

СРПСКА КРАЉЕВСКА АКАДЕМИЈА

ПОСЕБНА ИЗДАЊА

КЊИГА LXIII

ПРИРОДЊАЧКИ И МАТЕМАТИЧКИ СПИСИ

КЊИГА 15

ФЛОРА

БОСНЕ, ХЕРЦЕГОВИНЕ И ОБЛАСТИ
НОВОГА ПАЗАРА

PART 1.

НАПИСАО

Проф. DR. ГИНТЕР БЕК-МАНАГЕТА



Strawberry.
Vertical section of flower (mag.).

БЕОГРАД-САРАЈЕВО
ДРЖАВНА ШТАМПARIЈА У САРАЈЕВУ

1927

ЦЕНА 60 ДИНАРА

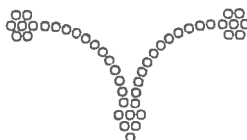
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ДРЖАВНА ШТАМПARIЈА У САРАЈЕВУ

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СРПСКА КРАЉЕВСКА АКАДЕМИЈА

FLORA

BOSNAE, HERCEGOVINAЕ ET REGIONIS
NOVIPAZAR

III. CHORIPETALAE
(FINIS)

ФЛОРА

БОСНЕ, ХЕРЦЕГОВИНЕ И ОБЛАСТИ НОВОГА
ПАЗАРА

III. ХОРИПЕТАЛЕ
(КРАЈ)

НАПИСАО

PROF. DR. GÜNTHER BECK-MANNAGETTA
(У ПРАГУ)

*Prof. Магара Савићковић
аутору
Београд 1934 год.*

БЕОГРАД-САРАЈЕВО

ДРЖАВНА ШТАМПАРИЈА У САРАЈЕВУ

1927

ПРЕДГОВОР.

Изванредно пријатељским заузимањем господина Дра Недељка Кошанина, професора универзитета и управника Ботаничке Баште „Јевремовца“ у Београду и благонаклоном предусретљивошћу Српске Краљевске Академије Наука у Београду омогућено је да се настави издавање Флоре Босне, Херцеговине и бившег Санџака Новог Пазара, које је било застало. Њима у првом реду имају да захвале и писац и сви они, које је увек живо занимало објављивање ванредно интересантне Флоре ових крајева и који су морали савлађивати огромне тешкоће због расутости ботаничке литературе о тим земљама.

Ово је трећи дио поменуте Флоре, а он је у исто време и крај хорипетала. Овај је одељак и у форми и по садржају истоветан са ранијим деловима, само је по жељи многих стручњака написан на латинском језику. Скраћивања су при навођењу литературе ограничена на уобичајену меру. Тако су скраћена имена скупљача само при навођењу биљних станишта, што је мало ниже и означено ради лакшег разумевања. Четврти дио, у којој ће бити гамопетале, има доћи скоро.

На овом месту морам поновити своју топлу захвалност господину Карлу Малиу, кустосу босанско-херцеговачког музеја у Сарајеву, не само зато што сам могао прегледати драгоцени ботанички материјал, него још и за многоструке допуне у рукопису.

Праг, 1. августа, 1925.

Др. Гинтер Бек-Манагета,
професор универзитета.

Infolge der außerordentlich freundlichen Vermittlung des Herrn Universitätsprofessors und Direktors des Botanischen Gartens »Jevremovac« in Belgrad, Dr. N. Košanin, und des wohlwollenden Entgegenkommens der königl. serbischen Akademie der Wissenschaften in Belgrad wurde es ermöglicht, die Fortsetzung der ins Stocken geratenen Flora Bosne, Hercegovine i bivšeg Sandžaka Novog Pazara¹⁾ herauszugeben. Ihnen gebührt daher in erster Linie der innigste Dank nicht nur des Verfassers sondern auch aller, die an der Veröffentlichung der hochinteressanten Flora dieser Länder seit jeher Anteil nahmen und wegen der Zerstückelung der botanischen Literatur dieser Länder mit den größten Schwierigkeiten zu kämpfen hatten.

Der nun vorliegende III. Teil der genannten Flora, welcher den Abschluß der Choripetalen enthält, schließt sich in der Form und dem Inhalte nach den früheren Teilen gleichwertig an, doch wurde auf Wunsch mehrerer Fachleute die lateinische Sprache bevorzugt, und wurden die Abkürzungen in den Literaturangaben auf das übliche Maß beschränkt, so daß nur bei

¹⁾ Es erschienen bisher:

A. Pteridophyta im Glasnik zemaljskog muzeja u Bosni i Hercegovini XXVIII (1916), 311—336.

B. Phanerogamae.

I. Gymnospermae, Angiospermae: Monocotyledoneae. Glasn. zem. muz. XV (1903), 1—48, 185—230.

II. Dicotyledonae: Choripetalae.

1—4. Glasn. zem. muz. XVIII (1906), 69—82, 137—150, 469—496; XIX (1907), 15—30.

5. Glasn. zem. muz. XXI (1909), 135—166.

6. Glasn. zem. muz. XXVI (1914), 451—476.

7. Glasn. zem. muz. XXVIII (1916), 41—168.

8. Glasn. zem. muz. XXX (1918), 177—218.

9. Glasn. zem. muz. XXXII (1920), 83—128.

10. Glasn. zem. muz. XXXIII (1921), 1—18.

11. Glasn. zem. muz. XXXV (1923), 49—74.

408
487

895
pas.

VIII

den Fundortsangaben die Namen der Sammler abgekürzt wurden, wie sie unten zum leichteren Verständnis erläutert werden. Der IV. Teil der Flora, die Gamopetalae begreifend, soll in Bände folgen.

Herrn Kustos des bosnisch-hercegovinischen Staatsmuseums in Sarajevo, Karl Malý, dem ich nicht nur die Einsicht sehr wertvollen Pflanzenmaterialies sondern auch vielfache Ergänzungen zur Handschrift verdanke, sei an dieser Stelle ebenfalls erneuert der verbindlichste Dank ausgesprochen.

Prag, 1. August 1925.

Univ.-Professor Dr. **Günther Beck-Mannagetta.**

ABBREVIATIONES NOMINUM COLLECTORUM.

| | |
|-------------------------------------------------------------------|------------------------------------|
| A. = Adamović L. | Haw. = Hawelka, Vincenz. |
| A. K. = Ascherson P. et Kanitz A. | Ja. = Janchen E. |
| B. = Beck-Mannagetta G. | J. = Jurišić Ž. J. |
| Bl. = Blau O. | M. = Malý K. |
| Boll. = Boller A. | Ma. = Marchesetti C. |
| Borb. = Borbás V. | Mu. = Murbeck S. |
| Bornm. = Bornmüller J. | P. = Pantocsek J. |
| Br. = Brandis E. | Pć. = Pančić J. |
| Brancs. = Brancsik K. | Pi. = Pichler A. |
| Br. Fr. = Brandis E. et Freyn J. | Pr. = Protić G. |
| C. = Conrath P. | R. = Reiser O. |
| D. = Degen A. | S. = Sendtner O. |
| F. = Fiala F. | Sch. = Schneider G. |
| Fa. = Faltis F. | Schi. = Schiller J. |
| Fo. = Formánek E. | St. = Stadlmann J. |
| Fr. = Freyn J. | Str. = Struschka H. |
| Fr. Br. = Freyn J. et Brandis E. | S. V. = Simony O. et Vierhapper F. |
| Fri. = Fritsch K. | V. = Vandas K. |
| G. K. = Gross L. et Kneucker J. A. | Vi. = Visiani R. |
| H. = Hofmann F. | W. = Wettstein R. |
| Ha. = Handel-Mazzetti H. | Wiesb. = Wiesbaur J. |
| Ha.-Fa. = Handel-Mazzetti H., Stadlmann J., Janchen E., Faltis F. | |

Mateja Štajkovič
apotecar.

Ordo LV: **Platanaceae.**

[Lindl., Nat. Syst., ed. II, 187 (1836); Benth. Hook., Gen., III, 396; Niedenzu in Nat. Pflanzenf., III 2 a, 137.]

1. **Platanus.**

[L. ^{*} Spec. pl., 999 (1753) et Gen., ed. V, nr. 954; Benth. Hook., Gen., III, 396; Niedenzu in Nat. Pflanzenf., III 2a, 140; Jaenicke in Nov. Act. Leop. Car., LVII (1899), 115; Schneider, Laubholz., I 435.] »Platan«.

Platanus orientalis [L., Spec. pl., 999 (1753). — Conf. Schneider, Laubholz., I, 436]. Oriunda est Oriente et colitur sicut in Dalmatia hinc inde, exempli causa in Bosna prope Ilidža (M.), Hercegovina circa Blagaj (*Str. 1880), Metković (B.) al. oc. Floret m. Majo.

Ordo LVI: **Spiraeaceae.**

[Maxim., Annot. de *Spir.* in Act. hort. Petrop., VI (1879), 114; Beck, Fl. Nied.-Öst., 668; Schneid., Laubholz., I, 440. — *Rosaceae* subordo *Spiraeaceae* Endl., Gen., 1247 (p. p.); trib. in DC., Prodr., II, 541 p. p. — *Rosaceae* trib. *Spiraeae* Benth. Hook., Gen., I, 601; trib. *Spiraeoideae* Focke in Engl., Prantl, Nat. Pflanzenf., III 3, 13.]

1. **Spiraea.**

[L., Spec. pl., 489 (1753) et Gen., ed. V, nr. 554; Benth. Hook., Gen., I, 611 p. p.; rectius Maximowicz, l. c., 68; Focke in Nat. Pflanzenf., III 3, 14; Schneid., Laubholz., I, 449; sect. *Chamaedryon* et *Spiraria* Ser. in DC., Prodr., II, 542 et 544.] »Suručica«.

Species nostrae ad subgenus *Euspiraea* [Schneid., l. c., 449] pertinent.

Sectio: *Chamaedryon*.

[Ser. in DC., Prodr., II, 542 (1825); Beck in Reich., Ic. fl. Germ., XXIV (1909), 8; Schneider, Laubholz., I, 449.]

1. *Spiraea cana* [Waldst. Kit., Pl. Hung. rar., III, 252, t. 227 (1812); Beck in Reich., Ic. fl. Germ., XXIV, 9, t. 148 f. 1—5; Schneid., Laubholz., I, 456; Asch. Graebn., Syn. mitt. Fl., VI, 13]. Ad saxa, in saxosis, inter dumeta in regione montana usque ad subalpinam (—1500 *m*). Floret m. Aprili—Juli.

Bosna: In monte Igrisnik et Javor versus fl. Drina (Wettst.); in monte Crvena stijena prope Srebrenica (Wettst. f. Fritsch); in monte Čardak c. 1400—1500 *m* (Ja.); prope Rajića Košara inter Hrastičevo et Glamoč c. 1360 *m* (Ha.-Fa.). In valle fl. Miljačka, inter Ilovići et Trnovo, ad confluentes fl. Crna rijeka et Željeznica (*Bl. 1877). In valle fl. Drina sub opp. Višegrad (Br. in litt.), in monte Stolac ad fl. Drina (Br. f. Fri.). — **Hercegovina:** Fide *Asch. Kan., Cat., 96 (1877). Ubi? In montibus Čabulja Pl.: Medved, Vel. Vlajna, ad riv. Ledenica potok (Prodan). Ibidem collegi modo *Sp^m mediam* v. *mollem*. Stationes Bosnae occidentalis probabiliter ad *Sp^m canam*, alterae autem ad varietatem *mollem Sp^{ae} mediae* ducendae sunt. *Sp^m canam* compluries in montibus Velebit observavi et collegi.

2. *Spiraea media* [Schmidt, Öst. Baumz., I, 53, t. 54, (1792); Max. in Annot. act. hort. Petrop., VI, 187; Asch. Gr., Syn. mitt. Fl., VI, 14; Beck in Reich., Ic. fl. Germ., XXIV, 9, t. 149; Schneider, Laubholz., I, 457]. Ad saxa, in declivibus lapidosis, apricis, inter frutices. Floret m. Majo, Junio.

Variat:

α. *oblongifolia* [G. Beck in Reich., l. c., 10, t. 149; Schneider, l. c., 457. — *Sp. oblongifolia* Waldst. Kit., Pl. Hung. rar., III, 261, t. 235 (1812)].

Bosna: In monte Osječenica (F.), in monte Marino brdo c. 1400 ad 1430 *m* (Ja.), prope Male Poljanice 1500—1550 *m* (Ja.-Wa.), in monte Troglav (B.); circa Kluč (B.) et Bukovica prope Travnik (*S. 1848).

f. *glabrescens* [Simonk., Enum. pl. Transs., 213 (1886); Beck. l. c., 10; Schneider, l. c., 457]. **Bosna:** In monte Troglav mont. Dinara (*B.).

β. *sericea* [Regel, Fl. Ussur., 53 (1861) fide Max.; Asch. Gr., Syn. l. c., 15; Schneider, l. c., 457; Beck, l. c., 10, t. 149 fig. 6. — *Sp. sericea* Turcz., Fl. Baic. Dah., I, 358 (1842)].

Bosna prope Kluč (*B.).

γ. *mollis* [Schneider, l. c., 457 (1905). — *Sp. mollis* C. Koch et Bouché in Regel, Gartenfl., III (1854), 404. — *Sp. cana* ×

media Zabel in Wittm., Gartenz., III (1884), 495; Asch. Gr., Syn. l. c., VI, 16. — *Sp. cana* v. *mollis* G. Beck, Fl. Südbosn. VIII. in Ann. naturh. Hofmus., XI (1896), 55 et in Reich., Ic. fl. Germ., XXIV, 9 (1903)]. Floris tempore *Spiraeae canae* W. K. simillima, solumque foliis ramorum foliatorum copiosius dentatis diversa, fructus autem tempore fructibus (f. Schneidér) sub apice stylo horizontaliter patente praestans. Nota ultima autem est etiam fructuum maturorum *Spiraeae canae* W. K. typicae, quam et e manu autoris in monte Plješevica Croatiae lectam et ex monte Velebit prope Oštarija a cl. d. Rossi sub nr. 13285 collectam perscrutavi, itaque instabilis. Forsan opinio mea, *Sp^{am} mollem* ad *S^{am} canam* pertinere quam d. Schneider oppugnavit, satis confirmanda sit, multoque plus, quia in valle fl. Miljačka prope Sarajevo formas varietatis *mollis* collegi, quarum folia ramorum foliatorum omnino integerrima observantur (= f. *integerrima*).

Bosna: In monte Igman versus Jasen (*B. 1896), proxime Ilovica prope Trnovo (Bl., Exs. nr. 1779 f. M.), circa Sarajevo: in monte Trebević (B.) —1600 m (M. in litt.) et eiusdem declivibus et summis Draguljevac, Orlovac, Hudež, Trebević, prope Bijela stijena, Dobra voda (Bl., Exs. nr. 495 sub *S. cana*, M., B.), In monte Lipovac (Starigrad) ad fl. Miljacka inter glareosa et in saxosis, 700—900 m (Bl. sub *S. cana*, Beck, Fl. Bosn. Herc., nr. 104; M. in Dörfl., Herb. norm., nr. 4624! B.), in valle fl. Miljacka, 700 m (Beck, Pl. Bosn. Herc. nr. 189) in monte Zli stup (M.) et Gradina s. Laze (M.); in faucibus Rakitnica inter Rogatica et Han Prača (F. sub *Sp. cana* f. M.); in monte Rudinica prope Banja stijena (M.), circa Blaž prope Višegrad (B.), in dorso montis Bić Pl. prope Uvac (R. f. M.). Suhidol prope Staribrod, in monte Orlinija prope Dobrun (M. in litt.). — **Hercegovina:** Circa Bare pr. Jasenik distr. Konjic (*M. 1910), Glogovo montis Prenj Pl. (M. in litt.), in monte Medved montis Čabulja c. 900 m (B. sub *Sp. cana*) et in monte Ošljar et Sedlo cum *Sibiraea* c. 1480—1600 m (M. in litt.). Hic observari etiam f. *phyllantham* sepalis petalisque (maxima parte) phylloideis viridibus.

3. *Spiraea chamaedrifolia* [L., Spec. pl., 489 (1753)]. subspec. *Sp. ulmifolia* [Scop., Fl. Carn., ed. II, I 349 t. 22 (1772)]; Asch. Graebn., Syn. mitteleur. Fl. VI, 16; Beck in Reich., Ic. fl. Germ., XXIV. 10 t. 150 pro spec. — Maxim. in Act. hort. Petrop., VI (1879), 186; Schneider, Laubholzk., I, 460 pro var. — *Sp. chamaedrifolia* Jacqu., Hort. Vind., II, 66, t. 140 (1772)]. — In locis lapidosis, fruticosis regionis montanae et subalpinae (—1500 m). Floret m. Majo, Junio.

Bosna: In saxis serpentinis prope Vrbanja (C.), inter Bugojno et Kupres (F.); in monte Prolog (B.), Troglav montis Dinara, in monte Vel. Šator (Pr.); circa Travnik (*S. 1848 Br.), in monte Vlašić 950—1600 *m* (*S. 1848 et Pl. Bosn., nr. 981, B.) supra Lašva (Fr. Br.), in silvis *Pini nigrae* montis Smolin (B.), in declivibus montis Papratnica versus Žepče solo serp. (B.); prope Maglaj (B.), in ditione riv. Gostović potok usque ad cacumen montis Tajan 300—1290 *m* solo serpent. vulgata (M. in litt.). Circa Fojnica frequenter (B.), in montibus Vranica Pl. 650—1500 *m* (Mu.): in declivibus montium Matorac, Luka (Schwarz!), in monte Lisina prope Gornji Vakuf (M.), in monte Čubrin prope Kreševo (M.). Circa Vareš, Kralupi, Duboštica, in monte Zvijezda (Pr.); in monte Bukovik et ad riv. Babin potok (M. in litt.); in valle fl. Željeznica (Pr.) prope Crveni klanac (Blau); in montibus Hranisava, Bijelašnica (Bl.); circa Suha (Pr., B.), Prijedor, in valle fl. Sutjeska (Pr.), in faucibus Prača (M.); in monte Stolac prope Višegrad 800—1500 *m* (Adam., Schill. f. Fri.); in monte Muharnica (M. in litt.). — **Hercegovina** in montibus Prenj Pl.: Prislav, Glogovo (*V. 1890), Čvrtnica: Plasa (B.).

Observatur etiam forma foliis angustioribus, subsimpliciter serratis instructa, quae *Spm flexuosam* [Fisch. in Ann. sc. nat., I, 365 (1824)] admonet in **Bosna** in adscensu ad montem Vlašić (B.).

2. **Sibiraea.**

[Maxim. in Act. hort. Petrop., VI (1879), 215; Focke in Nat. Pflanzenf., III 3, 15; Asch. Graebn., Syn. mitteleur. Fl. VI, 27; Schneid., Laubholz., I, 485.]

1. *Sibiraea altaiensis* [Schneider, Laubholz., I, 485. — *S. laevigata* Max., l. c., 215; — *Spiraea altaiensis* Laxm. in Nov. Comm. act. Petrop., XV (1770!) 554, t. 29, fig. 2. — *Sp. laevigata*. L., Mant., II (okt. 1771) 244 et Syst. XIV, 392 (1774); Ascherson in Sitzungsber. Ges. naturf. Freunde Berlin (1905), 219].

v. *croatica* [Degen in Magy. bot. lap., IV (1905), 255 et 284 pro spec. et subspec. — *S. laevigata* Max. v. *croatica* C. K. Schneider apud Dörf., Herb. norm., cent. 47, nr. 4625 et Sched. 193 (1906). — *S. laev.* subspec. *croatica* Degen, Plant. Hung. exs. (1905)]. — Sec. Degen [l. c.] a *S. altaiensis* Schneid. differt ramis brevioribus, foliis minoribus, non vel vix glaucis, sepalis triangularibus, latitudine longioribus acutis, fructibus et seminibus minoribus. Planta hercegovinica autem offert folia griseo-viridia, sepala triangulari-subovalia apice rotundata vel subacuta, tam longa vel latiora quam longa. Capsulam plantae velebiticae 3—4 *mm* longam observari, itaque nullo modo minorem quam in planta altaica. — Folia *S^{ae}*

altaiensis in planta culta modo majora, sepala plantae altaicae ab iis plantae hercegovinicae vix differunt, in cultura semper minus acuta reperiuntur. In saxis calcareis subalpinis et alpinis (970—1600 *m*). Floret m. Julio.

Hercegovina: Čabulja Pl.: in saxis praeruptis declivium septentr. prope Sedlo c. 1400—1500 *m* (M.); in saxis mont. Ošljari c. 1600 *m* (*R. 1905), in dorso Čabulja Pl. ad orientem Vel. Vlajna (Ha. Maz.). — **Croatia:** Frequenter in locis saxosis lapidosis montis Velnač prope Karlobag c. 970—1028 *m* (Degen!; Rossi, Exs. fl. croat. nr. 15949!).

3. *Aruncus*.

[Adans., Fam., II, 295 (1763); Maxim., Annot. in Act. hort. Petrop., VI, 64; Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 16; Beck, Fl. Nied.-Öst., 670 et in Reich., Ic. fl. Germ., XXIV, 7; Asch. Gr., Syn. mitt. Fl., VI, 27. — *Spiraea* L., Spec. pl., 489 (1753) et Gen., ed. V, nr. 554 p. p; sect. *Aruncus* Seringe in DC, Prodr., II, 545.]

1. *Aruncus silvester* [Kostel., Ind. hort. Prag (1844), 138; Max. in Act. hort. Petr., VI, t. 169; Beck, Fl. Nied.-Öst., 671 et in Reich., Ic. fl. Germ., XXIV, 7, t. 146. — *Spiraea aruncus* L., Spec. pl., 490 et. aut. — *Aruncus barbae capri* Wender., Fl. Hass., 151 (1846). — *Aruncus aruncus* Karst. Deutschl. Fl. 779 (1882); Asch. Gr., Syn. mittel. Fl. VI, 27]. In locis humidis umbrosis silvaticis, in faucibus silvarum ab regione montana usque ad subalpinas (1600 *m*). Floret m. Junio, Julio.

Bosna: In monte Kriva glava prope Novi (B.); in monte Majeвица Pl. (B.), prope Tuzla (R.), Prosjek pr Zvornik (J.), in declivibus mont. Papratnica prope Žepče solo serpent. (B.), in valle riv. Gostović et in silvis fagineis mont. Tajan solo serpent. (M. in litt.), in valle Semešnica prope Dolnji Vakuf (Sta), inter Bugojno et Kupres (Pr.), in valle Portić montis Stožer Pl. (B.), in montibus Malovan (B.), Uilica (Ja.-Wa.), Krug pl. prope Livno c. 1300 *m* (B.), circa Preodac (Pr.), circa Karaula gora prope Jajce (B.), circa Travnik (Fr. Br.), in valle inf. fl. Lašva prope Trebeuša (B.), frequenter circa Fojnica, in declivibus mont. Matorac (B.), inter Borovica et Vareš (*S 1848), circa Vareš (Fo.) prope Duboštica, Kralupi, in monte Zvijezda (Pr.), in valle fl. Stavnica prope Sutiščica (Fo.); In montibus omnibus editioribus Bosnae australis (B.), exempli gratia in montibus Igman (F., B.), Bjelašnica (Bl.), Treskavica (B., Pr.), Trebević (Bl., B.), Romanija (B.), Ozren (M.), Zelengora (Pr.), Maglić, Vučevo (B.), in valle fl. Miljačka prope Sarajevo (B.), in faucibus Prača (M.), in valle fl. Sutjeska (B.) et a. l. — **Hercegovina** [*Asch. Kan, Cat., 96 (1877)]. Ubi? In monte Prešlica (V.), in silvis subalpinis montis Bjelašnica montium Prenj Pl. (B.), in montibus Plasa (B.), Velež c. 1500—1600 *m* (Mu.), prope Nevesinje (Lerch i. M.); inter m. Štirovnik et Svitavac (V.).

Ordo LVII: Rosaceae.

[Juss., Gen. 334 (1789); Benth. Hook., Gen. I, 600; Baill., Hist. pl., I, 346; Focke in Nat. Pflanzenf., III, 3, 1; Asch. Gr., Syn. mitt. Fl., VI, 1, 5; Beck in Reich., Ic. fl. Germ., XXV, 1, 2.]

Tribus 1: *Dryadeae*.

[Vent., Tabl., III, 346 (1799); DC., Prodr., II, 549; Beck, Fl. Nied.-Öst., 718 et in Reich., Ic. fl. Germ., XXV, 1, 2. — *Potentilleae* Juss., Gen., 337 (1789); div. *Potentilleae* Spreng., Anl., II, 2, 863 (1818); trib. apud Benth. Hook., Gen., I, 603; Focke in Nat. Pflanzenf., III, 3, 28; Asch. Gr., Syn. mitt. Fl., VI, 440.]

Subtribus: *Potentilleae*.

[Beck in Reich., Ic. fl. Germ., XXV, 1, 70.]

1. *Fragaria*.

[L., Spec. pl., 494 (1753) et Gen., ed. V, 518 nr. 558; Benth. Hook., Gen., I, 620; Focke in Engl. Prantl, Nat. Pflanzenf., III, 3, 33; Asch. Gr., Syn. mitt. Fl., VI, 649; Beck in Reich., Ic. fl. Germ., XXV, 1, 2. — Confer: Solms-Laubach, Über unsere Erdbeeren und ihre Geschichte in Bot. Zeit. (1907) Heft III—IV.] »Jagoda«.

1. *Fragaria vesca* [L., Spec. pl. 494 (1753) p. p.; Reich., Fl. Germ., 597; Beck, Fl. Nied.-Öst., 748 et in Reich., Ic. fl. Germ., XXV, 1, 3, t. 1; Asch. Graebn., Syn. mitt. Fl., VI, 1, 649]. »*Mamica*«. In pratis, sub fruticibus, in silvis luminosis, herbosis, lapidosis usque ad subalpinas editiores (—1300 m). Floret m. Aprili—Julio.

f. *sylvestris* [L., l. c. pro var. — *F. sylvestris* Duch., Hist. nat. frais., 61 (1766)].

Bosna: Vulgata et frequens, uti circa Novi, in valle Prosara (B.), prope Banja Luka (H.), in monte Krnin (B.), circa Breške, Donja Tuzla (B.), Prosjek (J.), Žepče (*S. 1848, B.), Vranduk (*S.), in monte Smolin (B.). Circa Bihać (B.); in monte Dinara (B., D.), Troglav (B.), in jugo Strmac versus Grkovići (Ja. Wa.), in monte Krug Pl. prope Livno (B.), circa Travnik (*S. 1848), Fojnica (B.), in monte Vranica Pl. (B.), in monte Čubrin (M. in litt.), circa Kreševo (Schwarz!), Vareš, Duboštica (Pr.). In Bosna australi frequenter, uti in monte Igman (B.), circa Sarajevo (H., B.), in monte Trebević (F.), circa Pale (M.), in valle fl. Sutjeska (Adam. f. Ja) et certe in locis multis aliis. — **Hercegovina:** In monte Plasa (Prodan), Čabulja (B.), circa Drežnica (B.), Mostar (Str.), in monte Velež (B.), inter Tasovčići et Domanovići (B.), in monte Glijiva prope Trebinje (*P. 1874).

2. *Fragaria elatior* [Ehr., Beitr., VII, 23 (1792); Reich., Fl., Germ., 597; Beck, Fl. Nied.-Öst., 747 et in Reich., Ic. fl. Germ., XXV 1, 3, t. 2. — *F. vesca sativa* L., Spec., 495 (1753) = *β. pratensis* L., l. c., ed II, 709 (1762)?; v. *elatior* Thuill., Fl. Par. 172 (1790). — ? *F. moschata* Duch., Hist. nat. frais., 145 (1766); Asch. Graebn., Syn. l. c., 653. — ? *F. pratensis* Duch. in Lam., Enc. meth., II, 536 (1786). — *F. magna* Thuill., Fl. Par., ed. II, 254 (1799)]. »Kitnjača«. In pratis montanis, inter frutices, in dumetis, sylvis frondosis usque ad subalpinas editiores (—1700 m). Floret m. Aprili—Junio.

Bosna: Circa Banja Luka (H.). Inter Srebrnik et Gradačac (*S. 1848). In montibus Gomila prope Krupa (B.); Vitorog et Plazenica —1700 m (Ha. Fa.), Krug Pl. prope Livno 1300 m (B.). Circa Travnik (*S. 1848), in monte Vlašić (S.), circa Fojnica (B.), in monte Inac (Schwarz!); inter Vranduk et Topčići (S.), in saxis vallis Trstionica prope Sutiska (S.), circa Zenica (Franjić!), inter Podselovo et Pašinhan (S.), circa Vareš (Pr.). Vulgata in Bosnia australi sicut circa Sarajevo (B.), prope Koševo, in valle fl. Miljacka, in montibus Draguljevac (B.), Trebević (M.), Romanija (B.), in valle fl. Željeznica, Zelengora (Pr.), prope Pale, Podvitez, in valle fl. Sutjeska (Pr.), prope Vardište (M.) et aliis locis. — **Hercegovina:** In sylvis subalpinis montis Velež Pl. 1200 m (Mu., B.), in monte Glijiva prope Trebinje (*P. 1874), in monte Baba Pl. et in Bijela Gora (Havelka!).

f *quinata* [Čelak., Prodr. fl. Böhm., 634 (1874)]. **Bosna:** Sub Drinsko prope Višegrad, m. Aug. (*B.).

3. *Fragaria collina* [Ehrh., Beitr., VII, 26 (1792); Reich., Fl. Germ., 597; Beck, Fl. Nied.-Öst., 748 et in Reich., Ic. fl. Germ., XXV 1, 3, t. 3. — ? *F. viridis* Duch., Nat. frais., 135 (1766) et in Lam., Enc. meth., II, 536 (1786) p. p.; Asch. Graebn., Syn. l. c., 654. Confer Solms-Laubach in Bot. Zeit. (1907), III—IV, 52 et Čelak., Prodr. Fl. Böhm., 634]. »Pucalica«. In pratis, locis aridis, apricis, ad silvarum margines usque ad regionem subalpinam (1200 m). Floret m. Aprili—Junio.

Bosna: Circa Banja Luka (H.), inter Prosjek et Djevanje ad fl. Drina (J.); in monte Podgomila prope Krupa (B.), circa Krupa (B.); in monte Vel. Malovan, prope Kupres, in m. Prolog (Pr.); circa Jajce (Fo.), Karaula pr. Jajce (Bl.). Circa Travnik (*S. 1848, B.) sicut prope Bukovica, ad pedem montis Vlašić, prope Gučja gora (S.); in monte Rapte Pl. (M. in litt.); circa Vareš, Duboštica, Tarčin (Pr.). Circa Sarajevo (H, B.), in monte Trebević, Borja, Šimino brdo (M. in litt.), in valle fl. Željeznica (Pr.); circa Mokro, in monte Romanija (Bl.), in vallibus fl. Sutjeska et Drina (Pr.), Razdolina (M.). — **Hercegovina:** Inter Ljubinje et Trebinje, circa Trebinje (Bl.), prope Bileća (*P. 1874). — **Novi Pazar:** Circa Prijepolje (P. Zahlbr. f. *Hayek).

f. *subpinnata* [Čelak., Prodr. fl. Böhm., 634 (1874) pro var.; f. *foliolosa* Beck, Fl. Nied.-Öst., 748 (1892)]. **Bosna:** In monte Trebević (*Mu. 1891).

4. *Fragaria collina* × *elatior*: *F. neglecta* [Lindem. in Bull. soc. imp. de Moscou, XXVIII 2 (1865), 218; Beck, Fl. Nied.-Öst., 747. — ? **F. vesca* × *collina* Lasch in Linnaea, V (1830), 458. — *F. collina* × *elatior* Hausskn. in Mitt. geogr. Ges. Thür., III, 280. — *F. moschata* × *viridis* Asch. Graebn., Syn. l. c., 658].

Bosna: In monte Cincar prope Livno, 1400 m m. Aug. (*B.). Etiam in Croatia prope Slunj (Rossi, nr. 6982!).

2. *Potentilla*.

[L., Spec. pl., 495 (1753) et Gen., ed. V, nr. 559; rectius Nestler, Mon. Pot., 17, 22 (1816) et *Th Wolf, Mon. der Gatt. *Potentilla* in Bibl. bot., Heft 71 (1908) incl. *Duchesnea*; *Beck in Reich., Ic. fl. Germ., XXV 1, 5. — *Potentilla*, *Duchesnea*, *Comarum* *Asch. Graebn., Syn. mitt. Fl., VI 1, 664, 660, 663. — *Duchesnea* Smith in Trans. Linn. soc., X (1811), 373. — *Comarum* L., Spec. pl., 500 (1753) et Gen., ed. V nr. 563. — *Tormentilla* L., Spec. pl., 500 (1753) et Gen., ed. V nr. 560 — *Opera gravissima!] »Petoprst«.

Sectio: *Thermophyllum*.

[Wallr., Sched., 246 (1822); Beck in Reich. Ic. l. c., 6. — sect. *Fragariastrum* Séringe in DC., Prodr., II, 583 (1825); subsect. *Nematostylae* ser. *Herbaceae* Th. Wolf, Mon. Pot., 46.]

1. *Potentilla speciosa* [Willd., Spec. pl. II 2, 1110 (1800); Boiss., Fl. Or., II, 705; Asch. Gr., Syn. l. c., 685; Th. Wolf, Mon. Pot., 86; Beck in Reich., Ic. l. c. 6, t. 9]. In saxis calcareis montium altissimorum, 1700—1900 m. Floret m. Junio, Julio.

Hercegovina (*Asch. Kan., Cat. 98 [1877]). Ubi? In monte Prenj Pl. in saxis supra Plana versus Polica (V.). In monte Velež Pl. (Bornmüller 1886! etiam f. Zimmerer, Beitr., 36), in declivibus ad agrum Nevesinjsko polje 1700—1800 m (Mu.); in summis montis Gnjila greda, Prasa, Vučji zub 1600—1700 m (V.); in monte Orijen 1600—1793 m (*Fr. Neumayer 1852 apud Vis., Fl. Dalm., III, 253; Th. Pichler 1868!; Vesely in Wien. ill. Gartenzeit. 1890, 387).

2. *Potentilla apennina* [Tenore, Cat. hort. Neap., 50 (1815) et Fl. Nap., I, 291, t. 46, fig. 4; Reich., Fl. Germ., 589; Asch. Graebn., Syn., l. c. 685; Th. Wolf, Mon. Pot. 88; Beck in Reich. Ic. l. c., 6, t. 10]. In saxis calcareis regionis altissimae montium 1700—2000 m, rarius usque 1000 m descendens. Floret m. Julio—Sept.

Hercegovina: Frequenter in cacuminibus omnibus montis Prenj Pl. 1700—2000 m (B. sub. *P. nitida* Fl. Südbosn., III 117 et VIII 54; Engler alii) sicut in m. Ortiš, Prenj, Kantar, Lupoglav et al. (B.), Glogovo, Prislav, Porim (V.); in monte Čvrstica Pl. (V. et alii) sicut in m. Plasa (B.,

Pl. Bosn. Herc. nr. 186 b., V.!), Drinača (B.), Vilinac (V.), Muharn ca (F.), in valleculo Drjenac (V.); in mont. Čabulja Pl., a monte Vel. Vlajna usque 1000 *m* descendens (Hand. Maz.); in monte Velež Pl. (*Bornmüller 1886!, Beck, Pl. Bosn. Herc., nr. 186 a, Mu., Raap-Callier, Pl. Herc., nr. 179!) circa 1600—1900 *m*.

3. *Potentilla apennina* × *speciosa* — *P. Murbeckii* [Beck in Reich., Ic. l. c., 7 (1907). — *P. apennina* × *speciosa* Murb.. Beitr. in Lunds Univ. Årsskr., XXVII, 138 (1891); Th. Wolf, Mon. Pot., 90. — *P. speciosa* × *apennina* Pöeverlein apud Asch. Gr., Syn., l. c., 694]. Inter parentes intermedia et foliolis foliorum basalium obovalibus basi cuneatis antice denticulis 6—14 praeditis, 6—14 *mm* latis; indumento eorum paginae superioris sericeo nervaturam non plane occultante; caule florifero 12 ad 25 *cm* alto; inflorescentia 3—7-flora; petalis sepala paulo superantibus, eorum lamina late ovali obtusa 3.5 *mm* lata et ungue 1½ × longiore praedita; polline et fructibus maxima parte sterilibus facile recognoscenda.

Hercegovina: In monte Velež Pl. ad agrum Nevesinjsko polje inter parentes (*Mu. 1891); occurrit etiam forma *Pae speciosae* propinquior.

4. *Potentilla Clusiana* [Jacqu., Fl. Austr., II, 10, t. 116 (1774): Reich., Fl. Germ., 590; Beck, Fl. Nied.-Öst., 750 et in Reich., Ic., l. c., 9, t. 10; Asch. Gr., Syn. l. c., 687; Th. Wolf, Mon. Pot., 106]. — In saxosis et lapidosis montium altiss. calcar., 1500—2200 *m*. Floret m. Junio, Julio.

Bosna: In montibus: Osječnica (F., B.), Klekovača (F., B.), Kamešnica (Th. Pichler 1869, Pr.), Prolog (Visiani 1852, Th. Pichler), Dinara (Visiani, B.), Troglav (Pr.), Uilica (Ha. Fa.), Šator (Pr.), c. 1550—1800 *m* (Ha. Fa.), Vlašić (*S. 1848) — 1900 *m*; Vranica a cacum. Krstac ad mont. Ločike et descendens usque ad lacum Prokoško jezero (R., B., S. V. et alii); Bjelašnica (B.), Treskavica, Vratlo (B.), Maglić — 2200 *m* (B., Rohlena), Volujak (Mu., B.), Bregoč (Pr.). — **Hercegovina** (*Asch. Kan., Cat., 78 [1877]) ubi? In montibus: Prenj (B. et al.) sicut in cacum. Bjelašnica, Kantar, Prenj, Lupoglav, Ortiš — 2100 *m* (B.), Osobac, Boračka draga (Pr.), Glogovo, Prislav, Porim (V.); Čvrstica (V.) sicut in cac. Plasa (V., B.). Drinjača (B., Prodan), Vilinac et loco Drjenac dol. (Begović f. V.), Čvrstica (V.); Velež — 1800 *m* (Mu., B., Raap. Callier. Pl. Herc. nr. 178!); Crvanj in cac. Zimomor (Ja., Ad. sub *P. caulescente* f. Th. Wolf).

Ludit altitudine caulium florescentium, numero florum et indumento. Praeterea observavi:

f. *gracilis* [G. Beck]. Foliola e basi longe cuneata oblongo-rhombea, versus apicem tridentatam e media angustata, in media parte latissima 3—5 *mm* lata, 4—5 × longiora. In typo foliola obovalia-oblonga, basi plus minus nec longe cuneata, sub apice vel supra mediam latissima, in apice

rotundata vel truncata vix vel paulo attenuata. **Bosna:** Vel. Todor et Videš Pl. in Zelengora m. Aug. (Lakatos!). — **Crna Gora** in monte Kom Kučki (Szyszyłowicz!).

f. *minutula* [G. Beck]. Foliola minima, 5–9 mm longa. Caules floriferi teneri pauciflori, —6 cm alti. Flores 6–8 mm longi. In typo foliola plurimum pluries majora, flores 10–13 mm longi. — **Hercegovina:** In monte Velež Pl., m. Aug. (*B.).

5. *Potentilla caulescens* [L., Amoen. acad., IV, 316 (1759) et Spec. pl., ed. II, 713; Reich., Fl. Germ., 590; Lehm., Rev. Pot., 132; Asch. Gr., Syn. l. c., 691; Beck, Fl. Nied.-Öst., 750 et in Reich., Ic., l. c. 9, t. 13; Th. Wolf, Mon. Pot., 107]. In saxis calcareis, declivibus lapidosis regionis subalpinae usque ad regionem alpinam (1600 m). Floret m. Junio, Julio.

Bosna: In monte Kamešnica (Pr.). Circa Travnik (Br.), in monte Vlašić —1600 m (Pr.). Circa Sarajevo: Gradina (Laze) (M.), Bukovik —1400 m (M.), Paprenik (B.), in valle fl. Miljačka (B.); in monte Romanija (B.): in vallibus fl. Željeznica et Sutjeska (Pr.); ad lacum Kladovo polske jezera (Knapp, It. bosn. 1869 nr. 180!). — **Hercegovina:** In montibus Glogovo, Prislav (V.), Plasa (V.), Čvrstica (Pr.); Bijelagora prope Vučija (V.), in monte Koristna greda (*P., 1874), in declivibus montis Prasa (V.).

6. *Potentilla alba* [L., Spec. pl., 498 (1753); Reich., Fl. Germ., 589; Asch. Gr., Syn. l. c., 679; Th. Wolf, Mon. Pot., 112; Beck, Fl. Nied.-Öst., 750 et in Reich., Ic. l. c., 10, t. 15]. In pratis, dumetis, silvis luminosis regionis collinae et montanae plurimum calcem devitans, libenter solo serpent. Floret m. Aprili—Junio.

Bosna: Prope Pribinić (Fo. f. Th. Wolf), in monte Crni Vrh prope Tešanj (Fo.). Circa Žepče solo serp.: prope Papratnica usque ad mont. Smolin 1100 m (B.), inter Golubnje et Žepče (*S. 1848), in monte Orlovik (Fo.) et supra Orahovica (B.); ad fl. Krivaja inter Ribnica et Careva ćuprija (Bucalović f. M. in litt.); in ditone riv. Gostović potok solo serp. frequens c. 280–913 m (M. in litt.). In jugo Jovce brdo (Metalka) prope Vardište (M.).

Plantae e territorio serpentino Žepčensi foliolis apice paucidentatis praestant, sed forma et magnitudine eorum variant.

7. *Potentilla sterilis* [Garcke, Fl. Halle, 2. Nachtr. Phan., 200 (1856) et Fl. Norddeutshl., 4. Aufl., 112 (1858); Asch. Gr., Syn. l. c., 675; Th. Wolf, Mon. Pot., 115; Beck in Reich., Ic. l. c., 10, t. 16 fig. 1–6. — *Fragaria sterilis* L., Spec. pl., 485 (1753). — *P. fragariastrum* Ehrh., Exs., nr. 146 (1792); Reich., Fl. Germ., 589; Beck, Fl. Nied.-Öst., 749]. In pratis, ad silvarum margines, inter frutices usque ad subalpinas. Floret m. Martio—Majo.

Bosna: Circa Travnik (Br. f. Wiesb., Not. 175); ad saxa vallis fl. Sutjeska (Pr.). — **Hercegovina:** Inter frutices montis Glijiva prope Trebinje (*P. 1874). Hanc speciem e ditione nostra nondum vidi.

8. *Potentilla micrantha* [Ram. in DC., Fl. franc., IV, 468 (1805); Reich., Fl. Germ., 589; Asch. Gr., Syn. l. c., 678; Th. Wolf, Mon. Pot., 117; Beck, Fl. Nied.-Öst., 750 et in Reich., Ic. l. c., 12 t. 18 fig. 1—6]. In dumetis, inter frutices, in silvis luminosis, declivibus lapidosis usque ad subalpinas (1520 m). Floret m. Martio—Majo.

Bosna: Circa Kobaš (Prodan), Banja Luka (H.); in valle fl. Drina prope Zvornik (Wettst. f. Th. Wolf), in monte Kvarac prope Srebrenica solo trachytico 1000 m (Wettst. f. Th. Wolf); prope Zavidovići, Žepče, Golubinje (*S. 1848), in monte Velež prope Borovnica (M. in litt.), in valle fl. Krivaja (Bucalović f. M.) solo serpent. In monte Gomila velika prope Krupa (B.) et colle Debeljača prope Bihać (B.); in monte Jedovnik c. 1520 m (Ha.). Circa Travnik (*S. 1848, Br. ! Siegfr., Pot. exs. nr. 319 b) frequenter; circa Donji Vakuf prope Prusac (*S. 1848); in monte Kriva Jelika (Ha. Fa.), ad septemtr. prope Donji Vakuf (S.); circa Fojnica (Mu., Schwarz!), Vareš, Kralupi, Pajtov han (Pr.). Frequenter occurrit in Bosna australi, uti circa Sarajevo (H., F., B.), prope Šitluci (M.) et al. loc. Circa Kalinovik, in Zelengora, in valle fl. Sutjeska (Pr.); in monte Jovce brdo prope G. Vardište solo serpent., prope Dobrun, in valle Bjeluša solo calc. (M. in lit.), circa Drinsko (B.). — **Hercegovina:** Ad lacum Boračko jezero (Bucalović f. M.), prope Jablanica, Grabovica et in valle Drežanka (M. in litt.), circa Drežnica (Prodan), Nevesinje (V.), in monte Glijiva prope Trebinje (*P. 1874), inter Milanov odsjek et Radkuša jama, circa Bogojević selo, inter stationem Vrbanje et m. Orijen (V.), circa Gacko (Mu.).

Occurrit etiam corollis roseis paulo minoribus = f. *rosea* [Pančić, Addit., (1884) 139 pro var., M. in lit.]. **Bosna:** Circa Travnik (*Fr. Br.), in monte Hum prope Sarajevo (M.).

9. *Potentilla carniolica* [A. Kern. in Öst. bot. Zeit. XX (1870), 44, 96; Asch. Gr., Syn., l. c., 677; Beck in Reich., Ic. l. c., 12, t. 18, f. 7—9. — *P. micrantha* v. *carniolica* Th. Wolf, Mon. Pot., 118. (1908)]. In lapidosis, silvis luminosis regionis montanae. Floret m. Majo.

Bosna: In silvis *Pini silvestris* luminosis montis Smolin prope Žepče, solo serpent (*B.).

Sectio: *Geoides*.

[Tausch, Hort. Canal. (1823); Beck in Reich., Ic. l. c., 12; sect. *Pentaphyllastrum* Focke in Abh. naturw. Ver. Bremen, X (1889), 414; sect. *Gymnocarpae* grex *Rupestres* Th. Wolf, Mon. Pot. 47—48, 121.]

10. *Potentilla rupestris* [L., Spec. pl., 497 (1753); Reich., Fl. Germ., 594; Asch. Gr., Syn. l. c., 713; Th. Wolf, Mon.

Pot., 256; Beck, Fl. Nied.-Öst., 751 et in Reich., Ic. l. c., 12 t. 19. — Confer Th. Wolf, l. c. 124—133; Tuzson, Syst. Glied. und Verbreit. der *P. rupestris* in Növ. Közlem. VII (1908), Különl. Heft 5, 207]. In pratis montanis, locis lapidosis, graminosis, fruticosis. Floret m. Majo—Julio.

Variat:

α. typica [Th. Wolf, Potent. Stud., II 10 (1902) et Mon. Pot., 126; v. *gracilis* Asch. Gr., Syn., l. c., 696 (1904)].

Bosna: Prope Gradačac (*S. 1848); in monte Vel. Šator (Pr.), Šuljaga prope Kupres, circa Tarčin (Pr.). In monte Igman (F.). Circa Sarajevo frequenter sicut in m. Grdonj (M.), Borije (M.), pr. Koševo (M.), in valle fl. Moščanica (F.), in monte Bakije (M.); circa Pale, in monte Crni vrh mts Gola Jahorina (F.), in valle fl. Željeznica, prope Kalinovik, in valle fl. Sutjeska prope Tjentište, Mješajići, Ustikolina (Pr.). — **Hercegovina:** In declivibus graminosis m. Porim versus Zimlje polje non procul a fonte Žeravac (*V. 1895); in m. Mala Čvrstica (Bucalović f. M.).

f. *eglandulosa* [Th. Wolf, Mon. Pot., 126]. **Hercegovina:** In pratis subalpinis mts. Velež Pl., 1500—1600 m (*Mu. 1891).

β. banatica [Th. Wolf, Mon. Pot., 128 (1908); Beck in Reich., Ic. l. c., 13, t. 20, f. 7—8; ? v. *grandiflora* Heuff. in Verh. zool.-bot. Ges. (1858), 101; v. *Benitzkyi* Asch. Graebn., Syn. l. c., 696 (1904) non Friv.].

Hercegovina: In m. Baba Pl., m. Junio (Havelka f. *B.). Hactenus ut videtur e Banatu modo l. Straszcz prope Mehadia nota!

Sectio: *Makropotentilla*.

[G. Beck in Reich., Ic. fl. Germ., XXV 1, 13 (1910); sect. *Quinquefolium* Tausch, Hort. Canal. (1823) p. p; sect. *Gymnocarpae* greges *Argenteae* et *Rectae* Th. Wolf, Mon. Pot., 49, 50, 252 et 332; *Elatae* Poev. in Denkschr. bot. Ges. Regensb., VII (1898), 184.]

11. *Potentilla argentea* [L., Spec. pl., 497 (1753); Reich., Fl. Germ., 594; Asch. Gr., Syn. l. c., 267; Beck Fl. Nied.-Öst., 754 et in Reich., Ic. l. c., 13, t. 23]. In apricis, aridis, arenosis, lapidosis, in pratis montanis usque ad regionem montanam editiorem (1200 m). Floret m. fine Maji—Aug.

Bosna: In monte Krnin (B), prope Ivanjska (B.), Banja Luka (H), Kobaš (Prodan), Doboj (f. Th. Wolf), inter Brčka et Ratković (B.), circa Zvornik (J., Wettst. f. Th. Wolf), Prosjek (J.), in m. Ludo brdo pr. Srebrenica (J.), pr. Mag'aj (Fo. f. Th. Wolf). Circa Krupa, Dubovik turski, Bihać Smoljana, Krmine, Ratkovo, Sitnica (Fo. f. Th. Wolf), Karaula prope Bihać (Fo. sub *dissecta* f. Th. Wolf). Prope Kupres, Šujica, Preodac (Pr.), infra

ugum Strmac prope Grkovci (Ja. Wa f. Th. Wolf). Circa Travnik, pr. Dolac (*S. 1848), Pirota (Fr. Br.); Donji Vakuf (Ha. Fa); circa Fojnica (Mu., B.), inter Fojnica et Kiseljak (*S.); circa Duboštica, Pobrin han, Tarčin (Pr.); inter Tušín han ad fl. Lepenica et Sarajevo (*Š.), in faucis riv. Bistrica et in monte Trebević (Fo. f. Th. Wolf), in valle fl. Miljačka (F.!), in monte Glog prope Sarajevo (Fo. f. Th. Wolf); circa Kalinovik, proxime Ručnik pr. Vlaholje (Fo.), in mont. Crni vrh et Kmur pr. Foča (Fo. f. Th. Wolf), in declivibus monts. Maglić (Rohlena), in valle fl. Sutjeska (B.), prope Ustikolina, Mješajići (Pr.); circa Goražde (Fo. sub. *P. incanescens* f. Th. Wolf). — **Hercegovina**: Prope Jablanica (Pr.), in valle fl. Neretva (Mu.), circa Domanovići (Behrendsen), in silva Dubrava (f. *Pae tephrodes* Reich. affinis) et prope Plužine (Fo.); circa Nevesinje, Gacko (Mu.), Bileća, Orahovac et Dubovac in Bijela gora (*P. 1874).

Variat:

α. vulgata [G. Beck in Reich., Ic. l. c. 14]. Vulgata.

f. *discolor* [Tratt., Mon. Ros., IV 50 (1824); v. *genuina* Döll, Fl. Bad., 1105 (1862); *typica* G. Beck, Fl. Nied.-Öst., 754 (1892); Th. Wolf, Mon. Pot., 260. — *P. confinis* Jord., Pug., 68 (1852) f. Th. Wolf]. Vulgata. Ad hanc pertinent porro: *septemsecta* [Mey., Fl. Hann., 178 (1849); v. *septenata* Lehm., Rev. Pot., 97 (1856); Th. Wolf, Mon. Pot., 261]. — **Bosna** in monte Krnin (*B.). — *latifolia* [Peterm., Fl. Lips., 380 (1838); *latisecta* F. Sauter in Öst. bot. Zeit. (1889), 212; Th. Wolf, l. c., 260]. Vulgata; primum Fiala in valle fl. Miljacka sub nom. *P. argentata* [Jord., Pug., 76 (1852)] adnotavit; circa Bočac (Behrendsen). — *multifida* [Tratt., l. c., 51 (1824); *angustisecta* F. Sauter., l. c. 212; Th. Wolf, l. c. 260. — *P. tenuiloba* Jord., Pug. pl. nov., 67 (1852) = *P. argentea* var. Schwarz, Fl. Nürnberg, 248 (1899); Th. Wolf, l. c. 263]. Vulgata. Primum in Bosna: Mrkojevići pr. Sarajevo (*B. 1887). — f. *Blavii* [Asch. Gr., Syn. l. c. 719; Th. Wolf, l. c., 264]. Foliolis angustioribus, dentis utrinque 1—2 a priore differt. Foliolum intermedium saepe tripartitum. Flores majores. — **Bosna** (Blau f. Asch. Gr.). Ubi? — f. *tenerrima* [Th. Wolf in Asch. Gr., Syn. l. c. 719 et Mon. Pot., 264]. Foliola prioris. Foliolum intermedium non tripartitum. Flores minimi, calices vix 5 mm lati. — **Hercegovina**: In silva Dubrava (Fo. sub f. *perincisa* Borb. f. *Th. Wolf 1909). — f. *decumbens* [Focke apud Wohlff., Syn. Deutschl. Fl., I, 811 (1891); Th. Wolf, l. c., 262. — *P. decumbens* Jord., Cat. hort. Grenoble, 22 (1849)]. — **Bosna** prope Novi et Krupa (*Fo. sed fid. Th. Wolf [in Vandas, Rel. Form., 191] non forma typica sed altera potius ad formam *dissectam* Wallr. ducenda adest. — f. *impolita* [Wahl, Fl. Carp. 155 (1814) pro spec.; Beck in Reich., Ic., l. c., 15. — *P. argentea* v. *incanescens* Opiz in Kostel., Clav., 73 (1824); Th. Wolf, l. c., 261]. — **Bosna**: Primum Formanek hanc formam in faucibus riv. Bistrica prope Sarajevo et circa Goražde adnotavit, cujus plantae autem f. Th. Wolf ad formam typicam pertinent. In monte Romanija Pl. (Fo. sub v. *tenuiloba* f. *Th. Wolf 1909); in monte Igman (Bornmüller!). — **Hercegovina** prope Plužine (Fo. sed f. Th. Wolf in forma inter *incanescentem* et *pseudocalabram* adest). Huc loco inserenda est f. *subincanescens* [F. Sauter in Öst. bot. Zeit. (1889), 212 pro var. *Pae incanescens*] in **Bosna** prope Kalinovik (Fo. f. Th. Wolf).

β. *dissecta* [Wallr., Sched., 237 (1822); Th. Wolf, l. c. 265. — *P. dissecta* Zimm., Europ. Art. Pot., 13]. E Bosna primum Formanek (1890), prope Karaula prox. Bihać et prope Novo Selo indicavit, sed planta prior f. Th. Wolf ad typum, secunda autem ad var. *pseudocalabram* ducenda est.

Bosna: Ad riv. Savraski potok inter Prusac et Koprivnica, solo schistoso c. 1200 m; in arvis Karst. prope Pribelja, Halapić (Ha. Fa.).

γ. *pseudocalabra* [Th. Wolf apud Asch. Gr., Syn., l. c. 720 sine descr. et Mon. Pot., 266 (1908)]. »Foliola intermedia bitriloba vel-partita, antice conspicue flabellata, laciniis plerisque antrorsum directis angustis, subacutis, margine revolutis, plerumque utraque facie villosa et incana, raro supra viridia« (Th. Wolf).

Bosna: Prope Novo Selo (Fo. sub v. *dissecta* f. Th. Wolf in Vandas, Rel. Form., 192 [1909]); in monte Kmur pr. Foča (Fo. f. Th. Wolf); prope Jaseković (B).

Var. *tenuifolia* [Borbás ubi? pro spec. non Willd.] f. Formanek prope Maglaj, Doboj, Dubovik turski, Krupa, in monte Glog prope Sarajevo adnotata, in herbario suo f. Vandas [Rel. Form. 196] non adest; attamen stationes eaedem a Th. Wolf formae typicae a Formanek collectae attribuuntur, cuius sine dubio sunt.

12. *Potentilla canescens* [Bess., Fl. Gal., I, 330 (1809); Reich., Fl. Germ., 594; Asch. Gr., Syn., l. c., 705; Th. Wolf, Mon. Pot., 268; Beck, Fl. Nied.-Öst. 755 et in Reich., Ic. l. c., 15, t. 24. — *P. inclinata* Mert. Koch, Deutschl. Fl., III 522 (1831) non Vill.]. In apricis, lapidosis, fruticosis, silvis luminosis — 1380 m. Floret m. Junio, Julio.

Bosna: *Asch. Kan., Cat., 97 (1877). Ubi? In adscensu montis Krnin in m. Kozara Pl. (B.); in monte arce coron. opp. Doboj (Ha. Fa. f. Th. Wolf), prox. Zvornik (Wettst. f. Th. Wolf), prope Maglaj (F., Fo. f. Th. Wolf), Mitrovići (M. in litt.). Circa Bihać (Boll., Fo. sub n. *P. confinis* Jord. f. Th. Wolf). Circa Jajce (Fo. f. Th. Wolf). Circa Sarajevo (F.): in montibus Igman 1380 m (M. in litt.), Trebević (Mu.), in monte castello coronato (M.), in valle fl. Miljacka, prope Drljevac, Dragulje prope Pale (M. in litt.), in faucibus Prača, prope Strmica ad fl. Lim, in m. Džermanica et Bikovac prope Višegrad (M. in litt.) in monte Crni Vrh prope Foča (Fo. sub nom. *P. recta* × *argentea* f. Th. Wolf); in monte Maglič versus Mratinje (Rohlena). — **Hercegovina:** In cacuminibus lapidosis mts Preslica (V.), circa Konjic (M.), in monte Velež prope Nevesinje (Fo. sub n. *P. collina* f. Th. Wolf), circa Nevesinje (Mu.), prope Žitomišljici (Mu.); in silva Dubrava (Fo. f. Th. Wolf).

Praeter var. α . *typicam* [Beck, Fl. Nied.-Öst., 755 (1892) et in Reich., Ic. l. c., 16; Asch. Gr. Syn. l. c., 707; Th. Wolf, Mon. Pot., 271] adhuc observatae sunt:

β . *inciso-serrata* [Th. Wolf, Mon. Pot., 16 (1908); Beck in Reich., Ic. l. c., 16]. Bosna circa Jajce (*B.).

f. *fallax* [Uechtr. in Jahresb. schles. Ges. (1862), 81. — *P. Uechtrizii* Zimm. Eur., Art. Pot., 9 (1884). **Bosna:** Circa Fojnica (Schwarz! f. *B.). — f. *Sadleri* [Reich., Fl. Germ., 594 pro spec.; Asch. Gr., Syn. l. c. 710]. **Bosna:** In monte Mašić hrdo prope Novi (*B.). — f. *oligodonta* [Th. Wolf, Potent. Stud., I, 31 (1901) et Mon. Pot., 274]. **Bosna:** Circa Jajce (*Gross et Kneucker 1903). — f. *polyodonta* [Borb. in Akad. Ertes., 9 (1882); Th. Wolf, Mon. Pot. 274]. **Bosna:** Circa et in reliquiis arcis Sokolac prope Bihać (*B.), circa Sarajevo (B.), prope Kluč (B.) ubi foliolis lanceolatis angustis collecta est. — f. *polytricha* [Borb. in Akad. Ertesitö, 9 (1882); Zimm., Eur. Art. Pot., 9 (1884) pro spec.]. **Bosna:** Circa Jajce (Behrendsen f. *Poeverlein).

γ . *fissidens* [Borb. in Akad. Ertesitö, 9 (1882); Beck in Reich., Ic. l. c. 16; v. *laciniosa* Beck, Fl. Südbosn. VIII in Ann. nat. Hofmus., XI (1896), 52=Th. Wolf, Mon. Pot., 276. — *P. inclinata* v. *laciniosa* Mert. Koch, Deutsch. Fl., III, 523 (1831)].

Bosna: Circa Jajce (Behrendsen f. Poeverlein); Han Biosko pr. Sarajevo (*B. 1896)

13. *Potentilla argentea* \times *canescens*. Conf. Th. Wolf, Mon. Pot., 277—279 et Asch. Gr., Syn. l. c., 721.

a) *P. semiargentea* [Borbás in Ak. Ertesitö, 9 (1882) et in Öst. bot. Zeit. (1882), 170. — *P. Kernerii* Borbás, l. c. (1878), 391 p. p. f. Th. Wolf, l. c., 278].

Bosna: In silva Arnautova šuma juxta Vučija luka prope Sarajevo (Fo. sub nom. *P. confinis* Jord. fide *Th. Wolf in Vandas, Rel. Form., 193); prope Mratinje in m. Maglić Pl. (Rohlena).

b) *P. pseudoargentea* [Blocki ex Zimm., Beitr. Pot., 23 (1889)].

Hercegovina: In declivibus lapidosis prope Mostar (Bornmüller 1896 f. *Zimmer!).

14. *Potentilla Visianii* [Pančić in Mem. ist. Ven., XII, 480 (1864) et Fl. princ. Serb., 273 (1874); Zimm., Eur. Art. Pot., 7; Th. Wolf, Mon. Pot., 325. — *P. poteriifolia* Vis. in Mem. ist. Ven., X, 433 (1861), t. II fig. 2 non Boiss.; v. *Visianii* Asch. Gr., Syn. l. c., 744 (1904). — *P. pimpinelloides* Pančić in Verh. zool.-bot. Ges., VI (1856) 487; IX, 142 non L.]. Caulis erectus, robustus, —30 cm et ultra altus, supra furcato-

ramosus, ramis divaricatis, sicut tota patule pilosus et breviter rubro-glandulosus, plurimum obscure fuscus, foliatus. Folia impari-pinnata, petiolata, inferiora plurimum jugis 5—7 praedita. Stipulae caulinae integrae vel 1—2-dentata. Foliola e basi breviter cuneata oblongo-ovalia, grosse crenato-serrata, serraturis utrinque 2—4, superiora utrinque serraturis 1—2 praedita, infra in nervis parce pilosa. Inflorescentia laxa. Flores magni, 22—28 mm lati. Phylla calyculi oblongo-linearum acuta sepals ovatis longiora. Petala magna, obovalia emarginata, sepals bis longiora, aurea vel dilute flava. Noces rugosae. A *Pa pimpinelloidi* L. differt foliis tantum 5—7- (7—12-) jugis-foliolis utrinque dentibus 2—3 modo (non 3—5) grossis instructis, stipulis minus inciso-dentatis, floribus majoribus.

Bosna: Sub *Pinis nigris* juxta Barino—Brištanica et in valle Kruševica prope Višegrad, solo serpentinico. [*K. Malý in Glasn. zem. muz. XXXI (1919) 82.]

Nota apud Asch. Kan. [Cat. corm. Serb., 97], hanc speciem in Hercegovina crescere, est vitiosa. Solum modo crescit in territorio serpentinico Bosnae orientalis et Serbiae finitimae ac insuper in Albania (juxta Svete Trojice prope Prizren f. Dieck sec. Degen in Magy. bot. lap. I, 93.). Statio in cacumine montis Paštrik c. 1900 m (Dörfler in Hayek, Beitr. zur Kenntn. Fl. Alban. Mont. Grenzgeb. [1917] 43) etiam — ut K. Malý in litt. benevole illustravit — corrigenda, quia hac planta in territorio serpentinico finitimo loco quodam multo demissiore reperitur.

15. *Potentilla recta* [L., Spec. pl., 497 (1753); Reich., Fl. Germ., 595; Beck, Fl. Nied.-Öst., 754 et in Reich., Ic. l. c., 17, t. 25—26; Asch. Gr., Syn. l. c., 751; Th. Wolf, Mon. Pot., 334]. In locis apricis, lapidosis, fruticosis, in pratis montanis et subalpinis — 1650 m. Floret m. Junio, Julio.

Bosna: Circa Banja Luka (H.), Doboj (Fo.). Prope Krupa (Fo. sub n. *P. chrysantha* f. Th. Wolf); in monte Vel. Malovan, prope Kupres, Šujica (Pr.), Jaice (C). Circa Travnik et in monte Vlašić — 1200 m (Fr. Br.); circa Zenica (Fo. f. V), Vareš, Potoci, Kralupi (Pr.), Tarčin (Mu.). Circa Sarajevo, (B, Fo.) sicut in monte castello coronato (M.), Trebević (Brancsik), Bukovik (M.), in faucibus riv. Mošćanica (B), ad fl. Željeznica (Mu.) prope Krupac (F.), Galjiva njiva, Grab (F.), Trnovo (B.), Pale (F.), in valle fl. Sutjeska (Fr.). — **Hercegovina:** Circa Nevesinje (V.), in mont. Crveni grm prope Ljubuški (F.), prope Mogorjelo (Behrendsen f. Pöeverlein); Bijela gora prope Orahovac et Dubovac (*P. 1874), inter Orahovac et Lastva (V.)

— **Novipazar:** Prope Jabuka (*B. 1896). Stationes indicatae plurimae fortasse ad var. *sulfuream* pertinere videntur.

Variat:

α. *sulphurea* [Lam., Fl. franc., III 114 (1778) pro spec.; Lapeyr., Hist. Pyren., 288 (1813); Th. Wolf, Mon. Pot., 338; Beck in Reich., Ic., l. c., 17. t. 25=v. *grandiflora* Neilr., Fl. Wien, 627 (1846); *pallida* Lehm., Rev. Pot., 83 (1856); *typica* Beck, Fl. Nied.-Öst., 754 (1892); *acutifolia* Asch. Gr., Syn. l. c., 752 (1904). — *P. recta* Willd., Spec. pl., II 1099 et aut.].

Bosna: Prope Surjan (Fo.), Otaševac ad mont. Klekovača (B.), Donja Tuzla (Bucalović f. M.); in monte Vlašić (Br.), circa Fojnica (B.); Mitrovići (M.), Tarčin (Mu.), in monte Igman pr. Grkarica (F.), in valle fl. Željeznica (Mu.), in agro Sarajevsko polje, in m. Grdonj pr. Sarajevo (M.), in faucibus Prača (Kaut f. M.). — **Hercegovina:** In monte Prenj—Bjelašnica (B.), circa Mostar (F. Hofmann!), in agro Gačko polje (Riedel!).

Prope Ključ in Bosnia collegi formam luxuriantem foliis septenatis, foliolis oblongis multidentatis, stipulis divisis, petalis magnis dilute sulfureis, quae quodam modo varietatem *pilosam* (W.) floribus varietatis *sulphureae* instructam explicat.

f. *quinata* [Sagorski apud Th. Wolf, Mon. Pot., 339 (1908)]. **Bosna:** Circa Fojnica (Schwarz!), Sarajevo (*Mu. 1891). — **Hercegovina:** Circa Nevesinje, in monte Velež (*Mu. 1891), ibidem c. 1400 m (Sagorski f. Th. Wolf). — f. *pseudopallida* [Siegfr., Pot. exs. nr. 946 (1892) pro spec. sine diagn.]. Petala minora quam in typo. Fide Th. Wolf [Mon. Pot. 339] ad f. *microteropetalam* [Th. Wolf, l. c. 339] pertineat. **Bosna** in declivibus montis Trebević (*F. 1896). — **Hercegovina:** Culta a plantis Nevesinje ortis (*Siegfried 1892).

β. *obscura* [Willd., Spec. pl., II 1100 (1800) pro spec.; Koch, Syn. fl. Germ., 213 (1837); Th. Wolf, Mon. Pot., 343; Beck in Reich., Ic. l. c., 18, t. 26].

Bosna: Prope Vranjska (Fo. sub. n. *sulphurea* f. Th. Wolf), Jaice (Fo. f. Th. Wolf, B.); in monte Vlašić (B.), prope Lašva (Ha. Fa. f. Th. Wolf), Zenica (Fo. f. Th. Wolf), circa Donji Vakuf, ad Prusac, in monte Čardak livade versus Pribelja (Ha. Fa. f. Th. Wolf). Circa Sarajevo (B.), prope Mrkojevići, in m. Trebević —1200 m (Mu.), in valle riv. Mošćanica (Fo. f. Th. Wolf), in monte Igman (F.), in m. Siljevina prope Hreša et proxime Gorovići prope Vitez (M. in litt.), circa Kalinovik (Fo. f. Th. Wolf), Goražda, in monte Kmur pr. Foča (Fo.). — **Hercegovina:** Circa Mostar (Lerch. f. M.), Nevesinje (*Mu. 1891) c. floribus paulo majoribus; in m. Baba Pl. (Havelka!).

f. *crassa* [Tausch in Opiz, Böhm. Gew., 63 (1823) pro spec.; Asch. Gr., Syn. l. c., 755; Th. Wolf, Mon. Pot., 341]. **Bosna** et **Hercegovina** (*Asch. Graebn. Syn. 1904). Ubi? Opinionem habeo, nil aliud esse quam plantam loco aridissimo aprico obsoletam.

f. *leucotricha* [Borbás in Öst. bot. Zeit. (1884), 73; (1886), 291 nomen solum et Enum. pl. Castrif., 311 (1887) pro spec.; Th. Wolf, Mon. Pot., 341 pro var.; f. *leucolophias* Asch. Gr., Syn. l. c., 755]. **Bosna:** Prope Krupa (*Fo. 1890 sed a Th. Wolf non probatum), Bihać (Lerch. f. M. in litt.); in monte Gola kosa et Ovčara c. 1450m (Ha.); in monte Vlašić (B.) in formis transientibus ad fm *obscuram*; circa Sarajevo in m. Pašin brdo et castello coronato (M), prope Ophode, in valle fl. Miljačka, in monte Lipovac (M. in litt.). — **Hercegovina:** Prope Mogorjelo (*M. in litt.).

γ. ? *pilosa* [Willd., Spec. pl., II 1100 pro spec; Ledeb., Fl. Ross., II, 46 (1844); Th. Wolf, Mon. Pot., 347].

Bosna: In monte Klek prope Prača [*Fiala, Adnot. in Glasn. zem. muz. (1893)].

δ. *balcanica* [Th. Wolf in Allg. bot. Zeit. (1903) 181 et Mon. Pot., 349; Asch. Gr., Syn. l. c., 764]. Foliolis obtuse dentatis, e basi cuneata obovalibus, petalis sepala superantibus vel aequantibus praestat, sed formis intermediis cum alteris saepius conjungitur itaque aegre distinguenda.

Bosna: Prope Doboij (Fo. f. Th. Wolf), circa Krupa (Fo. sub n. *obscura* f. Th. Wolf); prope Turski Dubovik, Zbilje (Fo. f. Th. Wolf); in monte Jedovnik c. 1600—1650m (Ha. f. Th. Wolf), in m. Marino brdo c. 1400m (Ja. f. Th. Wolf), circa Jajce (*Gross Kneuck. 1903) In monte Trebević (Fo. f. Th. Wolf) c. 1600m (M.). Circa Meštrovac c. 1600m (Schiller f. Th. Wolf). — **Hercegovina:** Ad lacum Boračko jezero (M. in litt.), circa Mostar (*Gross Kneuck. 1903), Nevesinje (Fo. sub. n. *pilosa* f. Th. Wolf), Bročnik prox. Ljubinje (Fo. sub. n. *pilosa* f. Th. Wolf), juxta Cvaljina prope Čapljina (M. in litt.).

Porro observatae sunt f. *viridis* [Th. Wolf, Mon. Pot., 349 = *P. pilosa* var. Velen. l. c.] et f. *parceglanulosa* [Gross Kneuck. in Allg. bot. Zeit. (1903), 95].

f. *vlašićensis* [Th. Wolf, Mon. Pot., 349 = *P. pilosa* var. Siegfri, Pot. exs., nr. 916 (1891)]. Foliis septenatis a var. *balcanica* diversa. **Bosna:** In monte Vlašić (Brandis f. Siegfried 1891 et Th. Wolf) c. 800—1300m.

*Potentilla astracanic*a [Jacqu., Misc., II, 349 (1781) et Ic. pl. rar., I, 10, nr. 92, t. 62 (1781)] enumeratur ex ditioe nostra ab Asch. Gr. [Syn. l. c., 763] sub nom. *P. recta* v. *astracanic*a [Ledeb., Fl. Ross., II, 45 (1844)]. In territorio Bosnae austro orientali (sec. Blau) in collibus siccis aridisque et in declivibus frequenter crescere, dicitur; porro in Hercegovina prope Domanovići a Behrendsen [f. Pöverlein in Glasn. zem. muz. XX (1908) 564] commemoratur. Fide autem Th. Wolf [Mon. Pot., 350—352] *P. astracanic*a est planta culturae dubia, male depicta ac obscure descripta, quae saepius cum *P. taurica*

Willd. conjungitur. Haud dubie stationes plantae nostrae ditionis ad formas var. *balcanicae* pertineant.

16. *Potentilla argentea* × *recta* Th. Wolf, Mon. Pot., 353; Asch. Gr., Syn. l. c., 785]. Quae forma? Ex Hercegovina prope Domanovići (Behrendsen fide *Poeverlein 1905) indicitur. Formanek (1890) hanc hybridam cum f. *P. crassa* Tausch in monte Crni Vrh prope Foča reperisse, f. Th. Wolf [in Vandas, Rel. Form., 186] erroneum est, quia plantae Formanekianae partim ad *P^m canescentem* Bess., partim ad *P^m hirtam* v. *pedatam* pertinent. *P. crassa* autem ad formas *P^{ae} rectae* attribuenda est.

17. *Potentilla laciniosa* [Waldst. Kit. fide Nestler. Mon. Pot., 45 (1816); Reich., Fl. Germ., 595; Th. Wolf, Mon. Pot., 356; Beck in Reich., Ic. l. c., 18, t. 27. — *P. recta* v. *laciniosa* Mert. Koch, Deutschl. Fl., III, 520 (1831) p. p.; Asch. Gr., Syn. l. c., 760. — *P. hirta* v. *laciniosa* Ser. in DC., Prodr., II, 579 (1825). — *P. obscura* subspec. *P. laciniosa* Murb., Beitr. Fl. Südbosn. in Lunds Univ. Årsskr., XXVII (1891), 133]. In locis arenosis lapidosis, saxosis, apricis, inter frutices. Floret m. Junio.

Bosna: In saxis prope Jajce (Behrendsen f. *Poeverlein 1905). — **Hercegovina:** Ad fl. Neretva prope Mostar (*Mu. 1891); prope Mogorjelo (M. in litt.).

18. *Potentilla hirta* [L., Spec. pl., 497 (1753); Asch. Gr., Syn. l. c. 766; Th. Wolf, Mon. Pot., 361; Beck in Reich., Icon. l. c., 19, t. 28]. In locis apricis, aridis, lapidosis, graminosis, praecipue in territorio florum mediterranae — 1400 m. Floret m. Majo, Junio.

Variat:

α. *laeta* [Reich., Fl. Germ., 595 (1832) pro spec.; Asch. Gr., Syn. l. c., 768; Th. Wolf, Mon. Pot., 366; v. *genuina* Lehm., Rev. Pot., 86 (1856); Beck in Reich., Icon. l. c., 19. — *P. pedata* v. *laeta* Focke in Wohlf., Syn. Deutschl. Fl., I, 809 (1891)].

Bosna: Prope Lohovo prox. Ripač (Boller), circa Kupres, Šujica (Pr.) in monte Prolog versus Bilibreg in Dalmatia (*S. 1848); circa Livno (F.). Gubin, Preodac, in monte Hrblijina (Pr.), Šuljaga pr. Koprivnica (*S. 1848 sub n. *hirta*) — sed a nemine ultra in territorio carstiensi Bosniae observata est. Circa Modra (Fo. sub n. *P. recta* et ?*leucotricha* fid. Th. Wolf). In Bosna australi in montibus Trebević et Glog prope Sarajevo (Fo. fid. Th. Wolf in forma elatiore) repertam esse dicitur, sed a nemine ultra col-

lecta est. In valle fl. Sutjeska prope Tjentište, Beleni, Mješajići (Pr.), in monte Crni vrh prope Foča (Fo. sub n. *recta* × *argentea* f. Th. Wolf); in faucibus Prača et in valle Rzav prope Višegrad (M. in litt.). — **Hercegovina**: Frequens circa Mostar (*Str. 1880, Mu, B.) sicut in montibus Hum, Velež (Mu) —1400 m, Mal. Velež prope Nevesinje (Fo. f. Th. Wolf), Crvani Pl. (Mu.); circa Ljubinje (Fo.). Circa Trebinje in montibus Glijiva (V.) et Leotar c. 1229 m (B.), prope Dretelj, Lastva, Glavska (M. in litt.).

Formae sequentes observatae sunt:

f. *pinnatifida* [Gris., Spic. fl. Rum., I, 98 (1843); confer Beck in Reich., Ic. l. c. 18, 19; sec. Th. Wolf, Mon. Pot., 356 ad *Pm lacinosam* W.K. ducenda sit]. — **Hercegovina** in monte Leotar pr. Trebinje (*B.). — f. *subsericea* [Griseb., l. c.]. Vulgata. — f. *micrantha* [Freyn in Abh. zool.-bot. Ges. (1881), 378]. Calyces fructiferi inferiores 6–7 mm (in typo 10–12 mm) longi. **Hercegovina**: In declivibus m. Glogovo versus Jablanica (*B.). — **Dalmatia** in valle Lesnica prope Kotor (B.).

β. *pedata* [Willd., Enum. pl. suppl. 38 (1813) nom. sol. pro spec.; Nestl., Mon. 44 t. VII (1816); Koch, Syn. fl. Germ., 214 (1837); Asch. Gr., Syn. l. c., 769; v. *rubens* Ser. in DC., Prodr., II, 578 (1825); Beck in Reich., Ic. l. c., 20. — *P. rubens* All., Fl. Pedem., II, 58 non aliorum].

Bosna: Inter Breške et Donja Tuzla (B.); in monte Igrisnik prope Srebrenica 1400 m (Wettst. f. *Th. Wolf 1910). In regione media montis Dinara (D.); prope Bočac (Behrendsen). In monte Trebević (Prodan), sed nullo collectore probata. In monte Vučevo prope Bastaši ad fl. Drina (B. 1888), pr. Ifsar c. 1000 m (Schiller f. Th. Wolf). — **Hercegovina**: In valle fl. Trešanica prope Konjic (B.); circa Mostar (Bornmüller 1886! Mu.), in monte Hum (Ja. f. Th. Wolf, B.), in cac. Medved montis Čabulja (Prodan), in monte Velež prope Čitluk (Mu.), prope Buna (Mu.), Stolac (B.), Plužine (Fo. sub *P. laeta* in f. ad *pinnatifidam* Gris. vergente f. Th. Wolf), prope Neum kula (Fo. f. Th. Wolf), in monte Žaba Pl. (Br.), circa Uskoplje, Domanići, Mogorjelo (Behrendsen f. Poeverlein), Mostar-Glavica (Behrendsen f. Poeverlein, Lindberg). Circa Trebinje: in monte Glijiva, pr. Necvijeće, Grančarevo, Orahovac, Vučija (*P. 1874), pr. Visoka glavica (V.), Raška gora, stationem Hum, Sutorina (M. in litt.), Bileća (Boller f. M.).

Varietates *Pae hirtae subsericea* et *holosericea* Gris., a d. Sendtner (1848) in monte Vlašić alt. 1400–1900 m indicatae, ex statione hic inserendae sint vel formae *Pae rectae* ibi frequentissimae exprimere videantur.

19. *Potentilla argentea* × *hirta*. — *Potentilla Lamottei* [Siegfried in Atti soc. nat. Modena, ser. 3 a, XIV, 43 (1896) fide Asch. Gr., Syn. l. c., 786; Th. Wolf, Mon. Pot., 369 = *P. argentea* × *hirta* v. *laeta*]. — **Bosna**: Vaganac prope Petrovac (*Fo. 1890 fide Zimmeter?) Planta reperta f. Formanek [in Öst. bot. Zeit. (1890), 104] foliorum formam ac divisionem eorum *Pae hirtae* v. *laetae* et indumentum *Pae argenteae* demonstrat. Th.

Wolf in Vandas [Reliqu. Form., 188] hybriditatem inter *P. argenteam* et *P. hirtam* confirmavit, sed dubitavit operam et var. *laetae* et var. *pedatae*. Haec proles hybrida f. Th. Wolf in Serbia et Bulgaria non rare reperitur.

20. *Potentilla canescens* × *hirta* [Th. Wolf, Mon. Pot., 370]. — *Potentilla Degenii* [Siegfried in Sched. 1893 fide Th. Wolf, l. c. et Asch. Graebn., Syn. l. c., 785 (cum?) = *P. canescens* × *hirta* β. *pedata*].

Bosna: Inter Jajce et Bočac (Behrendsen f. *Poeverlein 1905); porro in silva Arnautova šuma prope Vučija luka in ditione urbis Sarajevo [Fo. sub nom. *P. confinis* f. Th. Wolf in Vandas (Rel. Form., 189) sed incerte, forsitan *P. argentea* × *hirta*].

21. *Potentilla hirta* × *recta* [Asch. Gr., Syn. l. c., 770; Th. Wolf, Mon. Pot., 371].

Hercegovina: Prope Domanovići (Behrendsen f. *Poeverlein 1905). An *P. pedatoides* [Haussknecht in Thür. bot. Ver. V (1873), 97 = *P. hirta* β. *pedata* × *recta* Th. Wolf, l. c., 372] subsit. non pronuntiatur.

22. *Potentilla adriatica* [Murbeck, Beitr. Fl. Südbosn. in Lunds, Univ. Årsskr., XXVII (1891), 134; Asch. Gr., Syn. l. c., 770; Th. Wolf, Mon. Pot., 373; Beck in Reich., Ic. fl. Germ., XXV 1, 20, t. 29. — *P. taurica* Zimm. in Kern., Fl. exs. austrohung., nr. 1241 et Schedae IV, 8 (1886) non Schlecht.; v. *adriatica* Horak in Öst. bot. Zeit. (1900), 160]. Perennis, pluriceps. Caulis mediocris, —35 cm altus, copiose foliatus, sicut tota setoso-villosus, breviter setulosus et pilis glanduliferis articulatis rectis longioribus copiose tectus ac glutinosus, pilis glandulosis arcuatis parvis paucis immixtis. Stipulae inferiores angustae acuminatae, superiores latiores saepe paucidentatae. Folia inferiora longe petiolata, 5-—7-nata. Foliola e basi cuneata oblongo-obovata, grosse crenato-serrata serraturis utrinque 3—8. Inflorescentia saepe condensata. Flores magni. Calyx villosus et copiose glandulosus. Phylla calyculi oblonga, longitudine sepala acuta aequantia vel breviora. Petala obcordata lutea, calyce longiora. Stylus cylindricus. Nux valde rugosa, carinato-alata, c. 2 mm longa. — *Potentilla taurica* [Willd. in Schlecht., Mag. Ges. naturf. Freunde Berlin, VII (1813), 291; Th. Wolf, Mon. Pot., 173] est planta pontica habitu *Pae adriaticae* similis sed phyllis calyculi maximis, sepala subduplo superantibus egregia. Nuces fere 2 mm longas observavi. Ditionem nostram non intrat, sed in Bulgaria et Serbia orientali reperta est. Differentias

plane exposuit: Murbeck [l. c., 135] et Borbás [a Bolgar fl. 48]. In locis apricis, lapidosis graminosis calcareis — 900 m in ditione florum mediterraneae. Floret m. Junio—Julio.

Hercegovina: In valle fl. Neretva prope Vojno (M. in litt.). circa Mostar (*Mu. 1891, Fo sub nom. *P. recta* f. Th. Wolf, B.) sicut in monte Hum (Mu., B.), ad paludem Mostarsko blato (Mu., B.), prope Miljkovići, Podgorje (Mu.), Radobolje (Lindberg), in monte Podvelež — 700 m (Ja.), prope Bišina c. 900 m (M. in litt.), in monte Busak Pl. (Fo. sub nom. *P. sulfurea* f. Th. Wolf), prope Buna (Mu.), prope Tašovčici ad fl. Neretva (Poeverlein f. M.). Prope Tihaljina in distr. Ljubuški (F.); circa Uskoplje (Berger). In monte Dinara supra Jažovic in Dalmatia finitima (Ja.). Hactenus observata est in **Dalmatia** prope Obrovac versus Podprag (Ja. Wa.), hic loco ad septentriones maxime promoti 44° 13'; prope Verlika, Šibenik, Spljet (Mt. Marian, Sućurac, Scardona), in insula Hvar, in monte Vipera peninsulae Pelješac. — **Crna Gora** prope Bar. — **Albania** in monte Vel. Taraboš prope Škodra.

Potentilla taurina [Steven], quam Protić [in Glasn. zem. muz. XX (1908), 283] e Bosna in monte Vel. Vitorog memoravit, in literatura botanica frustra quaesivi.

Sectio: *Aurastrum*.

[Beck in Reich., Ic. fl. Germ., XXV 1, 21 (1909). — Sect. *Quinquefolium* Focke in Wohlf., Syn. fl. Deutschl., I, 807 p. p.]

Series: *Grandiflorae*.

[Greges *Grandiflorae* et *Chrysanthae* Th. Wolf, Mon. Pot., 51; Beck l. c., 21.]

23. *Potentilla montenegrina* [Pantocsek in Öst. bot. Zeit. XXIII (1873), 5 et Adnot. in Verh. Ver. Naturk. Pressburg, Neue Folge, II (1874), 119; Asch. Gr., Syn. l. c., VI 1, 773; Th. Wolf, Mon. Pot., 447; Beck in Reich., Icon., l. c., 22, t. 31. — *P. grandiflora* Aut. fl. Bosn. et subspec. *montenegrina* Murb., Beitr. Fl. Südbosn., in Lunds Univ. Årsskr., XXVII (1891), 136. — *P. Buccoana* Panč., Fl. Serb., 274 non Clem.; confer Th. Wolf, l. c., 450]. Perennis. Caules elati, — 70 cm alti, sicut tota plus minus pilosi et pilis brevibus glanduliferis copiose tecti, saepe subglutinosi, paucifoliati. Folia basalia longe petiolata, ordine ternata (in cultura partim saepe 4-—5-na); foliola lateralia plerumque breviter petiolulata, oblique ovata, terminalia conspicue petiolulata (petiolulis plantae cultae saepe 2—3.5 cm longis), e basi cuneata obovalia; omnia grosse crenato-serrata, demum glabrescentia. Stipulae ovaes acuminatae;

caulinae saepe paucidentatae. Inflorescentia cymosa, pluriflora, floribus magnis, 20—26 mm latis. Calyx appresse pilosus et breviter conspicue glandulosus. Phylla calyculi oblonga vel elliptica, sepalis latis acuminatis breviora. Petala calyce longiora late obovalia retusa vitellina. Antherae laterales, extremae extrorsae. Noces obovatae tenuiter costatae 1.5 mm longae. Area geographica, statura majore, foliolorum majorum forma et imprimis petiolulis plus minus conspicuis, calycibus majoribus a *P. grandiflora* differt. In pratis subalpinis subhumidis, in locis graminosis, herbosis, in subalpinis usque ad regionem fruticosam, 900—1900 m, solo calcareo. Floret m. Julio, Augusto.

Bosna: In montibus Klekovača (B.), Lisina prope Gornj. Vakuš, c. 1700 m (M.), Vlašić —1900 m loco Mali Santići (S. sub *P. grandiflora* 1848, Br. apud Siegfried, Pot. exs. nr. 279); Vranica Pl. sicut in monte Stražica 1800 m (B.), Marine stijene (Schwarz!), Zec Pl. (Bl. sub *P. grandiflora*); in m. Igman Pl. loco Polom 900—1000 m (M.), Lokvansko brdo prope Pazarić (M.), in m. Trebević 1500—1600 m (*Mu. 1891; Beck, Pl. Bosn. Herc. nr. 185 et al.), prope Vučija Luka c. 1300 m (B.), in montibus Romanija Pl. (B., Fo.), Gola Jahorina, Treskavica, Bjelašnica (M. in litt.), Maglič, Volujak (Pr. sub *P. grandiflora*, Stolac prope Višegrad c. 1400 m (Schiller f. Th. Wolf). — **Hercegovina:** In m. Preslica et Lisin (*V. 1890); Visočica Pl. pr. Gornji Tušila c. 1250 m (B.), Muharnica montis Čvrstica Pl. (F), Glogovo (Zavodny); Velež Pl. supra Jezero (Ja).

24. *Potentilla chrysantha* [Trev., Ind. sem. hort. Vratisl. (1818), 5; Reich., Fl. Germ., 593 p. p.; Th. Wolf, Mon. Pot., 458; Beck in Reich., Ic. l. c., 23, t. 33; subspec. *euchrysantha* Asch. Gr., Syn. l. c., 775. — *P. leiocarpa* Vis. Panč. in Mem. ist. Ven., X., 431, t. 2 fig. 1 (1861) — *P. chrysantha* v. *liocarpa*. Asch. Gr., l. c., 776]. In locis fruticosis, silvis montanis luminosis. Floret m. Martio—Junio.

Bosna: Circa Travnik (*S. 1848), sed hactenus non rursus reperta. Planta a Formanek [in Öst. bot. Zeit. (1889) 60] prope Krupa reperta f. Th. Wolf in Vandas [Rel. Form., 194] ad *Pm rectam* pertinent. — **Hercegovina:** In silvis prope Čemerno (Boller f. *M. in litt.).

P. leiocarpa [Vis. Panč, l. c. — *P. Heuffeliana* Steud., Nom., II, 387 (1841); v. *pseudochrysantha* Borb., Temesvárm. veg., 76 (1884) = ? *P. chrysantha* v. *micropetala* Heuff. in Abh. zool.-bot. Ges., VIII (1858), 101] in Banatu et Serbia reperta a *P. chrysantha* indumento glanduloso, foliolis e basi cuneata obovalibus, floribus minoribus, petalis calyce paulo longioribus differre dicitur, quae notae f. Th. Wolf [Mon. Pot. 460] nullius momenti sunt.

25. *Potentilla Crantzii* [G. Beck in Sched. ex Fl. Nied.-Öst., 760 (1892); Fritsch, Exk. Flora Öst., 295 (1897); Hayek, Pot. Steierm. in Mitt. naturw. Ver. Steierm. (1904), 157; Beck in Reich., Ic. l. c. 26, t. 37 et 38. — *P. verna* L., Spec. pl., 494 (1753) et ed. II, 712 et Fl. Suec., II (1755) p. p.; Asch. in Verh. bot. Ver. Brand., XXXII (1890), 149; Zimm. in Kern., Sched. ad fl. exs. austro-hung. nr. 832. — *Fragaria* . . . Crantz, Stirp. Austr., II, 15, t. I, fig. 2 (1763) = *F. Crantzii* Crantz, Inst., II, 178 (1766) = *F. villosa* Crantz, Stirp. austr., ed. II, II 75 t. I f. 2. (1769) quae tres species certissime eadem et bene illustratae!; observavi eas accuratissime in loco classico. — *P. salisburgensis* Haenke in Jacqu., Collect., II, 58 (1788); Reich., Fl. Germ., 592; Koch, Syn. fl. Germ., 216; Rouy Camus, Fl. Franc., VI, 195. — *P. alpestris* Hall. f. in Ser., Mus. helv., I, 53 (1818); Koch, Syn. fl. Germ., ed. II, 240; Th. Wolf, Mon. Pot., 541. — *P. maculata* Pourr. in Act. Tolos., III (1788), 316 f. Lehmann, sed sec. Th. Wolf?; Lehmann, Rev. Pot., 119; Beck, Fl. Nied.-Öst., 760. — *P. villosa* Zimm. et Beck = Zimm., Europ. Pot. 25 (1884) — Beck, Fl. Hernst., große Ausg., 360 (1884); Focke in Wohlf., Syn. deutsch. Fl., I, 818; Asch. Gr., Syn. l. c., 789; Schinz Keller, Fl. Schweiz, 249 non Pallas.]. In locis lapidosis graminosis, ad saxa in regione subalpina editiore usque alpinam montium (—2200 m). Floret m. Junio—Sept.

Variat:

α. *typica* [Beck in Reich., Ic., i. c. 26 t. 37. — *P. alpestris* v. *typica* Th. Wolf, Pot. Stud., II, 55 (1903) et Mon. Pot., 547. — *P. villosa* v. *typica* Asch. Gr., l. c., 793]. Folia typi quinata; foliola majora, dentibus plurimum subaequalibus, utrinque 2—3 rarius 4. Frequenter.

Bosna: In montibus: Vel. et Mala Klekovača (B., Ha.-Ja.), Troglav (B.), Cincar (B., Sta.), Vlašić (*S. 1848, Br., B.) uti prope fontem Santiči, in monte Opaljenik, prope Vlaška gromila et a. l. In monte Vranica Pl. (B.): in cacuminibus Milenkova Kosa, Krstac, Ločike (B., Bošnjak). In montibus Hranisava, Bjelašnica, Treskavica, Vratlo (Beck, Pl. Bosn. Herc, nr. 8, 187). Gola Jahorina (F.), Lelja, Maglič, Volujak, Ljubična in agro Konjsko polje (B.); Vel. Vran (F.). — **Hercegovina:** In montibus: Prenj (B.), Visočica (B.), Muharnica (F.), Čvrstica (V.), Plasa (Prodan), Medved in m. Čabulja (Prodan), Velež (B.).

Planta indumento copiosiore subsericea = f. *subsericea* (Beck in Reich., Ic. l. c. 27 — *P. alpestris* v. Th. Wolf, Mon. Pot. 551]. Frequenter occurrit. — Plantae minores foliolis oblongo-obovalibus profundius incis, dentibus

angustioribus linearibus = *debilis* [Beck, l. c., 27. — *P. salisburgensis* v. Koch, l. c., 216. — *P. alpestris* var. Th. Wolf, l. c., 551]. Cum typo. In m. Mala Klekovača (*Ha. Fa. [1905] f. Th. Wolf) sed etiam alibi reperitur et in formis numerosis intermediis ad typum vergentibus observatur (B.). — f. *septenata* [G. Beck — *P. alpestris* v. *typica* f. Th. Wolf, Mon. Pot., 549]. Minor. Folia plurimum basalia 6- vel 7-nata. **Bosna:** In regione alpina montis Cincar (*B.). — **Hercegovina:** In cacumine Ortiš montis Prenj Pl. (*B.). — f. *firma* [Hayek, l. c., 162. — *P. aurea* v. *firma* Gaud., Fl. Helv., III, 395 (1828). — *P. villosa* v. *typica* f. Asch. Graebn., l. c., 793. — *P. salisburgensis* v. Koch, Syn, fl. Geim., 216 (1837). — *P. alpestris* v. *firma* Koch, l. c., ed. II, 240; Th. Wolf, Mon. Pot., 554]. Caule firmiore, foliolis subrotundo-obovalibus, marginibus invicem se tegentibus, dentibus latioribus. **Bosna:** In monte Klekovača (*B.). — f. *stricticaulis* [Gremli in Fl. Schweiz, ed. VI, 153, annot. (1889) pro spec.; G. Beck in Reich., Ic. l. c., 27. — *P. alpestris* v. Th. Wolf, Mon. Pot., 555. — *P. villosa* v. Asch. Gr., l. c., 794]. Caule firmiore, foliis saepe 6—7-natis, foliolis majoribus. **Bosna:** In monte Mala Klekovača (Ha.-Ja.) ad f. *subsericeam* transiens f. Th. Wolf; in m. Vlašić 1700—1900 m (Br. f. Th. Wolf).

β. *multidentata* [G. Beck]. Folia 5-nata. Foliolorum dentes utrinque 4—7 saepe ad basim decurrentes et decrescentes. Caetera ut in priore.

Bosna: In monte Vlašić (Br. sub *P. patula!*); in montibus: Klekovača (Beck, Pl. Bosn. Herc. nr. 188), Treskavica (Beck, Pl. Bosn. Herc. nr. 187 p. p.). Probabiliter amplius vulgata.

γ. *pygmaea* [G. Beck — *P. alpestris* v. *typica* f. *pygmaea* Th. Wolf, Mon. Pot., 548 (1908)]. Humilis subcaespitosa, plus minus villosa, caulibus 2—5 cm altis, 1—paucifloris. Folia quinata congesta, foliolis minimis, 3—7 cm longis, obovalibus basi plurimum breviter cuneatis, invicem se tegentibus, dentibus rotundatis vel obtusis saepe suborbicularibus utrinque 2—3 praeditis. Flores magni, 14—19 mm lati. Calyculi phylla plurimum late ovalia. Est forma regionis alpinae summae.

Bosna: In montibus Troglav et Volujak (*B.). — **Hercegovina:** Čvrstica: In montibus Plasa, Drinača (*B.) c. 2000 m. Vel. Čvrstica c. 1900 m (A. Pichler!).

f. *mirabilis* [G. Beck in Reich., Ic. l. c., 27. — *P. mirabilis* Siegr. et Moehrl., Herb. (1894) ex Asch. Gr., l. c., 795. — *P. alpestris* f. *trisepta* Th. Wolf, Mon. Pot., 549. — *P. minima* Beck, Fl. Südbosn. VIII in An. nat. Hofmus., XI (1896), 53 non Hall. f.]. Pumila sicut prior foliis plurimum omnibus ternatis, foliolis minimis vix 5 mm longis, utrinque dentibus 1—2 obtusissimis suborbicularibus praestat. Omnino *P^m dubiam* simillimam imitat, sed petala majora profundius retusa basi aureo-

maculata, foliis hinc inde rarissime quinatis foliolis, ambis basalibus minimis praeditis immixtis.

Hercegovina: Ad nives montis Drinača in Čvrstica Pl. c. 1900 *m* (*B.).

δ. *baldensis* [A. Kern. in Öst. bot. Zeit., XX (1870), 220 nomen solum; Zimm. in A. Kern., Fl. exs. austro-hung. nr. 833 (cum typo edita!) pro spec.; Malý in Glasn. zem. muz. XX (1908), 564 = G. Beck in Reich., Ic. l. c., 27, t. 38 fig. 1—5 (1910). — *P. verna* subsp. Murb., Beitr. Fl. Südbosn. in Lunds Univ. Årsskr., XXVII (1891), 136. — *P. opaca* var. Beck in Ann. nat. Hofm., XI (1896), 53. — *P. alpestris* var. Th. Wolf, Pot. Stud., II, 58 (1903) et Mon. Pot., 552. — *P. villosa* v. Asch. Gr., l. c., 796]. Caespitosa. Caules debiles humiles, saepe pauciflori, sicut tota copiose submolliter pilosi (immixtis pilis glanduliferis minimis). Folia quinata; foliola parvula, summo 15 *mm* longa e basi cuneata obovalia, utrinque dentibus 2—4 obtusis vel subacutis praedita. Phylla calyculi lineari-oblonga; sepala subacuta. Petala pallide lutea vel vitellina, immaculata. Habitu, foliis parvulis, calyce, petalisque saepe pallide luteis praestat, sed multis formis intermediis in formam typicam transit. Saepe cum v. *pygmaea*, quae petalis aureo-maculatis et foliolorum dentibus obtusissimis excellit, confusa est. In alpinis summis montium calc. — 2300 *m*.

Bosna: In montibus Klekovača c. 1650 *m* (Ha. Fa. f. Th. Wolf), Trebević c. 1500 *m* (Lindberg), Treskavica 1750—2000 *m* (*Mu. 1891, Beck Pl. Bosn. Herc. nr. 8 p. p.), Volujak c. 2300 *m* (Br. f. Siegf., Pot. exs. nr. 269 b). — **Hercegovina:** In montibus Prenj Pl. (B.), Velež (*Mu. 1891).

Ad hanc varietatem f. Th. Wolf [Mon. Pot., 553] etiam pertinet *P. verna* f. *carstiensis* Siegf. [Pot. exs., nr. 915] quae in m. Vlašić prope Travnik c. 1500 *m* a d. Brandis reperta est.

26. *Potentilla aurea* [L., Amoen. acad., IV, 316 (1759) et Spec. pl., ed II, 712; Reich., Fl. Germ., 593; Asch. Gr., l. c., 797; Th. Wolf. Mon. Pot., 562; Beck in Reich., Ic. l. c., 28, t. 39. — *P. Halleri* Ser., Mus. helv., I, 75 et in DC., Prodr., II, 576]. »Petoprst zlatasti« In pratis herbosis alpinis regionis subalpinae editioris et alpinae — 2000 *m*. Floret m. Majo—Augusto.

Bosna: In montibus: Klekovača (F.), Vel. Vitorog (Pr.), Stožer (F.), Vel. Malovan, Kamešnica, Troglav. Šator (Pr.), Cincar (Pr., B.), Lupoglav in m. Komar Pl. (Bucalović f. M. in litt.), Vlašić (*S, 1848, B.) — 1750 *m* sicut in cac. Kajambaša (Br. in Siegf., Pot. exs., nr. 252 b), in m. Mačak (Fr. Br.). Frequens in m. Vranica Pl. solo calc. et schistoso — 2000 *m* (Mu., B.) sicut in locis Devetači (Čurčić!), Prokoško jezero (B.), Luka, Gruda

P^m ternatam C. Koch pertinet et propter folia quinata f. *quinata* [*P. ternata* v. *pseudoaurea* Hayek in Öst. bot. Zeit. LXX (1921), 14 (f. M. in litt.)] nominatur. Cum differentiae essentiales indumenti apud *P^m auream*, quae hac in re variat, et apud *P^m ternatam* non reperiri possint, *P. ternata*, si foliis quinatis ludit, quamquam aream geographicam aliam obsidet, pro specie propria non habenda sit.

28. *Potentilla aurea* × *Crantzii* [G. Beck in Reich., Ic., l. c. 42 (1910). — *P. alpestris* × *aurea* Th. Wolf, Pot. Stud., II, 61 (1903) et Mon. Pot., 566. — *P. villosa* × *aurea* Asch. Graebn., Syn. l. c., 800 (1904)].

a) *Potentilla Huteri* [Siegfr., Exs. Pot., nr. 324 (1890) sub *P. aurea* × *alpestris* non Hausm.; Beck, l. c. — *P. aurea* × *verna* Huter in Öst. bot. Zeit. (1905) 108]. Sepala et phylla calyculi acuminata, utrumque angustius quam in *P. Crantzii*. Forma foliorum eorumque indumentum (magis appressum) ut in *P. Crantzii*. Vidi originalia Tirolensia.

Bosna: In declivibus inter septemtriones et orientem solem sitis montis Vel. Klekovača c. 1650m inter parentes (*Ha. Fa. 1905). Non vidi.

b) *Potentilla Fialae* [G. Beck, l. c., 42]. Bene inter parentes intermedia. Foliola oblonga, utrinque dentibus obtusis vel acutis 4–7 subprofunde serrata, copiose et in margine copiosius appresse pilosa. Phylla calyculi sepalaque acuminata. Petala immaculata. Squamae caulium subterraneorum fuscae. Indumento copiosiore minus appresso, foliolis profundius et plurimum latius serratis a *P^a aurea* distinguitur. A *P^a Crantzii* differt foliolis utrinque dentibus 4–7 praeditis, quorum indumentum in margine et in nervis subtus appresso-sericans, sepalis acutis, calyculi phyllis (sepalis angustioribus) longioribus, sterilitate. Ab ejusdem var. *multidentata*, quae indumento patulo excellit, insuper petiolis, margine et nervis pilis appressulis copiosis sericantibus diversa.

Bosna (*B. 1910). Frequens inter parentes in montibus: *Bjelašnica* (B.), *Treskavica* (F.), Beck, Pl. Bosn. Herc. nr. 182b ex parte), Maglić (B.).

29. *Potentilla opaca* [L., Amoen. acad., IV, 274 (1759) et Spec. pl., ed. II, 713 p. p. sed L. Herb. (fide Hartm., Smith, Domin nec Ascherson); Jacqu., Ic. pl. rar., I, 9, t. 91; Reich., Fl. Germ., 592; Dietr., Fl. Boruss., III, t. 169; Koch, Syn. fl. Germ., 217; ed. II, 242; Sturm, Deutschl. Fl., Hft. 17; Lehm., Rev. Pot., 123; Th. Wolf, Mon. Pot., 568; Beck in Reich., Icon,

Matorac, Vitruša (B.), Zec (R.) et a. In omnibus montibus Bosnae australis (B.) sicut Goropec pr. Sarajevo (M. in litt.), Gola Jahorina (F.), Bjelašnica, Treskavica (B.), Lelija (R.), prope Ledići (Landauer), Preslica (M. in litt.) Suha gora, Bregoc, Tovarnica pr. Gornje bare (Pr.), Volujak, Maglić (Beck, Adam. Exs. nr. 79) Ljubična (Schiller f. Th. Wolf) et in agro Konjsko polje (B.). — **Hercegovina:** In montibus Visočica, prope Tušila gornja descendens —1250 m (B.). Plasa (Prodan), Čvrstica (Prodan), Porim (V.), Crvanj (Adam., Exs. nr. 79 f. Th. Wolf).

Formae sequentes observatae sunt:

f. *vegetior* [Favrat ex Siegf. in Bot. Zentralbl. (1895) et Pot. exs. nr. 982; Th. Wolf, Mont. Pot., 563 = ? v. *latifolia* Ser. in DC., Prodr., II, 576 ex Rouy Camus, Fl. de France, VI. 191. — *P. Heerii* Brügger in Jahresb. naturf. Ges. Graub., II, 61 (1880) saltem p. p. f. Th. Wolf]. **Bosna:** Vulgata, praecipue frequens et luxurians in m. Vranica Pl. solo schistoso sicut in locis Vitruša, Matorac (*B.). — f. *Piperorum* [Rohlena, 3. Beitr. Fl. Mont., 27 (1903) = *obtusiloba* Beck in Reich., Ic., l. c., 29, t. 39 fig. 5 (1910)]. Foliola magis ovalia, obtusa, crenato-serrata. **Bosna:** In monte Vranica Pl. rare (*B. 1910). — f. *biserrata* [G. Beck]. Statura major, —33 cm alta formae *vegetioris*, sed foliola foliorum innovationum elliptica, 16—22 mm lata, basi minus cuneata, copiose serrata serraturis utrinque 5—7 saepe denticulo externo praeditis. **Bosna:** In monte Vranica: schistosis cac. Vitruša (*B.). — f. *paucidentata* [G. Beck in Reich., Ic., l. c., 29 et t. 39 fig. 6 (1910)]. Folia innovationum 5- —7-nata, foliolis foliorum omnium basi longe cuneatis in apice modo 3- rarissime 5-dentatis. **Bosna:** In monte Hranisava Pl. (*B. 1910). — f. *macrantha* [G. Beck]. Flores speciosi, 25 mm lati (in typo 15—20 mm lati). Statura nunc ut in f. *vegetiore* nunc in f. *minore*. **Bosna:** In monte Vranica Pl. (Schwarz f. *B.). — f. *minor* [Lehm., Rev. Pot., 129 (1856); v. *alpina* Willk., Führ. Pfl. Deutschl., 506 (1863). — *P. Halleri* v. *minor* Ser. in DC., Prodr., II, 576. — *P. alpina* Zimm., Eur. Pot., 24 (1884)]. In locis magis lapidosis sterilibus et partibus regionum editiorum vulgata et frequens.

27. *Potentilla ternata* [C. Koch in Linnaea XIX (1847), 45; Th. Wolf, Mon. Pot., 567; Beck in Reich., Ic. l. c., 29, t. 40. — *P. chrysocraspeda* Lehm., Ind. sem. hort. Hamb. Add. 14 (1849) et Rev. Pot., 160, t. 54; Simonk., Enum. fl. Transs., 221; Kerner in Öst. bot. Zeit., XIX (1869), 170. — *P. aurea* subsp. Murb., Beitr. Fl. Südbosn. in Lunds Univ. Årsskr., XXVII (1891), 136 — Asch. Graebn., Syn. mitt. Fl., VI 1, 799].

Bosna: Hactenus in alpinis modo m. Treskavica, c. 1800 m (*Mu. 1891) et in m. Gola Jahorina (M. in litt.) inter *Pm auream*. Nota in Asch. Kan. [Cat. Serb., 98], hanc speciem in **Hercegovina** crescere, probabiliter errone delatâ est, quia apud Asch. Graebn. [Syn. l. c.] non iteratur.

Planta, quam Formanek sub nom. *P. aurea* in Bosnae montibus Dumoš- et Morinje Pl. collegit, f. Th. Wolf [in Vandas, Rel. Form., 194—195] propter indumentum probabiliter ad

l. c., 30 t. 41. — *Fragaria rubens* Crantz, Stirp. Austr., II, 14 (1763). — *P. dubia* Moench, Fl. Hass, 433 (1777) et Meth. 659; Beck, Fl. Nied.-Öst., 756. — *P. rubens* Zimm. in Kern., Fl. exs. austro-hung. nr. 838 et Europ. Art. Pot. 16 (1884) non Crantz, qui genus *Potentillam* non comprobavit neque Allioni (1786); Asch. in Verh. bot. Ver. Brandenbg., XXXII (1890), 149 (1891); Focke in Wohlf., Syn. Deutschl. Fl., 814; Asch. Gr., Syn. l. c., 801. — *P. polymorpha* δ . *opaca* Schimp. et Spenn., Fl. Frib., III, 754 (1829). — *P. verna* δ . *opaca* Döll, Rhein. Fl., 771 (1843). — De hac specie confer: Ascherson, l. c. 139 etc.; Asch. Graebn., l. c., 791; Čelak. in Sitzungsber. böhm. Ges. Wiss. (1889) 452 et sequ.; Petunn. in Act. hort. Petrop., XIV (1895), 29 et sequ.; Hayek in Mitt. naturw. Ver. Steierm. (1904), 166; Th. Wolf, Mon. Pot., 569]. Longe patentim pilosa vel villosa. Folia inferiora plurimum 7—9-nata. Foliola e basi cuneata obovali-oblonga, infima etiam ovalia, grosse saepe profunde serrata, dentibus utrinque plurimum 4—7, in margine modo hirsuta. Nuces sublaeves. — In locis aridis apricis, pratis, ad silvarum margines et in silvis apertis usque ad regionem subalpinam (—1800m). Floret m. Aprili—Majo, in locis editioribus serius.

Bosna: Circa Banja Luka (H.), in m. Crni vrh prope Tešanj (Fo.); inter Podselovo Brdo et Pašin konak (Hajderovići), inter Golubinje et Žepče (?), Maglaj et Han Mravići, in valle fl. Spreča versus Turija (*S. 1848). Circa Karaula prope Bihać (Fo., sed f. Th. Wolf incerte), Vareš (Pr.). Circa Sarajevo in m. Trebević. in declivibus m. Šiljato prope Han Biosko c. 1250m, in m. Romanija Pl. (B.), Jahorina (M.), juxta Han Jagodina prope Dobrun (M.). — **Hercegovina:** Circa Trebinje in m. Gljiva (*P. 1874, V.), Leotar (B.), Jastrebica in Bijela gora (*P.).

Variat:

α . *genuina* [G. Beck in Reich., Ic. l. c., 30. — Synon. supra citata]. Foliola latiora, rarius angustiora, basi breviter cuneata, excepta basi plus minus serrata, dentibus utrinque 4—6. Solum observata est f. *typica* [G. Beck pro var. *Pae dubiae* Mch. in Fl. Nied.-Öst., 756 (1892). — *P. rubens* v. *typica* Pöeverl. in Denkschr. k. bayr. bot. Ges. Regensb., VII, Neue Folge, I (1898), 226. — *P. opaca* f. *eglandulosa* Th. Wolf, Pot. Stud., I, 61; II, 32 (1901) et Mon. Pot., 572].

β . *veležensis* [G. Beck in Reich., Ic. l. c., 31 (1910), t. 41, f. 8 (folium)]. Foliola angustiora, basi longe cuneata, in suprema

modo parte serraturis 1—3 praedita. In editioribus saepe pu-
silla, villosissima.

Hercegovina: In alpinis m. Velež c. 1450—1800 m, m. Majo, Junio (*B. 1910).

30. *Potentilla australis* [Krašan in Öst. bot. Zeit. (1867), 302; Zimm., Eur. Art. Pot., 16; Asch. Graebn., Syn. mitt. Fl., VI, 802; Pospich., Fl. öst. Küst., II, 257; Focke in Wohlf., Syn. Deutschl. Fl., 814; Freyn in Abh. zool.-bot. Ges., XXVII (1877), 331; Th. Wolf, Mon. Pot., 576; Beck in Reich. f., Icon. fl. Germ., XXV 1, 31, t. 42. — *P. opaca* subsp. *australis* Murb., Beitr. Fl. Südbosn. in Lunds Univ. Årsskr., XXVII (1891), 136; v. *australis* March., Fl. Trieste, 195 (1897). — *P. verna* β. *hirsuta* Vis., Fl. Dalmat. III (1852). — *P. dubia* Moench f. *australis* Beck, Fl. Südbosn. in Ann. naturh. Hofmus., XI (1896), 53]. — Priori persimilis sed tota pilis longis erecto-patentibus vel subappressis subsericeo-nitentibus plus minus copiose tecta, saepe villosa. Folia 5—9-nata. Foliola saepius e basi cuneata obovalia. Inflorescentia pluriflora, laxe cymosa. Flores tenuiter pedicellati, 10—16 mm lati. Nux conspicue rugulosa. *P^m opacam* in ditione nostra plurimum compensat at in regionibus altioribus formas transientes offert. In pratis montanis, pascuis, ad margines fruticum usque ad regionem alpinam (—1800 m), praecipue in regione carstiensi. Floret m. Martio, Aprili, in altioribus insuper etiam ad m. Junium.

Variat:

α. *typica* [G. Beck in Reich., Icon. l. c., 31. — Synon. supra citata].

Bosna: Probe Pribinić ad m. Borja Pl. (Fo. sub *P. glandulifera* Kraš. f. Th. Wolf), in m. Kolačka Pl. prope Novo selija (Fo.); prope Na podovi pr. Glogovo in pascuis carstiensibus, inter Pribelja et Dubrava (Ha. Fa.), in m. Hrbljina (Ha. Ja.), ad pedem m. Jankovo brdo (Ja. Wa.) et in declivibus m. Dinara (Degen, B.), in m. Uilica, Gola kosa (Ha.), Marino brdo (Ja.); circa Radlovići prope Grahovo (Ha.); inter Glamoč et Hrastičevo 850—1650 m (Ha. Fa.). In m. Gradina pr. Sarajevo (M. in litt.). Bjelašnica, Hrauisava (*B. 1887; Beck, Pl. Bosn. Herc., nr. 90); ad pedem m. Treskavica prope Trnovo (Mu.). — **Hercegovina:** In monte Čvrstica loco Plasa et Čabulja loc. Medved (Prodan); circa Mostar (M.); in m. Velež ca. 1000 ad 1400 m (Mu., B.), in m. West Velež c. 1450—1800 m (B.), prope Gradac in distr. Ljubuški (*F. 1896); circa Široki brijeg (Lakatos f. M.), pr. Gradac in m. Žaba Pl. (F. f. M.).

Formae sequentes observatae sunt:

f. *glandulosa* [Th. Wolf, Mon. Pot., 576]. **Bosna:** Prope Pribinić in m. Borja Pl. (Fo. f. *Th. Wolf, 1909). — f. *angustifolia* [Kraš., l. c.]. — **Hercegovina:** In alpinis m. Velež Pl. c. 1500 m (Bornmüller! f. *B.). — f. *incisa* [G. Beck, l. c.]. Nonnunquam in formis appropinquatis (B.). Egregia in **Dalmatiae** monte Biokovo. — f. *pygmaea* [Krašan, l. c.]. In pascuis frequens.

β. *dinarica* [G. Beck, l. c., 31, t. 42 fig. 10 (folium)]. Phylla calyculi oblonga vel ovalia obtusa, sepalis ovalibus obtusiusculis latis conspicue breviora. Dentes foliolorum saepe obtusiores. Magis in regione subalpina et alpina occurrit.

Bosna: In montibus Dinara, Hranisava, Bielašnica (Beck, Pl. Bosn. Herc. nr. 90). Igman pr. Hrastnički stan et Veliko polje c. 1200—1300 m (M. in litt.), Jahorina [Bucalović, M. sub *P. rubens* v. *dinarica* M. in litt.]. — **Hercegovina:** In montibus Velež (Bornmüller, B.), Porim pr. Rujšće c. 1000 m (Raap Callier, Pl. Herc., nr. 67!). — **Crna Gora** in m. Lovćen (Bornmüller!); **Croatia** prope Gospić (B.); **Istria** in m. Učka (v. Monte Maggiore) (B.).

γ. *Malýana* [Borbás apud Malý, Beitr. in Verh. zool.-bot. Ges. LIV (1904), 204 pro spec. — v. *serpentina* G. Beck in Reich., Ic. l. c., 31 (1910) non *P. serpentina* Borbás]. Petioli purpurei appresse pilosi. Foliola innovationum augustiora e basi longe cuneata oblongo-obovata, serrata, utrinque serraturis 2—4, coriacea, supra glabra vel subglabra, infra in nervis et in margine appresse longe pilosa; pili minores desunt. Dens terminalis lateralibus multo minor. Inflorescentiae axes tenues, pilis longioribus destitutae. Flores minores. Sepala lata, acuminata, phyllis calyculi saepius deflexi oblongis subduplo longiora. Floret m. Aprili.

Bosna: In saxis serpentinis ad septentriones a Maglaj (M! f. *Borbás 1904), circa Žepče, in monte Smolin (B. sub v. *serpentina*). In monte Velež prope Borovnica (M. in litt.)

Forsan ad hanc varietatem pertinet *P. opaca*, quam Sendtner inter Golubinje et Žepče collegit.

P. Zimmereri [Borb. in Acad. Ertes. (1882), 9—10 et in Öst. bot. Zeit. (1882) 170; Zimmet., Eur. Art, Pot., 22 p. p. fide Th. Wolf. — *P. australis* var. Prodan in Magy. bot. lap. (1910), 101] a Prodan in m. Prenj Pl. Hercegovinae collecta f. Th. Wolf. [Mon. Pot. 576] saltem p. p. ad *P^m australem typicam* neque ad *P^m auream*, neque vero ad *P^m auream* × *Crantzii* pertinet, ut idem autor [apud Asch. Graebn., Syn. mitt. Fl., VI 1, 829] enuntiaverat. Huic plantae f. Borbás [l. c.] inter *P^m vernam* et *P^m auream* locus ascribitur, quod non probabile

est, quia *P. verna* in montibus croaticis, quos *P. Zimmereri* incolat, deest. Planta igitur diluceri non potest.

31. *Potentilla patula* [Waldst. Kit., Pl. rar. Hung., II, 218, t. 199 (1802); Reich., Fl. Germ., 592; Koch, Syn. fl. Germ., ed. II, 238; Sturm, Deutschl. Fl., Heft 91, t. 10; Zimmet., Eur. Art. Pot., 16; Focke in Wohlf., Syn. Deutschl. Fl., I, 814; Asch. Graebn., Syn. mitt. Fl., VI 1, 803; Th. Wolf, Mon. Pot., 579; Beck in Reich. f., Ic. fl. Germ., XXV 1, 32, t. 43]. Perennis. Caules plurimum tenues, adscendentes, —25 cm longi, sicut tota pilis longis appressis vel erectopatentibus rigidis, immixtis paucis pilis glanduliferis minimis tecti. Folia basalia longe petiolata, plurimum 7-nata. Foliola e basi longe cuneata linearilanceolata vel oblonga, in parte superiore inciso-serrata vel subpinnatifida, dentibus utrinque plurimum 2—4 (raribus pluribus), obtusis vel acutis, breviter setulosa (imprimis in margine) et plus minus longe setosa. Inflorescentia pluriflora. Phylla calyculi angustissima, linearia v. linearilanceolata, interdum filiformiter convoluta, sepalis late ovatis acuminatis longiora vel ea longitudine aequantia. Petala obcordata flava sepalis summo paulo longiora. Nux conspicue rugulosa. *P^{ae} australi* affinis sed bene foliis angustis, eorum indumento duplici (setulis et setis longioribus), nucibus conspicue rugosis, in typo etiam sepalorum dorso glabro distinguitur. In graminois apricis, collibus usque ad regionem montanam. Floret m. Aprili, Majo.

Bosna: In monte Vlašić c. 1700—1900 m [f. *Freyn Brandis in Abh. zool.-bot. Ges. XXXVIII (1888), 604]; circa Travnik (Br.).

Jam d. Freyn et Brandis stationem in monte Vlašić abnormem designaverunt. Brandis *P^m patulam* nemini misit, qua re haec species nec dominis Ascherson-Graebner nec Th. Wolf e Bosna cognata est. Dubitavi propterea [l. c.] eam in Bosna repertam esse et opinor confusionem cum formibus *P^{ae} australis* foliolis angustioribus instructis. In Serbia autem *P. patulam* repertam esse traditur, cui itidem contra dicitur.

32. *Potentilla verna* [L., Spec. pl. 498 (1753); ed. II, 712 p. p.; Pollich, Hist. Palat. II, 67 (1777); Engl. bot., t. 37; Reich., Fl. Germ., 591; Mert. Koch, Deutschl. Fl., III, 533, Sturm, Deutsch. Fl., fasc. 17; Koch, Syn. Fl. Germ., 217; ed. II, 241; Lehm., Rev. Pot., 117; Focke in Wohlf., Syn. Deutschl. Fl.,

I, 815 (*); Th. Wolf, Pot. Stud., II, 33; Th. Wolf, Mon. Pot., 584; (*); Beck in Reich. f., Ic. fl. Germ., XXV 1, 33, t. 44; v. *viridis* Neilr., Fl. Nied.-Öst., 911 (1859); v. *vulgaris* Ser., Mus. helv., I, 70 et in DC., Prodr., II, 575; Neilr., Fl. Wien, 625; v. *campestris* Wallr., Sched. crit., 238 (1822); subsp. a. *P. vulgaris* Kittel, Tasch. Fl. Deutschl., 3. Aufl., 1183. — *P. opaca* L., Spec. pl., ed. II, 713 et Amoen. ac., IV, 274 p. p.; Zimm., Eur. Art. Pot., 17 (1884); Poev. in Denkschr. K. bot. Ges. Regensb., VII. Neue Folge, I (1898), 238; *α. typica* Beck, Fl. Nied.-Öst., 758. — *P. minor* Gilib., Exerc., 362 (1792)? — *P. polymorpha* Spenn., Fl. Frib., III, 735 (1846) p. p. — *P. varia* Wend., Fl. Hass., 160 (1829) *α.* et *β.* — *P. viridis* Fritsch, Exkurs. Fl. Öst., 295 (1897). — *P. Tabernaemontani* Asch. in Abh. bot. Ver. Brand., XXXII (1890), 156 (*); Asch. Graebn., Syn. mitteleurop. Fl., VI, 805 (*). — *Fragaria verna* Crantz, Stirp. Austr., II, 15, t. 1, fig. 2 (1763) et ed. II, II, 74 (certe p. p. incl. *P. arenaria*). — De huius speciei nomenclatura confer citationes (*) notatas et Focke in Abh. nat. Ver. Bremen, X, 415; Garcke in Engl., Bot. Jahrb., XIII, 459]. Perennis multiceps, surculos prostratos emmittens. Caules floriferi numerosi, —15 rarius —30 cm longi. oligophylli. Folia basalia ± longe petiolata, 5—7-nata, viridia. Petioli pilis erecto-patentibus praediti. Stipularum apices anguste lineares. Foliola e basi cuneata obovata vel oblonga, excepta basi ± saepe profunde serrata, vel subcrenata, dentibus utrinque 2—9 acutis v. obtusis, viridia, ± pilis subappressis longis tecta, rarius etiam pilis articulatis glanduliferis nunquam autem pilis stellatis perfectis immixtis. Inflorescentia laxa, pluriflora. Flores longe et tenuiter pedicellati, 7—20 mm lati. Pedicelli pilis et brevibus undulatis et setiformibus longioribus, saepe etiam pilis articulatis glanduliferis tecti. Calyculi phylla oblonga obtusa, sepalis ovatis acutis breviora. Petala obcordata, flava vel aurea, calyce copiose piloso plurimum duplo majora sed magnitudine et latitudine variantia. Stylus ad stigma incrassatus. Noces rugulosae. In locis graminosis apricis usque ad regionem subalpinam. Loca calida calcarea fugit. Floret m. Martio—Majo, saepe iterum autumnno.

A locis sequentibus enumeratur, sed dubitandum sit, *P^m vernam* hic descriptam (quacum etiam *P. Crantzii* et *P. opaca* L. confunditur), semper fuisse, quod probandum sit, eo magis quia

P. vernam veram fide Th. Wolf [Mon. Pot. 586] in omnibus terris peninsulae balcanicae deesse traditur.

Bosna [*Asch. Kanitz, Cat. corm. (1877) 98]. Ubi? Circa Banja Luka (H.); in montibus Kamešnica et Troglav (Pr.); vulgata circa Vareš (Pr.), Travnik (Br.). — **Hercegovina** [*Asch. Kan., Cat., 98 (1877)]. Ubi? Prope Podorašac et Konjic (M.); circa Mostar solo Neogen (A. Pichler 1899). Non vidi.

P. Tabernaemontani f. *sarajevensis* [Malý in Abh. zool.-bot. Ges. (1904) 201 = *P. Gaudini* var. Asch. Graebn., l. c., 818 = *P. verna* f. *sarajevensis* Malý in Glasn. zem. muz. XXXI (1919) 82] mea sententia, quam in Reich. f., Icon. l. c. 34 exposui, exemplaribus benevole ab autore communicatis exacte scrutatis est forma glandulifera (= f. *glandulifera* Čelak. in Sitzungsber. böhm. Ges. Wiss. (1891), 44; v. *glandulosa* Th. Wolf, Mon. Pot., 591] in omnibus partibus parvula. Pilos stelliformes non observavi, setas modo in basi setulis parvis instructas, quae in typo non rare occurrunt, investigare potui.

Bosna: Circa Sarajevo: in monte Gradina 1250—1270 m (*M. 1899!) et Crepoljsko (M.), Goropec, Koziače prope Vučja Luka 1260—1500 m (M. in litt.).

33. *Potentilla arenaria* [Borkh., Fl. Grafsch. Catzenellenbogen, 1795—1796 (sec. Lehm. et Gaertn. Mey. Scherb.) ampl.; Asch. Graebn., Syn. mitteleurop. Fl., VI, 820 Beck in Reich. f. Ic. fl. Germ., XXV 1, 37 t. 46—47; — *P. incana* Gaertn. Mey. Scherb., Flor. Wetterau, II, 248 (1800); Moench, Meth. Suppl., 279 non Lam. — *P. subacaulis* Host, Fl. austr., II, 40 (1831); non L. — *P. verna* v. *cinerea* Ser. in DC., Prodr., II, 575 (1825) (p. p.); Mert. Koch, Deutschl. Fl., III, 834 (1831); Döll, Rhein. Fl., 771 (1843); Neilr., Fl. Wien. 626 et Fl. Nied.-Öst., 910; Prantl, Exk. Flora Bay., 344; Poev. in Denkschr. bot. Ges. Regensb., VII, Neue Folge, I (1898), 230; v. *campestris* forma b Wallr., Sched., I. 239 (1822). — *P. cinerea* Reich., Fl. Germ., 591. (1832); Koch, Syn. fl. Germ., 217; ed. II, 242; Gren. Godr., Fl. franc., I, 527 non Chaix; β. *incana* Beck, Fl. Nied.-Öst., 757 et f. *arenaria* Rouy, Fl. France, VI. 207 et 208 (excl. β. *Gaudini*). — *P. polymorpha* v. *cinerea* Spenn., Fl. Frib., III, 753 (1829)]. — Pluriceps. Caules prostrati, e surculis elongatis orti, diffusi, florentes parce foliati, —12 cm longi, pluriflori, arrecto-patentes, sicut tota, ± pilis simplicibus setiformibus brevibus et longioribus ac pilis glanduliferis bre-

vibus rarius etiam longioribus tecti. Folia breviter petiolata, plurimum 5—3-, rarius —7-nata. Stipulae ad apicem anguste lineares. Foliola e basi cuneata obovata utrinque dentibus plurimum obtusis 2—6 crenato-serrata, rarius acrius et profundius serrata, autumnalia magis oblonga; omnia et setis appressis, basi saepe stellatis et utrinque vel subtus modo pilis stelliformibus dense stellato-tomentosa, incana vel subalbida. Flores plurimum 15—18 mm lati. Calyx stellato-tomentosus; sepala ovata, rotundato-acuta, phyllis calyculi oblongis orbicularibus longiora. Petala obcordata, calycem superantia, lutea. Stylus ubique aequicrassus. Noces rugulosae. In locis apricis aridis arenosis, saxosis in saxis imprimis solo calcareo —1600 m. Floret m. Martio—Majo, interdum iterum autumnuo.

α. typica [Asch. Graebn., l. c., 821. — *P. arenaria* Borkh., l. c. et Synon. supra citata; Th. Wolf, Mon. Pot., 619; Beck, in Reich. f., Ic., l. c., 37 et t. 46]. Folia basalia quinata, ternatis sexagenis vel septenatis rare hinc inde immixtis.

Bosna: Circa Gubar prope Srebrenica (J.), circa Travnik (*S. 1848 sub *P. subacaulis* L.), prope Jankovići, Paklarevo, Šuplica. In monte Kuk prope Bučići (Br. Fr.); inter Travnik et Vranduk (*S sub *P. subacaulis*). Circa Sarajevo (B., M.), in monte Trebević (Fo. sub *P. Tommasiniana* f. Th. Wolf); juxta Han Jagodina prope Dobrunj (M.).

Formae sequentes observatae sunt:

f. *concolor* [Th. Wolf apud Domin in Sitzungsber. böhm. Ges. Wiss., XXV (1903) 35; f. *meridionalis* Asch. Graebn., l. c. 822. — *P. cinerea* v. *concolor* Heuff. in Abh. zool.-bot. Ges. (1858), 102; v. *typica* G. Beck, Fl. Nied.-Öst., 757]. Foliola concoloria, utrinque dense et intricate tomentosa et pilis longioribus setiformibus appressis basi stellatis tecta. **Bosna:** Circa Sarajevo prope Koševo (B.), in monte Grdonj (M.). — *glandulosa* [Waisb., Köszeg növ., 64 (1891); Wolf, Pot. Stud., I, 86 (1901) — *P. cinerea* v. *glandulosa* Körn. in Verh. nat. Ver. Rheinl. u. Westph., III (1886), 77—78. — *P. cinerea* v. *glandulosa* Poev., l. c., 233]. Indumentum prioris sed planta in partibus superioribus etiam plus minus glanduloso-pilosa. **Bosna:** Circa Sarajevo in monte Goropec (M.). — *pseudovelutina* [G. Beck in Reich. f., Ic., l. c., 38 (1910) — *P. cinerea* Zimm. in Kern., Fl. exs. austro-hung. nr. 827! — *P. Tommasiniana* v. *quinata* Th. Wolf, Mon. Pot., 627 conf. Beck l. c.]. Indumentum foliolorum ut in f. *concolore* sed pili setiformes in superficie foliolorum nulli vel brevissimi, inconspicui, in tota planta plurimum cinerea saepius pauci. **Bosna:** in declivibus mont. Kozara Pl. versus Ivanjska (*B). **Hercegovina:** In monte Porim prope Rujšće c. 1000 m (Raap-Callier, Pl. Herc. nr. 66!). — *minutula* [Th. Wolf, Mon. Pot., 623. — *P. cinerea* f. *ericetorum* Opiz in Lotos IV (1854), 44; v. *minutula* Beck, Fl. Nied.-Öst., 757]. Humilis, in locis

aridis siccis orta, foliolis minimis vix 10 mm longis, floribus minoribus saepe 7—10 mm modo latis notabilis. **Bosna:** In montibus sept. versus circa Sarajevo: Bakije, Grdonj, Goropec (M.!) partim in f. *concolor* partim in f. *glandulosa*. — *discolor* [(Heuff.) Th Wolf, Mon. Pot., 622. — *P. cinerea* v. *discolor* Heuff, l. c., 102 (1858); f. *epipsila* Beck, Fl. Nied-Öst., 757]. Foliola supra parcissime stellata et pilosa, unde viridia, subtus autem plus minus stellato-tomentosa, qua re *discoloria*. **Bosna:** In declivibus calcareis inter Jajce et Jezero (Conrath in Öst. bot. Zeit. [1888] 52 ex descriptione). — f. *ternata* [Čelak., Prodr. fl. Boehm., 628 (1872); Domin in Sitz. böhm. Ges. Wiss. (1904) SA. 9; Beck in Reich., Ic. l. c.; v. *trisecta* Scholz in Schrift. phys. ök. Ges. Königsberg (1896), 153. — *P. cinerea* v. *trifoliata* Koch, Syn. fl. Germ., 217, ed. II, 242 (1843) p. p.]. Folia plurima ternata. Bene evoluta a var. β non distat sed inter typum foliis quinatis occurrit. Folium ternatum aliquid frequenter inter quinata observatur. **Bosna:** Circa Travnik (*Frey Br. ex notis in Abh. zool.-bot. Ges. [1888], 604).

β . *trifoliata* [Borb., Temes megye veget. (1884), 77 et Budap. Fl. 162 (1879) fide Asch. Graebn., l. c., 823; Beck in Reich. Ic. l. c., 38 t. 47; v. *Tommasiniana* Wolf, Pot. Stud., II, 53 (1903) pro subsp. vel var.; Asch. Graebn., Syn. mitteleur. Flora, VI, 822 pro subsp. — *P. subacaulis* Wulf. in Jacqu., Coll. II, 145 et Ic. rar. III, t. 491; Vis., Fl. Dalm., III, 252 non L. — *P. grandiflora* Scop., Fl. carn., ed. II, I, 363, t. 22, non L. — *P. cinerea* v. *trifoliata* Koch, Syn. fl. Germ., 217 (1837); ed. II, 242 p. p.; β . *P. subacaulis* Malý, Enum. pl. Austr., 341 (1848); v. *Tommasiniana* Beck, Fl. Südbosn. in Ann. naturh. Hofm., XI (1896), 53. — *P. trifoliata* Murb. Beitr. Südbosn. in Lunds Univ. Årsskr. XXVII (1891) 136. — *P. Tommasiniana* F. Schultz, Arch. flor., 273 (1858) et in Jahresb. Pollichia (1859), 7; Focke in Wohlf., Syn. Fl. Deutschl., I, 815 [»Von *P. incana* (i. e. *arenaria* α) kaum wesentlich verschieden«]. Folia basalia ternata, quinatis frequenter, septenatis rarius immixtis. [Conf. Beck Fl. Südbosn. in Ann. nat. Hofm. II (1887) 116.] Cetera ut in varietate α . Foliola plurimum utrinque dense intricato-stellato-tomentosa, cinerea vel subalbida, plurimum crenato-serrata. Flores magni, plurimum 12—18 mm lati. Omnes formae expetendae inter α . et β . intermediae copiose in littorali croatico ac frequenter in ditone nostra reperiuntur. Frustra differentias alias quam in foliorum compositione sitas conquisi. Qua de causa *P. Tommasiniana* f. *quinata* [Th. Wolf, Mon. Pot., 627] ad varietatem α . reponenda sit. In saxosis lapidosis, pratis siccis et pascuis, imprimis in ditone carstiensi — 1750 m vulgata. Floret m. Martio, Aprili.

Bosna: In pratis montanis in cacumine Krnin montis Kozara Pl. (B.), prope Otasovac ad m. Klekovača (B.), circa Pribelja (Sta.) et Dubrava 1100 *m* (Ha. Fa.), in m. Kalin prope Bugojno 1100 *m* (Br. f. Th. Wolf), in m. Hrblijina (Ha. Ja.), prope Kupres (F.), prope Marića Košara in m. Dinara (Ja. Wa.), circa Rečkovac, Drvar, Marinkovci, Marino brdo (Ja.), Grahovo, Preodac, Rore, Branešci, juxta Halapić, in m. Veliki Šator (Ja.), inter Glamuč et Rastičevo 800—1600 *m* (Ha. Fa. f. Th. Wolf); in m. Borova glava 1100—1230 *m* (B.), circa Livno (F., B.), in montibus Krug Pl., Cincar (F.), —1730 *m* (B.); prope Šehovci (Fo. f. Th. Wolf), inter Jaice et Jezero (Gross Kneucker). In m. Vlašić (S. sub *P. cinerea?*), circa Travnik (Br. sub *P. cinerea!* etiam Siegfried, Pot. exs. nr. 251a), in valle fl. Fojača prope Fojnica (Mu.). Prope Krupac (Land. et Sündermann!). Frequenter circa Sarajevo (H., B.) uti in declivibus montis Trebević (B., M.) —1500 *m*, in valle fl. Miljacka (B., Fo), in monte castello coronato (Gross Kneucker), prope Bakije, in m. Debelo brdo (Fo. f. Th. Wolf); in monte Maglić versus Mratinje (Rohlena) c. 1500 *m*. Prope Višegrad solo serpent. (Adam. sub *P. cinerea*), in saxis calcareis supra Kovanje (B.). — **Hercegovina:** In m. Ivan, prope Konjic, Jablanica, Mostar (Fo. sed a Th. Wolf non visa); prope Buna, Žitomišljici, in declivibus montis Velež, Crvanj Pl., Bijelasica prope Gacko —1200 *m* (Mu.), Plasa Pl. (Prodan).

Formae sequentes, illis varietatis α . congruentes repertae sunt: *concolor* et *pseudovelutina*, utraque frequens, *glandulosa*, *minutula* frequenter.

P. velutina Lehm., quam prope Koševo reperi, est *P. Tommasiniana* setulis parvis vestita; *P. cinerea* Chaix a monte Trebević pertinet ad *P^m Tommasiniana* f. *quinatam* Th. Wolf. Praeterea reperi prope Koševo formas villosas *P^{ae} Tommasiniana*. Ceterum *P. cinerea* Chaix a *P. arenaria* solum indumento magis patulo et *P. velutina* Lehm. a *P. arenaria* β . pilis fere deficientibus distinguendae sunt, et omnes notae differentiales alterae infidae dubiaeque aestimantur.

Forma *quinata* [Th. Wolf, Mon. Pot., 627], quae ut dixi melius ad formas varietatis α . annumeranda est, aliquoties observata est. Bosna: In valle fl. Drina prope Zvornik (Wettst. f. Th. Wolf), in m. Vitorog versus Pribelja (Ha. Fa. f. Th. Wolf), prope Šehovci (Fo. f. Th. Wolf), in declivibus montis Trebević (B.). Hercegovina: Prope Konjic, Jablanica (Fo. f. Th. Wolf). Plantae foliis quinatis singulis frequenter occurrunt.

34. *Potentilla arenaria* \times *verna* [Beck in Reich. f., Ic. fl. Germ., XXV 1, 35, t. 45. — *P. verna* \times *arenaria* Wolf, Pot. Stud., I, 92; conf. Domin, Böhm. Pot. in Sitz. böhm. Ges. Wiss. (1903), SA. 37. — *P. incana* \times *verna* Asch., Fl. Brand., I, 195 (1860). — *P. arenaria* \times *minor* Asch., Fl. Brand., II, 438

(1866). — *P. opaca* × *arenaria* Zimm., Eur. Art. Pot. 21. — *P. Gaudini* Wolf, Pot. Stud. II, 44 (1903) et Mon. Pot., 605; Asch. Graebn., Syn. mitteleur. Fl., VI, 815. ampl. et p. p. — *P. Gaudini* × *verna* Wolf, Pot. Stud., II, 33 — *P. Tabernaemontani* × *Gaudini* Asch. Graebn., l. c., 824. — *P. Tabernaemontani* × *arenaria* Asch. Graebn., l. c., 825. — *P. subcinerea* Borb., Akad. Értesitö, 9 (1882). — *P. subarenaria* Borb. in Zimm., Eur. Art. Pot., 21 (1884)]. — Folia plurimum 5-, rarius —7-nata. Foliola et calyx pilis et strigosis arrectis vel patentibus et stelliformibus tecta, nunquam autem stellato-tomentosa. Caetera variant ut in utroque parente. — Haec proles certe est hybrida sed ad optimam fertilitatem sicut multae aliae *Potentillae* perventa fines territorii parentium saepius transgressa est et speciem propriam format, quae autem ubique inter parentes renascitur. Th. Wolf et Ascherson eiusdem formas plurimas speciei *Pae Gaudini* inseruerunt.

a) *P. Gaudini* [Gremli, Exk. Fl. Schweiz, 2. Aufl., 171 (1874); Zimm., Eur. Art. Pot., 21 et in A. Kern., Sched. Fl. exs. Austro-Hung. III 21.; Wolf et Asch. Graebn., l. c. (ampl.)]. — Foliola hornotina e basi cuneata obovata, ad apicem dentibus 2—5 obtusis vel acutis utrinque praedita, subtus pilis stelliformibus copiosis cinerascens; foliola autumnalia magis oblongo-obovalia, basim versus longius cuneata, dentibus magis lateralibus.

Hujus loci est pilis glandulosis carens: *P. Tabernaemontani* v. *Boosiana* [K. Malý in Abh. zool.-bot. Ges., LIV (1904) 202 (Vidi originalia benevole communicata) = *P. opaca* v. *Boosiana* Malý in Sched. 1902 = *P. Boosiana* K. Malý in Sched. = *P. Gaudini* v. *Boosiana* K. Malý in Asch. Graebn., l. c., 819 = v. *sarajevensis* f. *Boosiana* Th. Wolf, Mon. Pot., 615].

Bosna: In declivibus graminosis inter valles fl. Miljacka et Moščanica prope Sarajevo (*M. 1904!), in declivibus mts Šijato prope Bioske (B.). Floret m. Aprili, Majo.

b) *P. glandulifera* [Kraš. in Öst. bot. Zeit, XIX (1869). 169 fide orig. non ex diagnosi, ubi de pilis stelliformibus nihil commemoratur. et fide Krašan in Mitt. naturw. Ver. Steierm. (1900), 88; Posp., Fl. Öst. Küstenl., II, 256. — *P. glandulosa* Kraš. in Öst. bot. Zeit. (1867), 303 non Lindley. — *P. Krašani* Beck, Fl. Nied.-Öst., 756]. Est forma pilis glanduliferis plus minus tecta.

Hercegovina: Inter Podorašac et Konjic (*M. 1904). Planta huius nominis a Formanek ex Pribinić Bosnae [Öst. bot. Zeit. [1889] 60] sec Th. Wolf in Vandas [Reliqu. Form., 195] ad *P^m australem* pertinet.

Fide Malý [in litt.] *P. Gaudini* v. *typica* f. *glandulosa* Th. Wolf occurrit porro in **Bosna:** Circa Sarajevo in m. Grdonj, Goropec, Trebević prope Sarajevo c. 680—1300 m (M.). In m. Goropec etiam f. *parceglandulosa* Th. Wolf reperta est. — **Hercegovina:** Prope Podorošac-Konjic; f. *parceglandulosa* etiam prope Konjic-Ljuta (M.).

Ad varietatem *virescens* Th. Wolf et eiusdem formam cum pedicellis et calycibus plus minus glanduliferis plantae f. Malý [in litt.] annumerandae sunt: ex jugo inter valles fl. Miljacka et Mošćanica, ex declivibus m. Mali Orlovac supra Vasin Han et Han Emirovci, Faletići, ex m. Veliki Glog, Bakije, Laze et Gradina, Čolić brdo juxta Nahorevo prope Sarajevo c. 580—1190 m (M.), ex locis Podorašac, Konjic (M.), Borci (J. Bucalović. f. M.)

35. *Potentilla arenaria* × *opaca* [Asch., Fl. Brand., 438 (1866); Beck in Reich., Ic. fl. Germ., XXV 1, 36, t. 49 fig. 7—8. — *Pot. opaca* × *arenaria* Wolf, Pot. Stud., I, 91. — *P. rubens* × *arenaria* Asch. Graebn., Syn. mitt. Fl., VI 1, 831. — *P. opaca* × *Gaudini* Th. Wolf, Pot. Stud., II, 52] a K. Malý [in Glasn. zem. muz. XXIII (1911), 593] ex Bosna juxta Han Jagodina prope Dobrun enumeratur. Habitus plantae repertae congruit cum *P. opaca* sed folia quinata, plus minus fasciculato-stellato-pilosa reperta sunt. Plantam non accuratius descriptam alicui hybridae huc referendae (sicut *P. bolzanensis* Zimm., *P. subrubens* Borb.) attribuire non possumus.

Planta dubia, quae ne quidem Th. Wolf [in Vandas, Rel. Form. 195] interpretari potuit, est *P. Tommasiniana* × *opaca* [Form. in Öst. bot. Zeit. (1889), 145], quae in m. Bakije prope Sarajevo a Formanek reperta est. Haud dubie i. Th. Wolf. *P^{ae} Gaudini* adjungenda sit. Opinio autem domini Th. Wolf, nec *P^m opacam* nec *P^m Gaudini* in peninsula balcanica crescere, interea dissoluta est.

36. *Potentilla arenaria* × *argentea*.

P. Brandisiana [Siegfr. in Sched. et Pot. exs. nr. 910 ex cultura; Beck in Reich., Ic. fl. Germ., XXV 1, 42. — *P. arenaria* β. × *argentea* Beck, l. c. — *P. argentea* × *Tommasiniana* Th. Wolf, Mon. Pot., 628]. Habitu *P^{ae} argenteae* humilioris similis, sed indumento foliolorum utrinque pilis stelliformibus densis formato cinereo *P^m arenariam* in memoriam reducit.

Bosna: Prope Travnik (Br. f. *Siegfried). Non vidi.

? 38. *Potentilla collina* Wibel, Prim. fl. Werth., 267 (1799) et aut p. p. Confer: *Collinae* Th. Wolf, Mon. Pot., 285 et sequ.; Asch. Graebn., Syn. l. c., 722 et sequ.; Beck in Reich., Ic. fl. Germ., XXV 1, 45, t. 50]. A. d. Formanek [in Öst. bot. Zeit. 1889, Beil. 104] in m. Mali Velež prope Nevesinje Hercegovinae repertam esse. traditur, sed f. Th. Wolf [in Vandas, Rel. Form., 194] adest planta adeo imperfecta, ut determinari non possit; probabiliter ad *P^m canescentem* pertinet.

Sectio: *Tormentilla*.

[*Axilliflorae* Lehm., Rev. Pot., 8. — Sect. *Tormentilla* Tausch, Hort. Canal., fasc. I (1823); Endl., Gen., 1242; Beck in Reich., Ic. fl. Germ., XXV 1, 52. — Sect. *Pentaphylloides* Tausch, l. c. — Sect. *Tormentilla* et *Chenopotentilla* Focke in Abh. naturw. Ver. Bremen X (1889), 415. — *Tormentillae* et *Anserinae* Wolf in Asch. Graebn., l. c., 671—672. — Sect. *Anserina* Gaud., Fl. Helv., III, 370 p. p. — *Tormentilla* L., Gen. ed VI, 256, nr. 635; Spec. pl., 500; Koch, Syn. il. Germ., 220. — *Argentina* Lam., Fl. franc., III (1778), 118.]

39. *Potentilla erecta* [Hampe in Linnaea XI (1837), 50 = Dalla Torre, Anleit. zur Beob. Alpenfl., 204 (1882); Murb. in Bot. Not. (1890), 196; Beck in Reich., Ic. fl. Germ., XXV 1, 52. — *Tormentilla erecta* L. Spec. pl. 500 (1753); Sturm, Deutschl. Fl., Heft 34; Fl. dan., t. 589; Reich., Fl. Germ., 588; Koch, Syn. Fl. Germ., 220. — *Fragaria tormentilla* Crantz, Stirp. austr., II, 23. — *Potentilla silvestris* Neck., Del. Gall. Belg., I, 222 (1768); Beck, Fl. Nied.-Öst., 752; Asch. Graebn., Syn. mitt. Fl., VI, 833 — *P. tormentilla* Neck., Hist. Comm. acad. Palat., II, 491 (1770); Sibth., Fl. Oxon., 162 (1794); Koch, Syn. Fl. Germ., ed. II, 240; Lehm., Rev. Pot., 176; Focke in Wohlf., Syn. Fl. Deutschl., I, 819; Wolf, Mon. Pot., 643. — *P. Tormentilla erecta* Scop., Fl. carn., ed II, I, 360. — *P. tetrapetala* Hall. fil. in Ser., Mus. Helv., I, 51 (1818)]. »Srčenjak, stežnik, steža«. In pratis, pascuis, inter virgulta, in silvis luminosis, paludosis, declivibus lapidosis usque ad regionem alpinam (—2000 m). Floret aestate usque ad m. Octobr.

Bosna: Circa Novi, Krupa, Zalin, Sasina, Sratinska, Buletić, Teslić, in m. Crni vrh prope Tešanj, circa Žabljak (Fo. maxima parte f. Th. Wolf). Circa Banja Luka (H.), Vrbanja solo serp. (C.). Donja Tuzla (M.), in m. Hršin prope Nov. Kasaba (J.), circa Maglaj (Fo.) f. Th. Wolf), Žepče (Fo., B.), in m. Smolin (B.) in locis ultimis solo serpent. In agro Dugo polje (Fo.). Prope Šujica, in m. Vel. Malovan, prope Gubin in m. Prolog, Vještica gora, prope Grčovac, Preodac (Pr.) Circa Travnik (*S. 1848), in m. Vlašić (Br.

etiam Siegiried, Pot. exsicc., nr. 6a), in m. Vilenica (Fr. Br.). Frequenter circa Fojnica (Mu., B.) et in m. Vranica Pl. (Sim. Vierh., B.) sicut in m. Matorac (R.!) Pogorelica (Schwarz!). Circa Vareš (Fo., Pr.), in m. Bjelašnica (M.). Vulgata in Bosna australi (B.) sicut in agro Sarajevsko polje (Mu.), in valle fl. Željeznica (Pr.), circa Sarajevo: in m. Trebević (F.), circa Hreša, in m. Glog (Fo. f. Th. Wolf), prope Vučija Luka c. 1300 m (B.) et a. l. Circa Kalinovik, in Zelengora. in valle fl. Sutjeska, prope Mješajići (Pr.). — **Hercegovina:** In agro Nevesinjsko polje (Mu.). In Bjelagora prope Medov dol et Vučija (*P. 1874), in m. Visoka glavica (V.).

Variat:

α. typica [Beck in Reich. Ic. l. c. 53 t. 59. — *P. silvestris* *α. typica* Beck, Fl. Nied.-Öst., 752 (1892); v. *eusilvestris* Asch. Graebn. I. c., 834 — *P. tormentilla* v. *typica* Wolf, Pot. Stud., I, 103 (1901) et Mon. Pot., 645. — *P. erecta* Zimm., Eur. Art. Pot., 5. — *Torm. parviflora* v. *sessilifolia* Wallr. in Linnaea XIV (1840), 580]. — Caules floriferi in basi saepe flexuosi, graciles, procumbentes vel ascendentes, rarius suberecti, 10–30 cm longi. Folia caulina sessilia, foliolis —2 cm longis, plurimum e basi longius cuneata oblongo-lanceolatis. Stipulae digitato-incisae. Inflorescentia divaricato-ramosa, exceptis plantis minoribus multiflora. Flores cymosi, parvuli, c. 5–10 mm lati.

Formae sequentes adhuc observatae sunt:

minor [Zimm., Beitr. Kenntn. Pot. 10 (1889). — *P. silvestris* f. *minima* Beck, l. c., 752; *alpina* Asch. Gr., l. c., 835]. Vulgata. — *micrantha* (Vocke fide Zimm., l. c., 5. — *P. silvestris* f. *parviflora* Asch. Gr., l. c., 835. — *Tormentilla parviflora* Wallr., l. c., 580]. **Bosna:** Circa Fojnica (Schwarz f. *B.) — *incisa* [Beck, l. c., 53. — *P. silvestris* f. *incisa* Domin in Sitz. böhm. Ges. Wiss. (1903), 40; f. *pinnatifida* Asch. Gr., l. c.]. **Bosna:** Circa Sarajevo, Žepče (*B.). — *dacica* (Beck, l. c., 54. — *P. silvestris* v. *divergens* Asch. Gr., l. c., 840. — *P. dacica* Borb. apud Zimm., Eur. Art. Pot., 5; Th. Wolf, Mon. Pot., 647]. Plantae affines f. Th. Wolf a Formanek prope Zaspá in Bosna repertae sunt. — Forma *laxa* Form. [in Öst. bot. Zeit. (1889) 59] a m. Trebević prope Sarajevo mihi ignota est.

β. strictissima [Hayek in Mitt. naturw. Var. Steierm. (1904) 186 = Beck in Reich., Ic. l. c., 54, t. 60, f. 1. — *P. strictissima* Zimm., Eur. Art. Pot., 5 (1884) = *P. silvestris* f. *strictissima* Beck, Fl. Südbosn. in Ann. naturh. Hofmus., XI (1896). 51; v. *Neumayeriana* Beck, Fl. Nied.-Öst., 752 vix Tratt.? (conf. Wolf, Mon. Pot., 652, nota) = *P. tormentilla* v. *elatior* Tratt., Mon. Ros., VI, 74; v. *strictissima* Focke, l. c., 820. — *Tormentilla alpina* Opiz, Boh. Gew., 64 (1823) f. Domin.]. — Caules floriferi firmiores. — 50 cm longi, plurimum erecti et in

basi recti, minus ramosi. Folia caulina sessilia vel breviter petiolata. Foliola majora saepe ultra 3 cm longa, basi \pm cuneata. Stipulae majores, tri-multifidae (rarius integrae vel bidentatae). Inflorescentia pauciflora. Flores singuli, majores. Videtur varietas bene distinguenda cuius formae humiliores saepe caulibus decumbentibus gaudent.

Bosna: Circa Sarajevo sub virgultis, prope Koševo, in valle fl. Moščanica (F.). Certe amplius vulgata.

Ad hanc varietatem pertinet forma nana: *sciaphila* [Beck, l. c., 54, — *P. silvestris* v. *sciaphila* Asch. Gr., l. c. — *P. tormentilla* Th. Wolf, Mon. Pot., 648]. Parvula. Caules graciles, prostrati, pauciflori. Folia plus minus petiolata, foliolis saepius magis ovatis. Stipulae integrae vel bifidae. Flores parvuli. **Bosna:** Prope Banja Luka in formis affinibus (*Fo. 1888), prope Han Begovac (distr. Bihać) (Fo. etiam f. Th. Wolf).

40. *Potentilla reptans* [L., Spec. pl., 499 (1753); Lehm., Mon. P., 144 et Rev. Pot., 183 (α - ϵ); Koch, Syn. Fl. Germ., 215; ed. II, 239; Reich., Fl. Germ., 591; Beck, Fl. Nied.-Öst., 753; Focke in Wohlf., Syn. Deutschl. Fl., I, 821; Murbeck in Bot. Not. (1890), 223; Asch. Gr., Syn. l. c., 844; Th. Wolf, Mon. Pot., 654; Beck in Reich., l. c., 55, t. 62. — *Fragaria pentaphyllum* Crantz, Stirp. austr., II, 23]. In pratis, pascuis udis, fossis, ad vias, agros — 1200 m. Floret m. Majo—Sept.

Bosna: Vulgata et frequens prope Maglaj ad fl. Vrbas (H.); circa Kobaš (Prodan), Derventa (B.), Donja Tuzla (M.), in m. Ilinčica (B.), prope Prosjek, Zlohanje, Djevanje (I.), circa Žepče (B.), in m. Grad oppidi Krupa (B.), circa Petrovac (B.) in m. Kriva jelika prope D. Vakuf (Ha. Fa.), prope Glamoč, Preodac (Pr.), circa Travnik (*S 1848, Br.), Paklarevo (Fr. Br.), Fojnica (Mu., B.), Kiseljak (Mu.). Inter Kakanj et monast. Sutjeska (*S. 1848), prope Pajtov han et Kralupi (Pr.), prope stationem Vogošća (B.), Tarčin (Pr.). Frequens circa Sarajevo (F., Mu., B.), in agro Sarajevsko polje (Mu.); prope Pale (Pr.), in jugo Metaljka (B.) inter Prebilje et Pod Vitez (Pr.); in valle fl. Željeznica et Sutjeska (Pr.) inter Čemerno et Suha (Mu.). — **Hercegovina:** Ad pedem m. Preslica (V.); ad lacum Jezero prope Borci (Blau), prope Lediči (Landauer), in monte Velež (Raap Call, Pl. Herc., nr. 276!), in agro Nevesinjsko polje (Mu.), ad paludem Mostarsko blato (B.); prope Domanovići (Behrendsen f. Pöeverlein), in agro Gacko polje (Mu.). Circa Trebinje et Vučija (*P. 1874).

Formae sequentes observatae sunt:

typica [Asch Gr., Syn. l. c. 845 p. p.; Th. Wolf, Mon. Pot., 656] — *glabriuscula* [Peterm., Fl. Lips., 378: *glabra* Koch, l. c.; ed. II, 239]. Utraque frequens. — *hirsuta* [Opiz in Lotos, IV, (1854), 44; *mollis* Borbás, Fl. Budap., 162 (1879)]. — **Hercegovina** ad ripas paludis Makarsko blato prope Mostar (Bornmüller!). — f. *microphylla* [Tratt., Ros. mon., VI, 80; *minor*

Ser. in DC., Prodr., II, 574; *Hohenackeri* Asch. Graebn., l. c., 848]. Vulgata; etiam *Novipazar* prope Prijepolje (P. Zahlbr. f. Hayek). — f. *Blavii* [Asch. Gr., l. c., 848 = v. *subpinnatifida* Lehm. Pug, IX, 71 (1849); Th. Wolf, Mon. Pot., 658 p. p.]. Foliola grosse et aequaliter acriter serrata. Phylla calyculi ovalia maxima, sepalis dimidio longiora. Calyculi phylla talia maxima, sepalis bis et ultra longiora non rare in f. *typica* reperiuntur et formam sequentem *anomalam* constituunt, in f. nostra foliolis acrius serratis conjunguntur. — **Bosna:** In faucibus riv. Bistrica in m. Trebević (M.). Formas similes etiam a Fojnica vidi. — f. *anomala* [Ledeb., Fl. Ros., II, 53 pro spec.; Lehm., Rev. Pot., 183]. — **Bosna:** In locis udis prope Fojnica (Schwarz f. *B.). — **Hercegovina** prope Podorašac (*M. 1904).

41. *Potentilla erecta* × *reptans* [Zimm., Eur. Art. Pot., 6 (1884); Murb. in Bot. Not. (1890), 208 et Beitr. Südbosn. in Lunds Univ. Årsskr. XXVII (1891), 132; Beck in Reich., Ic. fl. Germ., XXV 1, 56. — *P. reptans* × *tormentilla* Focke in Wohlfl., Syn. Deutsch. Fl., I, 820; Wolf, Pot. Stud., I, 112 et Mon. Pot., 659. — *P. silvestris* × *reptans* Asch. Graebn., Syn. mitteleur. Fl., VI, 852]. Parentibus et *Pae procumbenti* persimilis sed polline et nucibus maximam partem sterilibus.

Potentilla Gremlii [Zimm., Eur. Art. Pot., 6 (1884) Beck, l. c., t. 63, f. 1 = *P. adscendens* Greml, Beitr. Fl. Schweiz. 68 (1870) non W. K. — *P. reptans* × *tormentilla* f. *pertomentilla* Focke, l. c., 821. — *P. supertormentilla* × *reptans* Th. Wolf, Pot. Stud., I, 114]. Subsericea, caules suberecti, firmuli; folia inferiora quinata, longius petiolata. Foliola obovato-oblonga. Stipulae integrae vel paucidentatae. Flores subcymosi, majusculi, plurimum pentameri. *Pae erectae* formis majoribus similis, sed foliis caulinis petiolatis plurimum quinatis, stipulis partim fissis, floribus majoribus saepius pentameris bene distincta.

Bosna: In pratis, sub virgultis in agro Sarajevsko polje prope Vruci (*B. 1887; Beck, Pl. Bosn. Herc., nr. 102; Mu.), Bačevo, Vrelo Bosne (Mu.) vulgata. Floret m. Junio, Julio.

Series: *Pentaphylloides*.

[Tausch, Hort. Canal., I (1823). — Sect. *Anserina* Gaud., Fl. Helv., III, 405 (1828) p. p. — Sect. *Chenopotentilla* Focke in Abh. naturw. Ver. Bremen X (1889), 415. — Grex *Anserinae* Wolf, Mon. Pot., 52 et 667. — *Argentina* Ludw., Inst., ed. II, (1757), 145.] Folia pinnata vel interrupte pinnata.

42. *Potentilla anserina* [L., Spec. pl., 495 (1753); Reich., Fl. Germ., 596; Koch, Syn. fl. Germ., 213; ed. II, 236; Lehm., Rev. Pot., 188; Zimm., Eur. Art. Pot., 6; Focke in Wohlfl., Syn. Deutschl. Fl., I, 821; Beck, Fl. Nied.-Öst., 751; Wolf,

Mon. Pot., 669; Asch. Graebn., Syn. mitteleur. Fl., VI, 854. Beck in Reich., Ic. fl. Germ., XXV 1, 57, t. 64. — *P. argentina* Huds., Angl., 195. — *Fragaria anserina* Crantz, Stirp. austr., II. 9 (1763). — *Argentina vulgaris* Lam., Fl. fr., III, 119 (1778). — *A. anserina* Rydb., Mon. North. Am. Pot., 19 (1898) — *Dactylophyllum anserina* Spenn., Fl. Frib., III, 1084 (1829). In pascuis, ad vias, ripas, in fossis. Floret m. Majo—autumno.

Bosna: [*Asch. Kan., Cat., 97 (1877)]. Ubi? Prope Brčko ad fl. Sava (B.); juxta Zvornik (J.). In agro Suhopolje juxta m. Plazenica (Sta.). Prope Arnautovići juxta Visoko, prope Sarajevo (Fo.). Juxta Podivice prope Gajiva njiva (Bucalović f. M.). — **Hercegovina:** Prope Ledići (Landauer! f. *B.).

Variat:

α. *sericea* [Hayne, Arzneigew. IV nr. 31 (1816) = Koch, Syn. fl. Germ. 213; *concolor* Wallr., Sched., 236 (1822); = Ser. in DC., Prodr. II, 582; *holosericea* Gaud., Fl. Helv., III, 406 (1828); *argentea* Neilr., Fl. Nied.-Öst., 908; *unicolor* Schur, Enum. Trans., 189. — *P. sericea* Zimm., Eur. Art. Pot. 6 non L. — *P. concolor* Lehm. ap. Zimm. in Sydow, Bot. Kal. (1887), 66.

Bosna: Circa Kupres c. 1100m (*Br. 1890/91 f. Th. Wolf, sed paulo minus pilosa).

β. *vulgaris* [Hayne, l. c. (1816); *discolor* Wallr., l. c.; *communis* Turcz. in Bull. soc. nat. Mosc., XVI (1843), 623; *bicolor* Schur, l. c., 189; *argentina* Asch. Graebn., l. c., 855].

Bosna: Circa Ilidža agri Sarajevsko polje (Fo. f. *V. 1909).

Subtribus: *Eudryadeae*.

[Torr. Gray, Fl. bor. Am., I, 426; Endl., Gen., 1245; Beck in Reich., Ic. fl. Germ., XXV 1, 59.]

3. *Waldsteinia*.

[Willd., Neu. Schrift. Ges. naturf. Freunde Berl., II (1799), 105, t. 4; Benth. Hook., Gen., I, 619; Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 36; Asch. Gr., Syn. mitt. Fl., VI 1, 873; Beck in Reich., Ic. fl. Germ., XXV 1, 59.]

1) *Waldsteinia geoides* [Willd., l. c., 106, t. 4; Neilr. Diagn. Ung., 45; Waldst. Kit., Pl. rar. Hung., I, t. 77 (1799); Pančić, Fl. Serb., 271; Focke in Wohlf., Syn. Deutschl. Fl., I, 825; Asch. Gr., Syn. l. c., 873; Beck in Reich. Ic. l. c., 59, t. 65]. In sylvis montanis umbrosis, inter virgulta. Floret m. Aprili, Majo.

Novipazar: In valle fl. Lim inter Prijepolje et Priboj (*B. 1896). In Serbia frequentius observata.

4. *Geum*.

[L., Spec. pl., 500 (1753) et Gen. ed. V, nr. 561; Endl., Gen., 1246; Benth. Hook., Gen. I, 619 p. p.; subgen. *Eugeum* Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 36 (1894); sect. *Caryophyllastrum* et *Caryophyllata* Sér. in Mém. soc. phys. Genève, II, 138, 139 et in DC., Prodr. II, 550, 551; sect. *Eugeum* et *Caryophyllata* Torr. Gray, North-Am. Fl., I (1840), 420. — Conf. Scheutz, Mon. Georum in Nov. act. soc. sc. Ups., ser. III (1870); Beck, Die *Geum*-Arten der Balkanländer in Abh. zool.-bot. Ges. (1895), 101 et in Reich., Ic. fl. Germ., XXV 1, 59.]

Sectio: *Eugeum*.

[Beck in Reich., Ic. l. c., 60. — subgen. *Eugeum* Focke, l. c.; sect. *Geoidea* Rouy Cam., Fl. franc., VI, 158.]

1. *Geum coccineum* [Sibth. Sm., Fl. Graec. prodr., I. 354 (1806) et Fl. Graec., V, t. 485; Boiss., Fl. Or., II, 697; Pančić, Fl. Serb. add., 138; Velen., Fl. Bulg., 175; Asch. Gr., Syn. mitt. Fl., VI 1, 882; Beck, *Geum* Balkanl., l. c., 101 — *G. Sadleri* Friv. in Flora XVIII (1835), 332 — *G. macedonicum* Friv., Iter II, 166 ex Griseb., Spic. fl. Rum., I, 96. — Confer K. Malý, *Geum coccineum* u Bosni in Glasn. zem. muz., XXIX (1917), 97—104]. Rhizoma crassum ascendens. Caulis simplex vel supra ramosus, erectus firmus paucifolius, 2-—4-florus, cum calyce dense glanduloso-pilosus. Folia basalia interrupte pinnata, foliolis inferioribus 4—8 minimis approximatis, sessilibus inaequalibus ovalibus, terminali maximo reniformi flabellato-nervoso, omnibus inaequaliter bicrenato-dentatis, copiose appressule pilosis. Folia caulina sessilia, foliolis 5—3 inciso serratis composita. Flores pedicellati maximi. Calyculi phylla parvula oblongo-linearum, sepalis e basi lata longe acuminatis denuum reflexis multo minora. Petala obcordato-rotunda sessilia, sepalis bis longiora, rubro-aurantiaca, cinnabarina rarius lutea. Noces villosae; articulo styli inferiore plus minus longe piloso, superiore plurimum glabro inferiore aequilongo. In pratis subalpinis uvidis usque ad regionem alpinam. Floret m. Junio, Julio.

Bosna: Adhuc loco Vlahinja montis Bjelašnica c. 1900 m (Bucalović f. *M. 1907). In Serbia, Macedonia, Bulgaria et Albania reperta est.

2. *Geum molle* [Vis. Panč., Pl. Serb. rar. I in Mem. dell' ist. Ven., X (1861), 429 t. XIX fig. I B.; Scheutz, Mon. Geor.,

27; Panč., Fl. Serb., 271; Beck, *Geum* Balkanl., l. c., 102 et in Reich., Ic. l. c., 26 t. 70. — *G. aleppicum* v. *molle* Asch. Graebn., Syn. mitteleur. Fl., VI 1. 880 (1904)]. Affinis *G^o aleppico* sed caule ad basim modo rigide piloso, foliorum basalium inaequaliter pinnatorum foliolis lateralibus paucis minimis, lobo terminali maximo ovato-orbiculari cordato lobato, indumento copiosiore in foliis rigide velutino, in pedicellis longe setuloso (ut in *G^o aleppico*) sed et pilis et glandulis articulatis longioribus aucto, sepalis late ovatis abrupte acuminatis, floribus fructiferis globosis, area geographica intra terminos penninsulae balcaniae coercita distingui potest. Confer: Rohlena, 5. Beitrag Fl. Mont. in Sitzungsab. böhm. Ges. Wiss. 1911 (1912), 39]. Inter virgulta, in silvis apertis, etiam in declivibus graminosis usque ad subalpinos elatiores —1600 *m*. Floret m. Junio, Julio.

Bosna: In monte Vitorog (Sta.); juxta Brezovača prope Glamoč (Ha. Fa.), in m. Stožer (Pr.). Frequentius in Bosna australi sicut in m. Igman prope Sirovci, Crni vrh, Malo polje, Grkarica 1100—1400 *m* (F.), in m. Trebević prope Sarajevo —1600 *m* (V., Mu., A. et alii), Romanija Pl. (*Blau 1877, B.). — **Hercegovina:** In m. Preslica (V.). Circa Nevesinje (V.); Bijela gora prope Dubovac (*P. 1874), inter Milanov odsjek et Radkuša jama, prope Visoka glavica, Begova korita, in m. Ledenik (V.). Circa Bogojević selo, in m. Štirovnik, Gnjila greda, inter Vrbanje et m. Orijen (V.).

Variat. Lacinia ultima foliorum basalium hinc inde inaequaliter triloba et caulis 1—3-florus observantur.

3. *Geum urbanum* [L., Spec. pl., 501 (1753); Reich., Fl. Germ., 598; Koch, Syn. fl. Germ., 209; ed. II, 232; Focke in Wohlf., Syn. Deutsch. Fl., I, 823; Scheutz, Mon. Geor., 24; Asch. Graebn., Syn. mitt. Fl., VI, 877; Beck, Fl. Nied.-Öst., 761 et in Reich., Ic. fl. Germ., XXV 1, 61, t. 68. — *G. caryophyllata* Gilib., Fl. Lith., V, 258 (1782). — *Caryophyllata urbana* Scop., Fl. Carn., ed. II, I, 364. — *C. officinalis* Moench, Meth., 660]. »Stopa zečja«. Inter virgulta, ad sepes, in pomariis, silvis frondosis apertis, in locis subhumidis humosis usque ad regionem subalpinam editiorem (—1600 *m*). Floret m. Majo bis Juli.

Bosna: Circa Kobaš (Prodan), Banja Luka, Maglaj ad fl. Vrbas (H.); prope Prosjek, Zlohanje, Djevanje (J.), Krupa (Fo.), in monte Velika Gomila (B.), circa Vrtoče, in m. Osmača Pl., prope Ljubačevo (Fo.), in m. Lisina prope Varcar Vakuf (B.), in m. Kriva jelika prope Donji Vakuf (Sta. Fa.), m. Vel. Malovan et Hrblijina, circa Kupres, Šujica, in m. Prolog, Vještica gora (Pr.), Dinara (Degen), Ilica (Ja. Wa.), in jugo Strmac versus Grkovci (Ja. Wa.) in m. Golja supra fontem Korita (Sta. Fa.); circa Gubin, Glamoč,

Preodac (Pr.). Circa Travnik (*S. 1848) sicut prope Bukovica (S.), Gučja gora (Franjić!) et a. l. Circa Fojnica (S.), in m. Pogorelica (Schwarz!), circa Kukavica, Visoko (Fo.), Vareš, Tarčin (Pr.). — In Bosna australi vulgatum (B.), sicut in m. Igman (B.), circa Sarajevo (H. B.), in valle fl. Mišjačka (B.) et in a. l. In jugo Metaljka pr. Pod Vitez (B.), in valle fl. Željznica, prope Kalinovik, in Zelen-Gora (Pr.); in valle Sutjeska (Pr.) prope Suha (B.), in angustiis Sušička ad m. Maglič (B.), in valle fl. Drina (Pr.). — **Hercegovina**: In m. Preslica (V.) prope Jablanica (Prodan), Mostar (A. Pichler), in m. Velež (Mu.) imprimis versus Nevesinje (B.) 1000—1400 m; circa Nevesinje (V.), in m. Crvanj Pl. (Mu.) in silva Plana dola prope Neumkula (Fo.). Circa Trebinje (*P. 1874), in m. Leotar c. 1229 m (B.), in Bijela gora prope Vučijak (P.), Orahovac. Lastva, in m. Ledenik (V.): circa Bičea (P.).

Occurrit f. *glandulosum* [Murbeck. Beitr. Fl. Südbosn. in Lunds Univ. Årsskr., XXVII, 11 (1891)]. Inflorescentia (caules, petioli, pedunculi) et articulus stylorum inferior pilis glanduliferis numerosis tecta. — **Bosna**: In m. Lisina prope Varcar Vakuf cum typo (*B.). — **Hercegovina**: In silvis subalpinis montium Crvanj et Bjelasica Pl., c. 1300—1600 m, vulgatum. (*Mu. 1891).

Folia infima caulina plantae bosnensis sunt ut in planta Europae mediae petiolata aut pinnata cum foliolorum paribus 1—2 inaequalibus aut ternata, folia caulina superiora sensim brevius petiolata solumque triloba, in supremis laciniis rhombeis praedita. Differentias inter foliationem plantarum bosnensium cum illis terrarum balticarum, ut Stadlmann et Faltis [in Öst. bot. Zeit (1904), 483] annotaverunt, observare non potui.

4. *Geum rivale* [L., Spec. pl., 501 (1753); Reich., Fl. Germ., 598; Focke in Wohlf., Syn. Deutschl. Fl., I, 823; Asch. Graebn., Syn. mitt. Fl., VI 1, 876; Beck in Reich. f., Ic. fl. Germ., XXV 1, 60, t. 67. — *Caryophyllata rivalis* Scop., Fl. Carn., ed II, I, 365. — *C. nutans* Gilib., Fl. Lith., V, 256 = Moench., Meth., 661]. In pratis humidis, locis herbosis, humidis, ad ripas usque ad regionem alpinam (—1940 m). Floret m. Majo—Julio.

Bosna: In m. Lisina prope Varcar Vakuf (B.), pr. Kupres (F.), ad lacum Kukavičko jezero prope Kupres (Pr.), in m. Troglav (B.); circa Glamoč, Preodac (Pr.), in m. Raduša (Sta.), in valle fl. Semešnica pr. Donji Vakuf et. in m. Čardak livade (Sta.). In m. Vlašić —1940 m (*S. 1848, Br. B.). In m. Vranica Pl. —1800 m (Mu.), sicut in m. Krstac (Bošnjak), Vitruša (B.), ad rivulum Globoki potok (Schwarz!); circa Vareš, Tarčin (Pr.). In m. Hranisava, Bjelašnica, Igman, Treskavica imprimis ad lacum Vel. jezero (B.), in Zelengora (Pr.), circa Kadino selo prope Mokro (M.), inter Previla et Pod Vitez (Pr.), in faucibus Suha gora (B.), in agro Konjsko polje montis Ljubična, 1600 m (Schiller fide Ja.). — **Hercegovina**: In m. Jastrebnica (*P. 1874).

Variat indumento et longitudine pilorum glanduliferorum. In m. Treskavica reperi formam sepalis serratis ornatam. Prope Bjela voda in m. Bjelašnica porro detexi formam, formae *pallido* [Blytt, Norges Fl., 1178 (1876) = *G. pallidum* Fisch. Mey., Ind. sem. hort. Petrop. (1846), 49. — *G. rivulare* v. *eglandulosum* Peterm., Fl. Lips., 384] affinem, laciniis terminalibus foliorum basaliū insigniter magnis, reniformibus, inaequaliter crenato serratis, floribus minoribus, calycibusque subviridibus praeditam, quae *Geum perrivale* [Focke, Pflanzenmischl., 124 (1881) = *G. rivale* × *urbanum*] admonet.

5. *Geum rivale* × *Sieversia montana* [Beck in Reichenb., Ic. fl. Germ., XXV 1, 63. — *G. montanum* × *rivale* Focke, Pflanz.-Mischl., 125]. Folia lyrata, lacinia ultima maxima. Caulis ramosus 2—pauciflorus, floribus subcymosis, primum nutantibus. Sepala erecta vel patentia, extus pilosa et glandulosa. Petala obovata, in unguem attenuata, lutea. Noces plurimum steriles. Torus fructifer brevissimus vel nullus.

α. *Geum inclinatum* [Schleich., Cat. pl. Helv., 46 (1815); Koch. Syn. fl. Germ., ed. II. 233; Čelak., Prodr. Fl. Böhm., 624; Scheutz, Mon. Geor., 47; Beck, Fl. Nied.-Öst., 762 et in Reich., Ic., l. c., 63, t. 76; Keller in Verh. zool.-bot. Ges. (1906), 360. — *G. sudeticum* Tausch, Hort. Canal., 90 (1823) et in Flora (1824), 28. (Vidi orig.) — *G. pyrenaicum* Koch, Syn. fl. Germ., 209 non Ram. — *G. montano* × *rivale* Reich., Fl. Germ., 598. — *G. montanum* × *rivale* Focke, Pflanz.-Mischl., 125. — *G. rivale* × *montanum* Čelak., l. c., 624. — *G. subrivale* × *montanum* Kern. in Öst. Bot. Zeit. (1867). 106. — *Geum rivulare* × *montanum* Beck, Geum-Art. Balk., l. c., 104. — *G. rivali* × *montanum* c. *sudeticum* Asch. Graebn., Syn. mitt. Fl., VI, 889. — *G. rivali-montanum* Gillot in Bull. soc. bot. France, XXXIII, 550 = *Billietii* Gillot in Bull. Herb. Boiss., I (1899), App. 4, 17; Rouy Cam., Fl. France, VI, 164; anatom. conf. in Ann. sc. nat., sér. 8, II, 9. »styles presque tous articulés«]. Flores expansi pauci. Calyx saepe purpurascens. Petala suborbiculata, brevissime v. breviter cuneato-unguiculata, saturate lutea, nervis ± rubescentibus, calyce longiora. Articulus styli plurimum uterque pennato-pilosus, inferior etiam glanduloso-pilosus vel apicem versus glaber et superiore bis vel ter longior. Noces steriles. — Petalorum forma et colore a *Geo*

rivali differt. Nunc quasi *Sieversiam montanam* parvifloram habitu humiliore, caule 1—3-floro, foliis parvulis obsito in memoriam redigit, nunc caule elatiore, foliis majoribus praedito, plurifloro *Gei rivalis* commonefacit. Nuces maturas non investigavi. Styli non semper articulati, sed hinc inde *Sieversiae* modo inarticulati, ad locum geniculi in articulo inferiore glabri et ibidem recti vel partim modo flexuosi. Sic in Magn. Fl. sel. nr. 2181 (= *G. Billietii* fide Rouy Camus), partim in *Geo sudetico* originali. Sed haec nota non in omnibus floribus constat. Inter parentes. Floret m. Julio, Augusto.

Bosna: In m. Vlašić prope Travnik c. 1300—1750 *m*, solo calcareo (*S. 1848 sub *G. inclinato*), pluries etiam in locis 1850 *m* altis (B.). In m. Vranica Pl. culmine Matorac (B.), solo schistoso.

5. *Sieversia*.

[Willd. in Mag. naturf. Freunde Berlin V (1811), 397; Endl., Gen., 1246; Beck, Fl. Nied.-Öst., 762 et in Reich. f., Ic. fl. Germ., XXV 1, 65. — *Geum* sect. *Oreogeum* Ser. in Mém. soc. phys. Gèneve, II, 139 et in DC., Prodr., II, 553 (1825); sect. *Buchhavea* Reich., Consp., 167 (1828); sect. *Sieversia* Torr. Gray, Fl. North Am., I, 423; Scheutz, Mon. Geor., 49; Focke in Wohlf., Syn. Deutschl. Fl., I, 824; Asch. Graebn., Syn. mitt. Fl., VI 1, 886. — Subgen. *Sieversia* Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 38; subgen. *Eusieversia* Rouy Camus, Fl. Franc., VI, 165.]

1. *Sieversia montana* [R. Br. in Parry, 1. Voy., App. 276 (1823); = Spreng., Syst., II, 543 (1825); Reich., Fl. Germ., 599; Beck, Fl. Nied.-Öst. 763 et in Reich., Ic., l. c., 66, t. 73. *Geum montanum* L., Spec. pl., 501 (1753); Koch, Syn. fl. Germ., 210; ed II, 233; Sturm, Deutschl. Fl. Heft 14; Scheutz Mon. Geor., 51; Focke in Wohlf., Syn. Deutsch. Fl., I, 824; Asch. Graebn., Syn. mitteleur. Fl., VI, 886. — *Caryophyllata montana* Scop., Fl., Carn., ed. II, I, 365]. In pratis et pascuis regionis alpinae montium solo calcareo ac schistoso — 2000 *m*. Floret m. Junio—Augusto.

Bosna: In montibus: Stožer prope Kupres (F.), Vel. Šator (Pr.), Vlašić 1400—1900 *m* (*S. 1848, Br., B.). Frequens in schistosis montis Vranica Pl. (Mu., B.) — 1980 *m* sicut circa lacum Prokoško jezero, in m. Stražica, Tikva, Luka, Matorac, Gruda (B.), Kozo (Moellendorf), Zec (Schwarz!); in m. Bjelašnica (Beck, Pl. Bosn. Herc. nr. 49) c. 1800 *m* solo calcareo. — **Hercegovina:** Fide Asch. Kan., Cat., 97 (1877) et Asch. Graebn., l. c. sed ubi?

Praeter typum caule unifloro egregium formae sequentes observavi: *submultiflora* [Opiz in Lotos, IV (1854), 94. — *G. montanum* f. *polyantha* Uechtr., Res. Durchf. schles. Phan. für 1885, S. A. 32; f. *geminiflorum*

Borbás in Öst. bot. Zeit. (1888) 158]. **Bosna:** Non rare in m. Vranica Pl. (Mu., B.); in m. Raduša prope Prozor (Čurčić f. M.). — *multicaulis* [Beck, l. c., 66]. Ibidem. — *minor* [Pers., Syn. pl., II, 57 (1807) = Séringe l. c.]. In pascuis alpinis exilibus vulgata. — *grandiflora* [Beck, l. c. — *G. montanum* v. Tausch]. Hinc inde in m. Vlašić, Vranica (*B.). — *velutina* [G. Beck]. Tota planta usque ad calyces, praecipue folia pilis sericantibus longis pilosissima-velutina. In m. Vranica Pl. non rare occurrit, etiam in formis sensim ad typum parcius pilosum transeuntibus (*B.). — *semiplena* [G. Beck]. Petala duplicata. **Bosna:** In m. Matorac montis Vranica Pl. rare (*B.).

2. *Sieversia bulgarica* [Nym., Consp. Suppl. II, 113 (1889). Beck in Reich. Ic. fl. Germ., XXV 1, 66, t. 75. — *Geum bulgaricum* Panč., Elem. fl. Bulg., 26 (1883); Boiss., Fl. Or., Suppl., 232; Velen., Fl. Bulg., 176; Beck Geum-Art. Balk., in Verh. zool.-bot. Ges. (1895), 103; Asch. Graebn., Syn. mitt. Fl., VI, 888]. Caudex crassus. Folia basalia in rachi crassa hispidissima, lacinia terminali maxima reniformi inaequaliter crenatolobata, hispida et lateralibus copiosis saepe minimis instructa. Caules floriferi foliis bracteiformibus paucis obsiti, superne subcymose 2—7-flori. Flores nutantes. Pedicelli longi, sicut calyx \pm glanduloso-villosi. Sepala ovalia, acuta, petalis obcordatis in unguem longum sensim attenuatis intus sulphureis, extus subalbidis marginem versus rubescentibus (f. K. Malý) longiora. Nuces et styli pennato-hispida. In locis saxosis lapidosis, in rupium fissuris regionis alpinae montium calcareorum. Floret m. Julio.

Hercegovina: In m. Prenj Pl. in declivibus saxosis montis Ortiš versus alpem Tisovica c. 1800 m (*B. 1896); in m. Plasa (Pr.) prope fontem (Prodan). In m. Muharnica montis Čvrstica Pl. (M. in litt.). In m. Čabulja Pl. in declivibus septentrionalibus prope Sedlo c. 1500 m (M.!) consocio *Sibiraeae croaticae*. Ex Bulgaria, Crnagora et Albania nota.

6. *Dryas*.

[L., Spec. pl., 501 (1753) et Gen., ed V nr. 562; Endl., Gen., 1247; Benth. Hook., Gen., I, 618; Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 98.]

1. *Dryas octopetala* [L., Spec. pl., 501 (1753); Reich., Fl. Germ., 599; Sturm, Deutschl. Fl., V, Heft 20; Koch, Syn. fl. Germ., ed, II, 232; Focke in Wohlf., Syn. Deutsch. Fl., 822; Beck, Fl. Nied.-Öst., 763 et in Reich. f., Ic. fl. Germ., XXV 1, 68, t. 77]. In alpinis saxosis lapidosis, pascuis regionis alpinae, solo calcareo et schistoso, 1600—2200 m. Floret m. Junio—Augusto.

Bosna (*Boué 1840). In montibus Klekovača (F., B.), Vel. Vitorog (Pr.), Kamešnica (Pr.), Troglav (B.), Šator (Pr.), Cincar (B., Pr.), Vranica in cacuminibus Krstac usque ad Ločike (Mu., B., Bošnjak), Hranisava, Bielašnica (B.), Treskavica (Bl., B.), Klek (F.), Orlovac, Todor in Zagorje (R.), Bregoc (Pr.), Suhagora, Maglić (B.), Volujak (Mu., B.). — **Hercegovina**: In montibus Prenj (B.), sicut in cac. Bielašnica, Ortiš (B.), Osobac (Pr.), Prenj (B., Schiller), Porim (V.) et a.; Čvrstica (Fr. Br.) in cac. Muharnica (F.), Vel. Viličinac (V.), Drinača (B., Prodan), Plasa (V., B.), Čvrstica (V.) —2200 m (A. Pichler). In m. Velež (B.) —2000 m (Bornmüller!), Zimomor in Crvanj Pl. (Ja.).

α. typica [Beck, Fl. Nied.-Öst., 763]. Vulgata.

β. eglandulosa [Beck in Reich. f., Ic. l. c. 68 (1912)]. Pedicelli et calyces copiose sericeo-albo-tomentosi. Glandulae in pedicellis nullae, in calyce in pilos plumosos (ut in petiolis) transformatae. Foliorum indumentum ut in *α*.

Bosna: In regione alpina m. Cincar prope Livno (*B. 1912). — **Hercegovina**: In m. Čvrstica 2000—2200 m (A. Pichler! f. *B.).

III. Subtribus: *Rubae*.

[Dumort., Anal. fam., 39 (1829); Benth. Hook., Gen. I, 603 sub tribu *Dalibardeae* Torr. Gray, Fl. North Am., I, 449 (1838—1840); Endl., Gen., 1241. — subtrib. *Rubinae* Focke in Engl. Prantl, Nat. Pflanzenfam., III 3, 12 et 28 (1894).]

7. *Rubus*.

[L. Spec. pl., 492 (1753) et Gen., ed. V, nr. 557; Endl., Gen., 1241; Benth. Hook., Gen., I, 616; Focke in Engl., Prantl, Nat. Pflanzenf., III 3, 28. — *Literatura principalis*: Weihe et Nees, Die deutschen Brombeersträucher (Elberfeld 1822—1827); Focke, Synops. Ruborum Germaniae (Bremen 1877); Halácsy, Österr. Brombeeren in Abh. zool.-bot. Ges. (1891), 197—294; Beck, Fl. Nied.-Öst., 718; Focke in Asch. Graebn., Syn. mitteleur. Fl., VI 1, 440 et sequ. (1902) et Spec. Rub. in Bibl. bot. Heft 72 (1914); Boulay in Rouy Camus, Fl. France, VI (1900), 30; Sudre, Rubi europaei (1908—1913); Gayer, Prodr. Bromb. Ung. in Magy. bot. lap. XX (1921) (1922)

1. *Literaturam reliquam additur locis definitis.* »Kupina«.

Sectio: *Cylactis*.

[Raf. in Sillim., Journ. (1819) 377 pro gen.; Focke in Abh. naturf. Ver. Bremen, IV, 146 (1874) et Syn. Rub., 95 (1877) pro subgen. et in Engl. Prantl, Nat. Pflanzenf., III 3, 29 pro sect. — Sect. *Chamaebatus* Wallr. Sched., 224 (1822).]

1. *Rubus saxatilis* [L., Spec. pl., 494, (1753); Focke, Syn. Rub., 95; Hal. Öst. Bromb., l. c., 216; Beck, Fl. Nied.-Öst..

720; Asch. Gr., Syn. l. c., VI 1, 443]. In locis lapidosis graminosis dumosis, glareosis regionis subalpinae et alpinae montium, solo calcareo et schistoso (—1900 *m*), rarius in locis profundius sitis. Floret m. Majo—Augusto.

Bosna: In m. Osječnica (F., B.), Vitorog (Pr., Sta.), Kamešnica (Pr.), Troglav (B.), Jedovnik pr. Dvar (Ja.) et ad rivulum Ravni potok c. 700 *m*, Šator supra lacum c. 1600 *m* (Ja.), Cincar (B.), Borova glava 1100—1230 *m* (B.), Vlašić —1900 *m* (*S. 1848, Br., B.), prope Paklarevo (S.), Braikovici (Fr. Br.) et a. l. In m. Vranica (Mu.), Treskavica (F., Mu., B.) locis Ogorjeli Kuk (F.), Vratlo (B.); Jahorina a. 1580 *m*, Bjelašnica (M.); in m. Bregoč (Pr.), Ulobić (B.), Maglić (B., Pr.) imprimis juxta lacum Jezero (B.), Volujak (Pr.). — **Hercegovina:** Prope Gornji Lukomir (M.); in m. Prenj Pl. (B.) l. Boračka draga (Pr.), Ortiš (B.), Obrlin (M.). Porim (V.); in m. Velež (Mu.). In Bijela gora in m. Ledenik prope Milanov odsiek (*V. 1888).

Sectio: *Idaeobatus*.

[Focke in Abh. naturf. Ver. Bremen, IV, 147 (1874) et Syn. Rub., 97 (1877) pro subgen. et in Engl. Prantl, Nat. Pflanzenf., III 3, 30 pro sect.]

2. *Rubus idaeus* [L. Spec. pl., 492 (1753); Weihe u. Nees, Deutsch. Bromb., 107, t. 47; Focke, Syn. Rub., 97; Hal., Öst. Bromb., 216; Beck, Fl. Nied.-Öst., 720; Asch. Graebn., Syn. l. c., 444]. »Malina«. In sylvis caesis, dumetis, silvis apertis, silvarum faucibus imprimis in regione subalpina usque ad regionem Pini mugo (—1780 *m*). Floret m. Majo—Julio.

Bosna: In m. Vitorog (Sta.), prope Pribelja, Podgorje (Ha. Fa.), in m. Šuljaga, Vel. Malovan (Pr.), Prolog (Pr., B.), Vještica gora (Pr.), Jedovnik pr. Drvar (Ja.), Cincar —1700 *m* et Krug Pl. 1100—1300 *m* (B.), circa Gubin, Preodac (Pr.), prope Kadina voda (H.), circa Karaula pr. Jajce (Fo.). In m. Vlašić (*S. 1848), pr. Čatići (Br. f. Sabransky, Fr. Br.), in valle fl. Lašva prope Trebeuša (Br.). Circa Fojnica (B.), in m. Vranica et Štit Pl. (Mu.); prope Vareš, in m. Zvijezda, circa Dubošćica (Pr.); Tarčin (Pr.). In Bosna australi vulgatus (B.) sic in m. Bjelašnica, Treskavica (B.) hic —1780 *m* (M.), Vratlo (B.), Trebević (B.) —1629 *m*, Igman, Ravna, Vel. Žep (M.), in valle fl. Željeznica, in Zelengora (Pr.), prope Borje in Zagorje (Adam.), in faucibus Prača (M.), in valle fl. Sutjeska in Suha gora (Pr.), in m. Maglić (B.) et Volujak, circa Ustikolina (Pr.). — **Hercegovina:** In m. Lovnica (M.), Prenj Pl.: Boračka draga (Pr.), Za Kantarom (M.) et Bjelašnica (B.), Porim supra Rujšće (V.); in declivibus m. Čabulja (B.); in m. Velež (Mu.), Mali Velež pr. Nevesinje (V.) et in declivibus versus Nevesinje (B.); in m. Crvanj et Bjelasica (Mu.). In Vučija bara pr. Gacko (Mu.); in m. Glijiva pr. Trebinje (*P. 1874), Svitavac, Stirovnik, pr. Visoka glavica (V.). — **Novi Pazar** prope Svetlo borje (*B. 1896).

Sectio: *Eubatus*.

Focke in Abh. nat. Ver. Bremen, IV, 148 (1874) et Syn. Rub., 102; Sudre, Rubi eur., 15 pro subgen.: Focke in Engl. Prantl, Nat. Pflanzenf. III 3, 31 pro sect.¹

Suberecti.

[Focke, Syn. Rub., 103; Hal., Öst. Bromb., 217; Beck, Fl. Nied.-Öst. 721; Asch. Gr., Syn. l. c., 451; Sudre, Rubi, eur., 17; Gayer, Prodr. l. c. 12.]

3. *Rubus plicatus* [Weihe Nees, Deutsch. Bromb., 15, t. 1 (1822); Focke, Syn. Rub., 111; Beck, Fl. Nied.-Öst., 721; Asch. Gr., Syn. l. c., 459; Sudre, Rubi eur., 18, t. IV. — *R. fruticosus* L., Spec. pl., 493 et aut. p. p.; Hal., Öst. Bromb., 219].

Bosna: In faucibus silvarum m. Kriva glava prope Novi (*B.). Circa Fojnica (Schwarz!) incompletus itaque?

4. *Rubus plicatus-sulcatus*. Turiones non sulcati. Foliola subtus pilosa; basalia sessilia vel subsessilia, terminalia elliptica vel obovalia, basi rotundata. Inflorescentia pauci-(—10-) flora, aculeis paucis praedita. Stamina stylos superantia.

Bosna: In faucibus silvarum m. Kriva glava prope Novi (*B.).

R. canaliculatus [P. J. Müller in Flora (1858) nr. 7], qui a Boulay in Rouy Camus [Fl. France, VI, 44] pro *R. plicatus* × *sulcatus* interpretatur, f. Sudre [Rubi europ., 18] »foliis subtus cinereo-pubescentibus, ramis floriferis aculeis falcatis numerosis praeditis, inflorescentia multiflora« a nostra planta distinguitur. Forsan planta nostra ad formam *macranderi* Focke [in Asch. Gr., Syn., l. c., 461] pertinet, sed forma foliolorum terminalium discrepat.

5. *Rubus sulcatus* [Vest in Steyerm. Zeitschr., III (1821), 162; Tratt., Ros., III (1823), 42; Focke, Syn. Rub., 119; Hal., Öst. Bromb., 220; Beck, Fl. Nied.-Öst., 722; Asch. Gr., Syn. l. c., 456; Sudre, Rubi eur., 17, t. III; Gayer, Prodr., l. c., 12. — *R. fastigiatus* Weihe, Nees; Deutsch Bromb., 16 (1822) p. p.]. Inter frutices, ad sylvarum margines, in sylvis apertis regionis montanae —800 m. Floret m. Junio, Julio.

Bosna: Prope Sasina (Fo f. *Borbás 1887), in valle Jedovica prope Prnjavor (B.). Circa Travnik prope Pirota (Br. f. *Sabransky 1887); pr. Slimena (Br. f. Fritsch); frequens in m. Vilenica (B.), juxta Rovno prope Busovača (Br. f. M.). Circa Fojnica —800 m (Mu. f. Halácsy, B.).

Rubus Weihei [Lej. in Lej. et Court., Comp. fl. Belg., II 164 (1831) non Koehler; Focke, Syn. Rub., 122; Asch. Gr.,

Syn. l. c., 458], qui forma *Rⁱ sulcati* turionibus pilosis dicitur, sec. Freyn et Brandis [in Abh. zool.-bot. Ges. (1888), 603] circa Travnik prope Pirola enumeratur. Monographis haec forma obscura et dubiosa remansa est.

Candicantes.

[Focke, Syn. Rub., 154 et in Asch. Gr., Syn. l. c., 484. — *Discolores* aut. p. p.]

6.—9. *Rubus thyrsoides* [Wimm., Fl. Schles., 204 (1840); Focke Syn. Rub., 161 et in Asch. Gr., Syn. l. c., 485; Sudre, Rubi eur., 90. — *R. montanus* Hal., Öst. Bromb., 226; Beck, Fl. Nied.-Öst. 723 non Lib. fide Sudre. — *R. candicans* Weihe in Reich., Fl. Germ., 601; Gayer, Prodr., 14]. Ad silvarum margines, inter frutices, in silvis apertis caesisque regionis collinae et montanae. Floret m. Julio.

Bosna: Proxime Vrelo Bosne (Čurčić f. M.) — **Hercegovina:** Circa Pod Orošac et Konjic (M.). Quae subspecies non indicatur.

Eo pertinent subspecies (?) sequentes:

6. *Rubus phyllostachys* [P. J. Müller in Flora LI (1858), 133; Focke in Asch. Gr., Syn. l. c., 488; Sudre, Rubi eur. 90; Gayer, Prodr., 15. — *R. elatior* Focke in Greml, Beitr. Fl. Schweiz (1870), 70].

Bosna: Circa Travnik, pr. Slimena (Br. f. *Freyn 1888).

7. *Rubus zvornikensis* [Fritsch in Mitt. naturw. Ver. Steierm., 47 (1910), 173 (1911)]. »Turiones obtusanguli vel acutanguli, apicem versus sulcati, aculeis sat validis paulo inaequalibus sparsis armati, pilis fasciculatis et hinc inde glandulis minutissimis obsiti. Stipulae lineares, longe acuminatae. Folia turionum digitato-quinata, supra ad nervos medianos foliolorum tantum sparse pubescentia, subtus cano-tomentosa. Foliolum terminale rhombeo-ellipticum vel ovato-ellipticum, basi vix cordatum, breviter acuminatum, argute serratum. Rami floriferi breves, pubescentes, aculeis sparsis validis instructi. Folia ramorum ternata, rarius quinata, superiora saepe simplicia. Inflorescentia saepe foliosa, apicem versus dilatata vel aequilata, ramulis cymoso-partitis, aculeis validis subrectis vel paulo reclinatis munita, breviter villosula, glandulis stipitatis carens. Sepala tomento denso subvillosa cinerea, reflexa. Petala lata, ut videtur, alba. Stamina valde numerosa, stylos superantia. Germina subglabra.« (Fritsch.)

Bosna: In silvis fruticetis montium, serpentino constructis ad septentriones versus prope Zvornik et in declivibus lapidosis vallis fl. Drina ad meridiem a Zvornik (Wettstein f. *Fritsch 1911).

Habitus Candicantium possidet.

Fide Fritsch (l. c.) »kommt namentlich wegen der deutlichen Behaarung des Schöblings in erster Linie *R. phyllostachys* P. J. Müll. in Betracht. Die kräftigen, fast geraden, an *R. bifrons* Vest erinnernden Stacheln des Blütenstandes machen aber eine Identifizierung des *R. zvornikensis* mit irgend einer schon beschriebenen Form der *Candicantes* unmöglich. *R. pubescens* Weihe, der gleichfalls ähnlich ist, hat einen anders gebauten und mit mehr hakigen Stacheln besetzten Blütenstand«.

8. *R. thyrsanthus* [Focke, Syn. Rub., 168 (1877) et in Asch. Gr., l. c., 487; Sudre, Rub. eur., 91, t. 104, fig. 10, 11; Gayer, Prodr., 14. — *R. montanus* var. Hal., Öst. Bromb., 227; Beck, Fl. Nied.-Öst., 723. — *R. thyrsoideus* var. Focke in Asch. Kan., Cat. corm. Serb., 97 (1877). — *R. stenothyrsanthus* Borb. exs.]

Bosna: Prope Novi (Fo. sub *R. stenothyrsantos* Borb. fide ips.). Circa Vranduk (Degen in litt.); loc. ad meridiem a Donja Tuzla (Wettst. fide Fritsch), in m. Suljaga prope Koprivnica han (*S. 1848). Circa Travnik (Br.), Grahovik (Br. f. Freyn sub *R. euodes* G. Br. f. Sabransky); ad sepes circa Sarajevo pr. Kovačići, pr. Pale, Bara, juxta Stambulčić et pr. Strmica ad fl. Lim (M.). — **Hercegovina:** Inter Podorašac et Konjic (*M.).

9. *Rubus candicans* [Weihe in Reich., Fl. Germ., 601 (1832); Focke Syn. Rub., 163 et in Asch. Gr., Syn. l. c., 485; Sudre, Rubi europ., 92, t. 95, f. 7—9; Gayer, Prodr., 14. — v. *stenotrichus* Borb. Budap. növ. 161 (1879). — *R. fruticosus* Weihe Nees, Deutsch. Bromb., 24, t. VII].

Bosna: (*Fo. 1889. sed omnes suae indicationes non sunt approbatae): Circa Tunica pr. Novi (Fo.), prope Banja Luka, Vrbanje, Maslovare, Stenjak, Tešanj, Žabljak, Doboj (Fo.), Derventa, Kobaš (Prodan), inter Breške et Donja Tuzla (B.), prope Krupa, Lipnik, Stari Majdan, Kosa prope Ripač, Velagići, Zablači, in silva Mumenovac prope Dragočaj, Miletići pr. Sitnica, in m. Šip pr. Gornji Šeher, pr. Donji Šeher, Karanovac, Surjan, Liskovica; cirka Maglaj, Žepče, Varoš (Fo.); in agro Sarajevsko polje pr. Vrelo Bosne (V. C. f. M.), in m. Površnica pr. Goražde, cirka Foča (Fo.). — **Hercegovina:** Circa Idbar proxime Konjic (*B. 1887); prope Jablanica (Prodan).

f. *oblongatus* [Sudre, Rubi eur., 92]. **Bosna:** Prope Ključ (*B.).

9.* *R. persicinus* [A. Kern. in Ber. Nat. Ver. Innsbruck II (1871) 37 et Nov. pl. spec. III 14; Focke in Asch. Gr. l. c. 487].

Bosna: Juxta Kovačići-Hrasno pr. Sarajevo (*M. 1923).

10. *Rubus candicans* × *ulmifolius* et *R. ulmifolius* × *candicans* [Utsch, Hybriden im Genus *Rubus* im Jahrb. westph. Provinzver. für Wiss. u. Kunst, (Münster 1894—1897). Non vidi. Quanti hoc opus aestimatur, cognosci potest ex O. Gelert in Öst. bot. Zeit. (1898), 127. Uterque f. Utsch ab A. Pichler [in Peti godišnji izvještaj vel. gimnazije u Mostaru 1898/99 17] solo neogeneo prope Mostar Hercegovinae repertus est.

Discolores.

[Focke in Asch. Gr., Syn. I. c., 499. — *Villicaules* 1. *Discolores* Focke. Syn. Rub., 177 (1877).]

11.—14. *Rubus ulmifolius* [Schott fil. in Isis (1818), fasc. 5, 821 (solum nomen); do. in Link, En. h. Berol. II (1822) 61; Focke, Syn. Rub., 177; Hal. Öst. Bromb., 228; Focke in Asch. Gr., Syn. I. c., 501; Sudre, Rubi eur., 69, t. LXXVII; Gayer, Prodr., 15. — *R. amoenus* Portenschl. et aut., Petter, Bot. Wegw., n. 785 sec. Visiani]. In apricis, siccis, lapidosis, inter frutices, ad sepes, solum in ditone florum mediterraneae — 800 m. Floret m. Junio, Julio.

Ad hunc referendi sunt:

11. *Rubus rusticanus* [E. Mercier in Reut., Cat. pl. Genève, 2. éd. 279 (1861); Focke ap. Asch. Gr., Syn. I. c., 502. — *R. dalmaticus* Guss., Fl. Sic. Syn., I, 567 (1842). — *R. sanctus* Schreb. γ. *rusticanus* Malý in Glasnik zem. muz. XXXV (1923) 141]. Veri simile est, omnes pro *R^o ulmifolio* indicatae stationes ad hanc prolem pertinere.

Hercegovina: In valle fl. Trešnica- et Neretva frequens et vulgata, certe etiam in aliis Hercegovinae partibus. In jugo Ivan (Fo.), ubique circa Konjic et in montibus circumjacentibus: Repovica, Vrabac etc (Fo., B.); prope Klanići, Lisičići (M.), Čelebić (Fo., B.), circa Idbar (B.), prope stationem Prenj (Pr.), circa Jablanica (Fo., V., B.), Grabovica (*Blau 1877, B.) in faucibus Grabovica (B.), pr. Drežnica (V.), in declivibus m. Glogošnica — 400 m (B.); circa Mostar (Fo.): in agro Bijelo polje; prope Ravno (M.), Cim (Fo.), Jasenica (Mu.), Blagaj (Fo.), Vrelo Bune (Fo.), Buna (Mu.), circa Kokorina in m. Busak Pl. (Fo.), pr. Žitomišljici (Mu.), Domanovići (Fo.); pr. Aladinići (Fo.), Stolac (Fo.), in m. Ošanica glavica (B.), pr. Ljubinja, Neumkula (Fo.), Mosko, Panik, Bileća (Fo.); circa Trebinje (*P. 1874, V.), in m. Leotar — 800 m (B.), pr. Pridvorce, Gomoljani, Lastva juxta Orahovac (V.), Drijeno (Fo.).

12. *Rubus dalmatinus* [Focke, Syn. Rub., 184 (1877) pro subspec. et in Asch. Gr., Syn. I. c. 503. — *R. fruticosus* v.

dalmatinus Tratt., Ros. mon., III, 33 (1824). — *R. ulmifolius* v. *dalmatinus* Hal., Öst. Bromb., 228. — *R. amoenus* Portenschl. f. A. Kerner. — *R. heteromorphus* Ripart apud Genev. Ess. mon., 255 (1869); Sudre, Rub. eur., 73. — *R. sanctus* β . *dalmatinus* Malý, l. c., 141].

Hercegovina: (Fide *Focke apud Asch. Gr., Syn. l. c. 1902). Ubi? In angustiis fl. Trešanica pr. Konjic; juxta Ostrošac (M.). Circa Mostar (Jetter! Prius habui pro *R. bifrons* v. *incrustedus*); in m Hum pr. Mostar (B.).

R. amoenus = *R. dalmaticus* Guss. ab Hofmann [in Öst. bot. Zeit. (1882) 113] in Bosna prope Banja Luka reperta et indicata, certe cum alia specie petalis roseis instructa commutata est.

Huc loco insero etiam plantam, quam in faucibus fl. Trešanica prope Konjic collegi et sub *R. Schulzii* Rip. in Fl. Südbosn. III in Ann. nat. Hofmus., II (1887) notavi. Haec planta excellit turionibus dense villosis (fere contextis) angulatis, aculeis validis rectis sparse armatis; pilis glanduliferis deficientibus, aculeis teneribus acicularibus in inflorescentia multiflora, cujus axes villosi squarrose patent, foliolis subtus velutinis, cinereis. Imitatur *Rubum ulmifolium* \times *vestitum* et probabiliter et optime *R. piliferum* [Sudre in Bull. soc. bot. France, XLVI (1899), 90 et Rubi eur., 103, t. CII], qui glandulis caret et ad *Vestitos* pertinere dicitur. Ex *Vestitis* autem nulla species ex ditioe nostra adhuc reperta est, qua re sententia non est neganda, etiam hybridas inter *R. ulmifolium* et *R. vestitum* prope Mostar repertas ad hanc prolem pertinere.

13. *Rubus sanctus* [Schreb., Icon. et Descr., 15, t. 8 (1766); Desf., Choix (1808) p. (80) t. 61; Ser. apud DC., Prodr., II, 561; Sudre, Rubi europ., 76. Confer contra Kuntze in Allg. bot. Zeit. (1898) 181 et Hand. Mazz. in Ann. nat. Hofmus. XXIII (1909) 164. — *R. anatolicus* Focke in Abh. nat. Ver. Bremen, IX, 335 (1880) et in Asch. Gr., l. c., 503. — *R. sanctus* α . *anatolicus* Malý, l. c., 140 (1923)]. A *R. ulmifolio* Schott fide Sudre differt: foliis supra pilis simplicibus vel stellulatis intermixtis dense obsitis subtus pubescentibus; inflorescentiae rhachide plus minus pilosa; antheris pilosis; polline vulgo plus minus admixto, interdum subpuro. — Turio plus minus pilosus, cum pube stellulata sericeo-micante. Folia 5-nata vel in apricis 3-nata; foliolum terminale vulgo obovatum, basi integrum, cuspidatum; petala rosea vel purpurea; germina pilosa.

Bosna: (Sec. *Sudre l. c.). Ubi? — **Hercegovina:** Ad lacum Boračko jezero in ascensu m. Prenj Pl., a. 840 m (M.), pr. Konjic in angustiis fl. Trešavnica, in valle fl. Neretva pr. Grabovica (M.), prope Jablanica (*Blau, Herb. nr. 1965); pr. Mogorjelo, Struge (M.); in Sutorina (V. C.), Ljubuški (F. sub *R. amoeno* f. M.), Trebinje (R. sub *R. amoeno* f. M.), prope Mostar (Baenitz sec. *Sudre, l. c.).

14. *Rubus sanctus* × *ulmifolius*. — *R. mostarensis* [Sudre, Rubi europ., 77]. »Turio pilosus; foliola supra glabra, lata; antherae pilosae; pollen valde imperfectum.«

Hercegovina. Circa Mostar (Baenitz sub *R. vestitus* × *ulmifolius* in Herb. Europ. nr. 9583 sec. *Sudre).

15. *Rubus procerus* [P. J. Müller in Boul., Ronc. Vosg., 7 (1864); Sudre, Rub. europ., 87, t. XCII. — *R. discolor* Weihe Nees, Deutsch. Bromb., 49 p. p., t. XX (1825) Hal., Öst. Bromb., 231; Beck, Fl. Nied.-Öst., 724; Gayer, Prodr., 16 non aliorum. *R. macrostemon* Focke, Syn. Rub., 193. — *R. hedycarpos* subsp. *macrostemon* Focke, in Asch. Graebn., l. c., 508]. Ad silvarum margines, in sepibus, inter fruticeta usque ad regionem subalpinam (800 m). Floret mens. Junio, Julio.

Bosna: In altis septentriones versus prope Donja Tuzla (Wettst. fide Fritsch) prope Novi, Modra, Tešanj (Fo.), Ratković circa Brčko (B), circa Banja Luka (Fo.), Krupa, in m. Kosa prope Ripač, prope Han Bravsko (Fo.). Circa Fojnica 600–800 m (Mu. f. Halácsy), pr. Gračanica (M.). Hinc inde circa Sarajevo sicut prope Mrkojevići (*B.), Lukavica (F.), in m. Trebević, pr. Kovačići-Hrasno (M.), Vrelo Bosne (V. C.), in valle riv. Koševo (M.).

16. *Rubus Godroni* [Lecoq et Lam., Cat. rais. pl. Centr. 151 (1847) p. p.; Focke in Asch. Gr., l. c., 509; Sudre, Rub. europ., 77, t. 97. — *R. argentatus* P. J. Müll. in Pollichia XVI–XVII (1859), 93. — *R. Winteri* P. J. Müller, in Focke, Syn. Rub., 196 (1877); Sudre, l. c., 78, t. 80. — *R. rorulentus* Halácsy in Schedis ad fl. exs. austro-hung., III, 49 nr. 846 (1884) et Öst. Bromb. 230 fide Sudre].

Bosna: In m. Crni vrh prope Foča (Fo. f. *Borbás 1890 sub *R. Winteri*).

17. *Rubus Linkianus* [Ser. in DC., Prodr., II, 560 (1825); Focke, Syn. Rub., 202 et in Asch. Gr., l. c., 491; Sudre, Rub. europ., 97].

Hercegovina: Copiose in declivibus lapidosis montis Stolac prope Mostar [*Sagorski in Öst. bot. Zeit. (1911) 21, 88].

Focke, cujus arbitrio Sagorski [l. c.] plantam suam permisit, propensus fuit ad opinionem, eam stirpem silvestram plantae cultae sat notae esse. Huic opinioni etiam Sagorski

assensus est et descriptionem sequentem l. c. 88] plantae Mostarensis dedit: »Schößling derb, in nicht hohem Bogen niederliegend, kantig mit gefurchten Flächen, fast kahl, spärlich kurzflaumig, mit ganz vereinzelt Büsselhaaren, nach oben zu anliegend behaart, mit mäßig starken, am Grunde verbreiterten, etwas gekrümmten Stacheln. Blätter gefingert-fünffählig und dreizählig; Blättchen unregelmäßig grob doppelt-eingeschnitten-gesägt, oberseits völlig kahl, unterseits dicht weißfilzig. Endblättchen zirka 7 cm lang und 5–5.5 cm breit, breitelliptisch, am Grunde abgerundet oder schwach herzförmig, vorne einfach spitz oder mit kurzer Zuspitzung. Blütenstand groß, breit, rispig, sehr dicht, nur am Grunde beblättert, nach oben nicht oder kaum verjüngt, mit aufrecht abstehenden, trugdoldig geteilten, 3—7-blütigen Ästchen. Achse drüsenlos, filzig zottig, mit breit aufsitzenden, etwas gebogenen, ziemlich schwachen Stacheln. Blütenstiele filzig und zottig behaart. Blüten ziemlich groß. Kelchblätter beiderseits grau bis weißfilzig, zurückgeschlagen, mit abstehender Spitze. Kronenblätter verkehrt eiförmig, weiß. Staubblätter weiß, die grünlichen Griffel überragend. Fruchtansatz gut entwickelt.« Sec. Sabransky turio glabrior est quam in planta culta. Turio humiliarcuata, quam lores numerosi splendidi superant, plantam Mostarensis, quae ad seriem *Rⁱ thyrsum* pertinet, egregie significat. Similitates quaedam, ac petala alba, paulo luteole aspirata *R^m tomentosum* v. *glabratum* in memoriam reducunt. Sudre [l. c.] habet *R Linkianum* pro hybridam inter *R^m procerum* (v. *robustum*) et *R^m tomentosum (Lloydianum)*.

Eandem plantam etiam prope Buna et Kosor (A. Pichler nr. 224!) crescere videtur, quia ejusdem ramos floriferos observare potui, qui plene descriptioni a d. Sabransky datae respondent.

18. *Rubus bifrons* [Vest in Tratt., Ros. monogr., III (1823), 28; Hal., Öst. Brombeeren, 229; Focke, Syn. Rub., 186 et in Asch. Gr., l. c., 505; Beck, Fl. Nied-Öst., 723; Sudre, Rub. eur., 80; Gayer, Prodr., 15. — *R. discolor* Gren. Godr., Fl. franc., I, 546 p. p.]. Ad silvarum margines, in silvis luminosis, fruticetis regionis montanae.

Bosna: In monte Ilinčica prope Donja Tuzla (*B.). — **Hercegovina:** Jablanica (*Laus 1913), dubiose.

19. *Rubus Pantocsekii* [Holuby apud Pantocs., Annot. in Verh. Ver. für Naturkunde, Pressburg, Neue Folge II (1874), 117]. »Turio tenuis, teres, prostratus, aculeis subarcuatis validis irregulariter dispositis armatus, accumbenter dense villosus, eglandulosus; folia turionis Inflorescentia brevis laxiflora, foliosa, acubus longis a latere compressis dense armata, eglandulosa; pedicellis et calycibus accumbenter griseotomentosis; foliis caulis floralis omnibus ternatis, supra strigosis, subtus griseotomentosis; calyce basi tantum sparse armato, post deflorescentiam patente?; petalis ovatis, pilosis, rubescentibus; filamentis infundibuliformibus (? Beck), stylos paulo superantibus; ovaria glabra; fructus? »Ad *Homoecanthos* pertinet.« Propter turionem accumbenter dense villosam et paniculam longe aculeatam affinis *R^o bifronti* Vest, qui autem nunquam habet tam dense armatam paniculam nec vestimentum turionis persistens; discernendus noster etiam per vestimentum foliorum et formam inflorescentiae.« — Propter defectum foliorum turionis et descriptionis foliolorum nec comparandus neque in tuto collocare potest (Beck).

Hercegovina: In locis lapidosis ad pedem m. Gliiva prope Trebinje (P., fide *Holuby 1874).

20. *Rubus procerus* × *vestitus*. — *Rubus robustiramus* [Sudre in Bull. soc. bot. France, LII (1905), 333 et Rubi eur., 88]. Descriptio deest.

Hercegovina: Prope Mostar (Baenitz fide *Sudre).

21. *Rubus ulmifolius* × *vestitus* et *R. vestitus* × *ulmifolius* Utsch [Hybriden im Gen. *Rubus* (Münster 1894—1897) in Jahresber. westph. Provinz Ver. für Wiss. und Kunst (Non vidi). Vergl. O. Gelert in Öst. bot. Zeit. (1898) 127] indicantur ab A. Pichler [Peti godišnji izvještaj vel. gimnaz. u Mostaru 1898/99. 17] in arenis (Neogen) prope Mostar Hercegovinae. Probabiliter haec hybridae ad *R^m vestitifrontem* [Sudre, Rub. europ., 102 — *R. vestitiformis* Sudre non Rogers] pertinent. Confer annotationes de *R^o pilifero* Sudre apud *R^m dalmatinum* Focke.

Tomentosi.

[Wirtg., Herb. Rub., et. 2, I (1858); Focke. Syn. Rub., 225 et in Asch. Gr., l. c., 494.]

22. *Rubus tomentosus* [Borkh. in Roem., Neu. Mag., I, 2 (1794); Focke, Syn. Rub. 226; Hal., Öst. Brom., 237; Beck,

Var. *subaculeatus* Borb, quae in Fl. Südbosn., VIII, 51 errore ad *R^m tomentosum* attrahitur, ad *R^m hirtum* referenda est.

23. *Rubus bifrons* × *tomentosus*. — *Rubus anomalus* [P. J. Müller in Flora XLI (1858), 136; Focke, Syn. Rub., 239. — *R. megathamnos* A. Kerner in Ber. naturwiss. Ver. Innsbruck, II, 150 (1871). — *R. radula* × *tomentosus* (*Lloydianus*) Sudre, Rub. europ., 127].

Bosna: In montibus prope Zalin (Fo. fide Borbás 1889). In pratis prope Ifsar c. 1000m (Schiller fide Fritsch).

24. *Rubus tomentosus* × *ulmifolius*.

a) *Rubus tomentellus* [Ripart in Genev., Ess. Rubus, 301 (1869); Sudre, Rubi europ., 99].

Hercegovina: Circa Idbar proxime Konjic, m. Julio (*B. 1887).

b) Hybridam quamdam *R^o tomentoso* propius accedentem Sagorski [in Allg. bot. Zeit. (1912), 20] sub *R. supertomentosus* × *ulmifolius* a Mostar sub m. Stolac enumerat. Quacum hybrida inter numerosas alteras hujus originis (Conf. Boulay in Rouy Camus, Fl. franc., VI, 81; Sudre, Rubi europ., 99) conducenda sit, propter defectum descriptionis accuratioris existimari non potest.

Porro Sagorski (l. c.) hybridam *R. tomentosus* (*glabratus*) × *superulmifolius* descripsit, quam prope Mostar copiose locis variis in pratis et juxta vias ad septentriones ab via ferrea reperit. Sec. Sagorski foliola sunt parva, acutissime bis neque inciso-serrata et ista *Rⁱ ulmifolii* in memoriam reducunt, a quo aculeatione multo copiosiore turionis per aculeis brevioribus paulo curvatis, aculeatione copiosissima ramorum florentium per aculeis arcuatis retro inclinatis, turionibus in arcuatis retro inclinatis, turionibus in arcubus non altis procumbentibus, petalis albis, ad ultimum sterilitate perfecta distinguitur. Etiam Sagorski nequivit hanc hybridam nullam adhuc descriptam declarare.

Silvatici.

[Focke in Asch. Gr., l. c., 514. — *Villicaules* (*Silvatici* et *Virescentes*) Focke, Syn. Rub., 177.]

25. *Rubus macrophyllus* [Weihe et Nees, Deutsch. Bromb., 36, t. XII excl. β.; Focke, Syn. Rub., 215; Halácsy, Öst. Bromb., 236; Beck, Fl. Nied.-Öst., 726; Focke in Asch. Gr., l. c., 521;

Fl. Nied.-Öst., 726; Focke in Asch. Graebn., l. c., 495; Sudre, Rubi europ., 98, t. XCVIII]. Ad silvarum margines, in fruticetis, sepibus, silvis luminosis, sed etiam in pratis, locis lapidosis usque ad regionem subalpinam — 1250 *m.* Floret m. Junio, Julio.

Bosna: In m. Krnin montium Kozara Pl. (B.), prope Bronzani Majdan (Fo.), Prosjek juxta Zvornik (J.), Maglaj (Fo.), Modra (Fo.), Vranjska proxime Krupa, in m. Grmečgrad prope Smoljana (Fo.), inter Varcar Vakuf et Sijnjakovo (B.), ad Prusac prope Han Čardak (Ja.). Circa Travnik (Br. fide *Sabransky 1887), prope Grahovnik (Fr. Br.), in monte Vlašić prope Čatići, ad castellum, proxime Pirola (Br. f. Sabransky), in valle fl. Bosna inter Zenica et Lašva (V. C.); ad riv. Pavlovac p. Fojnica, in m. Igman loc. Kečina dolina c. 1250 *m.*, prox Rusenovići (F. f. M.), inter Ilovice et Trnovo (B.), in valle fl. Miljacka (M.), in m. Vel. Žep — 1230 *m.* (M.) prope Gorazde (Fo.), juxta Strmica ad fl. Lim (M.). — **Hercegovina:** In faucibus fl. Trešanica (*B. 1887), in valle fl. Rama (M.), circa Jablanica, Drežnica (Prodan), in declivibus m. Čabulja (B., Prodan). Circa Nevesinje (V.) uti prope Bojište et Žiljevo (Mu. f. Halácsy).

Formas sequentes offert:

hypoleucus [Vest in Syll. pl. nov. Ratisb., I (1824), 235 pro spec.; Gayer, Prodr. 9 pro subspec.; Halácsy, Öst. Bromb., 238 pro var.; v. *vulgaris* b. *glabratus* Focke, Syn. Rub., 227 (1877); v. *glabratus* Godr., Mon. Rub. Nancy 27 (1843). — *R. Lloydianus* v. *hypoleucus* Sudre, Rub. europ., 99]. — **Bosna:** In monte Udrč prope Drinjača (Wettst. fide Fritsch), circa Zalin, Sratinska (*Fo., 1889); in m. Krnin montium Kozara Pl. (B.), circa Lukavica juxta Sarajevo (B. F.!). — **Hercegovina:** In declivibus mont. Čabulja (*B.), circa Mostar (Bornmüller).

canescens [DC., Cat. hort. Monsp., 139 (1813) pro spec.; typus sec. Gayer, Prodr., 9; Wirtg. sec. Focke, Syn. Rub., 227; Beck, Fl. Nied.-Öst., 726 pro var.]. — **Bosna:** Circa Bistrica (Fo.), in m. Krnin montium Kozara Pl. (B.), circa Travnik (Br.), in m. Borja Pl. (*Fo. 1889), in vallibus fl. Mošćanica et Miljacka, prope Han Bulozi proxime Sarajevo (F.!, M.). — **Hercegovina:** In faucibus fl. Trešanica (*B. 1896); circa Gubar (Hawelka!).

albicans [Kit. apud Schult., Öst. Fl., ed. II (1814), 80 fide Gayer, Prodr., 9, — *R. cinereus* Reich., Fl. Germ. 607 (1832) = *R. tomentosus* var. Hal., Öst. Bromb., 238; Beck, Fl. Nied.-Öst., 726; Focke apud Asch. Gr., l. c., 496]. — **Bosna:** In montibus prope Modra (Fo. fide *Borbás 1889). — **Hercegovina:** Circa Bileća (Fo. fide *Borbás 1889).

setosoglandulosus [Wirtg. in Focke, Syn. Rub., 227 pro var.; Gayer, Prodr., 9 pro subspec.] f. *ditrichocladus* [Borb., Vasm. fl. (1887), 292 fide Gayer]. Turione dense piloso egregius. — **Bosna:** In silvis prope Banja Luka (Fo. fide *Borbás 1889).

Varietatis *glabrati* Griseb. »foliis subtus stellato-pilosis« sec. Borbás [ex Forman. in Öst. bot. Zeit. (1890), 105], a d. Formanek in **Bosna** prope Gorjevac, Miletići et Sitnica collecti, nusquam mentionem facitur.

Sudre, Rubi europ., 48, t. LII; Gayer, Prodr., 21]. In silvis frondosis. Floret m. Julio, Augusto,

Bosna: Circa Travnik prope Pirota (Brandis fide *Sabransky 1887); prope Fojnica (B.).

26. *Rubus Eduardi* [Borbás in Öst. bot. Zeit., XL (1890), 247 adnot. = *R. villicaulis* Koehl. v. *Formanekianus* Borb., l. c., 105 non *R. Formanekii* (*oreogeton* × *tomentosus*) Sabransky, l. c. (1889), 404]. Sec. Borbás »turionibus glaucescentibus subglabris glandulis sessilibus inspersis, inflorescentia omnino foliosa et aculeis sparsis minoribus a typo diversus«.

Bosna: Prope Novi (Fo. fide *Borbás 1890).

Apiculati.

[Focke in Asch. Gr., l. c., 576 (1902). — *Adephophori* Focke, Syn. Rub., 247 (1877) p. p.]

27. *Rubus Caflischii* [Focke, Syn. Rub., 278 et in Asch. Gr., l. c., 587. — *R. bifrons* × *hirtus* Gayer, Prodr., 17].

Bosna: Prope Goražde (Fo. fide *Borbás 1890).

Hystrices.

[Focke, Syn. Rub., 342 (1877); Halácsy, Öst. Bromb., 263; Gayer, Prodr.] 5. — *Koehleriani* Babingt., Brit. Rub., 199 (1869); Focke in Asch. Gr., l. c. 593.

28. *Rubus Koehleri* [Weihe et Nees in Bluff Fingerh., Comp. fl. Germ., I, 681 (1825) et Deutsch. Bromb., 71, t. 25; Focke, Syn. Rub., 348 et in Asch. Gr., l. c., 597; Halácsy, Öst. Bromb., 263; Beck, Fl. Nied.-Öst., 737; Gayer, Prodr., 27].

Bosna: In silvis apertis montis Smolin prope Žepče (*B.) solo serpentino m. Augusto.

Planta reperta habitu *Rⁱ Guentheri* Weihe et Nees similis est, excellit autem inflorescentiis paniculato-compositis staminibusque stylis longioribus.

Glandulosi.

P. J. Müller in Pollichia XVI—XVII (1859), 192; Focke, Syn. Rub., 355 et in Asch. Gr., l. c., 602. — *Euglandulosi* Halácsy, Öst. Bromb., 266; Gayer, Prodr., 6.]

29. *Rubus Bellardi* [Weihe et Nees in Bluff Fingerh., Comp. fl. Germ., I, 688 et Deutsch. Bromb., 97, t. XLIV; Focke, Syn. Rub., 382; Halácsy, Öst. Bromb., 269; Beck, Fl. Nied.-Öst., 741; Focke in Asch. Gr., l. c., 610; Sudre, Rubi

europ., nr. 106; Gayer, Prodr., 35. — ? *R. glandulosus* Bell., App. fl. Ped., 24]. In silvis montanis, ad silvarum margines. Floret m. Junio, Julio.

Bosna: Circa Prosjek et Mladjevac prope Zvornik (J. sub *R. glanduloso?*); prope Lipnik prope Sanski Most (Fo. fide *Borbás 1889).

30.—32. *Rubus hirtus* [Waldst. Kit., Pl. rar. Hung., II, 150, t. 114 (1805); Focke, Syn. Rub., 371; Halácsy, Öst. Bromb., 274; Beck, Fl. Nied.-Öst., 742; Focke in Asch. Gr., l. c., 611; Sudre, Rub. europ., 221 nr. 109; Gayer, Prodr., 35]. In silvis montanis apertis caesisque, ad silvarum margines usque ad regionem subalpinam (1400 m), plurimum calcarem evitans. Floret m. Junio—Augusto.

Bosna: In silva Kozini (Fo.) et in monte Kriva glava prope Novi (B.), circa Orahovo ad m. Prosara (B.), in m. Krnin montium Kozara (B.). Circa Banja Luka, Vrbanja (Fo.), Kobaš (Prodan), in silva Šibovska prope Prnjavor (B.), prope Opsječko in m. Borja, prope Liplje, Stenjak, in m. Crni vrh prope Tešanj, circa Doboje, Svijetlica (Fo.), copiose solo serpentinico circa Žepče, in m. Mračajsko brdo et Babina, circa Papratnica (B.). In m. Majeвица, inter Donja Tuzla et Breške (B.); prope Podvidača in m. Beheremaginica (Fo.). In agro Vedropolje, m. Ljubinska Pl., prope Dragočaj, in m. Kuk Pl., in silva Vidovac prope Sitnica, prope Kadina voda, in silva Malbuće prope Kola, prope Karanovac, in m. Osmača Pl., prope Krmine, Surjan, Karaula proxime Jajce (Fo.). In m. Siša prope Ključ (B.), m. Suljaga prope Koprivnica han (*S. 1848). Circa Travnik prope Jankovići, Zlotići, Grlonica, prope Ilidža in Kruščica (Br. f. Sabransky), in m. Vilenica (Fr. Br.); prope Trebeuša in valle fl. Lašva (B.), circa Fojnica (*S. 1848), in declivibus m. Matorac montium Vranica Pl. (B.). Prope Pogari, Dubošćica (Fo., Pr.), in m. Srednja Pl. (Pr.) in m. Bjelašnica —1200 m (Mu. f. Halácsy). In valle fl. Željeznica (Pr.), prope Galjiva njiva (B.), Trnovo (Pr.), in m. Vučija Pl. pr. Nemila; in m. Velež pr. Borovica, in valle Kamenica pr. Zavidovići, in m. Ozren pr. Sarajevo (M.), in m. Trebević —1400 m (M.), prope Vučija Luka (Fo.). In m. Vratlo prope Kalinovik (B.), in Zelengora (Pr.), in m. Vitez et Ranjen Pl. (B.), in valle fl. Govza prope Jeleć (B.), in silva Jablanska šuma prope Jablan vrelo (Lakatoš!). In iugo Metaljka prope Čelebić (B.). In m. Stolac prope Višegrad. — **Hercegovina:** In m. Vrabac pr. Konjic (*Fo. 1889). In m. Ivan (M.). — **Novipazar:** Circa Svetlo borje (*B., 1896).

Huc pertinent:

30. *Rubus crassus* Holuby in Öst. bot. Zeit. (1873), 381; Focke in Asch. Gr., l. c., 621; Sudre, Rubi europ., 225. t. CCV; Gayer, Prodr., 36].

Bosna: In silvis collucatis in m. Smolin prope Žepče, solo serpentinico, copiose (*B.), m. Julio.

31. *Rubus Bayeri* [Focke in Öst. bot. Zeit. (1868), 99 et Syn. Rub., 378; Halácsy, Öst. Bromb., 279; Beck, Fl. Nied.-Öst., 743; Focke in Asch. Gr., l. c., 615. — Bosna: in valle Kamenica (M.)

[*R. rivularis* Muell. et Wirtg. subspec. *R. divexiramus* Muell. in Boul., Ronc. vosg., nr. 30 et 38 (1866); Focke in Asch. Gr., l. c., 620 ex Gayer, Prodr., 38].

Bosna: In silvis collucatis in m. Vitez et Ranjen Pl. (*B. 1887), m. Julio.

32. *Rubus Guentheri* [Weihe et Nees in Bluff Fingerh., Comp. fl. Germ., I, 679 et Deutsch. Bromb., 65, t. XXI; Focke, Syn. Rub., 376; Halácsy, Öst. Bromb., 277; Beck, Fl. Nied.-Öst., 742; Sudre, Rub. europ., 224; Gayer, Prodr., 36].

Bosna: Prope Vranduk (*Degen in litt.), in valle Gostović pr. Zavidovići a. 410 m (M.).

f. *erythrostachys* [Sabransky in Öst. bot. Zeit., (1886), 291; Focke in Asch. Gr. l. c., 616]. — **Bosna:** In m. Lupoglav montis Komar prope Travnik (Brandis fide *M. 1904).

33. *Rubus rivularis* [Muell. et Wirtg., Herb. Rub. rhen., ed. I, nr. 107 (1858) et in Flora (1859), 237; Focke in Asch. Gr., l. c., 618; Sudre, Rub. europ., 207; Gayer, Prodr., 37. — *Rubus lamprophyllus* Gremlin in Öst. bot. Zeit. (1871), 94; Focke, Syn. Rub., 381 et in Asch. Gr., l. c., 618].

Bosna: In silvis fagineis montium serpentinarum ad septentrionem ab Zvornik; in m. Udrč prope Drinjača (Wettst. f. *Fritsch 1910).

34. *Rubus serpens* [Weihe in Lej. et Court., Comp. fl. Belg., II, 172 (1831); Focke, Syn. Rub., 365 et in Asch. Gr., l. c., 621; Halácsy, Öst. Bromb., 272; Beck, Fl. Nied.-Öst., 741; Sudre, Rub. europ., 212, t. CCI; Gayer, Prodr., 39].

Bosna: In silvis caesis ad Mala Obršine prope Vrbljani proxime Ribnik, 1250 m (Ha. f. Fritsch 1904/58).

35. *Rubus hirtus* × *Schleicheri*. — *Rubus insolatus* [P. J. Müller in Flora (1858), 166?; Focke, Syn. Rub., 358; Halácsy, Öst. Bromb., 268; Beck, Fl. Nied.-Öst., 740. — *R. subaculeatus* Borb. in Öst. bot. Zeit., (1883), 151 et Vasm. Fl. (1887), 300 = *R. hirtus* v. *subaculeatus* Borbás, l. c.].

Bosna: Prope Ranjen Karaula (Fo. f. *Borbás 1890).

Corylifolii.

[Focke in Abh. naturf. Ver. Bremen I (1868), 277; Syn. Rub., 387 et in Asch. Gr., l. c., 624; Halácsy, Öst. Bromb., 281.]

36. *Rubus caesius* [L., Spec. pl., 493 (1753); Focke, Syn. Rub., 407; Halácsy, Öst. Bromb., 288; Beck, Fl. Nied.-Öst.,

744; Focke in Asch. Gr., l. c., 626; Gayer, Prodr., 6]. In silvis ripariis, silvis, inter frutices, ad sepes ac in pratis miseris et agris usque ad subalpinos (1000 *m*). Floret m. Junio ad autumnum.

Bosna: In parte septentrionali sec. Fo. frequens. Prope Banja Luka (H.); circa Kozluk, Zvornik, Prosjek, Djevanje, Drinjača, Nova Kasaba, in valle fl. Jadar (J.). Prope Bugojno, in m. Vel. Malovan, prope Kupres, Šujica, Podgradina, Gubin, Grkovac, Preodac (Pr.). Circa Travnik (Br. f. Sabransky) Foinica (Mu., B.), inter Putkovici et Tolovici (*S. 1848). In Bosna media vulgatus (Fo.). Circa Raičevac, Dubošćica, Tarčin (Pr.). In faucibus Rakitnica pr. Dubočani (M.). Hinc inde circa Sarajevo (B.), ad fl. Željeznica, in Zelengora, in vallibus fl. Sutjeska et Drina (Pr.). — **Hercegovina:** Prope Rama (Br.) f. Sabransky). In m. Prenj: Kiser (M.). In agris Nevesinjsko et Gatačko polje (Mu.) usque ad 1000 *m* In valle Raduš prodo prope Vučijak (*P. 1874). — **Novi Pazar** Prope Prijepolje (P. Zahlbruckner f. Hayek 1906).

Formae sequentes observatae sunt:

arvalis [Reich., l. c.]. Vulgatus. — *aquaticus* [Weihe Nees, Deutsch. Bromb., 105 (1827); v. *umbrosus* Reich., Fl. Germ., 608]. Divulgatus. — *dunensis* [Noeldeke in Abh. naturf. Ver. Bremen, III (1872), 139; Focke in Asch. Gr., l. c., 627]. — **Hercegovina:** Ad Cim prope Mostar (Fo. f. *Borbás 1890).

37. *Rubus nemorosus* [Hayne, Arzneigew., III, t. 10 (1813); Focke in Asch. Gr., 638. — *Rubus dumetorum* Weihe in Boenn., Prodr. fl. Monast., 153 (1824) p. p.; Weihe et Nees, Deutsch. Bromb., 98, t. XLV p. p.; Focke, Syn. Rub., 395; Halácsy, Öst. Bromb., 285; Beck, Fl. Nied.-Öst., 744; — *R. corylifolius* Sm., Brit. Fl., 542 et aut.]. Ad saepes, juxta vias et margines agrorum atque silvarum. Floret m. Junio, Julio.

Bosna: In m. Kvarac et ad Sase prope Srebrenica (*J. 1891). Circa Dubošćica, in valle fl. Sutjeska (Pr.).

38. *Rubus caesius* × *candicans*.

a) *Rubus Laschii* [Focke, Syn. Rub., 402 (1877); Halácsy, Öst. Bromb., 286 (*R. montanus* × *caesius*); Beck, Fl. Nied.-Öst., 745 (*R. caesius* × *montanus*). — *R. eu-Laschii* Focke in Asch. Gr., l. c., 642. — *R. caesius* × *candicans* Gayer, Prodr. 8. — *R. virgultorum* P. J. Mueller, Vers., nr. 217 (*R. thyrsoides* × *caesius*) sec. Boulay in Rouy Cam., Fl. France, VI, 144].

Bosna: Circa Sarajevo ad saepes prope Lukavica (F. f. *B.) Planta perfecte consentit cum exemplaribus editis in Kerner, Flora exs. austrohung. nr. 1257 et itidem glandulis stipitatis caret.

b) Magis *R^o caesio* appropinquatur hybrida, quam sub *R. pseudidaeo* Lej. per errorem prope Sarajevo ad riv. Sušica

edidi. Haec planta possidet foliola subtus minus pilosa biserrata, inflorescentias paucifloras glandulis stipitatis copiosis instructas, folia ternata, quae autem foliolis inferioribus conspicue lobatis partitionem quinatam indicant, demum aculeos debiliores turionum.

39. *Rubus caesius* × *tomentosus*.

a) *Rubus agrestis* [Waldst. Kit., Pl. rar. Hung., III, 298, (1812). — *R. caesius* × *tomentosus* Kuntze, Ref. Deutsch. Bromb., 87; Focke, Syn. Rub., 236 et in Asch. Gr., l. c., 498; Beck, Fl. Nied.-Öst., 746; Gayer, Prodr., 7. — *R. tomentosus* × *caesius* Halácsy, Öst. Bromb., 287].

Bosna: Juxta viam ad Vikoč 8 kilom. ab Iksar (Schiller f. *Fritsch 1910). — **Hercegovina:** Prope Bileća (Hawelka! f. *B.).

b) *Rubus pachyphyllus* [Borb., Fl. Temes., 76 f. Gayer, Prodr., 7].

Bosna: In montibus prope Velečevo (Fo. f. *Borbás 1890).

40. *Rubus (caesius* × *tomentosus* × *hirtus)* [Gayer Prodr., 9].

a) *Rubus adenocladus* [Borb. OTM. XXI (1882), 314 et Vas. Fl., 305 fide Gayer = *R. semitomentosus* v. Borbás l. c.].

Bosna: Prope Zalin (Fo. f. *Borbás 1889). — **Hercegovina:** In m. Mali Velež prope Nevesinje (Fo. f. Borbás); circa Bileća (Fo. f. Borbás 1890).

41. *Rubus caesius* × *serpens*.

Rubus pseudopsis [Gremli apud Focke, Syn. Rub., 394 (1877); Focke in Asch. Gr., l. c., 637 = *R. serpens* Godr. apud Gren. Godr., Fl. France, 1, 538 fide Boulay in Rouy Camus, Fl. France, VI, 149].

Hercegovina: Inter frutices vallis Zaslav prope Vučijak (*P. 1874).

Quod sub *R^o fruticoso* L. ex ditione nostra indicatur, non explanari potest.

4. Subtribus: *Filipenduleae*.

[Max. in. Act. hort. Petrop., VI, 131 (1879) sub tribu; Beck in Reich. f., Ic. fl. Germ., XXV 1, 68. — Trib. *Ulmarieae* Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 40.]

8. *Filipendula*.

[(Tourn., Inst., 293, t. 150); Miller, Abridg. gard. dict., ed. IV (1754) = Adans, Fam., II 295 (1763) rectius Maxim., Adnot. in Act. hort. Petrop., VI (1879), 245; Beck, Fl. Nied.-Öst., 763 et in Reich. f., Ic. fl. Germ., XXV 1, 68 = *Filipendula* L. apud Asch. Gr., Syn. mitt. Fl., VI 1, 436. — *Ulmaria* Miller,

l. c. et Hill, Hort. Kew., 213 (1769); Moench. Meth., 663 (1794); Focke in Engl. Prantl, Nat. Pflanzenfam., III 3, 40. — *Spiraea* L. et. aut. p. p. sect. *Ulmaria* Endl., Gen., 1247; sect. *Filipendula* et *Ulmaria* Gray, Brit. Pl., II, 588 et 589; DC. Prodr., II, 545. — Conf. Maxim., l. c.; Fritsch in Sitz. zool.-bot. Ges. (1889), 26, Abh. 591.]

1. *Filipendula ulmaria* [Max., Adn. Spir. in Act. hort. Petr., VI (1879), 251; Beck, Fl. Nied.-Öst., 764; Glaab in Deutsch. bot. Mon. (1891), 40 et (1896), 60; Asch. Graebn., Syn. mitt. Fl., VI, 437; Beck in Reich, Icon. fl. Germ., XXV 1, 69, t. 79. — *Spiraea Ulmaria* L., Spec. pl., 490 (1753); Sturm, Deutschl. Fl. V Heft 18; Koch, Syn. fl. Germ., 208; ed. II, 231. — *Ulmaria pentapetala* Gilib., Fl. Lith., V, 236 (1782). — *U. palustris* Moench, Meth., 663 (1794). In pratis humidis, fossis, ad ripas inter frutices riparios (—1580 m). Floret m. Julio ad Septembro.

Bosna: Ad riv. Mrežnica potok prope Klokot (Boller). In m. Stožer et Suljaga (B.) Prope Kupres (F.), Gubin, Glamoč, Preodac (Pr.). Circa Travnik (Br), in valle fl. Lašva prope Trebeuša (B.), circa Fojnica (Pr.), in m. Vranica (Mu.), Zvijezda, prope Strice et Dubošćica (Pr.); circa Tarčin (Pr.), Pazarić (B.), Pale (B.), in jugo Metaljka (B.) inter Previla et Pod Vitez (Pr.), in m. Romanija (B.), in faucibus Hrastnica montis Treskavica —1580 m (B.), ad fl. Željeznica (Pr.), in m. Vratlo prope Kalinovik (B.), in valle fl. Govza prope Jeleč (B.), in Zelengora et in valle fl. Sutjeska (Pr.). — **Hercegovina:** Fide Asch. Kan., Catal. (1877). Ubi? Prope Mostar (Str.).

Variat:

glaberrima [Beck, Fl. Südbosn. in Ann. nat. Hofmus., II, 118 (1887), Fl. Nied.-Öst., 764, et in Reich., Ic. l. c., 69. — *Spiraea Ulmaria* v. *denu- data* Hayne, Arzneigew., VIII, 31 non Presl; *viridis* Wallr., Sched., 235; Neilr., Fl. Wien, 631; Malý, Enum. Austr., 343]. Folia concoloria, subtus glaberrima. — **Bosna:** In agro Sarajevsko polje prope Vruci (*B. 1887), inter Ilidža et Vrelo Bosne (Gross Kneucker f. M.).

denudata [Beck, l. c. — *F. denudata* Fritsch in Abh. zool.-bot. Ges. (1889) 591. — *Sp. denudata* Presl, Fl. Čech., 101 (1819) vidi orig. — *Sp. Ulmaria* v. *concolor* Neilr., Fl. Nied.-Öst., 917]. Folia omnia v. inferiora subtus in nervis puberula, in lamina autem glabra v. parce pilosa (f. *pubescens* Beck. l. c.). — **Bosna:** Circa Banja Luka (H.); prope Zalin, Teslić, Žepče, Vedropolje, Karanovac, Kozluk (Fo.), ad fl. Željeznica pr. Fojnica (B.), pr. Dubošćica, Visoko (Fo.), circa Sarajevo in colle Debelo brdo ad Kovačići (Fo.), pr. Han Sumbulovac (Blau). Pale (B.). — f. *pubescens* crescit in valle fl. Miljacka et in m. Vitez Pl. (*B.).

tomentosa [Maxim., l. c., 252; Beck, Fl. Nied.-Öst., 764 et in Reich. f., Ic., l. c., 69. — *Spiraea Ulmaria* Hayne, Arzneigew., VIII, t. 31; v. *nivea*, Wallr. Sched., 235 (1822); *tomentosa* Cambess. in Ann. sc. nat., I, 381, (1824); v. *discolor* Koch, Syn. fl. Germ., 208]. Folia omnia v. inferiora subtus ± tomentosa, tomento niveo vel glauco-viridulo. — **Bosna:** Circa Banja Luka (H.)

Čelinac, Maslovare, in m. Borja Pl., ad Pribinić, Teslić, Žepče (Fo.). Circa Novi, Krupa, Zalin, Hašani, Križovo, Kosa, Pritoka, Velagići, Ključ, Bjelajsko polje (Fo.). In m. Vlašić (Fr. Br.). In agro Sarajevsko polje (M.), prope Lukavica proxime Sarajevo (F.). — **Hercegovina:** Ad Rakitno (Begović *V.).

glauca [Beck, l. c., 69. — *Sp. glauca* Schulz., Fl. Starg. Suppl., 26 (1819). — *Sp. Ulmaria* v. *glauca* Wallr. Sched., 235; = Schur, Enum. pl. Transs., 182. — *F. subdenudata* Fritsch, l. c. 591 = *Sp. Ulmaria* f. *subdenudata* Glaab, l. c., 40 = *F. Ulmaria* f. Asch. Graebn., l. c.]. Ut prior sed indumentum foliorum tenuius glaucum (nunquam niveum). — **Bosna:** Inter Klačnica et Dragočaj (B.), in m. Treskavica (*M. 1908).

2. *Filipendula vulgaris* [Hill, Brit. Herb. (1756), 24. — *F. hexapetala* Gilib., Fl. Lith., II (1782), 237; Max., Adn. in Act. hort. Petrop. VI (1879), 247; Beck, Fl. Nied.-Öst., 764 et in Reich., lc. fl. Germ., XXV 1, 70 t. 78. — *Spiraea filipendula* L., Spec. pl., 490 (1753); Reich., Fl. Germ., 626; Koch, Syn. fl. Germ., 208; ed. II, 231; Hayne, Arzneigew., VIII, 30; Sturm, Deutschl. Fl., I, Heft 18. — *Filipendula vulgaris* Moench, Meth., 663 (1794). — *Ulmaria filipendula* Kostel., Ind. hort. Prag. (1844), 138. — *Filipendula filipendula* Voss in Vilm., Blumengärt., 3. Aufl., I. 240 (1896); Asch. Graebn., Syn. mitteleur. Fl., VI, 439]. In pratis, pascuis, incultis, praecipue in pratis montanis — 1400 m. Floret m. Majo—Julio.

Bosna: Omnio vulgata et copiosa, sic in tota Bosna septentrionali et media (Fo., B.) sicut exempli gratia prope Novi (B.), Banja Luka (H.), Žepče (H.), Breške (B.), Donja Tuzla (M.), Nova Kasaba (J.), in m. Gomila, Grmeč, Krnin (B.), circa Livno (B.), Glamoč (Pr.), Travnik (*S., 1848), Fojnica (Mu., B.), in m. Vranica (B.), circa Vareš (Pr.); ubique circa Sarajevo (F., B.), Pale (Pr.), in m. Romanija (Blau), in valle fl. Sutjeska (Pr.), prope Čelebić (B.), Čajniče (Schiller) et a. l. — **Hercegovina:** Prope Umoljani ad 1400 m (B.), circa Mostar (A. Pichler), in m. Podvelež (B., Bornmüller!), in declivibus m. Velež (B.), circa Blagaj (B.); circa Trebinje in m. Leotar, ad Arslanagića most (B.), in m. Glijiva (*P. 1874), Gubar (Havelka!), in agro Gatačko polje (Mu., Riedel!), inter Trebinje et Drijeno (B.) et a. l. — **Novipazar:** Prope Svetloborje (*B.), Prijepolje (P. Zahlbruckner f. Hayek).

Tribus: *Sanguisorbeae*.

[Spreng., Anl., 2. Aufl., II 2, 861 (1818), DC, Prodr., II, 583. — *Sanguisorbae* Juss., Gen., 336. — *Sanguisorbaceae* Lindl., Veg. Kingd., 561. — *Rosaceae* trib. *Agrimoniae* Baill., Hist. plant., I, 349 et 462; subtrib. *Sanguisorbeae* Focke in Engl. Prantl., Nat. Pflanzenf., III 3, 12 et 41.]

9. *Alchemilla*.

[L., Spec. pl., 123 (1753) et Gen., ed. V, nr. 153 rectius Scop., Fl. Carn., ed. II, I, 115; Benth. Hook. Gen., I, 621; Focke in Engl. Prantl., Nat.

Pflanzenf., III 3, 43. — *Alchimilla* (Tournef.) DC., Prodr., II, 589; *Asch. Graebn., Syn. mitt. Fl., VI 1, 385. — Confer: R. Buser, Opera varia numerosa dispersa 1891—1903 citata apud *Briquet in Burnat, Fl. Alp. marit. III, 128 et literaturae comprehensiones in operibus hic *notatis ac apud Schinz Keller, Fl. der Schweiz (1900), 253; Camus in Rouy-Camus, Fl. France, VI, 439 (1900); Keller, Syn. der *Alchemilla*-Arten der Schweiz in Mitt. naturforsch. Ges. Winterthur 1907/08 64; Paulin, *Alchemilla*-Arten Krains in Jahresber. Staatsgymn. Laibach 1907 et a.]

Sectio: *Aphanes*.

[L., Spec. pl., 123 (1753) et Gen., ed. V, nr. 154 pro gen.; Gray, Brit. pl., II, 5 576 pro sect.; DC., Prodr., II, 590; Focke, in Nat. Pflanzenf., l. c., 43.]

1. *Alchemilla arvensis* [Scop., Fl. Carn., ed. II, I, 115 (1772); Koch, Syn. fl. Germ., ed. II, 257; Beck, Fl. Nied.-Öst., 765; Asch. Gr., Syn. mitt. Fl. VI 1, 386. — *Aphanes arvensis* L., Spec. pl., 123 (1753)]. In agris arenosis, incultis, graminosis, imprimis solo schistoso et tertiaro usque ad regionem montanam altiorem (800 m). Floret m. Aprili ad autumnum.

Bosna: Circa Novi, Tihotina crebre (B.), Banja Luka (H.), inter Srebrenik et Gradačac (*S. 1848). In valle Dobrnica pr. Bihać (B.); ad Djukići ad occidentem a Glogovac (Ha. Fa.). Circa Travnik pr. Dolac (*S. 1848), pr. Podobzir in distr. Jajce (Lindberg f. Buser), in valle Gostović (M.). Non rare in Bosna australi, sicut pr. Ilidža in agro Sarajevsko polje (M.), copiose in schistosis [Werfener Schiefer] circa Sarajevo (B.), in declivibus m. Trebević (B.) —800 m (M.), in valle fl. Lapišnica (B.), et al. loc.; in m. Orlinja prope Vardište (M.). — **Hercegovina:** Circa Mostar, praecipue in agro Bijelo polje (A. Pichler!); prope Trebinje, Bileća (*P. 1874).

Sectio: *Alchemilla*.

[L., l. c. pro gen.; Gray, Brit. pl., II. 576 (1821) pro sect. — Sect. *Eualchemilla* Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 43; Asch. Gr., Syn., l. c., 386.]

2. *Alchemilla alpina* [L., Spec. pl., 123 (1753) α . excl. β .; Asch. Gr., l. c. 387. — *Alchimilla* I. *alpinae* Buser in Magnier, Scrin. fl. select., nr. XI (1892). — Conf. Buser, Zur Kenntnis der Schweizerischen Alchimillen I. Über *A. alpina* in Ber. Schweiz. bot. Ges., IV (1894)]. In locis lapidosis saxosis regionis Pini mugo et alpinae montium elatiorum (1500—2000 m), rarius profundius descendens, solo calcareo ac schistoso. Floret m. Junio—Augusto.

Bosna: In montibus: Klekovača (F.), Osječenica (F., B.), Vel. Vitorog (Pr.), Raduša (Br. f. Freyn), Troglav (B.), Cincar (B.), Vlašić (*S. 1848) pr.

fontem Mali Santići et in m. Opaljenik; Vranica (Mu., B.) sicut in culminibus Krstac, Smiljeva Kosa, Matorac; Zec (Bl.), Hranisava, Bjelašnica (B.), Treskavica (Bl., B.), Lelija (B.), Trebević (C., Engler), Jahorina (F.), Maglić (B.), hic prope Mratinje in Crnagora vicina ad 600 *m* descendens (Rohlena). Volujak (Mu., B.), Vjetrenik montium Ljubičina pl. (B.). — **Hercegovina:** In montibus: Preslica, Lisin (V.); Prenj (B.) sicut in alpe Tisovica, in culmine Ortiš (B.), Osobac (Pr.) et al. loc.; Čvrsnica (V.), veluti in culm. Plasa in valle Drinac (V.), in c. Muharnica (F.), Čvrsnica (V.); Medved et Vlajna montis Čabulja (Prodan); Velež (Mu., B.), Crvani, Bjelašica prope Gacko (Mu.).

Valde doleo, plantas a me collectas ac adnotatas cognoscere cum subspeciebus non potuisse, quia mea collectio *Alchemillarum* apud monographum *R. Buser* (Genevae) maxima parte flammis consumptae sunt. Proximum vero est, omnes stationes nominatas ad *A^m Hoppeanum* pertinere.

Huc subspecies:

Alchemilla Hoppeana [Reich., Fl. germ., 610 (1832) pro var. *A. alpinae*; Dalla Torre, Anl. Alpenreis., 208 (1882) pro spec. = Buser, Zur Kenntn. schweiz. *Alchem.* in Ber. schweiz. bot. Ges., IV (1894), Sep. 14, t. 1; Asch. Gr., l. c. 390. — *A. alpina* α . *asterophylla* Tausch in Flora XXIV, Beibl. 1, 108 (1841) = *A. asterophylla* Buser in Magn., Scrinia fl. sel., nr. XI (1892)]. In locis lapidosis saxosis montium elatiorum, solo calcareo — 2000 *m*. Floret m. Junio—Augusto.

Bosna: In m. Dinara c. Troglav (B.), inter Male poljanice et fauces montis Troglav, in declivibus m. Jankovo brdo ad Aldukovačka lokva, in m. Janski vrh, Gnjat, Dinara (Ja.-Wa. f. Degen sub v. *velebitica* Borb.). In m. Jedovnik (Ja.), Cincar (B.), Treskavica (B.). — **Hercegovina:** In m. Prenj Pl. (*Prodan, 1910), Medved et Vlajna montium Čabulja (Prodan).

Adjungo formam indescriptam *velebiticam* [Borbas in Öst. bot. Zeit. (1908), 248] secundum plantas a Degen, Rossi et parvitate mea collectas sine conditione ad typum vergentem, quia folia septenata plantae velebiticae foliola oblonga, nunc angustiora nunc latiora, utrinque dentibus lateralibus 2—5 praedita, supra glabra ostendunt et quorum forma in icone apud Buser (l. c. tab. I, folium supremum a sinistra parte) se declarat.

f. *angustifoliola* [Buser in Ber. Schweiz. bot. Ges., IV (1894), 53, t. 1 (foliolium infimum a sinistra parte)]. — **Bosna:** In monte Šator supra lacum, 1500—1750 *m* (*Ha. Fa. 1906). Sec. Asch. Gr. (l. c., 391) hanc formam sparse in Bosna et Hercegovina reperiri dicitur, quod confirmare nequeo, nam *A. Hoppeana* bosnensis, si foliis angustis deprehenditur, foliis septematis (non novenis) excellit.

f. *alpigena* [Buser in Bull. herb. Boiss., 2. ser., I (1901), 748 pro spec.; Asch. Graebn., l. c., 392 pro var.]. **Bosna:** In monte Radovina (Schiller f. Fritsch 1910). Etiam Fritsch [in Mitt. naturw. Ver. Steierm. 47 (1910), 180] commemoravit, plantam e statione indicata plurimum foliis septenatis ornatam esse. Plantam aequalem collegi in regione alpina montis Cincar prope Livno. Trebević (M). De reliquo *A. alpigena* ex mea sententia propter transitus numerosos ad typum est forma *A^{ae} Hoppeanae* levissime definita.

i. *vestita* [Buser in Ber. Schweiz. bot. Ges., IV (1894), 61 pro var.: Asch. Graebn., l. c., 391. — *A. amphisericea* Buser in Schedae ad Dörfler. Herb. norm. cent. XXXVII (1898), 206 nr. 3614]. Foliis supra sericeis egregia, in montibus non solum calcareis sed etiam schistosis — 2000 m crescit. **Bosna:** In montibus: Vranica (Mu., B., Bošnj.) locis Krstac, Ločike, prope lacum Prokoško jezero; in monte Zec Pl. (Blau, Schwarz!, B. f. Buser); Hranisava, Treskavica (B. f. Buser). — **Hercegovina:** In monte Prenj Pl. et in m. Glogovo prope Jablanica (B. f. Buser). — In monte Prenj Pl. exemplaria observavi, quorum indumentum sericeum adeo in superficie foliolorum auctum fuit, ut foliola unicoloria conspiciuntur.

Alchemilla ampliargyrea [Buser, ubi?] in confinibus Dalmatiae in monte Orjen (Adam. f. *Halácsy in Öst. bot. Zeit. [1906], 209) indicatur.

3. *Alchemilla glaberrima* [Schmidt, Fl. Boem., III, 89 (1794); Asch. Graebn., l. c., 395. — *A. glabra* Poiret, Enc. meth. suppl. I, 285 (1810). — *A. fissa* Günth. et Schumm., Herb. viv. fl. Siles., cent. IX, nr. 2 (1819) fid. Kerner. — *A. vulgaris* γ. *glabra* Lam. DC., Fl. France, IV, 451 (1805); DC., Prodr., II, 589]. In locis humidis fontanis, pascuis alpinis regionis alpinae et subalpinae — 1800 m. Floret m. Junio—Augusto.

Bosna: In mont. Vlašić (Br. f. Freyn) et Vranica (Mu.); ad lacum Veliko jezero in m. Treskavica (*B. 1887) in mont. Hranisava (F.), Bjelašnica (M.), Romanija (*B. 1887), Maglić (Mu., F., Rohlena). — **Hercegovina:** In mont. Prenj Pl. locis Bjelašnica, Ortiš (*B. 1887 sub *A. fissa*), Bjelašica prope Gacko (Mu.).

In loco ultimo sec. Murbeck [in Lunds univ. Årsskr. XXVII (1891), 130] in forma quadam reperta est, quae cum planta in Kerner [Fl. exsicc. austro-hungar. nr. 817] edita discrepat. »Der Blütenstand ist infolge der verlängerten Äste und den ebenfalls verlängerten, haarfeinen Blütenstielen sehr locker; die oberen Nebenblätter sind tief eingeschnitten; die Stiele der Wurzelblätter sind feiner und sehr lang. Besonders charakteristisch erscheint die Blattspreite, die kaum $\frac{2}{3}$ der Fläche eines Kreises entspricht. Stimmt mit Exemplaren der

A. glabra überein, die Szyszyłowicz in Montenegro aufsammelte« (Murbeck).

4. *Alchemilla alpestris* [Schmidt, Fl. Boem., III, 88 (1794). — *A. conglomerata* Schmidt, l. c., 89. — *A. glabrata* Neygenfind, Ench. bot. (1821) fide Mert. Koch. — *A. vulgaris* v. *glabra* Mert. Koch, Fl. Deutschl., I, 830 (1823) et aut. p. p. — *A. vulgaris* subsp. *A. alpestris* Asch. Graebn., l. c., 411; Briquet in Burnat, Fl. Alp. marit., III, 149 pro var.]. In pratis subalpiniis imprimis circa casas pastorales. Floret m. Junio—Augusto.

Bosna: In monte Troglav (B), prope Koprivnica c. 1100 m (*Ha. Fa. 1906); in m. Vranica Pl. frequenter, praecipue ad lacum Prokoško jezero (Sim. Vierh., B.), in m. Treskavica, Maglić (B.).

f. *acutidens* [Buser in Bull. herb. Boiss., II (1894), 412 pro spec.; Briquet in Burnat, Fl. Alp. marit., III, 149; Asch. Graebn., l. c., 412]. **Bosna:** In monte Vranica Pl. ad lacum Prokoško jezero (Schwarz f. *B.).

f. *obtusa* [Buser in Jaccard, Cat. fl. Valais, 126 (1895) pro spec.; Schinz. Keller, Fl. Schweiz, 256 (1900) pro var.; Asch. Graebn., l. c., 413]. **Bosna:** (*Buser 1894): In declivibus saxosis fruticosis montis Šator supra lacum c. 1500—1600 m (Ja.). In monte Vranica Pl. juxta lacum Prokoško jezero et in cacumine Treskavica (Bošnjak).

5. *Alchemilla vulgaris* [L., Spec. pl., 123 (1753) p. p.; Koch, Syn. fl. Germ., ed. II, 256; Beck, Fl. Nied.-Öst., 766; Asch. Graebn., Syn. l. c., 405. Confer Briquet in Burnat, Fl. Alp. marit., III, 146]. In pratis, ad silvarum margines usque ad summos montes (1943 m). Floret m. Aprili—Julio.

Bosna: Circa Travnik et in monte Vlašić —1943 m (*S. 1848; Fr. Br.); in m. Vranica Pl. cacumine Ločike (R.). Circa Sarajevo (H, F.), Mokro (Fo.), in m. Bjelašnica, Treskavica, Volujak (B.). — **Hercegovina:** Prope Gornja Tušila ad m. Visočica (B.); in monte Orijen (Studnička).

Variat:

α. *silvestris* [Schmidt, Fl. Boem., III, 88, (1794) pro spec.; Briquet in Burnat, Fl. Alp. marit., III, 155, (1899) = Asch. Graebn., Syn. l. c., 406; v. *typica* Beck, Fl. Nied.-Öst., 766. — *A. vulgaris* L. fide Buser in Dörfner, Herb. norm. nr. 3633 et Schedae 219].

f. *pastoralis* [Buser, Not. quelqu. Alch. crit. nouv., 18 (1891) pro spec.; Asch. Graebn., Syn. l. c., 407]. **Bosna:** In declivibus montis Trebević versus Starigrad (Ja. fide *Fritsch 1910).

f. *subcrenata* [Buser in Magnier, Scrin. fl. sel. XII, 285 (1893) pro spec.; Briquet, l. c., 155 (1899); Asch. Graebn., l. c. 407]. **Bosna:** In monte Jankovo brdo (1500—1600 m) et in declivibus occidentalibus montis Dinara (*Degen 1908). In pascuis alpinis montis Maglić (Ad. f. Fritsch). Forma

umbrosa Buser reperta est ad silvarum margines in jugo Strmac prope Grkovci c. 1400 m (Ja. Wa. f. Degen).

f. *acutangula* [Buser in Ber. Schweiz. bot. Ges. IV (1894) 69 pro spec.; Asch. Graebn., l. c., 408]. **Bosna:** In locis graminosis paulo humidis prope Petrovići c. 1000 m in monte Trebević (Lindberg f. *Buser 1906, M.).

β. *pratensis* [Schmidt, Fl. Boem., III, 88 (1794) pro spec.; Briquet l. c., 154 (1899); Asch. Graebn., l. c., 408].

Bosna: In monte Zec Pl. ad transitum inter Smiljeva kosa et Zečeva glava (*Bosnjak 1920).

γ. *minor* [Huds., Fl. Angl., 59 (1762) fide Buser pro spec.; Briquet, l. c., 153; Asch. Graebn., l. c. — *A. filicaulis* Buser in Bull. herb. Boiss., I, App. 2, 22 (1893)].

Bosna: In declivibus australibus montis Trebević (Behrendsen f. *Buser 1905).

δ. *heteropoda* [Buser in Ber. Schweiz. bot. Ges., IV (1894), 73 pro spec.; Asch. Graebn., l. c., 409].

Bosna: In monte Zec Pl. et ad transitum inter Smiljeva kosa et Zečeva glava (*Bošnjak 1920).

ε. *trichocalycina* [Wettst., Beitr. Fl. Alb. in Bibl. bot. Heft 26, 40 (1892)]. Tubus calycinus pilis longis patentibus praeditus, ceteris in rebus calyx glaber.

Bosna: In monte Igrisnik (*Wettst., l. c., 1892).

6. *Alchemilla coriacea* (Buser, Notes quelqu. Alch. crit., 19 (1891), in Bull. soc. Dauph., sér. 2 (1892) 108 f. autore. — *A. straminea* Buser in Bull. soc. ét. fl. fr.-helv. (1894) f. Rouy et in Jaccard, Cat. fl. Valais., 117 (1895). — *A. vulgaris* subsp. = Asch. Graebn., l. c., 416; var. = Briquet in Burnat, Fl. Alp. marit., III, 148 (1899).

Bosna: In monte Trebević (Behrendsen f. *Buser 1905 sub *A. straminea*). — **Hercegovina:** In monte Plasa (*Prodan 1910).

7. *Alchemilla hybrida* [L., Spec. pl., 123 (1753) pro var. *A^{ae} alpinae* ac Amoenit. academ., ed. II, III, 49 (1787) sed autorum p. p. — *A. pubescens* Lam., Illustr., I, 347 (1791) non Marsch. Bieberst. — *A. montana* Willd., Hort. Berol., II, 170 (1809) non Schmidt. — *A. vulgaris* v. *subsericea* Gaud., Fl. Helv., I, 453 (1828). *A. pubescens* subsp. *A. montana* Asch. Graebn., l. c. 401]. In pratis, locis graminosis paulo humidis usque ad regionem alpinam. Floret m. Junio, Julio.

Bosna: In montibus Bjelašnica, Treskavica (*B. 1887, M.). Circa Sarajevo: in monte Trebević (B., Lindberg), prope Vučja Luka (F.), in

locis superioribus ad septentriones a Sarajevo: Pašino brdo, Gradina, Crepolsko, Crni vrh et al. (M.), circa Pale (F. f. M.); in monte Mala Ljubuša (R.). — **Hercegovina:** In monte Visočica, Plasa (B.), prope Rakitno (F.), in monte Jastrebica (*P., 1874), in m. Velež (Bornmüller!), Porim prope Rujšite (Raap -Call., Pl. Herc. nr. 70!).

Variat:

α. *plicata* [Buser in Bull. herb. Boiss., I, App. 2, 20 (1893) pro spec.; Asch. Graebn., l. c., 402].

Bosna: In monte Jahorina (*M. 1908).

β. *flabellata* [Buser, Not. quelqu. Alch., 12 (1891) et in Bull. herb. Boiss., sér. 2, VII, 940 pro spec.; Briquet in Bur-nat, Fl. Alp. marit., III, 140 (1899); Asch. Graebn., l. c., 403. — *A. cinerea* Buser in Bull. soc. Dauph., sér. 2 (1892), 101 f. Briquet et in Bull. herb. Boiss., sér. 2, VII (1907), 938].

Bosna: In monte Trebević prope Petrovići c. 1000m (Lindberg f. *Buser 1906). — **Hercegovina:** Inter Golobrd et Bradina (Behrendsen f. *Buser).

γ. *colorata* [Buser, l. c. 10 pro spec.; Briqu., l. c., 139 pro var.; Asch. Graebn., l. c., 403]. — **Hercegovina:** In monte Plasa (*Prodan 1910).

10. Agrimonia.

[L., Spec. pl., 448 (1753) et Gen., ed. V, nr. 534; Benth. Hook., Gen., I, 622 p. p. rectius Adans., Fam., II, 293; Neck. Elem., II, 100; Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 43; sect. *Grypoctenium* Wallr., l. infra cit., 32, 36. — Confer Wallroth, Monogr. Vers. *Agrimonia* in Beitr. zur Botan., I, 1 (1842); Meyer, Rev. *Agrim.* in Bull. acad. imp. St. Petersb., X nr. 22 etiam in Ann. sc. nat., sér. 2, XVIII, 373.]

1. *Agrimonia eupatoria* [L., Spec. pl., 448 (1753); Wallroth, Monogr. Vers., l. c., I, 46, t. I fig. 1; Beck, Fl. Nied.-Öst., 767; Asch. Graebn., Syn. mitt. Fl., VI 1 420]. »Oskorušica, dubačac, turica, korevina«. — In locis graminosis lapidosis, pratis, sepibus, inter frutices usque ad subalpinas (1450m). Floret m. Majo—autumno.

Bosna: Pervulgata et frequens. Circa Bosn. Dubica, Ivanjska, Trošeljce vel Windhorst (B.), Maglaj ad fl. Vrbas, Banja Luka (H.), prope Sasina, Sratinska, Gjurići, Brankovac, Vrbanja, Podbrdje, Ružić, Plitska, Obodnjik, Maslovare, Pribinić, Žabljak, Kraševo, Doboij, Žepče (Fo.); circa Donja Tuzla (M.), ad fl. Jala prope Donja Tuzla (Wettst. f. Fri.), inter D. Tuzla et Breške (B.), in valle fl. Drina prope Zvornik (Wettst. f. Fri.), prope Prosjek (J.). — Circa Vrnograč, Cazin (F.), Krupa, Kozini, Lipnik, Podvidača (Fo.), in monte Grmeč Pl. (B.), inter Varcar Vakuf et Sinjakovo (B.), prope Donji Vakuf ad Prusac (Ha. Fa.), circa Bugojno, Kupres (Pr.),

in monte Hrbljina, Kamešnica, Vještica gora, in monte Prolog (Pr., B.), Dinara (Degen), in jugo Strmac ad Grkovci (Ja. Wa.), in monte Troglav (B.). Circa Gubin, Glamoč, Preodac (Pr.), circa Pešenci juxta Grahovo (Ja. Wa.); prope Karaula circa Jajce (H.); in valle fl. Lašva inter Busovača et Travnik (B.), circa Travnik (Fr. Br.), Fojnica (B.), in monte Pogorelica (Schwarz!), prope Zenica, Visoko (Fo.), Vareš (Pr.), Pervulgata in Bosna australi (B.), sicut circa Tarčin (Pr.), Krupac (Landauer), in monte Igman (Fo.), in agro Sarajevsko polje (M.), circa Sarajevo (H., B.), in valle fl. Zeljeznica circa Trnovo, Kalinovik (Pr.), Rogatica (H., F.), in valle fl. Sutjeska (Pr.), prope Suha (B.) et al. loc. — **Hercegovina**: In jugo Ivan (Laus), in valle Trešanica (B.), circa Konjic (Fo.), in valle fl. Doljanka (Pr.), prope Glogošnica, Jablanica (B.), in declivibus montis Čabulja (B.); circa Mostar (Str.) sicut in m. Hum, Podvelež (B.), Velež —1450 m (B.), circa Nevesinje, prope Domanovići (Fo.), circa Trebinje (*P. 1874), Grančarevo, in Bijela gora, prope Orahovac, Vučjak (P.), in valle Vučji do prope Kneševice, in m. Subra, juxta Grab (V.), Bileća (Fo.). — **Novipazar**: In valle fl. Lim inter Prijepolje et Bistrica, prope Plevlje (*B.).

Plantae inspectae plane ad var. *villosam* [Peterm., Pflanzenschl., 127 (1846)] pertinent. Planta, quam prope Jablanica legi, excellit receptaculis longe pilosis et foliis subtus quidem villosis sed sparse et parcius stelliferis, quibus glandulae margaritis vitreis similes conspicue aspectu sentiuntur.

2. *Agrimonia odorata* [Mill., Gard. dict., ed. VIII, nr. 3 (1768); Aiton, Hort. Kew., II, 130 (1789); Beck, Fl. Nied.-Öst., 767; Asch. Graebn., Syn. mitt. Fl., VI 1 423. — *A. procera* Wallr. in Linnaea XIV, 273, et Beitr. I, 50, t. I, fig. 2 (1842)]. Inter frutices, ad silvarum margines, in silvis apertis. Floret m. Julio, Augusto.

Bosna: Circa Fojnica, in monte Pogorelica (Schwarz!), prope Semizovac (*B. 1896), in m. Paštan brdo prope Rudo c. 760 m (M.). — **Hercegovina**: Circa Nevesinje (*V. 1888).

Variat:

β. *glandulosa* [Simonk., Fl. Transs., 223 (1886) pro spec. et in Term. füz., II (1878), 33 pro var., Asch. Graebn. l. c., 424. — *A. odorata* v. *macrocapra* Borbás, Budap. és Körny., 278 (1879). — *A. procera* Reich., Fl., Germ., nr. 2571 non Wallr. — *A. Biatzovfskyi* Fleischm., Übers. Fl. Krains, 102 (1844) sine descr. fide Murbeck].

Hercegovina: Sub frutices inter Nevesinje et Pustoljane, in agro Gatačko polje et in m. Bjelašica prope Gacko c. 850–1200 m [*Murbeck, Fl. Südbosn. in Lunds Univ. Årsskr., XXVII (1891), 130].

11. *Aremonia*.

[Necker, Elem. bot., II, 100, nr. 768 (1790); DC, Prodr., II, 588; Endl., Gen., 1243; Focke in Engl. Prantl, Nat. Pflanzenfam., III 3, 43. — *Agrimonia* sect. *Orthoctenium* Wallr., Beitr., I 1, 34.]

1. *Aremonia agrimonoides* [Necker, Elem. bot., II, 100 (1790); DC., Prodr., II, 588; Asch. Graebn., Syn. mitt. Fl., VI I. 426. — *Agrimonia agrimonoides* L., Spec. pl., 643 (1753). — *Potentilla stenantha* Lehm., Add. ad ind. sem. hort. Hamb. (1849), 7 et Rev. Pot., 44, t. 14. — *Spallanzania agrimonoides* Pollini, Hort. Veron. pl. nov., 10 (1816)]. Sub frutices, ad silvarum margines, in silvis imprimis frondosis usque ad subalpinas (1500 m). Floret m. Aprili, Majo.

Per totam **Bosnam** vulgata et frequens, praecipue locis calcare vacuis; sic exempli gratia circa Banja Luka (C.), in Bosna septentrionali (Fo.), prope Srebrnik, Donja Tuzla (*Sendtner 1848, B.), Breške (B.), Žepče (S.), Bihać (B.), in m. Gomila velika (B.), Osječenica (B.), Plazenica (Ha. Fa.), circa Livno (B.), Jajce (C.), Travnik (*S. 1848), Fojnica (B.), in m. Vranica Pl. (Mu., B.), prope Gornji Vakuf (F.), Bugojno (F.), Kupres (Pr.); circa Vareš (Pr.), Vogošća (B.), Tarčin (Pr.). Ubique in Bosna australi (B.), sicut circa Sarajevo (H., B.), in m. Trebević (F., B.), prope Pale (Per.), in m. Romanija Pl. (B.), juxta Rogatica (F.), in valle fl. Željeznica (Pr.), et Sutjeska (Pr.), in m. Maglić (B.). — **Hercegovina**: Praecipue in silvis montanis. In m. Preslica et Porim (V.), prope Borci (Pr.), Jablanica (Pr.), in m. Čabulja (B.), Velež (Mu., B.), circa Nevesinje (V.), in m. Crvanj et Bjelasic prope Gacko (Mu.); circa Trebinje in m. Gljiva (*P. 1874), in Bijela gora prope Milanov odsjek, Radkuša jama (V.), Dubovac, Medov dol (P.), in m. Jastrebnica (P.), Vučji zub (Studnicka).

12. *Sanguisorba*.

[L., Spec. pl., 116 (1753) et Gen., ed V, nr. 136 rectius Scop., Fl. Carn., ed. II, I 109; Focke in Engl. Prantl, Nat. Pflanzenfam., III 3, 44. — *Pimpinella* Adans., Fam., II. 293 (1763); Gaertn., De fruct., I, 161 non L. — *Poterium* Benth. Hook., Gen., I. 624. — Confer: Clos in Bull. soc. bot. France, sér. 3, V (1898), 32]

Sectio: *Eusanguisorba*.

[Cesati, Ic. stirp. Ital. fasc. I (1840); A. Br. in Ind. sem. hort. Berol. (1867), App. 10. — *Sanguisorba* L., l. c.]

1. *Sanguisorba officinalis* [L., Spec. pl., 116 (1753); Beck, Fl. Nied.-Öst., 767; Asch. Graebn., Syn. mitt. Fl., VI I, 428. — *Pimpinella officinalis* Gaertn., De fruct., I, 161 (1788). — *Sanguisorba major* Gilib., Fl. Lith., I, 18 (1781). — *Poterium*

officinale A. Gray in Proc., Am. acad., VII (1868), 340. — Confer: Opiz in Berchth. Seidl, Fl. Böhm., II, 25 (1838/39); Ugolini in Comm. Ateneo Brescia (1907), 102]. In pratis humidis, paludosis usque ad subalpinas (1200 m). Floret m. Junio—Augusto.

Bosna: Sec. *Asch. Kanitz, Cat., 98. Ubi? Circa Koprivnica (Ha. Fa.) c. 1200 m, Kupres (Pr.), in m. Hrblijina, prope Preodac (Pr.); circa Travnik (Br.), prope Vitovlje (Fr. Br.); circa Vareš prope Pajtov han (Pr.); in agro Sarajevsko polje (B.), prope Han Hreša juxta Sarajevo c. 1000 m (B.), in monte Trebević (M.), circa Pale (B.); in monte Stolac prope Višegrad (Čurčić f. M.), in Zelengora (Pr.). — **Hercegovina:** Sec. *Aschers. Kan., Cat. 98. Ubi? In agris Nevesinjsko et Gatačko polje (Mu.) c. 850—1000 m.

Sectio: *Poterium*.

(L., Spec. pl., 994 (1753) et Gen., ed. V, nr. 948 pro gen. — *Sanguisorba* sect. *Rhytidopoterium* (*Rutidopoterium*) Ser. in DC., Prodr. II (1825), 594. — Confer: Spach, Rev. gen. *Poterium* in Ann. sc. nat., sér. 3, V, 31 (1846).]

2. *Sanguisorba minor* [Scop., Fl. Carn., ed. II, I, 110 (1772); Beck, Fl. Nied.-Öst; 768; — *Sanguisorba sanguisorba* Asch. Graebn., Syn. mitt. Fl., VI I, 431. — *Poterium sanguisorba* L., Spec. pl., 994. — *P. dictyocarpum* Spach in Ann. sc. nat., sér. 3, V, 34 (1846). — *Pimpinella sanguisorba* Gaertn., De fruct., I, 162 (1788)]. In pratis siccis, locis graminosis, incultis, arenosis, lapidosis, desertis usque ad subalpinas (1300 m). Floret m. Aprili ad autumnum.

Bosna: Frequens et vulgata, exempli gratia in Bosna media et septentrionali prope Banja Luka (H.), Donja Tuzla (M.), Breške (B.), ad fl. Kravica prope Nova Kasaba (J), in m. Šuljaga, circa Kupres, Šujica, in m. Vel. Malovan (Pr.), in m. Dinara c. 800 m (B.), circa Gubin, Glamoč, Preodac (Pr.); prope Travnik (*S. 1848), Fojnica (B.), Vareš, Tarčin, (Pr.). In Bosna australi frequens (B), circa Sarajevo, in m. Trebević ad 1300 m (B.), in m. Bjelašnica (B.), secundum fl. Željeznica, circa Kalinovik, Vlaholje, in Zelengora, prope Tjentište, Mješajici, inter Previla et Pod Vitez (Pr.). — **Hercegovina:** In declivibus m. Čabulja (B), circa Mostar (A. Pi.), in m. Podvelež (B.), circa Trebinje, Bileća (*P. 1874), in Bijela gora (Hawelka!). — **Novi Pazar:** Circa Metaljka vel Svetlo borje, in valle fl. Lim inter Prijepolje et Banja (*B. 1896).

Variat:

α . *typica* G. Beck [*S. minor* Scop. = *Poterium sanguisorba* L. et aut. — *Pot. dictyocarpum* Spach, l. c.]. Fructus orculaeformis, carinis 4 crassis vel anguste alatis praeditus, 3—4 mm

longus, cum lateribus reticulato-foveolatis, marginibus foveolarum crassis rotundatis. Foliola sessilia vel breviter petiolulata.

f. *virescens* [Abrom., Fl. Ost-West-Preuß., 250 (1898); Asch. Graebn., l. c. 432. — *Pot. sanguisorba* v. *viride* Peterm., Pflanzenschl., 134 (1846). — *P. dictyocarpon* v. *virescens* Spach, l. c., 35; v. *genuinum* Rouy, Fl. Franc., VI, 436 »Folia utrinque viridia. Caulis petiolique glabri. Pervulgata.« — f. *glaucescens* [Garcke, Fl. Nord-Mitt.-Deutschl., 8. Aufl., 134 (1867). — *Pot. glaucescens* Reich., Fl. Germ., 610 (1832) = *Pot. sanguisorba* var. Peterm., Pflanzenschl., 134 (1846). — *Pot. dictyocarpum* v. *glabrum* Spach, l. c., 35]. Folia subtus glauca. Caulis et petioli glabri. Rarius. — f. *puberula* [G. Beck, *P. sanguisorba* v. *puberulum* Ser. in DC., Prodr., II, 594 (1825); v. *guestphalicum* Peterm., Fl. Lips., 359 (1838) = *P. guestphalicum* Boenn. l. c.; v. *hirtum* Peterm., Pflanzenschl., 134 (1846); v. *pilosissimum* Schur, Enum. Transs., 205 (1866); v. *piloso-hirsutum* Schur in Verh. Nat. Ver. Brünn, XV 2, 197 (1877). — *P. dictyocarpum* v. *hirsutum* Rouy, l. c. 436!. — *S. minor hirta* Dall. Torr. et Sarnth., Fl. Tir., VI (1909), 541]. Caulis imprimis ad basim et petioli plus minus pilosi. Freuens et vulgata.

β. *polygama* [G. Beck. — *Pot. polygama* Waldst. Kit., Pl. rar. Hung., II, 217, t. 198 (1803) = *P. sanguisorba* v. = Vis., Fl. Dalm., III, 255 (1852). — *P. muricatum* Spach, l. c. 36 = *P. sanguisorba* subsp. = Rouy, l. c. 435; var. = Čelak., Res. bot. Durchf. Böhm. für 1883 in Sitz. böhm. Ges. Wiss. (1884), Sep. 36.! — *S. muricata* Greml., Exk. Fl. Schweiz, 3. Aufl. (1878), 172 = Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 45 (1888) = *S. minor* subsp. = Asch. Graebn., l. c. 433; var. = Asch. Kan., Cat. Serb., 98 (1877). — *S. polygama* Garcke, ubi? = Beck, Fl. Nied.-Öst., 768 (1892) non Nyl.]. Fructus orculaeformis, carinis 4 alatis latioribus saepe sinuato-dentatis et subcristatis praeditus, 3—5 mm longus, cum lateribus profunde foveolatis, marginibus, foveolarum crassis elatis denticulatis. Foliola plus minus saepe longius petiolulata.

Bosna: In monte Dinara c. 1100 m (B.), supra Prusac prope Donji Vakuf (Ha. Fa.), circa Trnovo 800—900 m (Mu.); in agro Sarajevsko polje (M.), circa Sarajevo hinc inde (*B. 1887), in valle riv. Moščanica (M.) et in m. Trebević (Prodan, M.). — **Hercegovina:** Circa Jablanica (*Prodan).

f. *platylopha* [G. Beck. — *P. platylophum* Jord., Obs. VII, 22 (1849) = *P. muricatum* v. = Spach, l. c., 37. — *S. platylopha* Hausskn. in Öst. bot. Zeit. (1875), 391]. Fructus 3—5 mm longus, carinis latis prominentibus, dimidiam latitudinem fructus aequantibus praeditus. Planta glabra. Est forma vulgata. — f. *trichota* [G. Beck]. Ut prior sed caulis ad basim et petioli plus minus pilosi. — **Istria:** prope Pola (Freyn!); in insula Lošinj (Rex Frieder. Aug. II!). **Dalmatia:** frequenter (B.). — f. *microcarpa* [G. Beck]. (Fructus 2.2—3 mm longi.) — **Hercegovina:** Circa Mostar in m. Stolac (Raap

Callier, Pl. Herc. nr. 69 sub *P. sanguisorba!*), in m. Podvelež c. 900 m (Bornmüller f. B.). — **Dalmatia:** In m. Marian prope Split (B.). — **Crna Gora** prope Rijeka (B.). — f. *stenolopha* [G. Beck]. — *P. muricatum* v. *stenolophum* Spach, l. c., 37 = *S. stenolopha* Hausskn. in Öst. bot. Zeit. (1875), 391]. Carinae fructus ut in var. *typica* sed latera ut in var. *polygama*, hinc inde cum marginibus foveolarum obtusiusculis. — **Hercegovina:** Circa Mostar (*B.).

γ. *gracilis* [G. Beck. — ? *Pot. sanguisorba* v. *vulcanorum* Herib. in Bull. soc. ét. fl. Fr.-Helv., nr. 727 f. Rouy]. Caulis et petioli pilosi vel glabri. Pedunculi tenues, saepe filiformes. Capitula parva 5—8 mm longa, globosa pallida. Fructus (non exacte maturos vidi) 2·5 mm longi, cum carinis latis alatis, lateribus late foveolatis, et foveolarum marginibus rotundatis. Stigmata pallida. Habitu *S^{am} garganicam* [Tenore, Syll. fl. Neap., 261 sub *Poterio*] commemorat, quae autem fructibus majoribus 3·5—4 mm longis praestat.

Hercegovina: Circa Mostar in m. Hum et in montibus circumjacentibus (Bornmüller f. *B.).

Tribus: *Roseae*.

[Cambess. in Ann. sc. nat., I, 225 (1824); DC., Prodr., II, 596 (1825); Baillon, Hist. pl., I, 346 et 461; Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 12 et 46.]

13. *Rosa*.

[L., Spec. pl., 491 (1753) et Gen. ed. V, nr. 556; Endl., Gen., 1240; Benth. Hook., Gen., I, 625; Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 46. — Pro fines nostras opera sequentia permagni momenti sunt: Lindley, Rosarum monogr. (London 1820); Trattinick, Monogr. Ros., I—IV (1823—1824); Crépin, Prim. monogr. Ros. in Bull. soc. bot. Belg. (1869—1882); Christ, Rosen der Schweiz (Basei 1873); Déséglise, Cat. rais. Rosier in Bull. soc. bot. Belg. (1876) ac Genève (1877); Burnat et Gremlé, Roses Alp. marit. (Genève 1879—1883); Borbás, A magy. birod. rózsái = Prim. monogr. Ros. Hung. in Math. term. közlem. XVI (1879) edit. 1880; Keller J. B., Rosen Nied.-Öst. in Hal. Braun, Nachtr. Fl. Nied.-Öst. (1882), 179; Wiesbaur, Die Rosenflora von Travnik in Öst. bot. Zeit. (1883), 315; (1884), 12; Braun H., Beitr. zur Kenntn. der Gatt. Rosa in Abh. zool.-bot. Ges., (1885), 61; Vukotinović, Opis ružah okol. zagreb. in Rad jugosl. ak., LXIX (1884); LXXXIII (1886); Braun H., Bosn. Rosen in Beck, Fl. Südbosn. in Ann. naturhist. Hofmns., II (1887), 97; Braun H., Rosen Nied.-Öst. in Beck, Fl. Nied.-Öst., 768 (1882); Crépin, Nouv. class. Ros. in Bull. soc. bot. Belg. 31 (1892); Rosae hybridae, ibidem 32 (1894); Keller R. Beitr. zur Kenntn. bosn. Rosen I in Engler, Bot. Jahrb., XV (1893), 493, et II ibidem XXI (1896), Beibl. nr. 53, 28; Pospichal, Rosen Istr. in Flora öst. Küstenl., II 1, 296 (1898); Camus, Ros. hybrid in Journ. de bot. (1900), 12; Keller R., Rosen Deutschl., in Asch. Graebn., Syn. mitt.

Fl., VI 1, 32 (1900); Rouy, Ros. franç. in Rouy Camus, Fl. France, VI (1900) 236; Malý K., Bosn. Ros. in Verh. zool.-bot. Ges., LIV (1904), 200; Willmott, The genus Rosa (London 1910).] »Ruža«.

Synstylae.

[DC., Cat. hort. Monsp. 137 (1813) et Prodr., II, 597.]

1. *Rosa sempervirens* [L., Spec. pl., 492 (1753); Vis., Fl. Dalm., III, 242; Schneid., Laubholz., I, 544; R. Keller in Asch. Graebn., l. c., 36 (hic literatura accuratius citata)]. Inter frutices, in sepibus, in ditone modo mediterranea. Floret m. Majo, Junio.

Hercegovina: Circa Mostar (M.), prope Radobolje (Baenitz!), Buna (*Str. 1880).

f. *scandens* [Mill., Gard. dict., ed. 8 (1768) nr. 8 pro spec.; DC., Fl. fr., V, 533 (1815); R. Keller, l. c. (1896), 28]. — **Hercegovina:** Prope Vitina juxta Ljubuški (F. f. R. Keller 1896). — f. *prostrata* [DC., Cat. hort. Monsp., 138 (1813) pro spec.; Desv., Journ. bot., II (1813), 113; R. Keller in Asch. Graebn., l. c., 38]. **Bosna:** Circa Derventa (*Prodan 1910) non probabiliter! — **Hercegovina:** Prope Drežnica (*Prodan 1912). — f. *microtricha* [Borbás, Magy. birod. rózsái 340 (1880); R. Keller apud Asch. Graebn., l. c., 38]. **Bosna:** Prope Derventa (*Prodan 1918) minime probabiliter! — **Hercegovina:** In m. Medved montis Čabulja (*Prodan 1918).

2. *Rosa arvensis* [Huds., Fl. Angl., 192 (1762); R. Keller apud Asch. Graebn., l. c., 38 (hic literatura accuratius citata); Schneid., Laubholz., I, 545. — *R. silvestris* Herrm. Diss. Rosa, 10 (1762). — *R. repens* Scop., Fl. Carn., ed. II, I, 355 (1772). — Confer: Wiesbaur in Öst. bot. Zeit. (1883), 347; R. Keller, Mitt. II, l. c. (1896) 28]. In silvis, sub frutices, ad sepes usque ad subalpinas (1200 m). — Floret m. Junio, Julio.

Bosna: Prope Banja Luka (H.). Circa Donja Tuzla (R. Keller), inter Donja Tuzla et Breške. in m. Ilinčica prope D. Tuzla (B.); circa Bihać (B.), in planitie porrecta inter Glogovac et Ljuša (Ha. Fa.). Circa Jajce, prope Karaula gora (R. Keller). Circa Travnik (Br. f. Wiesbaur), prope Putičevo (Br. f. R. Keller) et in monte Vlašić (R. Keller); inter Kiseliak et Fojnica (*S. 1848), inter Putkovići et Tolovići (S.); circa Vareš prope Kralupi, Pajtov han (Pr.). Circa Sarajevo prope Lukavica et Miljevići (F. f. R. Keller), in monte Trebević (B.), secundum fl. Željeznica et Sutjeska, circa Suha ad declives m. Volujak (Pr.). Prope Ledići (*Landauer et Sündermann). — **Hercegovina:** In valle Idbar ad m. Prenj Pl. (B.), in declivibus montis Čabulja Pl. (B.); in Bijelagora (Hawelka). — **Novipazar:** In valle fl. Lim inter Prijepolje et Banja (*B. 1896).

Formae sequentes plurimum leviter definitae observatae sunt:

α. *typica* [R. Keller apud Asch. Graebn., l. c., 40. — *repens* (Scop.) H. Braun apud Beck, Fl. Nied.-Öst., 773].

Bosna: Rare (R. Keller). Prope Grahovik (Br. f. Wiesbaur 1883); in m. Stolac prope Višegrad 1400—1600 m (Schiller f. H. Br.).

β. *ovata* [Lej., Fl. Spa, II, 113 (1813) pro spec.; Desv., Journ. bot. II, 113; R. Keller apud Asch. Graebn., l. c., 40].

Bosna: Prope Gornji Šeher (C.), Kobaš (Prodan), Guvna (Br. f. Wiesbaur 1883).

γ. *levipes* [Gremli, Exkurs. Fl. Schweiz, 5. Aufl., 165 (1885); R. Keller in Asch. Graebn., l. c., 40. — *R. erronea* Ripart fide Crépin, Prim. in Bull. soc. bot. Belg. VIII (1869), 257].

Bosna: (*R. (Keller 1896), sed cum pedicellis p. p. glandulosis.

δ. *pilifolia* [Borbás, Ros. Hung., l. c., 344 (1880); R. Keller in Asch. Graebn., l. c., 40]. H. Braun in Beck, Fl. Südbosn., III, l. c., 100] varietatem *pilifoliam* ad var. *baldensem* annumerat, quod ceterum jam Borbás, l. c. quamvis cum? fecit.

Bosna: Vulgata (R. Keller). Circa Agino selo (Fo.), prope Gornji Šeher (C.) in forma affini. Circa Malbuče prope Kola (Fo.). Ad septentriones a Donja Tuzla, prope Zvornik et in valle fl. Drina ad australes a Zvornik (Wettst. f. H. Braun). Circa Travnik prope Djelilovac, ad pedem australem montis Vlašić, in m. Vilenica (Br. f. *Wiesbaur 1883), etiam in formis, quae ad f. *subsericeam* et *baldensem* transeunt (Wiesb., l. c., 347). Circa Fojnica (Schwarz! f. B.). In m. Bukovik prope Sarajevo (M. sub. v. *carstigena!*).

ε. *transalpina* [Christ, Ros. Schweiz, 196 (1873); R. Keller in Asch. Graebn., l. c., 40].

Bosna: Circa Travnik (Br. f. *Wiesbaur 1883). Sec. Wiesb. [l. c., 347]: »Von der typischen *transalpina* Christ nur im Mangel der (vielleicht durch den Transport veränderten) silberigen Behaarung der Nerven der sonst übereinstimmenden, kleinen, flaumhaarigen, rundlichen Blätter abweichend. Sehr ausgezeichnet durch konischen Discus und fiederteilige Sepalen.«

ζ. *baldensis* [A. Kerner apud Déséglise, Catal., l. c. 217 (1876), pro spec.; J. B. Keller in Hal. Braun, l. c., 202; R. Keller in Asch. Graebn., l. c., 41].

Bosna: Circa Tujnica prope Novi (B., Fo.) etiam ad f. *subsericeam* transiens, sed fructibus globularibus, foliolis ovalibus-acutis rigidis majoribus ramisque rubris elongatis (Fo.); prope Dragočaj, Modra (Fo.); circa Banja Luka (Fo. f. J. B. Keller) transiens ad f. *typicam*; circa Nova Kasaba in valle fl. Jadar (J.). Prope Kluč (B.). Circa Travnik prope Dželilovac (Br. fide *J. B. Keller 1883) hic floribus albis paulo olentibus fructibusque multis florescentia nondum dejectis. Circa Sarajevo: in faucibus rivuli Bistrički

potok c. 900 m (B.), in declivibus montis castello coronati, in valle fl. Miljacka (M.) hic pedicellis eglandulosis vel vix glandulosis; prope Lukavica, inter Kovačići et Lukavica (F.). — **Hercegovina:** In silva supra Bojište c. 1200 m (*Sagorski 1902). Circa Radopolje prope Mostar ad sepes (Baenitz, Herb. europ., nr. 105b!).

η. *subsericea* [J. B. Keller in Öst. bot. Zeit. 33 (1883), 347]. »Ganz wie *pilifera* nur die Blättchen unterseits von kleiner, angedrückter, sehr dichter, an den Nerven seidenartiger Behaarung. Armdrüsiger, grün; Griffel kahl. Discus flach.«

Bosna: Prope caminos calcarios juxta Travnik (Br. f. *J. B. Keller 1883). In formis ad f. *piliferam* transeuntibus etiam prope Aginoselo et Malbuće proxime Kola (Fo.). In forma f. *atratae* affinis prope Krupa ad fl. Una (Fo. f. J. B. Keller); hic etiam in f. ad f. *carstigenam* vergente; prope Rujevica in f. ad f. *transalpinam* transeunte (Fo. f. J. B. Keller).

θ. *carstigena* [Malý in Verh. zool.-bot. Ges. LIV (1904), 205 pro var. — *R. repens* subsp. *carstigena* H. Braun apud Beck, Fl. Südbosn. III in Ann. naturh. Hofmus. II (1887), 97]. A var. *atrata* [Christ, Ros. Schweiz, 196 (1873)] vix diversa! Frutex caulibus scandentibus vel leviter arcuatis, foliolis parvulis late ellipticis vel subrotundis apice rotundatis vix acutis, basi plurimum rotundatis, indumento ut in v. *baldens.* (A. Kerner) praeditis, inflorescentia 1—multiflora, sepalis exterioribus saepe in margine glandulis stipitatis obsitis, fructibus globosis.

Bosna: Circa Sarajevo ad sepes (B. f. *H. Braun 1887; Beck, Pl. Bosn. Herc., nr. 81), in valle fl. Miljacka, in monte Trebević (M.).

ι. *hašaniensis* [J. B. Keller in Öst. bot. Zeit. (1889), 56]. Ramis nudis strictissimis; foliolis obovato-lanceolatis, subtus pallido-glaucis; pedunculis saepe glabris; sepalis brevibus, diu persistentibus, receptaculis ovatis. Inter formam *repentem* et *pilifolia* media; formae *subsericeae* inserenda.

Bosna: Prope Hašani in distr. Bos. Krupa (Fo. f. J. B. Keller).

κ. *cuneifolia* [G. Beck. — *R. arvensis* f. »foliolis cuneatis«. Confer R. Keller, Beitr. II, l. c., 29]. Foliola basi cuneata, terminale conspicue acuminatum. Sepala saepissime in margine glandulis stipitatis praedita. Cetera ut in v. *pilifolia*.

Bosna: Circa Sarajevo prope Miljevići (F. f. R. Keller) et al. loc.; prope Kluč. — **Serbia:** Prope Vranja (G. Ničić!).

λ. *bibracteata* [Seringe in DC., Prodr., II, 597 (1825); R. Keller in Asch. Graebn., l. c., 41. — *R. bibracteata* Bast. in DC., Fl. Franc., V, 537 (1815); Posp., Fl. öst. Küst., II, 298.

— *R. arvensis* v. *umbellata* Godet, Fl. Jura, 217 (1853). — Confer R. Keller, Beitr. II, l. c., 29]. Corno erecto robusto, inflorescentia multiflora, fructu ellipsoideo.

Bosna: Prope Jajce (*R. Keller, 1896), hic foliolis basi cuneatis, probabiliter ad v. *cuneifoliam* pertinet?; prope Travnik (Br. f. R. Keller) hic foliolis rotundis pilosis.

Ad *R^m arvensem* pertinere videtur:

R. herporhodon [Ehrh., Beitr. II (1788), 71]. »Nähert sich nach J. B. Keller [in Öst. bot. Zeit. (1883), 348] in den steifen, oberseits schon etwas glänzenden, unterseits aber fein seidig-behaarten, sonst normalen Blättchen und den sehr langen Fruchtsielen der Gruppe der *Bibracteatae*. Früchte kugelig« (J. B. Keller).

Bosna: Prope Žepče (Br. f. J. B. Keller 1883).

3. *Rosa arvensis* × *sempervirens* [Duffort in Pons et Coste, Annot. fasc. 2, 25 (1895) et fasc. 4, 34; R. Keller apud Asch. Graebn., l. c., 42].

a) *Rosa pervirens* [Gren. apud Crépin, Prim., in Bull. soc. bot. Belg., VIII 1 (1869), 257 et XVIII 1 (1879), 315; Rouy in Rouy Camus, Fl. France, VI, 240].

Hercegovina: Ad sepes ante fontem Radobolje prope Mostar c. 70 m Junio (Baenitz. Herb. europ., nr. 105 a sub *R. sempervirente* f. *B.). Planta collecta habet folia turionum florescentium plurimum septenata, foliola longe acuminata cum dentibus *Rae sempervirentis*, utrinque pilosa. Petioli et rachis foliorum sunt pilosi, paucis aculeis armati, glandulosi. Pedicelli, receptacula et calycis dentes parce glandulosi.

Gallicanae.

[DC., apud Ser., Mus. helv., 2 et 4. — *Gallicae* Crépin, Prim., l. c., XXXI (1892), 70, 72; R. Keller in Asch. Graebn., l. c. 47.]

4. *Rosa gallica* [L., Spec. pl., 492 (1753); R. Keller apud Asch. Graebn., l. c., 48 (hic literatura accuratior); Schneid., Laubholz., I, 547. — *R. austriaca* Crantz, Stirp. Austr., II, 36 (1763). — De formis confer: Borbás, Magy. birod. rózsái, l. c., 357; J. B. Keller apud Hal. Braun, Nachtr., l. c., 207; H. Braun in Beck, Fl. Nied.-Öst., 779; R. Keller, Beitr. II, l. c., 30 et apud Asch. Graebn., l. c. 48]. In locis lapidosis, fruticosis, ad silvarum et agrorum margines, ac in pratis. Floret m. Majo, Junio.

Bosna: Ad fl. Una prope Dobrljin (B.), in m. Krnin montis Kozara (B.), circa Banja Luka, Maglaj ad fl. Vrbas (H.), inter Banja Luka et Bočac

(Lindberg); in valle fl. Jedovica prope Prnjavor (B.); in m. Majeвица (B.). inter Novi et Otoka, in m. Gomila prope Krupa, in m. Debeljača prope Bihać (B.): circa Travnik prope Dolac (R. Keller), Guvna, Grahovik, in colle Tarabovac prope Slimena (Br. f. R. Keller), inter Putkovići et Tolovići (*S. 1848). Circa Vareš, Kralupi, Pajtov Han (Pr.); in agro Sarajevsko polje (B.), circa Sarajevo prope Lukavica, Miljevići (F. f. R. Keller).

Formas sequentes offert, quae in natura formis variis conjunguntur et notis suis permiscuntur. Confer pro area nostra: Wiesbaur in Öst. bot. Zeit. (1883), 348 et (1885), 338; J. B. Keller, l. c. (1889), 57; R. Keller, Beitr. II, l. c. 30.

α. eriostyla [R. Keller in Asch. Graebn., l. c., 48].

*Ad foliola:

f. *haplodonta* [Borb., Magy. birod. rózsái, l. c., 367 (1880); R. Keller apud Asch. Graebn., 48].

Bosna: Circa Banja Luka (C.), Zalin (Fo. f. J. B. Keller). Circa Travnik (Br. f. Wiesbaur), hic etiam sepalis 26—30 mm longis (= *longisepala* Gandoger); in m. Vlašić et colle Tarabovac (Br. f. *Wiesbaur 1883). Circa Sarajevo in m. Bukovik, supra Papratina 1100 m (M.), in valle Buća c. 600 m, in declivibus m. Kobilje brdo ad finem australem agri Sarajevsko polje c. 600 m (B.).

austriaca [Crantz, l. c., pro spec., Borbás, Magy. birod. rózsái, l. c. 367 = *R. pumila* Jacqu., Fl. Austr., II, 59, t. 198 (1773); L. f., Suppl. I (1781), 262 = *R. gallica* var. H. Braun apud Beck, Fl. Nied.-Öst., 779; R. Keller apud Ascherson Graebn., l. c., 48].

Bosna: Frequenter circa Novi, sicut in valle Tujnica, in monte Kriva glava, Mašić brdo (B.); in valle Dobrnica prope Bihać, in monte Kozara (B.); prope Aginoselo (Fo. f. J. B. Keller). In m. Šuljaga et Vel. Malovan (Pr.). Circa Travnik (Br. f. Wiesbaur), hic etiam in formis transeuntibus ad typum (*haplodontam*), in colle Tarabovac (Br. f. *Wiesbaur 1883) etiam in f. *subglandulosa* [Borbás, l. c., 350]. Frequenter circa Sarajevo sicut prope Švrakinoselo, ad Mojnilo (B.), juxta Lukavica (F. f. M.), in declivibus m. Mali Orlovac ad vallem fl. Miljacka (M.); prope Rusenovići in distr. Rogatica (M.). — **Hercegovina:** Prope Nevesinje (*Sagorski 1912).

cordifolia [Host, Fl. Austr., II, 23 (1831) pro spec.; H. Braun in Beck, Fl. Nied.-Öst., 779; R. Keller apud Asch. Graebn., l. c., 49. — *R. austriaca* var. J. B. Keller apud Hal. Braun, l. c., 207].

Bosna: In valle fl. Jedovica (B.); in agris circa Travnik, Grahovik (Br. f. *Wiesbaur 1883). Circa Sarajevo prope Lukavica (F.!).

assimilis [Déségl., Descr. Roses in Mém. soc. ac. Maine et Loire (1873), 103 = *R. cordata* Cariot, Étud. fleurs, éd. 5,

II, 280 (1872) f. Rouy]. Foliolis orbiculatis, basi cordatis, simpliciter dentatis: receptaculo ovoideo-oblongo; petalis intense roseis (Borbás).

Bosna: Circa Travnik pr. Guvna, in m. Vlašić (Br. f. *Wiesbaur 1883).

macrophylla [R. Keller, Beitr. II, l. c., 31]. Foliola maxima. 38—50 mm longa, 25 mm lata.

Bosna: Circa Travnik (*R. Keller 1896).

microphylla [R. Keller, Beitr. II, l. c., 31]. Foliola terminalia maxima 21·5:16 mm, minima 11:8 mm, medium tenent 15:11 mm. Petala minora c. 17 mm longa.

Bosna: Circa Sarajevo prope Miljevići (F. f. R. Keller 1896) et in incultis prope Švrakinoseo (M.).

doboensis [J. B. Keller in Öst. bot. Zeit. (1889), 58; v. *virescens* Déségl. f. *flectidenta* (Gandoger) Wiesbaur in Öst. bot. Zeit. (1883), 348]. A typo Déségglisei: fruticulo altiore, caule (erecto) ramisque aculeis sparsis brevibus rectisque armatis insuper creberrime glanduloso-setosis (haud inermibus), foliolis septenis, $\frac{1}{3}$ majoribus, utrinque (supra valde) lucidis; stipulis inferioribus ramorum frugiferorum latioribus dorso glandulosis; receptaculis fructibusque globoso-pyriformibus (haud ovoideis); disco sat conico (haud plano); stylis densius villosis, insigniter discedit. (J. B. Keller.)

Bosna: Prope Dobo (Fo. f. *J. B. Keller 1889). Circa Travnik inter Tarabovac—Guvna et Grahovik (Br. f. J. B. Keller), hic receptaculis separorumque marginibus crebre glandulosis, stipularum auriculis conspicue elongatis ab specimine Doboensi differt.

ruralis [Déségglise, Ess. monogr., 79 (1861); R. Keller in Asch. Graebn., l. c., 49. — *R. incarnata* Mill. var. Rouy, Fl. France, VI, 255]. Receptacula fructusque globosa. Foliola composite glanduloso-serrata. Petala laete rosea, ungue flavescente. (Ex Borbás.)

Bosna: Prope Derventa (*Prodan 1918). Etim a d. R. Keller [Beitr. II, 32] formae foliolis biserratis observatae sunt, qua proprietas saepe in foliolis eiusdem fruticis plus minus commutat (Beck).

pubescens [R. Keller, Beitr. II, l. c., 31]. Foliolorum pagina inferior subdense pilosa, superior juniorum initio laxè appresse pilosa et demum glabrescens.

Bosna: Circa Sarajevo prope Miljevići (F. f. *R. Keller 1896).

leiophylla [Borb. Mag. birod. rózsaí, 369; R. Keller in Asch. Graebn., l. c., 49].

Bosna: In valle riv. Tujnica potok prope Novi (*B.). Circa Sarajevo in m. Hrastova glava ad vallem fl. Miljačka (M.!).

Vukotinovičii [Gandoger, non Borbás f. J. B. Keller in Öst. bot. Zeit. (1885), 338]. »Foliolis simpliciter (crenato)-serratis, subtus glabris, in ramis floriferis trichoneuris, dein glabrescentibus, nervo medio solum pilosulis, 5—7; fructu pyriformi, disco valde conico, stylis dense lanatis.« (J. B. Keller.)

Bosna: Prope Travnik (Br. f. *J. B. Keller apud Wiesbaur 1885).

** Ad ramulorum armaturam:

pannonica [H. Braun apud Beck, Fl. Nied.-Öst. 779; R. Keller apud Asch. Graebn., l. c., 49. — *R. austriaca* f. = Wiesb. in Öst. bot. Zeit. (1879), 143; Hal. Braun, Nachtr. Fl. Nied.-Öst., 207 pro var.].

Bosna: Circa Sarajevo prope Šyrakinoselo et in m. Trebević (*B.); petala coccinea ad unguem albescencia, filamenta lutea, antheras cinnamomeas observavi.

anacantha [H. Braun apud Beck, Fl. Nied.-Öst., 779; — *R. austriaca* var. J. B. Keller apud Hal. Braun, Nachtr., l. c., 208 (1882)]. Est. f. *austriaca* ramulis inermibus.

Bosna: Circa Travnik in colle Tarabovac (Br. f. *Wiesbaur 1883).

dearmata [Borbás, Magy. birod. rózsái, 358 pro f. *R^{ae} velutinaeflorae* Déségl].

Bosna: Circa Travnik (Br. f. *R. Keller, Beitr. II, l. c., 32 (1896)).

*** Ad fructus:

globosa [R. Keller, Beitr. II, l. c., 31 (1896)]. Fructus globosi.

Bosna: Frequenter circa Travnik (*R. Keller 1896). Circa Sarajevo pr. Lukavica (M.).

piriformis [R. Keller, Beitr. II, l. c., 31 (1896)]. Fructus piriformes, saepe bis longiores quam lati.

Bosna (*R. Keller 1896). Ubi?

β. *leiostyla* [Gelmi, Prosp. fl. Trent., 58 (1893); R. Keller Beitr. II, l. c., 32 et in Asch. Graebn., l. c. 49].

Bosna: Rare (*Keller 1896). Ubi?

Rosa centifolia [L., Spec. pl., 491 (1753). — *R. gallica* subsp. Crépin in Bull. soc. bot. Belg., XXXI (1892), 73]. »Tronjka«. In hortis creberrime seritur.

5. *Rosa arvensis* × *gallica* [Borbás, Magy. birod. rózsái, l. c. 360; R. Keller Beitr. II, l. c., 32 et in Asch. Graebn., l. c. 363. — *R. Polliniana* Spreng., Plant. pug. II, 66 (1813). — *R. Schleicheri* H. Braun apud Beck, Fl. Nied.-Öst., 773 = *R. hybrida* Schleich., Catal. (1815) non Vill. et aliorum. Confer R. Keller, Beitr. II, l. c. 32 (1896); Borbás, l. c.; Vukot., Opis ružah, l. c., 7—16].

Bosna: Circa Travnik prope Dolac (*R. Keller 1896) et Grahovik (Br. f. R. Keller). Circa Sarajevo pr. Miljevići (F. f. R. Keller).

*Styli in columnam abbreviatam elongati.

a) Styli lanati vel dense pilosi.

a)..... [R. Keller, Beitr. II, l. c. 32 nr. 1]. Rami aciculis ac glanduliferis copiose tecti. Folia 3—5-nata, foliolis subtus per totam superficiem pilosis, supra glabris. Flores singuli, pedicellis dense glandulosis et aciculis parcis praeditis. Sepala lineari-lanceolata, dorso dense glandulosa, margine glanduloso-ciliata, majora pinnata. Receptaculum ovatum, bis longius quam latum, in dimidia inferiore glandulis stipitatis vestitum. Stylo-
rum columna 3—5 mm longa, supra libera, dense pilosa. Flores maxima parte steriles. — A *R. Axmanni* [Gmel., Fl. Bad., IV (1826), 367; Borb., Magy. bir. rózsái l. c., 355 et 363] fructibus ovatis diversa (Beck).

Bosna: (*R. Keller 1896).

✓ *b) Rosa miljackae* [K. Malý in Verh. zool.-bot. Ges. LIV (1904), 205]. Rami erecti debiles virides vel fuscescentes, aciculis inaequilongis curvatis ac setis glandulisque stipitatis praediti. Folia 3—5-nata, foliolis inferioribus minoribus, ovalibus vel rotundo-ovalibus plurimum obtusis, basi subcordatis vel rotundatis, vel rotundatis, subsimpliciter serratis cum serraturis glandulis 1— pluribus obsitis, subtus parce pilosis et in nervo medio glandulosis, supra parce pilosis vel glabris. Petioli glandulosi et aciculati, ceterum glabri. Inflorescentia 1—3-flora. Sepala ut in *R. arvensi*, exteriora autem pinnata, in dorso et margine glandulosa. Petala albido-rosea, emarginata. Styli liberi, staminibus dimidio breviores, pilosi (nec lanuginosi). Affinis *R^{ae} assurgenti* [Vukot. in Rad. jug. ak., 69 (1884) nr. 10 (Beck)]; A *R. etrusca* [Borb., rózsái, l. c., 356] stylis connexis differre videtur.

Bosna: Inter frutices in declivibus m. Hrastova glava ad vallem fl. Miljacka prope Sarajevo (*M. 1904).

СРПСКА КРАЉЕВСКА АКАДЕМИЈА

ПОСЕБНА ИЗДАЊА

КЊИГА LXIII

ПРИРОДЊАЧКИ И МАТЕМАТИЧКИ СПИСИ

КЊИГА 15

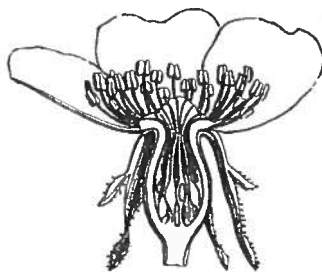
ФЛОРА

БОСНЕ, ХЕРЦЕГОВИНЕ И ОБЛАСТИ
НОВОГА ПАЗАРА

PART 20

НАПИСАО

Проф. DR. ГИНТЕР БЕК-МАНАГЕТА



БЕОГРАД-САРАЈЕВО

ДРЖАВНА ШТАМПАРИЈА У САРАЈЕВУ

1927

ЦЕНА 60 ДИНАРА

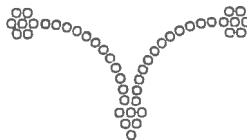
СРПСКА КРАЉЕВСКА АКАДЕМИЈА

ПОСЕБНА ИЗДАЊА

КЊИГА LXIII

ПРИРОДЊАЧКИ И МАТЕМАТИЧКИ СПИСИ

КЊИГА 15



БЕОГРАД-САРАЈЕВО

ДРЖАВНА ШТАМПАРИЈА У САРАЈЕВУ

1927

c) *Rosa Neilreichii* [Wiesbaur in Öst. bot. Zeit. (1879), 144 et (1883), 348; Hal. Braun, l. c. — *R. gallico* × *arvensis* Neilr., Fl. Nied.-Öst., 900 et Nachtr. (1866), 95. — *R. Schleicheri* v. *Neilreichii* H. Braun in Beck, Fl. Nied.-Öst., 773].

Bosna: Circa Travnik prope Grahovik (Br. f. *Wiesbaur 1883).

f. *zalinensis* [J. B. Keller apud Formánek in Öst. bot. Zeit. (1889), 57. — *R. superbaldensis* × *pumila* ibidem]. »Caulis humifusus (repens), rami virides aculeati aciculisve sparsis, glandulisque creberrimis praediti aut verrucosi superne glaucescentes; foliola obovata acuta, remota, magis concoloria supra nitentia atroviridia, subtus virescentia et toto adpressepuberula (in juvenalibus trichoneura aut glabra) in costa semper (rarius in nervis) glandulosa, basi duplo-, apice uniserrata, serratura glandulis atroviolaceis instructa; petioli pubescentes glandulosi et aculeati; pedunculi 2—3, longi, glandulis atroviolaceis dense rubiginosi; receptaculum breviter ovatum purpurascens toto gland.-punctatum; sepala brevia, extus toto rubiginosa exteriora pauci lacinulata; discus subplanus; styli exserti staminibus breviores basi cohaerentes et villosi superne in capitulo glabri; petala . . . (pallide rosea?); fructus parvus ovalis aut obovoideus marcescens sterilis.«

Bosna: Ad Zalin prope Bos. Krupa (Fo. f. *J. B. Keller 1889).

d) [R. Keller, Beitr. II. l. c., 33 nr. 2]. Rami aculeis, aciculis ac glanduliferis copiose tecti. Folia 3—5-nata, foliolis subtus in nervis dense pilosis, simpliciter serratis, serraturis glanduloso-ciliatis. Flores singuli. Pedicelli dense glandulis stipitatis praediti, aciculis immixtis. Sepala lanceolata, tria pinnata. Petala rubescentia. Stylorum columna 3 mm longa, lanuginosa. — Mihi (Beck) videtur *R^{ae} Axmanni* Gmel. forma.

Bosna: (*R. Keller 1896). Ubi?.

e) *Rosa macrocalyx* [J. B. Keller in Öst. botan. Zeit., (1889), 57. — An *R. Malji* × *cordifolia*? fide J. B. Keller. — *R. Axmanni* v. *macrocalyx* Borbás, Magy. birod. rózsái (1881), l. c., 355 et 365].

v. *mokrana* [J. B. Keller, l. c.]. »Ramis strictis elongatis glauco-viridibus, aculeis paucis brevibus falcatis aciculisque sparsis armatis (haud inermibus); petiolis perlongis toto tomentellis subinermibus glandulis minutis inspersis aut eglandulosis; foliolis septenis (haud quinis!) petiolulatis, in petiolo

valde remotis (infirmis longe distantibus) brevioribus magis elliptico-subrotundis, basi eximie cordatis planis tenuibus, supra nitentibus glabris laete viridibus, subtus pallidioribus et trichoneuris biserratis, serraturis eas villosarum monentibus, sed pauce denticulatis rotundato-apiculatis (haud profundis); sepalorum pinnulis angustioribus toto eglandulosis; pedunculis geminis; stylis ultra discum subplanum longe exsertis connexibusve, apice capitatis toto dense albo-villosis, staminibus paulo brevioribus, — typo et ejus varietate *coriacea* Borb. l. c. p. 364 longe distat.«

Bosna: Prope Mokra (? an Modra f. Malý) in Bosna boreali (Fo. f. J. B. Keller 1889). Ubi?

b) Styli glabri vel subglabri.

f) *Rosa Wiedermanni* [H. Braun apud Beck, Fl. Nied.-Öst., 774 (1892) pro var. *Rosae Schleicheri*; R. Keller apud Asch. Graebn., l. c., 366].

Bosna: Circa Sarajevo juxta Lukavica (*M. 1904); hic in forma quadam cum ramis, qui minus setis glandulosis et aciculis inaequalibus vestiti sunt et fructus rotundos basim versus glanduloso-pilosos ferunt (K. Malý).

g)..... [R. Keller, Beitr. II, l. c., 33 nr. 3]. Ramuli copiose glandulis stipitatis partim oblitteratis praediti. Folia 5-nata, foliolis ovalibus, basi cordatis, subtus ad nervos pilosis, serratura maxima parte simplici, subtiliter glanduloso-ciliata praeditis. Pedicelli copiose glandulosi. Receptacula ovata. Sepala lanceolata, tria exteriora copiose pinnata, dua altera cum pinnulis 1—3, dorso et margine copiose glandulosa. Petala alba. Stylorum columna 5 mm longa. Styli ultra mediam conjuncti, subglabri. — An *R. cymelliflora* Borb. Vuk. in Vukot., Opis ružah, l. c. 14? (Beck).

Bosna: (*R. Keller 1896).

**Styli capitulum formantes.

h) [R. Keller, Beitr. II. l. c. 33, nr. 4]. Ramuli aculeis duplicibus ac glandulis stipitatis subcopiose armati. Folia 5—7-nata, foliolis partim utrimque subdense appresse pilosis. Flores singuli. Pedicelli et receptacula dense glandulosi aciculis immersis. Sepala lanceolata, tria pinnata et alteris latioribus sublongiora. Receptacula piriformia. Styli glabri, vix elati, liberi, capitulum formantes. Fertilitas moderata.

Bosna: (*R. Keller 1896).

i) [R. Keller, Beitr. II, l. c., 33, nr. 5]. Ramuli parce glandulis stipitatis et aciculis armati. Folia 3—5—7-nata, foliolis utrimque vel subtus modo pilosis. Inflorescentia pluriflora corymbosa. Receptacula oblongo-ovata, in parte infera glandulis stipitatis praedita. Sepala dorso sparse glandulosa, lanceolata, longe acuminata, longiora pinnata. Petala alba. Styli subbreves, subtus lanati. — A *R. tenella* [Boullu in Soc. bot. Dauph., XIII (1886), 546] receptaculis oblongo-ovatis diversa. (Beck.)

Bosna: (*R. Keller 1896).

6. *Rosa canina* × *gallica* [*R. gallica* × *canina* Crépin in Bull. soc. bot. Belg., 33 (1894), 88 et R. Keller in Asch. Graebn., l. c., 273. — Confer: R. Keller, Beitr. II, l. c., 34].

a) *Rosa Kosinsciana* [Besser, Cat. hort. Crem. (1819) et Enum. Pod. Volh., 60 (1822); Tratt., Ros. monogr., II, 48; R. Keller apud Asch. Graebn., l. c., 277. — *R. gallica* × *canina* Crépin, l. c., (1894), 89].

var. *švrakinae* [H. Braun apud Beck, Fl. Südbosn., III, in Ann. nat. Hofm. II (1887), 108]. Frutex altus, ramis aculeis *R^{ae} caninae* propriis parce armatis. Folia 5—7-nata. Petioli copiose glandulosi ac spinulis paucis armati, ad basim vel usque ad rhachim mediam puberuli. Stipulae in margine copiose et dense glanduloso-ciliatae. Foliola elliptico-rotunda vel suborbicularia, basi contracta, subtus glaucescentia (?); serratura magis composita et glandulosa cum dentibus minus convergentibus. Inflorescentia 1—pluriflora. Pedicelli elongati hispidi. Sepala exteriora in dorso glandulosa, pinnulis hinc inde subdilatis, glanduloso-ciliatis. Receptacula ellipsoidea, solum ad basim setis glanduliferis praedita. Discus subconicus; stylo- rum capitulum copiose pilosum. Petala magna, dilute rosea, ad basim alba.

Bosna: Circa Sarajevo in sepibus prope Švrakinoseło ad Mojnilo, c. 520m (Beck, Fl. Bosn. Herc., nr. 52, *H. Braun 1887).

b) *Rosa* [R. Keller, Beitr. II, l. c., 35 (1896) nr. 2 = *R. canina biserrata*] × *gallica*. Frutex minor, ramis aculeis *R^{ae} caninae* propriis parcissimis armatis ac aculeis debilibus subrectis *R^{ae} gallicae* propriis frequentibus praeditis. Folia praevalenter 5-nata, ac sparse 3- vel 7-nata glabra. Stipulae dense glanduloso-ciliatae, subtus fere semper eglandulosae. Petioli glandulis stipitatis subcopiosis et aciculis parvis leviter cur-

vatis armati. Foliola subrigida, late ovalia basi cordata; serratura aperta, divergente, copiose composita, denticulis glandulosis. Flores singuli, pedicellis glandulis stipitatis inaequilongis numerosis armatis. Receptacula ovata, basi partim glandulosa. Sepala partim bipinnata, pinnulis glandulosociliatis. Stylorum capitulum breve, supra pilosum (R. Keller).

Bosna: In planitie Dolac prope Travnik (*R. Keller 1896).

Sec. R. Keller *R. Kosinsciana* v. *švrakinae* differt petiolis ad basim (et saepe altius) pubescentibus, sepalis densius glandulosis, stylis copiosius pilosis (ac inflorescentia hinc inde pluriflora, foliis saepius 7-natis, foliolis basi contractis add. Beck). Mihi a *R. Chaberti* [Déségl. in Cariot, *Etud. des fleurs*, 180 (1865) vix diversa videtur.

c) *Rosa* [R. Keller, *Beitr.* II, l. c., 34, nr. 1 = *R. canina (dumalis) × gallica*]. Frutex elatus, ramis aculeis *R^{ae} caninae* propriis armatis ac aciculis et glandulis stipitatis parcissimis praeditis. Folia 5- et praevaletenter 7-nata, glabra. Stipulae dense glanduloso-ciliatae cum auriculis ad nervos saltem copiose glandulosis. Petioli copiose glandulosi. Foliola subrigida, rotunda, basi cordata, breviter acuminata; nervo mediano subtus copiose glanduloso, nervis secundariis hinc inde glandulosis; serratura lata, dentibus acriter acuminatis, supra mediam convergentibus, partim simplicibus partim duplicibus, glandulosis. Flores singuli, sublonge pedicellati, pedicellis glandulis stipitatis dense praeditis. Receptacula globosa, magna parte bene evoluta, basi glandulosa. Sepala reflexa, pinnis glandulosociliatis. Styli capitulum elatum formantes subcopiose pilosi. (R. Keller, translatum Beck).

Bosna: Ad viam a Dolac ad Travnik (*R. Keller 1896 et in *Herb. norm. Ros. Europ.* nr. 90). Exemplaria edita forsitan a *R. Chaberti* Déségl. receptaculo globoso distinguenda sint.

Rosa turbinata [Aiton, *Hort. Kew.*, II, 206 (1789)]. In Bosna prope Travnik culta modo et semiplena observata est (Br. f. J. B. Keller 1885).

Cinnamomeae.

[DC. apud Seringe in *Mus. Helv.*, I, 2 (1818); R. Keller apud Asch. Graebn, 293.]

7. *Rosa pendulina* [L., *Spec. pl.*, 492 (1753); H. Braun in *Verh. zool.-bot. Ges.* (1885), 111 et apud Beck, *Fl. Nied.-Öst.*,

775; Schneider, Laubholz., I, 579; R. Keller in Asch. Graebn., I. c., 298. — *R. alpina* L., Spec. pl., ed. II, 703 (1762) et aut. — Confer H. Braun, l. c.; Borbás, Magy, birod. rózsái, l. c., 525; Wiesbaur in Öst. bot. Zeit. (1883), 349, 393; K. Malý in Verh. zool.-bot. Ges., LIV (1904), 214; R. Keller, Beitr. I, l. c., 493 et in Asch. Graebn., l. c.]. In fruticetis, ad silvarum margines, in silvis apertis sed etiam in locis lapidosis, saxosis et alpinis usque ad regionem alpinam (2200 m). Floret ex altitudine stationis m. Junio, Julio.

Bosna: Prope Papratnica et in monte Smolin prope Žepče (B.); in montibus Klekovača (F), Osječenica (B.), Šuljaga, Kamešnica (Pr.), Troglav (B.), Krug prope Livno, Cincar —1700 m (B.), Vel. Šator (Pr.). In reg. fl. Gostović pr. Žepče 380—980 m (M.). Circa Dubošćica prope Vareš (Pr.). In montibus Bregoč, Maglić, Volujak (Pr.), Stolac prope Višegrad (Adamović). — **Hercegovina:** In cacumine Osobac montis Prenj (2026 m), in m. Plasa, ad declives m. Velež ad Nevesinje (B.).

Var. *pyrenaica* [Koch, Syn. fl. Germ., 224 (1837); an *R. pyrenaica* Gouan, Ill., 31, t. 19 (1773) ?], quae omnes formas complectitur, quarum pedicelli glandulis stipitatis ornatu et quarum fructus receptaculaeque aut laevia aut glandulis stipitatis armata sunt, in locis sequentibus enumeratur.

Bosna: In m. Jedovnik (Ja.) c. 900—1000 m, in jugo ad Babina greda (Ha.) c. 1600—1700 m, in m. Troglav, Janski vrh, Veliki Bat, Gnjat, prope Male poljanice (Ja.Wa.), in m. Vlašić (*S. 1848), inter Borovica et Vareš (S.). — **Hercegovina:** In Bijela gora in m. Koristna greda prope Vučjak (*P. 1874), in m. Ledenik prope Milanov odsjek (V.).

E formis numerosissimis *R^{ae} pendulinae*, quae in notis suis saepe sine relictis confluent et quidem in fruticibus iisdem commutant (confer: R. Keller, Beitr. I, l. c.; K. Malý, l. c. et alii) omnes e terris nostris cognatae enumerantur. Pertinent ad var. *glandulosam* [R. Keller, Beitr. I, l. c., 504], quae glandulis stipitatis tamen in nervo medio paginae inferioris foliolorum impositis excellit, dum var. *eglandulosa* [R. Keller, l. c.], quae in ditione nostra deesse videtur — in Croatia saltem collegi — defectu earum praestat. Porro plantae nostrae ad seriem modo *Biserratarum* inserendae sunt.

I. Foliola ovalia vel oblongo-ovalia.

A. Foliolis glabris vel subtus in nervo medio pilosis et hic solum glandulosis.

a) Ramulis inermibus.

α) Receptaculis fructibusque oblongis, ovatis vel lageniformibus, pedicellis glandulis stipitatis praeditis, rarius nudis.

α. *sublaevis* [G. Beck. — *R. pendulina* nr. 5 K. Malý (1904), l. c., 216]. Foliola mediae magnitudinis, ovalia vel sublanceolata, obtusa vel obtusiuscula, basi plurimum angusterotundata, subtus parcissime, saepe in nervo medio modo et in nervis secundariis pilosa, glandulis perpaucis praedita. Pedicelli partim sparse glandulosi, partim laeves. Sepala laevia, cum appendicibus angustis subfiliformibus, tarde erecta. Fructus ovati, partim glandulosi partim laeves.

Bosna: In monte Trebević (*M. 1904).

Huc fortasse fruticulus pertinet, quem in regione alpina montis Cincar alt. c. 1800 *m* collegi, notis sequentibus distinctum: Ramuli inermes. Petioli cum rhachi folii glabri, glandulis stipitatis copiosis tecti. Foliola 7, parvula, elliptica, summo 1.5 *cm* longa, glabra, in nervo medio subtus parce glandulosa. Pedicelli et receptacula nuda. Sepala angusta, longe acuminata, eglandulosa vel sepalum externum in margine glandulosum, appendice lineari. Receptaculum urceolatum.

β. *vranicae* [G. Beck]. Frutex palmaris, ramulis inermibus brevibus. Petioli plus minus puberuli et sparse glanduloso-pilosi. Foliola 7, parva, terminalia 8—17 *mm* longa, ovalia, basi apiceque rotundata vel subacuta, glanduloso-biserrata, subtus in nervo medio pilosa ac parcissime glandulosa, ceterum hinc inde parce pilosula, glabrescentia. Stipulae utrinque pilosulae, glabrescentes, in margine glanduloso-ciliatae. Pedicelli nudi. Receptacula subfusiformia, in eadem frutice laevia vel sicut sepala glandulis stipitatis plus minus copiose praedita. Sepala anguste lanceolata, integra, appendice elongata anguste-lanceolata. Petala calycem bis superantia, obcordata, pulchre rubra, 25 *mm* longa.

Bosna: In alpinis cacuminis Stražica montium Vranica, solo schistoso alt. 1700 *m*, Julio (*B.).

Fortasse huc pertinent planta, quam Fiala in monte Klekovača collegit et K. Malý l. c. (1904), 223—224 pro var. *levis* [R. Keller apud Asch. Graebn., l. c., 300 = *R. alpina* v. *levis* Ser. in DC., Prodr., II, 612] interpretavit. At vero de indumento foliorum nihil patefactum est. (K. Malý in litteris foliola glaberrima, in nervo medio saltem parce glandulosa memora-

vit). Dubito num planta in m. Klekovača collecta ad varietatem *eglandulosam* R. Keller pertineat. R. Keller fortasse eandem plantam ante oculos habuisse videtur, quia indicavit, eam formam glabram *R^{ae} alpinae* esse, cui simul glandulae subfoliariae desunt.

γ. *typica* [H. Braun apud Beck, Fl. Nied.-Öst., 775 (1892) = *R. alpina* f. *pyrenaica* Christ, Ros. Schweiz, 59 (1873) an Koch? — v. *setosa* R. Keller apud Asch. Graebn., l. c., 300 (1902)].

Bosna: In monte Vitorog alt. 1600 m (Ha. Fa.), in m. Šator supra lacum (Ja.), in declivibus septentrionalibus montis Trebević (*Behrendsen 1905).

In dubitationem vocem hanc varietatem, quae defectu glandularum subfoliolarium eminet, in Bosna crescere. Itidem K. Malý qui tot stirpes *R^{ae} pendulinae* montis Trebević critica ratione perscrutavit, hanc varietatem, quae ad sequentem pertineat, non enumeravit.

δ. *adenosepala* [Borbás, Magy. birod. rózsái l. c., 527 et 529 (1880) pro var. *R^{ae} alpinae*; H. Braun in Beck, Fl. Südbosn., III, l. c. 100; confer: H. Braun l. c. et K. Malý (1904), l. c. 217]. Receptacula fructusque ovata vel oblongo-fusiformia, sicut sepala glandulis stipitatis plus minus frequentibus obsita.

Bosna: In monte Smolin prope Žepče (B.), in m. Šiša prope Klujuč alt. 900 m (B.). In m. Vlašić (B.), in m. Vranica Pl. in cacuminibus Tikva (B.), Matorac, Krstac (Bošnjak); in m. Zec Pl. (Schwarz!); in m. Crni vrh montis Igman (F.!) alt. 1500 m; in m. Vratlo montis Treskavica inter *Pinum pumilio* (B.); in m. Trebević (M.). In summis montis Stolac prope Višegrad (Schiller f. H. Braun). — **Hercegovina:** In m. Plasa (Prodan); inter saxa et in fissuris in regione alpina montis Prenj Pl. c. 1800 m (B. f. *H. Braun 1887), prope Jablanica, Drežnica, in cacumine Vljajna montis Čabulja (Prodan); in declivibus saxosis montis Velež (Mu., B.) et Bjelašnica prope Gacko c. 1200—1500 m (Mu. f. H. Braun), in montibus ultimis etiam cum foliis latioribus, profundius serratis.

Huc subforma *calvens* [G. Beck]. Petioli glabri, glandulosi. Foliola subtus glabra, in nervo medio modo parce glandulosa. A var. *atrizophylla* Borb. sepalis glandulis stipitatis copiosis obsitis diversa.

Bosna: In monte Troglav montis Dinara et in m. Cincar prope Livno in regione alpina alt. c. 1800 m (*B.). In m. Šiša Pl. c. 900 m (B.); in cacumine Vitreušā montis Vranica (B.). — **Croatia:** In monte Klek prope Ogulin (B.).

Subforma *seminuda* [G. Beck]. Receptacula nuda. Pedicelli sepalaque glandulis stipitatis copiosis praedita.

Hercegovina: In monte Velež orientali (*B.). — **Croatia:** In m. Klek prope Ogulin (B.); hic simul cum notis sf. *calventis*.

ε. *bicuspis* [G. Beck]. Rami ramulique inermes. Petioli et foliorum rhachis glabri, parce glandulosi. Stipulae latae, auriculis triangularibus acutis erecto-patentibus, glanduloso-ciliatae. Foliola 9, breviter petiolulata, 25—30 mm longa, elliptica, omnia basi longe attenuata, apice acuminata vel infima modo rotundata, supra glabra, infra glabra et in nervo medio glanduloso-verrucosa, vix pilosula, biserrata, dentibus superioribus denticulis 1—2 praeditis plurimum eglandulosis, inferioribus minoribus glanduliferis. Pedicelli glandulosi, receptaculis pluries longiores. Receptacula breviter urceolata, nuda. Sepala erecta, 20—24 mm longa, angusta, longissime acuminata, appendicibus anguste lineari-lanceolatis, integris vel glanduloso-serratis, glabra, eglandulosa. Stylorum capitulum dense lanuginosum.

Bosna: In monte Cincar alt. 1600—1800 m s. m., solo calcareo. (*B.). — **Hercegovina:** In monte Gubar (Hawelka f. *B.).

β) Fructibus globosis vel obovato-turbinatis.

ζ. *adenophora* [Kit. in Schult., Öst. Fl., ed, II, 69 (1814) et in Linnaea 32 (1863), 587 pro spec.; R. Keller apud Asch. Graebn., l. c., 302. — *R. alpina* var. Borbás, l. c., 527, 528]. A forma *adenosepala* solum fructibus globosis distinguitur.

Bosna: In regione alpina montis Cincar prope Livno (*B.).

η. *turbinata* [K. Malý in Abh. zool.-bot. Ges. (1904), 220 non *R. alpina* v. *turbinata* Koch]. Frutex subelatus, ramis junioribus ac foliolis pruinosis. Foliola magna (maxime 6·2:3·6 cm) vel mediae magnitudinis, coriacea, ovalia, obtusa, basi plus minus rotundata, ea turionum basi angustata vel rotundata, subtus in nervo medio conspicue, in nervis lateralibus parce pilosa et ibidem parce glandulosa, ceterum glabra. Serratura non profunda, aperta, in foliis turionum minus glanduloso-composita, dentibus nonnullis simplicibus. Stipulae latae, auriculis brevibus erectis, laeves rarius sparse glandulosae. Petioli subbreves, dense parvuleque glandulosi. Fructus obovati, basi in pedicellum angustati, sursum incrassati, collo contracti (turbinati), glabri vel parcissime glandulosi. Sepala laevia, brevia, appendice anguste lanceolata.

Bosna: In monte Trebević prope Sarajevo (*M. 1904). In m. Vranica Pl. (Schwarz f. B.).

b) Ramulis aculeatis.

ϑ. *megalophylla* [R. Keller apud Asch. Graebn., l. c., 301. — *R. Malýi* var. Borb. Magy. birod. rózsái l. c., 526 et 536. Confer: R. Keller, Beitr. I, l. c., 501].

Bosna: Circa Grahovik prope Travnik (Br. f. *J. B. Keller 1883) saltem subappropinquata. Etiam ex **Bosna** a d. R. Keller indicatur.

Hic etiam *R. humilis* v. *calvescens diplotricha* [J. B. Keller in Öst. bot. Zeit. (1885), 342], quam Br. f. J. B. Keller in plano montis Vlašić collegit, pertineat.

B. Foliolis subtus tota superficie pilosis et in nervis modo glandulosis.

a) Pedicellis nudis.

ι. *levipes* [R. Keller apud Asch. Graebn., l. c. 301; K. Malý (1904) l. c., 216. — *R. alpina* var. Borbás, l. c., 528 (1880) non *R. laevipes* Rouy].

Bosna: In monte Cincar prope Livno inter fagos fruticosas (B.). In cacumine Stražica montis Vranica (B.). In m. Trebević (*M. 1904).

b) Pedicellis glandulosis.

κ. *pubescens* [R. Keller apud Asch. Graebn., l. c., 301; v. *praealpina* H. Braun apud Beck, Fl. Nied.-Öst., 775 (1892). — *R. alpina* var. *pubescens* Koch, Syn. fl. Germ., 224 (1837); Borb., l. c., 528].

Bosna: In monte Trebević prope Sarajevo (*M. 1904); hic fructibus laevibus.

λ. *trebevićiana*. [*R. pendulina* v. *R. trebevićiana* K. Malý l. c., 221 (1904)]. Frutex ultra 1 m altus, inermis, ramis brunneis et ramulis floriferis viridibus pruinosis. Foliola 5—9, mediae magnitudinis vel magna, late ovalia, obtusa, basi plus minus conspicue rotundata vel subcordata vel angustato-rotundata interdum se marginibus obtegentia, supra intense viridia paulo pruinosa, interdum apicem versus pilosula, subtus cinereo-viridia, in superficie sparse, in nervis imprimis principali pilosa et ibidem pilis glandulosis dilutis conspicue praedita. Glandulae superficiei parcae rarius numerosiores sed sparsae. Serratura aperta, vix profunda, sublata, dentibus simplicibus vel hinc inde fissis, intus eglandulosis vel 1—3 (—4) denticulis glandulosis praeditis, extus denticulis aequalibus 3—6 (—8) auctis. Petioli inermes, rarius aciculis sparsis armati, copiose glanduloso-

pilosi, glabri vel in petiolis nonnullis puberuli. Stipulae latissimae, glaucae, cum auriculis modice longis, erecto-patulis, subtiliter glanduloso-ciliatae, glabrae rarius subglandulosae, ad basim saepius velutino-puberulae. Inflorescentia plurimum uniflora, rarissime 2—4-flora. Bracteae late ovales, glaucissimae, pedicellos longitudine aequantes vel paulo longiores. Sepala post anthesim reflexa vel expansa, serius iterum erecta, indivisa vel rarius pinnulis singulis linearibus aucta, intus ac in margine tomentosa, appendicibus lanceolato-dilatatis, glanduloso-serratis vel integris. Petala mediae magnitudinis vel magna, calyce paulo longiora. Pedicelli cum receptaculis copiose glandulosi vel sepala glabrescentia. Receptaculum globosum vel ovato-fusiforme, sursum paulo angustatum. Stylorum capitulum dense albotomentosum. Fructus....

Bosna: In monte Trebević prope Sarajevo (*M. 1904, B.); in m. Vlašić (Franjić f. B.) hic etiam receptaculis parce glandulosi.

K. Malý [l. c.] insuper formam quamdam fructibus turbinato-globosis, quae fortasse ad speciem commemoratam pertinet observavit, significans, *Rosam trebevičianam* nulli adhuc formae descriptae similem esse, qua de causa ab hybriditate profectam esse fortasse interpretari sit.

μ. *subgentilis* [R. Keller apud Asch. Graebn., l. c., 303. — *R. alpina* v. *subgentilis* J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 216 (1882)]. »Ramuli parce aciculosi. Foliola parvula, subtus et in nervis parce pilosa ac parce glandulosa, utrinque paulo attenuata. Sepala angusta, corollam longitudine subaequantia. Receptacula parva, anguste ovato-oblonga, laevia, cum pedicellis et sepalis rubescentia« (J. B. Keller).

Bosna: Prope Travnik (Br. f. J. B. Keller in Öst. bot. Zeit. (1883), 41] hic foliolis ovalibus, acutis vel. oblongo-ellipticis, quorum nervi subtus copiose glandulosi observantur et cum petalis intense rubris.

c) Foliolis subtus in superficie ac in nervis et conspicue pilosis et glandulosi.

ν. *Ebelii* [H. Braun apud Beck, Fl. Südbosn. III in Ann. naturhist. Hofmus, II (1887), 101; R. Keller apud Asch. Graebn., l. c., 302; K. Malý, l. c., 222]. »Rami flavescens inermes. Stipulae late ovato-ellipticae, subtus glandulis tenuibus purpurascentibus plus minus dense vestitae; in margine glanduloso-ciliatae, cum auriculis brevibus patentibus. Petioli partim

glabri, partim pilis longiusculis albidisve praediti, purpurei vel virescentes, glandulis purpureis obtecti. Foliolorum forma ut in *Rosa pendulina* L. Foliola purpurea vel. glauca, subtus in nervis omnibus vel tota in lamina glandulosa ac pubescentia, in margine argute composite-glanduloso-serrata. Pedunculi glandulis purpurascensibus stipitatis obtecti. Receptacula, parva breviter ellipsoidea laevia, vel glandulis parcis stipitatis obsessa. Sepala superne spathulata laevia, in dorso glandulis purpurascensibus plus minus tecta.«

Bosna: In regione subalpina editiore montis Igman prope Blažuj, c. 1200 m. Junio (B. f. *H. Braun 1887); in m. Trebević (M.).

Subforma *atricha* [J. B. Keller et Formánek in Öst. bot. Zeit. (1890), 101] »foliolis atrichis aut solum costa puberulis, receptaculis obovoideis, sepalis apicibus filiformibus« discrepare fertur.

Hercegovina: In m. Mala Velež prope Nevesinje (Fo. f. *J. B. Keller 1890). In monte Baba Pl. (Hawelka f. B.).

ξ. *balsamea* [Kitaibel in Linnaea 32 (1863), 590 pro spec.; R. Keller apud Asch. Graebn., l. c., 302. — *R. alpina* f. *balsamea* Borb., l. c., 527 (1880); J. B. Keller in Formánek, Rosen des Hochgesenkes]. Fide Kitaibel l. c. a *R. pyrenaica* differt: »germinibus hispidis setis glanduliferis, calycum laciniis glandulis adpersis, foliolis supra subpubescentibus, subtus villosis, glandulis fructus balsamico-viscidis«. »Fructus plus minus oblongi non raro curvi«.

Bosna (fide *R. Keller 1902). Ubi?

ο. *sarajevensis* (K. Malý, l. c., 221 (1904)). Foliola ovalia, mediae magnitudinis, breviter petiolulata, subtus dilute viridia, conspicue pilosa, in superficie sparse glandulosa. Serratura aperta, non profunda, parce glanduloso-composita. Petioli sparse glandulosi, glabri vel ad basim brevissime pilosi, parce armati. Stipulae subangustae, laeves vel eae foliorum inferiorum pauce glandulosae. Fructus ovatus, elongatus (16—19 : 10—10·5 mm), cum sepalis et pedicellis laevis. Appendices sepalorum angustissimae, integrae. (K. Malý.)

Bosna: In monte Trebević prope Sarajevo (*M. 1904).

π. *setacea* [R. Keller apud Asch. Graebn., l. c., 306 = K. Malý, l. c., 222 (1904) nr. 20 cum? — *R. Malýi* v. *bosniaca*

f. *setacea* J. B. Keller apud Wiesbaur in Öst. bot. Zeit. (1883), 393; — v. *daesitiatensis* K. Malý in schedis]. Rami c. 30 cm alti, dense aculeis acicularibus armati, glandulis stipitatis paucis immixtis. Ramuli florentes breves, paucè aculeati. Foliola parva, breviter petiolulata, oblongo-ovalia, breviter rotundata, obtusa, supra glabra, subtus conspicue pilosa et tota in superficie dense glandulosa. Petioli densissime glandulosi, inermes. Stipulae dense glandulosae, auriculis erecto-patentibus. Receptaculum ovatum, cum pedicellis et sepalis breviter glandulosum. Sepala breviter appendicibus filiformibus. Petala parva. Fructus pyriformis, glaber. (K. Malý.)

Bosna: Circa Sarajevo in declivibus m. Kurvina ad vallem fl. Mi-ljacka (M.), in angustiis fl. Prača prope Banja stijena (M. in litt.). Circa Travnik (*Br., f. J. B. Keller apud Wiesbaur 1883). — **Hercegovina:** In jugo inter m. Mali Velež et cacumen orientale alt. 1350 m in locis herbosis (*Sagorski 1912).

Wiesbaur [in Öst. bot. Zeit. (1883), 393] certe peccavit, quum formam *serratam* [J. B. Keller, l. c., 393], quam J. B. Keller a *R. Malji typica* diversissima declaravit, ad *R^m Malji*, v. *bosniacam* J. B. Keller inseruit, quia nota insignis »rami inermes« ad eam non pertinent. Quoniam diagnosis formae *setaceae* J. B. Keller: »caule aculeato, aculeis setaceis recurvis, foliolis subtus toto glanduloso-scabris, villosis, serraturis triplicatis« fere ex omni parte cum illa forma sub nr. 20 a K. Malý descripta congruit et Wiesbaur praeterea definite notavit, *Rosam Malji* quae foliolis rotundo-ovalibus descripta est circa Travnik deest, mihi persuasi, formam descriptam adversus negationem d. K. Malý formae *setaceae* inserere posse.

ρ. *cadocarpa* [G. Beck. — *R. pendulina* nr. 24 apud K. Malý, l. c. (1904), 223]. Truncus armatus, ramulis aculeis acicularibus sparsis armatis. Foliola mediae magnitudinis, ovalia, basi plus minus rotundata, obtusa, subtus pilosa, in superficie plus minus sparse glandulosa. Serratura aperta. Stipulae latae, pruinosae, laeves vel parce glandulosae, auriculis erecto-patentibus. Petioli breviter patentim pilosi vel glabri, copiose glandulosi. Sepala appendice spathulato-dilatata integra vel denticulata praedita, dense glandulosa. Fructus lageniformis, 18—26 (22) mm longus. (K. Malý.)

Bosna: In m. Trebević prope Sarajevo (*M. 1904. exsicc. nr. 130).

Haec forma fortasse proxima est formae *subgentili* (J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 216 (1882) pro var. *R^{ae} alpinae*).

σ. *subadenophora* [G. Beck. — *R. pendulina* nr. 21—23 K. Malý, l. c., 222—223]. A f. *adenophora* (Kit.) foliolis subtus copiosius pilosis glandulosisque distat.

Bosna: In monte Trebević (*M. 1904); etiam in formis trunco armato.

II. Foliola rotunda vel rotundo-ovalia.

A. Foliola glabra.

τ. *Sternbergii* [H. Braun in Beck, Fl. Nied.-Öst., 775 (1892) pro var.; R. Keller apud Asch. Graebn., l. c., 303. — *R. Sternbergii* Gandog., Essai (1876), 20. — *R. alpina* var. H. Braun apud J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 216 (1882). — *R. affinis* Sternb. in Flora IX (1826), Beilag. 1, 80 non Rau.].

Bosna: In monte Vlašić (Br. f. *Wiesbaur 1883).

Wiesbaur [in Öst. bot. Zeit. (1883) 396] scripsit, hanc plantam primo *Rosam gentilem* f. *inermem* habuisse, at satis bene ad *R^{am} affinem* Sternb. inseri posse, quo dubitationes moveantur. In monte Vitorog alt. 1600 m (Ha. Fa.) et in m. Ljubična c. 1800 m [Schiller f. H. Braun apud Fritsch in Mitteil. naturw. Ver. Steierm. 47 (1910), 184]. Ultima quoque dicta, quae notam domini H. Braun continent: »differt a typo foliolis subtus magis pilosis, pedunculis setosis, sepalis elongatis, in dorso glandulosis« dubitari possunt, quia *R. Sternbergii* foliis glabris excellit.

υ. *gentilis* [Sternberg in Flora IX (1826), Beil. 1, 79; Borbás, Magy. birod. rózsái, l. c., 532; H. Braun in Verh. zool.-bot. Ges. (1885), 114 pro spec.; — R. Keller apud Ascherson Graebn., l. c., 304].

Huc subforma genuina [H. Braun, l. c., 114] foliolis utrinque glabris eglandulosis (an semper?).

Bosna: Fide *Asch. Kanitz, Catal., 98 (1877). Ubi? In monte Vlašić [Br. f. Wiesb. in Öst. bot. Zeit. (1883), 396] ex inditis notis dubiosissimum! — **Hercegovina:** Ad rivulum Ledenica potok in monte Čabulja (*Prodan 1918).

φ. *adenoneura* [Borbás in Öst. bot. Zeit. (1879), 317 et Magy. birod. rózsái, l. c., 526 et 534; H. Braun, l. c., 114]. Foliolis subtus in nervis glandulosis.

Bosna: Circa Travnik, in m. Crni vrh montis Vlašić [Br. f. J. B. Keller apud Wiesbaur in Öst. bot. Zeit. (1885) 339] cum serraturae dentibus ter glanduloso-serratis conniventibus. Praeterea inter Janjica et Sjekira (Br. f. J. B. Keller).

χ. *trichoneura* [J. B. Keller in Öst. bot. Zeit. XXXV (1885), 339]. »Foliolis ellipticis subtus eglandulosis trichoneuris, serraturis minus abunde duplis« [J. B. Keller apud Wiesbauer, l. c., 339]. An hic inserenda sit?

Bosna: In cacumine Crni vrh montis Vlašić prope Travnik (Br. f. *J. B. Keller apud Wiesbaur 1885); insuper inter Janica et Sjekira (Vranica plan.) (Br. f. J. B. Keller 1887).

ψ. *perconspicua* [J. B. Keller in Öst. bot. Zeitschr. (1885). 339 pro var. *R^{ae} gentilis*]. »Inermis, adenoneura, foliolis forma typi sed 2—4-plo majoribus, rotundis apice obtusis, remotiusculis, ad basim usque serratis, serraturis magis rotundatis, margine abunde (antice 5—7, postice 7—11) denticulis minutis glandulosis praeditis, utrinque glabris, subtus in nervis secundariis sparsim glandulosis, glandulis demum evanidis; pedunculis breviusculis; stipulis maximis; auriculis magnis divergentibus glabris; pedunculis cum tubo obovoideo sepalisque intergerrimis glabris eglandulosis aut glandulis sparsis instructis; sepalis apice dilatato-dentatis valde elongatis. Fructus apice rotundatus, haud strangulatus, qualis in *R. Brandisii* coccineus. (J. B. Keller.) Sec. J. B. Keller a *R. gentili* typica sepalis longissimis, apice dilatatis et serratis, latioribus, frondosis et momenti laevioris nervis secundariis sparse glandulosis distinguitur. De differentiis aliarum confer locum citatum.

Bosna: In monte Vlašić ad introitum caverni calcarei (Br. f. *J. B. Keller 1885).

ω. *inermis* [J. B. Keller in Öst. bot. Zeit. (1887), 183]. *Rosae Sternbergii* similis sed receptaculis ovoideis hispidis differt.

Bosna: Inter Janica et Sjekira (Br. f. *J. B. Keller 1887).

α₁. *Malji* [Kerner in Öst. bot. Zeit. XIX (1869), 325; H. Braun in Verh. zool.-bot. Ges. (1885), 115 pro spec. — *R. dinarica* F. Malý apud Borbás, Magy. birod. rózsái, l. c., 535. — *R. pendulina* var. *R.* Keller in Asch. Graebn., l. c., 305. — Confer: R. Keller, Beitr. I (1893), l. c., 493; Wiesbaur in Öst. bot. Zeit. (1883), 395]. Frutex humilis — 30 cm altus truncis ramulisque copiose aculeatis, ramulis floriferis inermibus. Aculei recti, inaequilongi, e basi rotunda disciformi contracti. Stipulae

angustae sursum dilatatae, margine dense glanduloso-ciliatae, subtus plus minus glandulosae rarius nudae. Petioli glabri, glandulis stipitatis copiosis et aciculis parcis armati. Foliola appropinquata, saepe se tegentia, parvula (1—2:0·5—1·6 *cm*), rotundo-ovalia, cum serratura valde composita et dentibus extus denticulis glandulosis 3—5, intus unico praeditis, supra laete viridia, subtus albido-viridia et per totam superficiem sparse glandulis obscuris numerosis tecta, glabra. Pedicelli dense glanduloso-pilosi. Receptacula globoso-ovata, nunc laevia nunc plus minus glandulis stipitatis obsita. Sepala dorso glandulosa, appendice oblongo-lineari integra vel glanduloso-lacera. Fructus globoso-ovati, in maturitate deorsum curvati.

Bosna: Proxime fines bosnenses in monte Dinara (F. Malý in Herb. Crépin sec. R. Keller. l. c., 498); in m. Prolog (F. Malý f. Borbás, l. c. 535). — **Hercegovina:** Ad rivulum Ledenica potok in m. Čabulja (Prodan) et in m. Prenj Pl. alt. c. 2000 *m* (*Prodan 1910); in m. Lupoglav c. 2100 *m* (B.).

B. Foliola subtus pilosa.

β₁ *diplotricha* [(Borbás) G. Beck. — *R. Malji* f. *diplotricha* Borb., Magy. birod. rózsaí, l. c., 536 fide R. Keller, Beitr. I, l. c., 497 sequ. — *R. Malji* v. *bosniaca* J. B. Keller apud Wiesbaur in Öst. bot. Zeit. (1883) 349 excepta f. *setacea*. — *R. pendulina* v. *bosniaca* R. Keller apud Asch. Graebn., l. c., 306]. Ramis et ramulis inermibus; petiolis inermibus, plurimum glandulosis. rarius laevibus. Stipulis subtus plurimum glandulosis. Foliola parva, subtus plus minus copiose pilosa et glandulosa; serratura glanduloso-composita. Appendicibus sepalorum anguste lineari-lanceolatis, saepe glanduloso-laceratis; fructibus nunc laevibus nunc glandulosis.

Bosna: In monte Vlašić (S. f. *Borbás 1880; Br. f. J. B. Keller); prope Grahovik (Br. f. J. B. Keller apud Wiesbaur). — **Hercegovina:** Inter saxa et in eorum fissuris in regione alpina montis Prenj Pl. c. 1800 *m* (*B. 1887). In monte Velež c. 1500 *m* (B.) in f. *leiocalyx*.

Petioli, receptacula, sepala glandulosa = *adenocarpa* [Wiesbaur, l. c., 393] vel fructus setulis eglandulosis armati = *hispida* [Wiesbaur, l. c.] sed etiam fructus laeves cum pedicellis glandulosis = *adenocalyx* [Wiesb., l. c., non Borbás] vel fructus laeves cum pedicellis eglandulosis = *leiocalyx* [Wiesb., l. c.]. Praeterea et petioli et receptacula laevia occurrunt = *laevis* [R. Keller, Beitr. I. l. c., 496]. Omnes has formas ex indumento glan-

duloso discretas nullius pretii esse, R. Keller [Beitr. I, l. c., 495—497] accuratissime exposuit.

γ_1 *bijelagorae* [G. Beck]. Frutex humilis, ramis brevibus erectis; ramuli glandulis stipitatis densissimis glutinosi ac aciculis brevibus permultis et spinis firmioribus rectis subulatis—6 mm longis armati. Petioli cum rhachi foliorum densissime glandulosi ac spinulis et glanduliferis et parcis eglandulosis obsiti. Stipulae densissimae ac in margine aequaliter glandulosae, latae, auriculis triangularibus, divergentibus. Foliola 15—20 mm longae, 7—5, rotunda vel latissime ovalia, omnia aequalia, rotundata, supra sparse appresse pilosula sparseque sed copiose glandulosa, infra per totam superficiem glandulosa ac imprimis in nervis omnibus pilosa et ibidem spinulis paucis praedita, biserrata, serraturae dentibus copiose glanduloso-pilosis. Pedicelli breves, densissime glandulis stipitatis praediti, glutinosi. Receptacula globosa, densissime spinis longis glanduliferis obsita, echinacea. Sepala longe acuminata, glandulis densissimis glutinosa et dorso spinulis glanduliferis tecta, margine intusque tomentosula, petalis breviora. appendice lineari-lanceolata brevi vel deficiente aucta. Petala rubra, 18 mm longa. Stylorum capitulum dense pilosum. — Propter armaturam copiosam *R^{am} pendulinam* v. *setaceam* R. Keller (= *R. Malji* v. *bosniaca* J. B. Keller, l. c.) in memoriam reducit, sed distinguitur: ramulis praeter armaturam densissime glandulosis, petiolis dense glandulosis et spinulis parcis immixtis (haud pilosis), foliolis rotundis, pedicellis spinulis longis glanduliferis tectis, receptaculis globosis basi non attenuatis, spinulis glanduliferis longis densissimis echinatis, sepalis densissime glandulosis glutinosis et spinulis glandulosis immixtis, appendicibus sepalorum vix evolutis.

Hercegovina: In ditioe Bijela gorae montisque Orijen in cacuminibus Gubar, Prasa, Vučji zub c. 1600—1800 m, m. Julio florentem legit Hawelka (*B.).

8. *Rosa canina* × *pendulina* [*R. alpina* × *canina* R. Keller, Mitt. II, l. c., 45 (1896)]. »Kleines Sträuchlein ohne Stacheln mit 5-zähligen kahlen Blättern, deren Sekundärnerven vereinzelte Subfoliadrüsen besitzen und deren Rand eine zusammengesetzte Zahnung mit drüsentragenden Zähnchen hat. Blüten einzeln, ohne Brakteen. Blütenstiele sehr reichlich mit Stieldrüsen bewehrt. Rezeptakel länglich-oval, dicht mit Stieldrüsen

bekleidet. Kelchzipfel lang zugespitzt, zwei einfach, drei mit einem Paare fadenförmiger Fiederchen, dicht drüsig gewimpert, auf dem Rücken schwach befläumelt und stieldrüsenreich, zurückgeschlagen bis ausgebreitet. Griffelköpfchen schwach behaart.« (R. Keller.)

Notas proprias *R^{ae} pendulinae* a R. Keller cognoscuntur: in defectu aculeorum et bractearum florum, in armatura densa pedicellorum et receptaculorum (*R^{ae} pendulinae* loco praesentis), ad hoc in sepalis fere simplicibus, notas *R^{ae} caninae* autem minus in collocacione sepalorum quam in indumento parco styli. Interpretatio huius hybridae quoque a d. Crépin probatur.

Bosna: In monte Vlašić (*R. Keller 1896) inter parentes alt. 1400 ad 1500 *m*.

Pimpinellifoliae.

[DC. apud Seringe in Mus. Helv., I, 3 (1818).]

9. *Rosa spinosissima* [L., Spec. pl., 491 (1753); J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 213; H. Braun apud Beck, Fl. Nied.-Öst., 776; Schneider, Laubholzk. I, 583]. In locis apricis, lapidosis, inter frutices usque ad regionem alpinam (1600 *m*). Floret m. Majo, Junio.

Enumero omnes stationes, ubi *R. pimpinellifolia* L. reperta est, quum hoc nomen nominatio prius usitata pro *R. spinosissima* sensu ampl. fuit.

Bosna: In monte Šuljaga prope Kupres, in m. Hrblijina, Šator (Pr.), Ljubuša (R. f. R. Keller), Prolog et Borova glava prope Livno (*S. 1848), Cincar (B.). Circa Vareš (Pr.), in valle fl. Željeznica, prope Kalinovik, in valle fl. Sutjeska (Pr.). — **Hercegovina:** In m. Velež 1200—1450 *m* (B.), supra Bojište a. 1400—1500 *m* (Sagorski). Circa Trebinje in m. Glijiva (*P. 1874), prope Visoka glavica (M.).

Variat:

α. *typica* [H. Braun in Beck, Fl. Nied.-Öst., 776. — *R. spinosissima* L., l. c. — *R. pimpinellifolia* v. *spinosissima* Koch, Syn. fl. Germ., 222 (1837)].

Bosna: In m. Jedovnik (Ja.), Cincar alt. 1400 *m* (B.), Vlašić (*S. 1848) —1600 *m* (Engler!). Circa Vareš prope Dubošćica (Fo.); in m. Rudinica prope Banja stijena (M.). — **Hercegovina.** Frequentissime in monte Leotar prope Trebinje (B), in Bijela gora ad Petni vrh inter Arslanagića most et Orahovac, prope Česali, Visoka glavica, circa Milanov odsjek, in m. Ledenik (*V. 1888).

Huc pertinent praeterea: subf. *macropetala* [Borbás, Magy. birod. rózsái, l. c., 552]. Bosna: In m. Kajabaša montis Vlašić (Br. f. *Wiesbaur 1885); Hercegovina: In m. Leotar prope Trebinje copiose (B.); hic petala — 3·2 *cm* longa et subf. *oligo-tricha* [Borbás, l. c., 549] cum petiolis et nervo principali subtus pilosulis glabrescentibus ab eadem statione.

In monte Leotar prope Trebinje collegi insuper formas sepalis basi setaceo-glandulosis, in quibus saepius etiam pars receptaculorum superior glandulis talibus ornata fuit, dum pars reliqua et basis receptaculi nuda observantur.

subf. *humensis* [Conrath in Öst. bot. Zeit. (1888), 52 pro spec. — *R. pimpinellifolia* v. *humensis* K. Malý in litt. (1905)]. »Aufrechtes, c. 3 *dm* hohes Sträuchlein. Stämmchen und Äste mit abwärts gerichteten, dünnen Stacheln besetzt. Blättchen meist zu 7, seltener zu 9, elliptisch bis eiförmig-elliptisch, klein (die größten 18:9 *mm*), die seitlichen sehr kurz gestielt oder sitzend, ausgewachsen beiderseits kahl, ihr Mittel-nerv auf der Unterseite mit zerstreuten Drüsen besetzt; Rand einfach gezähnt, mit zahlreichen kleinen, scharf zugespitzten, nach vorwärts gerichteten Zähnchen. Nebenblätter lineal-lanzettlich, mit $\frac{1}{3}$ so langen, schmalen, abstehenden Zipfeln. Blüten ? Kelchzipfel ganz, kurz, am Rande drüsig. Frucht aufrecht, dunkelrot, kurz elliptisch mit etwa halb so langen Drüsenborsten, welche bis auf den unteren Teil der Frucht übergehen, besetzt, von den aufrechten, bleibenden Kelchzipfeln gekrönt.« »Sie gehört wegen der einfach gezähnten Blätter, der kurzen Sepalen und der dunkelroten Frucht wohl zu den *Pimpinellifoliae* und unterscheidet sich von der *R. Simkoviczii* Kmet', durch die Form und Kleinheit der Blätter etc., von *R. spinosissima* L. vorzüglich durch die abwärts gerichteten Stacheln und die Farbe der Frucht« (Conrath).

Mea quidem opinione a *Rosa spinosissima* non vere evidenter diversa est.

Bosna: In saxis prominentibus regionis superioris montis Hum prope Jaice (*Conrath 1888).

β. *poteriifolia* [Bess., Enum. pl. Pod. Volh., 62 (1822) pro spec.; H. Braun apud Beck, Fl. Nied.-Öst., 776; v. *spinosa* J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 214. — *R. pimpinellifolia* α. *spinosa* Neilr., Fl. Nied.-Öst., 893].

Bosna: Circa Travnik prope caminos calcarios (Br. f. J. B. Keller 1883), in m. Vlašić in cacumine Kajabaša (Br. f. Wiesbaur), etiam in f. *minutiflora* Borbás alt. 1700 m (B.). Circa Dubošćica prope Vareš (Fo.). — **Hercegovina:** In m. Velež supra Bojište 1400—1500 m, inter cacumina Mali Velež et orientalem c. 1350 m (*Sagorski 1912); in monte Velež orientali (B.).

γ. *pimpinellifolia* [L., Syst. nat., ed. X, 1062 (1759) et Spec. pl., ed. II, 703 pro spec.; J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 214; H. Braun apud Beck, Fl. Nied.-Öst., 777. Confer Sagorski in Allg. bot. Zeit. (1914), 72].

Bosna: Circa Travnik (Deyl f. *J. B. Keller apud Wiesbaur 1883) »cum sepalis margine parce glanduloso-ciliatis, purpureis«.

An huc insuper *R. pimpinellifolia* v. *typica* [Christ, Ros. Schweiz. 63 (1873); R. Keller apud Asch. Graebn., l. c., 310] ducenda sit, repugnatur. Formas, quae apte ad ultimam conveniunt, nonnumquam reperi.

Bosna: In monte Smolin prope Žepče (B.); in m. Inac prope Fojnica (Schwarz! f. B.). In m. Vlašić (B.). — **Hercegovina:** In monte Velež c. 1500 m (B.).

δ. *sorboides* [H. Braun in Verh. zool.-bot. Ges., 38 (1888), 514; — *R. pimpinellifolia* var. *R. Keller* apud Asch. Graebn., l. c., 311].

Bosna: In regione alpina montis Cincar alt. 1700 m (*B.).

10. *Rosa pendulina* × *spinosissima* [*R. pendulina* × *pimpinellifolia* R. Keller in Asch. Graebn., l. c., 314].

a) *Rosa reversa* [Waldst. Kit., Pl. rar. Hung., III, 293 (1812), tab. 264; Crépin in Bull. soc. bot. Belg., VIII (1869), 328 et XXXIII (1894), 33; Borb., Magy. birod. rózsái, l. c., 539 et 544; H. Braun in Verh. zool.-bot. Ges. (1885), 117].

Bosna: (Sec. *Asch. Kan., Cat. 98). Ubi? In saxis vallis fl. Sutjeska (Pr.).

Fortasse fieri potest notam apud Asch. Kan. [l. c.] ad *Rosam pimpinellifoliam* var. *reversam*, quam Sendtner a loco Travnik sine autorem enumeravit, ducendam esse. Insuper R. Keller l. c. edidit, *Rosam pendulinam* × *pimpinellifoliam* in Bosna crescere (Crépin, Rosae hybridae p. [37] 41). Reperi hanc hybridam in duabus, ut videtur formis adhuc indescriptis:

b) *Rosa subcroatica* [G. Beck. — *R. pendulina* (*croatica*?) × *pimpinellifolia*]. Rami ramulique spinis setiformibus inaequilongis, partim —5 mm longis plus minus armati. Petioli cum foliorum rhachi et glandulis stipitatis parcis et setis paucis prae-

diti. Stipulae angustae, glabrae, margine glanduloso-ciliatae, auriculis erecto-patentibus, acutis. Foliola —17 mm longa, 7—9, elliptica, basi rotundata (terminale modo basi cuneatum), rotundata, simpliciter serrata sed hinc inde cum dentibus denticulo unico auctis, serraturis eglandulosis vel infimis parcissime glandulosis, supra glabra, subtus glaberrima vel in nervo medio parce appressule pilosa et hinc inde parcissime glandulosa. Pedicelli uniflori, et aciculis reflexis copiose et glandulis longe stipitatis parcis tecti. Receptacula subglobosa nuda. Sepala 15 mm longa, angusta, longe acuminata, cacumine saepe pinnulis minutis obsita, dorso et margine glandulis stipitatis subcopiosis praedita, reflexa. Petala rosacea (?). Stylorum capitulum dense lanuginosum. A *R. croatica* Kit. differt ramulis minus aculeatis, foliolis subtus in superficie glaberrimis, simpliciter serratis, dentibus (exceptis infimis) eglandulosis, pedicellis armatis, receptaculis nudis. A *Rae spinosissimae* formis sepalis copiose glandulosis, hinc inde pinnulis auctis distinguitur. C. d. Crépin Rosam nostram in herbario meo pro *R. pimpinellifolia* determinavit.

Bosna: In agro Otaševac polje ad montem Klekovača, alt. c. 1060 m, solo calcareo, Junio (*Beck).

c) *Rosa devečanica* [G. Beck. — *R. pendulina (croatica)* × *pimpinellifolia*]. Frutex humilis, copiose ramosus, ramis erecto-patentibus, nudis; ramulis aculeis setiformibus parcissimis instructis vel subnudis. Petioli cum foliorum rhachi setis paucis et glandulis stipitatis sparsis tecti. Stipulae glabrae, margine glanduloso-ciliatae, auriculis erecto-patentibus, acutis. Foliola 1—2 cm longa, plurimum 7, elliptica, basi rotundata, terminalia autem subcuneata, omnia subacuta, biserrata, dentibus in latere inferiore denticulis 1 rarius 2 obsitis, plurimum eglandulosis vel ad basim folioli glandulosis, utrinque glabra vel subtus in nervo medio modo glandulis perpauca praedita et hic interdum pilosula. Pedicelli receptaculis pluries longiores, purpurei, nunc glandulis stipitatis copiosis tecti nunc nudi. Receptacula late ellipsoidea, nuda. Sepala purpurea, post anthesim reflexa, longe acuminata, 12—16 mm longa, nuda vel rarius exteriora in margine lanuginoso etiam glandulis longissime stipitatis parcissimis instructa. Petala calyce longiora, dilute rosea. Stylorum capitulum dense pilosum.

A *R. croatica* Kit. differt foliolis subtus summo in nervo medio parce pilosulis, dentibus foliorum eglandulosis vel ad

basim foliolorum modo glandulosis, receptaculis nudis, sepalis dorso eglandulosis vel externis modo glandulis longissime stipitatis parcissimis praeditis, petalis dilute roseis.

A *R. spinosissima* formis imprimis foliolis biserratis diversa. Crépin in herbario meo pro *R. pimpinellifolia* × *alpina* agnovit.

Bosna: In monte Devečani montis Vlašić prope Travnik, c. 1600 m, solo calcareo. Julio (*B.).

d) *Rosa Villarsiana* [Sieber in Pl. exsicc. it. Alp. Delph. (1829). — *R. pendulina* × *pimpinellifolia* v. *Villarsiana* R. Keller apud Asch. Graebn., l. c., 318].

Hercegovina: In monte Gubar (distr. Orijen), m. Julio (Hawelka f. *B.).

Jundzilliae.

[Crépin in Bull. soc. bot. Belg., XXXI 2 (1892), 80; R. Keller in Ascherson Graebn., l. c., 53]

11. *Rosa Jundzillii* [Besser, Cat. hort. Crem, 117 (1816); R. Keller in Asch. Graebn., l. c., 54. — *R. trachyphylla* Rau, Enum. Ros. Wirc., 124 (1816); H. Braun in Abh. zool.-bot. Ges. (1885), 71 et apud Beck, Fl. Nied.-Öst., 805]. Inter frutices, ad silvarum margines, in silvis apertis. Floret m. Junio.

Hic:

Rosa trachyphylla [Rau, l. c.; Borbás, rózsái, l. c., 377; v. *typica* H. Braun apud Beck, l. c. — *R. Jundzillii* v. *trachyphylla* R. Keller apud Asch. Graebn., l. c., 55].

Bosna: Circa Travnik prope Guvna (Br. f. *R. Keller 1806). In monte Trebević (F. sec. R. Keller fide M. in litt.).

Rubrifoliae.

[Crépin in Bull. soc. bot. Belg., XXXI 2 (1892), 79; R. Keller apud Asch. Graebn., l. c., 59.]

12. *Rosa rubrifolia* [Vill., Hist. pl. Dauph., III. 549 (1789); R. Keller in Asch. Graebn., l. c., 60. — *R. ferruginea* Borbás, rózsái, l. c., 456; H. Braun apud Beck, Fl. Nied.-Öst., 778 et aut. an Villars, Prosp. (1779) 46?]. In fruticosis, ad silvarum margines regionis subalpinae. Floret m. Junio, Julio.

Variat:

α. *typica* [Christ, Ros. Schweiz, 173 (1873)].

Bosna: In monte Troglav et prope Gubin (*Pr. 1900). In valle fl. Sutjeska pr. Suha, circa Tjentište et prope Popov most (Pr.).

β. *gutensteinensis* [Jacqu. fil., Cat. hort. Vind. (1821), 3 pro spec; R. Keller in Asch. Graebn., l. c., 61; v. *livida* Koch, Syn. fl. Germ., 225 (1837). — *R. livida* Host, Fl. Austr., II, 25 (1831). — *R. ferruginea* v. *livida* J. B. Keller apud Hal. Braun, Nachtr. Fl. Nied.-Öst., 223 (1882)].

Bosna: Prope Travnik (Br. f. *J. B. Keller 1887).

γ. *praerupticola* [H. Braun apud Beck et Szyszyłowicz, Pl. per Crnag. et in Alb. lectae Sep. 90 (1888) = R. Keller apud Asch. Graebn., l. c., 62. Confer Bald. in Malpighia (1891), 69. — *R. ferruginea* var. H. Braun apud Murb., Beitr. Fl. Südbosn., 131].

Hercegovina: In declivibus saxosis montis Bjelašica prope Gacko alt. 1200m (Mu. f. H. Braun 1891).

Vestitae.

[R. Keller in Asch. Graebn., l. c., Syn. mitt. Fl., VI, 63 (1900).]

13. *R. orientalis* [Dupont in DC., Prodr., II, 607 (1825); Boiss., Fl. Or., II, 607 (1825); Boiss., Fl. Or., II, 680; Crépin in Bull. soc. bot. Belg., XXI 1 (1882), 33; R. Keller in Asch. Graebn., l. c., 64; Schneider, Laubholz., I., 551]. In saxis regionis montanae et subalpinae. Floret m. Junio.

Hercegovina: In monte Čabulja, alt. 800m (*B.). Praeterea e Crnagora nota.

Frutex humilis, cum descriptione omnino congruens, foliorum serratura simplice sed (imprimis) laesorum hinc inde composita, petalis rosaceis, basim versus clarioribus. Pedicellis tomentosus extemplo agnoscenda!

14. *Rosa pomifera* [J. Herrm., Diss. de Rosa, 16 (1762); Christ, Ros. Schweiz, 81; Crépin in Bull. soc. bot. Belg., XXI 1, 100 (1882), XXXI 2, 76 (1892); R. Keller in Asch. Graebn., l. c., 66. — *R. villosa* L., Sp. pl., 704 (1753) p. p.; Schneider, Laubholz., I, 553. — *R. villosa* v. *pomifera* Desv., Journ. bot., II, 117 (1813)]. Inter fruticosa, in silvis, ad saepes in regione montana editiore et subalpina. Floret m. Julio.

Bosna: Sec. *Sendtner (1848) prope Travnik, sed sec. Asch. Kan. [Cat. Corm., 99] dubiose. Nota ad sequentem pertinere videtur.

resinosa [Sternberg in Flora IX (1826), 1. Beil., 74; H. Braun in Flora 66 (1883), 464 pro spec.; R. Keller in Asch. Graebn., l. c., 67 pro var.].

Bosna: Ad fines arborum in monte Vlašić (Br. f. J. B. Keller apud Wiesbaur 1884). Hic floribus singulis et sepalis glanduloso-ciliatis. [Confer J. B. Keller in Öst. bot. Zeit. (1884), 42]; prope Kupres (Pr.), in m. Ločike montis Vranica (R.); frutices formans prope Lukavac ad pedem australem montis Bjelašnica, alt. 1400 m (Beck, Pl. Bosn. Herc nr. 36 p. p.).

15. *Rosa mollis* [Smith, Engl. bot., 35 (1812), t. 2459; Schneider, Laubholz., I, 554; R. Keller in Asch. Graebn., l. c., 72. — *R. villosa* L., Spec. pl., 704 (1753) p. p. et v. *mollissima* Rau, Ros. Wirc., 154 (1816). — *R. mollissima* Fries, Nov., ed. II 51 [1828]].

α. *Erici* [J. B. Keller in Öst. bot. Zeit. (1889), 58; R. Keller apud Asch. Graebn., l. c., 74]. Frutex humilior vix ultra 1 m altus ramosus pallescens; ramis rigidis gracilibus breviusculis cortice ex luteo virescente aut unifariam purpurascens in ramulis albo-virentibus conspicue glaucescente. Aculei homomorphi recti tenuissimi breviter-subulatique e basi minute elliptica horizontaliter patentem, in ramulis glaberrimis approximati aut gemini. Petioli aculeis subulatis aciculiformibus copiose armati tomentosi et glandulosi. Stipulae conformes (superiores angustae breviter auriculatae supra glabrescentes) inferiores profundius auriculatae auriculis vix mediocribus (subdilatis) utrinque adpresse tomentosis margine dorsoque + glandulosis. Foliola 5- (7-) na, terminalia obovato-oblonga basi anguste-rotundata, lateralia minus breviora elliptico-ovata aut elliptica, obtusiuscula, saepe omnia utrinque rotundata, mediocria aut minora supra incana coerulescentiaque, subtus palidissime glauca, utrinque (subtus insigniter) tomento molli nitide velutina, subtus in pagina nervisque glandulis brunnescentibus evanescentibusque sparsim punctata, glanduloso biserrata; serratura + aperta triangularis aut versus apicem subcrenato-rotundata utrinque minute denticulato-glandulosa (iis Villosarum simillima, sed multo magis obsoleta!). Pedunculi solitarii brevissimi 3—6 mm longi crassiusculi atrichi setis 3—4 glanduliferis sparsim praediti, foliis (!) anguste (!) stipitatis occulti. Receptaculum? Sepala brevia post anthesin erecto-conniventia (petalis breviora?) indivisa anguste linearia apice subfiliformia dorso glandulis

atrorubris sessilibus breviter stipitatisque tecta. Petala? (pallidissime rosea?). Discus planus. Styli dense villosi. Fructus maximus saepe sphaericus (aut ovato-rotundatus) apice brevissime inconspicue-attenuatus, toto sparsim setulosus (haud spinulosus) praecox (inrupte Augusti maturescente) coccineus (haud sanguineus) calyce breve, persistente conniventeque coronatus subnutans.

Transitum *R^{de} mollis* Sm. ad *R^{am} pomiferam* Herrm. efficit.

Bosna: Circa Travnik (Br. f. *J. B. Keller 1889), Sarajevo (Fo. f. J. B. Keller).

†. *minor* [J. B. Keller in Öst. bot. Zeit. (1890), 103]. Pumila, stipulis angustis. Etiam in forma quadam *condensata* [J. B. Keller, l. c.] minus aculeata, fructibus subpiriformibus, erectis.

Bosna: Sub m. Dumoš (Fo. f. *J. B. Keller).

β. *Conrathiana* [K. Malý in Verh. zool.-bot. Ges., LIV (1904), 206. — *R. arduennensis* Crép. var. *Conrathiana* H. Braun apud Beck, Fl. Südbosn. III in Ann. naturh. Hofmus., II (1887), 115] differt a *R. arduennensi* Crép. *typica* [= *R. mollis* var. Fonsny et Collard, Fl. Verv., 157 (1862); R. Keller apud Asch. Graebn., l. c., 74] ramificatione densiore, aculeis in ramis ramulisque crebris oppositis, suboppositis, stipulis latioribus, petiolis aculeolis creberrimis (sed etiam sparsis!) armatis, foliolis latioribus et majoribus, pedunculis brevioribus, pinnulis sepalorum latioribus. Serratura foliolorum minus arguta et minus tenuiter glandulosa quam in *R. arduennensi* Crép., pagina superior foliolorum subglandulosa (vel parce glandulosa!), dum ea foliolorum *R^{ae} arduennensis* Crép. plus minus glandulis fuscescentibus tecta est. Pedunculi in *Rosa arduennensi* Crép. v. *typica* 12—20 mm longi, in var. *Conrathiana* H. Braun 7—12 mm longi; stipulae in *R. arduennensi typica* 4—5 mm lata, in var. *Conrathiana* H. Braun 6—8 mm lata sunt. Fructus (mihi a. d. K. Malý benevole communicati) globosi, setis glanduliferis sparsis obtecti, sepalis erectis copiose glandulosis coronati. (Beck.) Folia recentia (f. K. Malý in litt.) odore jucundissimo resinoso delectant.

Bosna: In m. Crni vrh prope Grkarica in m. Igman (M); in m. Trebević (B. f. *H. Braun 1887), hic in pluribus locis ut prope Dobra voda, in cac. Bijela stijena, prope Mala Dobra voda, Draguljevac, sub culmine, 1100—1600 m, porro prope Kasidol juxta Sarajevo (M!).

γ. *velebitica* [(Borbás) H. Braun apud Murbeck, Beitrag Fl. Südbosn. in Lunds Univ. Årsskr., XXVII (1891), 131. —

Confer K. Malý in Verh. zool.-bot. Ges. (1904), 206]. »Rami brunnei vel rubescentes saepe pruinosi, aculeati; aculei recti, graciles, basin versus dilatati; rami fructigeri aculeis rectis et aculeolis setiformibus crebris muniti. Stipulae dense pilosae, subvestitae, glandulis nitidis dense obtectae; auriculis brevibus porrectis vel divergentibus, in margine glandulis breviter pedicellatis dense ciliatae. Petioli tomentosi glandulis crebris et hinc inde aculeolis flavescensibus inaequalibus armati. Foliola quina-septena, elliptica vel late elliptica, ad basin rotundata, apicem versus breviter acuta vel obtusiuscula, infima obtusa, supra viridia dense pilosa, subtus dense villosopilosa, glandulis flavescensibus punctiformibus nitidis dense adspersa, glaucescentia, in margine breviter composito-glanduloso-serrata, mediocria 16—18—38 mm longa, 10—16—25 mm lata. Bracteae dilatatae, ceterum ut in stipulis. Pedunculi glandulis stipitatis obtecti, hinc inde elongati. Receptacula fructifera globosa, glandulis stipitatis obtecta, parva, 8—10 mm lata et longa. Sepala post anthesin erecta, longe persistentia, in dorso dense glandulosa, brevia, pinnulis parvis. Styli dense villosi; discus subplanus. Petala? (amoena rosea).« — Affinis varietati *Conrathianae* sed differt: »aculeis hinc inde subsetosis, pedunculis elongatis, stipulorum et foliolorum forma etc.« Confer autem K. Malý [l. c.], qui varietates et *velebiticam* et *Conrathianum* easdem declaravit.

Bosna: In m. Trebević (*M. f. Borb. 1904) pertinet ad β. (M. in litt.). — **Hercegovina:** In declivibus fruticosis montis Bjelašnica prope Gacko alt. 1200—1300m (Mu. f. *H. Braun 1891); in m. Gubar montium Orijen (Hawelka f. B.), hic receptaculis floriferis 5—6 mm longis, quae paucas modo setas glanduliferas ferunt. Petala rubra, 1 cm longa.

16. *Rosa pendulina* × *pomifera*. [*R. pomifera* × *pendulina* R. Keller in Asch. Graebn., l. c., VI 1, 321. — *R. alpina* × *pomifera* Christ in Flora 57 (1874), 467].

Bosna: Sec. R. Keller in Asch. Graebn., l. c., 322. Ubi?

a) *Rosa bjelašnicae* [G. Beck]. Frutex elatior, ramis purpurascentibus inermibus vel aculeis subulatis rectis basi ellipsoideo-dilatatis sparsis armatis; ramulis floriferis subpruinosis, aculeis singulis obtectis. Petioli cum rhachi foliorum puberuli, copiose glanduloso-pilosi ac aculeis vel aculeolis subulatis parvis muniti. Stipulae latae, supra glabrae, subtus ac in margine copiose glanduloso-pilosae, auriculis acutis divergentibus. Foliola

ramulorum floriferorum 7, approximata vel distantia, brevissime petiolulata, late elliptica, apice rotundata, basi rotundata vel paulo cuneata, glanduloso subterserrata, serraturis profundis, supra appresse subtus copiosius pilosula et hic glandulis sparsis per totam superficiem tecta, in nervis subtus subtomentosa, terminalia 3—4 *cm* longa. Flores singuli. Pedicelli receptaculis 2—3× longiores, plurimum 1—2-bracteati, bracteis latis, cum receptaculis subglobosis ad apicem contractis copiose glandulis stipitatis rigidis muniti. Sepala florescentia patentia demum erecta, 2—2.7 *cm* longa, corollam longitudine aequantia vel paulo superantia; exteriora pinnulis 3—7 lineari-lanceolatis instructa, interiora integra, omnia dorso copiose pilis setisque glandulosis tecta, appendicibus elongatis, lineari-lanceolatis subserratis rarius serratis pilosulis et glanduloso-ciliatis munita. Petala obscure rosea, basim versus alba, 2 *cm* longa. Stylorum capitulum pilosum. Odor plantae vinaceus. — *Rosa bjelašnicae*, cui cl. dom. Crépin in herbario meo notam »*alpina* × *pomifera*« imposuit, ex notis inter *R^m Christii* et *velutinam* [R. Keller in *Asch. Gr.*, l. c., 322 et 324] medium tenet a *R. Christii* foliolis utrinque pilosulis, sepalis exterioribus copiose pinnatis, a *R. velutina* stipulis glabris, foliolis subtus minus pilosis differt.

Bosna: Prope Lukavac ad montem Bjelašnica, 1400—1600 *m*, solo calcareo, copiose, m. Junio (*Beck, *Pl. Bosn. Herc.*, nr. 36 sub *R. resinosa* Sternberg p. p.).

b) *Rosa poliochroa* [G. Beck]. Frutex humilis (?), ramis ramulisque aculeis subulatis rectis basi ellipsoideo-dilatatis paucissimis armatis. Petioli cum rhachi tomentosi, pilis glandulosis copiosis et aculeolis subulatis sparsis praediti. Stipulae latae, utrinque copiose pilosae, in margine glanduloso-ciliatae, subtus plus minus glandulosae, auriculis acutis divergentibus. Foliola foliorum ramulorum floriferorum 5—7, distantia, late elliptica, acuta, basi rotundata, profunde glanduloso-subterserrata, supra appresse pilosula, subtus copiose appressule mollior pilosa et sparse glandulosa, terminalia 2—4 *cm* longa. Inflorescentia 1—3-flora itaque bracteis latis 0—3. Pedicelli florum singulorum receptaculis bis vel ultra longiores, ei inflorescentiae pluriflorae etiam breviores, sicut receptacula globosa supra contracta setis glandulosis modo numerosis muniti. Sepala florescentia patentia, exteriora pinnulis lineari-lanceolatis pluri-

bus (—7) glanduloso-ciliatis et pilosis praedita, interiora integra, omnia appendicibus lineari-lanceolatis glanduloso-serratis et pilosulis munita, nunc corolla breviora nunc eam longitudine aequantia vel paulo superantia, dorso copiose pilis glandulosis et setis glanduliferis tecti. Petala obcordata 18—20 mm longa.

Bosna: In monte Igman loco Crni vrh, 1500 m, solo calcareo, m. Junio et Julio florentem legit Fiala! (*B.).

Cl. de Crépin huic Rosae in herbario meo notas »*R. alpina* × *pomifera*«, affinis Rosae meae sub nr. 36 editae (= *R. bjelašnicae* G. Beck) et »*R. alpina* × ?« apposuit. Inter formas *R^{ae} velutinae* [R. Keller pro var. l. c.] inserenda sit et *pseudovestitae* [R. Keller l. c. 324 pro var.] proxima, sed foliolis numero paucioribus subtus semper glandulosis, pedicellis longioribus setis modo glanduliferis obtectis, receptaculis praeter setas glandulosas non aculeolis eglandulosis praeditis, sepalis pinnulis crebrioribus munitis differt.

17. *Rosa mollis* (?) × *pendulina*.

Rosa Brandisii [J. B. Keller apud Wiesbaur in Öst. bot. Zeit., 34 (1884), 12 et (1885), 340; *R. pendulina* var. *Brandisii* Malý in litt. Crépin, Rosae hybridae (1894) 18 (14)]. »Elata, toto inermis, ramis brunneo-purpureis; foliolis ample ovato-ellipticis ellipticisve utrinque rotundatis, saepissime septenis (rarius 5 vel 9) remotiusculis, inferioribus minoribus, superioribus latitudine inaequalibus 15—22 mm, longitudine 30—35 mm (non conniventibus, necreflexis), triplicato-serratis, serraturis in circuitu rotundatis, apice mucronatis (iis *Villosarum*), glandulosis, subtus tota superficie pallida sparsim hirtellis atque dense glandulosis, in nervo medio etiam glandulis longius pedicellatis praeditis. Stipulis conformibus e basi dilatatis (iis *Alpinarum*); auriculis amplis ovato-ellipticis acutis vel rotundatis subtus toto glanduloso-hirtellis viridibus. Petiolis saepissime hirtellis vel fere atrichis, dein glabris, inermibus, glandulis sessilibus aciculisque brevioribus abunde praeditis. Pedunculis solitariis glanduloso-setosis. Receptaculis ovoideo-obovoideisve glabris. Bracteis angustis glabris, margine glandulosis, obverse lanceolatis, pedunculis brevioribus. caducis. Sepalis carnosis post anthesin erectoconniventibus, e basi angusta dorso glabro elongatis, apice fere filiformibus, toto integerrimis. Stylis e disco plano

lanatis. Fructu amplo, oblongo-conico, basi rotundato, apice sensim attenuato vel ovato, glabro, nutante, rubro. Petalis intense rubris.«

Bosna: In monte Vilenica (vel Velenica) prope Travnik (Br. f. *J. B. Keller apud Wiesbaur 1884).

A *R. longicruri* [Christ = *R. pomifera* v. *longicruris* = *R. pomifera* × *alpina*? Christ, Ros. Schweiz, 85 (1873) = *R. pomifera* × *pendulina* v. *longicruris* R. Keller apud Asch. Graebn., l. c., 323] fide J. B. Keller [l. c., 12] differt: petiolis plurimum glabrescentibus, foliolis paucioribus, late ellipticis, subtus tenuiter pilosis (sed dense glandulosis), serratura rotundata abunde glandulosa, petiolis glandulis stipitatis munitis, receptaculis nudis, sepalis angustioribus, fructibus obovoideis (non lageniformibus). Meo sensu autem notis modo prominentibus ac sepalis dorso glabris differre videtur. Differentias inter alias Rosas J. B. Keller [l. c., 13 et 341] diffuse exposuit.

Wiesbaur [in Öst. bot. Zeit. (1885), 340] varietates a cl. d. J. B. Keller constitutas sequentes addidit.

α. *evanescens* [J. B. Keller. »*R^{ae} pendulinae pyrenaicae* similis, foliolis mediae magnitudinis argute serratis, subtus glandulis longe stipitatis aspersis; petiolis glandulis stipitatis rigidis (ut in *R. spinulifolia* Dem. = *R. pendulina* × *tomentosa*) munitis.

Bosna: In monte Kajabaša montis Vlašić (Br. f. *J. B. Keller apud Wiesbaur 1885).

β. *perfallens* [J. B. Keller, l. c., 340]. »Foliolis obovato-oblongis aut oblongo-ellipticis, basi attenuatis aut cuneatis, apice rotundatis, subtus tota superficie tenuiter pubescentibus et glandulis tenuibus inspersis — pilis glandulisque foliorum tamen in ramis frugiferis eiusdem exemplaris evanescentibus —, serraturis angustioribus argutioribusque (in circuitu haud rotundatis) apice conniventibus, sepalorum appendice parum dilatato, fructibus globoso-piriformibus pedunculisque pilis glanduliferis tenuiter inspersis, trunco ad insertionem ramorum sparsim setoso, setis demum evanidis.« Fide J. B. Keller *Rosae pendulinae* verae [proxima sed foliolis subtus per superficiem glandulosis, serratura copiose glandulosa, sepalis angustis, stipulis superioribus latioribus distingui possit.

Bosna: In cacumine Crni vrh montis Vlašić c. 1730m (Br. f. *J. B. Keller apud Wiesbaur 1885).

γ. *echinotuba* [J. B. Keller in Öst. bot. Zeit. (1884), 14 et (1885) 340]. Fructibus apice contractis setis glanduliferis echinaceis.

Bosna: In monte Vilenica prope Travnik (Br. f. J. B. Keller), apud Wiesbaur 1884), in m. Vlašić loco Kajabaša (Br. f. J. B. Keller), hic varietati *evanescenti* similis, at foliis novenis.

Sec. J. B. Keller [in Öst. bot. Zeit. (1885), 341] var. *echinotuba* *R^{ae} Sueffertii* [Kirschl. = *R. pendulina* × *tomentosa*, cfr. R. Keller apud Asch. Graebn., l. c., 334] peraffinis est, sed ramulis plane inermibus, foliolis magis acutis, subtus cum stipulis per totam superficiem diuturne glandulosis, pedicellis fructiferis erectis, receptaculis oblongis (haud globoso-ovatis), sepalis plane simplicibus (non pinnulis instructis) distingui potest.

δ. *vilenicae* [G. Beck]. »*R^{ae} spinulifoliae* Dem. similis. foliolis oblongioribus (5—7), stipulis omnibus conformibus abbreviatis, valde dilatatis, subtus saepius glabris pallideque glaucis, glandulis subfoliosis crebris (haud densis) subsessilibus, serraturis lanceolato-conniventibus aut ovatis (haud rotundatis), sepalis dorso saepe glanduloso-setosis, apice hinc inde foliaceis, fructu setoso-hispido differt.« [J. B. Keller apud Wiesbaur in Öst. bot. Zeit. (1885), 341.]

Bosna: In monte Vilenica prope Travnik (Br. f. J. B. Keller).

ε. *travnikensis* [J. B. Keller in Öst. bot. Zeit. (1885), 341. — *R. alpina* var. *Travnikensis* J. B. Keller in Öst. bot. Zeit. (1884), 14]. »Forma conjuncta *R^{ae} alpinae* v. *adenosepala* et *R^{ae} affini* Sternb., a quibus serraturis argutioribus perglandulosis, foliolis ovato-ellipticis (fere parvis), pedunculis valde abbreviatis bracteatis, fructibus majoribus glandulosis echinatisque erectis, sepalis denique dense glandulosis elongatis differt.« (J. B. Keller 1884.) Haec diagnosis suppletur [l. c., 341] receptaculis setis glanduliferis numerosis echinaceis, petalis intense roseis ut in *R. gentili*, quacum reperta est.

Bosna: In monte Vilenica (Br. f. *J. B. Keller apud Wiesbaur 1884) et in m. Vlašić loco Crni vrh (Br. sec. J. B. Keller).

Haec varietas sec. J. B. Keller [l. c., 342] rectius inter formas *R^{ae} Brandisii* inserenda est ac formam ostendit: »receptaculis atrorubris, toto setoso-glandulosis, pedunculis sepalisque rubentibus erectis, pilis rigidis (haud setis) glanduliferis obtectis; stipulis *R^{ae} pendulinae*, foliolis *R^{ae} Brandisii*, subtus tamen in nervis secundariis solum glandulosis et pilosis;

toto inermis; sepalis indivisis erectis, petiolis atrichis aut pilosulis; serratura ut in *R. Brandisii*«, quae forsan *R. Brandisii* × *R. pendulina* (Malýi) interpretari potest. Ultima forma *R^{am} longicrurum* Christ (*pendulinam* × *pomiferam*) acriter in memoriam reducit, attamen *R. longicruris* inflorescentia corymbosa, pedicellis tomentosulis, sepalis longioribus, parce sed conspicue pinnatis, appendice dilatata instructis, petalis pallidioribus minoribus disjungitur. Mea quidem opinione *R. travnikensis* minus cum *R^{ae} pendulinae* var. *adenosepala* Borb. congruit.

18. *Rosa tomentosa* [Smith, Fl. Brit., II, 539 (1800) et aut.; H. Braun in Beck, Fl. Nied.-Öst., 814; R. Keller in Asch. Graebn., l. c., 80; Schneider, Laubholzk., I, 555]. Ad sepes, inter frutices, ad silvarum margines, in silvis apertis usque ad subalpinas (1600 m). Floret m. Junio, Julio.

Variat:

a) Serratura foliolorum plurimum simplex vel partim composita.

α. *farinulenta* [Crépin in Bull. soc. bot. Belg., VIII (1869). 246 pro spec.; J. B. Keller in Öst. bot. Zeit. (1884), 44 pro subsp.; R. Keller in Asch. Graebn., l. c., 81 pro var.].

Bosna: Circa Travnik (Br. f. *J. B. Keller apud Wiesbaur 1884), sed cum? notata. Sec. Déségl. (Cat. rais. 558) etiam a Sendtner indicata.

β. *cinerascens* [Dumort., Fl. Belg., 93 (1827) pro spec.; Crépin in Bull. acad. Belg., 2. sér., XIV, 106 [35] (1862) f. R. Keller in Asch. Graebn., l. c., 82].

Bosna: Ad agrorum margines prope Ivanjska (B.); inter Višegrad et Rogatica (R. Keller, Herb. norm. nr. 88a; confer Beitr. II, 41).

f. *subadenophylla* Borbás subf. *leiocarpa* [Borb., Magyar. birod. rózsái. 510]. »Differt: a *R. subadenophylla* [Borb., l. c. pro forma *R^{ae} cinerascens*] foliolis aliis majoribus, aequantibus minoribusque aliis, late oblongo-ovatis acutiusculis, inferioribus subtus tota lamina glanduloso-punctatis. Sepalis subpersistentibus, a *R. subglobosa* Sm. foliolis inferioribus inferne tota superficie sparsius glanduloso-punctatis, a *R. Herculis* Borb. cui foliorum forma sepalis subpersistentibus similis, serraturis haud argutis haud triplo-serratis, aculeis homomorphis, stylis densius villosio-hirtis, foliolis utrinque tomentosis.« [J. B. Keller in Öst. bot. Zeit. (1890), 103.]

Bosna: In locis silvaticis prope Šehovci (Fo. f. *J. B. Keller 1890). — f. *lasioclada* [Boullu in Pons et Coste, Herb. Ros., nr. 100 (1895) fide R.

Keller in Asch. Graebn., l. c., 82]. In collibus circa Kovačići prope Sarajevo (F. f. *B.).

γ. *notha* [J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 250 (1882)].

Bosna: Circa Travnik prope Visokovići (Br. f. *R. Keller 1896).

δ. *micans* [Déségl. in Bull. soc. bot. Belg., XV (1876), 555 pro spec.; H. Braun in Beck, Fl. Nied.-Öst., 814; R. Keller in Asch. Graebn., l. c., 83 pro var.].

Bosna: Sec. *R. Keller, l. c. (1901) prope Travnik (etiam sub nom. *nigrans*).

ε. *dumosa* [Puget in Déségl., Rév. sect. Tom., 40 (1866) f. R. Keller pro spec.; R. Keller in Asch. Graebn., l. c., 83 pro var. — *R. micans* subsp. *erioclona* H. Braun apud Beck, Fl. Südbosn., III in Ann. naturh. Hofmus., II (1887), 110].

Bosna: Prope Jaice, Karaula gora, circa Travnik (*R. Keller 1896). Circa Sarajevo: in sepibus prope Halapi in valle riv. Koševo prope Koševo, sparse in declivibus m. Mojnilo; inter frutices in declivibus montis Igman prope Blažuj c. 700 m (Beck, Pl. Bosn. Herc. nr. 74 sub *R. micante* v. *erioclona* H. Braun). Circa Rogatica prope Han in summitate versus Višegrad, circa Višegrad (R. Keller).

Addo descriptionem subspeciei *erioclonae* H. Braun [l. c.]:

»Frutex elevatus, ramis ramulisque effusis. Rami badii juniores subvirescentes, robuste aculeati. Aculei dispersi, eodem in ramo partim subfalcati vel erectiusculi, partim inclinati, canescentes vel brunnescentes, basin versus subdilatasti. Rami fertiles superne dense albido-puberuli, sublanati. Stipulae anguste lanceolatae, subtus velutino-pilosae, supra pilis sparsis tectae vel subglabrae, in margine glandulis purpurascensibus obtectae, cum auriculis brevibus divergentibus. Petioli molliter albo-canescenti-villosi, glandulis intermixtis, aculeati vel inermes. Foliola quina vel septena, plerumque septena elliptico-ovata, apicem versus breviter acuta vel obtusiuscula, basin versus anguste-rotundata, canescente-viridia, supra dense et molliter albo-villosula subtus vellutino-villosa, cum nervis prominentibus, in margine irregulariter serrata, supra eglandulosa, subtus in nervo primario et in lamina glandulis tenuibus punctiformibus obtectae. Serratura hinc indeve subduplicata et dentibus secundariis glandulosis intermixta, breviter in lamina incisa, serraturae dentes breviter triangulares. Bractee sub-

tus velutino-albido-villosae, supra virides et adpresse villosulae, late lanceolatae, acuminatae, pedunculos longitudine aequantes vel iis breviores. Pedunculi longitudine mediocres vel hinc inde elongati, setis glanduliferis flavescentibus vel fuscescentibus dense obsiti cum pilis hinc inde intermixtis, solitarii vel 2—5 corymbosi. Receptacula ellipsoidea vel ellipsoideo-ovoidea, laevia vel plus minus et saepe sat dense setis glanduligeris oblecta. Sepala duo integra, tria pinnatifida, in dorso glandulis stipitatis dense praedita, post anthesin reflexa, demum patentia et erecta, receptaculum fructiferum immaturum usque colorationem coronantia; petala breviora. Petala dilute rosea, mediocria. Styli pilosi. Discus subplanus. Receptacula fructifera ellipsoidea, vel ellipsoideo-ovoidea. Dimensiones: Stipulae 15 mm longae, 8 mm latae. Foliola 15—[22]—30 mm longa, 10—[16]—22 mm lata. Pedunculi 16—[25]—30 mm longi. Sepala 14 mm longa.

Revisio plantarum originalium docuit, ramulos fertiles tenuiter pilosos mox glabrescentes et glabros (nec dense albido-puberulos sublanatos), folia plurimum septena, supra dense breviterque pilosula (nec villosula), receptacula minimum parce glanduloso-stipitata (nunquam laevia) observanda esse, quia de causa ac propter serraturam magis simplicem quam subcompositam ad varietatem *dumosam* (Puget) pono.

Ad varietatem eandem praeterea *R. micans* »var pedunculis solum sed tota longitudine hirtellis, ramis omnino atrichis, stylis plus minus glabris«] pertinere videtur, quam Formánek (f. J. B. Keller) in Bosna prope Dragočaj (distr. Ključ) (1890) reperit.

ζ. *canovelutina* [G. Beck]. Turiones spinis validis arcuatis basi dilatatis —1 cm longis copiose armati; rami copiose armati, ramuli floriferi glabri, armati. Petioli canotomentosi, copiose glandulosi et spinulis arcuatis subcopiosis armati. Stipulae sublatae, auriculis patentibus acutis, subtus copiose pilosae et hic cum margine copiose glandulosae, supra glabrescentes. Foliola plurimum 7, subaequilonga, infima modo minora, late elliptica, basi rotundata, apice vix acuta, inferiora rotundata, terminale 12—18 rarius —25 mm longum, omnia utrinque dense velutino-tomentosa, subtus in nervo principali modo sparse glandulosa. Serratura simplex vel dentes denticulis 1—2 aucti, plurimum

in latere exteriori glandulis 1—3 praediti, usque ad apices copiose pilosi. Inflorescentia 1—pluriflora, bracteis latissimis utrinque canotomentosis. Pedicelli bracteas superantes, 2—3× fructu longiores, copiose glandulis setiformibus inaequilongis obsiti. Receptacula fructusque plus minus glandulis setiformibus praedita, globosa vel subglobosa. Sepala reflexa, appendice lanceolata instructa, pilosa, dorso copiose glandulosa, exteriora pinnata, pinnulis saepe incis. Styli villosi.

A var. *dumosa* (Puget) differt: stipulis supra glabris vel glabrescentibus, foliolis minoribus utrinque cano-tomentosis, sepalis fructus tempore reflexis, stylis villosis, fructibus subglobosis; a var. *intromissa* Christ bracteis latissimis, sepalis reflexis, fructibus subglobosis distinguitur.

Bosna: In valle Koševo prope Sarajevo (K. Malý f. *Beck).

b) Serratura foliolorum composita.

*) Foliola subtus non glandulosa vel in nervis modo glandulosa.

η. *confusa* [Puget apud Déséglise in Bull. soc. bot. Belg., XV (1873), 573 pro spec.; R. Keller in Asch. Graebn., l. c., 84].

f. *occupata* [Wiesb. in Öst. bot. Zeit. (1884), 43]. A *R. confusa typica* discedit stipulis subtus copiose pilosis interdum glandulosis, bracteis subtus pilosis, foliolis supra tenuiter pilosis, subtus breviter denseque albotomentosis, appendicibus sepalorum corolla sublongioribus, stylis tenuibus pilosis (Wiesbaur).

Bosna: Circa Travnik prope nosocomium ligneum (Br. f. *Wiesbaur 1884) et in colle Tarabovac (J. Platz f. Wiesbaur); circa Jajce (Fo.).

θ. *subglobosa* [Smith, Engl. Fl., ed. II, 384 (1824) pro spec.; Carion, Cat. pl. Saône et Loire, 53 (1859); H. Braun in Beck, Fl. Nied.-Öst., 814; R. Keller in Asch. Graebn., l. c., 84 pro var.].

Bosna: Circa Jajce, prope Bočac in valle fl. Vrbas (R. Keller). In monte Vilenica versus Kasapovići (Br. f. *Wiesbaur 1884); circa Travnik; prope nosocomia lignosa (hic etiam in forma *R. calostephana* Gandoger sec. Br. f. J. B. Keller apud Wiesbaur), prope Pirota, Jankovići-Vranji dol, Tipovik, Peltakovica (Br. f. R. Keller, sed sec. M.?), in monte Vlašić —1500 m (R. Keller); inter frutices prope Han Derventa inter Sarajevo et Pale (M.), hic etiam in quadam forma *Rae Billotianae* Crép. appropinquata. Prope Slap ad fl. Drina et juxta Višegrad (R. Keller). — **Hercegovina:** In valle fl. Neretva sub Jablanica (*R. Keller 1896). Ad riv. Lantosa potok prope Drežnica (M., hic etiam *Rae Billotianae* appropinquata). Circa Osoje et in agro Bijelo polje prope Mostar (A. Pichler! f. B.).

2. *typica* [Christ, Rosen Schweiz, 95 (1873); H. Braun in Beck, Fl. Nied.-Öst., 814; R. Keller apud Asch. Graebn., l. c., 85. — *R. tomentosa* Sm., Engl. Fl., t. 999].

Bosna: Circa Sarajevo sub dumetosis in valle superiore riv. Koševog in declivibus montis Grdonj, in silvis fagineis in declivitate montis Mali Orlovac versus vallem fl. Miljačka (*M. 1899 et 1909).

Hic etiam omnes stationes enumerō, quae de *R. tomentosa* omnino nominatae sunt.

Bosna: Circa Preodac. Kupres (Pr.), Travnik (*S. 1848), in petros supra Vareš et pr. Droškovac (Pr.), ad fl. Željeznica, in Zelengora, secundum fl. Sutjeska (Pr.).

3. *intromissa* [Crépin in Bull. soc. bot. Belg., VIII (1869), 298 pro spec.; Christ, Ros. Schweiz, 101 (1873); R. Keller apud Asch. Graebn., l. c., 85 pro var.].

Bosna: Circa Travnik prope Peltakovica (Br. f. *R. Keller 1896), paulo differens (confer R. Keller, Mitteil. II. 44).

***) Foliola subtus plus minus glandulosa.

°) Styli glabri vel subglabri.

4. *foetida* [Bastard, Suppl. fl. Maine et Loire, 19 et 28; (1812) pro spec.; Ser. in DC., Prodr., II, 618; R. Keller in Asch. Graebn., l. c., 87].

Bosna: Circa Fojnica prope Lučice (Schwarz f. *B.).

Huc insuper *R. Karstiana* [Borbás f. J. B. Keller in Öst. bot. Zeit. (1890), 103 et H. Braun in Beck, Fl. Südbosn., III in Ann. naturhist. Hofmus., II (1887), 111] pertinere videtur. Descriptio domini J. B. Keller, qui determinationi? addidit, haec est:

»...ramis pedunculisque villosulis gracilibus, aculeis rectis crebris, foliolis brevibus parvisque remotis ovato-acutis sessilibus utrinque dense tomentosis supra viridibus, subtus albocanescens glandulisque hinc inde laxe inspersis glanduloso-biserratis serraturis brevissimis denticulis paucis (1—2) glanduliferis praeditis; fructibus fere parvis glabris globosis subglobosisve; sepalis subpersistentibus erectis breviusculis exterioribus late-pinnatifidis frondosis dorso stipitato-glandulosis; stylis pilosulis subglabrisve. Forma haec nostra a typo Borbásii (adhuc non satis publicato) solum serraturis minus »argute duplis« denticulis latioribus paucis, recedere videtur. A *R. micans* f. *eriodclona* H. Braun ramis minus dense puberulis foliolis supra haud »albido velutinis«, aculeis gracilioribus, foliolis basi haud

anguste (sed late) rotundatis, fructu globoso-ovato globosove, serraturis omnino duplicatis, satis diversa.«

Praeterea H. Braun [l. c.] loquitur de pedicellis conspicue pilosis, interdum etiam sublanuginosis, de serratura foliolorum duplici acuta atque receptaculis et fructibus globosis, quas proprietates in plantis originalibus a Borbás collectis observavit. Exemplaria autem a d. Borbás pro *R. Karstiana* determinata, quae Rossi (nr. 14273!) in Croatia legit, demonstrant ramos floriferos pedicellosque glabros et foliola supra subcopiose pilosa. Propter has diversitates *R. Karstiana* difficiliter est explananda. In Bosna prope Gorijevac (distr. Bihać) [Fo. f. J. B. Keller 1890] crescere et in Croatia finitima vulgatam esse dicitur.

μ. *macrophylla* [R. Keller, Mitteil. II, l. c., 43]. »Blätter meist 7-zählig. Nebenblätter breit, drüsig gewimpert, unterseits drüsig. Blättchen groß, Endblättchen bis 6 cm lang und über 4 cm breit. Drüsenzähnen innen oft noch 1—2. Zahnung tief, breit, Zähne auf der Außenseite 1—4. Receptakel oval, mit den Blütenstielen mehr oder weniger dicht drüsigstachelig. Kelchzipfel nach der Anthese abstehend, z. T. auch zurückgeschlagen, auf dem Rücken drüsenreich, lange bleibend. Griffel fast kahl. Scheinfrüchte groß.«

Bosna: Circa Travnik (Br. f. *R. Keller 1896).

ν. *cuspidata* [Déségl. in Rév. sect. *Tomentos.* 8 (1866) pro spec. non MB.; Godet, Suppl. fl. Jur., 61 (1869); R. Keller in Asch. Graebn., l. c., 88. — Confer: Borbás in Bot. Zentralbl., III (1880), 959. — *C. pseudocuspidata* Crépin in Bull. soc. bot. Belg., XI (1872), 89 f. R. Keller. — Sec. K. Malý cum sequente conjugenda.

Bosna: Circa Travnik prope Pirota (Br. f. *R. Keller 1896) cum sepalis erectis, etiam ad fructus persistentibus.

ξ. *Seringeana* [Dumort., Fl. Belg., 51 (1827); H. Braun in Beck, Fl. Nied.-Öst., 814 pro spec. — *R. pseudocuspidata* Crépin, Prim. II, 205 (89) (1872) = *R. tomentosa* var. *pseudocuspidata* J. B. Keller apud Hal. Braun, Nachtr. Fl. Nied. Öst., 251 (1882)].

Bosna: Circa Sarajevo inter Miljevići et viam Lukavica (*M. 1899). Hic — 3 m alta; inflorescentia 3—12-, rare 1-flora. Fructus globosus. In valle fl. Miljacka prope pontem Kozja Čuprija a. 580 m (M.).

ι. *umbrigena* [J. B. Keller in Öst. bot. Zeit. (1884), 42 et (1885), 343]. Foliolorum serratura composita, glandulosa; sti-

pulae et foliola inferiora utrinque tomentosa, subtus per totam superficiem glandulosa, glandulis tenuibus in pubescentia oblitteranda ferrugineis; rami pubescentes ac cum petiolis copiose aculeati, aculeis homomorphis. Styli basi pilosuli, apice toto glabri. Fructus ovati, corymbosi.

Bosna: Circa Travnik prope nosocomia lignosa (Br. f. *J. B. Keller 1884) et in colle Tarabovac (Br. f. B. Keller apud Wiesbaur).

o. *jajcensis* [G. Beck = *R. tomentosa* forma ... R. Keller, Mitteil. II, l. c., 43]. »Strauch klein, dicht verzweigt; Zweige sparrig abstehend, mit geraden langen Stacheln reich bewehrt. Bestachelung etwas ungleich; die zahlreicheren, größeren Stacheln erreichen eine Länge von 1 cm, die kürzeren, spärlicheren sind oft nur $\frac{1}{3}$ cm lang. Blätter 3—5-zählig. Nebenblätter beiderseits dicht behaart, unterseits dicht mit kleinen, roten Drüsen bedeckt, drüsig gewimpert. Blattstiel dicht behaart mit geraden Stachelchen und kleinen, roten Drüsen. Blättchen oval, klein, größere 1 $\frac{1}{2}$ cm lang und 1 cm breit, dicht behaart, dicht mit kleinen, dunklen Drüsen übersät. Zähne tief, reichlich, zusammengesetzt; Zähnchen drüsig (ein Zahn bisweilen auf der Außenseite mit 4—7 Drüsenzähnchen, auf der Innenseite bis 2—5). Blüten einzeln. Brakteen dicht behaart, dicht drüsig gewimpert. Blütenstiele reichlich doppelt so lang als die Brakteen, reichlich mit Stieldrüsen bewehrt. Rezeptakel breitoval, ziemlich klein (circa 1 cm lang). Kelchzipfel zurückgeschlagen oder ausgebreitet, an der bereits gefärbten Frucht noch vorhanden, oft doppelt gefiedert. Rücken dichtdrüsig. Griffel etwas erhaben, fast kahl.« (R. Keller.)

Bosna: Circa Jajce subfrequenter (*R. Keller 1896).

°°) Styli magis villosi vel lanuginosi.

π. *Zabelii* [Crépin in Bull. soc. botan. Belg., XXI 1, 94 (1882) pro spec.; R. Keller in Asch. Graebn., l. c., 89].

Bosna: In monte Melac prope Banja stijena a. 900 m (*M. 1910).

ρ. *nana* [Crépin apud R. Keller, Mitteil. II, l. c., 42]. »Sträuchlein oft kaum 15 cm hoch. Die Blütenzweige sind mit kurzen, dünnen, nadelartigen, leicht gebogenen bis geraden, nicht sehr zahlreichen Stacheln bewehrt. Blätter meist 5-zählig; Nebenblätter schmal, beiderseits dicht behaart, und unterseits sehr dicht drüsig. Blättchen oval, kurz zugespitzt, dicht

behaart, unterseits gleich einer *Rubiginosa* sehr dicht mit Drüsen übersät. Die Blättchen sind klein, größte Endblättchen nur c. 15 mm lang und 12 mm breit. Zähne schmal, spitz, aufrecht, drüsenreich. Blüten einzeln. Blütenstiele dicht mit Stieldrüsen bekleidet. Rezeptakel kugelig, klein. Kelchzipfel auf dem Rücken dicht drüsig, nach der Anthese aufrecht oder ausgebreitet. Griffel etwas säulenförmig erhaben, locker behaart.«

Bosna: In monte Vlašić a. c. 1500 m (*R. Keller 1896).

♂. *Sendtneri* [H. Braun apud Beck, Fl. Südbosn., III in Ann. naturh. Hofm., II 112 (1887) pro spec.]. »Frutex parvus 0.5–1 m altus; rami tenues, erecti, flexuosi, cortice fuscescente. Aculei validi, recti vel parum inclinati saepe infra stipulas geminati. Stipulae anguste-lanceolatae vel lineares, in lamina tomentoso-glandulosae, cum auriculis divergentibus, in margine glanduloso-ciliatae et tomentosae. Petioli tomentosi, cum glandulis rubescentibus et aculeolis sparsis. Foliola mediocria vel parva, elliptico-ovata, basin versus anguste rotundata, apicem versus acuta vel in infimis obtusiuscula, supra pilis albidis dense vestita vel in junioribus nitido-velutina, subtus velutino-tomentosa, in lamina et in nervis glandulis punctiformibus rufescentibus numerosis obtecta, in margine acute glanduloso-serrata, denticulis secundariis (serratura) 2–5 glandulis stipitatis obtectis. Bractae ut stipulae sed latiores, saepe foliaceae. Pedunculi solitarii vel 3–5 corymbosi, setis glanduliferis dense obtecti. Receptacula oblongo-ellipsoidea apicem versus parum angustata, setis tenuibus glanduliferis obtecta. Sepala duo integra, tria valde pinnatifida, pinnulis copiose glanduloso-tomentosis. in dorso dense glandulis partim stipitatis partim sessilibus obtecta. Styli dense albido-pilosi sed non lanati. Discus conicus. Petala albido-rosea vel rosea. Receptacula fructifera (ellipsoidea)? Dimensiones: Stipulae 12 ad 14 mm longae, 3–5 mm latae. Foliola 17–25 mm longa, 8–15 mm lata. Pedunculi 9–15 mm longi. Sepala 15–17 mm longa. Corolla aperta ca. 23 mm diam.« (H. Braun.)

Bosna: Circa Sarajevo ad sepulcra serbica et ad pedem montis Mojmiło prope Švrakinoseło alt. ca. 600 m, in declivibus montis Kobilje brdo ad agrum Sarajevsko polje c. 600 m (B. f. *H. Braun 1887). Inter dumetos in declivitate montis Trebević (M.) et montis Igman supra Presjenica (B.).

R. Sendtneri fide H. Braun (l. c., 113—114] a *R. Zabelii* distinguitur petiolis plurimum aculeolis armatis, foliolis basi rotundatis, subalbo velutinis (meo sensu canis Beck), receptaculis ellipsoideis sursum angustatis, fructibus verisimiliter ellipsoideis. Differentias *R^{ae} arduennensis* Crép. et *R^{ae} Andrzejowskii* Besser (quas R. Keller apud Asch. Graebn., l. c., 73—74 formis *R^{ae} mollis* Sm. inseruit), confer H. Braun [l. c.].

19. *Rosa gallica* × *tomentosa* [Christ, Ros. Schweiz, 202 (1873); R. Keller apud Asch. Graebn., l. c., 261].

a) *Rosa terebinthinacea* [Besser, Enum. Pod. Volh., 21 (1820), 61, 66 et Borbás, Magy. birod. rózsái, 511 pro spec. — *R. tomentosa* subsp. Wiesb. in Öst. bot. Zeit. (1884), 43].

Bosna: Circa Travnik (Br. f. Wiesbaur 1882), in colle Tarabovac (Br. f. J. B. Keller), in planitie editiore ad Dolac prope Travnik (R. Keller).

Loco ultimo f. R. Keller [Mitteil. II, l. c., 35] proprietates sequentes demonstrat: »Die Achse zeigt leicht gebogene stärkere Stacheln und in größerer Zahl die feinen Stachelchen und Drüsenborsten der *R. gallica*. Der Blattstiel ist filzig, drüsenreich und bisweilen mit zahlreichen feinen Drüsenstachelchen versehen. Die Blätter sind teils 5-, teils 7-zählig, besitzen z. T. große Blättchen, die beiderseits und unterseits dicht behaart sind. Der Mediannerv und z. T. auch die Seitennerven sind drüsenreich. Zahnung vorherrschend doppelt, die einfachen Zähne mit mehreren Drüsenwimpern.« (R. Keller.)

20. *Rosa pendulina* × *tomentosa* [*R. alpina* × *tomentosa* Christ in Bot. Zentralbl., XVIII (1884) 399. — *R. tomentosa* × *pendulina* R. Keller in Asch. Graebn., l. c., 333].

a) *Rosa spinulifolia* [Dumort., Ess. monogr., 8 (1818); Crépin in Bull. soc. bot. Belg. XXI 1, 82 (1882). — *R. tomentosa* × *pendulina* A. *spinulifolia* R. Keller apud Asch. Graebn., l. c., 333].

Hercegovina: In monte Velež orientali (*B.) in forma quadam formae *umbellatae* [R. Keller, l. c., 335] appropinquata, sed inflorescentia plurimum uniflora.

b) *Rosa euvestita* (Borbás, Magy. birod. rózsái, 508, 517 (1880). — *R. vestita* Godet, Fl. Jur., 210 (1853) et Suppl., 70 (1869) non alicrum. — *R. tomentosa* × *pendulina* var. R. Keller apud Asch. Graebn., l. c., 337].

Bosna: Circa Travnik (Br. f. J. B. Keller 1887).

21. *Rosa pimpinellifolia* × *tomentosa* [R. Keller, Mitteil. III, l. c., 46 et in Asch. Graebn., l. c., 341].

a) *Rosa involuta* [Sm., Fl. Brit., III, 1398 (1804); Engl. bot., t. 2068. — *R. Sabini* Woods in Transact. of Linn. soc., XII (1816), 188].

Bosna: In monte Vlašić (*R. Keller 1896).

Proprietates hybridae repertae R. Keller [l. c., 46] hujusmodi descripsit: »Das Sträuchlein ist dicht mit den für *R. pimpinellifolia* charakteristischen größeren und kleineren, nadel-förmigen Stacheln bewehrt. Die Blätter sind beiderseits, wie bei jenen kleinblättrigen Formen des Vlašić dicht anliegend behaart, die Zahnung aber im Gegensatz zum Verhalten jener Formen zum großen Teil einfach und drüsenlos, in der unteren Hälfte der Spreite aber öfters mit einem, bisweilen selbst mit zwei drüsentragenden Zähnen, während jene Form der *R. tomentosa* gerade durch die sehr zusammengesetzte Zahnung auffällt. An dem Sträuchlein ist nur ein unvollkommen ausgebildetes Rezeptakel erhalten, während mehrere andere beim Schneiden abfielen, also jene schlechte Ausbildung zeigten, die für Hybride charakteristisch ist. Die Blütenstiele sind dicht stieldrüsig bewehrt, ebenso die kugeligen Rezeptakel. Die Kelchzipfel sind weniger fiederig als bei jener kleinblättrigen Form der *R. tomentosa* Sm.«

v. *tarabovacensis* [J. B. Keller in Öst. bot. Zeit. (1884). 94 pro var. *R^{ae} Sabini*]. »Media inter *Rosam Sabini* Woods et *Rosae coronatae* var. *nudam* Crép. Aculeis (an constanter?) homomorphis subulatis longitudine inaequalibus (setis tamen glanduligeris haud immixtis); foliis fere parvis, supra laxe puberulis, obscure virentibus, subtus tomentosus, glandulis inaequalibus inspersis; petiolis glanduloso-tomentosis, aculeatis brevibus; stipulis angustis glanduloso-tomentosis, auriculis lanceolatis elongatisque; pedunculis solitariis, glandulis pedicellatis sparsim praeditis; fructu glabro, breviter ovato, nitide sanguineo (pedunculo haud longiore); sepalis breviusculis dorso sparsim glandulosis pinnatifidis, reflexis, deciduis; disco plano; stylis (in fructu maturo) subglabris. — Eine merkwürdige *Rosa Sabini* mit der Scheinfrucht und den Sepalen der *Caninae*; von allen bekannten Arten der Gruppe *Sabinae* durch den Mangel der drüsentragenden Borsten an den Achsentellen

und die schwachen herabgeschlagenen Sepalen; von der *R. coronata subnuda* durch die nicht »krönenden« Kelchzipfel; von der *R. Sabini* durch die entschieden drüsigen Blätter, von der *R. Andrzejowskii* Besser durch schwächere Drüsigkeit, kleinere Sepalen, nicht wollige Griffel verschieden.« (J. B. Keller.)

Bosna: Proxime Travnik in colle Tarabovac (Br. i. *J. B. Keller 1884) solum frutex solitarius parvus. Folia glandulosa, odore vinoso. (Brandis.)

22. *Rosa Heldreichii* [Boissier et Reuter in Boiss., Diagn., sér. II 2, 49; Hal., Consp. fl. Graec., I, 520; Borbás, Magy. birod. rózsái, 521].

Hercegovina: In locis lapidosis prope Dubovac in Bijela gora (*P. 1874).

Rubiginosae.

[Crépin in Bull. soc. bot. Belg. XXXI 2 (1892). 91.]

23. *Rosa rubiginosa* [L., Mant. II, App. 504 (1771); Boiss., Fl. Or., II, 686; Borb., Magy. birod. rózsái, 497; H. Braun in Beck, Fl. Nied.-Öst., 812; R. Keller apud Asch. Graebn., l. c., 92; Schneider, Laubholz., I, 556]. In locis apricis, lapidosis, pascuis, inter dumetos usque ad subalpinas. Floret m. Junio.

Bosna (*Asch. Kan., Catal., 1877). Ubi? In monte Šuljaga prope Kupres, Kamešnica, Prolog, Vještica gora, Šator (Pr.); circa Vareš prope Kralupi, Pajtov han, Dubošćica (Pr.). Secus fl. Željeznica (Pr.). Frequens circa Sarajevo uti prope Koševo, in locis funeri (spaniolorum) prope Kovačići, in monte castello coronato (Gross Kneuck., M.) et aliis locis.

In forma quadam ad *R^m micrantham* vergente cum aculeis aequalibus, sepalis partim erectis, partim explanatis, hinc inde autem reflexis, stylis praecipue subgraviter pilosis, nec autem lanuginosis, fructibus globosis, jam coloratis sed nihilominus calyce coronatis in Bosna prope Krušev-dol (prope Luka, distr. Srebrenica) a *R. Keller [Mitt. II, l. c., 39 (1896)] reperta est.

f. *aculeatissima* [Dupont] sec. Asch. Kan., Catal., 99 (1877) in Bosna ubi? indicatur.

24. *Rosa rubiginosa* × *tomentosa*.

a) *Rosa floribunda* [Besser, Cat. hort. Crem. (1816), Suppl., IV, 19 et Enum. Volh., 68 (1822); confer: Wiesbaur et J. B. Keller in Öst. bot. Zeit. (1884), 44]. A *R. tomentosa* differt ramis flexuosis, foliolis supra minus pilosis, serratura acriore, copiose glandulosa, minus profundiore instructa, stipulis minoribus brevioribus glabrioribus, bracteis minus tomentosis pedi-

cellis brevioribus, stylis liberis glabris, pilis glanduliferis tenuissimis mollibus, odore vinaceo.

Bosna: Circa Travnik (Br. f. J. B. Keller 1882), prope Grahovik (Ledić f. Wiesbaur).

25. *Rosa glutinosa* [Sibth. Sm., Fl. Graec. prodr., I, 348 (1806) et Fl. Graec., t. 482; Boiss., Fl. Or., II, 679; Schneider, Laubholz., I, 557].

Bosna: In declivitate australi-orientali montis Trebević a. 1500m (*M. 1919) solummodu frutex unicus, qui in hortum botanicum Sarajevense translatus est.

subspec. *Rosa dalmatica* [A. Kerner in Öst. bot. Zeit., XX (1870), 10 pro spec. — *R. glutinosa* subspec. *R. Keller* in Asch. Graebn., l. c., 106 (1901); var. H. Braun in Beck et Szyszyłowicz Pl. per Crnag. et in Alb., lectae in Rozpr. i spraw, akad. Krak., XIX (1888), 111, t. IV, fig. i, k].

Hercegovina (*Asch. Kan., Catal., 99, 1877). Ubi? In declivibus saxosis prope Čemerno a. c. 1300m (Mu. f. H. Braun 1891); in monte Orijen (Vesely in Wien. ill. Gartenzeit. 1890). — **Dalmatia** et **Crna gora** finitima. In Bijela gorae regione Krivošije (F. Malý), circa Kotor prope Sanjevdó (Th. Pichler), in m. Krstac supra Kotor (v. Cattaro) (Baldacci), ad Treskjak in monte Lovčen (Bald.).

26. *Rosa micrantha* [Smith, Engl. bot., t. 2490 (1812); Borbás, Magy. birod. rózsái, 492, 496; H. Braun in Beck, Fl. Nied.-Öst., 810; R. Keller apud Asch. Graebn., l. c., 114; Schneider, Laubholz., I, 559]. In declivibus apricis, lapidosis, pascuis. Floret m. Majo, Junio.

Bosna: Circa Travnik (Br. f. *Wiesbaur 1882). Circa Sarajevo compluribus locis uti prope Miljevići (M.), in valle riv. Koševo (F. f. R. Keller), in valle fl. Miljacka, in declivibus montis Trebević (M.), in m. castello coronato (Br. f. J. B. Keller 1884) et aliis locis.

Adest praeterea in formis inter formam *typicam* [Christ, Ros. Schweiz, 110] et formam *permixtam* [Déségl. in Bull. soc. bot. Belg., XV (1876), 538 pro spec.; R. Keller apud Asch. Graebn., l. c., 115].

Bosna: Prope Donja Tuzla, in declivibus montis Vlašić prope Travnik, Kruševdol, circa Slap ad fl. Drina (*R. Keller 1896). Circa Kruševdol in forma cum stylis subintense pilosis, in monte Vlašić etiam cum pedicellis singulis plane eglandulosis inter alios glandulis paucis praeditos.

α. *septicola* (Déséglise in Essai monogr. in Mém. soc. Maine et Loire, X (1861), 149 pro spec.; R. Keller apud Asch. Graebn., l. c., 116].

Bosna: In declivibus lapidosis ad australes ab Zvornik, solo calcareo (Wettstein f. H. Braun apud Fritsch 1910). pro parte ac ramulis floriferis aculeis munitis.

β. *leucopetala* [Borbás, Magy. birod. rózsái, l. c., 492, 496 (1880); R. Keller apud Asch. Graebn., l. c., 121].

Hercegovina: Circa Mostar: in monte Hum, prope Osoje, in Bijelo polje (A. Pichler! f. *B.), ac cum floribus pallide roseis.

γ. *nuda* [R. Keller in Asch. Graebn., l. c., 120].

Bosna: In monte Vlašić (*R. Keller 1901).

δ. *polyacantha* [Borbás, Magy. birod. rózsái, l. c., 491, 494 (1880) pro forma *Rae lactiflorae* Déségl.; R. Keller apud Asch. Graebn., l. c., 122].

Bosna: In pascuis ad declives m. Hrastova glava ad vallem fl. Miljacka a. 600m (M. f. Borbás 1904).

f. *globulosa* [J. B. Keller et Form. in Öst. bot. Zeit. (1890), 103]. Fructibus maturis subglobosis (rectius breviter vel late ovato-globosis), foliolis aequaliter copiose nec semper dense glandulosis, aculeis plus minus curvatis nec triangulariter dilatatis a var. *polyacantha* diversa.

Bosna: In m. Crni vrh prope Foča (Fo. f. *J. B. Keller 1890).

27. *Rosa agrestis* [Savi, Fl. Pis., I, 475 (1798); R. Keller apud Asch. Graebn., l. c., 123; Schneider, Laubholz., I, 560. — *R. sepium* Thuill., Fl. Par., ed. II, 252 (1798—1799); Borbás, Magy. birod. rózsái, 476; H. Braun in Beck, Fl. Nied.-Öst., 807]. In locis apricis, lapidosis, sub dumetis. Floret in m. Majo, Junio.

Bosna: (*Asch. Kan., Catal., 99 1877). Ubi? Circa Banja Luka (H., etiam R. Keller). Circa Jezero et Jajce (R. Keller), prope Crna Rijeka in valle fl. Vrbas (R. Keller) etiam in forma quadam glabritie *Rae arvaticae* appropinquata; in declivibus australibus montis Vlašić prope Travnik (Br. f. J. B. Keller) hic »mit kurzen Blütenstielen, steifdrüsigen, dunklen, schärflichen, mittelgroßen Blättchen, befläumten, teils nur drüsigen, teils auch noch mit roten, kurzen Aciculis und hakigen Stacheln bewehrten Blattstielen, länglichelliptischen Rezeptakeln, armdrüsigen, am Rücken und Rande etwas befläumten Kelchzipfeln, weißen Blüten und ganz kahlen Griffeln« [J. B. Keller in Öst. bot. Zeit. (1884), 93]. Circa Sarajevo sparsim uti in jugo Lukavica (V. Čurčić f. M.), prope Miljevići, in valle riv. Koševo (F. f. R. Keller), in monte castello coronato (Gross Kneucker, M.); inter Slap et Višegrad (R. Keller). — **Hercegovina:** Juxta viam inter Podorašac et Konjic (*M. 1902!).

Ludit:

f. *arvatica* [Puget in Baker, Revis. Brit. Ros., 33 (1864); Crépin in Bull. soc. bot. Belg., XXI 1, 183 (1882) pro spec.; R. Keller in Asch. Graebn., l. c., 125].

Hercegovina: In agro Bijelo Polje prope Mostar (A. Pichler! f. *B.).
f. *virgultorum* [Ripart. in Déségl., Billotia, I, 44. (1864)
pro spec.; R. Keller apud Asch. Graebn., 1. c. 125.].

Bosna: Cirka Ivanjska (B); in monte castello coronato urbis Sarajevo (*M. 1904) cum foliolis supra nitentibus.

f. *livnoënsis* [G. Beck]. Frutex inermis vel aculeis rarissimis munitus; foliolis utrinque aequaliter attenuatis, mediocribus; pedicellis receptaculis brevioribus vel sesquolongioribus; fructibus ellipsoideis, disco conico-producto. Inter formam *arvaticam* (Puget) et *mentitam* (Déségl.) inserenda.

Bosna: Prope Livno (*B.).

β. *pubescens* [Rapin in Reuter, Catal. pl. Genève, ed. II, 73 (1861) pro spec.; R. Keller in Asch. Graebn., 1. c., 126. — *R. sepium* v. *pubescens* Christ, Ros. Schweiz, 117 (1874)].

Hercegovina: Circa Mostar prope Radobolje (A. Pichler! f. *B.).

γ. *Gizellae* [Borbás, Magy. birod. rózsái, 486 (1880) pro spec.; R. Keller in Asch. Graebn., 1. c., 128. — *R. sepium* v. J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 235. — *R. micranthoides* J. B. Keller, 1. c., 239].

Bosna: In delivitate australi montis Vlašić prope Travnik (Br. f. *J. B. Keller sub *R. micranthoides*). — **Hercegovina:** Ad Arslanagića most prope Trebinje, m. Junio (*B.) cum foliolis minoribus, vix 2 cm longis et receptaculis magis oblongis, sursum attenuatis.

f. *hercegovinae* [H. Braun apud Fritsch in Mitt. naturw. Ver. Steierm., 47 (1910), 187 (1911) pro var. *Rae Gizellae* Borb]. »Rami plus minus dense aculeati. Petioli pubescentes, glandulis validis obsiti, aculeolati, aculeis flavescentibus. Foliola elliptica, praecipue subtus in nervo mediano pubescentia, subtus tota in lamina glandulis crebris praedita, parva vel mediocria, in margine argute glanduloso-serrata ut in *Sepiaceis*. Pedunculi glandulis sparsis obtecti. Receptacula ellipsoidea, ad basin glandulis praedita, ceterum glabra. Sepala in dorso glandulosa, post anthesin reflexa. Styli pilosi. Discus conicus. Petala laete rosacea. Differt a *R. Gizellae* stylis pilosis, aculeis pro parte subrectis, petalis rosaceis, petiolis pubescentibus, foliolis ellipticis; a *R. Gizellae* f. *longipede* [Borbás, Magy. birod. rózsái, 479] receptaculis solum ad basim glandulis obtectis, pedunculis elongatis« (H. Braun).

Hercegovina: In monte Hum prope Mostar (Ja. f. *H. Braun 1911).

Eucaninae.

[Crépin in Bull. soc. bot. Belg., XXXI 2, 81 (1892).]

28 *Rosa tomentella* [Leman in Bull. soc. Philom., 94 (1818); Borbás, Magy. birod. rózsái, 472; J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 231; H. Braun in Beck, Fl. Nied.-Öst., 806; R. Keller in Asch. Graebn., 1. c., 140; Schneider, Laubholz., I, 563]. In locis lapidosis, dumetosis usque ad regionem montanam editiorem. Floret m. Junio.

Variat:

α . *typica* [Christ, Ros. Schweiz, 127 (1873); H. Braun, 1. c., 806; R. Keller, 1. c., 143].

Bosna: In latere septentrionali montis Trebević prope Sarajevo a. 1050 m (M.).

In formis quae inter formam *typicam* Christ et formam *concinnam* [Lagger et Puget apud Crépin in Bull. soc. bot. Belg., VIII (1869), 241 pro spec.; Christ, 1. c., 128] nutant in Bosna: circa Jezero, Jajce, Karaula gora, Travnik [*R. Keller, Mitt. II, 1. c., 38 (1896)]; insuper cum receptaculis mox majoribus piriformibus mox minoribus globosis. Circa Jajce etiam cum foliolis magna parte simpliciter dentatis (R. Keller).

γ . *pycnocephala* [Christ] »Blütenzweige mit krummen Stacheln, schwächerer Behaarung, weißen Blumenblättern und ziemlich kahlen, nach der Anthese aufrecht abstehenden Kelchzipfeln« [J. B. Keller in Öst. bot. Zeit. (1885), 343].

Bosna: In colle Tarabovac prope Travnik (Br. f. *J. B. Keller 1885).

β . *Murbeckiana* [K. Malý in Verh. zool.-bot. Ges. LIV (1904), 208 = *R. affinis* Rau var. K. Malý in litt.]. Frutex c. 2 m altus, ramis elongatis, nutantibus. Ramuli breves, fuscovirides, glabri, aculeis brevibus uncinatis, luteo-fuscis et interdum aciculis sparsis armati. Petioli subdense puberuli et pilis glanduliferis brevibus numerosis et aculeis acriter curvatis vel acicularibus sparsis vel pluribus tecti. Folia 5—7-na. Foliola crassiuscula, subrigida, breviter petiolulata, mediocria vel subparva (—30:24 mm, plurimum 24—28:19—20 mm), ea caulium terminalium magna vel maxima (32.5—58:22—41 mm) subrotundo-ovalia usque ovalia, obtusa rarius breviter acuminata, supra nitida, glabra, rarius plus minus conspicue pilosa, subtus nervibus prominentibus instructa, in nervo medio conspicue, in secundariis et superficie parce pilosa, glabrescentia, per

totam superficiem regulariter sparse glanduloso-pilosa, in foliis caulium terminalium etiam dense glandulosa, composite glanduloso serrata, cum serratura aperta, dentibusque non profundis, subrectangulariter patentibus, intus cum denticulis glandulosis 0—2, plurimum 1, extus 1—4, plurimum 2—3 instructis. Stipulae ramorum floriferorum latae, auriculis sursum directis, subtus per superficiem parce pilosae glabrescentes eglandulosae rarius sparse glandulosae. Bractee plurimum foliiferae. Inflorescentia 1—4, plurimum 2—3-flora vel interdum cymosa multiflora; pedicelli glabri, setis glandulosis inaequilongis copiose tecti fructibus breviores vel eos longitudine aequantes. Fructus parvi, ovati, coccinei, plurimum basi rarius sparse glanduloso-setosi. Sepala reflexa, dorso dense breviterque glandulosa, cum appendicibus lanceolatis, glandulososerratis, pinnulis numerosis glanduloso fimbriatis interdum incisus instructis. Discus subelevatus. Styli conspicue pilosi. Petala parva, pallide rosea. *R^{ae} tirolensi* [A. Kerner in Öst. bot. Zeit. XIX (1869) 331] proxima.

Bosna: In sepibus prope pagum Jarčedo ad declives sept. montis Trebević, a. 720 m (*M. 1904).

γ. *obtusifolia* [Desv., Journ. bot., II, 317 (1809) pro spec.; R. Keller apud Asch. Graebn., l. c., 142. — *R. canina* var. Desv., l. c., II (1813), 115. — *R. dumetorum* var. J. B. Keller apud Hal. Braun, Nachtr. Fl. Nied.-Öst., 276 (1882). — *R. leucantha* Bastard, Essai fl. Maine et Loire, suppl., 32 (1812)].

Bosna: Circa Travnik supra nosocomia (Br. f. *J. B. Keller apud Wiesbaur 1884) in formis intermediis inter *R^m obtusifoliam* et *R^m amblyphyllam* Rip. Circa Sarajevo in declivibus saxosis montis castello coronati, in m. Draguljevac et prope Dobra voda in m. Trebević (M.) cum foliolis simpliciter dentatis.

29. *Rosa canina* [L., Spec. plant., 491 (1753); J. B. Keller; in Hal. Braun. Nachtr. Fl. Nied.-Öst., 308; H. Braun in Beck, Fl. Nied.-Öst., 783; R. Keller apud Asch. Graebn., l. c., 154; Schneider, Laubholzkunde, I, 564]. »Ruža divja, r. pasja, šipurika«. In locis apricis, lapidosis, sepibus, inter dumeta, ad silvarum margines usque ad subalpinas. Floret m. Majo, Junio.

Bosna: Prope Derventa (Prodan). In m. Šuljaga, Malovan, Hrblijina, circa Preodac, in m. Kamešnica et al. locis (Pr.); inter Kakani et monast. Sućeska, circa Travnik (*S. 1848), Vareš (Pr.). In vallibus fl. Željeznica, Sutjeska, Drina (Pr.). — **Hercegovina:** In declivibus circa Mostar (Str.

sub. var. *vulgaris* Koch); in sepibus prope Bileća (*P. 1874 sub var. *vulgaris* Koch).

Variat:

1. *Lutetianae*.

Glabrae. Foliola simpliciter serrata vel serratura hinc inde subcomposita.

* Pedicelli nudi.

α. *lutetiana* [Léman in Bull. philom., 93 (1818) pro spec.; Christ, Ros. Schweiz, 156 (1873); R. Keller apud Asch. Graebn., 1. c., 156. — Confer: H. Braun in Öst. bot. Zeit., (1885), 305].

Bosna: Prope Tujnica juxta Novi (B.); circa Varcar Vakuf, Jezero, Jajce, Karaula gora, Travnik, Donja Tuzla, Slap, Višegrad (*R. Keller 1896) in formis variis cum foliolis ovalibus, rotundis, etiam longe acuminatis, magnitudine variis ac cum receptaculis globosis et oblongis.

f. *lucorum* [H. Braun apud Fritsch in Mitteil. naturwiss. Ver. Steierm. 47 (1910) 184 (1911)]. »Differt a *R. lutetiana* Lém. stipulis bracteisque rubescentibus, petiolis plerumque inermibus, stylis minus villosis, a *R. calycina* M. B. stylis minus villosis, petiolis plerumque inermibus, floribus rosaceis« (H. Braun). **Bosna:** In declivibus prope Čelebić a. c. 1600 m (Schiller f. *H. Braun 1911).

f. *euoxyphylla* [Borbás, Magy. birod. rózsái, 414 (1880); R. Keller apud Asch. Graebn., 1. c., 157].

Hercegovina: Circa Mostar ad ripam dextram fl. Neretva (A. Pichler f. *B.), in monte Hum (Raap Callier, Pl. Herc. nr. 68 sub v. *subglaucina* H. Br. f. B.).

β. *Desvauxii* [H. Braun, Ros. polon. 30 (1886) et in Beck, Fl. Nied.-Öst., 783. — *R. glaucescens* Desvaux in Mérat, Fl. Paris, 192 (1812) non Wulf. — *R. canina* v. Desvaux, Journ. bot., II, 114 (1813); R. Keller, 1. c., 158].

Bosna: Prope Bihać in turri ruinae Sokolac et in eadem (*B.), circa Petrovac, Sarajevo juxta Švrakino Selo (*B.).

f. *nitens* [Desvaux apud Mérat, 1. c., 192 pro spec. et in Journ. bot., II, 114 (1813); R. Keller, 1. c., 158].

Bosna: Circa Sarajevo, in collibus prope Kovačići (F. f. *H. Braun).

γ. *brachypetala* [J. B. Keller in Öst. bot. Zeit. (1884), 95] »Petalis minutis orbiculato-reniformibus, saturate roseis, calyce brevioribus; sepalis apice subfiliformibus, pinnulis angustissimis; disco subplano; stylis paulo hirtellis; receptaculis ovoideis; pedunculis bractea longioribus; petiolis aculeatis fere eglandulosus; stipularum auriculis lanceolatis acuminatis margine paulo glandulosus; ramis aculeatis, aculeis uncinatis; foliolis

ovatis uniserratis, basi subattenuatis, apice acutis, mediocribus, inferioribus rotundatis« [J. B. Keller l. c.]. A *R. aciphylla* Rau petiolis glabris, foliolis paulo latioribus uniserratis, aculeis curvatis, stylis parce pilosis distinguitur.

Bosna: Circa Travnik (Br. f. *J. B. Keller 1884).

δ. *flexibilis* [Déséglise in Bull. soc. bot. Belg., XV (1876), 317 pro spec.; H. Braun apud Beck, Fl. Nied-Öst., 784; R. Keller apud Asch. Graebn., l. c., 158].

f. *lepidula* [H. Braun apud Beck, Fl. Südbosn., III in Ann. naturh. Hofmus., II, 102 (1887)]. Frutex elevatus. Rami elongati virgati hinc inde flexuosi, valde aculeati. Cortex dilute brunneus vel purpureus, hinc inde rore coeruleo tectus. Aculei robusti, arcuati vel falcati basin versus dilatati. Stipulae anguste lanceolatae, auriculis acuminatis divergentibus, glaucae et plerumque plus minus rubescentes, in margine glandulis rufescentibus crebris praeditae, glabrae. Petioli sparse hirtelli, plerumque inermes. Foliola quina vel septena elliptica, lateralia subsessilia, apicem versus acuta vel subacuminata, basin versus acuta, mediocria vel plerumque parva, supra viridia, subtus glauca vel praecipue in junioribus rubescentia, utrinque glaberrima in margine acute-simpliciter vel hinc inde parum irregulariter-serrata, serraturae dentibus subacuminatis. Bractee ut stipulae sed latiores saepe foliaceae. Pedunculi longitudine mediocres, glabri. Receptacula ellipsoidea vel ellipsoideo-oblonga, gracilia. Sepala duo integra tria pinnatifida, corolla aperta breviora; pinnulae hinc inde glandulis sparsis instructae, post anthesin reflexae demum deciduae. Styli glabri vel hinc inde sparse hirtelli. Discus valde conicus. Petala mediocria dilute rosea vel albicantia. Dimensiones: Stipulae 15—17 mm longae, 4—5 mm latae. Foliola 12—[18]—26 mm longa, 7—[12]—15 mm lata. Pedunculi 10—12 mm longi. Sepala 18 mm longa. Corolla aperta 32—35 mm diam.« (H. Braun.)

Differt a *R. flexibili* Déségl. foliolis ovali-rotundis vel ovali-ellipticis, apice plurimum subobtusis, subtus viridibus, sepalis ad apicem magis spathulato-dilatatis.

Differentias inter affines (*R. fallax* Puget, *R. canina* f. *oblonga* Kmet, *R. Desvauxii* H. Braun [*glaucescens* Desv.], *R.*

oxyphylla Rip., *R. myrtilloides* Tratt., *R. ololeia* Rip. et al.) exposuit H. Braun l. c. 102—104.

Bosna: Frequenter in sepibus collis Gorica et in valle riv. Koševo circa Sarajevo a 530 m (Beck, Pl. Bosn. Herc. nr. 51 f. *H. Braun (1887).

f. *ragusina* [Gandoger. t. 1150 f. J. B. Keller in Öst. bot. Zeit. (1884), 95]. A *R. flexibili* foliolis acuminatis et fructibus brevissime pedicellatis oblongis diversa (J. B. Keller).

Bosna: In angustiis prope Travnik (Br. f. *J. B. Keller 1884).

f. *texta* [Gandoger t. 1135 f. J. B. Keller in Öst. bot. Zeit. (1885), 343] »Weicht von der *R. flexibilis* ab in den öfters vereinzelt Blüten, kugeligen und eiförmigen Rezeptakeln.« Die Pflanze hat ferner eine ganz einfache, seichter zusammenneigende Serratur, derben Bau, hakige Stacheln, ganz kahle Griffel, rötliche junge Triebe und Kelchzipfel, wodurch sie auch der *R. montivaga* Des. nahe steht.«

Bosna: In m. Vilenica (Br. f. *J. B. Keller 1885).

ε. *subversuta* [H. Braun apud Beck, Fl. Nied.-Öst., 784].

Bosna: Circa Sarajevo prope Dobra voda in m. Trebević inter dumeta (*M. 1904). Blättchen unterseits grau. Blüten einzeln, klein, blaßrosa. Scheinfrucht breitförmig oder kugelig? (K. Malý.)

2. *Transitoriae.*

Gabrae. Foliola inferiora plus minus irregulariter biserrata, superiora plurimum simpliciter serrata.

* Pedicellis nudis.

ζ. *transitoria* [R. Keller in Asch. Graebn., l. c., 159].

Hercegovina: In m. Hum pr. Mostar (*B.)

η. *aciphylla* [Rau, Enum. Ros. Wirc., 69 (1816), t. 1; J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 303 pro spec.; Lindley, Mon. Ros., 99 (1820); H. Braun in Beck Fl. Nied.-Öst., 785; R. Keller in Asch. Graebn., l. c., 159].

Bosna: In m. castello coronato urbis Sarajevo (*M. 1904).

Forma ramis (?) glaucovirentibus [J. B. Keller apud Wiesbaur in Öst. bot. Zeit. (1884), 95].

»Zweige dünn, zierlich, unbewehrt, grün; Blättchen klein, graubläulich, verkehrteiförmig, zugespitzt; Serratur sehr scharf, tief, ziemlich einfach; Rezeptakel breit ellipsoidisch; Kelchzipfel kurz, feinfiederig, drüsenlos; Blumenblätter rosenrot, ziemlich groß; Griffel zottig.« (J. B. Keller, l. c.)

Bosna: In declivibus montis Vlašić prope Travnik supra castellum (Platz f. *J. B. Keller 1884).

9. *montivaga* [Déségl. in Mem. soc. ac. Maine et Loire, XXVIII (1873), 107; J. B. Keller apud Hal. Braun, Nachtr. Fl. Nied.-Öst., 302 pro spec.; H. Braun in Beck, Fl. Nied.-Öst., 785; R. Keller apud Asch. Graebn., l. c., 160].

Bosna: Circa Fojnica prope Lučica (Schwarz f. B.), prope Kalinovik (Fo. f. *J. B. Keller 1890).

f. *subvirens* [J. B. Keller et Wiesbaur in Öst. bot. Zeit. (1886), 330.] Inter *R^m montivagam* et *R^m sphaericam* media.

Hercegovina: Ad Bačkovići prope Nevesinje (Fo. f. *J. B. Keller 1890).

t. *semibiserrata* [Borbás, Magy. birod. rózsái, 410 et 414 (1880); H. Braun in Beck, Fl. Nied.-Öst., 784].

Hercegovina: In monte Velež orientali (*B.).

x. *intercedens* [H. Braun in Kerner. Schedae ad fl. exsicc. austro-hung., V, 6 (1888) nr. 1624 et in Beck, Fl. Nied.-Öst., 785; R. Keller apud Asch. Graebn., l. c., 160].

Bosna: Inter dumeta in monte Trebević a. 1050 m (*M.).

λ. *spuria* [Puget apud Déséglise in Mém. soc. ac. Maine et Loire (1873), 109; J. B. Keller apud Hal. Braun, Nachtr. Fl. Nied.-Öst., 304; pro spec.; H. Braun in Beck, Fl. Nied.-Öst., 785; R. Keller apud Asch. Graebn., l. c., 160].

Bosna: Circa Travnik prope Guča gora (Br. f. *J. B. Keller 1884 apud Wiesbaur) in forma quadam inflorescentiis trifloris, aculeatione copiosa, subdensa, subrecta et cum fronde ramorum floriferorum aculeatorum supra sanguinea infra pallide-viridi obscura. Nervi glandulis petiolatis obsiti; petioli frutus tempore subglandulosi et glabri. [J. B. Keller in Öst. bot. Zeit. (1884) 95—96]. Porro circa Travnik (Br. f. J. B. Keller) cum receptaculis partim globosis, partim ovatis et cum serratura sub frequentius duplici, qua de causa *R^m rubescentem* Ripart in memoriam reducens (J. B. Keller l. c. 96); circa Sarajevo (Jetter!), in m. castello coronato (Gross et Kneucker), in declivibus prope castrum versus vallem fl. Miljacka, in jugo inter Kovačići et Lukavica (M.). — **Hercegovina:** In m. Velež a. 850 m (B.); pr. Nevesinje (Fo. f. J. B. Keller 1890).

f. *brachyclona* [H. Braun apud Beck, Fl. Südbosn. III in Ann. naturh. Hofmus., II (1887), 101 pro var. *R^{ae} spuriae* Puget]. »Frutex statura compacta, ramis florigeris brevibus, dense frondosis. Aculei in ramis veteribus sat robusti adunci vel subfalcati. Cortex ramorum badius vel subnigricante-purpureus. Petioli glabri, aculeati, purpurei. Foliola quina vel septena, mediocria vel parva, ovato-rotundata, ad basin versus late-rotundata, lateralia subsessilia, terminalia sat longe petiolulata; utrinque glaberrima, apicem versus

breviter acuta vel praecipue in infimis obtusiuscula, juniora subtus purpurascens, demum solum ad nervos purpurascens, simpliciter serrata, rarius dentibus secundariis glandulosis intermixtis. Stipulae sat latae in basin purpureae, in margine glandulis tenuibus ciliatae, auriculis acutis divergentibus. Bracteae latae plerumque foliaceae, pedunculos occultantes. Receptacula breviter ovoidea. Sepala post anthesin reflexa cito decidua; pinnulae eglandulosae. Discus planiusculus. Styli hirsuti sed non villosi. Petala dilute rosea subalbicantia. — Durch das gedrungene Wachstum, die dichte Belaubung, die ziemlich kleinen, eirundlichen Blättchen höchst auffällig und jedenfalls der *Rosa senticosa* Acharius sehr verwandt. Diese Mittelform ist über Bosnien, Dalmatien und Montenegro verbreitet.« (H. Braun.)

Bosna: Inter dumeta prope Ledići a. c. 1000 m, m. Junio (B. f. *H. Braun 1887).

f. *oenophora* [Gandoger t. 1437 (1882) f. J. B. Keller in Östbot. Zeit. (1884), 96 pro var. *Rae spuriae* = *R. spuria* var. versus f. *euoxyphyllam* J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 305].

Bosna: Circa Grahovik prox. Travnik (Br. f. *J. B. Keller 1884).

f. *suboenophora* [G. Beck = *R. spuria* forma... H. Braun apud Beck, Fl. Südbosn. III in Ann. naturh. Hofmus., II (1887), 101]. »Differt a *Rosa spuria* Puget typica ramis dense aculeatis, pedunculis brevioribus. Petioli eximie pilosuli, corymbi 1—3flori; nervi primarii eglandulosi, nervi secundarii rubescentes. Von der f. *oenophora* J. B. Keller unterscheidet sie sich durch die zum Blattstiele zugerundeten, nicht verschmälerten Blättchen. Auffallend sind an vorliegender Pflanze die breiten Stipulae mit zugespitzten Ohrchen. Form der Blättchen, Receptakel, Griffel, Discus genau so wie bei der typischen Form beschaffen. Wohl nur als Standortsform der *Rosa spuria* Puget aufzufassen.«

Bosna: In sepibus suburbii Hrid urbis Sarajevo (Beck, Pl. Bosn. Herc. nr. 50 i. *H. Braun 1887).

μ. *fissidens* [Borbás, Magy. birod. rózsái, 411 et 413 (1880); H. Braun apud Beck, Fl. Nied.-Öst., 875. — *R. spuria* α. *fissidens* Borbás apud J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 305 (1882)].

Bosna: Circa Derventa (Prodan); Travnik (Br. f. *J. B. Keller 1884); in saxis vallis fl. Miljacka et in declivibus montis Hrastova Glava ad vallem fl. Miljacka (M.) in formis, quae formam *acuminatam* [H. Braun apud J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 306] accedunt.

Porro in forma quadam, quae et *Rae frondosae* [Steven in Spreng., Syst., II, 5—54 (1825) et nominatae f. *acuminatae* H. Br. appropinquatur cum proprietatibus sequentibus: Rami florigeri inermes vel aculeati. Foliola elliptica vel elliptico-ovata, ad basin versus subattenuata, superiora simpliciter, infima irregulariter duplicato-serrata, subtus glauca. Serraturae dentes acuti vel fere acuminati, mucronulati; petioli glabri vel hinc inde puberuli, glandulis sparsis obtecti vel plerumque eglandulosi, aculeolati vel inermes. Discus conicus. Styli dense albopilosi. [H. Braun apud Beck, Fl. Südbosn., III in Ann. naturh. Hofmus., II (1887), 101.] **Bosna:** Prope Tošići ad pedem montis Treskavica, a. c. 880 m. Junio (B. f. *H. Braun, 1887).

Forma typica etiam in **Hercegovina:** circa Mostar in m. Hum, pod Hum, pod Kolom (A. Pichler! f. *B.), m. Majo florens; in m. Velež orientali (B.).

γ. *sphaerica* [Gren. in. Billot, Arch. de la fl. Franç. Allem., 333 (1854); J. B. Keller in Hal. Braun, Nachtr. Fl. Nied-Öst., 312 pro spec.; Godet, Fl. Jur. suppl., 75; H. Braun in Beck, Fl. Nied.-Öst., 784].

Bosna: In collis dumetosis ad sept. ab Donja Tuzla, in silvis vallis fl. Jadar prope Drinjača (Wettst. f. H. Braun apud Fritsch). Circa Travnik in fauce inter collem Tarabovac et m. Vlašić (Br. f. *J. B. Keller 1884). Circa Sarajevo vulgata sic in valle fl. Miljacka, in monte castello coronato, in valle riv. Koševo, in m. Trebević a. c. 1050 m (M.). — **Hercegovina:** In sepibus prope Bojište (*Sagorski 1914) cum petalis intense rosaceis et petiolis glabris.

ξ. *subglaucina* [H. Braun apud Murbeck, Beitr. in Lunds Univ. Årsskr. XXVII (1891), 131]. Rami parum aculeati, aculeis aduncis vel inclinatis; ramuli subinermes vel aculeis gracilibus 1—2 praediti, cortice virescenti vel brunnescenti, flexuosi. Petioli glabri vel pilis raris obtecti, hinc inde in parte inferiore inermes vel aculeolis 1—2 armati. Stipulae lanceolatae vel anguste lanceolatae, pallide virides, in margine glandulis sparsis parvis ciliatae, auriculis porrectis vel divergentibus. Foliola quina—septena, mediocria, 18—28 mm longa, 10—17 mm lata, ambitu elliptica vel ovato-elliptica, basin versus rotundata vel hinc inde attenuata, apicem versus acuta, infima etiam subrotundata; supra viridia, subtus glaucescentia, in margine aequaliter eglanduloso-serrata, serratura acuta. Bractae dilatatae lanceolatae, apicem versus interdum filiformes. Pedunculi bre-

ves, 6—7 mm longi, laeves. Sepala non glanduloso-ciliata, post anthesin reflexa, ceterum ut in *R. canina* typica. Discus subplanus. Styli dense pilosi. Receptacula fructifera immatura ellipsoidea-subglobosa vel ellipsoidea, ellipsoidea-elongata eodem in ramo, — affinis *Rae separabili* Déségl. [Déscr. ros. fasc. I in Bull. soc. bot. Belg. XIX (1880) 30] sed differt: ramis aculeis armatis, pedunculis brevibus solitariis, foliolis magis acutis; a *R. lutetiana* Lem. differt: foliolis subtus glaucescentibus, stylis magis villosis, pedunculis brevibus; a *R. glaucescenti* Desv. (non Wulfen 1805, *R. Desvauxii* H. Br.) differt: serratura, foliolis elliptico-ovatis, acuminatis vel eximie acutis, ramulis fertilibus inermibus subinermibusve.

Hercegovina: In sepibus circa Bojište in agro Nevesinjsko Polje a. 850 m (Mu. f. *H. Braun 1891).

Forma »foliolis minoribus 15—25 mm longis. 8—14 mm latis, ramis dense aculeatis, pedunculis c. 8—12 mm longis«. »Differt a *R. ramulosa* Godron foliolis non ovato-oblongis, petiolis glabris.« Ibidem.

Sagorski [in Allg. bot. Zeit. XX (1914), 71] eandem plantam eodem loco originali collegit et notas sequentes addidit: »Ich fand an dem sehr beschränkten Originalstandorte nur einen Strauch, welcher der Diagnose im wesentlichen entspricht, doch sind die Scheinfrüchte auch häufig zu 2—3, auch die Fruchtstiele oft länger, als H. Braun angibt. Ähnliche Formen mit mehr minder wolligem Griffel wachsen dort verschiedene, die aber teils durch die Blattfarbe, teils durch die mehr minder verdoppelte Blattzahnung und auch durch die Bestachelung abweichen. Hieraus ergibt sich, daß H. Braun im wesentlichen einen einzelnen Rosenstrauch beschrieben hat. Der Rhodologie ist damit nicht gedient.« (Sagorski.)

o. *ololeia* [Ripart apud Crépin in Bull. soc. bot. Belg. VIII 238 (1869) f. H. Braun in Abh. zool.-bot. Ges. (1887). 63 et in Beck, Fl. Nied.-Öst., 786].

Bosna: Prope Livno (*B.).

π. *nuda* [Woods in Trans. Linn. soc., XII (1817), 205 pro spec.].

Bosna: Ad silvarum margines prope Srebrenica c. 400 m; in m. Kvarac prope Srebrenica solo trachytico c. 1000 m (Wettst. f. *H. Braun prope Fritsch 1911).

?ρ. *Amansii* [Déséglise et Ripart apud Déségl., Enum. Ros., 3 pro spec.; Borbás, Magy. birod. rózsái, 410 (1880);

Rouy in Rouy Cam., Fl. Fr., VI (1900), 304]. »In einer Varietät, die der *R. globularis* Franch. in der Tracht, Bestachelung, kurzen Blütenstielen, Griffeln, immerhin näher als der kleinblütigen *R. Amansii* oder der *R. sphaerica* steht. »Rami gracilissimi, foliola (inter mediocr.) parva magis uniserrata; aculei ramorum tenuiores crebri; petioli inermes; stipulae angustae; styli paulo villosi subhirtellique (= Caninarum); pedunculi breves (5—7 mm) villosuli, fructus (ovato-rotundato-globosus) sat magnus. A *R. Amansii* Déségl. plurimis foliolis mediocribus (haud parvis) haud »rotundatis«; floribus (secundum fructum magnum) haud »parvis«; ramis petiolisque haud inermibus etc.; a *R. sphaerica* Gren. autem omnibus partibus (supra indicatis) abhorret!« [J. B. Keller in Öst. bot. Zeit. (1890), 101.]

Hercegovina: In m. Hum prope Mostar (Fo. f. *J. B. Keller 1890 sub *R. globulari* Franch., quae autem ad *Biserratas* pertinet).

****Pedicellis glanduloso-setosis.**

σ. *andegavensis* [Bastard, Essai fl. Maine et Loire, 189 (1809). Suppl., 29 (1812); J. B. Keller apud Hal. Braun, Nachtr. Fl. Nied.-Öst., 271 et in Beck, Fl. Nied.-Öst., 793 pro spec.; R. Keller apud Asch. Graebn., l. c., 161. — *R. canina* v. *hispida* Desvaux, Journ. bot., III 2, 115 (1813); Seringe in DC., Prodr., II, 614 (1824)].

Bosna: Prope Žepče; Štitar proxime Županje ad fl. Sava in Slavonia (Br. f. *J. B. Keller apud Wiesbaur 1884); hic f. J. B. Keller in Öst. bot. Zeit. (1884), 94] in forma vix hispida Christ = *R. vinealis* Ripart »mit typischen bis fast länglichen oder zylindrischen Scheinfrüchten, stark konischem Discus, mit kurzen, an der Basis zusammengedrängten, anfangs schwach wolligen, später kahlen Griffeln, kleinen oder ziemlich kleinen, lederigen, dicklichen, scharfgespitzten, mattglänzenden Blättchen aber fast drüsenlosen Fruchtstielen«. — **Hercegovina:** In m. Raška gora prope Drežnica (*B.), hic cum stylis magis pilosis.

Formanek etiam formam (ubi non proclamavit) reperit, quam J. B. Keller (in Öst. bot. Zeit. (1890), 102] verbis sequentibus descripsit: »f. foliolis omnibus subbiserratis fructibus globosis globoso-ovatisve. Differt a *R. transsylvanica* Schur (nach Exemplaren aus Siebenbürgen in meinem Herbarium) ramis haud dumoso-tortuosis glaucopruinosus; aculeis longioribus, foliolis omnibus acuminatis, inferioribus ovatis ellipticisve, superioribus ovato-lanceolatis, serraturis patentibus acutis, subbiserratis; stipularum auriculis angustis oblongo-lanceo-

latis glandul.-denticulatis; petiolis aculeatis, pedunculis longioribus; fructibus sat magnis globoso-ovatis globosisve, totis aut solum inferne hispidis; disco-plano; stylis brevibus hirsutis; sepalis reflexis dorso crebre glandulosis. A *R. tortuosa* Wirzb. habitu, ramis haud tortuosis, petiolis costisque haud pubescentibus etc.«

τ. *transsylvanica* [Schur, Enum. pl. Transsylv., 202 (1866) pro spec. — *R. canina* var. K. Malý in Verh. zool.-bot. Ges. LIV (1904) 212].

f. *sarajevensis* [H. Braun apud Beck, Fl. Südbosn., III in Ann. naturh. Hofmus., II (1887), 108 pro var. *R^{ae} transsylvanicae*]. Differt a *Rosa transsylvanica* Schur typica foliolis majusculis subtus glaucis elliptico-rotundatis, stylis albo-lanatis, petalis majusculis, serratura magis composita in foliolis inferioribus.

Bosna: In et circa Sarajevo, in sepibus ad declives montis castello coronati versus fauces riv. Moščanica, c. 600 m, m. Junio (Beck, Pl. Bosn. Herc. nr. 42 sub v. *bihariensi* f. H. Braun 1887); in declivibus vallis fl. Miljacka; ad delapsum fontis Dobra voda in m. Trebević (M.).

Fide K. Malý [in Verh. zool.-bot. Ges. LIV (1904), 212] fructus breviter ellipsoidei-oblongi, basi attenuati aut etiam rotundati, reperiuntur; tamen occurrunt praeterea frutices cum fructibus ovato-rotundis. In nervis secundariis faciei inferioris foliorum interdum pauci pili glanduliferi observantur. In fructibus singulis pili glandulosi subplane desunt, quo f. *subadenopoda* [Borbás in Deutsch. bot. Monatsschr. IV (1886), 50 et in Enum. pl. Castrif., 281 (1887)] excellit. Foliola interdum etiam parva vel subparva observantur. — Hanc prolem cum Crépin [in Herb. Beck] lateri *R^{ae} andegavensis* adjungo, quia serratura foliolorum irregulariter duplicata saepe simplex observatur.

3. Biserratae.

Glabrae. Folia bi- vel composite-serrata.

* Pedicelli nudi.

υ. *dumalis* [Bechstein, Forstbot., 227, 241 (1810); J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 293 pro spec.; Becker, Brit. Ros. in Journ. Linn. soc. XI (1869) 227; Borbás, Magy. birod. rózsái, 418, 420; H. Braun in Beck, Fl. Nied.-Öst., 787; R. Keller apud Asch. Graebn., l. c., 163].

Bosna: Prope Doboj (L. Richter f. Borbás!) cum fructibus p. p. in pedicellum attenuatis; circa Petrovac (B.), Jajce, Karaula gora (R. Keller), Travnik (Br. f. *J. B. Keller apud Wiesbaur 1884; R. Keller). Circa Sarajevo in valle riv. Koševo, prope Biosko donje (F. f. M.), in m. Hum (M.) in forma quadam *Rae innocuae* Rip. et *Rae Hanausekianae* J. B. Keller affini, circa Miljevići (F. f. R. Keller), pr. Kruševdol, Slap, Višegrad (R. Keller) frequenter. Fide R. Keller etiam cum receptaculis globosis, cum pedicellis brevissimis (sic loco Jajce) et stylis interdum valde pilosis (sic loco Travnik), itaque in f. *biserrata* Baker occurrit. — **Hercegovina:** Circa Mostar prope Radobolje, Osoje, Bijelo polje (A. Pichler f. *B.)

φ. *opaca* [Fries, Nov. fl. Suec., 101 (1823) pro spec.; H. Braun in Beck, Fl. Nied.-Öst., 787. — *R. dumalis* subspec. *opaca* (Fries.) H. Braun in Beck, Fl. Südbosn., III in Ann. naturh. Hofmus., II (1887), 104.]. »Trunci ramique aculeati. Stipulae sat latae, auriculis brevibus parum divergentibus, in margine glandulis rufescentibus praeditae. Petioli glandulis sparsis obsessi, inermes vel aciculis paucis parvis flavescens armati, usque ad primum par foliolorum puberuli vel glabri. Foliola quina vel septena, late elliptica vel ovata, basin versus late rotundata, apicem versus acuta vel infima obtusiuscula suborbicularia, utrinque glaberrima supra obscure viridia, subtus canescente-viridia vel glauca, cum nervis primariis eglandulosis, in margine tenuiter glanduloso-biserrata, serratura irregulariter profunde incisa, cum dentibus acutis. Stipulae, bractee petioli rubescentia. Bractee latae, plerumque foliaceae, pedunculos longitudine aequantes vel superantes. Pedunculi laeves, longitudine mediocres, 2–8 aggregati. Receptacula anguste ellipsoideo-oblonga apicem versus eximie angustata, basin versus angustata vel parum rotundata, saepe rore coeruleo oblecta. Sepala cum pinnulis fere eglandulosis, post anthesin reflexa brevia. Petala dilute rosea, satis magna. Discus eximie conicus. Receptacula fructifera ellipsoidea vel oblongo-ellipsoidea. Styli hispidi. Differt a *Rosa dumali* Bechst. typica receptaculis oblongis angustis, colore glaucescente paginae infimae foliolorum, disco conico.

Bosna: Circa Sarajevo in sepibus prope Čengića Vila (B. f. *H. Braun 1887); inter frutices juxta viam inter Sarajevo et Pale prope Han Derventa (M.) hic »auffallend durch die graugrüne Ober- und die seegrün bereifte Unterseite der Blättchen. Ohrchen der Nebenblätter groß und breit, aufrecht abstehend. Serratur nicht tief. Fieder der Kelchzipfel breit, drüsig gesägt«. [K. Malý in Verh. zool.-bot. Ges. LIV (1904), 211]. — **Hercegovina:** Circa Mostar in m. Podvelež (Fo. f. *J. B. Keller 1890).

f. *pseudoglaucina* [H. Braun apud Beck, Fl. Südbosn., III in Ann. Naturh. Hofmus., II (1887), 105 pro subspec. *R^{ae} dumalis* = *R. canina*? v. *pseudoopaca* (H. Braun apud Malý in Verh. zool.-bot. Ges. LIV (1904), 211]. »Rami virgato-elongati, cortice brunneo-purpurascete vestiti, disperse aculeati. Aculei robusti, falcati vel adunci. Stipulae anguste-lanceolatae, glandulis purpureis ciliatae, utrinque glaberrimae, auriculis acutis, divergentibus. Petioli glabri, vel in infima parte pilosiusculi, virescentes vel subpurpurascetes, parum glandulosi, aculeolis flavescentibus armati vel inermes. Foliola quina vel septena plerumque quina, rotundato-elliptica, acuminata, infima lateralia plerumque obtusa vel obtusiuscula, in margine glanduloso-duplicato serrata, utrinque glaberrima, supra obscure-viridia subnitida, subtus glauca. Pedunculi subbreves. Receptacula ellipsoideo-oblongata, superne in collum breviusculum contracta. Styli sat dense pilosi. Discus conicus. Sepala tria valde pinnatifida, cum pinnulis glandulis praeditis, post anthesin reflexa, cito decidua. Petala candicantia, marginem versus rosea. Differt a forma typica pedunculis solitariis, foliolis acutiusculis minoribus subnitidis, stylis dense hispidis, a *Rosa glaucina* differt: disco conico, et praecipue receptaculis fructiferis ellipsoideo-oblongis, pinnulis sepalorum minus glandulosis et petiolis glandulis sparsis praeditis.« (H. Braun).

Bosna: Circa Sarajevo prope Švrakino Selo (B. f. *H. Braun 1887); supra dejectum riv. Koševo ad montem Bukovik (M.) hic »die Blättchen klein oder mittelgroß, unterseits am Mittelnerv schwach drüsig oder kahl. Blumen blaßrosa«. [K. Malý in Verh. zool.-bot. Ges., LIV (1904) 211.]

f. *Presliana* [H. Braun apud Beck, Fl. Südbosn., III in Ann. naturh. Hofmus., II (1887), 104 pro var. *Rae opacae* = *R. canina* β *caesia* Presl non Sm. f. H. Braun] »Rami florigeri satis breves, virescentes vel purpurascetes. Aculei in ramis numerosi, plerumque bijugi vel subverticillati, robusti, falcati. Stipulae purpurascetes, in margine copiose glandulis purpurascetibus ciliatae. Petioli purpurei in infima parte hinc inde pilis albidis sparse vestiti. Foliola 5–7, plerumque 7, terminalia acutiuscula, lateralia plerumque obtusiuscula, rotundato-elliptica; basin versus rotundata, supra saturate viridia, subtus glauca, in nervis plerumque purpurea, in nervo primario glandulosa. Bractee latae

saepe foliaceae, pedunculos occultantes. Pedunculi satis breves, glabri. Receptacula ovoidea nec ellipsoideo-oblonga, ut in forma typica. Serratura minus profunde incisa cum denticulis glanduliferis plurimum intermixtis. Pinnulae sepalorum parum glandulosae, satis pinnatifidae. Styli dense hispidi. Discus minus conicus ut in forma typica. Petala dilute rosea, marginem versus saturate rosea.« (H. Braun.)

Bosna: Circa Sarajevo in sepibus collis Gorica (B. f. *H. Braun 1887); in declivibus montis castello coronati a. 570 m (M.).

f. *glaucina* [Ripart in Soc. Dauph., 373 (1882) non Bechst.; H. Braun apud Beck, Fl. Südbosn., III in Ann. naturh. Hofmus. II (1887), 106; Beck, Fl. Nied.-Öst., 787]. »Cortex ramorum dilute brunneus vel virescens. Rami plus minus aculeati, rami florigeri aculeati vel inermes, subinermes effusi. Aculei plus minus graciles, inclinati, in ramis infimis etiam robusti et falcati. Stipulae sat latae et longae, in margine glandulis copiosis purpurascens ciliatae, auriculae sat latae, triangulari-acutae. Petioli glandulis praediti, et hinc inde aculeolis parvis armati, glabri, solum hinc inde ad insertionem foliolorum pilis sparsis vestiti. Foliola quina-septena plerumque septena, ovato-rotundata vel ovato-oblonga, plerumque in petiolum attenuata supra saturate-vel subflavescenti-viridia, subtus glauca, utrinque glaberrima, subtus in nervo primario glandulis sparsis praedita, in margine glanduloso-biserrata, serraturae dentes subconvergentes. Bractee late elliptico-lanceolatae apicem versus acuminatae, saepe foliaceae, basin versus purpurascens, pedunculos longitudine aequantes vel superantes. Pedunculi 5—10 mm longi, laeves et glabri. Receptacula ovoidea vel ellipsoidea, superne parum angustata, breviora ut in *Rosa opaca* Fries. Sepala tria pinnatifida, duo integra; pinnulae plus minus, plerumque copiose glandulis stipitatis sessilibusve praeditae, rarius (ut in planta ex Bosnia), fere eglandulosa; post anthesin reflexa, cito decidua. Petala dilute rosea marginem versus saturate rosea. Discus conicus. Styli dense hispidi vel subvillosi, Receptacula fructifera ovoidea vel ovoideo-suboblonga, coccinea vel sanguinea.« (H. Braun.)

»Die in Bosnien wachsende Form der *Rosa glaucina* Rip. gehört offenbar zu den Übergangsformen zur *Rosa rubelliflora*

Rip. Von *Rosa rubelliflora* Rip. unterscheidet sie sich aber leicht durch die lichtbraune, fast grünliche Rinde, die kurzen, wenig derben Stacheln, die verlängerten Blütenäste, die bleichere Blütenfarbe und die zum Blattstiel etwas genäherte Basis der Blättchen. Von den Originalexemplaren Puget's (Thonon in Savoyen) unterscheidet sich die Pflanze durch etwas kürzere, rundere und nicht plötzlich in den Blattstiel zusammengezogene Blättchen nur sehr wenig.« (H. Braun.)

Bosna: Circa Sarajevo in sepibus collis Hum prope Kobilja Glava a 650m. Junio (B. f. *H. Braun 1887); ad pedem montis Grdonj (M.) hic frutex circa 2m altus, subinermis.

f. *glaucopsis* [G. Beck]. Rami purpurascens aculeis firmis curvatis sparsis praediti; ramuli floriferi breves spinulis tenuibus brevibus sparsissimis obtecti. Foliola plurimum septena. Petioli glabri vel hinc inde pilis sparsis paucis praediti, eglandulosi, spinulis minutis paucis armati. Stipulae latae, auriculis divergentibus acuminatis munitae, margine copiose glandulosae. Foliola late elliptica, basi paulo angustata, superiora acuta, inferiora rotundata glabra, plurimum biserrata, medio-cristata, nervo mediano subtus laevi, terminale longe petiolatum. Inflorescentia 1—2-flora. Pedicelli breves, receptaculis subglobo-ovatis breviores vel ea longitudine aequantes, nudj, bracteis latis breviores. Sepala reflexa, dorso glabra, pinnulis parce glandulosis. Styli lanuginoso-pilosi. Discus non elevatus. Petala subalba. A f. *Presliana* differt petiolis subglabris eglandulosis nervo primario foliolorum subtus eglanduloso a. f. *glauca* petiolis eglandulosis receptaculis subglobo-ovatis, pinnulis sepalorum minus glandulosis, petalis subalbis, disco non conico. — Cl. d. Crépin huic plantae in herb. meo schedulam: An *Rosa glauca* Vill.? addidit.

Hercegovina: Prope Umoljani a. c. 1400m (*B.). Floret m. Julio.

γ. *glaucifolia* [Opiz in Flora V (1822), 268; H. Braun in Verh. zool.-bot. Ges. (1885), 99 et in Beck, Fl. Nied.-Öst., 787].

Bosna: Circa Sarajevo in m. castello coronato et ad pedem montis Hum (M.). In agro Kupreško polje (Pr.).

f. *moščanicae* [H. Braun apud Beck. Fl. Südbosn., l. c., 105]. »Rami squarrosi, partim aculeis robustis falcatis partim aculeis tenuioribus gracilibus armati, parum flexuosi. Cortex dilute brunneus vel virescens. Stipulae sat latae-lanceolatae, cum auriculis divergentibus. Petioli pilo-

suli, plerumque inermes, partim glandulis praediti partim inermes. Foliola mediocria satis lata, rotundato-elliptica, in petiolum rotundata, utrinque glaberrima, supra saturate-viridia subtus glauca, et in nervo primario glandulis sparsis praedita, in margine duplicato-glanduloso-serrata, serraturae dentes non profunde in lamina incisi, cum denticulis secundariis glandulosis vel posteriores saepe nullis. Bracteae ut stipulae sed saepe foliaceae. Receptacula ovoidea-oblonga vel ovoidea. Pedunculi satis longi. Sepala pinnulis parum glandulosis. Petala satis magna, rosea, subalbicantia. Discus conicus. Styli dense puberuli.« (H. Braun.)

»Durch die wehrlosen und wenig drüsigen etwas befläumten Petiolen, sowie durch die blaßrosaroten Blüten, die lichtbraune Farbe der Rinde von *Rosa rubelliflora* Rip. abweichend, von *Rosa glaucifolia* Opiz typica durch die wenig drüsigen Petiolen etwas abweichend, aber jedenfalls unter allen mir bislang zur Ansicht vorgelegenen Rosen aus der Gruppe der *Rosa glaucifolia* Opiz am besten mit der Diagnose Opiz's übereinstimmend und vielleicht eine Form, welche die *Rosa opaca* Fries mit der *Rosa dumalis* verbindet.« (H. Braun.)

Bosna: Circa Sarajevo in faucibus fl. Moščanica, a. 600 m, m. Majo (B. f. *H. Braun 1887).

ψ. *rubelliflora* [Ripart apud Déségl. in Mém. soc. acad. Maine et Loire, X (1861), 109 pro spec.; H. Braun in Beck, Fl. Nied.-Öst., 787; R. Keller in Asch. Graebn., l. c., 164. — *R. dumalis* var. J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 295].

Bosna: Circa Sarajevo inter frutices in m. Trebević, a. 1050 m (*M. 1904).

ω. *sphaeroidea* [Ripart in Déségl., Cat. rais., nr. 194 (1876); J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 296. — *R. canina* var. H. Braun apud Beck, Fl. Nied.-Öst., 788].

Bosna: In silvis dumetosis montium serpent. prope Zvornik (Wettst. f. H. Braun apud Fritsch), circa Grahovik pr. Travnik (Ledić f. *J. B. Keller 1884); circa Sarajevo in valle riv. Koševo et in declivibus proxime Da Riva in valle fl. Miljacka (M.).

ι. *subtomentella* [J. B. Keller in Öst. bot. Zeit (1884), 128 pro var. *R^{ae} sphaeroideae*]. »Stylis villosis (saepe dense villosis), basi subcoalitis (ut in *R. sphaeroidea*) sed fructibus

sat parvis ellipsoideo-rotundatis vel globosis, disco subconico subpurpureo. Sepalis breviusculis utrinque villosulis, supra purpurascentibus, pinnulis angustissimis, parum dentato-glandulosus, glabris. Pedunculis ternis 10—20 mm longis, sat tenuibus, glabris (pilis versus insertionem raris, evanescentibus). Petiolis sparsim pilosulis, basi petiolisque semper hirsutis, glandulosus, aculeatis. Stipulis ad petioli partem dorso semper glanduloso-hirtellis (*Rosae tomentellae*); auriculis breviusculis, angustis, divaricatis aut acuminato-cuspidatis, omnibus sat conformibus. Foliolis septenis, remotis, mediocribus aut parvis, late ellipticis, apice breviter acuminatis, terminalibus basi rotundatis, lateralibus attenuatis, ad costam tota longitudine remote glandulosus, rarius pilis sparsissimis evanescentibus praeditis, supra obscure viridibus, non nitentibus, subtus pallide glaucescentibus, nervis prominulis, omnibus biserratis, denticulis minutis (1—2), glanduliferis (*R. tomentellae* affinis). Aculeis ramorum falcatis validis, iis ramulorum minoribus aut inaequalibus, e basi dilatata rectis, hinc inde verticillum formantibus.« (J. B. Keller, l. c., 128—129) ubi etiam positionem inter propinquas amplius explicavit. Certe transitum ad *Tomentellas* facit.

Bosna: Prope Travnik (Br. f. *J. B. Keller).

f. *densifolia* [H. Braun apud Fritsch in Mitt. naturw. Ver. Steierm. 47 (1910), 185 pro subvar. varietatis *sphaeroideae*]. »Styli pilosi vel leviter pilosi; foliola ovoidea, late rotundata; rami floriferi aculeati« (H. Braun).

Bosna: In m. Kvarac prope Srebrenica, solo trachytico, a. 1000 m (Wettst. f. *H. Braun apud Fritsch 1910).

α_1 . *eristyla* [Ripart et Déségl. in Déségl., Cat. rais., nr. 184 in Bull. soc. bot. Belg. XV (1876), 334; J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 290 pro sp.; H. Braun in Beck, Fl. Nied.-Öst., 788; R. Keller apud Asch. Graebn., l. c., 166].

Hercegovina: Circa Nevesinje (*Sagorski 1914).

β_1 . *biserrata* [Mérat, Fl. Paris, 190 (1812). Confer: H. Braun apud Beck, Fl. Südbosn., III in Ann. naturh. Hofmus., II 107 pro spec.; Baker in Journ. Linn. soc. XI (1869), 228; R. Keller apud Asch. Graebn., l. c., 165. — *R. sphaeroidea* var. J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 299]. Differentias inter hanc Rosam et *R^{am} sphaeroideam* Rip. ac *R^{am} eristylam* Rip. exposuit H. Braun l. c.

Bosna: Circa Sarajevo in sepibus prope Švrakino Selo, a. c. 520 m, m. Junio (B f. *H. Braun 1887, M.); in sepibus inter Miljevići et Lukavica, prope Lukavica (M.), probabiliter ad formam *disparabilem* [Lucan. et Ozan. in Bull. soc. Dauph., 328 (1881)] pertinens. Etiam R. Keller [Mitt. II, 36] hanc varietatem in locis Bosnae pluribus reperit.

γ_1 . *rubescens* [Ripart in Déségl., Essai monogr. Ros. in Mém. soc. acad. Maine et Loire X (1861), 110 pro spec.; H. Braun apud Beck, Fl. Nied.-Öst., 789; R. Keller apud Asch. Graebn., l. c., 165. — *R. dumalis* var. J. B. Keller apud Hal. Braun, l. c., 295].

Bosna: Circa Travnik supra castellum (Platz) prope Grahovik (l. Ledić) et inter collem Tarabovac et m. Vlašić (Br), omnibus stationibus f. *J. B. Keller apud Wiesbaur 1884, in formis affinis.

δ_1 . *malmudariensis* [Lejeune, Fl. Spa, I 231 (1811) pro spec.; H. Braun apud Beck, Fl. Nied.-Öst., 788. — *R. canina* v. *ambigua* Ser. in DC., Prodr., II, 614. — *R. sphaeroidea* var. J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 299].

Bosna: Circa Sarajevo inter frutices in pluribus locis montis Trebević a. 1050–1320 m (*M. 1904). »Junge Triebe zuweilen auch mit 9-zähligen Blättern. Nebenblätter breit, ziemlich gleichmäßig verbreitert, mehr oder weniger rot überlaufen. Blütenstiele zu 1–4. Hochblätter am Rande kleindrüsig gefraust. Kelchzipfel herabgeschlagen oder etwas abstehend, am Rande mit zahlreichen, kleinen Drüsenhaaren besetzt, am Rücken kahl. Fiedern und Anhängsel lanzettlich, drüsig gesägt. Discus etwas erhaben. Scheinfrucht ziemlich klein, rundlich« [K. Malý in Verh. zool.-bot. Ges., LIV (1904), 211–212.]

ϵ_1 . *podolica* [Tratt., Monogr. Ros., II, 71 (1823) pro spec.; H. Braun apud Beck, Fl. Nied.-Öst., 788. — *R. glaucescens* Bess., Enum. pl. Vollh. Pod., 19 (1822). — *R. dumalis* v. *podolica* (Rip.) J. B. Keller in Öst. bot. Zeit. (1884), 130].

Bosna: Circa Travnik (Br. f. *J. B. Keller 1884) hic »lusus petiolis stipulisque rubentibus«. Circa Sarajevo in declivibus montis Hrastova glava versus vallem fl. Miljacka, a. 600 m; inter dumeta montis Trebević a. c. 1050 m (M.)

ζ_1 . *gregaria* [H. Braun in Beck, Fl. Nied.-Öst., 788 (1892)].

Bosna: Circa Sarajevo in m. castello coronato a. c. 570 m (*M. 1904). »Blättchen matt. Kelchzipfel mit schmalen, fast ganzrandigen Anhängseln und Fiedern, letztere oft in verlängerte Drüsenborsten verwandelt.« [K. Malý in Verh. zool.-bot. Ges. LIV (1904), 212.]

η_1 . *cladoleia* [Ripart apud Crépin, Prim., 17 (1869) nom. solum et apud Déségl., Cat. rais., nr. 180 (1876); J. B. Keller in Hal. Braun, l. c., 285 pro spec.; K. Malý in Verh. zool.-bot. Ges. LIV (1904), 212].

Bosna: In monte Trebević a. c. 1040 m (*M. 1904).

♁₁. *affinis* [J. B. Keller apud Wiesb. in Öst. bot. Zeit. (1884), 130 pro var. *R^{ae} dumalis*] »*R^{ae} affini* [Billot, Exs. nr. 3720 vix Rau] proxima, ab eaque stylis albolanatis et foliolis minoribus solum diversa« [J. B. Keller, l. c.].

Bosna: Circa Travnik in declivibus australibus montis Vlašić (Br. f. *J. B. Keller 1884).

♁₁. *villosiuscula* [Ripart in Crépin, Prim. Bull. soc. bot. Belg. (1869), 45 et XV (1876), 335 pro spec.; H. Braun apud Beck, Fl. Nied.-Öst., 788; R. Keller in Asch. Graebn., l. c., 167. — *R. medioxima* var. J. B. Keller apud Hal. Braun l. c., 284].

f. *subcordata* [H. Braun apud Beck, Fl. Südbosn. III in Ann. naturh. Hofmus., II, (1887), 106]. »Rami ramulique dense aculeati, aculei saepe albido-canescens falcati. Petioli saepe dense puberuli, purpurascens. Foliola sat parva, subtus glauca, basin versus subcordata, juniora rubescentia, glanduloso-biserrata. Stipulae et bractae purpurascens. Petala dilute rosea. Styli dense albido-pilosi. Discus subconicus. Einerseits durch das Indument der Petiolen und die Form der Blättchen nahe der *Rosa villosiuscula* Rip. in Crépin, Primit. monogr. Ros. in Bull. de la soc. royale de Botanique de Belgique, VIII (1869), pag. 239 s. descrpt., Déséglise, Catalogue raisonné (1876) Nr. 194 (1876) verwandt, anderseits durch das rötliche Kolorit der jungen Blättchen und Stipulen, Kelchzipfel etc., die ziemlich dicht behaarten Griffelköpfchen an *Rosa rubescens* Rip. erinnernd. Eine der zahllosen Mittelformen, welche die Abgrenzung der Typen in der Gruppe der *Eucaninae* so schwankend und unsicher machen.« (H. Braun.)

Bosna: Circa Sarajevo in sepibus prope Kupina in valle riv. Sušica. m. Junio (B f. *H. Braun 1887).

**Pedicelli glanduloso-setosi.

♁₁. ?*transmota* [Crépin apud Déséglise in Bull. soc. bot. Belg. XV (1876), 366; J. B. Keller apud Hal. Braun, l. c., 270 pro spec.; R. Keller apud Asch. Graebn., l. c., 169. — *R. a. i. degavensis* var. H. Braun in Beck, Fl. Nied.-Öst., 793]. »Var. pedunculis glabris mit mehr kugeligen, großen, glänzenden Früchten, drüsenlosen (?) Blütenstielen, typischen runden, dicklichen, glänzenden aber etwas kleineren Blättchen.« [J. B. Keller in Öst. bot. Zeit. (1884), 94.]

Bosna: In fauce quadam orientem versus a Sarajevo (Br. f. J. B. Keller apud Wiesbaur 1884).

λ₁. *Schottiana* [Seringe in DC., Prodr., II, 613 (1825); R. Keller in Asch. Graebn., l. c., 171. — *R. Schottiana* Déséglise in Bul. soc. bot. Belg., XV (1876), 358; *R. andegavensis* var. H. Braun in Beck, Fl. Nied.-Öst., 793].

Bosna: In fageto prope Dobra voda in m. Trebević a. 1250 m (*M. 1904).

Biserratae dubiae.

μ₁. *venosa* [Sw. ex Spreng., Syst., II, 554 (1825) pro spec. versus formam umbrosam J. B. Keller in Öst. bot. Zeit. (1884), 131]. »Sehr ausgezeichnet durch Stachellosigkeit, durch bläulich-graue, dickliche, nach beiden Enden oval-lanzettlich verschmälerte, glatte Blättchen, deren konvergierende Zähne nur mit je 1–2drüsigen Zähnchen ausgestattet sind; ferner durch eiförmig zugespitzte Öhrchen der tief ausgeschnittenen Nebenblätter, durch den von einem langen Deckblatt gestützten Corymbus, durch die langgestielten Receptakeln und die schwächer kurzsteifhaarigen Griffelköpfchen. Sie erinnert lebhaft an *R. opaca* Fr., ist aber eine *R. canina biserrata*.« (R. Keller.)

Bosna: Circa Travnik (Br. f. *J. B. Keller 1884). Brandis beschreibt die Blätter dunkelgrün, glanzlos!

ν₁. ?*curticola* [Puget f. Déséglise in Mém. ac Maine et Loire (1873), 114; Borbás, Magy. birod. rózsái, 416, 443 pro spec.; H. Braun apud Beck, Fl. Nied.-Öst., 790].

ι. *durans* [Wiesb. in Öst. bot. Zeit. (1884), 131]. »Obscure viridis, ramis ramulisque floriferis aculeis rectis sat brevibus copiosissimis onustis; petiolis omnibus aculeatis; foliolis fructibusque mediocribus; calyce patente, pinnulis margine 2–5-dentato-glandulosis; floribus pallide roseis; fructu globoso-ovoideo nitido sanguineo. *R. canina biserrata* inter *R^m curticolam* et *R. oblongam* Rip. et Dés. ponenda« [J. B. Keller apud Wiesb., l. c.].

Bosna: In m. Vlašić prope Travnik supra castellum (Br. f. *Wiesbaur et J. B. Keller 1884).

4. Scabratae.

Subglabrae, foliola subtus etiam ad nervos secundarios glandulosa (in seriebus prioribus 1–3eglandulosa).

*Pedunculis glandulosis.

ξ₁. *nitidula* [Besser, Cat. hort. Crem. suppl. IV, 20 (1815) et Enum. Pod. Vol. 20 et 67; Borbás, Magy. birod. rózsái 464 et 467 (1880); H. Braun in Beck, Fl. Nied.-Öst., 804 pro spec. — *R. canina* var. K. Malý in Verh. zool.-bot. Ges. LIV (1904) 213].

Bosna: In sepibus montis Trebević a. 1050m (*M. 1904).

f. *belgradensis* [Pančić, Flora agri Belgrad. (1865) 130; Öst. bot. Zeit. (1866) 219; Flora princ. Serb. (1874) 283. — *R. nitidula* f. *Belgradensis* Borb. in Bot. Zentralbl. I (1880) 90] »in modif. foliolis serraturisque brevioribus, late ovatis, ovato-rotundatis (obovatisque); petiolorum dense glandulosorum aculeis rarioribus« [J. B. Keller in Öst. bot. Zeit. (1890), 102].

Hercegovina: In monte Podvelež prope Mostar (Fo. f. *J. B. Keller 1890).

**Pedunculis levibus.

α₁. *scabrata* [Crépin in Scheutz, Stud. Skand. Ros., 23 (1872) et in Bull. soc. bot. Belg. VIII (1869), 241; R. Keller apud Asch. Graebn., l. c., 171. — *R. scabrata* Crépin, l. c., 241; Borbás, Magy. birod. rózsái, 465. — *R. nitidula* var. H. Braun apud Beck, Fl. Nied.-Öst., 804].

f. *heteracantha* [J. B. Keller in Öst. bot. Zeit. (1884), 94 pro var. *R^{ae} scabratae* »aculeis biformibus«.

Bosna: Circa Travnik (Br. f. *J. B. Keller 1884); prope Jajce (R. Keller).

30. *Rosa canina-dumetorum*.

a) *Rosa hispidula* [Ripart apud Déségl. in Bull. soc. bot. Belg. XV (1876), 386 = *R. dumetorum* var. R. Keller apud Asch. Graebn., l. c., 158].

Bosna: Prope Dobož (L. Richter sub *R. fallens* [Déségl. f. B.]); circa Travnik prope Grahovik, Mosor et aliis locis (Br. f. *R. Keller 1896).

b) *Rosa Déséglisei* [Boreau, Fl. centre Franc., ed. III, II 224 (1857) pro spec.; Christ, Ros. Schweiz (1873) 187 pro f. *R. dumetorum*; Rouy in Rouy et Cam., Fl. France, VI (1900), 307 pro var.].

Bosna: Prope Travnik et in m. Vilenica (Br. f. *R. Keller 1896) etiam cum serratura duplice incipiente.

31. *Rosa dumetorum* (Thuillier, Fl. Paris, ed. II, 250 (1799); Borb., Magy. birod. rózsái, 427; J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 273; H. Braun in Beck, Fl. Nied.-Öst.,

795; R. Keller in Asch. Graebn., l. c., 173; Schneid., Laubholzkunde, I, 565]. Inter frutices, ad silvarum margines usque ad regionem montanam. Floret m. Junio—Julio.

Bosna: Circa Bihać (Boller f. R. Keller); prope Crna Rijeka, Varcar-Vakuf, Jezero, Jajce (R. Keller); circa Travnik (Br. f. *J. B. Keller apud Wiesbaur 1884) saepius in formis variis, sicut prope Dolac, Putičevo, Grahovik, in colle Tarabovac, prope Turbe, Peltakovica, Pirota, in m. Vilenica a. 1000 m (Br. f. R. Keller, R. Keller); prope Kruševdol (distr. Srebrenica) Slap ad fl. Drina, Trnovo, in m. Romanija Pl. (R. Keller).

1. *Serratae.*

Foliola simpliciter serrata.

α. *platyphylla* [Rau, Enum. Ros. Wirc., 82 (1816); H. Braun in Verh. zool.-bot. Ges. (1885), 96 pro spec.; Christ, Rosen Schweiz, 184 (1873); H. Braun in Beck, Fl. Nied.-Öst., 799; R. Keller apud Asch. Graebn., l. c., 175].

Bosna: (*R. Keller 1896) locis ut *R. dumetorum*. — **Hercegovina:** In m. Velež a. 850 m (*B.).

β. *urbica* [Leman in Bull. soc. phil. 93 (1818); J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 277; R. Keller apud Asch. Graebn., l. c., 175 pro spec. — *R. collina* var. Baker, Mon. brit. Ros., 228].

γ. *semiglabra* [Ripart apud Déségl. in Bull. soc. bot. Belg., XV (1876), 373 pro spec.; H. Braun apud Beck, Fl. Nied.-Öst., 799; R. Keller in Asch. Graebn., l. c., 175. — *R. urbica* var. J. B. Keller in Hal. Braun, l. c., 278].

Bosna: Circa Travnik in faucibus fl. Lašva inter m. Vlašić et coll. Tarabovac (Br. f. *J. B. Keller apud Wiesbaur 1884) »in einer Form mit behaarten Griffeln, flachem Discus, kugeligen Receptakeln, halbdoppelter Serratur, behaarten Blättchenrippen«, der *R. uncinella* Bess. nahestehend. Circa Sarajevo in monte castello coronato (M.). — **Hercegovina:** Prope Bojište (*Sagorski 1914) »eine durch stark behaarte Griffel und kugelig-eiförmige Scheinfriichte ausgezeichnete Form mit sehr blaßrosa gefärbten, ziemlich kleinen Blüten. Ihre Blätter sind unterseits wie bei *R. urbica* Lem. nur auf den Nerven behaart« [Sagorski in Allg. bot. Zeit. (1914), 72].

δ. *sparsipila* [Gandoger t. 2198]. »Pedunculis glabris, stylis paulo villosis (non subhirsutis), pedunculis c. 13 mm longis, fructibus oblongis non strangulatis, sed utrinque attenuatis, ramis floriferis inermibus aut sparsim aculeatis, foliolis obovato-ellipticis aut late obovatis, basi angustatis, simpliciter serratis. Differt a *semiglabra* receptaculis oblongo-ellipsoideis, stylis

minus lanuginosis saepe subcalvis, disco conico.« [J. B. Keller in Öst. bot. Zeit. (1885), 344 pro var. *subglabra*.]

Bosna: Circa Travnik (Br. f. *J. B. Keller apud Wiesb. 1885).

f. *globata* [Déségl. in Bull. soc. bot. Belg., XV (1876), 374 pro spec.; J. B. Keller in Hal. Braun, l. c., 278; H. Braun in Beck, Fl. Nied.-Öst., 800; R. Keller in Asch. Graebn., l. c., 175].

Bosna: In m. Trebević (M. 1904).

f. *lašvana* [J. B. Keller in Öst. bot. Zeit. (1884) 170 pro var. *R^{ae} urbicae*]. »Stylis dense hirsutis, fructibus ovato-globosis, serraturis lanceolatis. Eine schöne, dunkelgrüne, fast kleinblättrige Form der *R. urbica* mit scharfgespitzten länglich-elliptischen, etwas schmalen Blättchen, verlängerter, zusammenneigender, einfacher Serratur und längeren Stacheln. Die zerstreute Behaarung des Parenchyms zwischen den beiden Seitennerven der unteren Blattfläche und die gleichfalls zerstreute Behaarung der Blattoberfläche noch Mitte Juli vorhanden. Auch die Griffel sind stärker behaart.« (J. B. Keller, l. c.)

Bosna: Circa Travnik ad ripam dextram fl. Lašva juxta nosocomium militare (Br. f. *J. B. Keller apud Wiesb. 1884).

f. *hirta* [H. Braun in Verh. zool.-bot. Ges. 35 (1885), 108 pro spec.; H. Braun in Beck, Fl. Nied.-Öst., 797; R. Keller in Asch. Graebn., l. c., 176].

Bosna: In sepibus prope Švrakino Selo juxta Sarajevo, a. 520 m (B. f. *H. Braun 1887). »Eine Form mit ziemlich kleinen Blättchen, dicht behaarten, etwas verlängerten Griffeln und etwas kegeligem Discus. Blattstiele bewehrt oder unbewehrt. Eine Abänderung gegen die mikrophyllen Formen der *R. trichoneura* Rip.« [H. Braun l. c.]

f. *eulanceolata* [H. Braun in Verh. zool.-bot. Ges. (1885), 96 pro spec.; H. Braun apud Beck, Fl. Nied.-Öst., 800].

Bosna: Circa Sarajevo in saxosis vallis fl. Miljacka, in m. castello coronato et m. Hum (*M. 1904).

f. *submitis* [Gren. in Schultz, Arch. fl. Franc., 332 (1854) et Annot. fl. Fr. Allem., 10 (1855) pro spec.; H. Braun apud Beck, Fl. Nied.-Öst., 796].

Bosna: In declivibus prope Čelebić (distr. Foča) a. c. 1700 m (Schiller f. *H. Braun apud Fritsch 1914).

f. *piligera* [H. Braun apud Beck, Fl. Südbosn. III in Ann. naturh. Hofmus., II (1887), 108 pro var. *R^{ae} hirtae* subspec. *ramealis* Pug. — *R. dumetorum* var. *R. Keller* in Asch, Graebn.,

l. c. 176]. »Frutex elevatus, rami effusi. Cortex ramorum purpurascens-brunneus vel virescens. Rami aculeati. Aculei subgraciles inclinati vel falcati, in ramulis fructiferis hinc inde sparsi vel nulli. Stipulae anguste-lanceolatae, subtus pilosulae, supra glabra, auriculis acutis vel acuminatis in margine glandulis purpurascens praeditae. Petioli pilis longiusculis dense vestiti, eglandulosi, cum aculeolis flavescens obtecti vel inermes. Foliola quina vel septena, elliptica vel obovato-elliptica, mediocria, apicem versus obtusiuscula, basin versus in petiolum subattenuata, supra glabra, subtus in nervo primario villosula, in nervis secundariis pilosula et hinc inde inter nervos pilis plus minus oblecta, lateralia sessilia, supra flavescens-vel saturateviridia in margine simpliciter serrata. Bractae valde dilatatae saepe foliaceae. Pedunculi laeves, longitudine mediocres. Receptacula ovoidea vel ellipsoidea. Sepala duo integra, tria pinnatifida, cum pinnulis eglandulosis, superne subspathulata, post anthesin reflexa, cito decidua. Discus valde conicus. Styli glabri, subglabri vel sparse hirtelli. Receptacula fructifera ovoidea.« (H. Braun.) Differentiae inter alias formas explicatae apud H. Braun [l. c. 108 – 109].

Bosna: Circa Sarajevo in sepibus faucium riv. Moščanica sub castello urbis Sarajevo, a c. 600 m (Beck, Pl. Bosn. Herc. nr. 27 p. p. f. *H. Braun 1887).

f. *platyphylloides* (Déségl. et Ripart in Bull. soc. bot. Belg. XV (1876), 376 pro spec.; J. B. Keller apud Hal. Braun, l. c., 279; R. Keller apud Asch. Graebn., l. c., 176].

Bosna: Circa Sarajevo in declivibus montis Trebević et in m. castello coronato (*M. 1904).

γ. *trichoneura* [Ripart apud Crépin in Bull. soc. bot. Belg., VIII (1869), 240 et XV (1876), 375 pro spec.; J. B. Keller apud Hal. Braun, l. c., 280; R. Keller apud Asch. Graebn., l. c., 177].

Bosna: Supra castellum urbis Travnik in saxis calcareis (Br. f. *J. B. Keller apud Wiesbaur 1884). — **Hercegovina:** In valle fl. Zalomska prope Plužine (Fo. f. J. B. Keller).

In formis intermediis inter *trichoneuram* et *Thuillieri* [Christ, Ros. Schweiz, 185 (1873)].

Bosna: Prope Krušev Dol (ditio Srebrenice) in m. Romanija (R. Keller, Mitt. II, 37 1896).

f. *haemantha* [H. Braun apud Fritsch in Mitt. naturw. Ver. Steierm. 47 (1910) 186]. »Foliola late elliptica; receptacula breviter ovoidea, hinc inde subglobosa; styli subglabri« (H. Braun).

Bosna: In silvis ad m Crvene stijene prope Srebrenica a. 1000—1200 m (Wettst. f. *H. Braun 1910).

g. *conglobata* [H. Braun in Oborny, Fl. Mähr., 918 (1888)].

f. *globulosa* [H. Braun apud Fritsch in Mitt. naturw. Ver. Steierm., 47 (1910) 186]. »Differt a *R. conglobata* H. Braun pedunculis elongatis, foliolis majoribus« (H. Braun).

Bosna: Ad pratorum margines prope Ifsar a. c. 1000 m [Schiller f. *H. Braun apud Fritsch 1910].

2. **Transitoriae.**

Foliola partim vel irregulariter biserrata.

e. *decalvata* [Crépin apud H. Braun in Beck, Fl. Nied.-Öst., 800 (1892)].

Bosna: In declivibus montis castello coronato urbis Sarajevo et inter dumeta vallis riv. Koševo (*M. 1904).

z. *solstitialis* [Besser, Prim. fl. Gal., I, 324 (1809) pro spec.; H. Braun in Beck, Fl. Nied.-Öst., 795 (1892); R. Keller in Asch. Graebn., I. c., 177].

Bosna: Circa Travnik prope neocomia militaria (Br. f. *J. B. Keller apud Wiesbaur 1884).

3. **Biserratae.**

Foliola biserrata.

h. *amphisbaena* [Gandoger t. 2377; f. J. B. Keller in Öst. bot. Zeit. (1884), 170 pro var. *R^{ae} urbicae*] »mit drüsigen Blattstielen, verschiedenfarbigen (unterseits bläulichen) elliptisch-länglichen, mittelgroßen Blättchen, doppelter Serratur, geraden, abwärts geneigten Stacheln, großen, breitellipsoidischen, dunkelroten Scheinfrüchten und feineren, tiefer fiederteiligen Sepalen«. Der *R. uncinella* Bess. und *R. uncinelloides* Puget nahe stehend. [J. B. Keller.]

Bosna: Circa Travnik supra nosocomia militaria (Br. f. *J. B. Keller 1884).

i. *hemitricha* [Ripart apud Déséglise in Bull. soc. bot. Belg., XV (1876), 373 pro spec.; J. B. Keller apud Hal. Braun,

l. c., 281; H. Braun in Beck. Fl. Nied.-Öst., 797; R. Keller in Asch. Graebn., l. c., 180.]

Bosna: In castello Grad urbis Krupa (B.); circa Travnik prope Grahovik (Ledić f. *J. B. Keller apud Wiesbaur 1884). — **Hercegovina:** In agro Gatačko Polje (Riedel f. *B.).

«. *subglabra* [Borbás, Magy. birod. rózsái, 435 (1880); J. B. Keller apud Hal. Braun, l. c., 280; H. Braun apud Beck. Fl. Nied.-Öst., 800; R. Keller apud Asch. Graebn., l. c., 180].

Bosna: Circa Travnik supra locum ad tela sclopetorum petenda (Br. f. *J. B. Keller 1884) sed cum ramis aculeatis.

Imperfecte descriptae.

? λ. *didymoxis* [Gandoger et Deb. apud Gandog. t. 2444 pro spec. f. J. B. Keller in Öst. bot. Zeit. (1884), 171 pro var. *R^{ae} dumetorum*]. »Ausgezeichnet durch rote Rinde, dünnere Äste, fast gerade, derbe, nach abwärts geneigte Stacheln, kurze, dunkelgrüne oft rötliche, mittlere bis kleine, nach beiden Enden verschmälerte spitze Blättchen mit schwächerer Pubescenz auf der Unterseite, dünne Fruchtstiele, birnförmige Früchte, schmale Sepalen und schwachbehaarte Griffel« (J. B. Keller).

Bosna: Circa Travnik supra nosocomia militaria (Platz f. *J. B. Keller apud Wiesbaur 1884).

μ. *vlašićensis* [J. B. Keller in Öst. bot. Zeit. (1884), 171 pro var. *R^{ae} dumetorum*]. »*Rosa pygmaea* a grege *R^{ae} solstitialis* Bess. (forma versus *R^m tauricam* (M.B.) Crépin, a qua differt stylis parce hirtellis, receptaculis ovoideis aut obovoideo-globosis, pedunculis semper brevibus. Iisdem notis a *R. cinerascenti* Cariot et a *R. erythraea* Bor. discrepat. A *R. coriifolia* Fr., cui magis proxima, calyce reflexo et stylis sparsim hirtellis recedit. Dubio procul varietas nova (*R. solstitialis*) humilis, condensato-ramosa, poliantha valde insignis.« (J. B. Keller.)

Bosna: Ad finem summam arborum in monte Vlašić m. Julio (Deyl f. *J. B. Keller 1884); in colle Tarabovac (Br. f. J. B. Keller).

32. *Rosa glauca* [Villars apud Loisel. in Desv., Journ. bot. II, 336 (1809); Borbás, Magy. birod. rózsái, 442, 459; J. B. Keller apud Hal. Braun. Nachtr. Fl. Nied.-Öst., 225; H. Braun in Beck. Fl. Nied.-Öst., 781; R. Keller apud Asch. Graebn., l. c., 183; Schneid., Laubholz., I, 565]. In declivibus fruticosis regionis montanae ac subalpinae. Floret m. Junio.

Bosna: Circa Sarajevo ad dejectum rivuli Koševo juxta montem Bukovik (*M. 1904!) cum foliolis parvis. — **Hercegovina:** [Sec. Asch. Kautz, Cat. 99 (1877)]. Ubi?

α. *complicata* [Gren., Fl. Jur., 239 (1864) pro spec.; H. Braun in Beck, Fl. Nied.-Öst., 782; R. Keller apud Asch. Graebn., l. c., 188].

Bosna: In declivibus supra nosocomia militaria urbis Travnik (*R Keller 1896).

»Die Achsen sind spärlich bestachelt, die blütentragenden Zweige stachellos. Blätter 5-zählig. Nebenblätter z. T. dicht drüsig gefranst. Blattstiel oft drüsenreich, doch sehr spärlich bestachelt. Blättchen klein, oval zugespitzt. Zahnung häufig doppelt, Zähnchen mit Drüsen. Blüten einzeln oder in 3-zähligen Corymben, kurzgestielt. Brakteen die Blütenstiele überragend. Rezeptakel kugelig, von mittlerer Größe. Sepalen ausgebreitet, z. T. aufgerichtet, vereinzelt auch zurückgeschlagen. Griffelköpfchen groß, dicht behaart.« [R. Keller Mitt. II, l. c., 38 (1896).] Nach Crépin vielleicht eine Variation der *R. canina* v. *dumalis*.

33. *Rosa canina-glauca*.

a) *Rosa subcanina* [J. B. Keller in Bot. Zentralblatt XLVII (1891), 321. — *R. Reuteri* f. Christ, Ros. Schweiz, 169 (1873). — *R. glauca* var. J. B. Keller in Hal. Braun, Nachtr. Fl. Nied.-Öst., 226; H. Braun in Beck, Fl. Nied.-Öst., 782; R. Keller apud Asch. Gr., l. c., 195].

34. *Rosa dumetorum-coriifolia*.

a) *Rosa subcollina* [Christ, Ros. Schweiz, 191 (1873) pro var. *R^{ae} coriifoliae* ampl.; R. Keller in Asch. Graebn., l. c., 209].

v. *grisescens* [H. Braun apud Beck, Fl. Südbosn., III in Ann. naturh. Hofm. II (1887) 109—110 pro var. *R^{ae} coriifoliae* Fr.]. »Frutex elevatus, ramis ramulisque aculeatis. Rami subflexuosi, rufescentes. Aculei robusti, adunci inclinati vel subrecti; canescentes. Stipulae anguste-lanceolatae, supra glabrae solum in media parte pilosae, subtus tota in lamina adpresse pilosae, in margine ciliatae et cum glandulis atropurpleis praeditae, auriculis subacutis, ciliatis. Petioli dense canescente-villosuli, eglandulosi et inermes. Foliola mediocria, canescente-virescentes, ovata-elliptica ad basin late rotundata apicem versus breviter acuta vel obtusiuscula, supra pilis adpressis dense vestita, subtus

tota in lamina dense pilis albidis obtecta, in margine simpliciter serrata. Serraturae dentes acuti hinc inde sed rarius denticulis secundariis glandulosis intermixti. Bracteae sat latae, pedunculos longitudine aequantes vel superantes, saepe foliaceae, minus pilosae ut in stipulis. Pedunculi longitudine mediocres, laeves glabrique. Receptacula ovoidea vel oblongo-ovoidea, laevia et glabra. Sepala in dorso laevia, eglandulosa, in margine tomentosa, pinnulis hinc inde glandulis rufescentibus intermixtis; post anthesin reflexa, demum suberecta. Petala pulchre rosea. Discus subconicus. Styli hirsuti sed non villosi.«

»Unterscheidet sich von *Rosa coriifolia* Fries f. *typica* durch weniger hakige fast gerade Stacheln, spitzere, schmaler dreieckige Sägezähne, die schwächer behaarten Griffel, den kegeligen Discus, größere Blüten, längere Blütenstiele. *Rosa incana* Kitaibel in Schultes, Flora Österreichs, II, pag. 70 (1814) unterscheidet sich vor allem durch die dünnere Konsistenz der Blättchen, weniger dichtes Wachstum, weißwollige Griffel, ebenen Discus, wenig geteilte Kelchzipfel.« (H. Braun.)

Differentias huius *Rosae* a *R. coriifolia* v. *trichostyli* Borb. vide apud H. Braun l. c., 110. Sec. determinationem dom. Crépin in herb. Beck ad *R^m subcollinam* pertinet.

Bosna: Circa Sarajevo in sepibus collis Gorica, inter frutices secus rivulum Sušica potok, m. Junio florif. (B. f. *H. Braun 1887).

Tribus: *Amygdaleae*.

[DC., Prodr., II, 529; Beck, Fl. Nied.-Öst., 816 et in Reich. f., Ic. fl. Germ., XV 2, 1. — *Amygdalaceae* G. Don, Gen. syst., II, 481. — *Amygdaleae* Juss., Gen., 340. — *Drupaceae* Schneider, Laubholz., I, 588 — *Rosaceae* trib. *Pruneae* Baill., Hist. pl., I, 478; Benth. Hook., Gen., I, 602; subf. *Prunoideae* Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 12 et 50.]

14. *Prunus*.

[L., Spec. pl., 473 (1753) et Gen., ed. V, 212; rectius Benth. Hook., Gen., I, 609; Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 51; Beck, Fl. Nied.-Öst., 816 et in Reich. f., Ic. fl. Germ., XXV 2, 1; Asch Graebn., Syn. mitteleur. Fl., VI 2, 118; Schneider, Laubholz., I, 589, II, 973. — *Amygdalus*, *Armeniaca*, *Cerasus* aut.] »Šljiva, šljivica«.

Sectio: *Prune*.

[Griseb., Spic. fl. Rum., I, 85 (1843); Beck in Reich. f., l. c., 1; sect. *Armeniaca* et *Pruni genuinae* Koch. Syn. fl. Germ., 205; sect. *Armeniaca* et *Pru-*

nus Gaud., Fl. Helv., III, 293, 304 (1828); sect. *Armeniaca* et *Prunophora* Endl., Ench. 663; Benth. Hook., Gen., I, 610. — *Armeniaca* Juss., Gen., 341 et Don, Gen. hist., II, 481. — *Prunus* et *Armeniaca* DC., Prodr., II, 532 et 531. — *Prunus* subgen. *Armeniaca* G. Beck, Fl. Nied.-Öst., 816 (1892); subgen. *Prunophora* Focke in Nat. Pflanzenf., III 3, 52 (1894); subgen. *Euprunus* Schneider, Laubholz, I. 620.]

Subsectio: *Prunus*.

[Gaudin, l. c.; sect. *Euprunus* Koehne, Deutsche Dendrol., 315; sect. *Prunophora* Focke in Wohlf., Syn. Deutschl. Fl., 725 (1891).]

1. *Prunus spinosa* [L., Spec. pl., 475 (1753); Reich., Fl. Germ., 644; Beck, Fl. Nied.-Öst., 818 et in Reich. f., l. c., 2, t. 80 et 81, fig. 4; Asch. Graebn., l. c., 119; Schneid., Laubholz., I, 628]. »Crni trn, šljiva divja, trnula«. In collibus siccis, apricis, ad silvarum margines, inter dumeta, in sepibus, fruticosis, pinetis apertis — 1300 m. Floret Martio—Majo.

Bosna: Vulgata et passim frequens uti prope Draksenić, Bos. Gra-diška, Novi (B.), in valle fl. Vrbas (B.), pr. Banja Luka (H), Doboj (Fo.), Breške, Donja Tuzla (B., Wettst.), Nova Kasaba (J.). Circa Krupa, Kuka-vica, Maslovare (Fo.), Ripač, Ključ, Šurjan, Liskovica (Fo.), Varcar-Vakuf (B.), Donji Vakuf (Sta.), Prusac (Ha. Fa.), in m. Prolog (B.), in fauce Sutina montis (Dinara (Ja.), prope Preodac, Glamoč (Pr.), Grahovo (Ha. Fa.), in m. Borova glava prope Livno a. 1230 m (B.). Circa Jajce (Fo.), Travnik (*S. 1848), Fojnica (Mu.), in m. Kriva jelika (Sta.), prope Vranduk (S.), Žepče (Fo.), Golubinje (S.), inter Han Mravići et Foča (S.), circa Visoko (Fo.), Tarčin (Pr.), Ilidža (Fo.). Vulgata circa Sarajevo (H.), in m. Tre-bević: in decl. austral. — 1300 m (M. in litt.), Kobilja glava (B.), in valle riv. Vogošća (S., B.), prope Pale (B.). In valle fl. Drina circa Vučevo prope Bastasi, circa Gorazde, hic prope Zidine etiam arboreus (B.), Višegrad, Drinsko (M.), in valle fl. Sutjeska (Pr.) et al. loc. — **Hercegovina:** Prope Spiljani, Pribilje (M.); in valle Idbar ad m. Preuj Pl., inter Lisičići et Ostro-žac, circa Jablanica, in m. Glogošnica (B.). Circa Mostar (*Str. 1880, B.), in m. Podvelež, Varda (B.), ad Cim (Fo.), prope Bišina (Pi.), in agro Ne-vesinjsko polje (Mu.), in valle fl. Trebišnjica prope Trebinje (B.), circa Bileća (Fo.), in agro Gatačko polje (Mu.). — **Novipazar:** In valle fl. Lim inter Prijepolje et Bistrica (*B. 1896).

Ludit: *vulgaris* [Ser. in DC., Prodr., II, 532 (1825)]. — *coaetanea* [Wimm. Grab., Fl. Schles., II 1. 10 (1829)]. Utraque vulgata. — *umbellifera* [G. Beck apud Reich. f., l. c., 2, tab. 81, fig. 4]. Floribus 2-5 in apice ramo-rum hornotinorum terminalibus corymbosis, polline fertili instructis. **Bosna:** Circa Sarajevo prope Švrakino Selo, ineunte m. Junio florifera (*B. 1912). — *dasyphylla* [Schur, Enum. pl. Transsylv., 178 (1866)]. — **Bosna:** Prope Višegrad (*B.). — **Hercegovina:** Circa Mostar in m. Hum (*B.).

2. *Prunus insititia* [L., Amoen., IV, 273 (1759); Reich., Fl. Germ., 644; Beck, Fl. Nied.-Öst., 819 et in Reich. f., l. c.,

3, t. 82; Asch. Graebn., l. c., 121. — *P. domestica* subsp. *insititia* Schneid., Laubholz., I, 630]. »Trnovača, cibara«. In dumetis, ad sepes. probabiliter ubique inquilina, quia arbor saepissime in lusibus variis propter poma colitur. Floret m. Aprili, Majo.

Bosna: Circa Nova Kasaba (J.), Sarajevo (*H. 1882, B.), Jelovci prope Mokro (M.). **Hercegovina:** Communiter vulgata et silvestris? (f. *A. Pichler).

3. *Prunus domestica* [L., Spec. pl. 175 (1753) pro max. parte; Reich., Fl. Germ., 645; Beck, Fl. Nied.-Öst., 819 et in Reich. f., l. c., 3, t. 83; Asch. Graebn., l. c., 123; — subspec. *oeconomica* Borkh., Handb. Forstbot., 1401 (1803) pro spec.; Schneid., Laubholz., I, 631]. »Šljiva«. Ex Oriente (Caucaso, Persia boreali) vel Asia centrali orta, saepissime in lusibus numerosis propter poma colitur ac frequenter culturae aufugit et inquilina observatur uti in Bosna prope Vranduk (*S., 1848), in silvis fruticosis prope Zvornik (Wettst. f. Fritsch) et al. loc. De cultura illustri Prunorum bosnensium confer: Dr. P. Zurunić: Die bosnische Pflaume (Wien 1895). Floret m. Aprili, Majo.

Arbor spontanea inquilina est f. *silvestris* [Schneid., l. c.; Beck. l. c., Asch. Graebn., l. c. = *P. oeconomica* v. *silvestris* Borkh., l. c., 1401].

4. *Prunus cerasifera* [Ehrh., Beitr., IV, 17 (1789); Reich., Fl. Germ., 644; Beck in Reich. f., l. c., 4, t. 84; Asch. Graebn., l. c., 125; Schneid., Laubholz., I, 632. — *P. mirobalana* Desf., Hist. arbr., II, 206 (1809). — *P. domestica* v. *myrobalan* L., Spec. pl., 475. — *P. Myrobalanus* (L.) Fritsch in Öst. bot. Zeit. (1892), 193]. »Razdelija«.

Hercegovina: In saxis, inter dumeta montis Čabulja Pl. a. 1000 ad 1200 m (*B. 1912), hic evidenter? silvestris. Stationes aliae adhuc in **Bosna** cognatae [in m. Trebević sec. rivulum Bistrice usque ad fontem Dobra voda — 1290 m (*M. 1912), Grdonj, Borije (M.) et in **Hercegovina** prope Spiljani, in valle fl. Drežanka (M.), in monte Stolac prope Mostar ad margines vinetorum ac ad sepes prope Domanovići (M.), inter Podporim et Rujište probabiliter ad plantas inquilinas pertinent. In Bosna et Hercegovina *P. cerasifera* propter poma non rare colitur. Planta in Hercegovina silvestris est sicut planta terrarum Balkani orientalis praeterea Orientis varietas *divaricata* [Ledebour, Ind. sem. hort. Dorp. (1824), 6 et Icon. pl. Ross., I, 7, t. 13 (1829); Boiss., Fl. Or., II, 651 pro spec.: Schneid., Laubholz., l. c., Beck, l. c., 4].

Insuper colitur f. *typica* [G. Beck, l. c.; subspec. *myrobalana* Schneider, l. c., 631; Asch. Graebn., l. c., 126. — *P.*

domestica v. *myrobalan* L., Spec. pl., 475 (1753)]. Floret m. Aprili. Majo.

Cum Linnéus (l. c.) et Clusius [Stirp. rar. hist., 93 (1583), quem Bauhinus [Pinax, 444], a Linnaeo autore uno soloque usus denotavit, fructus nigro-purpureos descripserunt, opinionem a d. Fritsch affirmatam: *Prunum domesticam* v. *myrobalan* L. cum *P^o cerasifera* vera etiam in cultura tempore maturitatis fructus rubrofuscos gerente plane identicam esse, non sine mora sequi possum, potiusque, quum d. Schneider [l. c.] his ipsis verbis praedicavit »daß es durchaus nicht leicht sei, das, was als Myrobalane oder als *P. cerasifera* in den Gärten geht, nur einigermaßen sicherzustellen.«

Subsectio: *Armeniaca*.

[Miller, Gard. dict., ed. VII (1759); Juss., Gen., 341 (1789) pro gen.; Gaud., Fl. Helv., III (1828), 313 pro sect.; Beck in Reich. f., I c., 4 (1912).]

5. *Prunus armeniaca* [L., Spec. pl., 474 (1753); Reich., Fl. Germ., 646; Beck, Fl. Nied.-Öst., 817 et in Reich. f., I c., 5, t. 85; Asch. Graebn., I c., 132; Schneid., Laubholz., I, 637. — *Armeniaca Malus* Gars., Expl. abr., II 108 (1765). — *A. vulgaris* Lam., Enc. meth., I, 2 (1780)]. »Kajsija, natipjerka, antić, praskva žuta«.

Orta Asia centrali ac Mandschuria saepius in regionibus calidioribus propter poma colitur. Floret m. Martio, Aprili.

Sectio: *Amygdalus*.

[Benth. Hook., Gen., I, 610 (1865). — *Amygdalus* L., Spec. pl., 472 (1753) et Gen., ed. V., nr. 545. — *Prunus* subgen. Schneider, Laubholz., I, 589.]

Subsectio: *Persica*.

[Borkhausen in Roem., Archiv., I 2, 37 (1797); Endl., Gen., 1250 pro gen.; Pers., Syn. pl. II 33 (1807) pro sect.; Beck in Reich. f., I c., 5 (1913).]

6. *Prunus persica* [Zucc. in Sieb. Zucc., Fl. Jap., 29 annot. (1835) et in Abh. Akad. Münch., IV 2 (1845), 122; Beck, Fl. Nied.-Öst., 818 et in Reich. f., I c., 5, t. 86. — *Amygdalus persica* L., Spec. pl., 472 (1753) et aut. — *Persica vulgaris* Miller, Gard. dict., ed. VIII (1768), nr. 1]. »Breskva, praskva, praska«. Orta Asia centrali et orientali, saepius in regionibus calidioribus propter poma colitur. Bosna prope Vranduk (*S. 1848), aliisque locis.

Subsectio: *Euamygdalus*.

[Beck in Reich. f., l. c., 6 (1913); subgen. *Amygdalus* Focke in Engl. Prantl, Nat. Pflanzenfam., III 3, 53; subgen. *Amygdalus* sect. *Euamygdalus* Schneider, Laubholz., I, 590; sect. *Amygdalus* Focke in Wohlf., Syn. deutsch. Fl., I, 727 p. p. — *Amygdalus* Gaertn., De fruct., II, 74, t. 93 (1791); sect. *Amygdalus* Reich., Fl. Germ., 646 (1832); sect. *Euamygdalus* Spach in Ann. sc. nat., sér. 2, XIX (1843), 114.]

7. *Prunus communis* [Arcang., Comp. fl. Ital., 209 (1882); Fritsch in Sitzber. math.-naturw. Klasse Ak. Wien CI (1892), 632; Schneider, Laubholz., I, 592; Asch. Graebn., l. c., 137; Beck in Reich. f., l. c., 6, t. 87. — *P. amygdalus* Stokes, Bot. med., III, 101 (1812) = Baill., Hist. pl., I, 415; Beck, Fl. Nied.-Öst., 818. — *Amygdalus communis* L., Spec. pl., 473 (1753) et aut.]. »Badem, pitomi bajam«.

Orta Asia centrali et orientali frequenter in regione mediterranea propter poma colitur, sicut in Hercegovina circa Mostar (Str. 1880), prope Trebinje (*P. 1874), in Sutorina (Pr.) et al. locis. Floret m. Januario—Martio.

Planta silvestris vel inquilina est v. *Webbii* [Vierhapper in Öst. bot. Zeit. 65 (1915), 21 pro spec. = *Amygdalus Webbii* Spach in Ann. sc. nat., sér. XIX (1843), 117; Boiss., Fl. Or., II, 642 = *P. communis* v. *spontanea* K. Malý in Glasn. zem. muz., 23 (1911), 593]. »Divlji Bajam« Reperta est in Hercegovina prope Gabela, in agro Popovo polje, prope Ravno, supra Gabela (*M.), prope Fatnica (V. Čurčić f. M.) et juxta Trebinje (P.).

Coluntur: f. *dulcis* [Schneider, l. c., 593. — *P. amygdalus* v. *sativa* Focke apud Wohlf., Syn. Deutsch. Fl., 727. — *Amygdalus sativa* Burgsd., Anleit., II (1787), 25. — *A. communis* v. *dulcis* Lam. et DC., l. c., Fl. Franc., IV, 486] et f. *amara* [Schneid., l. c. — *Amygdalus amara* Burgsd., l. c., 25. — *A. communis* v. *amara* Lam. et DC., l. c. — *P. amygdalus* v. *amara* Focke, l. c. Confer: Gabrieli, il Mandorlo amaro in Atti ist. incoragg. Napoli ser 6, IV (1907)].

Sectio: *Cerasus*.

[Pers., Syn. pl., II, 34 (1807). — *Cerasus* Juss., Gen., 340; DC, Prodr., II, 535. — *Prunus* sect. *Cerasus* et *Padus* Focke in Engl. Prantl, Nat. Pflanzenfam., III 3, 53. 54; subgen. *Cerasus* Schneider, Laubholz., I, 601 (excl. sect. *a*, *b*). Confer: Koehne in Wiss. Beil. Jahresber. Falk-Realgymn., Berlin 1912.]

Subsectio: *Eucerasus*.

[Koehne, Dendrol., 306 (1893) pro sect.; sect. *Cerasus* Focke, l. c.]

8. *Prunus fruticosa* [Pallas, Fl. Ross., I, 19, t. 8. B (1784); Asch. Graebn., 146; Schneider, Laubholz., I, 614; Beck in Reich. f., l. c. 9, t. 90. — *P. cerasus* ϑ . *pumila* L., Spec. pl., 474 (1753) = *P. pumila* Lumnitzer, Fl. Poson., 201 (1791) = Fritsch in Kerner, Schedae ad fl. exsicc. austro-hung., nr. 3204 et Exkurs. Fl., 307 (1897) non L. — *P. chamaecerasus* Jacqu., Coll., I, 133 (1786); Beck, Fl. Nied.-Öst., 821. — *P. cerasus* v. *chamaecerasus* Döll, Fl. Bad., 1123. — *Cerasus chamaecerasus* Lois., in Duhamel, Arb., ed. II, 29, t. 5, f. A (1812)]. In locis siccis, lapidosis, collibus aridis, declivibus apricis, inter dumeta. Floret m. Aprili, Majo.

Bosna: Adhuc modo circa Drinjača ad fl. Jadar (*J. 1891).

9. *Prunus cerasus* [L., Spec. pl., 474 (1753) p. p. α — δ , η , κ melius ed. II, 679; Reich., Fl. Germ., 643; Beck, Fl. Nied.-Öst., 820 et in Reich. f., l. c., 10, t. 91; Asch. Graebn., l. c., 147; Schneid., Laubholz., I, 614. — *Cerasus vulgaris* Mill., Gard. dict., ed. VIII, nr. 1 (1768). — *C. caproniana* Lam. DC., Fl. Franc., IV, 482. — *C. acida* G. M. Sch., Fl. Wett., II 185].
»Višnja«.

Orta Oriente propter poma frequenter colitur. Floret m. Aprili, Majo,

In Bosna et Hercegovina primum *Boué anno 1840 observavit. Reperit hanc arborem in silvis quercinis et in silvis montis Porim, sine dubio silvestrem modo. Etiam Pantoczek eandem in silvaticis prope Trebinje in Hercegovina investigavit, praeterea circa Orahovac in Bijela gora silvestrem in f. *caproniana* [L., Spec. pl., 474 (1753) = *erythrocarpa* Reich., l. c., 644 = *acida* Hayne, Arzneigew., IV, 42 = *P. acida* Ehrh., Beitr., VII, 130 (1792)].

10. *Prunus avium* [L., Fl. Suec., ed. II, 165 (1755) et Spec. pl., ed. II, 680; Reich., Fl. Germ., 644; Beck, Fl. Nied.-Öst., 819 et in Reich. f., l. c., 13, t. 93; Asch. Graebn., l. c., 151; Schneid., Laubholz., I, 616. — *P. cerasus* ζ . *actiana* L., Spec. pl., 474 (planta silvestris), ι . *avium*, ϵ . *juliana*, λ . *duracina* l. c. 474—475 (planta culta). — *Cerasus nigra* Mill., Gard. dict., ed. VIII (1768). — *C. avium* Moench, Meth., 672 (1794). — *C. dulcis* G. M. Sch., Fl. Wett., II, 181 (1800)]. »Trešnja«. In silvis frondosis, imprimis in fagineis et subalpinis — 1500 m. Floret m. Aprili, Majo. Frequenter propter poma in variis lusibus

colitur, ex culturis auffugit et in silvis frequenter inquilina occurrit.

Bosna: In regione septentrionali vulgata (B.) sicut circa Banja Luka (H.), in valle inferiore fl. Bosna et Spreča (*S. 1848), inter Breška et Donja Tuzla (B.), circa Žepče (S., B.), Orahovica (M.). In valle fl. Una prope Novi, Otoka (B.), in m. Kriva Jelika (Ha, Fa.), in valle riv. Semešnica prope Donji Vakuf (Sta.), prope Bugojno, Kupres, Glamoč (Pr.). Circa Travnik (Br.), in m. Vlašić —1300 m (S.); circa Fojnica (Pr., B.), in m. Matorac (B.), Inac (Schwarz!). Circa Vareš, ad fl. Stavnja (Pr.), prope Tarčin (Br.), in montibus Hranisava, Bjelašnica, Treskavica et al. (B.) Circa Sarajevo (H.), Nahorevo, Biosko, in m. Gradina, Bukovik, Trebević, Igman, prope Pale etc. (M.), in valle fl. Miljacka, in m. Ozren (B.); in vallibus fl. Željeznica (Pr.), Govza, Krupica prope Jeleč (B.), Sutjeska (Pr.); in m. Vučevo (B.), prope Klis, Kamensko, Vardište (M.), in m. Stolac pr. Višegrad —1500 m (Adam.). — **Hercegovina:** Prope Vrbljani, Dubočani, Pribilje (M.); in adscensu ad m. Lisin (Pr), circa Buna (Str.), prope Ostrožac et Solakova kula (Pi.), Drežnica (M.), inter Jovanović karaula et Nevesinje (B.), inter Domanovići et Pileta (B.), in m. Glijiva pr. Trebinja (*P. 1874).

Stationes ante enumeratae pro maxima parte ad arborem silvestrem cum fructibus nigris pertinent, quae = f. *actiana* [*P. cerasus* ζ. *actiana* L., Spec. pl., 474. — *P. avium* (*silvestris*) Pers., Syn. pl., II, 35 (1807); v. *silvestris* Reich., Fl. Germ., 644 (1832). — *Cerasus silvestris* Garsault, Expl. abr., II, 1 39, t. 211 (1765). — *C. nigricans* Ehrh., Beitr., VII, 126 (1792). — *C. avium* α. *silvestris* Ser. in DC., Prodr., II, 536].

f. *leucocarpa* (G. Beck). Fructibus parvulis albis vel dilute roseis; foliis fructus tempore glaberrimis vel parcissime pilosis. — **Bosna:** In silvis in adscensu ad m. Matorac prope Fojnica (*B.) sub f. *actiana* normali.

Coluntur: f. *Juliana* [Koch, Syn. fl. Germ., 206 (1837). — *Cerasus Juliana* Lam. et DC., Fl. Fr., IV 482 (1805) et *duracina* [L., Mant. II (1771). — *P. cerasus* λ *duracina* L., Spec. pl., 475 (1753) in lusibus numerosis.

Subsectio: *Padus*.

[Beck in Reich. f., l. c., 13 (1913). — Sect. *Padus* Reich., Fl. Germ., 642 (1832). — *Cerasus* sect. *Padus* Gray, Arr. brit. pl, II 589 (1821). — *Padus* Moench, Meth., 671 (1794); Schneid., Laubholzk., I, 637 sed confer II, 991. *Laurocerasus* Röm., Syn. monogr., III, 89 (1847).]

11. *Prunus mahaleb* [L., Spec. pl., 474 (1753); Reich., Fl. Germ., 643; Asch. Graebn., l. c., 156; Beck, Fl. Nied.-Öst., 822 et in Reich. f., l. c., 14, t. 94; Schneid., Laubholzk., I, 617. — *Cerasus mahaleb* Miller, Gard. dict., ed. VIII, nr. 4 (1768) = Host, Fl. Austr., II, 5 (1831). — *Padus Mahaleb* Borkh. in Roem., Arch., I 2, 38 et in Handbuch Forstb., II, 1434 (1803)]. »Rašelka, rašeljika, sriemzla«. In locis saxosis, dumetosis prae-

cipue solo calcareo in regione carstiensi —1220 *m.* Floret *m.* Majo.

Bosna: Prope Srebrenica (Br.), in *m.* Grad prope Zvornik et in *m.* Vrto glavica (J.). Circa Maglaj (M.), inter Golubinje et Žepče (*S. 1848). In regione flum. Gostović, impr. in solo serpent. a. 290—810 (M.). Circa Ključ (B.); in *m.* Kamešnica (Pr.), in declivibus *m.* Dinara (Ja), prope Resanovci (R.), circa Livno in agro Buško blato et pr. Grabovica a. 780 *m.* (Br. f. Fritsch), in *m.* Borova glava et circa Livno (S.), prope Gubin (Pr.) In districtu Rogatica prope Rusenovići, Han Prača, Banja stijena, prope ponor Rakitnica (F.), prope Dobrun, in valle fl. Lim (M.). — **Hercegovina:** Ubique vulgata et frequens (A. Pi.), uti in *m.* Glogovo (V.), prope Grabovica (M.), inter Drežnica et Mostar, in *m.* Raška gora (B.), circa Mostar (Sagorski), Blagaj (Str.), inter Blagaj et Jovanović Karaula (B.), in *m.* Velež occidentali a. 850 *m.* (B.), —1500 *m.* (R.), in *m.* Hrgud prope Stolac (F.). Circa Glavska (M.), Trebinje, in valle Trebišnjica (B.) in *m.* Gljiva (*P. 1874), Leotar —1220 *m.* (B.), ad marginem dolinae Krstati do inter Konjušnica et Visoka glavica (V.), prope Bileća (P.).

Formae sequentes observatae sunt:

typica [Fiore in Fiore Paol., Fl. anal. d' Ital., I, 561 = Asch. Graebn., l. c., 156; Beck in Reich. f., l. c., 20]. Vulgata. — *tomentosa* [G. Beck, l. c., 20]. **Bosna:** In faucibus Rakitnica inter Rogatica et Han Prača (F.! f. *B.).

12. *Prunus padus* [L., Spec. pl., 473 (1753); Reich., Fl. Germ., 642; Beck, Fl. Nied.-Öst., 821 et in Reich. f., l. c., 15, tab. 95; Asch. Graebn., l. c., 159. — *Cerasus padus* Delarb., Fl. Auv., ed. II, 323 (1800). — *Padus avium* Miller, Gard. dict., ed. VIII (1768). — *P. vulgaris* Borkh., Hand. Forstb., II, 1426 (1803). — *P. racemosa* Gilib., Fl. Lithuan., II, 231 (1781); Schneid., Laubholz., I, 639]. »Sremza«.

Adhuc modo in **Bosna** in *m.* Humbat prope Prozor, a. 856 *m.* [*Stadlmann in Mitteil. naturw. Ver. Wiener Univ. (1912), 33]. An mendum scripturae?

Tribus: *Pomeae.*

[Benth. Hook., Gen I, 605; Beck in Reich. f., Ic. fl. Germ., XXV 2, 16; sect. *Pomaceae* Juss., Gen., 334 (1789); Reich., Fl. Germ., 627; subordo *Pomeae* Lindl. Nat. Syst., ed. II, 145 (1836); subordo *Pomoideae* Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 12 et 18. — *Pomaceae* Lam. et DC., Fl. Franc., IV, 428; Endl., Gen., 1236; Schneid., Laubholz., I, 652; Beck, Fl. Nied.-Öst., 701. — Confer: Lindley, Observ. in Transs. of Linn. soc., XIII 1, 88; Roemer, *Rosiflorae* in Syn monogr., III, 97 (1847); Decaisne in Mém. sur la famille des Pomacées in Nouv. Arch. du mus. d'hist. nat., X (1874), 113; Koehne, Die Gattungen der *Pomaceae* in Wiss. Beilage Jahresber. Falk-Realgymn. Berlin (1890); Wenzig, *Pomarieae* in Linnaea 38 (1874) et in Jahrb. bot. Gart., Berlin II (1883), 287; Koehne, Deutsche Dendrolog., 224 (1893); Beck, Fl. Nied.-Öst., 701 (1892) et in Reich. f., Ic. fl. Germ.,

XXV 2, 16; Schneider, l. c.; A. Burgerstein, Vergl. histolog. Unters. des Holzes der Pomaceen in Sitzungsber. der Akad. Wiss. Wien CIV et CV (1895—1896) et Gatt. der Pom. in Wiener illustrierte Gartenzeit. (1896), 383.

Subtribus: *Crataegeae*.

[Koehne, Gatt. Pom., 8 (1890) et Deutsch. Dendrol., 224; Beck, Fl. Nied.-Öst., 704 et apud Reich. f., l. c., 17; Schneid., Laubholz., I, 744. — *Mespilae* Asch. Graebn., l. c., 2.]

15. *Cotoneaster*.

[Medic., Phil. Bot., 154 (1789) et Gesch. Bot., 85 (1793); Benth. Hook., Gen. l. 627 (p. p.); Koehne, Gatt. Pom., 8; Beck, Fl. Nied.-Öst., 704 et in Reich. f. l. c., 17; Schneid., l. c., 744. — *Cotoneaster* sect. *Eucotoneaster* Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 21. — *Mespilus* sect. *Cotoneaster* Gaud., Fl. Helv., III, 326 (1828). Confer: Zabel, Monogr. *Cotoneaster* in Mitteil. deutsch. dendr. Ges. (1897—1898).] »Mušmulača«.

1. *Cotoneaster integerrima* [Medic., Geschicht. Bot., 85 (1793); Beck, Fl. Nied.-Öst., 704 et in Reich. f., l. c., 17, t. 96; Schneid., l. c., 747. — *Mespilus cotoneaster* L., Spec. pl., 479 (1753) p. p. — *Cotoneaster vulgaris* Lindl. in Transs. Linn. soc., XIII 1, 101 (1822) et auct.; v. *glabra* Vis., Fl. Dalm., III, 243. — *C. cotoneaster* Karst., Deutschl. Fl., 785 (1882); Ascherson Graebn., l. c., 7]. In saxis calcareis, inter dumeta, in silvis apertis usque ad regionem alpinam (1800 m). Floret m. Aprili—Junio, in editoribus etiam m. Julio.

Bosna: In montibus Grmeč (Boller), Klekovača (F., B.), Osječenica (F.), Šuljaga, Vel. Malovan, Kamešnica (Pr.), Prolog, Troglav (B.), Vel. Šator (Pr.), Cincar — 1700 m (B.), Borova glava pr. Livno (B.). Circa Travnik (Fr. Br.), in m. Vlačić (*S. 1848, B.) — 1800 m; circa Vareš (Pr.). In Bosna australi in saxosis vulgata (B.), uti in m. Trebević — 1600 m (Bl., F.), Jahorina, Treskavica, Igman (M.), in valle fl. Željeznica (Pr.), in m. Romanija (B.), Dumoš Pl. (Fo.), pr. Urdenji dol juxta Konjsko vrelo in Zagorje (Lakatoš), in m. Bregoč (Pr.), in valle fl. Sutjeska prope Suha (Pr.), in m. Veternik (B.), Bič Pl. (Schiller f. Ja.), in m. Stolac pr. Višegrad a. 800—1500 m (Adam.). — **Hercegovina:** Prope Bijela voda juxta Klinja (Fo.), in m. Prenj Pl. (Prodan), Velež 1800 m (Bornmüller!), Velež occidentali a. 1330 m (B.), Mali Velež prope Nevesinje a. 1400 m (V.).

Ludit:

typica [Schneider, l. c., 747; Beck, l. c., 18]. — Vulgata. — *oxyphylla* [Schneid., l. c.; Beck, l. c.]. Hinc inde. — *pubens* [G. Beck, l. c., 18 — ? *C. tomentosa* v. *intermedia* Lec. et Lam., Cat. plant. plat. centr., 162 (1847) = *C. intermedia* Coste in Bull. soc. bot. Fr., 40 (1893) p. CXXII (1894) et in Bull. herb. Boiss. (1894), App. IV, 19].

Bosna: In m. Borova glava prope Livno a. 1100—1230 m (*B.). — **Hercegovina:** In m. Hum prope Mostar (Pi. f. *B.). — *intermedia* [Schneider, l. c. = *C. vulgaris* v. *intermedia* Regel in Act. hort. Petrop., II, 315 (1873); v. *minutifolia* Zabel in Mitt. dendrol. Ges. (1897), 17. — *parvifolia* Hirc in Öst. bot. Zeit (1886), 380 sine descr.]. Foliola minima, 1—2 cm longa. — **Bosna:** In m. Klekovača (*B.). — *glabrescens* [G. Beck, apud Schneider, l. c., 747 et in Reich. f., l. c., 18]. Folia parvula, 1.5—2.5 cm longa, 1—1.8 cm lata, subtus parce modo pilosa, glabrescentia et coerulescentia, supra cum pedunculis glabra. — **Bosna:** In m. Cincar prope Livno sub *Pino mugo* a. 1600 m (*B.).

2. *Cotoneaster tomentosa* [Lindley in Transs. Linn. soc., XIII (1821), 101; Beck, Fl. Nied.-Öst., 705 et in Reich. f., l. c. 18, t. 97; Asch. Graebn., l. c. 5; Schneid., l. c., 748. — *C. vulgaris* v. *tomentosa* Vis., Fl. dalm., III, 243. — *Mespilus orientalis* Miller Gard. dict., ed. VIII (1768), nr. 9 p. p. — *M. tomentosa* Aiton, Hort. Kew., ed II, II, 174 (1789). — *M. coccinea* Waldst. Kit., Pl. rar. Hung., III, 284. t. 256 (1812)]. In saxis, dumosis lapidosis, inter frutices, praecipue solo calcareo usque ad regionem alpinam (—1860 m). Floret m. Aprili—Junio.

Bosna: In montibus Grmeč (Boller), Mala Klekovača (Ha.), Hrblijina (Pr.), Prolog (F.), Vještica gora (Pr.), Dinara: circa dolina Kozja jama, in m. Jankovo brdo, Gnjat (Ja. Wa.) a. 1000—1800 m, Troglav (Pr.), Uilica (Ja. Wa.), Vel. Šator (Pr.), Jezero Kamen (Ja.) et Babina greda a. 1300—1860 m (Ha. Fa.), in m. Brezovača prope Glamoč (Ha. Fa.). Circa Travnik (Br.), Gučja gora (Franjić!), in m. Vlašić (Fr. Br., B.). Circa Vareš, Kralupi (Pr.), Sarajevo (*H.), in m. Trebević (V., B.), in valle fl. Miljacka (F.), in m. Todor in Zagorje (Lakatos!), prope Vlaholje (Fo.), in m. Bregoč (Pr.), in valle fl. Sutjeska prope Sulja (Pr.), in m. Maglić (Rohlena). — **Hercegovina:** In m. Boračka Draga (Pr.), in m. Velež orientali (B.), in m. Koristna greda pr. Vučja (*P. 1874), inter Milanov odsjek et Radkuša jama in Bijela gora, in m. Stirovnik, Svitavac (V.).

16. *Pyracantha*.

[Roem., Syn. monogr., III, 104, 219 (1847); Koehne, Deutsch. Dendrol., 227; Schneid., l. c., 761; Asch. Graebn., l. c., 10; Beck, in Reich. f., l. c., 20. — *Cotoneaster* sect. *Timbalia* Nym., Consp. fl. Europ., II (1879), 244; sect. *Pyracantha* Boiss., Fl. Or., II, 665; Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 21 (1894). — *Timbalia* Clos in Bull. soc. bot. Fr., XVIII (1871), 177.]

1. *Pyracantha coccinea* [Roem., Syn. monogr., III, 104 et 219 (1847); Koehne, Deutschl. Dendrolog., 227; Schneid., l. c., 762; Beck in Reich. f., l. c., 20, t. 99. — *Mespilus pyracantha* L., Spec. p., 478 (1753). — *Crataegus pyracantha* Med., Gesch. Bot., 84 (1793). — *Cotoneaster pyracantha* Spach, Hist. vég.,

II, 77 (1834). — *Pyracantha pyracantha* Asch. Graebn., l. c., 11].
 »Divlja trnovina«. In silvis, dumetis, ad sepes praecipue in
 ditone florum mediterraneae. Floret m. Majo, Junio.

Bosna: In sepibus juxta Privilica prope Bihać (F. f. *M. 1904). —

Hercegovina: Silvestris in Sutorina sec. rivulum Sutorina (*Visiani in Fl.
 dalm., III. 244 (1852), M.). Etiam jam ab Asch. et. Kanitz in Hercegovina
 notata sed sine loco.

17. *Crataegus*.

[L., Spec. pl., 475 (1753) et Gen., ed. V, 213 nr. 547 p. p. rectius Persoon,
 Syn. pl., II, 36 (1807); Benth. Hook., Gen., I, 626; Koehne, Gatt. Pom., 10;
 Beck, Fl. Nied.-Öst., 705 et in Reich. f., l. c., 22; Schneid., l. c., 766. —
Mespilus Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 26; subgen. *Crataegus*
 K. Koch in Woch. Ver. für Gart. preuß. Staat. (1862), 363 = Asch. Graebn.,
 l. c., 13. Confer: Schneider, l. c., et Lange, Rev. gen. *Crataegi* (Kjopenh.
 1897).] »Glog«.

**Pentagynae*.

[Schneider, l. c., 768.]

1. *Crataegus pentagyna* [Waldst. Kit. in Willd., Spec. pl.,
 II, 1006 (1800); Reich., Fl. Germ., 629; Koehne, Deutsche
 Dendrol., 240; Schneider, l. c., 777; Beck in Reich. f., l. c.,
 22, t. 101. -- *C. melanocarpa* M. Bieb., Fl. taur. cauc., I, 386
 (1808). Neilr., Aufz. Ung. Slavon. Nachtr. (1870) 93. — *Mespilus*
pentagyna Spreng., System., II, 507 (1825) = K. Koch, Dendrol.,
 I, 154 (1869); Asch. Graebn., l. c., 38]. In silvis, dumetis. Floret
 m. Majo Junio.

Hercegovina: Scum in locis silvaticis montis Glijiva prope Trebinje
 (*P. 1874).

2. *Crataegus nigra* [Waldst. Kit., Pl. rar. Hung., I, 62,
 t. 61 (1802); Reich., Fl. Germ., 629; Koehne, Deutsche Dendrol.,
 240; Schneid., l. c., 778; Beck in Reich. f., l. c., 23, t. 102. —
Mespilus nigra Willd., Enum. hort. Berol., 524 (1809); Asch.
 Graebn., l. c., 37]. In silvis, imprimis ripariis, inter dumeta,
 ad fluvios majores. Floret m. Majo, Junio. »Crni glog«.

Bosna: Fide Asch. Kan. sed? Ubi? — **Hercegovina:** In silvaticis
 prope Dubovac in Bijela gora (*P. 1874). Certissime errore captum!

***Oxyacanthae*.

[Schneider, l. c., 768.]

3. *Crataegus oxyacantha* [L., Spec. pl., 477 (1753) p. p.,?;
 Jacqu., Fl. Austr., III, 50, t. 292. fig. 2; Reich., Fl. Germ.,

628; Koehne, Deutsche Dendrol., 238; Beck, Fl. Nied.-Öst., 705 et in Reich. f., l. c., 24, t. 103; Schneid., l. c., 780. — *C. oxyacantha* v. *vulgaris* DC., Prodr., II, 628 (1825); v. *lobata* Neilr., Fl. Wien, 607. — *Mespilus oxyacantha* All., Fl. Pedem., II, 141 (1785); Asch. Graebn., l. c., 25 (non Crantz)]. »Trn bijeli, glog«. In dumetis, sepibus, ad margines silvarum usque ad regionem montanam superiorem (1180 m). Floret m. Majo, Junio.

Bosna: Prope Novi (B.). Circa Banja Luka, Maglaj ad fl. Vrbas (*H 1882). Supra Popović prope Rore a. c. 1000—1100 m (Ha. Fa.). Circa Sarajevo rare: Prope Ophode (M.). In m. Igman (B., 1180 m M.), prope Mokro (M.) et in declivibus montis Treskavica (B.). In valle fl. Sutjeska (Pr.). — **Hercegovina:** Circa Mostar (*Str 1880) frequens. Certe ad *C^m monogynam* Jacq. pertinet.

4. *Crataegus monogyna* [Jacqu., Fl. Austr., III, 50, t. 292 fig. 1 (1775); Reich., Fl. Germ., 629; Borbás in Botan. Zentralbl. XVII (1884) 80; Koehne, Deutsche Dendrol., 238; Beck, Fl. Nied.-Öst., 706 et in Reich. f., l. c., 25, t. 104 et 105 fig. 1; Schneid., l. c., 782. — *Mespilus monogyna* All., Fl. Pedem., II, 141 (1785); Ehrh., Beitr., VII, 133 (1792 Asch.); Graebn., l. c., 27. — *C. oxyacantha* v. *monostyla* DC., Prodr., II, 628; var. *laciniata* Neilr., Fl. Wien, 607; v. *monogynus* Mor. et De Not., Fl. Capri, 52 (1839). — *Oxyacantha monogyna* Roem., Syn. monogr., III, 107]. »Bijeli glog«. Inter dumeta, in silvis apertis, ad silvarum margines usque ad subalpinas (—1330 m). Floret m. Aprili—Junio.

Bosna: Vulgata et frequens sicut: circa Novi, in valle inferiore fl. Vrbas, prope Prnjavor, Breška, Donja Tuzla, Gradačac; Bihać, in m. Grmeč Pl., Klekovača; pr. Ključ, Drvar, Resanovača, Ribnik, Donji Vakuf, Bugojno, in m. Stožer, circa Kupres, Šujica, in m. Vel. Malovan, Dinara. Šator, Hrblijina, pr. Grahovo, Travnik, in m. Vlašić, pr. Fojnica, Vareš, Vogošća, Tarčin, in agro Sarajevsko polje in m. Igman (—1330 m M.), Hranisava, Trebević, circa Sarajevo, in valle fl. Željeznica, pr. Kalinovik, Jeleć, Zagorje, Pale, Podvitez, in valle fl. Sutjeska, circa Foča, Ustikolina, Prebilje, Iksar et al. loc. (*S. 1848 et alii). — **Hercegovina:** Vulgata et frequens, uti prope Brđani, in m. Golo brdo, in valle Idbar et Doljanka, circa Mostar, in m. Podvelež, Velež, in agro Mostarsko blato, Nevesinjsko et Gatačko polje, in m. Čabulja, pr. Domanovići, Tasovčići, in m. Bjelašica, Baba, pr. Trebinje, Bileća, et al. loc. (*P. 1874 et alii). — **Novipazar.** Inter Han Kovač et Boljanić, in valle fl. Lim inter Prijepolje et Bistrica (*B. 1896).

Variat:

α. *typica* (Beck, Fl. Nied.-Öst., 706 (ampl.) et in Reich. f., l. c., 26].

f. *denudata* [Schum., Enum. Saell., 155 (1801) f. Lange; Beck, in Reich. f., l. c., 26; v. *glabra* Peterm., Pflanzenschlüss., 135 (1846) — *C. monostyla* Peterm., l. c.). Vulgata. — *villosa* [Peterm., l. c.; Beck, l. c. — *C. kyrstostyla* Fingerhut in Linnaea IV (1829), 372, t. III, fig. 1. — *C. monogyna* v. *lanigera* G. Beck., Fl. Südbosn. in Ann. naturh. Hofmus., II, 96 (1887); *kyrstostyla* Beck, Fl. Nied.-Öst., 706. — *C. hirsuta* Schur, Enum. Tramss., 206 (1866). — *Mespilus monogyna* v. *typica* f. *eriocarpa*, *kyrstostyla*, *azarella*, *hirsuta* Asch. Graebn., l. c. 30—33]. Rarius. **Bosna.** In sepibus prope Koševo juxta Sarajevo (*B. sub v. *lanigera*); in collibus pr. Kovačići (M.), in declivibus in Igman versus Vruci (M.); circa Fojnica (Schwarz! f. B.). **Hercegovina:** Prope Vojno proxime Mostar (*Ja. 1911). — *schizophylla* [Beck, Fl. Nied.-Öst. 706 (1892) et in Reich. f., l. c., 26, t. 104, fig. 11. — *Mespilus fissa* Poir. in Lam., Enc. meth., IV, Suppl., 72 (1817). — *M. monogyna* v. *decussata* Wallr., Sched., 221 (1822); *laciniata* K. Koch, Dendrol., I, 160 (1869); *fissa* Asch. Graebn., l. c., 30 — *C. dissecta* Borkh. in Roem., Arch., I 3, 86 (1798), — *C. fissa* Bosc. in DC., Prodr., II, 628. — *C. laciniata* Lodd. et Hort. — *C. monogyna* f. *decussata* (Wallr.) Schneid., l. c., 782]. **Bosna:** Circa Sarajevo ad sepes in m. castello coronato versus Da Riva (*M. 1904).

β. *Inzengae* [Bert., Fl. Ital., VII, 629 (1847); Strobl in Verh. zool. bot. Ges. (1903), 515 pro spec. sub *Insegnae* (mendum); G. Beck in Reich. f., l. c., 27, t. 105 f. 1; Briqu., Prodr. Fl. Corse (1913) 170. — *C. oxyacantha* v. *inzengae* Fiori in Fiori Paol., Fl. d' Ital., I, 596 (1898). — *C. transalpina* A. Kern. in exs. et in Monatschr. Ver. z. Beförd. Gartenb. preuß. Staat. (1875), 185; Borb. in Bot. Zentralbl., XVII (1884), 81. — *Mespilus insegnae* Tineo in Guss., Fl. sic. syn., II 2, 830 (1844) = *M. Inzengae* Asch. Graebn., l. c. 34].

Bosna: In ditone karstiensi uti in m. Dinara supra Ježenic in fauce Sutina, jam in Dalmatia (Ja. Wa.) et in Dinara media [*Degen, confer. Öst. bot. Zeit. (1908). 247]. Circa Sarajevo in faucibus Lapišnica et prope Mededa (M.). — **Hercegovina:** Circa Mostar (*B.). — f. *panachaica* (Schneid., l. c., 783 pro spec. — *C. monogyna* v. *hirsutior* Boiss., Fl. Or., II, 664; Hal., Consp. Fl. Graec., I, 547) Est forma *Inzengae* foliis magis pilosis. — **Hercegovina:** In m. Podvelež (*B.).

γ. *rosiformis* [Janka in Öst. bot. Zeit., XX (1870). 250 nomen solum pro spec; Beck in Reich. f., l. c.; 25; hic demonstratur plantam Jankaeanam ne utiquam ad *C^m calycinam* pertinere ut in Asch. Graebn., l. c. exponitur.

Bosna: In silvis mixtis in latere septentrionali montis Trebević et in m. Igman a. 1060 do 1220 m [*M. in Glasn. zem. muz. 31 (1919), 70].

5. *Crataegus monogyna* × *oxyacantha* [Lasch f. Uechtr. in Res. Durchf. schles. Pflanz. für 1883, 3; Sanio in Verh. bot. Ver. Brandenb., 32 (1890), 90; Beck in Reich. f., l. c. 28. —

C. oxyacantha × *monogyna* Lasch in Bot. Zeit., XV (1857), 513.
— *Mespilus oxyacantha* × *monogyna* Asch. Graebn., l. c., 35].

a) *Crataegus intermixta* [Beck, Fl. Nied.-Öst., 706 (1892)
et in Reich. f., l. c., 28; Schneid., l. c., 781. — *Mespilus oxya-*
cantha × *monogyna* B. *intermixta* Asch. Graebn., l. c. 35].

Bosna: In dorso montis Igman (*B.); in m. Igman et prope Hrid
juxta Sarajevo (M.) an ad hanc hybridam?

6. *Crataegus azarolus* [L., Spec. pl., 477 (1753) excl. β?;
Reich., Fl. Germ., 629; Schneid., l. c., 788; Beck in Reich. f.,
l. c., 29, t. 106. — *Pyrus azarolus* Scop., Fl. Carn., ed. II, I, 347
(1772). — *Mespilus azarolus* All., Fl. Ped., II, 141 (1785); Asch.
Graebn., l. c., 40. — *Azarolus crataegoides* Borkh. in Wett.
Fl., II., 1253]. In dumetis in regione florum mediterraneae.
Floret m. Majo.

Hercegovina: In vicinia castri septentrionalis urbis Mostar (*Str.
1880), sed non iterum observata.

Quod Sendtner [in Ausland (1848) 444 et 467] sub nomine
C. azarolus L. prope Gradačac et inter Prud et Gradačac
observavit nec frutex mediterraneus neque *C. azarella* Gris.
esse potest, quia *C. monogyna* Jacqu. eodem loco crescere
dicitur. D. Car. Malý plantam Sendtnerianam autem inspexit
et pro *C. oxyacanthae* v. *glabratam* Sanio recognovit.

Subtribus: *Sorbeae*.

[Koehne, Gatt. Pom., 15 (1890) et Deutsche Dendrol., 224; Beck, Fl. Nied.-
Öst., 707 et in Reich. f., l. c., 32; Schneid., l. c., 654 — Trib. *Cydoniaceae*
Karst., Deutsch. Fl., 780 (1882). — Trib. *Pireae* Asch. Graebn., l. c., 47.]

18. *Amelanchier*.

[Medicus, Philos. Bot. I, 135 (1789); Endl., Gen., 1237; Focke in Engl. Prantl,
Nat. Pflanzenf., III 3, 26; Beck. Fl. Nied.-Öst., 707 et in Reich. f., l. c., 32;
Koehne, Gatt. Pom., 25; Schneid., l. c., 731 = Lindl. in Transs. Linn. soc.,
XIII (1821), 100; Benth. Hook., Gen., I, 628 — *Aronia* Pers., Syn. pl., II
39 (1807), p. p.]

Sectio: *Euamelanchier*.

[Schneider, l. c., 731.]

1. *Amelanchier rotundifolia* [Dumont de Courset, Bot.
cult., ed. II, V, 459 (1811) non Roemer (1847) f. Koehne,
Deutsche Dendrolog., 255; Koch, Dendrol. I, 178; Schneid., l.
c., 731; Beck in Reich. f., l. c., 32, t. 110. — *Mespilus amelan-*

chier L., Spec. pl., 478 (1753). — *Sorbus amelanchier* Crantz, Stirp. Aust., II, 53 (1763). — *Pirus amelanchier* L. fil., Suppl., 256 (1781). — *A. ovalis* Medicus, Gesch. Bot., 79 (1793); Beck, Fl. Nied.-Öst., 707 non Lindl. — *A. vulgaris* Moench, Meth., 682 (1794). — *A. Amelanchier* Karst., Deutsch Fl., 784 (1882); Asch. Graebn., l. c. 49. — *Aronia rotundifolia* Pers., Syn. pl., II, 39 (1807). — *Aronia amelanchier* Dumort., Fl. belg., 92 (1827)]. In saxosis, dumetosis, silvis apertis, solo calcareo — 1800 m. Floret m. Aprili, Majo.

Bosna: Prope Glogovac (Ha. Fa.); in montibus Šuljaga, Vel. Malovan (Pr.), Plazenica (F.), Vran (F.), Divić a. 1800 m (F.); in m. Dinara pr. Dolina Kozja jama, in m. Troglav (Ja. Wa. Apfelbeck f. M.), in m. Uilica (Ja. Wa.), Jedovnik pr. Drvar, praecipue in declivibus m. Lijepi kamen a. 700—1000 m (Ja.), in m. Borova glava prope Livno (B.) c. 1200 m; in m. Hum pr. Jajce (C., B.). Circa Travnik (*S 1848), pr. Bukovica, in m. Vlašić (Fr. Br., B.), pr. Stolovac (M.). Circa Vareš (Pr.); Sarajevo (Bl., B.), prope Koševo, in valle fl. Miljacka (B.) in m. Trebević (Bl., F.!); in montibus Treskavica, Bre-goč, Maglić, Volujak (Pr.). — **Hercegovina:** In m. Glogovo, Porim, (V.) in valle Jazina prope Vučjak in Bijela Gora (*P. 1874); in m. Svitavac, Štirovnik, Gnjijila greda (V.).

Variat:

α. *genuina* [Schneid. l. c., 732; Beck in Reich. f., l. c., 33. — *A. vulgaris* v. *genuina* et *grandifolia* Rouy Camus, Fl. Fr., VII, 28 (1901). — *A. amelanchier*, B. *grandifolia* Asch. Graebn., l. c. 50. — *Aronia rotundifolia* β. *tomentosa* Koch, Syn. fl. Germ., ed. II. 261]. Vulgata.

β. *dalmatica* [Beck, in Reich. f., l. c., 33 (1914). — *A. amelanchier* II *dalmatica* Asch. Graebn., l. c. 50]. Folia ut in var. *genuina* late ovalia, rotundata, — 4.5 cm longa in tertia vel media parte basim versus integra.

Hercegovina: In m. Stolac prope Mostar (Pi.! f. *B.) et in m. Velež a. 1500 m. (*B.).

γ. *macrophylla* [K. Malý in Magy. bot. lap., VII (1908), 216; Beck in Reich. f., l. c., 33. — *Aronia rotundifolia* v. *macrophylla* Vandas in Öst. bot. Zeit., 38 (1888), 367. — *Amelanchier ovalis* v. *grandifolia* Bald., Contr. fl. Mont. Alb. in Mem. ac. sc. Bologna, ser. 5, IX (1900), 20]. »Fruticulus humilis, foliis ovato-oblongis. obtusis vel breviter acuminatis, mucronulatis, obsolete crenatis, in parte inferiore subintegris, subtus tomentosis, demum glabrescentibus, glaucescentibus, c. 4—7 cm longis, 2.5—4.5 cm latis.« Addo: Folia — 9 cm longa, saepe irregula-

riter vel obsolete crenatoserrata, subtus longius tomentella, cum floribus coëtanea.

Hercegovina: In m. Baba (Havelka!), florens m. Junio; in saxis calcareis inter Milanov odsjek et Bogović selo juxta cavernam Carica (*V. 1888). — **Crna Gora:** In declivibus dumetosis prope Cetinje (Bornmüller!).

♂. *grossedentata* [K. Malý in Magy. bot. lap., VII (1908), 216; Beck in Reich. f., l. c., 33 — *Amelanchier vulgaris* v. *grossedentata* Rohlena, 4. Beitr. Fl. Mont., in Sitzungsber. Böhm. Ges. Wiss., (1904), 48 et in Fedde, Repert., I (1905), 35]. »Folia latissima elliptica fere orbicularia, profunde cordata, grosse crenulato-dentata, vel subduplo crenato-dentata dentibus nonnullis denticulum gerentibus.« Hactenus in Crna Gora monte Lovčen modo a d. Rohlena reperta est.

2. *Amelanchier cretica* [DC., Prodr., II, 632 (1825); Vis., Fl. Dalm., III, 243; Schneid., l. c., 733; Hal., Consp. fl. Graec., I, 542. — *A. vulgaris* v. *cretica* Boiss., Fl. Or., II, 667. — *Pyrus cretica* Willd., Spec. pl., II, 1015 (1799). — *Crataegus cretica* Desf., Coroll., 79, t. 59]. Ab *A. rotundifolia* differt foliis minoribus, subrotundis, antice modo crenato-serratis, basim versus plus minus longe integris, inflorescentia pauciflora, stylis longioribus staminum insertionem conspicue superantibus. In saxosis regionis montanae usque ad alpinas. Floret m. Junio.

Hercegovina: In m. Češalj juxta Visoka glavica, circa Milanov odsjek et Radkuša jama, in m. Ilina greda supra Bogojević selo (*V. 1888). — **Dalmatia:** Prope Crkvice in Krivošije (Th. Pichler); supra Kotor (Bornmüller). — **Crna Gora:** Prope Cetinje (Bornmüller).

19. Malus.

[Miller, Gard. dict., ed. VIII (1768); Medicus, Gesch. Bot., 64 (1793); Koehne, Gatt. Pom., 27; Beck, Fl. Nied.-Öst., 715; et in Reich. f., l. c., 33; Schneid. l. c. 714. — *Pirus* vel *Pyrus* Aut.; sect. *Malus* S. F. Gray, Nat. arr. brit. pl., II, 562; = Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 24; sect. *Eumalus* Rouy Cam., Fl. Fr., VII, 15 (1901).] »Jabuka«.

1. *Malus sylvestris* [Miller, Gard. dict., ed. VIII (1768); Koehne, Deutsche Dendrol., 258; Schneid., l. c. 715; Beck apud Reich. f., l. c., 34, t. 111. — *M. communis* Lam., Ill. genr. II, 545, t. 435, fig. I a-g (1793); v. *silvestris* Beck, Fl. Nied.-Öst., 715. — *M. acerba* Mérat, Fl. Paris, 187 (1812). — *Pyrus malus* α. *silvestris* L., Spec. pl., 479 (1753); v. *austera* Wallr., Sched., 215 (1822); v. *glabra* Koch. Syn. fl. Germ., 235 (1837); v. *acerba* Asch., Fl. Brand., II, 207 (1860); subspec. *P. sylvestris*

Asch. Graebn., l. c., 75. — *P. acerba* DC., Prodr., II, 635. — *P. sylvestris* S. F. Gray, Nat. arr. brit. pl., II, 562 (1821)]. »Divlja jabuka«.

In silvis et dumetis usque ad subalpinas silvestris, sed propter poma frequentissime colitur et inquilina. Floret m. Majo.

Bosna: In partibus demissis (*Boué 1840). In valle fl. Sava (B.); circa Prosjek juxta Zvornik, pr. Nova Kasaba (J.), pr. Donja Tuzla (M.), Banja Luka (H.), inter Han Mravići et mon. Foča (S.), in m. Mračansko brdo pr. Žepče (B.); in Bosna occidentali vulgata (Fo., B.); in silvis subalpinis montis Osječenica et Klekovača (F., B.); circa Travnik in m. Vlašić —1300 m (S.); prope Vareš (Pr.); in m. Čelin pr. Visoko (Fo.), circa Tarčin (Pr.); in Bosna australi vulgata, imprimis in silvis subalpinis, sicut circa Sarajevo (H.), in m. Vitez (B.), in valle Krupica pr. Jeleč (B.), et al. loc.; in m. Stolac pr. Višegrad (Adam.). — **Hercegovina:** Circa Ostrožac (Fo.), Mostar (Str.) etiam silvestris (B.), inter Jovanović karaula et Nevesinje (B.), pr. Žitomišljici (Fo.), in m. Glijiva pr. Trebinje (*P. 1874). — **Novipazar:** In valle fl. Lim inter Prijepolje et Bistrica (*B. 1896).

Una est ex stirpibus pomorum cultorum, sed patriae incertae nisi forte ex Europa orta. Cultura variationes varias et speciebus aliis hybridas numerosas creavit, quae copiam infinitam pomorum hortensium explent. Haec facile silvescunt et saepissime plantas silvestres imitantur.

2. *Malus pumila* [Miller, Gard. dict., ed VIII (1768); Schneid., l. c., 715; Beck in Reich. f., l. c., 34, t. 112, f. 1—2. *M. paradisiaca* Med., Gesch. Bot., 78 (1793); Koehne, Deutsche Dendrol., 259. — *Pirus* (vel *Pyrus*) *Malus* β. *paradisiaca* L., Spec. pl., 479 (1753). — *P. pumila* et *dasyphylla* K. Koch, Dendrol., I, 203 et 205 (1869).

Ex Rossia australi et terris caucasicis orta, frequenter propter poma in varietatibus variis atque hybridis colitur, sed rare modo inquilina repertur. Planta e culturis effugita et inquilina est v. *paradisiaca* [(L.) Schneider, l. c.], planta culta = v. *domestica* [Borkh., Handb. Forstbot., II, 1272 (1803) sub spec.; Schneid., l. c.].

Bosna: Inquilina circa Travnik (*Br. 1890/91), in m. Debeljača prope Bihać (B.), circa Sarajevo in faucibus fl. Miljačka (B.) et al. loc.

f. *dasyphylla* [Borkh., Handb. Forstb. II, 1271 (1803) Asch. Gr., l. c. 77].

Bosna: In monte Igman a. 1380 m, Trebević, pr. Miljevići (*M.).

20. Sorbus.

[L., Spec. pl., 477 (1753) et Gen., ed. V, nr 548 ampl.; K. Koch, Dendrol., I, 184; Fritsch in Öst. bot. Zeit. 48 (1898), 1 et sequ.; Beck in Reich. f.,

l. c., 35. — *Pirus* seu *Pyrus* Endl., Gen., 1237; Benth. Hook., Gen., I, 626 ex parte; Ascherson Graebner, loc. cit., 84 — Confer: T. Hedlund, Monograph. Gatt. *Sorbus* in k. Svensk. vet. ak. handl., 35 nr. 1 (1901) et opera dendrologica autorum K. Koch, Koehne, C. K. Schneider etc.]

Subgenus: *Cormus*.

[Beck in Reich. f., l. c., 35 (1914). — *Sorbus* Medic., Phil. Bot., I, 138 et 155 sed L. l. c. et aut. pro parte; sect. *Sorbaria* Dum., Fl. belg., 93 (1827) p. p.; sect. *Aucuparia* Neilr., Fl. Nied.-Öst., 686 p. p.; sect. *Cormus* Fritsch in Öst. bot. Zeit., (1898), 168; Schneid., l. c., 683. — *Cormus* Spach, Hist. veg. phan., II, 96 (1834); Koehne, Gatt. Pom., 23; Beck, Fl. Nied.-Öst., 714. — *Pyrus* sect. *Sorbus* Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 24 p. p.; sect. *Cormus* Asch. Graebn., l. c., 90.]

1. *Sorbus* (*Cormus*) *domestica* [L., Spec. pl., 477 (1753); Jacqu., Fl. Austr., t. 447; Reich., Fl. Germ., 627; Schneid., l. c., 683; Beck in Reich. f., l. c., 36 t. 113; Hedlund, Mon. Sorb., 32. — *Mespilus domestica* All., Fl. Pedem., II, 142 (1785). — *Pirus sorbus* Borkh., Forstbot. Beschr., 183 (1790). — *P. domestica* Sm., Engl. bot., V, 350 (1796); Asch. Graebn., l. c., 91. — *Malus sorbus* Borkh., Handb. Forstbot., II, 1253 (1803). — *Cormus domestica* Spach, Hist. vég. Phan., II, 97 (1834); Koehne, Deutsche Dendrol., 254; Beck, Fl. Nied.-Öst., 715. — *Pyrenia sorbus* Clairv., Man. d'herb. Suisse 162 (1812). — Confer: Roem., Syn. Monogr., III 162]. »Oskoruša, okoruš«. In silvis Europae australis et Orientis indigena et propter poma in ditone nostra colitur. Floret m. Aprili, Majo.

Bosna: Prope Bronzeni Majdan (Fo.), Ivanjska (B), Travnik (Br.), in m. Vlašić a. 1400—1900 m (*S. 1848), hic valde dubitandum!; in valle Rijeka prope Fojnica (B.), circa Kotor Varoš (R. f. M.). Circa Sarajevo pr. Halapi (B.), in m. Kobilja glava (B.), in declivibus montis castello coronati (M.). Juxta Han Ošanica in valle fl. Drina, prope Blaž et Drinsko supra Višegrad (B.), circa Goražde (Fo. f. V.). — **Hercegovina:** Prope Brđani (M.), Selakova kula et ad fl. Neretva (*Fr. Br. 1888), juxta Žitomišljici (Fo.), inter Tašovčići et Domanovići (B.).

Subgenus: *Eusorbus*.

[Beck in Reich. f., l. c., 36 (1914). — *Sorbus* L., Gen., ed. V, nr. 548 et ed. VI 250 nr. 623 ex diagn. sed Spec. pl., 477 p. p. (confer Beck, Fl. Nied.-Öst., 708 nota 1); Koehne, Deutsche Dendrol., 246; Beck, l. c.; sect. *Sorbus* Pers., Syn. pl., II, 38 p. p.; sect. *Sorbaria* Dumort., Fl. belg., 93 (1827) p. p.; sect. *Aucuparia* Roem., Syn. monogr., III, 137 (1847) = Fritsch in Öst. bot. Zeit. (1898), 169; Schneid., l. c., 667. — *Pirus* Benth. Hook., Gen., I, 626; subgen. *Sorbus* Focke in Engl. Prantl, Pflanzenf., III 3, p. p.; sect. *Sorbus* Gray, Arr. brit. pl., II, 563; Endl., Gen., 1237; sect. ?*Aucuparia* Asch. Graebn., l. c., 86.]

2. *Sorbus (Eusorbus) aucuparia* [L., Spec. pl., 477 (1753); Reich., Fl. Germ., 627; Koehne, Deutsche Dendrol., 246; Beck, Fl. Nied.-Öst., 708 et in Reich. f., l. c., 37, t. 114; Hedl., Mon. *Sorbus*, 46; Schneid., l. c., 672. — *Mespilus aucuparia* Scop., Fl. Carn., ed. II, I, 346 (1772). — *Pyrus aucuparia* Gaertn., De fruct., II, 45 (1791); Asch. Graebn., l. c., 86. — *Aucuparia silvestris* Medic., Gesch. Bot., 86 (1793). — *Pyrenia aucuparia* Clairv., Man. d'herb. Suisse, 162 (1812)]. »Jarebika«. In silvis praecipue frondosis et subalpinis, ad silvarum margines, in declivibus saxosis usque ad regionem alpinam (—1900 m). Floret m. Majo, Junio, in editioribus etiam m. Julio.

Bosna: Circa Gubar, Srebrenica (J.), in m. Velika Gomila pr. Krupa (B.), Osječnica, Klekovača (F.), circa Bugojno (Pr.), in m. Stožer, Šuljaga (B.), pr. Kupres (F.), pr. Šujica, in m. Vel. Malovan (Pr.), Prolog (B.), Troglav (Pr.), Šator (Ja.), Cincar —1700 m (B.), Krug (B.); cirka Gubin, Grkovac, Preodac, Glamoč (Pr.), ad riv. Ravni potok prope Drvar (Ja.). Circa Travnik (Br.), in m. Vilenica (Fr. Br.), prope Pašin han ad fl. Bosnam (*S. 1848); cirka Fojnica (Pr.), in m. Vranica et Štit (Mu.), a. 1200 ad 1500 m; in Resanovača pr. Poljane et pr. Podgorje (Ha. Fa.), inter Borovica et Vareš (*S. 1848), cirka Vareš, Tarčin (Pr.). In m. Trebević 1600 m (B.), Gola Jahorina —1900 m (M.), Igman prope Han Sumbulovac (B.), in m. Bjelašnica supra Babindol, hic epiphytica in Abie (M.), in m. Romanija et Treskavica (B.) Stolac prope Višegrad (Adam.). — **Hercegovina:** In m. Lelija (B.), cirka Plužine (F.), in m. Bjelašica prope Gacko (Mu.) cirka Čemerno, Brajčin (Simonović f. Fritsch), in silva Dubrava inter Domanovići et Stolac (F.), in agro Popovo polje (M.) in m. Gljiva prope Trebinje et in m. Jastrebnica (*P. 1874).

α. lanuginosa [Kit. in Schultes, Öst. Fl., ed. II, II, 50 (1814) pro spec.; Günth. Grab. et Wimm., Enum. stirp. Sil., 82 (1824); Beck, Fl. Nied.-Öst., 708 et in Reich. f., l. c., 37; Schneid., l. c., 673].

Bosna: In m. Cincar a. 1400 m (*B.). Circa Fojnica (Schwarz f. B.), in silvis subalpinis montis Treskavica (B.). Probabiliter amplius vulgata. — **Hercegovina:** In planitie Dubrava prope Stolac (F. fide M. in litt.).

β. typica [Schneider, l. c., 673]. Frequens.

γ. alpestris [Wimm., Fl. Schles., 127 (1841), 2. Aufl., 127; G. Beck, in Reich. f., l. c., 37; v. *glaberrima* Tausch Exs.; v. *alpina* Blytt, Om. veg., 174 (1869); v. *typica* Beck, Fl. Nied.-Öst., 708; v. *glabrata* Schneid., l. c., 673 = subsp. Hayek, Fl. Steierm., I, 969. — *S. glabrata* Hedl., Mon. Sorb., 45 (1901). — *Pyrus aucuparia* v. *glabrata* Wimm. Grab., Fl. Schles., II 1, 21 (1821); v. *alpestris* Grab., Fl. Oberschles., 139 (1843)].

Bosna: In m. Vranica sub Devetači (Čurčić! f. *B.).

СРПСКА КРАЉЕВСКА АКАДЕМИЈА

ПОСЕБНА ИЗДАЊА

КЊИГА LXIII

ПРИРОДЊАЧКИ И МАТЕМАТИЧКИ СПИСИ

КЊИГА 15

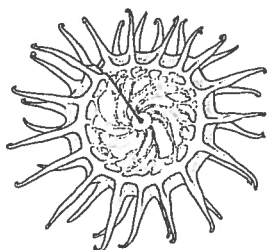
ФЛОРА

БОСНЕ, ХЕРЦЕГОВИНЕ И ОБЛАСТИ
НОВОГА ПАЗАРА

PART 3.

НАПИСАО

Проф. DR. ГИНТЕР БЕК-МАНАГЕТА



БЕОГРАД-САРАЈЕВО

ДРЖАВНА ШТАМПАРИЈА У САРАЈЕВУ

1927

ЦЕНА 60 ДИНАРА

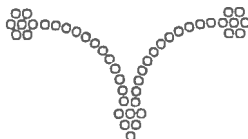
СРПСКА КРАЉЕВСКА АКАДЕМИЈА

ПОСЕБНА ИЗДАЊА

КЊИГА LXIII

ПРИРОДЊАЧКИ И МАТЕМАТИЧКИ СПИСИ

КЊИГА 15



БЕОГРАД-САРАЈЕВО

ДРЖАВНА ШТАМПАРИЈА У САРАЈЕВУ

1927

Subgenus: *Aria*.

[Beck in Reich., l. c., 38 (1914). — *Hahnia* Medic., Gesch. Bot., 81 (1793). — *Pyrus* sect. *Aria* et *Torminaria* DC., Prodr., II, 635 et 636 (1825). — *Pyrus* subgen. *Sorbus* Focke in Engl. Prantl, Nat. Pflanzenf., III, 3, 24 p. p. — *Aria* Host, Fl. Austr., II, 7 (1831) ampl.; Beck, Fl. Nied.-Öst., 710 (1892). — *Sorbus* sect. *Aria* Pers., Syn. pl., II, 38; sect. *Hahnia* Schneid., l. c., 684.]

Sectio: *Euaria*.

[Beck, Fl. Nied.-Öst., 710 pro sect. *Ariae* et in Reich. f., l. c., 38 (1914); sect. *Aria* Pers., l. c., 38 (incl. *S^o torminali*). = *Aria* Host., l. c., p. p. (incl. *S^o chamaemespilo*) sed Beck, l. c.; Koehne, Gatt. Pom., 17 et Deutsche Dendrol., 248.]

3. *Sorbus* (*Aria*) *aria* [Crantz, Stirp. Austr., II, 46 (1762) p. p.; Reich., Fl. Germ., 628; Hedl., Mon. Sorb., 77; Schneid., l. c., 687; Beck, in Reich. f., l. c., 38, t. 116—117. — *Crataegus aria* α L., Spec. pl., 475 (1753) p. p. — *Mespilus aria* Scop., Fl. carn., ed II, I, 345 (1772)? = All., Fl. Pedem., II, 141. — *Pirus aria* Ehrh., Beitr., IV, 26 (1789); Focke in Wohlf., Syn. Deutsch. Fl., I, 855; Asch. Graebn., Syn. mitteleur. Fl., VI 2, 95. — *Hahnia aria* Med., Gesch. der Bot., 81 (1793). — *Azarolus aria* Borkh., Handb. Forstbot., II, 1229 (1803). — *Pyrenia aria* Clairv., Man. herb. Suisse, 162 (1811). — *Aria nivea* Host, Fl. Austr., II, 8 (1831); Roem., Syn. mon., III, 125; Beck, Fl. Nied.-Öst., 711; Koehne, Deutsch. Dendrolog., 250. — De formis conf.: Roem., Syn. mon., III, 126 et Schneider, l. c. In locis lapidosis, silvaticis, saxis, inter dumeta, in silvis subalpinis usque ad regionem *Pini mugo* (—1700 m), praecipue solo calcareo. Floret m. Majo.

Bosna: Inter Drinjača et Nova Kasaba (J.) in m. Osječenica (F., B.), inter Glogovac et Ljuša (Ha. Fa.), in m. Šuljaga, Vel. Malovan (Pr.), circa Malovan (B.), in m. Prolog (B.), Dinara in m. Troglav (B., Ja. Wa.), in faucibus Sutina (Ja.); in m. Uilica, Jedovnik (Ja. Wa.), circa Drvar, Resanovača, Poljana pr. Ribnik (Ja.), in m. Šator Pr., Ja., Jezero Kamen in valle riv. Mlinki (Ja.), ad Popovići (Ha. Fa.); in m. Krug pr. Livno (B.). Circa Vareš (Pr.), in m. Igman (M.), Bjelašnica (B.). Circa Sarajevo in faucibus fl. Miljacka (B.), in m. Trebević (Zoch, B.) usque ad cacumen 1629 m; in m. Treskavica (B.), Vratlo (Fo.), Dumoš, circa Bijele vode pr. Klinja (Fo.), in valle Krupica pr. Jeleć (B.), in m. Bregoč, in valle fl. Sutjeska (Pr.), in Suha gora et in m. Maglić (B.), Volujak (Pr.), Grad pr. Goražde (B.). — **Hercegovina:** In m. Preslica (V.), circa Konjic (D.), prope Morinje (Fo.); in montibus Prenj (B.), Prislav (V.), Porim (A. Pi.), Crvani (Mu.), Velež (Fo., Mu., B., Sagorski) —1600 m; prope Nevesinje (V., B.), in m. Plasa (Pr., Prodan), supra Rakitnica (R. f. M.), pr. Jovanović karaula

(B.). In m. Glijiva pr. Trebinje (*P. 1874). In Bijela gora in valle Raduš prodo pr. Vučjak (*P.), ad fontem Orijenška lokva, in m. Svitavac (V.).

Variet:

α. *typica* [Schneid., l. c., 687; Beck in Reich. f., l. c., 39. — *Pirus aria* v. *typica* Asch. Graebn., l. c., 96]. Vulgata.

f. *incisa* [Reich., Fl. Germ., 628 (1832) = *S. incisa* Hedl., Mon. Sorb., 82. — *Pirus aria* v. Asch. Graebn., l. c., 97]. **Bosna:** Circa Sarajevo in faucibus fl. Miljacka (*B.). — **Hercegovina:** In cacumine Bjelašnica montis Prenj, in valle Idbar; in m. Leotar prope Trebinje (*B.). Sine dubio amplius vulgata.

β. *cyclophylla* [Schneid., l. c., 688; Beck, l. c., 39, t. 117, fig. 3 — *Aria nivea* v. *cyclophylla* Beck, Fl. Südbosn. in Ann. nat. Hofmus., XI (1896), 47. — *Pirus Aria* v. Asch. Graebn., l. c., 97].

Bosna: In valle fl. Vogošća supra Jasikovina pr. Sarajevo (*B. 1896); in m. Trebević (Sagorski).

γ. *salicifolia* [Myrin in Hartm., Skand. fl., ed. III, 116 (1838); Schneid., l. c., 688; Beck, in Reich. f., l. c., 40, t. 117, fig. 5; confer: Sagorski in Allg. bot. Zeit. (1912), 19. — *Pirus aria* var. Asch. Graebn., l. c., 96. — *Sorbus salicifolia* Hedl., Mon. Sorb., 78].

Hercegovina: In fagetis supra Bojište a. 1200 m (*Sagorski 1912).

Subspec. *Sorbus umbellata* [Fritsch in Kerner, Sched. ad fl. exs. austro-hung., 2449 (1896) em.; Schneider, l. c., 689; Beck, in Reich. f., l. c., 40, t. 118. — *Crataegus umbellata* Desf., Cat. hort. Par., ed. III, 408 (1829)]. *Sorbo ariae* valde est affinis et certe huius speciei polymorphae proles australis praestans: foliis subcoriaceis, rotundis, in apice plurimum rotundatis supra glabrescentibus, infra albo-vel cinereo-tomentosis, nervis utrinque 4–11, petiolis brevibus 9–10, summo 15 mm longis, floribus 15–20 mm latis, fructibus aurantiacis vel coccineis. *S. aria* autem in saxosis apricis calcareis saepissime folia coriacea nanciscitur ac folia obtusa in f. *obtusifolia* (DC.) ostendit. Eiusdem longitudo petiolorum plurimum 10–15 mm sed inter 8–25 mm nutat.

Variet:

α. *meridionalis* [Malý in Glasn. zem. muz., 32 (1920), 150. — *Pyrus meridionalis* Guss., Syn. fl. Sic., II, 831 (1844). — *Sorbus meridionalis* Nym., Consp. fl. Eur., Suppl. II, 118 (1889) = Fritsch, l. c., nr. 2447. — *S. aria* f. *meridionalis* Strobl

in Öst. bot. Zeit. (1886), 238; var. Hal., Consp. fl. Graec., I, 541 (1901). — *S. meridionalis* f. *typica* Sagorski in Allg. bot. Zeit. XX (1914), 70. — Confer: Strobl, l. c. (hic ulteriora)]. Folia late elliptica, plurimum utrinque rotundata, 7—15: 5—10 cm, in tertia infima integra, grosse biserrata vel inciso-serrata, interdum sublobata. A *S^o Mougeotii* v. *austriaca*, quae fructus tempore foliis coriaceis gaudet, foliis infra integris, apice magis rotundatis differt. Forsan *S. aria* × *Mougeotii* (*austriaca*)?

Bosna: In m. Igman et Trebević pr. Sarajevo (*M. 1904. Sagorski).

S. meridionalis Guss. in Kerner, Fl. exs. austro-hung., nr. 2447 (det. Fritsch) ad *Sm ariae* f. *apiculatam* Beck pertinet.

β. *flabellifolia* [Wenzig in Linnaea XXXVIII (1874), 55 = Schneider, l. c., 689. Beck in Reich. f., l. c., 40, t. 118, fig. I. — *Pyrus aria* Sibth., Fl. Graec., V, 63, t. 479 non L. — *Crataegus umbellata* Desf., l. c., = *Sorb. aria* v. *umbellata* Hal., Consp. fl. Graec., I (1901), 541. — *Crataegus flabellifolia* Spach, Hist. Veg., II, 103 (1834) = *Aria flabellifolia* Roem., Syn. Monogr., III, 127 (1847); Koehne, Deutsche Dendrol., 250. = *Sorbus flabellifolia* Schauer in Allg. Gartenzeit. (1847), 84. — *Hahnia aria* v. *flabellifolia* Dippel, Laubholzkunde, III, 375 (1893). — *Pirus meridionalis* A. *flabellifolia* Asch. Graebn., Syn. mitteleur. Fl. VI 2, 99 (1908)]. Folia e basi cuneata et integra rotunda, apicem versus lobato-biserrata, infra dense tomentosa, serius coriacea, 5—7 cm longa, 3.5—5.8 cm lata, nervis lateralibus utrinque 4—7. Petioli 10—15 mm longi. Flores parvuli, 15 mm lati. Petala c. 5 mm longa; sepala fructus tempore reflexa. Proles regionis mediterraneae egregia!

Hercegovina: In valle Bukov dol prope Ljubinje (R. f. M. 1918 sub *umbellata*), in m. Gljiva pr. Trebinje (*P. 1874 sub *S. aria* v. *graeca*).

γ. *graeca* [K. Koch, Dendrol., I, 102 (1869); Beck in Reich. f., l. c., 40, t. 118, fig. 3—5; v. *cretica* Schneid., l. c. *Pyrus aria* v. *cretica* Lindl. in Trans. Hort. soc. Lond., VII (1830), 236 = Asch. Graebn., l. c. 100 (1906). — *Crataegus graeca* Spach, l. c., 102 (1834). — *Aria graeca* Roem., l. c., 127 (1847); Koehne, Deutsch. Dendrol., 250 — *Hahnia aria* v. *graeca* Dippel, l. c., 375. — *Sorbus cretica* Fritsch l. c., nr. 2448 (1896). — *S. graeca* K. Koch, Dendr. I, 192 (1869); Lodd. in Nym. Consp. fl. Eur. Suppl. II, 118 = Hedl., Mon. Sorb., 75 (1901.) = *S. aria* v. Gris., Spic. fl. Rum., I, 93?; Zabel in Handb.

Laubholzben. (1903), 199.; v. *cretica* Hal., Consp. fl. Graec., I. 541]. Folia elliptica vel rotunda in basi cuneata integra, a media ad apicem simpliciter sed inaequaliter serrata, non lobata, subtus albo-tomentosa, 5—9 cm longa, 4—7.5 cm lata, nervis lateralibus utrinque 6—11, petiolis 10 mm longis. Flores 20 mm lati. Sepala fructus tempore erecta. Proles regionis mediterraneae!

Forsan etiam in Hercegovina reperienda sit, quia haec frutex etiam in Crna Gora prope Cetinje a Sagorski [in Allg. bot. Zeit., XX (1914), 70] observata est.

♂. *Baldaccii* [Schneider, l. c. — *Sorbus Baldaccii* Degen et Fritsch in Herb. = *Pirus meridionalis* var. Asch. Graebn., l. c., 100]. Folia minora, e basi cuneata elliptica vel oblongo-elliptica, sublobato-grossedentata, ad basim modo integra, subtus albo-tomentosa, 3.5—6.5 cm longa, 1.8—4 cm lata, nervis lateralibus utrinque c. 6, petiolis 9—13 mm longis. Inflorescentia depauperata, fructus tempore 2—4 fructus gerens. Proles subalpina.

Bosna: In m. Osiečenica (*B.) et Cincar pr. Livno a 1400 m (*B.) — **Hercegovina.** In regione subalpina m. Velež (Bornmüller! sub *P. graeca* Lodd f. *B.). Etiam in **Istriae** monte Učka (=Mt. Maggiore), in **Croatia, Dalmatia** (pr. Kotor) et in **Albania** occurrit.

4. *Sorbus Mougeotii* [Soy. Will. et Godr. in Mém. de l'acad. Stanisl. (1858) et in Bull. soc. bot. de France, V, 447 (1858); Gren., Fl. Jur., 259; Issler in Allg. bot. Zeitschr. (1901), 117; Schneid., Laubholz., I, 694. — *S. scandica* f. *S. Mougeoti* Rouy Camus, Fl. France, VII, 22; v. *Mougeoti* Gillot in Bull. soc. bot. France, XXIII p. CXXXIX; = Zabel in Handb. Laubholzbenennung, 198 (1903). — *Pirus Mougeotii* Asch. Graebn., Syn. mitteleur. Fl., VI 2, 93 (1906). — *Aria scandica* Roem., Syn. mon. III, 127 p. p.; Decaisne, Mém. Pom., 163 p. p. — *A. Mougeoti* Beck, Fl. Nied.-Öst., 714 (1890); Koehne, Deutsch. Dendrol., 250. — *Hahnia suecica* Dippel, Laubholz., III, 377 p. p. — *H. Mougeoti* Schneid., Dendrol. Winterstud., 247. — Confer: Beck, Fl. Hernst., kleine Ausg., 216 (1884) et Fl. Südbosn. in Ann. naturh. Hofmus., XI (1896), 47; Murbeck, Beitr. Fl. Südbosn. in Lunds. Univ. Årsskr. (1891), 129]. — Arbor (rarius frutex) — 20 m altus, ramis junioribus subglabris. Folia ovali-rotunda, in basi + cuneato-contracta, lobato-bidentata, lobis mediis maximis, subtus dense albotomentosa, nervis lateralibus utrinque 8—12, petiolis 1.5—2 cm longis. Flores 12—15 mm lati. Petala rotunda, alba, 5—7 mm longa. Pomae

subglobosae, coccineae, ad vescendum aptae, 10—13 mm longae. — In lapidosis, saxis, silvis apertis, sub *Pinos mugo* in regione subalpina et *Pini mugo* — 1800 m, solo calcareo. Floret m. Majo, Junio.

Variat:

α . *typica* [Schneid., l. c. *Sorbus Mougeoti* Soy. Will., l. c. — *Aria Mougeoti* α . *typica* Beck, l. c., 714. — *Pirus Mougeotii* α . *typica* Asch. Graebn., l. c., 94. — *P. scandica* Beck, Fl. Südbosn. in Ann. nat. Hofmus., II, 97 non Fries.]. Folia ovalia, subduplo longiora quam lata, 7—10 cm longa, 3.5—6 cm lata, in basi \pm cuneata, hinc inde subrotundata, lobis brevibus. Petala 6—7 mm longa. Pomae vix ultra 10 mm longae.

Bosna: In saxis m. Romania (*Beck, Pl. Bosn.-Herc, Nr. 118 sub *Piro scandica*) imprimis in Crvena stijena

β . *austriaca* [Schneider, l. c., 694. — *Sorbus aria* Crantz, Stirp. austr. II, t. II f. 2 (1763). — *S. intermedia* Reich., Fl. Germ., 628 p. p. — *Pyrus intermedia* Schult., Öst. Fl., ed. II, 61 (1814) p. p. non Ehrh. — *Pirus Mougeoti* G. Beck, Fl. Hernst., kleine Ausg., 216 (1884); *B. austriaca* Asch. Graebn., l. c., 94. — *Aria Mougeoti* β . *austriaca* Beck, Fl. Nied.-Öst., 714 (1892) = *Aria austriaca* Beck in sched.]. Folia paulo longiora quam lata, late ovalia vel suborbicularia, in basi breviter cuneata, lobis profundius (usque ad tertiam dimidiae folii partis) incisus, pro parte incumbentibus, supra obscure viridia, nitentia nervis immersis, 8—11 cm longa, 4—9.5 cm lata, demum coriacea. Pomae subglobosae, 10—13 mm longae, rubrae. Arbor ad 20 m altus, in locis editioribus modo fruticosa.

Bosna: In m. Igman (R., F, B) et Trebević (*B., M. et alii) — 1625 m; in faucibus fl. Miljacka, in m. Lišovac (*B. 1887), prope Hreša, in m. Bukovik, Glog (M.), in m. Klek (F.!). — **Hercegovina:** In m. Čabulja a. 850 m (B.). Proxime Tatar brieg ad riv. Streha potok (R. f. *M. 1908); in m. Velež (Sagorski).

Sorbus hybrida [L., Spec. pl., ed. II, 684 (1762); Schneid., l. c., 691. — *Crataegus aria* β . *fennica* L., Fl. Suec., ed. II, 167 (1755). — *Pirus pinnatifida* Ehrh., Beitr., VI, 93 (1791). — *P. semipinnata* Bechst., Forstbot., ed. IV a, 325, t. VIII (1846) *S. fennica* Fries, Summa veg., 42 (1846)] est *Sorbus aucuparia* \times *intermedia* et in ditione nostra certe deest. Quia *S. intermedia* regiones septentrionales incolat, dicta d. Protić [in Glasn. zem. muz. XII (1900), 479] *Sorbum hybridam* in Bosnae

monte Šuljaga repertam esse, ad *Sm ariam* × *aucupariam* pertineant.

5. *Sorbus aria* × *aucuparia* [Hal. Braun, Nachtr. Fl. Nied.-Öst., 178 (1882). — *S. aucuparia* × *aria* Schneid., l. c. 674; confer: Fritsch in Öst. bot. Zeit. (1899), 382. — *Pirus aria* × *aucuparia* Focke in Wohlf., Syn. Deutsch. Fl., 856 (1899). — *P. aucuparia* × *aria* Asch. Graebn., l. c., 105].

Bosna: In regione *Pini mugo* montis Osječenica (*F. 1892); in m. Šuljaga (Pr. sub *S. hybrida*), in m. Maglić prope Prijedor, in m. Volujak (Pr.).

Probabiliter *Sorbus semipinnata* [Hedl., Mon. Sorb., 20 et 49 (1901) non Borbás = *Pirus semipinnata* Roth, Enum. Germ., II, 438 (1827). — *Sorbus hybrida* Koch, Syn. fl. Germ., 236 non L. — *S. thuringiaca* Fritsch in Kerner, Schedae ad fl. exs. austro-hung., VII 16 nr. 2443 (1896) non Schneider (= *Pirus thuringiaca* Ilse) locis citatis reperta est.

6. *Sorbus aucuparia* × *Mougeotii* [Fritsch in Öst. bot. Zeit., XLIX (1899), 427 = *Sorbus austriaca* × *lanuginosa* Borbás, ibidem, 429].

a) *Sorbus dacica* [Borbás in Öst. bot. Zeit., 37 (1887), 403. — *S. semipinnata* Borbás in Math. es Term. tud. ertes. 1882/83 (non Hedl.) sub *S. aria* v. *graeca*? × *aucuparia* = *S. austriaca* × *lanuginosa* Borbás apud Fritsch, l. c., 429. — *S. aucuparia* v. *lanuginosa* × *umbellata* v.? (vel *aria* var.?) Schneid., l. c., 675 (1906). — *Pirus aucuparia* × *meridionalis* (*P. dacica*) Asch. Graebn., Syn. l. c., 106].

Nomen *S. dacicam* Borb. praefero, quia *S. semipinnata* Hedl. *Piro semipinnata Rothii* (1827) justissime subnititur.

Bosna: In m. Osječenica (F. f. *Fritsch 1899).

Sectio: *Torminaria*.

[G. Beck — *Pyrus* sect. *Torminaria* DC., Prodr. II, 636 (1825). — *Sorbus* sect. *Torminaria* Rouy Camus, Fl. France, VII, 27, (1901) cum diagnosi non sufficiente. — *Hahnia* Medik., Gesch. der Bot., 81 p. p. — *Torminaria* Roem., Syn. monogr., III 101 et 130 (1847); Koehne, Deutsch. Dendrol., 253.]

7. *Sorbus torminalis* [Crantz, Stirp. Austr., II, 45 (1763); Reich., Fl. Germ., 628; Koch, Syn. fl. germ., 237; ed. II, 263; Hedl., Mon. Sorb., 107; Schneider, Laubholz., I, 696; Hemp., Wilh., Bäume u. Sträuch. des Waldes, III, 81, t. LIII. — *Crataegus torminalis* L., Spec. pl., 476 (1753); Jacqu., Fl. Austr.,

V. t. 443. — *Mespilus torminalis* All., Fl. Pedem., II, 141. — *Pyrus torminalis* Ehrh., Beitr., VI, 92 (1789); Focke in Wohlf., Syn. deutsch. Fl., I, 855; Asch. Graebn., Syn. mitteleur. Fl., VI 2, 84. — *Hahnia torminalis* Med., Gesch. Bot., 81 (1793). — *Azarolus torminalis* Borkh., Handb. Forstbot., II, 1235 (1803). — *Torminaria Clusii* Roem., Syn. Mon., III, 130 (1847); Decaisne, Mém. Pom., 167; Koehne, Deutsch. Dendrol., 255. — *T. vulgaris* Schur, Enum. Transs., 207 (1866). — *Torm. torminalis* Dippel, Handb. Laubholz., III, 387 (1893). — *Aria torminalis* Beck, Fl. Nied.-Öst., 713 (1892). — »Brekinja, brek«. — In silvis frondosis, ad silvarum margines, inter dumeta usque ad subalpinas (1500) m. Floret m. Majo, Junio.

Bosna: In m. Kriva glava pr. Novi, in cacumine Krnin montis Kozara (B), in agro Brezovo polje ad fl. Sava (F.), inter Maglaj et Han Mravići (*S. 1848), circa Žepče, prope Papratnica, in m. Smolin (B) In m. Gomila velika pr. Krupa (B.), Debeljača pr. Bihać (B.), inter Ribnik et Poljana (Ha. Fa.); in m. Šuljaga, Vel. Šator (Pr.). Circa Travnik (Br.), prope Pu-tičevo (Pr. Br.), Vareš (*S. 1848), Potoci, Pržiči (Pr.); in m. Igman (M.); circa Sarajevo: in valle riv. Koševo (M.), prope Vučja luka, in m. Trebević (F.), Hrid (M.), in valle fl. Miljacka (B.); prope Rogatica, Golubići, Ruseno-vići (F.); in valle fl. Željeznica, in Zelengora, pr. Suha, Mješajići (Pr.), in m. Grad pr. Goražde (B) in m. Stolac pr. Višegrad a. 800—1500 m (Adam.), In m. Macute prope Vardište a. 830 m (M.). — **Hercegovina:** In m. Golo brdo inter Brdjani et Bradina a. 700 m, in m. Preslica (Lindberg), in valle Idbar a. 800 m (B.), in m. Raška gora (B.), Velež 1300 m (Mu., Pi.); prope Neve-sinje (*V. 1888). — **Novi Pazar:** In valle fl. Lim inter Prijepolje et Bi-strica (*B.).

Formae sequentes observatae sunt:

f. *mollis* [Schneider, l. c., 696; = *Pirus torminalis* var. Beck, Fl. Südbosn. in Ann. naturh. Hofmus., II (1887), 97 = *Aria torminalis* var. Beck, Fl. Nied.-Öst., 713]. **Bosna:** In silvis montis Igman pr. Blažuj (*B. 1887). — f. *latelobata* [G. Beck]. Folia pinnatilobata, in lobis basi plus minus cordata, lobis basalibus latis ovalibus acutis, tam longis quam latis, in margine posteriore saepe lobulatis. **Bosna:** In m. Knin montis Kozara (*B.). — f. *perin-cisa* [Borbás et Fek., Erdészti lapok (1899), 105—106 et in Öst. bot. Zeit (1889), 223 pro spec.; Schneid., l. c., 696]. **Bosna:** In m. Hum prope Jajce (*B.).

8. *Sorbus aria* × *torminalis*. Hanc hybridam Ascherson et Kanitz [Cat., 96 (1877)] in Bosna sine notis indicantur. Qua de causa incertum relinquit, an *S. latifolia* Pers. aut alia inter hybridas *Sⁱ ariae* et *Sⁱ torminalis* reperta sit. In literatura omnia alia dicta desunt.

9. *Sorbus (Aria) chamaemespilus* [Crantz, Stirp. Austr., II, 40 p. p., t. I, fig. 3 (1763); Schneider, l. c., 697 (exc. dis-

color). — *Mespilus chamaemespilus* L., Spec. pl., 479 (1753). — *Crataegus alpina* Mill., Gard. dict., ed. VIII, nr. 3 (1768). — *C. chamaemespilus* Jacqu., Enum. Vind., 86 et 243 (1762) et Fl. Austr., III, t. 231. — *Hahnia chamaemespilus* Med., Gesch. Bot., 82 (1793). — *Pirus chamaemespilus* Ehrh., Beitr., IV, 19 (1789) = Pallas in Duroi, Harbk. Baumz., 2. Aufl., II, 321 (1800); Asch. Graebn., l. c., 101. — *Aria chamaemespilus* Host, Fl. Austr., II, 8 (1827); Beck, Fl. Nied.-Öst., 712; Koehne, Deutsch. Dendrol., 251. — *Chamaemespilus humilis* Roem., Syn. mon., III, 131 (1848)]. In saxosis, dumetosis, inter *Pinos mugo* in regione subalpinae editiore et *Pini mugo* — 1800 m, interdum dumeta formans.

Bosna: In montibus: Osječenica et Klekovača (F., B.), Vel. Malovan (Pr.), Šator (F. Ja.), Plazenica (Ha. Fa., Pr.), Bjelašnica (*Br. 1890/91, M.), Treskavica (R.), Maglić (B., Rohlena). — **Hercegovina:** In m. Prislav (*V. 1890); Vlah? (Zavodny).

Var. *glabra* [Neilr., Fl. Nied.-Öst., 887] modo observata est.

21. Pirus.

[L., Spec. pl., 479 (1753) et Gen., ed. V, nr. 550 sub *Pyro* et aut. p. p. rectius Medicus, Gesch. Bot., 76 et 87 (1793); Decaisne, Mém. Pom., 150; Koehne, Gatt. Pom., 15; Beck, Fl. Nied.-Öst., 709. — *Pirus* sect. *Pirophorum* Focke in Engl. Prantl, Nat. Pflanzenf., III 3, 22; Asch. Graebn., l. c., 59. — *Pirophorum* Necker, Elem., II, 72 (1790).] »Kruška«.

1. *Pirus communis* [L., Spec. pl., 479 (1753); Koehne, Deutsch. Dendrol., 244; Asch. Graebn., l. c., 60; Beck, Fl. Nied.-Öst., 709; Schneider, l. c., 661. — *Sorbus Pyrus* Crantz, Stirp. Austr., II, 56 (1763)]. »Kruška«.

Variat:

α. *piraster* [L., l. c., 479 (*pyraster*); v. *achras* Wallr., Sched., I, 213 (1822); subsp. *achras* Gaertn. et *piraster* Borkh. in Asch. Graebn., l. c., 61–62. — *P. pyraster* Borkh., Handb. Forstbot., II, 1287 (1803). — *P. achras* Gaertn., De fruct., II, 44 (1791); K. Koch, Dendrol., I, 215 (1869). — *P. brachypoda* Kerner in Linnaea 38 (1874), 17]. Est planta in silvis et montanis et ripariis, dumetis declivibus lapidosis silvestris et usque ad regiones subalpinas silvestris. Floret m. Aprili, Majo.

Per totam ditionem vulgata, hinc inde frequens et sociationes formans. **Bosna:** In partibus demissis (*Boué 1840) Ubique in Bosna septentrionali (B.) sic prope Demirovac, Medjedja, Novi, Tujnica, Ivanjska (B.), Srebrnik, Gradačac (S.), in valle fl. Spreča (S.), prope Donja Tuzla (M.),

Prosjek (J.), Zvornik (Wettstein f. Ja.), Nova Kasaba (J.), in m. Kvarac pr. Srebrenica (Wettst. f. Ja.), circa Žepče, in m. Smolin (B.). In Bosna occidentali vulgata (Fo.) uti in valle fl. Una (B.), circa Bihać (B.), in m. Osje-^{Klas}čenica et Klekovača (F., B.), Kriva Jelička (Sta.), Stožer (B.), prope Kola Novoselija, Karanovac (Fo.), Jezero, Jajce (Gross Kneucker), in m. Vlašić —1300m (S.), circa D. Vakuf (Ha. Fa.), in m. Vranica (Mu.). In Bosna australi vulgata et frequens sic circa Vareš (Pr.), in m. Igman (B.), circa Sarajevo (B.), in valle Vogošća et Krupica pr. Jeleč (B.), circa Višegrad in m. Stolac (Adam.) —1500m et in Suha gora (Schiller f. Ja.), et al. loc. — **Hercegovina**: Vulgata sicut in m. Preslica, Golo brdo, inter Brdjani et Bradina (Lindberg), in m. Čabulja a. 1200m (B.) sub *Pino leucodermi*. Circa Mostar, in m. Podvelež (B.), Velež (Mu., B.) —1400m, inter Blagaj et Nevesinje (B.), in m. Crvanj (Mu.), inter Tasovčići et Domanovići (B.), pr. Grbeši (Fo.). Circa Trebinje in m. Glijiva (*P. 1874), in valle fl. Trebišnjica (B.). — **Novi Pazar**: Prope Jabuka, in valle fl. Lim inter Prijepolje et Bistrica (*B. 1896).

Arbor culta, cuius varietates et lusus hybridatione ortae sunt = β. *sativa* [DC., Prodr., II, 634 (1825); v. *hortensis* Beck, Fl. Nied.-Öst., 709; subsp. *sativa* Asch. Graebn., l. c., 63. — *P. domestica* Medic., Gesch. Bot., 87 (1793)] ubique propter poma usque ad subalpinas colitur. De *Piris* cultis confer: Decaisne: Jard. fruit. du mus., I, 122 sec. Mém. Pom., 159 et opera pomologica.

2. *Pyrus amygdaliformis* [Vill., Cat. jard. Strassb., 322 (1807), f. Schneider, l. c., 658; Asch. Graebn., l. c., 66; Koehne, Deutsch. Dendr., 244; Posp., Fl. Öst. Küstenl., II 1, 229; Boiss., Fl. Or., II 654. — *P. cuneifolia* Vis., Fl. Dalm., II, t. 38 non Guss. — *P. eriopleura* Reich., Fl. Germ., 620 (1832) f. Vis.]. «Slanopadja». In locis lapidosis, apricis, siccis, inter dumeta in ditone florum mediterraneae silvestris, ad hinc inde culta. Floret m. Aprili, Majo.

Bosna: in valle fl. Sutjeska inter Tjentište et Popov most rara (*Pr. 1902). — **Hercegovina**: In tota regione carstiensi vulgata (Pi.), sic circa Mostar (Pi., Mu.), in m. Planinica (Pi.), in m. Podvelež (B.), pr. Buna (Str.), inter Tasovčići et Domanovići (D.), in silva Dubrava (M.), inter Pileta et Stolac (B.), pr. Trebinje han (V.), inter Stolac et Ljubinje (F.), circa Bukov dol (R. f. M.), in valle inferiore fl. Neretva, inter Dračevo et Metković (B.), circa Sovići (F.), Hrasno (Br.), Trebinje et in valle fl. Trebišnjica (B.), in m. Glijiva et Drača (*P. 1874).

Pyrus nivalis [Jacqu., Fl. Austr., II, 4, t. 107 (1774); Schneid., l. c., 658; Asch. Graebn., l. c., 64; Witasek in Verh. zool.-bot. Ges. LIV (1904) 621 ff.] hinc inde colitur ut circa Foynica, Sarajevo (B.).

Pirus communis × *nivalis* [Aschers. Graebn., l. c., 68 (1906). — *P. nivalis* × *communis* C. K. Schneid., l. c., 660 (1906). — Focke, Pflanzenmischl., 143 (1881). — *P. salvifolia* DC., Prodr. II, 634 (1825); Witasek, l. c., 626]. Culta. Bosna: Beck f. Witasek, l. c. Ubi?

Cydonia oblonga [Miller, Gard. dict., ed. VIII, nr. 1 (1768); Schneid., l. c., 654. — *C. maliformis* Mill., l. c. — *Pyrus cydonia* L., Spec. pl., 480 (1753). — *Cydonia cydonia* Pers., Syn. pl., II, 40 (1807); Asch. Graebn., l. c., 114. — *C. vulgaris* Pers., l. c., Corr.]. »Dunja«. Ex oriente orta propter poma hinc inde colitur. — Floret m. Majo. Primum a d. Sendtner (1848) pro Bosna et a d. Struschka (1880) pro Hercegovina indicata.

Ordo LVIII: Leguminosae.

[B. Juss., Hort. Trian., ordo 52 (1759); DC., Prodr., II 93; Endl., Gen., 1253; Benth. Hook., Gen., I, 434; Taubert in Engl. Prantl, Nat. Pflanzfam., III 3, 70.]

Subordo I: Caesalpinieae.

[Benth. Hook., Gen., I 436, 562 (1867); subordo *Caesalpinioideae* Taubert in Nat. Pflanzenf., III 3, 99 et 125. — *Caesalpinieae* Kl. et Garcke, Bot. Ergeb. Reise Prinz. Wald., 157 (1862); Eichl., Blütendiagn., II, 517.]

Cercis siliquastrum [L., Spec. pl., 374 (1753); Vis., Fl. Dalm., III, 260; Reich., Ic. fl. Germ., XXII, t. 2; Schneider, Laubholzk., II, 7; Asch. Graebn., Syn. mitt. Fl., VI 2, 178]. »Smrdeļj, smrdljika morska«. In hortis colitur sicut in oppidis. Hercegovinae Mostar etc.

Ceratonia siliqua [L., Spec. pl., 1026 (1753); Vis., Fl. Dalm., III, 332; Schneider, Laubholzk., II, 8; Reich., Ic. fl. Germ., XXII, t. 3; Asch. Graebn., Syn., l. c., 180]. »Rogač«. In territorio florum mediterraneae per Dalmatiam colitur. In Hercegovina non observavi, sed extra fines proxime Ivanicam cultam vidi.

Gleditschia triacanthos [L., Spec. pl., 1056 (1753); Schneider, Laubholzk., II, 12; Asch. Graebn., Syn., l. c. 183]; incomla hanc Americae septentrionalis prope Metković (Dalmacija) cultam vidi. (B.) Sarajevo, Koševsko Brdo (M.).

Subordo II: **Papilionaceae.**

[DC., Theor. élém., 245 (1819); Benth. Hook., Gen., I 435 (1867). — Subordo *Papilionatae* Taubert in Nat. Pflanzenf., III 3, 99. — *Papilionaceae* L., Philos. bot, 33 (1751).]

Tribus: **Genisteae.**

[Benth. Hook., Gen., I 439; Asch. Graebn., Syn., l. c., 212.]

1. **Lupinus.**

[L., Spec. pl., 721 (1753) et Gen., ed. V, nr. 774; Endl., Gen., 1262; Benth. Hook., Gen., I, 480; Taubert in Nat. Pflanzenf., l. c., 231; Asch. Graebn., Syn., l. c., 220.] »Vučika«.

1. *Lupinus hirsutus* [L., Spec. pl., 721 (1753); Vis., Fl. Dalm., III, 272; Asch. Gr., Syn., l. c., 226; Reich, Ic. fl. Germ., XXII, t. 7]. In apricis pratis per regionem florum mediterraneae; ac saepe colitur in hortis campisque. Floret vere m. Aprili, Majo.

Hercegovina: Domanovići (Hensch! f. *Vandas 1888). Etiam Aschers. Graebn. (l. c.) eum in Hercegovina (ubi?) indicant.

2. *Lupinus albus* [L., Spec. pl., 721 (1753); Boiss., Fl. Or., II, 29; Reich., Ic. fl. Germ., XXII, 36, t. 10, fig. II; Asch. Gr., l. c., 229]. Est florum mediterraneae membrum, quod rare colitur.

Bosna prope Sarajevo (*H. 1882). Certe spontaneus!

3. *Lupinus digitatus* [Forsk., Fl. Aeg. Arab., 131 (1775)].

Hercegovina prope Neum [*Fiala, Pril. 313 (1892)] Patriam Aegyptum tenet.

2. **Spartium.**

[L., Spec. pl., 708 (1753) et Gen., ed. V, nr. 765 p. p.; rectius DC., Prodr., II, 145; Endl., Gen., 1265; Benth. Hook., Gen. I, 483; Taubert in Engl. Prantl, Nat. Pflanzenf., III 3, 232. — *Spartianthus* Link, Enum. Hort. Ber. II, 223 (1822).] »Žuka, brnistra«.

1. *Spartium junceum* [L., Spec. pl., 708 (1753); Boiss., Fl. Or., II, 36; Asch. Gr., Syn., l. c., 235; Schneid., Laubholz., II, 23; Pospich., Fl. Öst. Küst., II, 342. — *Spartianthus junceus* Link, Enum. hort. Ber., II 223 (1822); Reich., Fl. Germ., 519; Reich., Ic. fl. Germ., XXII, 27, t. 18.; Vis., Fl. Dalm., III, 262. — *Genista juncea* Scop., Fl. Carn., ed. II, II, 50 (1772)]. »Brnistra, žučica, žukva, žilj žuti«. In aridis lapidosis, saxosis, inter dumeta solo calcareo — 450 m.

Bosna: Sec. Asch. Graebn., l. c. (1906); ubi? certe cultum modo. Prope Ripač (Boller 1892)? — **Hercegovina:** In collibus ad ripam sinistram flum. Buna (Struschka 1880). Circa Neum (F.), Trebinje (*P. 1874. B.), in monte Gljiva (V.), in saxis litoreis Sutorinae inter Igalo et Njivice (V., Pr.) prope Drijeno (F.), Ivanica (B.). Copiosissime per totam **Dalmatiam, Crnagoram** litoream.

3. *Genista*.

[L., Spec. pl., 709 (1753) et Gen., ed. V, nr. 766 p. v.; Endl., Gen., 1266; Benth. Hook., Gen., I, 482; Taubert in Engl. Prantl, Nat. Pflzf., III 3, 233; Schneid., Laubholz., II, 25; Beck, Fl. Nied-Öst., 820. — Subgen. *Eugenista* Rouy in Rouy Fouc., Fl. France IV, 220. — Confer: Spach, Rev. gen. *Genista* in Ann. sc. nat., sér. 3, II 237, III 102 (1844—1845).] »Žutica, žuti-
lovka«.

Sectio: *Asterocytisus*.

[*Cytisus* sect. *Asterocytisus* Mert-Koch, Deutschl. Fl., V, 111 (1839). — *Cytisanthus* Lang in Flora 26 (1843) 769 = *Genista* sect. Asch. Gr., Syn. l. c., 240. — Subgen. *Spartocarpus* sect. *Asterospartum* Spach, Rev. l. c., II, 240. — *Genista* sect. *Ephedastrum* Rouy Fouc., Fl. France, IV (1897), 220; sect. *Asterospartum* Taub. in Nat. Pflzfam. III 3, 234.]

1. *Genista radiata* [Scop., Fl. Carn., ed. II, II 51 (1772); Spach, Rev. l. c., II 240; Reich., Ic. fl. Germ., XXII, 15, t. 32; Boiss., Fl. Or., II, 37; Asch. Gr., Syn., l. c., 240. — *Spartium radiatum* L., Spec. pl., 708 (1753). — *Cytisus radiatus* Mert. Koch, Deutschl. Fl., V, 111 (1839). — *Cytisanthus radiatus* Lang in Flora 26 (1843) 769. — Confer Buchegger in Öst. bot. Zeit. (1912) 303, 420. De incrementi natura et area geographica confer etiam: Beck, Veget. Illyr., 373—374]. In aridis saxosis montanis imprimis in regione montana usque ad pascua alpina (1200—1960 m), solum calcareum praeferens saepe fruteta 0.5—2 m alta formans, hinc inde ac in silvis pineis et piceis. Floret m. Junio, Julio, in summis etiam Augusto. »Metlika«.

Bosna: In montibus Osječenica et Klekovača (F., B.) —1800 m; Čardak (Ja. Sta., Fa. 1350—1860 m), Vitorog (Sta., Pr.), Stolovac, Tisova kosa (M., Lindberg), Plazenica 1150—1700 m (Sta. Fa., Pr.), Malovan (Pr.), Vel. Kupreška vrata (Pr.), prope Kupres (*S. 1848, R.), Ljubuša (F.), Kamešnica, Konj (Pr.), Dinara i Male poljanice, Jankovo brdo, Vrsina, Vel. Bat (Ja.), Uilica (Ha.), Jedovnik (Ha., M.), Šator (Pr., Ha.), Babina greda (Ha.), Cincar (B.), 1200—1960 m; Krug (B.), Borova glava prope Livno (*S. 1848), prope Livno (F.), prope Prisjeka (Ja.). Vel. Kujača (R. fide Buchegger); in monte Vlašić (Fr. Br.), prope Koričani (Br.), Paklarevo (*S. 1848). — Prope Jeleč (S. fide Buchegger). In montibus Radovina, Ljubičina (B.), Stolac prope Višegrad (Schiller f. Ja.).

Variat:

α. *leiopetala* [Spach, l. c., 241; Buchegger, l. c., 459, fig. 3]. Lamina vexilli extus ad lineam dorsalem modo pilosa, tam longa quam lata, ovata. Bracteae ovali-lanceolatae. Bracteolae ovali-lanceolatae, tubo calycino late adnatae, eo breviores. Styli apex rectus; stigma anticum ac inferum. Pervulgata.

β. *bosniaca* [Buchegger, l. c., 461, fig. 8]. Lamina vexilli extus per totam superficiem pilosa, latior quam longa, basi utrinque obtuse auriculata. Bracteae florum inferiorum late ovales, latiores quam latae. Styli apex pronus curvatus stigma includens.

Bosna: In monte Troglav (H. Neumayer f. *Buchegger 1912).

Genista holopetala (Fleischm. in Reich., Fl. Germ. exs., nr. 2066. — *G. radiata* v. *nana* Spach, Rev. l. c., II 241 = v. *holopetala* Reich. f., Ic. fl. Germ., XXII, 16 (1869). — *Cytisus holopetalus* Koch, Syn. fl. Germ., ed. II, 441 (1843); Posp., Fl. öst. Küst., II, 350. — *Cytisanthus holopetalus* Gams in Hegi III. Fl. Mitt. Eur., IV 3, 1193. — Confer: Buchegger in Öst. bot. Zeit. (1912) 303, 418] paucis locis modo [Velebit, mte Hrabrohrib (Mte Spaccato) prope Tergestum, Čavin prope Ajdovščina (Haidenschaft)] reperta, differt a *G. radiata* bracteolis linearibus, calycis tubum longitudine aequantibus vel paulo superantibus, quae in *G. radiata* ovato-lanceolatae, calycis tubum longitudine aequantes observantur.

Sectio: *Voglera*.

[Gaertn. Mey. Scherb., Fl. Wetterau, II, 480 (1800) pro gen.; Reich., Consp., 153 nr. 4030 b (1828.); Spach, Rev. l. c. II, 257; Asch. Gr., Syn., VI 2, 242. — *Spartocarpus* sect. Spach, Rev., l. c., 257. — *Genista* sect. *Scorpius* Rouy in Rouy Fouc., Fl. France, IV, 224; Schneid., Laubholz., II 28; — *Scorpius* Moench Meth., 134 (1794).]

2. *Genista silvestris* [Scop., Fl. Carn., ed. II, II., 53 (1772); Spach, Rev., l. c., II, 257; Reich. f., Ic. fl. Germ., XXII, 16. t. 33, 34; Asch. Gr., Syn., VI 2, 242; Schneider, Laubholz., II, 29. — *Cytisus silvestris* Vis., Fl. dalm., III, 268. — *Genista hispanica* Wulf. in Jacqu., Coll., II 165 (1788) et Jacqu., Ic. pl. rar. III t. 557 non L.]. In saxosis apricis aridis ac dumetis usque ad regionem alpinam (—2000 m), solo calcareo. Floret Majo—Julio.

Variat:

α. genuina [Reich. f., Ic., l. c., 17, t. 33 fig. I—II (1867); *typica* Posp., Fl. öst. Küst., II 346 (1898). — *G. silvestris* Scop. et aut.; v. *innocua* Asch. Gr., Syn., VI 2, 243 — *Cytisus silvestris* v. *innocua* Vis., Fl. Dalm., III, 269]. Appresse pilosa; spinis innocuis tenuiter furcatis, subherbaceis, flexilibus, erectis vel erecto-patulis. Foliis —2 mm latis. Carina vexilloque sericeo-pubescentibus. Leguminibus parce pilosis. Petala lutea vel ochroleuca [= *ochroleuca* Hirc in Öst. bot. Zeit. (1889) 174].

Bosna: Grmeč Pl. (Boller), inter Sinj (Dalmacija) et Livno (Marchesetti). — **Hercegovina:** In monte Leotar prope Trebinje (*P. 1874).

β. arcuata [Tommas. apud Reich. f., Ic. l. c., 17, t. 33 fig. III; Asch. Gr., Syn., l. c., 243. — *G. arcuata* Koch, Deutschl. Fl., V, 84 (1839); Koch, Syn. fl. Germ., ed. I, 154 (1836). Confer Janchen in Öst. bot. Zeit. (1908) 249]. Caule foliisque subappresse sericeo canis, spinis horizontaliter patentibus, saepe arcuatis, flexilibus, hinc inde durioribus et firmioribus. Floribus minoribus, saturatius luteis.

In ditione nostra nondum observata?, sed Asch. Graebn. l. c. eam in Bosna indicant.

γ. dinarica [Janchen in Mitt. naturw. Ver. Univ. Wien VI (1908) 81 pro spec. — *G. dalmatica* var. Janch. in Öst. bot. Zeit. (1908) 248 hic. accuratius]. Caulibus foliisque patenter vel erecto-patenter pilosis. Spinis erectiusculis vel erecto-patentibus, mollioribus quam in v. *dalmatica*. Foliis 1—2 mm latis. Fide Janchen affinis *G^{ae} aristatae* [Presl, Delic. Prag., 34 (1822) = *G. silvestris* var. Fiori et Paol., Fl. anal. ital., II 21 (1899)] quae differt floribus multo majoribus 9—12 mm longis (nec 7—9 mm), foliis latioribus, 1.5—4 mm latis, spinis brevioribus. Ad varietatem *dalmaticam* saepissime formis intermediis conjungitur. In montanis 1300—2000 m.

Bosna: Circa Brekavica prope Bihać (F. sec. M.) In montibus Dinara: Sanči-Jankovo brdo (*Ja. 1908), Vrsina, Vel. Bat (Ja.), Uilica, Vijenac, Jedovnik (Ha. Ja.), Prolog, Borova Glava (F. sec. M.), Hrblijina (Br. sec. M.), Cincar 1200—2000 m (Sta. Fa., B.), Krug Pl. (B.). — **Hercegovina:** In monte Čabulja (B.), prope Mostar (Bornmüller!), in monte Leotar pr. Trebinje (B.).

Verosimiliter hic loco insercuda sit *G. aristata* a d. Fiala [Adnot. in Glasnik zem. muz. (1893) 120] in locis lapidosis montis Radovan prope Posušje reperta.

Adest f. *minor* [G. Beck]. Caulibus 5—10 *cm* modo altis, spinis saepe paucioribus minoribusque. Floret m. Julio. **Bosna:** In monte Hrbljina (Br.!), Cincar 1300—1400 *m* (*B). **Hercegovina:** In alpinis montis Prenj (*B).

f. *villosa* [G. Beck]. Minor, 10—12 *cm* altus, in omnibus partibus longe villosa; leguminibus villosis, petalis longius pilosis. **Croatia.** In monte Brusnic ad Udbina (Rossi nr. 14126!) **Bosna:** Gnjat (L. pl. Führer sec. M.).

♂. *dalmatica* [Bartl. in Bartl. Wendl. f. Beitr., II, 74 (1825); Spach, Rev. l. c., II, 259; Koch, Syn. fl. Germ., ed. II, 168; Lindberg It. austr. in Finska vet. soc. förh., 48 (1906) nr. 13, p. 48 pro spec. — Tommasini apud Koch, l. c., 169 et Reich. f., lc, l. c., 17, t. 34, fig. III; Asch. Gr., Syn., VI 2, 244; Curt., Bot. Mag., t. 8075. — *Cytisus silvestris* v. *pungens* Vis., Fl. Dalm., III 269 (1852)]. Minor, spinosior, spinis tetragonis, conspicue furcatis, demum rigidis pungentibus, divaricato-patentibus vel arcuato-reflexis; indumento copioso, pilis patentibus vel erecto-patentibus, petalis omnibus sericeo-pubescentibus. Leguminibus longe pilosis saepe villosis. Floret m. Majo—Julio.

Bosna: In montibus Prolog, Vještica gora, Troglav, Krug, (Pr.) Borova glava (*S. 1848), Hrbljina (Br. Pr.), prope Grkovac, Preodac (Pr.), Grahovo Ha.), in montibus Bikovac et Džermanica prope Višegrad (M.) sub Karaula Balvan et in monte Macute prope Vardište, 550 *m* (M.). In fauce Razdolina prope Dobrun (M) — **Hercegovina:** In monte Preslica (V.), prope Konjic (Degen, M.) Bigolje (M.), ad lacum Boračko jezero (Blau), in monte Prenj (B., Prodan), Glogovo, Prislav (V.) circa Mostar (F., B., Pi.!) in monte Podvelež (B., Bornmüller!), Vel. Vlajna montis Čabulja (Prodan), Čvrstica (V.), Radovan prope Posušje (F.) circa Trebinje, in monte Leotar c. 1229 *m* (B.), Koristna greda prope Vučijak (*P. 1874).

Adest f. *parcepilosa* [Lindberg, l. c. 49] indumento parciose appresso saepe parcissimo. Confer Janchen [l. c. 289]. **Bosna:** Inter Gračanica et Paroš (M.) — **Hercegovina:** Circa Mostar (*Lindberg), Ivanica (Adam. sec. M.).

3. *Genista germanica* [L., Spec. pl., 710 (1753); Reich. f., lc. fl. Germ., XXII, 17, t. 35; Spach, Rev. l. c., 261; Beck, Fl. Nied.-Öst., 829; Asch. Gr., Syn., VI 2 244; Schneider, Laubholz., II, 30. — *Scorpius spinosus* Moench, Meth., 134 (1794); — *Voglera spinosa* Gaertn., Mey. Scherb., Fl. Wett., II 500 (1800). — *Cytisus germanicus* Vis., Fl. Dalm., III, 268 (1852)]. In silvis luminosis caesiisque, ad sylvarum margines, in dumetis pratis montanis et ericetis, declivibus lapidosis usque ad regionem subalpinam. Floret Majo, Junio.

Bosna: In montibus Kriva glava et Masić brdo prope Novi (B.), prope Novo selo ad flum. Ukrina (B) in monte Krnin montis Kozara Plan. (B.), prope Banja Luka (H.), Beheremaginica Plan., Sratinska, in sylva

Šikara prope Bistrica (Fo.); in monte Tikva montium Vranica Plan. (Pr.), in valle Gujica prope Čelić (B.); circa Vareš ad Dubošćica, Pajtov han (Pr.); prope Tarčin (Pr.), in monte Ozren prope Sarajevo (*Blau 1877), in valle fluminis Željeznica (Pr.), prope Foča, Susješno (Fo.) In valle, fl. Sutjeska cirka Mješajići, in declivibus montis Volujak (Pr.). — **Hercegovina**: Knežak prope Nevesinje (*Fo., 1890).

α. typica (*G. germanica* aut.).

Formas sequentes observantur:

spinosa [G. Beck]. Copiose spinosa, spinis plerumque compositis vel superioribus simplicibus, omnibus rigidis pungentibus. Pervulgata. — *heteracantha* [Schloss. Vukot. in Rad. jugosl. akad. Zagreb XXXI, 100 et Syll. fl. Croat., 125 (1857) pro spec.; Asch. Gr., l. c., 245]. Rami elongati. Spini inferiores desunt, superiores (foliis fulti) simplices vel paulo compositi, flexiles, molliores. Confer: Reich. f. [Ic., l. c., 18]. **Bosna**: in pratis cacuminis Krnin montis Kozara Pl. (*B.). — *subinermis* [Rouy in Rouy Fouc., Fl. France IV 225 (1897)]. Planta subinermis, spinis minimis simplicibus. Formas bene declaratas nondum vidi.

β. inermis [Koch in Mert. Koch, Deutschl., Fl., V 86 (1839); Koch, Syn. fl. Germ., 153 (1837). — *Cytisus germanicus* var. *inermis* Vis., l. c., 268]. Plurimum minor; spini desunt vel fasciculis foliis minoribus formatis compensantur.

Bosna: In alpinis montium Vranica Pl. (1600—1900 m): Krstac (V. C. fide M.) Matorac, Treskavica (*Bošnjak 1920), Stražica (B. 1892), hic florens m. Junio, Julio. Kolo prope Fojnica (Schwarz f. B.). — **Hercegovina**: Sec. Asch. Kan., Cat. 100 (1877). Ubi?

Sectio: *Spartioides*.

[Spach, Rev., l. c., III 113 (1845); Asch Graebn., Syn., l. c., 250; Schneider Laubholz., II 31.]

4. *Genista Villarsii* [Clementi, Atti della 3. riun. scienc. ital. 517 (1841); Reich. f., Ic. fl. Germ., XXII, 18—20, t. 42 fig. III—V (hic amplius); Asch. Graebn., Syn. l. c., 251; Rouy Fouc., Fl. France, IV, 230. — *Cytisus Villarsii* Vis., Fl. Dalm., III 270 t. LV, fig. 1 (1852). Hic amplius. — *Genista humifusa* Vill., Hist. pl. Dauph., III, 421 (1789) non L.]. In saxosis apricis ditionis florum mediterraneae. Floret Junio, Augusto.

Hercegovina: Prope Trebinje (*P. 1874).

5. *Genista sericea* [Wulf. in Jacqu., Coll., II, 167 t 147 (1788); Spach, Rev., l. c., III, 120; Reich. f., Ic., l. c., 26, t. 36, fig. I—III; Posp., Fl. Öst. Küst., II, 343; Asch. Gr., Syn., l. c., 253; Schneider, Laubholz., II, 31. — *Cytisus sericeus* Vis., Fl. Dalm., III, 269 (1852). — Confer: Pampanini, La Ge-

nista sericea in Nuov. Giorn. bot. XIX (1912) 327]. Inflorescentia et in apice caulium umbellata et aggregato-racemosa (= f. *racemosa* Pamp., l. c., 330) hinc inde utraque, in eadem planta! In apricis lapidosis saxosis, pratis montanis usque ad regionem alpinam (1800 m), solo calcareo. Floret m. Majo, Junio.

Formas sequentes observavi.

typica. [Pampan., l. c. 328]. Folia inferiora e basi cuneata obovali-oblonga, rotundata, obtusa, superiora conspicue longiora, lanceolata, angustiora, omnia plerumque 3—4 mm lata, plana. Flores 12—15 mm longi. Per-vulgata. Forma foliis rigidioribus, junioribus supra nervum medium vel etiam undique sparse et breviter sericeis = *rigida* [Pamp., l. c., 332]. **Bosna**: Gredoviti vrh montis Grmeč Pl. (*Boller). — **Hercegovina**: In monte Čvrstica 1800 m (F. fide M.). Frequentior in ditone Bijela gora in montibus Gljiva (V.), Leotar 1229 m (B.), prope Dubovac (*P. 1874), Orahovac, Visoka glavica, Ledenik, Grab (V.), inter Uskoplje et Ivanica (Ia.). — *angustifolia* [G. Beck — ? f. *micrantha* Pampan., l. c., 328]. Folia angustiora, —2 mm lata, complicata. Flores minores vix 1 cm longi. Hinc inde. Vidi ex **Croatia**: litorali (Trsat), Velebit. — **Dalmatia**: (Viganj v. Mte Vipera) Certe alibi. — *brevifolia* [G. Beck]. Folia omnia elliptico-oblonga, rotundata, superiora nec longiora nec angustiora, rotundata, vix acuta. Legi in **Croatia** litorali prope Martinšćica, in **Dalmatia** prope Lapad (B.); Oštra glavica prope Dubrovnik v. Ragusam (Degen!). **Crnagora**: Prope Cetinje (B.). — *tomentosa* [Pampan., l. c., 336]. Tota planta cum floribus ac petalis patentim villosa (in formis prioribus appresse vel subappresse sericeopilosa). Cetera in f. *typica*. **Hercegovina**: In monte Leotar prope Trebinje cum typo, 1229 m (*B.).

Sectio: *Genistoides*.

[Moench, Meth., 132 (1794) pro gen.; Spach. Rev., l. c., 124 (1845); Schneid., Laubholz., II, 32.]

6. *Genista januensis* [Viv., Elench. pl. hort. Di Negro (1802), 10 sec. Viv., fl. Ital. fragm., fasc. I (1808) 5. Confer Burnat. Fl. Alp. Mar. II (1896) 60—61 et Janchen in Öst. bot. Zeit. (1908) 289. — *G. triangularis* Willd., Spec. pl., III 2 (1803 non 1800 f. O. Kuntze) 939; Reich. f., Ic. fl. Germ., XXII, 24, t. 40; Schneider, Laubholz., II 32; Posp., Fl. öst. Küst., II, 343 = Kit. in Asch. Graebn., Syn., l. c., 254. — *G. scariosa* Viv. in Ann. bot., I 2, 175 (1804); Boiss., Fl. Or., II, 43; Spach. Rev., l. c., III, 124. — *G. genuensis* Pers., Syn., II 287 (1807). — *G. triquetra* Waldst. Kit. apud Willd., l. c. (1803), et Pl. rar. Hung., II 165, t. 153 (1805, 1812) non Aiton, L'Herit., Willd. et al. — *Cytisus triangularis* Vis., Fl. Dalm., III, 268 (1852)]. Ad saxa, in lapidosis apricis siccis pascuis rarius in pinetis

usque ad regionem alpinam (1800 *m*) solo calcareo et serpentino. Floret m. Aprili—Junio.

Bosna: Prope Kobaš (Prodan), in valle Rakovac pr. Banja Luka (C.), in valle fl. Spreča versus Turija (*S 1848), inter Golubinje et Žepče (S.) in monte Smolin (B.) solo serpent. — In montibus Dinara Pl.: Sanči brdo, Jankovo brdo, Klačari vrh, Janski vrh, Vel. Bat. (Ja.); Jedovnik supra Radlovići prope Grahovo 1300 *m* (Ha.); Krug Pl. prope Livno et Cincar Pl. — 1150 *m* (B.). — Prope Jajce (M., Lindb.) Circa Travnik (*S. 1848) prope Bukovica (S.), Gučja gora (Franjić!), Krušćica (Br!), Kajabaša 1300 *m* (Br. f. Ja.), in monte Vlašić 950—1750 *m* (S., B.). — Circa Sarajevo (H.): in monte Trebević (F. M.), in valle fl. Miljacka (Blau, F., M. in Dörf., Herb. norm, nr. 4509!) in angustiis Lapišnica (Blau, B.), Lipovac (F.), in monte Castello coronato (F.! Gross Kneucker); prope Vitez, Han Prača, Rusenovići, Rogatica (F.), Foča (F.) Medeđa, Dobrun (M.). — **Hercegovina:** (fide *Asch. Kan., Cat. p. 100, 1877) ubi? Vel. Vljajna montis Čabulja (Prodan), Velež 1000—1800 *m* (B. Bornmüller!).

f. *ciliata* [K. Malý in Glasn. zem. muz. 35 (1923), 133 = *G. triangularis* v. *ciliata* Roch., Pl. rar. (1828) 52, t. 15]. Folia manifeste ciliata. **Bosna:** In silvis *Pini nigrae* in monte Žedni vrh (praedii Čauševac) prope Zavidovići (*M. 1923).

7. *Genista tinctoria* [L. Spec. pl., 710 (1753); Reich., Ic. fl. Germ., 519; Beck. Fl. Nied.-Öst., 829, Asch. Gr., Syn., I. c., 255]. In pascuis pratis montanis, inter virgulta, in silvis usque ad regionem subalpinam (1500 *m*). Floret m. Majo—Sept.

Variat:

α. *vulgaris* [Spach, Rev. Gen., I. c., III, 137; Asch. Gr., I. c., 256; v. *typica* Posp., Fl. Öst. Küst., II, 344 (1898)].

Bosna: (*Asch. Kan. Cat. 100 [1877]) Ubi? In parte septentrionali et media vulgata (Fo.). Vranograč (F.), in valle riv. Crkvenički potok prope Devetina (B.); inter Brčko, Ratkovići, in monte Majevisa (B.), prope Donja Tuzla (Wettst. f. Ja.), inter D. Tuzla, Siminhan et Breške (B.); inter Driinjača et Nova Kasaba (I.), circa Žepče, Globalica, Zavidovići (B.). Prope Novi, Kola, Gustovara (Fo.), in monte Lisina prope Varc. Vakuf (B.) et Smiljeva Kosa montium Zec Plan. (Bošnjak). Circa Vareš (Pr.), in monte Igman (Fo), Trebević (Zoch, V., B.), prope Han Kornica, Pale, in agro Sarajevsko polje, pr. Hrasno, Nedarići, Vučja Luka, in valle Buča prope Pofalići (M.), prope Čemernica (Fo.) Kalinovik, Tjentište, Mješajići (Pr.), Bastasi (B.). — **Hercegovina:** Prope Sovići (*F. 1898.). — **Novipazar:** In valle fluminis Lim inter Prijepolje et Priboj (*B.).

Adest: f. *latifolia* [DC., Fl. Franc., V 547 et Prodr. II 151; Spach Rev. I. c., III, 137].

β. *elata* [Asch. Gr., I. c., 261; v. *virgata* Koch in Mert. Koch, Deutschl. Fl., V, 90 (1839); Schneid., Laubholz., II, 33; v. *elatior* Reich. Ic. I. c., 22, t. 37 fig. III — *Genistoides*

elata Moench, Meth., 133 (1794). — *Genista virgata* Willd., Berl. Baumz., 2. Aufl. 159 (1811) non Lam. — *Genista elata* Wender. Ind. sem. hort. Marb. (1840) nr. 8 et in Linnaea XV Litt. Ber. 100 (1841); Spach, Rev. l. c., III 138. — *G. anxantica* Gris., Spic. fl. Rum., I 3 (1843) non Tenore — *G. elatior* Koch, Taschenb., 113 (1844) et Syn. fl. Germ., ed. II, 441 (1845); Pospich., Fl. öst. Küstenl., II, 345] non solum habitu robustiore et ramificatione sed etiam stipulis longioribus, longe subulatis ab α . differe videtur.

f. *typica* [Asch. Gr., l. c., 261. — *G. elatior* v. *typica* Posp., 345]. — **Bosna:** Prope Gubar (I. sub *G. anxantica*). In monte Trebević, in valle fl. Miljacka (*M. 1904), prope Pale (M.), prope Rusenovići in distr. Rogatica (F. fide M.). — **Hercegovina:** In agris Nevesinjsko et Gatačko polje 850–1000 m (*Mu. 1891). — f. *aristata* [G. Beck]. Folia lanceolata longissime et aristato-acuminata. Stipulae longiores, longe-subulatae. Sepala elongato-subulata. **Bosna:** In monte Krnin montium Kozara Pl. (*B). Etiam prope Tergestum (Trst) in silvis Boschetto et ad Rojano observavi. — f. *pubescens* [Lang, Syll., I, 181 (1824) pro spec.; Reich., Fl. Germ. exs., nr. 1723. Heuff. in Abh. zool.-bot. Ges. (1858) 85 — ? f. *hirsuta* DC., Prodr., II, 151]. Nil nisi forma pilosior ubique vulgata. — **Bosna:** Prope Kobaš (*Prodan 1910).

8. *Genista ovata* [Waldst. Kit. in Willd., Spec. pl., III (1800) 940 et Pl. rar. Hung., I. 86 (1802) t. 84; Koch, Syn. fl. Germ., ed. II, 167; Boiss., Fl. Or., II, 45; Schneid., Laubholz., II, 35; Asch. Gr., Syn., l. c., 263; Spach, Rev., l. c., III, 134. — *G. tinctoria* var. *ovata* Schultz, Arch., II, 219 (1856); Reich., Ic., l. c., 23, t. 38, f. III–IV. — *G. lasiocarpa* Spach, Rev. Gen., l. c., III, 135 p. p. (1845). — *Cytisus ovatus* Vis., Fl. Dalm., III, 268]. In collibus siccis graminosis, inter virgulta, locis silvaticis. Floret m. Junio—Augusto.

Bosna: Prope Novi (B.), Banja Luka (C.), Maglaj ad fl. Vrbas (H.), Donja Tuzla (Degen, Wettst. fid. J.); inter Drinjača et Nova Kasaba, circa Gubar et in monte Ludo brdo prope Srebrenica (J.). Prope Bihać, in agro Vedro polje prope Gorjevac (Fo. fide V.), Žabljak, Barakovac, Dragočaj (Fo.), in monte Hodža (Pr.), Inter Varcar Vakuf et Han Majdan (Schiller), prope Šuljaga (*S. 1848), Kupres (F!), prope Mlinište inter Glamoč et Jajce, 1200 m (Ha. Fa.); Travnik (Br.), Sutjeska, Borovica, Vareš (*S. 1848), Kralupi, Pajtov Han (Pr.), Dubošćica (Fo.), inter Putkovići et Tolovići (S.); in monte Trebević (V.) et Igman (B), prope Miljevići ad pedem montis Trebević (M.), prope fontem flum. Željeznica c. 1100 m (M.), in ditione Zelengora (Pr.), in valle fl. Sutjeska (Pr), pr. Višegrad, in valle fl. Lim prope Setihovo, in valle Rama (M.). — **Hercegovina:** Prope Konjic (Bornmüller!), in monte Preslica (V.), Glijiva prope Trebinje et in valle Jazina ditionis Bijela Gora (*P. 1874). — **Novipazar:** Prope Prijepolje (P. Zahlbruckner fide *Hayek 1906).

Variat:

α. nervata [Kit. in litt. 1815 apud DC., Prodr., II 151 (1825) sine descr. — *G. nervosa* Kit. in Linnaea (1864) 605. — *G. hirsuta* Kit. Herb. Conf. Simonkai in Öst. bot. Zeit. 38 (1888), 300. — *G. lasiocarpa* Heuff. in Abh. zool.-bot. Ges. (1858) 85. — *G. tinctoria* v. *nervata* (Kit.) K. Malý in Abh. zool.-bot. Ges. (1904) 224. — *G. ovata* v. *nervata* (Kit.) Fuss, Flora transsilv. (1866) 151; K. Malý in Magy. bot. lap. (1908), 217]. Caulis erectus, ramis longis, cum foliis plus minus longe patentim hirsutus. Folia ovalia, vel oblonga, acuminata vel acuta, nervoso-venosa. Calyx pilosus.

Bosna: Prope Donja Tuzla (M.), Han Kornica (M.), Fojnica (Schwarz!), in agro Veliko polje montis Igman (M.), prope Vogošća (B.), ad fontes fl. Bosna: Vrelo Bosne (*Gross Kneucker 1903, M.), prope Ilidža, Lukavica prox. Sarajevo (M.), inter Foča et Bastasi (B.). — **Hercegovina:** Prope Konjic (Bornmüller!), loco Smrčanj montis Velež (Pi.).

f. *stenocarpa* [G. Beck]. Elata, rami floriferi copiose ramosi, ramis erectis. Folia elliptica, utrinque acuminata, 15 mm lata. Flores minores, 10–12 mm longi. Legumina plurimum arcuata, angusta c. 2.5–3 mm lata, 6–10 seminosa. Stipulae longe-subulatae. — **Bosna:** In pratis montis Krnin montium Kozara Pl. (*B.). — **Croatia** prope Saš (B.), Šestim (Rossi) nr. 1181! Certe alibi.

β. macrophylla [Spach, Rev., l. c., III, 134 (1845); v. *prostrata* Sendtn. in Ausland (1848), 467, 477, 662, 663 sine descr.]. Caulis decumbens, 20–30 cm longus, plurimum spithameus, cum foliis patentim brevius pilosus. Folia ovalia vel ovali-oblonga; calyx pilosus.

Stationes supra citatae sed probandae! — f. *prostrata* a. d. Sendtner in **Bosna** in valle fl. Spreča prope Turija, inter Srebrnik et Gradačac, inter Borovica et Vareš indicatur.

f. *vranicensis* [G. Beck ? v. *lanceolata* Spach, Rev. l. c., III, 135 (1845)]. Caulis procumbens, seriatim ramulos floriferos erectos plurimum simplices rarius ramosos, 10–20, rarius — 30 cm altos formans, cum foliis plus minus patentim longe villosus. Folia lanceolata vel oblonga, acuminata, summo 4 mm lata. Stipulae breviter subulatae. Calyx glaber vel plus minus pilosus. Legumina recta, 4–5 mm lata. In alpinis montium, saepius solo schistoso. Floret m. Junio, Julio. **Bosna:** Vranica Planina: Rosin (Čurčić!), ^{Velež} Stražica (*B.), Tikva, Marine stijene, Pogorelica (Schwarz!); in monte Igman (B. sub. *G. ovata*); Velika Vrata prope Kupres (F.). — f. *angustifolia* [Freyn in Abh. zool.-bot. Ges. (1888) 601]. Folia sicut apud *G. tinctoriam*. Quia ultima forma variant, vix recognoscenda! **Bosna** prope Guvna prox. Travnik (Fr. Br.).

γ. *Perreymondii* [Lois., Fl. Gall., ed. II, II 105 (1828) pr. spec. *G. tinctoria* subsp. Asch. Gr., Syn., l. c., 262; var. Gremlí, Exk. Fl. Schweiz, 7. Aufl. 121 (1893); Rouy Fouc., Fl. Fr., IV, 236; v. *mantica* Reich., Ic. l. c., 23, t. 37 f. IV = *G. mantica* Poll., Cat. Ort. Veron., 18 (1816) et Fl. Ver. II 458, t. 4 fig. 7 (1822) v. *lasiocarpa* Gren. Godr., Fl. Fr., I, 352 (1848). — *G. lasiocarpa?* v. *Perreymondi* Spach, Rev. l. c., III 136]. Ramis tenuibus 20—30 cm longis rarius elongatis, foliis brevioribus, lanceolatis vel oblongo-lanceolatis, margine modo apresse breviter ciliatis, plurimum 2—3 (—6·8) mm latis, stipulis breviter subulatis, leguminibus sparse appresse puberulis differre videtur. Var. *vranicensis* saepe similis differt ramificatione altera, indumento longiore patulo, floribus majoribus.

Bosna et Hercegovina sec. Asch. Gr. [Syn. l. c. 263 1907]. Ubi? Non vidi.

Sectio: *Chamaespartum*.

[Adans., Fam., II, 321 (1763) pro gen.; Spach, Rev. gen., l. c., III, 140 (1845).]

9. *Genista pilosa* [L., Spec. pl., 710 (1753); Reich. f., Icon., l. c., 26, t. 42 fig. I, II (indumentum male depictum); Spach, Rev., l. c. III, 141; Beck, Fl. Nied.-Öst., 829; Pospich., Fl. öst. Küst., II, 343; Asch. Graeb., Syn., l. c., 265. — *Cytisus pilosus* Vukot. in Rad. jug. ak. Zagreb 31 (1875), 97. — *Genistoides tuberculata* Moench, Meth., 133 (1794)]. In saxosis, lapidosis aridis, pascuis arenosis, ad silvarum margines, in silvis luminosis, usque ad regionem alpinam (2000 m), solo vario libenter calcareo. Floret m. Aprili—Junio, saepe iterum autumnno.

Bosna: Donja Tuzla (M.); Šuljaga, Vel. Malovan (Pr.), prope Kupres (F.), Vran Pl. (F.), Prolog (F., Pr.), Vieštica gora (Pr.), Livno (F.). Cincar (F.). — Travnik (*S. 1848, Br.), Gučja gora (Franjić!), Vlašić (*S.), circa Fojnica (S., Schwarz!), in monte Čubrin prope Kreševo (M.), Crkvice (Franjić!), in valle Zeleće et in monte Ivankovac prope Žepče (M.), circa Vareš prope Kralupi, Pajtov han (Pr.). In monte Trebević (Zoch, B.) et in angustiis Lapišnica prope Sarajevo (M.); in valle fl. Sutjeska, prope Ustikolina, Vlaholje (Pr.), in angustiis fl. Rijeka prope Čelebić (B). — **Hercegovina:** In monte Golo brdo et Preslica, inter stationem Brdjani et Bradina (*Lindberg 1906).

Variat:

α. *microphylla* [Rouy Foucaud, Fl. France, IV, 233 (1894)].
Hinc inde cum typo.

β. *montana* [G. Beck]. Humillima vix digitalis, copiose breviterque ramosa, ramulis dense foliatis. Flores parci, singuli. Affinis f^{ae} *nanae* [Asch. Gr., Syn., l. c. 266] sed alpina in summis jugis montium 1700—1950 *m* crescens. Floret m. Junio—Julio.

Bosna: In monte Klekovača (*B.).

γ. *dinarica* [G. Beck]. Habitus prioris, folia autem non explanata obtusa sed minuta 2—4 *mm* lata, in ramulis foliatis vix 1 *cm* longa, aetiuscula, omnia complicata, saepius curvata. Legumina 3—3.5 *mm* lata, appresse pilosa, 1—4-sperma.

Bosna: In regione alpina mts Cincar 1800—2000 *m* (*B.).

Sectio: *Genistella*.

[Moench, Meth., 133 (1794) pro gen; Spach, Rev., l. c., III 123 (1845). — *Saltzwedelia* G. M. Sch., Fl. Wett., II, 480 (1800). — *Syspone* Gris, Spic. fl. Rum., I, 5 (1843).]

10. *Genista sagittalis* [L., Spec. pl., 710 (1753); Reich., Ic., l. c., 22, t. 30, 43, fig. 8, 9; Beck, Fl. Nied.-Öst., 828; Spach, Rev., l. c., III, 123; — *Genistella racemosa* Moench, Meth., 133 (1794). — *Cytisus sagittalis* Koch, Syn. fl. Germ., 157 (1837). — *Saltzwedelia sagittalis* G. M. Sch., Fl. Wett., II 498 (1800). — *Syspone sagittalis* Gris., Spic. fl. Rum., I 6 (1843) — *Genistella sagittalis* Gams in Hegi, Ill. Fl. Mitt. Eur. IV 3, 1196]. »Priještap«. In pratis montanis et subalpinis, declivibus lapidosis, inter virgulta et in sylvis luminosis usque ad regionem subalpinam (1600 *m*), imprimis solo schistoso arenoso. Floret m. Majo—Julio.

Bosna: In monte Mračajsko brdo prope Žepče (B.), Podgomila (B.) Dugopolje (Fo), Bihać (Boll.), Grmeč Pl. (Fo.), prope loc. Karnovac 800 ad 900 *m* (B.), copiosissime in agro Bjelajsko polje prope Petrovac (B.), in montibus Osječenica et Klekovača (B.), Čardak livade, Han Čardak proxime Prusac 1000—1430 *m*, Kriva jelika (Ha. Fa.); Vitorog (Sta.), Rilić polje prope Kupres (Pr.), in montibus Vran (V.), Kamešnica (Pr.), Prolog, Vještica (Pr.), Dinara: Gnjat, Jankovo brdo, Vel. Bat, Sanči brdo (Ja.); Uilica (Ja.), Jedovnik (Ha), Krug Pl. prope Livno (B), Šator (Pr.), Prisjeka (Ja.), prope Glamoč (Pr.), Preodac (Pr.), Mari o brdo prope Grahovo (Ja.); circa Hašani, in monte Kozini, prope Lipnik, Sratinska (Fo.), Travnik (*S. 1848), in monte Vilenica (Fr. Br.); copiose circa Fojnica (B.); Visoko (Fo.), Vareš (Fo.), Kralupi (Pr), Tarčin (Pr.). In Bosna australi copiose (B.), sicut prope Ilidža (Crawford), in vicina regione urbis Sarajevo (B., Fo. aliique), in monte Motka (M.), Trebević (B.), —1600 *m* (M.) et collibus circumjacentibus; prope Pale (F.), Mokro (B); in valle fl. Željeznica, circa Kalinovik, Vla-

holje, in declivibus montium Maglič et Volujak, in valle fl. Sutjeska, prope Gornje bare (Tovarnica) (Pr.); prope Čajniče (Životsky!), Meštrovac — 1600 m (Schill. f. Ja.). — **Hercegovina:** (*Asch. Kan. Cat. 1877) ubi? In montibus Ivan, Lisin, Čvrstica, Velež Pl. — 1500 m (B., Sag., Pi.), circa Nevesinje (V. *1888, B.), in monte Crvanj; Gatačko polje (Mu.). — **Novi Pazar:** Circa Prijepolje (P. Zahlbr. f. Hayek); inter Prijepolje et Priboj, praecipue juxta arcem Djurovograd (*B. 1896).

4. *Petteria*.

[Presl, Bot. Bem., 139 (1844) in Abh. böhm. Ges. Wiss., 5. Folge, III 569 (1845); Taubert in Nat. Pflanz.-Fam., III 3, 235; Schneider, Laubholz., II, 36; Asch. Graebn., Syn., l. c., 269. — *Genista* sect. *Petteria* Briquet, Et. Cytisus, 123 (1894). — *Cytisus* sect. *Petteria* Nym., Consp., I, 155 (1878). *Laburnum*, *Cytisus*, *Genista* spec. aut. — Confer: Briquet l. c., et Schneider, l. c. 40 Nota.]

Genus racemis erectis, calyce (sicut in *Genistis*) trilobo i. e. lobis (dentibus) duobus superioribus integris lateralibus, inferiore in apice tridentato infero, circumscisse deciduo, carpophoro deficiente, foliolis coriaceis, stipulis parvulis triangularibus conniventibus, gemmulas tegentibus bene a *Laburno* separandum. A genere *Genista* racemis, calyce tubuloso circumscisse deciduo, foliis trifoliatis distinguitur.

1. *Petteria ramentacea* [Presl, l. c. 140; Reich., Ic. fl. Germ., XXII, 31, t. 19 et 43, fig. IV; Asch. Gr., l. c., 269; Schneider, Laubholz., II, 36. — *Cytisus ramentaceus* Sieber in Flora V (1822), 242. — *C. Weldenii* Vis. in Flora XIII (1830), 52 et Fl. Dalm. III, 263, t. 39. — *C. fragrans* Welden in Flora XIII (1830) 218 et XV (1832), 528. — *Genista Weldeniana* Scheele in Flora XXVI (1843), 438. — *G. ramentacea* Briquet, Et. Cytis., 123 (1894). — *Laburnum fragrans* Gris, Spicil. fl. Rum., I, 7 (1843). — *L. ramentaceum* K. Koch, Dendrol., I, 20 (1869)]. »Tilovina«. Format fruticeta saepe longe lateque patentia in regione montana collinaque, solo calcareo, lapidoso praecipue 800—1000 m — 1220 m, attamen ad mare descendit. (Conf. Beck, Veg. Verh. Illyr., 205.) Floret Aprili—Junio.

Bosna: Fide Asch. Kan., Cat. 99 (1877) ubi? In faucibus fl. Rama (M.). — **Hercegovina:** Pervulgata in valle fl. Neretva acclivis versus Jablanica, inter Jablanica et Grabovica (Bl.), in valle Diva Grabovica (V.), in monte Glogovo (V.), prope Drežnica (Br. f. Ja.), in monte Raška gora et inter Drežnica et Mostar (B.), circa Mostar (P.i!), ad fontem Radobolje (M., Lindberg), in montibus Hum (B. Sagorski), Varda (B.), Forim — 860 m (M.), Podvelež (Str. sub *Cytiso alpino*, Fo., B., Bornmüller!), Velež (B.) — 850 m, prope Vrelo Bune (Bl.), Blagaj (Bl.), inter Blagaj et Nevesinje (Str. B.)

pluribus locis uti in monte Busak, prope Kokorina (Fo., B.); Domanovići (F., Fo.); in silva Dubrava (M.), prope Metković (Fo.); circa Stolac (F., Fo.), Žegulja karaula, Ljubinje (Fo.), Neum kula (F., Fo.), Plani dol (Fo.), Begović kula (Fo.), Glavica proxime Kotezi agri Popovo polje (R.), Hutovo, Hrasno (M), Bukov dol (R.), circa Trebinje (*P. 1874), in montibus Leotar (V., B.) — 1220 m, Gljiva (V.), prope Necvijeće (P.), circa Milanov odsjek, Koňjsko, Bogović selo, Radešići, Grab, prope cavernam Carica (V.), prope Bileća (F., Hensch f. V.), Avtovac (F.), inter fl. Trebišnjica et Drijeno (B.), prope Gluha smokva, Drijeno (V).

Ludit foliis nunc majoribus nunc minoribus, apice rotundatis vel repandis, basi plus minus cuneatis, glaberrimis vel subtus sparse ciliatis. Germina semper sericeo-villosa, legumina autem subtiliter pubescentia (nunquam glabra ut Asch. Graebn., l. c. 369 indicant) observavi.

5. *Laburnum*.

[Medicus in Vorl. Churpf. Ges., II (1787) 363, et Phil. Bot., I, 204 (1789); Gris., Spic. fl. Rum., I, 7 (1843); Benth. Hook., Gen., I 481; Taub. in Nat. Pflanzfam., III 3, 236; Schneider, Laubholz., II, 40. — *Cytisus* sect. *Laburnum* DC, Prodr. II, 153 (1825); Endl. Gen., 1267. — Confer: Briquet, Etud. Cytis. (1894); Wettstein, Unters. über *Cytisus* sect. *Laburnum* in Öst. bot. Zeit. (1890) 395, 435 t. IV et (1891) 127, 169, 261.] »Zanovijet, negnilj«.

Genus racemis elongatis, bracteolis minimis citate deciduis, calyce gibboso demum marcido, carpophoro, seminibus hilo foveolato instructis, arillodio funiculari destitutis a *Cytisi* sectionibus *Coroathamno* et *Tubocytiso* optime distinguendum; *Cytisus* sect. *Lembotropis* autem seminibus racemisque elongatis hilo foveolato consentit.

Sectio: *Eulaburnum*.

[Briquet, Et. Cytis., 124 (1894).]

1. *Laburnum anagyroides* [Medicus l. c. 363 (1787); Schneid., Laubholz., II, 37. — *L. vulgare* Gris., Spic. fl. Rum., I, 7 (1843) = Presl. Rostl., III, 99; Reich., Ic. fl., Germ., XXII, 30, t. 14, fig. III, IV. — *L. laburnum* Voss-Vilmorin, Blumeng. 198 (1896), Asch. Gr., l. c., 271. — *Cytisus Laburnum* L., Spec. pl., 739 (1753) et aut.; Beck, Fl. Nied.-Öst., 831. — *Genista laburnum* Scheele in Flora (1843), 438. — Confer: Wettstein, l. c.].

α. *typicum* [Schneid., l. c., 37. — Subspec. *L. Linnaeanum* Dieck. Neuh. Nat. Arb. (1892–93), 19; Asch. Gr., l. c., 272 =

Cytisus laburnum subspec. *Linneanus* Wettst. in Öst. bot. Zeit. (1890), 437 t. IV f. 7—12, 26 et subspec. *L. Jacquinianum* Dieck, l. c. = *Cyt. laburnum* subspec. *C. Jacquinianus* Wettst., l. c. (1890) 436, t. IV fig. 1—6, 26. *Lab. vulgare* α . *Linneanus* et β . *Jacquinianum* Koehne Dendr. 325 (1893). — Conf. Beck, Fl. Nied.-Österr., 831 et Schneider l. c. 37; Reichenb. f., l. c., 31].

In hortis modo cultum. Floret m. Majo, Junio. **Bosna** (B.); **Hercegovina** (*Boué 1840).

β . *Alschingeri* [Reich. fil., Ic. fl. Germ., XXII (1869) 30, t. 15, fig. I, II (male); Schneider, Laubholz., II, 38. — Pro subspec. Wettst. in Öst. bot. Zeit. (1891) 127, (1890) t. IV — Pro spec. C. Koch et Fint. Wochenschr., II (1859) 405. — *Cytisus Alschingeri* Vis., Sem. hort. Pat. (1840) et orto bot. di Padova 138; et in Linnaea XV (1841) Lit. 101; Fl. Dalm., III 262 (1852) t. LIV]. Labio inferiore multo longiore superiore (neque vix longiore) et indumento foliolorum demum subcoriaceorum magis argenteo-appresse hirsuto, etiam ungue vexilli tubo calycis longiore (non calyce tecto) a var. α . dif- fert.

Per Alpes australes et in montibus Croatiae Velebit in silvis subalpinis hinc inde, certe etiam in montibus vicinis **Bosnae** occurrit sed nondum observatum. Sec. Janchen etiam in hortis oppidi Mostar (Simonović) colitur. Floret Majo, Junio.

2. *Laburnum alpinum* [Griseb., Spic. fl. Rum., I, 7 (1843); I. Presl, Rostl. III, 99 (1846); Reich., Ic. l. c., 30, t. 14 f. I-II; Asch. Gr., l. c., 275. — *Cytisus alpinus* Mill., Gard. dict., ed. VIII (1768) et aut.; Wettst. in Öst. bot. Zeit. (1891) 170, (1890) t. IV fig. 19—24, 28. — *C. angustifolius* Moench, Meth., 145 (1794)]. Petiolis glabris, foliis glaberrimis vel margine hinc inde etiam in nervo medio pilosis, plurimum e media acuminatis, floribus minoribus, labiis calycis aequilongis, leguminibus glabris, carina ventrali magis alata bene distinguitur. — In silvis, ad saxa regionis montanae et subalpinae imprimis alpium australium et montium Croatiae (—1900 m). Floret m. Majo, Junio.

In **Croatiae** confinibus (montibus Plješevica, Velebit) pervulgata, attamen in vicinis **Bosnae** nondum observatum. Planta a d. Struschka in monte Podvelež indicata ad *Petteriam ramentaceam* pertinet. In hortis non rare colitur.

6. Cytisus.

[L., Spec. pl. 739 (1753) et Gen., ed. V, nr. 785; em. et aut. alior. p. p.; Benth. Hook., Gen., I 484; Reich., Ic. fl. Germ., XXII, 7; Taubert in Engl., Prantl, Nat. Pflanzenf., III 3, 239; Asch. Gr., Syn. mitt. Fl., VI 2, 292; Briquet, Etud. Cytis. 97, 132 (1894). Confer: Briquet, l. c. et Simonkai, Magy. környék zanótaj (*Cytisi* Hung. terr. finit.) in Math. term. közl., XXII (1888) 355.] »Zanovijet«.

Sectio: *Lembotropis*.

[Gris., Spic. fl. Rum., I 10 (1843) pro gen.; Benth. Hook., Gen., I, 484 (1867) pro sect.; — sect. *Phyllocytisus* Koch, Syn. fl. Germ., 155 (1837) ampl.; Schneid., Laubholz., II, 46. — *Genista* sect. *Lembotropis* Briqu., Et. Cyt., 121 (1894).]

Sectio aequo jure ad genus *Laburnum* adjungi potest, quocum hilo foveolato, inflorescentia, notisque vegetativis consentit sed defectu carpophori discrepat. Bracteolis bene evolutis praestat.

1. *Cytisus nigricans* [L., Spec. pl., 739 (1753); Reich., Ic. fl. Germ., XXII, 9, t. 20, fig. I—II; Beck, Fl. Nied.-Öst., 831; Asch. Gr., Syn. mitt. Fl., VI 2, 310; Schneider, Laubholz., II, 46, t. 39, f. I. — *Genista nigricans* Scheele in Flora XXVI (1843), 438; Briqu., Et. Cytis., 122. — *Lembotropis nigricans* Gris., Spic. fl. Rum., I, 10 (1843). — *Laburnum nigricans* J. Presl, Rostl., III, 99 (1846)]. In ericetis, pratis montanis, locis lapidosis, inter virgulta, in silvis luminosis usque ad regionem montanam. Floret m. Junio, Julio saepe iterum autumnio.

Bosna: Prope Novi (Fo.), in monte Masić brdo (B.), Krnin montium Kozara Pl. (B.), prope Bošković (B.), silva Klačnica prope Sasina, Sratinska, Gjurići, Brankovac, Magjir (Fo.), Banja Luka (H.), Trošelj (Windhorst) (B.), silva Barakovac prope Vrbanja (Fo.), Šibovska šuma prope Prnjavor (B.), prope Kobaš (Prodan), in valle Gnjica prope Čelić (B.), circa Donja Tuzla (M.!, Wettst. f. Ja.), in monte Ilinčica (B.), circa Srebrenica (Wettst. f. Ja.), Gubar (J.). — Prope Bihać, Dragočaj, in silva Malbuće prope Kola, Modra, Podvidača (Fo.) Stožer Pl. (B.), Marića Košara (Ja.), inter Jezero et Jaice (Gross Kneuck.), circa Jaice (Fo., B.), prope Podmilačje (Fo.). Circa Travnik (Fr. Br.), prope Paklarevo (*S. 1848), in colle Tarabovac (Br. f. Ja), monte Vilenica (Br.!), Vjetrenica prope Zenica (Blau), circa Fojnica (*S., Schwarz!), circa Gaj et Čelin proxime Visoko (Fo), in valle inferiore vallis Vogošća (B.); in valle fl. Željeznica et Sutjeska, Zelenogora, prope Beleni (Pr.); in monte Stolac prope Višegrad (Adam.). — **Hercegovina:** Inter Ivan et Konjic (Landauer et Sünderman f. *B.). — **Novipazar:** in valle fl. Lim inter Bistrica et Banja (*B. 1896).

Variat:

α. *typicus* [Beck, Fl. Nied.-Öst., 831. — *Genista nigricans* v. *genuinus* Briqu., Et. Cyt., 122 (1894)]. Vulgatus. — *elongatus* [Willd., Berl. Baumz., ed. II, 115 (1811) f. Schneid., Laubholzk., II, 46; v. *comosa* Beck, Fl. Nied.-Öst., 831 (1892)]. Hinc inde.

β. *mediterraneus* [Pant. in Öst. bot. Zeit. XXIII (1873) 5 et Adnot in Verh. Ver. Naturk. Pressburg (1874), 123; v. *sericeus* Roch. Pl. Ban. rar. 2 (1828) nom. solum; Andrae in Bot. Zeit. XI (1853), 440; Asch. Gr., Syn., l. c., 312. *Genista nigricans* var. *sericea* Briqu., Et. Cyt., 122 (1894)]. »Caulibus, calycibus, leguminibus argenteo-sericeis, foliolis sericeis« (Pantocsek). **Bosna:** Prope Rudo (M.). In monte Vlašić: Kajabaša prope Travnik (*Fr. Br. 1888). — **Hercegovina:** In monte Glogovo (V.), in valle Zaslav inter Grančarevo et Vučja (*P. 1873).

γ. *australis* [(Kerner Herb. pro spec.), Freyn, Zur Flora des Monte Maggiore in Termész. füz., III 4 (1879) 3 sine descr. = Freyn in Wohlfl. Syn. deutsch. Fl., I, 509 (1891); Asch. Gr., l. c., 312. — *Genista nigricans* v. *australis* Briqu., Et. Cyt., 122 (1894)]. **Bosna:** In valle inferiore Vogošća prope Sarajevo (*B.). Sagorski [in Allg. bot. Zeit. XX (1914), 73] negat mentionem apud Asch. Gr. et Wohlfarth l. c., hanc varietatem 28 dies post typum florere.

Sectio: *Corothamnus*.

[Nym., Consp. 157 (1878), Simonkai, Cyt. Hung. in Termész. füz. XXII 363 (1888); Beck, Fl. Nied.-Öst., 830; Asch. Graeb., l. c., 306. — *Genista* sect. Koch in Mert. Koch, Deutschl. Fl., V, 92 (1839); sect. *Genistella* Vis., Fl. Dalm., III, 269 (1850); sect. *Stenocarpus* Benth. Hook., Gen., I, 483 (1867); *Corothamnus* Presl in Abh. böhm. Ges., III (1845), 567. — *Cytisus* sect. *Alburnoides* DC., Mem. Legum., VI 213, 214 et Prodr. II, 153 (em.) subsect. *Corothamnus* Briqu., Et. Cyt., 158.]

2. *Cytisus procumbens* [Spreng., Syst. veg., III, 224 (1826); Asch. Gr., Syn., l. c., 306; Schneider, Laubholzk., II, 47. — *Genista procumbens* Waldst. Kit. in Willd., Spec. pl., III 880 (1800) et Pl. rar. Hung., II 197, t. 180. — *Corothamnus procumbens* Presl, Bot. Bem., 137 (1844). — *Cytisus Kitaibelii* Vis., Fl. Dalm., III, 269 (1850) mixte p. p.; Beck, Fl. Nied.-Öst., 830. *Genista Kitaibelii* Janka in Term. füz. VIII 2 (1884) 62 p. p. — *C. Visianii* Lindberg. It. austro-hung. in Finska Vet. soc. förh. 48 (1906) nr. 13, 51. — *C. decumbens* v. *procumbens* Reich., Ic., l. c. 8, t. 25, fig. III (1867). — *Genista pedunculata* L'Herit. subsp. *procumbens* Gams in Hegi, III. Fl. Mitt.-Eur., IV 3, 1207]. Locis saxosis lapidosis, pratis montanis usque ad regionem alpinam, libenter solo calcareo. Floret mens. Majo, Junio in editoribus etiam Julio.

Planta nostra (ac Austriae-Hungariae) habet ramos junioribus obtuse quinquecostatos, in uno latere modo costa intermedia a folio decurrente auctos, nunquam decagonales (ut Briquet l. c. et Asch. Graebner l. c. indicant) folia plurimum supra glabra vel parce pilosa, subtus plus minus appressiuscule pilosa, itaque dici possit nec *C. procumbens* nec *C. decumbens* esse, magis autem ad *C^m decumbentem* (*C. decumbens* Spach, Rev. Gen. in Ann. sc. nat. 3 sér., III, 156. — *Spartium decumbens* Durande, Fl. Bourg., I, 299 (1782). — *Coro-thamnus decumbens* C. Koch, Dendrol., I, 44 (1869). — *C. decumbens* Briquet, Et. Cyt., 159) pertinere videtur, qui autem sec. autorum indumento patulo differendus sit. Rohlena [in Magy. bot. lap. (1907), 154] affirmavit indumentum apud *C^m Kitaibelii* Vis. variare. Ego formam glabrescentem supra descripsi. Qua propter Briquet, Schneider aliique Reichenbach filio planissime assecuti sunt.

C. procumbens Spreng., *decumbens* Spach, *diffusus* Vis. (ac. ?*C. agnipilus* Velen., *rectipilosus* Adam., *Petrovićii* Adam.) propter formas intermedias specificè non satis differunt itaque omnes ad *C^m decumbentem* Gren. Godr., Fl. Franc., I 360 pertinere, censeo.

Bosna: Prope Šujica, in montibus Vel. Malovan, Kamešnica, Vještica gora, Vel. Šator (Pr.) prope Kupres (F.). Circa Travnik: prope Glanik (Fr. Br.), in monte Vlašić supra Paklarevo, Orašje (*S. 1848) in regione alpina — 1900m (B.), ad pedem montis Treskavica versus Trnovo (Mu.) c 1200m; in monte Trebević (Beck, Pl. Bosn. Herc. nr. 71). Prope Rusenovići, Rogatica, in faucibus Rakitnica (F.), in valle fl. Sutjeska, circa Vlaholje, in declivibus montis Volujak (Pr.). — **Hercegovina:** Circa Trebinje in monte Leotar c. 1220m (B.), Glijiva, Skorupac prope Orahovac in valle Raduš prodo prope Vučja (*P. 1874). — **Novipazar** prope Plevlje (Weisbach f. *M. 1899).

f. *glabrescens* [G. Beck]. Caules mox glabri. Folia parcissime plurimum in margine modo pilosa, glabrescentia. **Bosna:** In monte Smolin prope Žepče, solo serpentino (*B.); in monte Veternik (B.). In montibus Vlašić et Trebević etiam formam observavi, carinis pilosulis. Ac pedicelli valde longitudine variant.

3. *Cytisus diffusus* [Vis., Fl. Dalm. III, 269 (1852); Briquet, Et. Cyt., 160; Asch. Gr., Syn., l. c., 309. — *Genista humifusa* Wulf. in Jacqu., Collect., II 169 (1788) non L. = *G. diffusa* Willd., Spec. pl., III 942 (1800). — *Cytisus humifusus* Nym., Consp. fl. Eur., 158 (1878); Schneid., Laubholz., II, 47. — *C. decumbens* v. *diffusus* Reich., Icon., l. c., XXII, 8. —

v. *humifusus* Ces. Pass. Gib., Comp. fl. It. — *Corothismus diffusus* Presl. Bot. Bem., 137 (1844). — *Genista pedunculata* L'Her. subsp. *diffusa* Gams in Hegi, III. Fl. Mitt. Eur., IV 3, 1208]. In lapidosis aridis, solo calcareo et serpent. Floret Majo.

Bosna: In montibus Kamešnica et Kurlaj (*Pr. 1900), prope Višegrad solo serpent. (Adamović).

C. diffusus Vis. v. *adpressepilosus* [Lindberg It. Austr. hung. in Finska Vet. soc. förh 48 (1906), nr. 13, 49] innovationibus et foliis subtus sat dense — ac cum pedicellis calycibusque appresse pilosis, leguminibus hirsutis, floribus 10 mm longis egregia, mea sententia a *C^o procumbente* vix diversa est et supra apud priorem speciem dictum renovat. In Crna Gora inter Krstac et Njeguši Lindberg legit.

Sectio: *Tubocytisus*.

[DC., Prodr., II, 155 (1825) et Mém. Leg., VI, 214; Beck, Fl. Nied.-Öst., 830; Schneid., Laubholz., II, 48. — Sect. *Wiborgia* Moench, Meth., 132 (1794) pro gen., Briqu., Et. Cyt., 161 (1894). — Sect. *Viborgia* Asch. Graebn., l. c., 313. — *Tubocytisus* Fourr. in Ann. soc. Linn. Lyon, XVII (1868), 358. — *Genista* sect. *Tubocytisus* Vis., Fl. Dalm., III, 265 (1852). — Confer: A. Kerner, Abh. Pflanzengest. (1869) et Briquet, l. c.]

4 *Cytisus hirsutus* [L., Spec. pl., 739 (1753); Beck, Fl. Nied.-Öst. 832; Schneid., Laubholz., II, 52; Kern., Abh. Pflanzengest., 13 sed Briqu., Et. Cyt. 166 (1894), Asch. Gr., Syn., l. c., 317 et al. p. p. — *Wiborgia hirsuta* Moench, Meth., 132 (1794). — *C. Kernerii* v. *hirsutus* Schulz., Kan., Knapp, Pflz. Slav., in Verh. zool.-bot. Ges. XVI (1866) 160 p. p. — *C. capitatus* Scop. v. *lateriflorus* Grab., Fl. Schles., 205 (1843); v. *lateralis* Neilr., Fl. Nied.-Öst., 927. — ? *C. prostratus* Scop., Fl. Carn., ed. II, II, 70. — *C. virgatus* Vest in Sylloge I, 23. — *C. hirsutus* L. subsp. *hirsutus* Briqu. l. c., 170; subsp. *leucotrichus* Asch. Gr. l. c., 317; v. *leucotrichus* Schur in Verh. Sieb. Ver. X (1859) 60 = *C. leucotrichus* Schur in Öst. bot. Zeit. (1860) 179].

Variat:

α. typicus [Beck, Fl. Südbosn. VIII in Ann. nat. Hofmus., XI (1896), 56. — *C. hirsutus* subspec. *hirsutus* v. *genuinus* Briqu., l. c. 170 (hic synonyma ampliora)]. In saxosis, lapidosis. pratis montanis, inter virgulta et in silvis luminosis usque ad regionem subalpinam (1150 m). Floret mens. Aprili, Majo, rarius Junio.

Bosna: Prope Banja Luka (H), Kobaš (Prodan), Vel. njiva montis Majevisa (B.) pr. Kozluk prox. Zvornik (J.) in valle fl. Spreča prope Turija, inter Golubinje et Žepče (*S. 1848), in montibus Vel. Malovan, Kamešnica, Vel. Šator (Pr.), Cincar (F., Pr.), circa Travnik (*S. 1848, Br.) prope Bukovica (S.), in monte Vlašić (S.) — 1900m?, prope Zenica, Crkvice (Franjić!), Fojnica (Schwarz!), Vareš (Pr.), circa Sarajevo (Bjelić f. V.), prope Kovačići, in valle fl. Miljacka (F.), in monte Trebević (M.). — **Hercegovina:** Prope Idbar (B. sub *C. falcato*) Preslica, Golo brdo, inter Brdjani et Bradina (Lindberg, M.), inter Rama et Jablanica (Pr.), in monte Gljiva prope Trebinje (*P. 1874).

f. *leucotrichus* [Beck = *C. leucotrichus* Schur l. c. sensu Sim., Enum. Transs., 172 (non Asch. Gr.)] est forma indumento ramulorum brevior et densiore, subtomentosa. *K. Malý (1910) hanc formam in angustiis fl. Rama Hercegovinae observavit.

β. *falcatus* [Waldst. Kit., Pl. rar. Hung. III, 265, t. 238 (1812) pro spec.; Beck, Fl. Südbosn. VIII l. c. 160 pro subspec. Confer: A. Kern. in Verh. zool.-bot. Ges. (1863) 330 et Sched. ad fl. exs. austro hung. nr. 810 et Briquet, Et. Cyt., 170 observatio. — *C. leucotrichus* × *ciliatus* Asch. Gr., Syn. mitt. Fl., VI 2, 321 (1907)].

Bosna: Circa Sarajevo in declivibus montis Trebević — 1150m (*Mu 1892, B., M.) in monte Draguljevac (M.), in valle fl. Miljacka (F., M.).

5. *Cytisus ciliatus* [Wahl., Fl. Carp., 219 (1814); Kern., Abh. Pflanzengest., 14; Schneider, Laubholz., II, 53. — *C. scepusiensis* Kit. in Linnaea 33 (1863), 609. — *C. Kernerii* subv. *ciliatus* Kanitz in Asch. Kan., Cat. corm. Serb., 100 (1877). — *C. hirsutus* subspec. *ciliatus* Briqu., Et. Cyt., 169 (1894); Asch. Gr., l. c., 320]. Rami juniores, folia, pedicelli ac calyces patule ciliato-hirsuta. Folia parvula. Flores apicem versus ramorum aggregati. Dentes calycini in margine ciliati modo, vix puberuli. Carina et carinae partes in margine inferiore puberulae. Germina leguminaque in lateribus glabra (rarius parce setosa) in suturis modo copiose ciliato-pilosa. Legumina minora, — 3cm longa.

C. hirsutus L. differt: statura saepius firmiore, ramis longioribus, foliolis saepe majoribus, floribus longius dispersis, pedicellis brevissimis plurimum vix — 3mm longis, dentibus calycinis indumento duplici praeditis, hirsutis ac margine puberulis, germinibus et leguminibus ubique aequaliter hirsutis (vel leguminibus rarius in lateribus modo calvescentibus), leguminibus longioribus 3.5—4cm longis, plurimum 6—8mm latis.

In saxosis, herbosis, silvis caesis. Floret m. Majo, Junio.

Variat:

α. ciliatus [Briquet, l. c. pro var.; v. *scepusiensis* Asch. Gr., l. c. 320. Synonyma altera supra citata. *C. capitatus* var. *ciliatus* Wahl. apud Sag. Schneid., Fl. Centralkarp., II (1891) 111]. Rami ascendentes vel suberecti. Foliola obovalia vel subelliptica, basi cuneata, supra glabra vel sparse ciliata. Pedicelli breviores plurimum vix 5 mm longi.

Bosna: In monte Jankovo brdo (Ja. Wa.) c. 1500–1600 m an β.? Prope Travnik (*S. 1848), Topčići (S), Crkvice (Franjić!).

β. alpestris [G. Beck, Fl. Südbosn. III in Ann. nat. Hofm. II (1887), 119. — *C. alpestris* Schur, Enum. Transs., 148 (1866). Sim., Enum. Transs., 173. — *C. hirsutus* L. subspec. G. Beck, Fl. Südbosn., VIII in Ann. nat. Hofm., XI (1896) 57 et var. *alpestris* Briqu., Et. Cyt., 170; Asch. Gr., l. c., 320]. Humilis, ramis procumbentibus, ubique patentim hirsutus. Foliola minora, florescentiae tempore vix 1 rarius 1.5 cm longa, supra glabra vel sparse ciliato-pilosa. Pedicelli longiores — 10 mm longi. Flores 24–26 mm longi. Legumina breviora. In saxosis, lapidosis, graminosis alpinis regionis alpinae et subalpinae (—1700 m). Floret in m. Majo, Junio.

Bosna: In montibus Osječenica et Klekovača copiose (B.), Vranica Pl. (B.), Inac (Schwarz!), Hranisava (*B. 1887), Trebević (F., M., B.), in angustiis riv. Bistrica descendens, Gola Jahorina (F.), Divić in Vran Pl. (F.). — **Hercegovina:** Rujište Veliko (Pi.), Velež Pl. — 1700 m (Bornmüller), et — 1000 m descendens (*B.).

f. aberrans [G. Beck in Ann. nat. Hofm. XI (1896) 57]. Germinibus copiosus etiam in lateribus pilosis. Legumina matura non vidi.

Bosna: Vranica Pl. prope Prokoško jezero (Schwarz f. *B. 1896) — **Hercegovina:** In monte Velež Pl. 1000–1700 m (Bornmüller, B.). Etiam in Croatia et Crna Gora observatus est.

γ. Grisebachii [Briquet, Et. Cyt., 170. — *C. ponticus* Gris., Spic. fl. Rum., I 9 (1843) vix Willd., Kern., Abh. Pflanzengest., 14]. Frutex erectus, ramis elongatis ascendentibus, foliolis obovalibus vel subellipticis basi cuneatis supra glabris subtus pilis copiosis laxe accumbentibus strigoso villosis, subpatulis creberrimis ornatis f. Briquet. Calyx dense patule hirsutus, canus. Vexillum macula fusca praeditum. Legumen ad suturas tantum dense hirsutum.

Bosna: In valle flum. Sutjeska prope Suha (*B. 1887).

Planta nostra foliolis subtus appresse hirsutis paulo dif-
fert. Legumina 4.5—5.5 *cm* longa, 6—7 *mm* lata. Foliola majora,
media 3.5—4 *cm* longa, 1.3—1.7 *cm* lata.

6. *Cytisus bosniacus* [G. Beck, Fl. Südbosn. VIII in Ann.
nat. Hofm., XI (1896), 57 = *C. ciliatus* var. Beck l. c., III in
Ann. l. c. II (1887) 119. — *C. hirsutus* subsp. *C. leiocarpus*
var. *bosniacus* Briqu., Et. Cyt., 168 (1894); Asch. Gr., Syn.,
l. c., 323]. Suffrutex humilis, valde ramosus, in omnibus par-
tibus subappresse pilosus vel subsericeus. Rami novelli sicut
petioli copiose pilosi, vix sericei. Foliola obovata, subobtusa,
basim versus cuneata, supra glabra, subtus et in margine ap-
presse nec copiose sericea, summum 16 *mm* longa et 5—6 *mm*
lata. Flores singuli vel bini, laterales, 25—30 *mm* longi, pedun-
culo brevi 3—9 *mm* longo praediti. Calyx subappresse pilosus.
Vexillum flavum, in medio cum alis fulvescens, extus glabrum.
Germina in suturis modo copiosius pilosa. Legumina linealia,
compressa, utrinque attenuata, pulla, in lateribus et suturis hic
copiosius pilis sparsis saepe crispulis tecta, 30—37 *mm* longa,
c. 5 *mm* lata. In saxosis calcareis regionis montanae et sub-
alpinae (—1900 *m*). Floret m. Majo, Junio.

Differentias inter *C^m leiocarpum* [A. Kern. in Öst. bot.
Zeit. (1863) 90 = *C. hirsutus* subsp. *C. leiocarpus* (Kern.) var.
leiocarpus Briqu., l. c. 169 = v. *typicus* Asch. Gr., l. c. 322],
C^m subleiocarpum [Simonk. in Term. füz. X (1884), 144 = *C. hir-*
sutus subsp. *leiocarpus* var. *subleiocarpus* Briqu., l. c. 169 et
var. *liocarpus* Asch. Gr., l. c. 322] et *C^m bosniacum* G. Beck
exposui l. c. 58 (1896).

Presse differunt:

C. leiocarpus Kern. ramis petiolisque copiosius pilosis,
foliolis adultis 25—40 *mm* longis, ultra 1 et —2 *cm* latis, gla-
berrimis, calyce subglabro vel parce appresse piloso, legumi-
nibus glaberrimis, latioribus (6 *mm* latis).

C. subleiocarpus Sim. iisdem notis sed legumina in sutura
seminifera ciliata vel etiam in latere sparse pilosa ut in *C.*
bosniaca describuntur. Exemplaria exsiccata Florae exs. austro-
hung. nr. 814 ob calycem copiose patentim pilosam et foliola
patentim pilosa ad *C^m leiocarpum* pertinere non possunt.

Bosna: In ditone urbis Sarajevo in monte Trebević; Orlovac, Dra-
guljevac —1150 *m* (*B. 1887, M. in Dörfll., Herb. norm. nr. 5245), in valle

fl. Miljacka prope pontem Kozja ćuprija, fontem Helenenquelle (B.), in monte Romanija Pl. (B.), Košutska in monte Jahorina Pl. (F.), in monte Melac prope Banja Stijena (M.) 800 m.

C. ratisbonensis [Schaeff., Bot. exp. (1760) tab. tit.; Kern., Abh. Pflzgest., 15; Beck, Fl. Nied.-Öst., 832; Schneid., Laubholz., II, 50. — *C. hirsutus* subsp. Briquet, Et. Cyt., Asch. Gr., Syn., l. c., 323]. In Bosna circa Sarajevo (Hofmann) in monte Trebević (Zoch) indicatus, certe ad *C^m bosniacum* pertinere videtur.

7. *Cytisus supinus* [L., Spec. pl., 470 (1753) α .; Kern., Abh. Pflanzengest., 11; Beck, Fl. Nied.-Öst., 834; conf. A. Kern. in Sched. ad fl. exs. austro-hung. nr. 808. Subspec. *supinus* v. *genuinus* Briqu., Et. Cyt., 178. Subspec. *C. capitatus* v. *genuinus* Asch. Gr., Syn., l. c., 335. — *C. capitatus* Scop., Fl. Carn., ed. II, II, 70; v. *terminalis* Neilr., Fl. Nied.-Öst., 927. Reich., Ic. fl. Germ., XXII, 13, t. 24 fig. I, II. — *C. Kernerii* var. *capitatus* Kanitz in Schulz. Kan. Knapp, Pil. Slav. in Verh. zool.-bot. Ges. (1866) 160. — *Tubocytisus capitatus* Fourr. in Ann. soc. Linn. Lyon XVII (1868) 358. — *Genista capitata* Scheele in Flora 26 (1843) 438]. In pratis montanis, locis lapidosis, inter virgulta, ad silvarum margines regionis collinae et montanae. Floret m. Majo, Junio—Augusto.

Bosna: In monte Kozini prope Hašani (Fo. f. V) Sasina, Sitnica, Buletić (Fo. f. V.), prope Ivanjska, in monte Krnin montis Kozara Pl. (B.), prope Banja Luka (C.), Žabljak, Doboj (Fo. f. V), circa Donja Tuzla (M., Wettst. f. Ja.), prope Drinjača ad fl. Vardar (J.). In valle fl. Una inter Novi et Otoka (B.), circa Modra, Lipnik, Šehovci (Fo. f., V.), in colle Debeljača prope Bihać, prope Varcar Vakuf (B.), in montibus Kamešnica, Vel. Malovan, Troglav, Šator (Pr.), circa Orahovica prox. Žepče? (B.). In valle fl. Željeznica, circa Beleni, in valle fl. Sutjeska (Pr.). Ego in Bosna australi non observavi. [Conf. Fl. Südbosn. VIII in Ann. nat. Hofmus., XI (1896) 59]. — **Hercegovina:** In monte Ivan (Land. et Sünderm. f. *B.). — **Novi Pazar:** ? Prope Prijepolie (P. Zahlbr. f. *Hayek 1906).

Formas notabiles observavi sequentes:

cyclophyllus [G. Beck] foliis adultis parvulis, summo 1.5 cm longis orbicularibus. — **Bosna:** Lučice prope Fojnica (Schwarz! f. *B.). — *microphyllus* [G. Beck]. Foliola adulta 8—10 mm modo longa. **Carniolia** in monte arce coronato prope Postojno [Adelsberg] (*B.) — K. Malý prope Donja Tuzla! etiam formam calyce parcissime piloso subglabro vel glabro collegit.

8. *Cytisus pannonicus* [Simk., Cyt. Hung. in Math. és Term. Közl. XXII (1888), 361 v. *Prodani* Degen in Magy. bot.

lap. (1910), 102] a typo *Cⁱ supini* differt indumento caulis petio-
lorumque longissime patulo. Folia supra glabra.

Bosna: In sylvis caesis montium prope Kobaš (Prodan f. *Degen 1910)

Briquet [Et. Cyt. 173] sicut Asch. Graebn. [Syn. mitt
Fl., VI 2, 328] hanc speciem illustrare non potuerunt. Mihi
C^o supino proxima esse videtur.

9. *Cytisus albus* [Hacquet, Reis. dac. sarm. Karp., I, 49
(1790); Kern., Abh. Pflanzengest., 1; Simonk., Cyt. hung., 369.
— *C. supinus* subsp. *albus* Briqu., Et. Cyt., 173; Asch. Gr., l.
c., 328. — *C. leucanthus* Waldst. Kit. apud Willd., Spec. pl.,
III, 1124 (1803) et Plant. rar. Hung., II, 141, t. 132 (1805). =
C. austriacus var. Ledeb., Fl. Ross., I, 519 (1842)]. Petala alba
vel pallide lutea, vexillum extus pilosum. Legumina villosa.
Locis apricis lapidosis, inter virgulta, in silvis. Floret m. Ju-
nio, Julio.

f. *pallidus* [*C. leucanthus* v. *pallidus* Schrad. in DC. Prodr.
II 155 (1825). — *C. pallidus* Kern., Abh. Pflanzengest., 6 (1869)
= *C. supinus* subspec. Briqu., Et. Cyt., 174; Asch. Gr., l. c.,
329. — *C. austriacus* v. *pallidus* Neilr., Aufz. Ung. 330 (1866)]
petalis dilute flavescentibus vel pallide sulfureis.

Bosna: In valle fl. Sutjeska prope Suha, in valle fl. Drina prope
Bastasi et Osanići (B. sub *C. austriaco*), prope Čajniče (Životsky), in mon-
tibus Ranjen Pl. (B.); Suhagora prope Višegrad, solo schistoso c. 1100 m
(Schiller f. *Degen 1910).

10. *Cytisus austriacus* [L., Spec., pl., 739 (1753); Kern.,
Abh. Pflanzengest., 7; v. *luteus* Neilr., Aufz. Ung., 330 (1866).
— *C. supinus* subspec. *austriacus* Briqu., Et. Cytis., 175; Asch.
Gr., l. c., 330. — *Genista austriaca* Scheele in Flora XXVI
(1843) 438]. Petala lutea. Vexillum extus pilosum. Legumina
appresse villosa. In pratis montanis, locis lapidosis, arenosis,
inter virgulta et in silvis. Floret m. Majo—Augusto.

Bosna: Circa Travnik (Br.), in monte Smolin prope Žepče, solo
serpent. (B.); Škrabanj versus D. Tuzla (Br. fide Degen), circa Kralupi
supra Vareš (*Pr. 1898). In Zelengora, in vallibus fl. Sutjeska et Drina (Pr.).

α. *Heuffelii* [Wierzb. apud Gris. Schenk in Wiegmann, Arch.,
XVIII (1852), 293; Kerner, Abh. Pflanzengest., 8 pro spec. —
C. supinus subspec. *austriacus* v. *Heuffelii* Briqu., Et. Cyt.,
176; Asch. Gr., l. c., 332]. Foliola supra glabra vel parcepilosa
glabrescentia. Calyx appresse pilosus. Legumina appresse sericea.

Bosna: In faucibus Sutjeska proxime Suha (*F. 1896).

β. *maezeius* [K. Malý in Glasn. zem. muz. 35 (1923) 130 sub *C. austriaco* var. = *C. maezeius* K. Malý l. c.]. »Distinguitur a *C. paucifloro* Ebel calyce pilis longis adpressis obsito. Folia ramorum praecedentis minora, angustiora, subglabra (ut in *C. leucantho* [W. K. apud Willd., Spec. pl., III, 1124]), folia ramorum novellorum subtus dilutiora, evidenter plus minus adpresse subsericea. Floret m. Majo, Junio.« (K. Malý.)

Bosna: In declivibus saxosis et in silvis montanis (*Pino nigro* compositis) regionis fl. Gostović (in vallibus Gostović, Kamenica, Lužnica et in montibus Žedni vrh, Velež) solo serpentino, a. c. 360—1089 m (*M. 1923).

11. *Cytisus Tommasinii* [Vis., Fl. Dalm., III, 265 (1852); Kern., Abh. Pflanzengest., 9; Schneid., Laubholzk., II, 56. — *C. capitatus* v. *pauciflorus* Ebel, 12 Tage Mont., II, 83 (1844), t. IV, fig. 1; Reich, Ic., l. c., 13, t. 26, fig. IV. — *C. pauciflorus* G. Beck, Fl. Südbosn., III in Ann. nat. Hofmus., II (1887) 119 non Willd. — *C. supinus* subspec. *austriacus* var. *pauciflorus* Briqu., Et. Cyt., 177 (1894); Asch. Gr., l. c., 333.] Ramis erecto-patentibus (non erecto-strictis), pube minima crispula appressa tectis, foliis patulis, foliolis rectangule distantibus (cruciatis), parvulis summo 2 cm longis, ellipticis, saepe utrinque aequaliter acuminatis, supra glabris subtus parcissime (imprimis in nervo mediano) appresse pilosis, itaque viridibus, (nunquam argenteis), floribus minoribus 15—18 mm longis (non 20—22 mm longis), calyce parcius patule ciliato, petalis saturate luteis, vexillo extus patule piloso, leguminibus pilis erectis pilosis a *C. austriaco* sat distinguitur. Inter virgulta, locis silvaticis, quercetis. Floret in. Majo, Junio.

Bosna: In valle fl. Željeznica prope Ilovice, ad ostium riv. Crna rijeka, Trnovo, pr. Brutusi (*Blau 1877); Rusenovići distr. Rogatica (F. f. M. sub *C. austriaco*). In monte Varda Pl. prope pagum Repuševići et in monte Paštan Brdo prope Rudo, c. 700—900 m (M.).

α. Typum supra descriptum per Dalmatiam australem et Crnagoram pervulgatum enumerant in Hercegovina prope Sovići distr. Ljubuški (F.), in valle Jazina et Raduš prodo (*P. 1874). In Dalmatia confini observatus est prope Zelenika proxime Kotor [Cattaro] (Sagorski) in monte Vermač, ad arcem Trinita (Studnička) in montibus Krivošije supra Risan [Risano] (Visiani).

β. *keranius* [K. Malý in Glasn. zem. muz. 32 (1920) 136 = *C. austriacus* var. K. Malý ibidem]. Inflorescentia multi-

flora, 13 (5—17)-flora. Corollae vexillum citrinum, carina alaeque sulphureae; vexillum postremo macula fusca ornatum, 17 (14—20 mm) longum, extus plus minus appresse pilosum. Calyx patule pilosus, labio inferiore indiviso vel tridentato, 10 (9—12) mm longo. Floret fine Majo—Julio, fructificat Augusto, Septembro (K. Malý).

Bosna: Ad margines silvarum et in pratis prope Pale (F. apud B. 1896 sub *C. albo* f. M.), Trčine, Barakovac, Koran, Stambulčić; in declivibus montis Romanija Pl. prope Bogovići, Stajna aliisque locis, prope Podvitez, Gorovići, Željezničko vrelo, ubique in solo schistoso aut in solo areno-lapidoso, c. 840—1200 m (*M. 1920).

Plantam vidi a. d. Fiala prope Pale collectam, quam prius pro *C^m pauciflorum* habui, quae autem a typo differt foliolis nec patulis nec divergentibus, subtus copiosius pilosis, labio calycis inferiore profunde tridentato, floribus majoribus. Aeque jure ad *C^m Heuffelii* pertinere possit.

12. *Cytisus Jankae* [Velen. in Sitzungsber. böhm. Ges. Wiss. Prag (1889) 31 (1890) et Fl. bulg., 129. — *C. supinus* subspec. *C. tmolaeus* v. *Jankae* Briqu., Et. Cyt., 181]. »Pumi'us, ramis novellis adpresse sericeo-canescens, gracilibus, erectis. Foliola linearia vel lineari-spathulata apice obtusiuscula. Calyx adpresse sericeus. Corolla pallide lutea, vexillo extus dense pubescente. Legumen sericeum« (Briquet).

Bosna: Suha gora prope Višegrad, solo schistoso c. 1100 m (Schiller f. *Degen 1910).

7. Calycotome.

[Link in Schrad., Neu. Journ., II 2, 50 (1808); Benth. Hook., Gen., I, 481; Taub. in Nat. Pflanzenf., III 3, 236; Schneid., Laubholz., II, 59. — *Cytisus* sect. DC, Prodr., II, 154 (1825). Endl., Gen., 1267.]

1. *Calycotome infesta* [Guss., Fl. Sic. Syn., II 1, 247 (1843); Reich. f., Ic. fl. Germ., XXII, 32, t. 43, fig. II, III; Schneider, Laubholz., II, 60; Asch. Gr., Syn., l. c., 278 = Presl, Botan. Bem., 51 (1844). — *C. villosa* Link. var. *infesta* Asch. Kan., Cat. corm. Serb., 100 (1877). — *Cytisus infestus* Guss., Prodr. fl. Sic., II, 372; Vis., Fl. Dalm., III, 265. — *Spartium infestum* Presl, Del. Prag., 33 (1822)]. In locis aridis, saxosis, sterilibus conditionis florum mediterraneae. Floret m. Martio, Aprili.

Hercegovina: Prope Trebinje (*P. 1874); Sutorina (Pr.), inter Uskoplje et Ivanica (Ja).

Sarothamnus scoparius [Wimm. apud Koch, Syn. fl. Germ., 152 (1837); Asch. Gr., Syn. mitt. Fl., VI 2, 289. — *S. vulgaris* Wimm., Fl. Schles., 278. — *Cytisus scoparius* Link, Enum. hort. Berol., II, 241 (1822); Briqu., Et. Cyt., 146; Reich., Ic. fl. Germ., XXII, 7. t. 31, f. IV, V. — *Spartium scoparium* L., Spec. pl., 709 (1753)].

Bosna: In monte Trebević prope Sarajevo cultus et quasi spontaneus (*Brancsik 1890, M.) c. 1050 m. Floret Junio.

Ulex europaeus [L., Spec. pl., 241 (1753); Reich., Ic. fl. Germ., XXII, 6, t. 17 fig. I, et 29 fig. 1, 2; Schneid., Laubholzk., II, 58; Asch. Gr., Syn. mitt. Fl., VI 2, 284].

Bosna. In monte Trebević prope Sarajevo cultus et ad vias c. 900 ad 1060 m quasi spontaneus (*M. 1919). — **Hercegovina:** Cultus in hortis arcis Opušen (Fort Opus) sec. R. fide M. ubi m. Januario floret.

Tribus: *Trifolieae*.

[Bronn, Diss. Leg. 132 (1822); DC., Prodr., II 171 (1825) p. p.; Benth. Hook., Gen., I, 442; Taubert in Nat. Pflanzenfam., III 3, 240]

8. *Ononis*.

[L., Spec. pl., 716 (1753) et Gen., ed. V, Nr. 772; Endl., Gen., 1265; Benth. Hook., Gen., I, 485; Asch. Gr., Syn. mitt. Fl., VI 2, 341; Beck, Fl. Nied.-Öst., 834; Taubert in Engl. Prantl, Nat. Pflanzenf., III 3, 186 et 241]. »Gla-diš, mačak, zečji trn«.

Sectio: *Acanthononis*.

[Willk. in Willk. Lange, Prodr. fl. Hisp., III 392 (1877).]

1. *Ononis hircina* [Jacqu., Hort. Vind., I, 40, t. 93 (1770); Reich. f., Ic. Fl. Germ., XXII, 39, t. 45 et 46, fig. 1—7; Wohlff., Syn. deutsch. Fl., 523; Beck, Fl. Nied.-Öst., 836; Asch. Gr., Syn., l. c., 343; Hayne, Arzneik., XI, t. 42. — *O. arvensis* L., Syst., ed. X, nr. 1 (1759) p. p. — *O. foetens* All., Fl. Pedem., I. 317, t. 41, f. 1 fide Wallr., Koch et al. — *O. altissima* Lam., Dict., I 506 (1783) et IV, 506 (1797). — *O. spinosa* subsp. *hircina* Gams in Hegi, Illustr. Fl. Mitt. Eur., IV 3, 1224]. Statura robusta. Stipulis latioribus, argute dentatis, latissimis, petiola supra stipulas bene visibilia. Floribus ad apicem ramorum congestis, binis vel ternis (rarius solitariis), magnis. Calycibus et longe pilosis et brevius glanduloso-pilosis, c. 10 mm longis, vexillo 18–20 mm longo. Leguminibus calyce brevioribus. In

pratis, pascuis usque ad regionem subalpinam (—1230 m). Floret m. Junio—Augusto.

Bosna: Inter Klašnice et Dragočaj (Fo.), prope Ivanjska, in monte Krnin montium Kozara Pl. (B.); prope Banja Luka (H), Kobaš (Prodan), Brčko (B.), Donja Tuzla (M.). — Circa Bihać (Boller), Petrovac, Malovan (B.), in monte Prolog (B.), circa Livno, in monte Borova glava 1100–1230 m (B.), in agro Suho polje prope Hrastičevo (Ha. Fa.); Karaula prope Jajce (Fo, f. V.). Circa Travnik (Br), Žepče (Fo. f. V., B.), Vlaholje (Pr.), Visoko (Fo.). In Bosna australi dispersa (B.). Circa Sarajevo, Kobilja glava a. l. (B.), Pale (M.); inter Foča et Mješajići (Ad.), prope Čajniče (B.). — **Hercegovina:** In valle Tušila ad pedem montis Visočica, prope Umoljani (*B. 1896).

Variat:

spinescens [Ledeb., Fl. ross., I, 513 (1842); Asch. Gr., l. c., 344; Beck, Fl. Nied.-Öst., 836. — *O. spinescens* Grecescu, Consp. fl. Rom., 163 (1898) = Halácsy, Consp. fl. Graec., I 349 (1901). — *O. pseudohircina* (*hircino-spinosa*) Schur, Enum. pl. Transs., 150 (1866). Confer Beck, Fl. Südbosn. VIII in Ann. nat. Hofm., XI (1896) 60. Rami laterales plus minus spinulosi spinis nunc brevibus nunc longioribus. Sepala vexillo floris evoluti semper breviora. Flores saepius minores et singuli. Folia magnitudine valde variant. Sec. K. Malý [in Verh. zool.-bot. Ges. 1904) 224] probabiliter forma autumnalis esse videtur quod Handel-Mazzetti [in Öst. bot. Zeit. (1905) 36] dubitavit. Stipulis et leguminibus calyce brevioribus ab *O^e spinosa* L. distinguitur.

Bosna: Prope Ivanjska (B.), in valle riv. Crkvina prope Banja Luka (*C. 1888), circa Banja Luka (M.), prope Kobaš (Prodan), Donja Tuzla (Wettst. f. Ja.), infra Vaganac prope Ribnik, 500 m (Ha.); ad stationem Lašva (Ha. Fa.); prope Fojnica (B.). Copiose circa oppidum Sarajevo: in agro Sarajevsko polje prope Ilidža, Vrelo Bosne, Dolac (M.), Kovačići (F.!), in montibus Trebević, Draguljevac etc. (M. in Dörf., Herb. norm. nr. 4511! Gross Kneucker) —1100 m (M.). Inter Foča et Mješajići (Ad. f. Ja.), prope Uvac ad fl. Lim (B.). — **Hercegovina:** Circa Jablanica (*B. 1896).

2. *Ononis spinosa* [L. Spec. pl., 716 (1753) excl. β., rectius Syst. ed. X, nr. 1; β. *spinosa* L., Spec. pl., ed. II 1006.; Hayne. Arzneik., XI, t. 43 et aut. (plus minus commutata.). — *O. arvensis* L., Syst., ed. XII, 478 (1767) nr. 2. — *O. campestris* Koch et Ziz, Cat. Palat., 22 (1814); Reich. f., Icon. fl. Germ., XXII, 38, t. 46, fig. I—IV. Confer: Wettst. in Denkschr. Akad. Wiss. Wien 70 (1901) 332]. Statura minor. Petiolis supra stipulas breviter dentatas vix visibilibus. Floribus solitariis rarius

ad apicem ramorum congestis, minoribus. Calyce nunc glanduloso-piloso pilis nullis vel plus minus immixtis, 7—9 mm longo. Vexillo 13—15—18 mm longo. Leguminibus calycem longitudine aequantibus vel superantibus. In pratis, pascuis, ad vias, locis lapidosis usque ad regionem montanam (1000 m). Floret mens. Julio, Augusto.

Variet:

α. *spinosa* [L., Spec. pl., ed. II, 1006 (1763) = Burnat, Fl. Alp. mar., II (1896), 84. Synonyma supra citata; v. *genuina* Asch. Gr., l. c., 352]. Rami erecti, ramulis spinosis.

Bosna: Sec. Protić et Formánek vulgata. Prope Bos. Dubica, Ivanjska (B.), Banja Luka (iH.), Donja Tuzla (M.), Zalin, Modra, Vrbanja (Fo.), Kupres, Šujica, Hrblijina (Pr.), in monte Dinara (Degen), prope Rore, Preodac (Pr.), Jajce (Fo), Vareš (Pr.), Tarčin (Pr.), Kovačići prope Sarajevo (F.). — **Hercegovina:** Prope Rakitno (V.), Mostar (Pi.), Nevesinje (Raap Callier, Pl. Herc. nr. 177!), in agris Nevesinjsko- et Gatačko polje 850—1000 m (Mu.).

Occurunt: f. *latifolia* [Wallr., Sched. crit., 379 (1822); Neilr. Fl. Nied.-Öst. 929 = *O. latifolia* Hay., Fl. Steierm., I, 1064] et f. *angustifolia* [Wallr., l. c. 379]. — f. *densiflora* [Freyn apud Če'ak., Prodr. fl. Böhm., 906 (1881)], Hinc. inde.

β. *mitis* [L., Spec. pl., ed II 1006 (1763); Burn., Fl. Alp. mar., II, 85. — *O. mitis* Gmel., Fl. Bad., III, 162 (1808). — *O. pseudorepens* Schur in Verh. naturf. Ver. Brünn, XV 2, 170. — *O. procurrens* v. *mitis* Spenn., Fl. Frib., III 686 (1829), Asch. Gr., l. c., 346]. Rami inermes vel inferiores modo spinosi.

f. *brachystachya* [Vis., Fl. Dalm., III 274 (1852) pro spec.; Reich. f., Ic., l. c., 40 t. 47 fig. III. — *O. procurrens* var. Asch. Gr., Syn., l. c., 347]. Flores in apice ramorum capitato-aggregati. — **Hercegovina:** Fide *Asch. Kan., Cat. corm. Serb., 100 (1877). Ubi?

γ. *procurrens* [Wallr., Sched. crit., 381 (1822) pro spec.; Burn., l. c., 86. — *O. repens* subspec. *O. procurrens* Asch. Gr., l. c., 345]. Rami procumbentes vel ascendentes. Aliae differentiae non constant.

Bosna: Prope Banja Luka, Maslovare (Fo. f. V.) Zvornik, Kozluk (J.), Novi, Zaspá, Faletići (Fo. f. V.), prope Iirota, Vilenica, Pothum (*Fr. Br. 1888), in monte Trebević (Brancsik). — **Hercegovina:** Prope Milanov Odsjek (*V. 1888).

O. repens [L. Spec. pl. 717 (1753)], planta borealis litoralís, a d. Hofmann in Bosna prope Banja Luka certe errore indicatur. Forsan var. γ. ante oculos habuit.

3. *Ononis antiquorum* [L., Spec. pl., ed. II, 1006 (1763); Sibth. Sm., Fl. Graec. t. 675; Vis. Fl. Dalm., III 273; Asch. Gr., Syn., l. c., 353.; Reich. Iconogr. I, 9, t. VII f. 14; Reich. f., Icon., l. c., 39, t. 47 fig. I. — *O. spinosa* subspec. *antiquorum* Briquet s. aut.]. Ramis lateralibus omnibus spinosis, spinis puberulis, patentibus vel recurvatis, gracilibus. Foliolis singulis, parvulis, oblongis, glandulis perbrevibus tectis, demum glabrescentibus. Floribus singulis, in ramulis spinosis, 3—5, distantibus, parvulis 7—10—15 mm longis. Calyce cum pedunculis glabro vel glandulis subsessilibus parcis praedito. Semina nunquam laevia sed matura minute verruculosa. In pascuis, lapidosis, locis sterilibus, aridis, imprimis in ditione florum mediterraneae, (—1300 m). Floret mens. Majo—Sept.

Bosna: In agro Rilić polje prope Malovan (*S. 1848), prope Drvar, supra Radlovići et Marinkovci prope Grahovo 300—1000 m (Ha. Fa.), prope Vrpolje (Degen), in agro Livanjsko polje (B.), prope Grkovci (Ha. Fa.), Lištani prope Livno 700 m (Br. f. Ja.). — **Hercegovina:** Prope Jablanica (M.), in declivibus montium Čvrsnica Plan. (M.), prope Mostar (M.), ad paludem Mostarsko blato (B.), prope Županjac (*Fr. Br. 1888) sed?, circa Vrbanje (R. Berger).

Adest var. *pungens* [Pomel, Nouv. mat. fl. Atl, 166 (1860) pro spec.; Asch. Gr., l. c., 354 = v. *genuina* Rouy in Rouy Fouc., Fl. France, IV, 272].

Var^m secundam: *transiens* Rouy l. c. = v. *confusa* Asch. Gr., l. c. = *O. campestris* v. *confusa* Loret et Barr., Fl. Montp. 154 (1876) = *O. spinosa* v. *confusa* Burnat, Fl. Alp. mar., II 85 (1896) quae vix differre videtur quam floribus paulo majoribus — 15 mm longis, observavi in Bosna, in monte Borova glava prope Livno, 1100—1230 m (*B.).

Sectio: *Bugrana*.

[DC., Prodr. II, 162 (1825); Willk., l. c., 394.]

4. *Ononis alopecuroides* [L., Spec. pl., 717 (1753); Boiss., Fl. Or., II, 64; Reich. f., Ic. l. c. 42, t. 44; Asch. Gr., Syn., l. c. 356]. In arenosis, agris, pratis, dumetis. Floret m. Majo—Julio.

Bosna: Prope Bihać [Boller f. *Wettst. in Verh. zool.-bot. Ges. 1892), 259].

5. *Ononis Columnae* [All. Auct. ad Syn. meth. hort. Taur. 77 (1774); Fl. Pedem., I 318 t. 20 fig. 2 (1785); Reich. f., Ic.

fl. Germ., XXII, 41, t. 49; Asch. Gr., l. c., 358. — *O. subocculta* Vill., Prosp., 41 (1779) et Hist. pl. Dauph., I 255, III 835; Beck, Fl. Nied.-Öst., 835. — ? *O. pusilla* L., Syst., ed. X, II 1159 (1759) fide Schinz Thell. in Bull. herb. Boiss., 2. sér., VII (1907), 188]. In locis aridis, lapidosis, dumetosis, ad silvarum margines (—700 m). Floret mens. Aprili—Augusto.

Bosna: Circa Sarajevo prope Bakije et in monte Grdonj (*Blau 1877, M., Fo.) —700 m, Gračanica ad fl. Rama c. 400 m (M.). — **Hercegovina:** prope Mostar (*Pi. 1899, M.), in monte Stolac (Raap Call., Pl. Herc. nr. 49!) in monte Ošanica glavica prope Stolac 50–300 m (B.).

Occurunt: f. *genuina* (Rouy in Rouy Fouc., Fl. France, IV 277 (1897)) et f. *pauciflora* [Rouy, Exc. Esp., II 64 et l. c.]. — **Hercegovina:** Prope Mostar, Stolac (*B.).

6. *Ononis viscosa* [L., Spec. pl., 718 (1753); subspec. *O. breviflora* [DC., Prodr., II, 160 (1825), Boiss. Fl. or., II, 60 pro spec.; Rouy in Rouy Fouc., Fl. France, IV, 261; Asch. Gr., Syn., l. c., 369. — *O. viscosa* β. L., l. c.; Vis., Fl. Dalm., III, 276; v. *breviflora* Reich., Ic. l. c., 45, t. 52 fig. II]. In locis aridis, siccis, agris ad vias in ditone florum mediterraneae. Floret m. Majo, Junio.

Hercegovina: Circa Radišići distr. Ljubuški (*F. 1896).

9. *Trigonella*.

[L., Spec. pl., 776 (1753) et Gen. ed. V, 804; Endl., Gen., 1267; Benth. Hook., Gen., I, 486; Taubert in Nat. Pflanzenfam. III 3, 243.] »Piskavica«.

Subgenus: *Trifoliastrum*.

[Moench, Meth., 123 (1794) pro gen.; Beck in Sched. pro subgen. = *Melilotus* subgen. Beck, Fl. Nied.-Öst., 840 = *Trigonella* sect. *Grammocarpus* DC. Prodr., II, 181 (1825) p. p.; Benth. Hook., Gen., I, 486. — *Teliosma* Alef., Landw. Fl. 72 (1866). — *Melilotus* subgen. *Grammocarpus* Peterm., Fl. Deutschl., 137 (1849; sect. Reich., Fl. Germ., 499 (1832) = Koch Syn. fl. Germ., ed. II, 184 (1843).]

Flores subcapitati. Legumina inflata, dehiscentia, longitudinaliter venoso-striata, 2–3-sperma, rostrata. Cotyledones sessiles. Genus an Sectio inter *Trigonellam* et *Melilotum* exacte medium interest, aequo jure ambis attribuendum, a priore leguminibus inflatis, longitudinaliter venoso-striatis, a secundo leguminibus rostratis, ab utroque leguminibus inflatis, inflorescentia subcapitata diversum.

1. *Trigonella melilotus coerulea* [Asch. Gr., Fl. nordostd. Flachl., 434 (1898) et Syn. mitt. Fl., VI 2, 379. Reich., Iconogr.,

IV, 34, f. 524. — *T. coerulea* Ser. in DC., Prodr., II, 181 (1825); O. E. Schulz in Festschr. Aschers. 70. Geburtst., 168; Reich. f., Icon., l. c., 47, t. 58, fig. I—III; — *Trifolium melilotus coerulea* L., Spec. pl., 764 (1753). — *Trifoliastrum coeruleum* Moench, Meth., 123 (1794) = *T. melilotus coerulea* Beck in Sched. — *Melilotus coerulea* Desr. in Lam., Enc., IV, 62 (1797). — *Grammocarpus coeruleus* Schur, Enum. Transs. 152 (1866). — *Teliosma coerulea sativa* Alef., Landwirtsch. Fl., 72 (1866)]. »Pšena«. In incultis, agris, ad vias. Floret m. Junio, Julio. Hinc inde colitur et quasi spontanea occurrit.

Bosna: (*Asch. Kanitz, Cat. corm. Serb., 1877) Ubi? prope Orahova ad fl. Prosara culta (B.), prope Banja Luka (H.), ad vias vallis fl. Miljacka prope Sarajevo et in hortis rusticis (M.).

2. *Trigonella procumbens* [Reich., Iconogr., IV 35 (1826) fig. 525 sub *T. Besseriana* DC.; Asch. Gr., Syn. mitt. Fl., VI 2, 380; O. E. Schultz in Festschr. Aschers. 70. Geburtstag, 179. — *Melilotus procumbens* Bess., Enum. Volh., 30 (1822); Beck, Fl. Nied.-Öst., 841. — *M. coerulea* v. *procumbens* Spreng., Syst. veg., III 206 (1826); v. *laxiflora* Roch., Pl. rar. Hung., 51, t. 14. f. 31 (1828). — *Trig. Besseriana* Ser. in DC., Prodr., II, 181 (1825); Boiss., Fl. Or., II 68. — *Trig. coerulea* v. *laxiflora* Reich. f., Icon., l. c., 48, t. 47 fig. III. — *Grammocarpus procumbens* Schur, Enum. pl. Transs., 152 (1866). — *Trifoliastrum procumbens* Beck, l. c., 841]. In pratis, agris, sterilibus. Floret mens. Junio, Julio.

Bosna: Prope Banja Luka (*H. 1882).

Subgenus: *Trigonella*.

[L., l. c. et autorum β . p. sub genere.]

Sectio: *Foenum graecum*.

[Hill, Brit. herbal, 309 (1756) = Medicus Vorl. IV 1, 354 (1789) = Moench, Meth., 142 (1794) pro gen.; Ser. in DC, Prodr, II 182 (1825)].

3. *Trigonella foenum graecum* [L. Spec. pl., 777 (1753); Reich. f., Icon., l. c., 47, t. 57 fig. I, II; Boiss., Fl. Or., II, 70; Asch. Gr., Syn. l. c., 382]. Planta agrestis spontanea modo reperta est:

Trigonella gladiata [Steven, Cat. hort. Gorenk. 112 (1808); Boiss., Fl. Or., II, 69; Reich. f., Icon., l. c., 47, t. 56, fig. I—II. — *T. foenum graecum* β . L. Spec. pl., 777; subspec. Asch. Gr.,

Syn., l. c., 383]. Indumento copiosiore, ramis plurimum procumbentibus, floribus paulo minoribus, leguminibus rostro suo brevioribus vel id longitudine aequantibus, primum pilosis semina pauciora includentibus praestat. In cultis pratis, pascuis, inter virgulta, ad viarum margines in ditione florum mediterraneae. Floret m. Aprili—Junio.

Hercegovina: In declivibus montis Stolac prope Mostar (Raap Callier, Pl. Herc. nr. 274; Ja.).

Sectio: *Buceras*.

[Hall. in All., Fl. Pedem., I, 313 (1785)=Medic., Phil. Bot., I, 203 (1789) pro gen.; Ser. in DC., Prodr. II, 182 (1825).]

4. *Trigonella monspeliaca* [L., Spec., pl., 777 (1753) rectius ed II, 1095; Reich. f., Icon., l. c., 48, t. 59, fig. I, II; Beck, Fl. Nied.-Öst., 837; Boiss., Fl. Or., II, 76; Waldst. Kit., Pl. rar. Hung., II 152 t. 142; Asch. Gr., Syn. l. c., 385. — *Buceras monspeliacum* All., Fl. Pedem., I, 313 (1785)]. In arvis, incultis, agris, collibus aridis, juxta vias. Floret m. Martio—Junio.

Bosna: (fide *Asch. Graebn., Syn. I c. 1907) Ubi? — **Hercegovina:** In monte Stolac prope Mostar (Raap Callier, Pl. Herc, nr. 316), in monte Ošanica glavica prope Stolac 50—300 m (B), prope Trebinje (B.).

5. *Trigonella corniculata* [L., Syst., ed. X, 1180 (1759) et Spec. pl., ed. II, 1094; Boiss., Fl. Or., II, 83; Reich. f., Icon., l. c., 49, t. 58, fig. IV, V; Asch. Gr., Syn. l. c., 387. — *Buceras corniculatum* All., Fl. Pedem., I, 313 (1785)]. »Djetelina divja«. In cultis, graminosis, incultis, locis lapidosis, ad vias (—300 m). Floret m. Majo, Junio.

Bosna: Prope Banja Luka (H.), Donja Tuzla (M.); Hrblijina (Pr.). — **Hercegovina:** Ad lacum Boračko Jezero (Bl.), in angustiis flum. Neretva (B.). Circa Mostar in Bijelo Polje (M.), monte Hum (B.), Stolac (Ja.), Mostarsko blato (Mu.), Buna (Mu.), Mogorjelo (Behrendsen), Žitomišljici (Mu.), Šurmanci (M.), Bileća (Haw.!), Hum (M.), Trebinje (*P. 1874).

10. Medicago.

[L., Spec. pl., 778 (1753) et Gen. ed. V, nr. 805; Endl., Gen., 1267; Benth. Hook., Gen., I, 487; Taubert in Engl. Prantl, Nat. Pflanzenfam., III 3, 244. — Confer: Urban, Prodr. einer Monogr. Gatt. *Medicago* in Verh. bot. Ver. Brandenb. XV (1873) 1 et (1877) 125; Die *Medicago*-Arten Linnés in Ber. deutsch. bot. Ges. (1883) 256.] »Dunjica«.

Sectio: *Eumedicago*.

[Pospich., Fl. Öst. Küstenl., II 355 (1898); Asch. Gr., Syn., l. c., 391.]

Subsectio: *Lupularia*.

[Ser. in DC., Prodr., II, 172 rectius Urban, Prodr. l. c. 52 pro sect., Pospichal, l. c., 358.]

1. *Medicago lupulina* [L., Spec. pl, 779 (1753); Reich. f., Ic., l. c., XXII, 51 t. 73, fig. III, IV; Asch. Gr., Syn., l. c., 393; Urban, Prodr., l. c., 52 t. I f. 2]. In pratis, cultis, incultis juxta vias usque ad regionem subalpinam (—1400 m). Floret m. Majo—Julio.

Bosna: Certe pervulgata sed minus spectata. Ad notatur prope Bosn. Gradiška (B.), Banja Luka, Maglaj ad fl. Vrbas (H.), Donja Tuzla (M.) Zvornik, Nova Kasaba (J.). Circa Bugoino, Kupres, Šujica, (Pr.), Drvar Grahovo, Livno (Ha. Fa.), Gubin, Glamoč, Grkovac (Pr.). Prope Travnik (*S. 1848), inter Kakanj et monast. Sućeska (S.), prope Fojnica (S., Pr.), Vareš (Fo., Pr.), Tarčin (Pr.), Ilidža (Prodan.). In Bosna australi pervulgata (B.), circa Sarajevo (H.) et a. l. — **Hercegovina:** In subalpinis montis Preslica (V.), prope Konjic, Idbar (B.), Rama (Pr.); in monte Medved montium Čabulja Pl. (Prodan); circa Mostar (Str.), Trebinje (*P. 1874).

Ludit:

1. *vulgaris* [Koch, Syn. fl. Germ., 161 (1837) — *typica* Urban Prodr., l. c., 52]. Vulgata. Indumento valde variat.

2. *Willdenowii* [Boenn., Prodr. fl. Monast., 226 (1824) pro spec.; Asch. Fl. Brand, I, 139 (1864); Urban, Prodr., l. c., 52 non Mérat.; — v. *Willdenowiana* Koch, Syn., l. c., 161; — v. *glandulosa* Koch in Mert. Koch, Deutschl. Fl., V. 324 (1839)]. — **Bosna:** Certe pervulgata. Prope Petrovac, Jaice (B.), in monte Trebević (*Brancsik 1890) — **Hercegovina:** Prope Konjic (*B. 1896). Gornje bare in monte Čvrstnica c. 1400 m, in monte Hum prope Mostar (Pi.).

Subsectio: *Falcago*.

[Reich., Fl. Germ., 504 (1831) Urban, Prodr., l. c. 53.]

2. *Medicago prostrata* [Jacqu., Hort. Vind., I, 39, t. 89 (1770); Reich. f., Ic. fl. Germ., XXII, 51, t. 61, fig. I—II; Urban, Prodr., l. c., 55, t. I, fig. 11; Asch. Gr., Syn., l. c., 396; Beck, Fl. Nied. Öst., 839]. In pratis lapidosis, pascuis, incultis, juxta vias (—1440 m) imprimis solo calcareo. Floret m. Majo—Julio.

Bosna: In jugo Drenovo prope Bihać (Boller), prope Pribelja —1440 m (Ha. Fa.); in agro Rilić polje prope Malovan (*S. 1848). in monte Hrblijina (Ja.), prope Kurlaj (Pr.), in monte Kamešnica (Pr.) Dinara (D.), prope Livno (Br.) in palude Buško blato (Pr.) Obljani prope Grahovo (Br.), circa Glamoč, prope Dubrava (Ha.) et in monte Rudić Kosa (Ha. Fa.). Karaula Balvan prope Vardište (M.). — **Hercegovina:** In valle flum. Neretva (B.), prope Zimlje gornje prox. Rujšće (Baenitz!) in monte Medalevo brdo —

Stir montium Čabulja Pl. (Prodan), prope Rakitno (F.). Circa Mostar (Str. B., Pi., Mu) in montibus Hum (Fo., B.) Stolac (Raap Call., Fl. Herc., nr. 47!), ad paludem Mostarsko blato (B.), prope Buna, Žitomišljici (Mu.). In monte Ošanica glavica prope Stolac (B.). Prope Pridvorci circa Trebinje (V.), Bileća (*P. 1874).

Ludit:

glabra [Urban, Prodr., l. c., 55] et — *declinata* [Kit. in Linnaea(1863), 613 pro spec.; Urban, l. c., 55.] utraque pervulgata. — *glandulifera* [Urban. l. c., 56] Hinc inde imprimis in Hercegovina.

3. *Medicago sativa* [L., Spec. pl., 778 (1753); Reich. f., Ic. l. c., 50, t. 60; Beck, Fl. Nied. Öst., 839. — *M. sativa* subsp. *macrocarpa* Urban, Prodr. Medic., l. c., 56 — v. *vulgaris* Urb., l. c., 57; Asch. Gr. l. c., 400. = Alef., Landw. Fl., 75.] „Lucerna“, „meteljka“. — Inhabitat Asiam occidentalem sed recenter pabulati causa colitur, saepius autem inquilina spontanea reperitur. Floret m. Majo—Julio.

Bosna: Prope Bos. Gradiška (B.), Banja Luka (*H. 1882), Travnik (Fr. Br.), Vareš (Pr.) Sarajevo (Sündermann), Goražde (B.) — **Hercegovina:** Circa Jablanica (B.), Mostar (Prodan), in monte Hum prope Mostar (B.).

4. *Medicago falcata* [L., Spec. pl., 779 (1753); Reich. f., Ic., l. c., 50 (p. p.), t. 62, fig. III, IV; Beck, Fl. Nied. Öst., 839. — *M. sativa* subspec. *M. macrocarpa* Urban, Prodr. Med. — v. *falcata* Urb., l. c., 56, t. I fig. 12; Asch Gr., Syn., l. c., 398]. In pratis siccis, aridis, incultis, lapidosis, ad sepes viasque usque ad regionem montanam (—1300 m). Floret in Majo—autumnnum.

Bosna: Prope Bos. Gradiška (B.), Banja Luka (H) Donja Tuzla (M.!) Bihać (B.). Varcar Vakuf (B.), in monte Šuljaga, circa Han Koprivnica, Šujica, Hrblijina, Prolog (Pr.), Dinara (Degen), prope Rore, Buško blato (Pr.), in monte Krug Pl. prope Livno — 1300 m (B.), inter Grahovo et Radlovići (Ha.), Circa Jezero, (Gross Kneucker), Jajce (Fo. f. V.). Prope Travnik (*S. 1848), Vareš (Pr.), Tarčin (Pr.), Ilidža (Prodan), Sarajevo (B.) in vallibus fl. Željeznica et Sutjeska, circa Tjentište, Mješajici, Beleni (Pr.), Goražde (B.). — **Hercegovina:** Prope Ivan (Laus), in monte Tovarnica prope Rama (*F. 1889), circa Mostar (Mu.) et in monte Hum (B.), prope Ljubuški (F.) in monte Ošanica glavica prope Stolac (B.). — **Novi Pazar:** Prope Prijepolje (Zahlbruckner f. *Hayek 1906).

Variat:

typica [Beck, Fl. Nied. Öst., 840 (1892); Posp., Fl. Öst. Küstenl., II, 357 (1898)] Frequenter. — *glandulosa* [Koch, Syn. fl. Germ., ed. II 169 (1845) — *M. sativa* subspec. *macrocarpa* v. *glandulosa* Urban, Prodr. Med., l. c., 56; Asch. Gr., Syn., l. c., 400.] — **Hercegovina:** Ad sepes prope Mostar (*Mu. 1891).

5. *Medicago orbicularis* [All., Fl. Pedem., I, 314 (1785); Vis., Fl. Dalm. III, 280; Boiss., Fl. Or., II, 97; Reich. f., Ic., l. c., 51, t. 63, fig. I, II; Urban, Prodr. Med., l. c., 60, t. I fig. 22, 23; Pospich., Fl. Öst. Küst., II, 358; Asch. Gr., Syn., l. c., 405]. In agris, incultis, locis graminosis, aridis lapidosis, vineis. Floret mens. Majo, Junio.

Bosna: In monte castello coronato urbis Sarajevo (*Gross Kneucker 1903, M.), in valle fl. Miljacka (M.). — **Hercegovina:** Circa Mostar (Str., Bornmüller!) in montibus Stolac (Ja.), Podvelež (B.), in agro Mostarsko polje (Mu., Simonović f. Ja.), prope Žitomišljici (Mu.), Šurmanci, Dretelj (M.), Liubuški (F.), Trebinje, Bileća (*P. 1874).

β. *marginata* [Willd., Enum. hort. Berol., II 802 (1813); Reich. f., Icon., l. c. 51, t. 72 fig. I, 1—4 pro spec.; Benth., Cat. Pyr., 100 (1826); Urban, Prodr. Med., l. c. 60; Asch. Gr., Syn., l. c., 406].

Hercegovina: In locis lapidosis circa Ljubuški et Radišici (*F. 1895) non vidi.

6. *Medicago carstiensis* [Wulf. in Jacqu., Coll., I, 86 (1786) et Ic. rar. I, t. 156; Vis., Fl. Dalm., III 282; Reich. f., Ic. l. c., 52, t. 66, fig. I, II; Urban, Prodr. Med., l. c. 60; Pospich., Fl. Öst. Küstenl., II, 359; Asch. Gr., Syn., l. c., 407]. In nemorosis, inter virgulta, ad silvarum margines. Floret m. Majo, Junio.

Bosna: In montibus Grmeč Pl. prope Berani bunari juxta Veliki Radić (*Boller 1892) non vidi.

Sectio: *Cymatium*.

[Pospich., Fl. öst. Küstenl., II, 359 (1898).]

7. *Medicago tribuloides* [Desr. in Lam., Encycl., III 635 (1789); Boiss., Fl. or., II 99; Reich. f., Ic., l. c., 56; Vis., Fl. Dalm., III, 284].

v. *genuina* [Koch, Syn. Fl. Germ., 162 (1835). — *M. truncatula* Gaertn. v. *tribuloides* Burnat Fl. Alp. mar., II, 100 (1896); Asch. Gr., Syn., l. c., 416; — v. *longeaculeata* Urb., Prodr. Med., l. c., 67. — *M. crassispira* Vis., in Flora XII (1829), Erg. 20. — *M. murex* DC., Prodr., II, 180. non Willd]. In agris, incultis, aridis, arenosis, saepe ad litora maris in ditione florum mediterraneae. Floret. m. Martio—Junio.

Hercegovina: Circa Mostar (*Str. 1880, M.), ad litora Sutorinae (Baenitz!).

8. *Medicago litoralis* [Rohde in Lois., Not., 118 (1810); Boiss., Fl. Or., II, 98; Vis., Fl. Dalm., III, 284; Reich. f., Icon. l. c., 57, t. 71, fig. III, IV; Posp., Fl. öst. Küst., II, 361; Urban, Prodr. Med., l. c., 69, t. II fig. 42—43; Asch. Gr., Syn., l. c., 417]. In arenosis litoralibus. Floret m. Majo—Julio.

v. *longiseta* [DC., Fl. Franc., V, 568 (1815); Urban, l. c. 70; Asch. Gr., l. c., 418; -- v. *arenaria* Vis., l. c., 284 = *M. arenaria* Ten., Cat. hort. Neap. (1819), 59].

Hercegovina: Prope Trebinje juxta monast. Duži (Baenitz! f. *B. 1898); Sutorina (M.).

9. *Medicago rigidula* [Desr. in Lam., Encycl., III, 634 (1789); Urban, Prodr., Med., l. c. 68; Asch. Gr., Syn., l. c., 419. non Willd. — *M. polymorpha* α . *rigidula* L. Spec. pl., 780 (1753). — *M. Gerardi* Waldst. Kit. in Willd., Spec. pl., III, 1415 (1803); Reich. f., Icon., l. c., 56, t. 69, fig. II; Boiss., Fl. Or., II, 100; Vis., Fl. Dalm., III, 282; Posp., Fl. öst. Küst., II, 360 = *M. rigidula* var. Burnat, Fl. Alp. mar., II, 101]. In cultis, vineis et incultis aridis, saxosis. Floret m. Majo—Julio.

Bosna: In declivibus montis castello coronati urbis Sarajevo (*B. 1887); in valle fl. Miljacka (M.). — **Hercegovina:** Circa Mostar (Raap Call., Pl. Herc. nr. 289): in declivibus montis Stolac (Ja.) ad ripam fl. Neretva (Pi!), prope Miljokovići c. 200 m (Mu.), in agro Mostarsko polje (Simonović f. Ja.). Circa Trebinje (*P. 1874).

10. *Medicago turbinata* [Willd., Spec. pl., III, 1409 (1803) em.; Vis., Fl. Dalm., III, 285; Reich. f., Icon., l. c., 57, t. 65, fig. III, IV; Boiss., Fl. Or., II, 100; Urban, Prodr. Medic., l. c., 70, t. II fig. 47; Asch. Gr., Syn., l. c., 423. — *M. polymorpha* δ . *turbinata* L., Spec. pl., 780 (1753)]. In locis graminosis, aridis, saxosis, ad vias in ditone florum mediterraneae. Floret m. Aprili—Majo.

Hercegovina: prope Trebinje, Bileća (*P. 1874).

11. *Medicago arabica* [All., Fl. Pedem., I, 315 (1785) Urban, Prodr. Med., l. c., 73, t. II f. 52; Pospich., Fl. öst. Küst., II, 361; Asch. Gr., Syn., l. c., 427. — *M. polymorpha* η *arabica* L., Spec. pl., 780 (1753). — *M. cordata* Desr. in Lam., Dict. enc., III, 636 (1789); Vis., Fl. Dalm., III, 282; Reich. f., Icon., l. c., 53, t. 67, fig. I (sub *M. maculata*). — *M. maculata* Sibth., Fl. Oxon., 232 (1794); Willd., Spec. pl. III,

1412 (1803); Boiss., Fl. Or., II 103]. In locis laetificatis, agris, incultis, herbidis, pratis, pomariis, juxta vias. Fl. m. Aprili-Junio.

Bosna: (*Asch. Kan. Cat. corm. Serb., 101 (1877) ubi? Circa Banja Luka (H.); In monte Prosjek prope Zvornik, prope Djevanje et Zlohanje (J). Prope Preodac, Gubin (Pr.). Circa Sarajevo (B., F.), in declivibus montis Trebević (H), prope Kobiljdo! —600 m (Mu.). — **Hercegovina:** prope Šurmanci (*M. 1919).

12. *Medicago hispida* [Gaertn., de fruct., II 349 (1791) em.; Urban, Prodr. Med., l. c. 74, t. 2 fig. 53; Asch. Gr., Syn., l. c., 428. — *M. denticulata* Vis., Boiss., Posp. et al.]. In locis cultis ac incultis dittonis florum mediterraneae. Floret m. Majo—Julio.

Variat:

α . *confinis* [Burnat, Fl. Alp. mar., II 106 (1896); Asch. Gr., Syn., l. c., 429. — *M. apiculata* v. *confinis* Koch, Syn. fl. Germ., 164. — *M. polycarpa* α . *tuberculata* Godr. in Gren. Godr., Fl. France, I 390].

Hercegovina: In locis lapidosis ad fl. Neretva prope Buna 50 m. (*Mu. 1891).

β . *apiculata* [Willd., Spec. pl., III, 1414 (1803) pro spec.; Urban, Prodr. Med., l. c., 74 (1873); Burnat, l. c., 106; Asch. Gr., l. c., 430. — *M. polycarpa* var. Godr., l. c. — *M. denticulata* var. Posp., Fl. öst. Küst., II, 362].

Hercegovina: Circa Mostar inter segetes (*Str. 1880), (M.).

γ . *lappacea* [Urban, apud Asch. Gr., Syn., l. c., 432 (1907); Burn., l. c. 107 pp. = *M. lappacea* Desr. in Lam., Dict. enc., III 638 pp.; Gren. in Gren. Godr., Fl. Fr., I. 390 = *M. denticulata* var. Reich. f., Icon. l. c., 55, t. 70. fig. III].

Hercegovina: Circa Mostar (Mu., M.), Šurmanci, Dreteli, prope stationem Hum (M.); in cultis prope Trebinje (*P. 1874).

M. hispida Gaertn. sec. Asch. Gr., Syn. l. c., 428 etiam in Bosna indicatur, quod erroneum.

13. *Medicago minima* [Grufberg in L. Amoen., IV, 105 (1759); Bartal., Cat. piant. Siena (1776) 61; Desr. in Lam., Dict. enc., III, 636 (1789); Boiss., Fl. Or., II. 103; Urban, Prodr. Med., l. c., 78, t. II fig. 59; Vis., Fl. Dalm., III, 283; Reich. f., Icon. l. c., 53, t. 72, fig. III, IV; Asch. Gr., Syn., l. c. 437; Beck, Fl. Nied.-Öst., 838. — *M. polymorpha* ι *hirsuta* et λ) *minima* L., Spec. pl., 780 (1753). — *M. hirsuta* All., Fl. Pedem.

I 315 (1785)]. In pratis montanis, aridis, lapidosis — 1100 *m*. Floret *m*. Majo—Julio.

Bosna: Prope Novi (B.), Banja Luka (H), Zvornik (Wettst. f. Ja.), in monte Prosjek, prope Zlohanje (J.). Circa Krupa (B.), in monte Dinara (Degen), prope Djukići et na Podovi circa Glogovac (Ha. Fa.), prope Predodac, Rore (Pr.), Ključ (B.); Travnik (*S. 1848), Guča gora (Franjić!), inter Kakanj et monast. Sućeska, circa Fojnica, Vranduk (S.), Vareš (Pr.); circa Sarajevo (B.), in declivibus montis Trebević (F.! Breindl 1883!) — 1100 *m* (M.), prope Trnovo c. 1000 *m* (Mu.), in agro Zagorje, prope Ošlji dol, Prebilje, Podvitez (Pr.). — **Hercegovina:** Circa Mostar (Str., B): in montibus Stolac (Ja.), Hum (Pi!), Pod Velež (Raap Callier, Pl. Herc. nr. 48!), in agro Mostarsko polje (Ginzberger), in monte Ošauica glavica prope Stolac (B.); prope monast. Duži (Baenitz!), circa Trebinje, Vučjak (*P. 1874). — **Novi Pazar:** prope Prijepolje (P. Zahlbruckner f. Hayek).

Variat:

1. ad fructus: *recta* [Burn., Fl. alp. mar., II 109 (1896); Asch. Gr., Syn., l. c., 438. *M. polymorpha* v. *recta* Desf., Fl. atl. II, 212 (1800). — *M. recta* Willd., Spec. pl., III, 1415 (1803). — *M. minima* v. *longiseta* DC. apud Ser. in DC., Prodr., II, 178; Urban, Prodr. Med., l. c., 78; Reich f., l. c., t 72, fig. 20].

Hercegovina: In montibus Hum (Pi!) et Stolac (Ja.) prope Mostar (Jetter!); prope arcem Carina circa Trebinje (*P. 1874), in littore Sutorina (Baenitz! M.).

vulgaris [Urban, l. c., 78], Pervulgata.

sessiliflora [G. Beck]. Floribus fructibusque binis vel ternis, rarius singulis propter pedunculos communes brevissimos sessilibus folio fulcrante multo brevioribus. Fructibus sicut in v. *vulgari* Urban. Croatia in littore prope Karlobag (Rossi nr. 13133!).

2. ad indumentum: *pubescens* [Webb, Hist.-Canar. III 2, 65] et *mollissima* [Koch Syn. fl. Germ., 164 (1837) = *M. mollissima* Roth, Cat. bot., III 74 (1806)] Frequenter. — *viscida* [Koch, l. c.]. Bosna in declivibus montis Trebević (*B.).

14. *Medicago disciformis* [DC., Hort. Monsp., 124 (1813); Vis., Fl. Dalm., III, 281; Boiss., Fl. Or., II, 105; Reich. f., l. c., 52, t. 69, fig. I; Urban, Prodr. Med., l. c., 79, t. II, fig. 61; Asch. Gr., Syn. l. c., 440]. In locis arenosis, lapidosis, graminosis, incultis. Floret *m*. Aprili—Junio.

Hercegovina: Prope Trebinje (*P. 1874).

11. *Melilotus*.

[Ludwig, Inst. ed II (1757), 152. = Adanson, Fam., II, 322 (1763); Desr. in Lam., Enc. meth., IV, 61; Juss., Gen., 356; Endl., Gen., 1268; Benth. Hook., Gen., I, 487; Taubert in Nat. Pflanzenf., III 3, 247. — subgen. *Melilotus* Beck, Fl. Nied.-Öst., 840. — Confer: O. E. Schulze. Monogr. der Gatt. *Melilotus* in Engl., Bot. Jahrb., XXIX, 660 (1901); Borbás, De Meliloto Hungariae in Magy. bot. lap. I (1902) 101.] »Kokotac, ždraljika, nokatac«.

Sectio: *Coelorytis*.

[Ser. in DC., Prodr., II, 186 (1825) sub *Coelortutis*; O. E. Schultz in Monogr. I. c., 682, 687; Asch. Graebn., Syn. mitt. Fl., VI 2, 442.]

1. *Melilotus altissimus* [Thuill., Fl. Paris, ed. 2, 378 (1799); Boiss., Fl. Or., II 109; Rouy Foucaud, Fl. France, V, 53; O. E. Schulz, Monogr. I. c., 690; Asch, Gr., Syn., I. c., 445; Reich. f., Ic. fl. Germ., XXII, 59, t. 80, fig. III—IV. — *Trifolium Melilotus officinalis* γ L., Spec. pl., ed. II. 1078 (1762). — *Trif. macrorrhizum* Waldst. Kit., Pl. rar. Hung. I 24, t. 26 (1802); = *Melilotus macrorrhiza* Pers., Syn., II, 348 (1807); Beck, Fl. Nied.-Öst. 841. — *M. officinalis* Aut. p. p. Conf. Menyhárth in Öst. bot. Zeit. (1877) 231 sequ.; Kerner in Sched. ad fl. exs. austro hung. nr. 428, 429.] In pratis, locis humidis, fossis. Floret mens. Julio—Sept.

Bosna: Inter Jezero et Jajce (*Gross Kneucker 1903); prope Dobrun (M). — **Hercegovina:** In agro Dabarpolje prope Nevesinje (*V. 1888).

Variat:

α. *macrophyllus* [Asch. Gr., Syn., I. c., 446 = *M. officinalis* α. *macrophylla* Bluff Fingerh., Comp. fl. Germ., ed. 2, 174 (1838) p. p. — *M. macrorrhiza* α. *genuina* Koch, Syn. fl. Germ., ed. II, 183 (1843) p. p.; v. *procera* G. Beck, Fl. Nied.-Öst., 841 (1892). — *M. altissimus* v. *eualtissimus* O. E. Schulz, Monogr., I. c., 691. = *M. macrodontus* Borbás, A. Balat. flór. 122 (1900) fide autore in Magy. bot. lap. (1902) 104. — *M. altissimus* Thuill. I. c. ? Confer Beck, Fl. Nied.-Öst., 841,]

Bosna: Prope Donja Tuzla (M!).

β. *macrorrhizus* [O. E. Schulz, I. c., 692; Asch. Gr., I. c., 448. — *Trifol. macrorrhizum* Waldst. Kit., I. c. — *Mel. macrorrhiza* v. *typica* Beck, Fl. Nied.-Öst., 841.

Bosna: Prope Kupres, in monte Hrblijina, prope Grkovac, Preodac; in agro Zelengora, in valle Sutjeska, prope Popov most i Prijedjel (Pr.). — **Hercegovina:** Ad flumen Neretva prope Mostar (*Str. 1880).

f. *paluster* [O. E. Schulz, l. c. 692 = Asch. Gr., l. c., 448. — *Trifol. palustre* Waldst. Kit, l. c., III 295, t. 266 (1812). — *Melilotus officinalis* var. *palustris* Koch, Syn., 166 = *M. palustris* Waldst. Kit. in Schult., Öst. Fl. ed. II, II, 346 (1814) = Kit. in DC, Prodr., II, 187 (1825) = *M. macrorrhiza* var. Koch, Syn. ed. II, 183; Rouy in Rouy Fouc., Fl. France, V, 54].

Bosna: Prope Ripac proxime Bihać (Čurčić fide *M. 1904).

2. *Melilotus albus* [Medic., Vorles. churpf. Ges., II, 382 (1787) = Desr. in Lam., Enc. meth., IV, 63 (1796); Boiss. Fl. Or., II, 109; Reich. f., Ic. fl. Germ., XXII, 59, t. 79, fig. I, II; Beck, Fl. Nied.-Öst., 842; O. E. Schulz, Monogr., l. c., 694 t. VI, fig. 5, t. VIII, fig. 55; Asch. Gr., Syn. l. c., 449. — *Trifolium melilotus officinalis* γ L. Spec. pl. 765. — *M. vulgaris* Willd., Enum. hort. Berol., II 790 (1809). — *M. leucantha* Koch in DC., Fl. franç., V, 564 (1815). — *M. alba* Thuill., Fl. Par., ed. 2, 378. — *Trif. vulgare* Hayne in Schrad., Neu. Journ., II (1807) 336 et Arzneigew. II t. 32]. Ad vias, in incultis, lapidosis, glareosis, locis graminosis. Floret mens. Junio—Sept.

Bosna: Prope Brdari, Bronzani Majdan, Opsječko (Fo), Banja Luka (H.), Plitska, Vručica, Stenjak, Makljenovac (Fo.), Prnjavor (B), Doboj (Fo), inter Brčko et Ratković (B.), prope Kozluk (J.). — Circa Čadjavica, Otoka, Krupa, Budžak, Agino selo, Bielajsko polje (Fo.), prope Šujica, Livno, Glamoc (Pr), Jaice (Fo., B.) hic — 2 m alta, Kaunik (Fo.); in valle fl. Lašva (B.), circa Fojnica (B.), in valle tota fls. Bosna (B.), prope Žepče (Fo.), Zavidovići (B.), Zenica, Vratnica, Lješevno (Fo.), Visoko (Fo.), Han Semizovac, Tarčin (Pr. B.); in valle fl. Sutjeska, circa Tjentište, Mješajići, Ustikolina (Pr.), prope Rudo (M.). — **Hercegovina:** Circa Mostar (Str), in monte Hum (B.) prope Mostar, Žitomišjići (Mu.), Trebinje (*P. 1874).

3. *Melilotus officinalis* [Med., Vorl. churpf. Ges. II 382 (1787) = Desr. in Lam., Enc. meth., IV 62 (1797); Reich. f., Ic. l. c., 58, t. 79, fig. III, IV; Vis., Fl. Dalm., III, 287; Boiss., Fl. Or., II 109; Beck, Fl. Nied.-Öst., 843; O. E. Schultz, Monogr., l. c., 700, t. VI, fig. 7, t. VIII, f. 45—49, 53—54. — *Trifolium melilotus officinalis* L., Spec. pl. 765 (1753) p. p. — *Melilotus rugosus* Gilib., Fl. Lith., IV, 83 (1782) p. p. — *Trifol. Petitpierreanum* Hayne in Schrad., Neu. Journ., II 337 (1807) et Arzneigew. t. 33. = *Mel. Petitpierreana* Willd., Enum. hort. Berol., II 790 (Color corollae false albus indicatus). — *M. Melilotus officinalis* Asch. Gr., Fl. nordostd. Flachl., 435 (1878) et Syn. l. c., 452]. »Kokotac, djetelina velika, guniva, svinduh«.

In locis incultis lapidosis, graminosis, juxta vias (— 1200 m). Floret mens. Julio—Sept.

Per **Bosnam** totam pervulgata (*S. 1848). — **Hercegovina**: (*Asch. Kan., Cat. 101, 1877) ubi? In jugo Ivan (Laus), prope Mostar (Str.), inter Domanovići et Pileta, in monte Ošanica glavica prope Stolac (B.); Bijela gora (Haw.!), Gatačko polje (Riedel!). — **Novi Pazar**: prope Svetlo borje (*B. 1896), Prijepolje (P. Zahlbruckner f. Hayek).

Sectio: *Micromelilotus*.

[O. E. Schulz, Mon., l. c., 683, 709 (1901).]

4. *Melilotus melilotus italicus* [Asch. Gr., Fl. Nordostd. Flachl., 434 (1898) et Syn. l. c., 458. — *Trifolium melilotus italica* L., Spec. pl., 765 (1753). — *M. italica* Lam., Fl. fr., II 594 (1778); Desr. in Lam., Enc. meth., IV 65; Boiss., Fl. Or., II, 107; Reich. f., Icon. l. c., 57, t. 75; Vis. Fl. Dalm., III, 288; Posp., Fl. Öst. Küstenl., II, 365; O. E. Schulz, Monogr., l. c., 709, t. VI f. 14]. In pascuis, agris, vineis, collibus ditionis florum mediterraneae. Floret m. Majo—Junio.

Hercegovina: In cultis prope Trebinje (*P. 1874).

5. *Melilotus neapolitanus* [Tenore, Fl. Nap. prodr. suppl. I 62 (1811—1815); Vis., Fl. Dalm., III, 288; Reich. f., Ic. l. c., 58, t. 78 fig. I—II; Boiss., Fl. Or., II, 107; O. E. Schulz, Monogr., l. c. 711 t. VI fig. 15—16; Asch. Gr., Syn., l. c., 459. — *M. gracilis* DC., Fl. franç., V 565 (1815)]. In arenosis, incultis, litoreis graminosis olivetis ditionis florum mediterraneae. Floret mens. Aprili—Junio.

Hercegovina: Circa Mostar prope fontem Radobolje (Lindberg) in monte Stolac (*Raap Callier Pl. Herc. nr. 50! 1895, M.), prope Šurmanci (M.).

6. *Melilotus indicus* [All., Fl. Pedem., I, 308 (1785); Desr. in Lam., Enc. meth., IV, 65; O. E. Schulz, Monogr. l. c., 713, t. VI, fig. 17; Vis., Fl. Dalm., III, 287; Reich. f., Ic. l. c. 58, t. 76; Posp., Fl. Öst. Küst., II, 366. — *M. parviflora* Desf., Fl. Atl., II, 192 (1800); Boiss., Fl. Or., II, 108. — *Trifolium Melilotus indica* α L., Spec. pl., 765 (1753). — *M. Melilotus indicus* Asch. Gr., Fl. Nordostd. Flachl., 435 (1898) et Syn., l. c. 461]. In locis humidis, cultis, agris, graminosis ad vias ditionis florum mediterraneae. Floret hieme — m. Majum.

Hercegovina: In graminosis prope Trebinje (*P. 1874).

7. *Melilotus sulcatus* [Desf., Fl. Atl., II, 193 (1800); Vis., Fl. Dalm., III, 288; Boiss., Fl. Or., II, 106; Posp., Fl. Öst.

Küstenl., II, 366; Reich. f., Ic. l. c., 60, t. 74, f. III; Asch. Gr., Syn., l. c., 466; O. E. Schulz, Monogr. l. c., 721, t. VII, f. 24—25. — *Trifolium mauritanicum* Willd., Spec. pl., III 2, 1354 (1800) = *Melilotus mauritanica* Willd., Enum. hort. Berol., 789 (1809). — *M. longifolia* Ten., Fl. Nap. prodr., Suppl. I 43 (1811—1815) et Fl. Nap. I 176, fig. II.] In cultis ac incultis, lapidosis, juxta vias, in olivetis ditionis florum mediterraneae. Floret meus. Martio—Junio.

Hercegovina: Prope Mostar (*Pi. 1899).

12. Trifolium.

[L., Spec. pl., 764 (1753) et Gen., ed. V, 337 p. p, rectius Adans., Fam., II, 322; Endl., Gen., 1268; Benth. Hook., Gen., I, 487; Taubert in Nat. Pflanzenf., III 3, 249. — Confer; Čelakovsky, Aufbau der Gatt. *Trifolium* in Öst. bot. Zeit. (1874), 37; Gibelli et Belli, Rivista crit. Trif. ital. in Mem. acad. sc. Torino ser. 2. 22; 39, 41—43 (1888—1893), et in Malpighia III] — „Djetelina“.

Sectio: *Chronosemium.*

[Ser. in DC. Prodr., II, 204 (1825); Čelak. in Öst. bot. Zeit. (1874), 40; Gibelli et Belli in Malpighia III, 56; Asch. Gr., Syn., l. c. VI 2, 475. — *Chrysaspis* Desv., Fl. Anjou 338 (1827); Greene in Pittonia III 204 (1874), — *Amarenum* C. Presl, Symb. bot., I, 47 (1830) — *Lotophyllum* Reich. Iconogr. exot., I, 7, (1827) et Fl. sax., 285. — Conf. Soy. Willem. et Godron, Revue Tréfl. de la sect. Chronosemium in Mém. soc. sc. Nancy (1846) 195, 316 — Čelakovsky in Öst. bot. Zeit. (1872) 245; Asch. Graebn., l. c.]

1. *Trifolium procumbens* [L., Spec. pl., 727 (1753) non Herb.; Huds., Fl. Angl., 328 (1762); Boiss., Fl. Or., II, 154; Soy. Will., Gren. Godr., Beck, Fl. Nied. Öst., 845.; Posp., Fl. Öst. Küst., II, 370 et aut. — *T. dubium* Sibth., Fl. Oxon., 231 (1794). — *T. minus* Sm. in. Relh., Fl. Cantabr., ed. 2, 290 (1802) et Fl. Brit. 1403 (1800), Engl. bot. t. 1256. Asch. Gr., Syn. l. c., 477. — *T. filiforme* Schreb. in Sturm, Deutschl. Fl., XVI (1804), Koch, Deutschl. Fl. V, 296; Reich. f., Ic. l. c., 81, t. 120, fig. I et aut. non L., Spec. sed L. Fl. suec., ed. II, 261 (1755)]. In pratis, graminosis, incultis, juxta vias ad silvarum margines — 1400 m. Floret mense Majo—autumnum.

Bosna: Prope Novi, Ivanjska (B.), Donja Tuzla (M.), Brčko (B.), Zvornik, Nova Kasaba (I.). — Krupa (B.), Bihać, in valle Dobrnica (B.), Preodac, Glamoč (Pr), in monte Vilenica (B.), prope Travnik, Fojnica (*S 1848, Mu., B.). Ljubina (M.), Tarčin (Pr.), Sarajevsko polje (B.), Kovačići (F.), Švrakino Selo, Ilidža, Osijek (M.), Sarajevo (Mu.), Hreša, Pale (M.), Zelenogora, Gornje bare, Suha, Tjentište, Prijedjel (Pr.). — **Hercegovina:** Circa

Mostar (Mu., Pi.) in agro Nevesinjsko polje (Mu.) in declivibus montis Čabulja Pl. (B.), prope Trebinje (*P. 1874).

2. *Trifolium filiforme* [L., Spec. pl., 773 (1753); Sm. Fl. Brit., III, 1404, Vis., Fl. Dalm., III, 301; Soy. Will., Gren. Godr.; Beck. Fl. Nied. Öst., 845; Posp., Fl. Öst. Küst., II, 371. et aut. non L., Fl. Suec. nec. Schreb., Koch. — *T. micranthum* Viv., Fl. Libyc. 45 t. 19 fig. 3 (1824), Ser. in DC., Prodr., II, 206; Reich f., Ic. l. c. 82, t. 121 fig. II; Asch. Gr., Syn., l. c., 479.] In arenosis et incultis —1400 m. Floret mense Majo—Julio.

Bosna: Prope Glamoč (Pr.) Travnik, Fojnica (*S. 1848), ad fl. Mi-ljacka (Mu.) et in valle Moščanica prope Sarajevo (M.), in valle fl. Želiez-nica, prope Gornje bare (Pr.). Non vidi! — **Hercegovina:** Sec. Asch. Kan-Cat. corm. Serb. 102, ubi?

3. *Trifolium agrarium* [L. Spec. pl., 772 (1753) et Herb. p. p. sed Poll., Hist. Pal., II, 342 (1777); Boiss., Fl. Or., II, 153; Beck, Fl. Nied. Öst., 845; Belli et Gibelli in Malpighia III 14; Posp., Fl. Öst. Küst., II, 369; All., Soy. Will., Gren. Godr. et al. — *T. procumbens* L., Fl. suec., ed. II, 261 (1755) et Herb. non Spec. pl., Vis., Fl. Dalm., III, 300; — v. *majus* Koch., Syn. fl. Germ., 175 (1837); Reich. f., Ic. l. c. 81, t. 121 fig. I. — *T. campestre* Schreb. in Sturm, Deutschl. Fl., Heft XVI t. 13 (1804) Asch. Gr., Syn., l. c., 481.]. In pratis, pascuis, incultis, agris usque ad regionem subalpinam (—1500 m). Floret m. Majo—autumnum.

Bosna: (*Asch. Kan. Cat. 1877) ubi? In monte Krnin montium Kozara Plan. (B.), prope Banja Luka, Maglaj ad fl. Vrbas (H.), Donja Tuzla (M!). In monte Podgomila prope Krupa (B.), prope Petrovac (B.), in monte Di-nara (Degen), prope Donji Vakuf (Ha. Fa.), circa Travnik (Fr. Br.), Fojnica (Mu., B.); Ljubina (M.), Copiose circa Sarajevo (B.), Švrakino Selo, Hreša, Starigrad (M.); prope Strmica ad fl. Lim (B). — **Hercegovina:** Prope Ko-njic, in montibus Prenj Pl., prope Jablanica (B.); Plasa, prope Vojno (M.) circa Mostar (*Str. 1880, Bornmüller!, Raap Callier, Pl. Herc., nr. 51!); in monte Mali Velež (Mu), et Busak (Fo. f. V.) inter Tasovčići et Doma-novići (B.), Mogorjelo (M), Ljubuški (F.), prope monasterium Duži proxime Trebinje (Baenitz!), prope Bileća (Hawelka!). Sutorina (M). — **Novi Pazar:** Prope Prijepolje (P. Zahlbruckner f. *Hayek 1906.).

Occurrunt:

f. *campestre* [Schreb., l. c. p. spec. Beck, Fl. Nied. Öst., 845 (1892). — *T. procumbens* v. *majus* Koch, l. c., — β. *campestre* Ser. in DC. Prodr., II, 205 (1825). *T. campestre* v. *genuinum* Rouy Fouc., Fl. France, V, 73 (1899); Asch. Gr., Syn. l. c., 482]. Pervulgata.

f. *pseudoprocumbens* [Gmel., Fl. Bad., III 240 (1808) pro spec.; Lloyd, Fl. Ovest Fr., 100 (1854); Beck, Fl. Nied. Öst., 846; — v. *minus* Gren. Godr., Fl. France, I, 424 (1848); — v. *pratense* Posp., Fl. Öst. Küst., II, 370 (1898). — *T. procumbens* Schreb. in Sturm Deutschl. Fl., Heft 16. t. 14. — v. *minus* Koch, Syn. fl. Germ., 175.] — Rarius. (*Mu. 1891).

4. *Trifolium strepens* [Crantz, Stirp. austr., ed. II, V, 411 (1769); Asch. Gr., Syn., l. c., 483. — *T. agrarium* L. Spec. pl., 772 (1753) p. p.; Schreb. in Sturm, Deutschl. Fl., Heft XVI (1804); Reich. f., Ic. l. c., 80, t. 119. — *T. aureum* Poll., Hist. Palat., II, 344 (1777); Boiss., Fl. Or., II, 153; Beck, Fl. Nied. Öst., 845; Posp., Fl. Öst. Küst., II, 368. — *T. campestre* Gmel., Fl. Bad., III, 237 non Schreb. — Conf.: Čelak. in Öst. bot. Zeit. (1872) 245]. In pratis, graminosis ac paludosis, sylvis luminosis, caesis usque ad regionem subalpinam — 1600 m Floret m. Junio—Augusto.

Bosna: Circa Travnik (*Fr. Br. 1888), Velika Rađuša (V. Čurčić sec. M.), prope Dolac, in monte Vilenica (Br.); circa Fojnica, prope lacum Prokoško jezero c. 1600 m, in montibus Vranica Pl. (Schwarz!). In montibus Igman (Bornmüller!) et Trebević (V. F.), circa Sarajevo (Mu.); prope Pale, Vitez, in monte Hodža, Ozren (M. in litt.) in monte Stolac prope Višegrad (Čurčić f. M.). — **Hercegovina:** In monte Preslica, prope Grabovica (*V. 1890). circa Mostar (Fo.), in monte Velež (B.).

5. *Trifolium patens* [Schreb. in Sturm. Deutschl. Fl., Heft XVI, t. 16 (1804); Koch, Syn. fl. Germ., 176; Vis., Fl. Dalm., III, 301; Reich. f., Ic. fl. Germ., l. c., 81, t. 120, fig. II; Posp., Fl. Öst. Küst., II, 369; Asch. Gr., Syn. l. c., 483. — *T. parisiense* DC., Fl. fr., V, 562 (1815)]. In pratis ac humidis, graminosis, herbosis, rarius in agris usque ad regionem subalpinam (1200 m). Floret m. Majo—Augusto.

Bosna: Prope Banja Luka (H.), Zalužani (C.), Derventa (Prodan), Zvornik, Nova Kasaba (J); Ključ (B.), Donji Vakuf (Ha. Fa.), Bugojno, Kupres, Preodac (Pr.), circa Travnik (*S. 1848), in agro Travanijsko polje (Fr. Br.), in declivibus montis Vlašić, inter Travnik et Gučaninov Han, inter Fojnica et Kiseljak (*S. 1848), circa Fojnica (Mu., Schwarz!), inter Kakanj et monasterium Sućeska (S.); prope Pazarić (M.), Tarčin (Pr.) in agro Sarajevsko Polje (Mu.), prope Ilidža (M.), circa Sarajevo in angustiis Moščanica et prope Kupina (B.), circa Pale (M.) in vallibus fl. Željeznica et Sutjeska (Pr.). — **Hercegovina:** ad pedem m. Lisin (prope Ivan), inter Konjic et Borci (V.), prope Trebinje, Necvijeće, Grančarevo, in valle fl. Jazina (*P. 1874).

6. *Trifolium badium* [Schreb. in Sturm, Deutschl. Fl., Heft 16 t. 12 (1804); Reich., Fl. Germ., 498; Reich. f., Ic. l. c.,

80, t. 118 fig. I; Beck, Fl. Nied.-Öst., 846; Asch. Gr., Syn. I. c., 485]. In alpinis imprimis humidis, turfosis, ad fontes, in pascuis c. 1500—2000 m., rarius subalpinis (1250—1300 m). Floret m. Junio—Augusto.

Bosna: Inter Čardak livade et Pribelja (Ha. Fa.). In monte Vlašić (Fr. Br., B.). Copiose in montibus Vranica Pl.: locis Krstac (Bošnjak, B.) hic solo calcareo, supra lacum Prokoško jezero (Mu.) in monte Stražica (B.), Treskavica (B., Bošnjak) in turfosis, in montibus Ločike (R!), Tikva (B.), Matorac (R!) Smiljeva Kosa (B.); Ravna, Jahorina, prope Dovlići, in monte Trebević, Bjelašnica—1590 m (M. in litt.). In montibus Treskavica Pl. (*Blau 1877, B.) ad lacum Veliko jezero, in montibus Vratlo (B.) Oblik (F!); in montibus Maglić (B.), Volujak (Pr.), Bregoc (Pr.); in pratis silvaticis prope Vučja Luka prope Sarajevo 1250—1300 m (B., F!). **Hercegovina:** Ljubina Pl. prope Konjic: Vrtača 1320 m. (V.)

Variat:

α. genuinum [G. Beck — *T. badium* Schreb. s. c.]. Stipulae foliorum fulcrantium oblique ovatae vel ovali-oblongae acutae. — Vulgatum.

Occurrunt f. *typicum* [G. Beck. Fl. Südbosn. in Ann. naturh. Hofm. XI 70 (1896); Asch. Gr., Syn., I. c. 485]. **Bosna:** in monte Vlašić, prope Vučja Luka (B. I. c.) — f. *longidens* [G. Beck, I. c.; Asch. Gr., I. c., 486] **Bosna:** in montibus Vranica, Treskavica, Maglić Pl., prope Vučja Luka (B).

β. pseudobadium [Velen., Fl. bulg., 141 (1891) et Suppl. I, 83. pro spec. Asch. Gr., Syn., I. c., 486. Confer Beck, Fl. Südbosn. in Ann. naturh. Hofmus., XI, 69 (1896); Rohlena, 3. Beitr. Fl. Mont. in Sitzungsb. K. böhm. Ges. Wiss. XVII (1903), 25, Asch. Gr., I. c.]. Stipulae superiores lineari—lanceolatae sensim acuminatae. Notae aliae variant (Confer Beck, I. c.). Fide Rohlena (I. c.) etiam caulibus longioribus erectis, inflorescentiis paulo elongatis (nec globosis) obscure castaneis distinguitur. In planta bosnensi autem tales caules et capitula obscure castanea, subcylindracea (25 : 17 mm) minimum longiora quam lata observavi.

Hercegovina: In montibus Lisin Pl. prope Ivan (Smetana f. *V. 1892).

Sectio: *Amoria*.

[Presl, Symb., I, 43 (1830) pro gen.; Vis., Fl. Dalm., III, 297; Lojac. in Nuov. giorn. bot. ital., XV (1883), 228.]

7. *Trifolium Michelianum* [Savi, Obs. Trif., 93 (1810) et Fl. Pis., II 159; Gren. Godr., Fl. franc., I, 420; Rouy in Rouy Fouc., Fl. Franc., V, 84; Reich. f., Icon. I. c., 77, t. 117, fig.

I; Asch. Gr., Syn. l. c., 487.] In pratis humidis, ad ripas, sub salicibus. Floret m. Junio—Julio.

Bosna: In locis ad tempus inundatis prope Derventa, caespites densos formans (*Prodan in Magy. bot. Lap. 1910, 102, et in Dörf. Herb. norm. nr. 5249).

8. *Trifolium nigrescens* [Viv. Fl. It. fragm. 12, t. 13 (1808); Boiss., Fl. Or., II, 143; Gib. et Belli in Malp., III, 31; Posp., Fl. Öst. Küst., II, 371; Gren. Godr., Fl. fr., I, 419; Rouy in Rouy Fouc., Fl. Fr. V, 82; Reich. f., Icon. l. c., 76, t. 110, fig. IV. — *T. hybridum* Savi, Fl. Pis., II 90 (1798) et Bot. Etr., IV 41 non L.]. In locis graminosis, humidis, pratis, fossis (—1260 m) ditionis florum mediterraneae. Floret m. Aprili—Julio.

Hercegovina: Circa Konjic, Glavatičevo, Jablanica, Vojno (M. in litt.). Prope Mostar ad fl. Neretva (Mu.), Raškagora, Žitomišljici (M.) Čapliina (F.), prope monasterium Duži (Baenitz!), circa Trebinje (*P. 1874), prope Visoka glavica 1260 m. (M.) ad pedem montis Glijiva, inter Trebinje et Bileća (V.), prope Bileća (P., Hawelka!). **Bosna:** fide Asch. Gr., [Syn. l. c. 489 (1907)] certe per errorem.

9. *Trifolium hybridum* [L., Spec. pl., 766 (1753) α; Poll. Hist. Palat., II 330; Reich., Fl. germ., 497; Reich. f., Icon. l. c., 79, t. 117, f. II; Boiss., Fl. Or., II, 145; Beck, Fl. Nied.-Öst., 847; Posp., Fl. öst. Küst., II, 373; Asch. Gr., Syn., l. c., 495]. In pratis humidis, fossis usque ac regionem subalpinam (1200 m). Floret m. Majo—Sept.

Bosna: Prope Banja Luka (*H. 1882.), Brčko (B.), Zvornik (I.). Sub m. Veliki Žep (M.). Circa Bihać (Fo.), Preodac (Pr.), Jajce (Pr.), Travnik (Br.), Stojkovići (Fr. Br.), Žeravice, Podzarudje (M.), Žepče (Fo.) inter Varcar Vakuf et Sinjakovo (B.). Circa Vareš prope Pržiči et Kralupi (Pr.) Okruglica. In faucibus Prača (M.) prope Gornje Meduše, 1200 m (M.). In agro Sarajevsko polje prope Ilidža et juxta fontes fl. Bosna (Gross Kneucker), Butmir, Nedarići, Reljevo, Lukavica, in valle Miljacka (M.). Prope Pale, Bare (B.) Luke prope Kasindol (M.) Han Jezero, Han Toplica (M.), inter Fr belja et Pod Vitez (Pr.), Zelengora (Pr.). In faucibus Razdolina prope Dobrun (M.). — **Hercegovina:** In valle inf. fl. Tušila ad pedem montium Visočica Pl. c. 1200 m (B.) in faucibus Rakitnica (M.) ad lacum Jezero prope Ulog (M.) prope Radobolje juxta Mostar (*Str. 1880).

Variat:

α. *typicum* [*T. hybridum* L. et aut.] Pervulgatum.

β. *elegans* [Savi, Fl. Pis., II, 161, t. I fig. 2 (1798); Gren. Godr., Fl. Fr., I, 420; Posp., Fl. Öst. Küst., II, 373; Gib. et Belli in Atti ac. sc. Torino XXII 13 pro spec.; Garcke, Fl.

Deutschl., 15. Aufl., 102 (1885); Boiss., Fl. Or. II, 146; Reich. f., l. c., 79 t. 116 fig. II. pro var. — Asch. Gr., Syn. l. c., 496 pro subspec.]. In locis siccis, graminosis.

Bosna: Prope Kozluk proxime Zvornik, ad fl. Kravica prope Nova Kasaba (*I. 1891); proxime Uvac (M.).

10. *Trifolium repens* [L., Spec. pl., 767 (1753); Reich., Fl. Germ., 496; Vis., Fl. Dalm., III, 297; Reich. f., Ic. l. c., 78, t. 115; Beck, Fl. Nied.-Öst., 846; Boiss., Fl. Or., II, 145; Gib. et Belli in Atti acad. sc. Torino XXII 18; Posp., Fl. Öst. Küstenl., II, 372; Asch. Gr., Syn., l. c., 497]. In pratis, locis graminosis lapidosis, incultis, juxta vias usque ad regionem alpinam (— 2000 m). Floret m. Majo—Sept.

Bosna: Pervulgatum (B., Pr., Fo.). Adnotatum est prope Banja Luka (H., B.), Maglaj ad fl. Vrbas (H.), Kobaš (Prodan), Zvornik, Prosjek, Djevanje (I.). Circa Krupa, Zaspá, Vranjska (Fo. f. V.), in montibus Plazenica (Ha. Fa.), Dinara (Degen), Troglav, Jankovo brdo (Ja. Wa.); prope Travnik, inter Travnik et Gučaninov Han (*S. 1848), circa Fojnica (S.), in montibus Vranica Pl. copiose (B., R! et alii); circa Vareš (Pr.). In montibus Hranisava, Bjelašnica, Treskavica, Volujak et al. (B.). Circa Sarajevo Dobrun (M.). — **Hercegovina:** Popre Blaca (M.), Tušila gornji (B.), in montibus Lovnica (M.), Visočica- (B.), Prénj-, Plasa-, Čvrstica-, Čabulja Pl. (Prodan); circa Mostar (Str.), inter Blagaj et Jovanović Karaula (B.), prope Trebinje, Bileća (*P 1874). — **Novi Pazar:** prope Prijepolje (P. Zahlbruckner f.* Hayek 1906).

Variat:

α. *typicum* [Asch. Gr., Syn., l. c., 498] Pervulgatum. Etiam caulibus, petiolis pedunculis plus minus pilosis vel puberulis occurrit.

β. *Orphanideum* [Boiss., Fl. Or., II 145 (1872). Asch. Gr., l. c., 499. — *T. Orphanideum* Boiss., Diagn. ser. 2, II 17 (1856)]. — In regione alpina montium non rare. Bosna, Hercegovina l. c. (*B).

γ. *ochranthum* [K. Malý in Asch., Gr., l. c., 500 (1907)]. Axes longe repentis. Petioli plurimum 3—6 cm longi. Foliola plurimum subparvula — 1.3 cm longa, e basi cuneata obovalia — rotunda vel subobcordata, vix vel indistincte denticulata, laete viridia. Inflorescentiae magnae, c. 3 cm latae. Flores magni, dilute lutei vel luteo-viridescens, demum obscure brunnei. Pedicelli breviusculi etiam interni calyce breviores. Petala c. 4 × calyce longiora.

Bosna: In cacumine montis Bjelašnica, c. 2067 *m.* (leg. *M. 1907). Treskavica (M. in litt.) Julio—Augusto.

? *Trifolium pallescens* [Schreb. in Sturm, Deutschl. Fl., Heft XV (1804); Reich., Fl. Germ., 496; Gib. et Belli in Atti acc. sc. Torino XXII, 24; Reich. f., Ic. l. c., 78, t. 112, fig. II; Asch. Gr., Syn., l. c., 502] — In alpinis saxosis. — Floret m. Julio—Augusto. — Bosna fide *Asch. Kan. [Cat. Corm. Serb., 102, 1877] ubi? sed in Asch. Gr. [Syn. l. c. 503] sine signo spectationis! pro inde ac propter favorem in solum schistosum certe per errorem indicatum.

↓1. *Trifolium montanum* [L., Spec., pl., 770 (1753); Reich., Fl. Germ., 495; Vis. Fl. Dalm., 297; Reich. f., Icon. l. c., 79, t. 109, fig. I; Beck, Fl. Nied. Öst., 847; Posp., Fl. Öst. Küst., II, 374; Asch. Gr., Syn., l. c., 505; Gib. et Belli in Atti ac. sc. Torino, XXII, 40]. In pratis montanis, siccis, declivibus aridis, lapidosis, inter virgulta, in silvis luminosis usque ad regionem subalpinam (—1500 *m.*) Floret m. Majo—Augusto.

Bosna: Prope Novi, in montibus Kriva Glava et Krnin montium Kozara Pl. (B.), prope Banja Luka (H). In monte Hršnin prope Nova Kasaba (I). In monte Gomila prope Krupa (B.), prope Bihać (B.), Gorjevac (Fo. f. V.), Han Begovac (Fo.), Petrovac (Fo., B.), Smoljana (Fo.) in montibus Grmeč Pl. (B.), Hrblijina (Pr.) prope Kupres, Šujica, in monte Kamešnica, (Pr.), in montibus: Dinara, Veliki Bat, Gnjat, Uilica Pl. (Ja. Wa.), Krug Pl. et Borova Glava prope Livno 1100—1300 *m.* (B.), circa Karaula prope Travnik (Fo.), Travnik (*S. 1848), Jankovići (Fr. Br.), inter Putkovići et Tolovići (S.); circa Fojnica (Schwarz!) frequenter in Bosna australi (B.). Circa Vareš, Pogari, Mijakovići, Pržići, Kralupi (Pr.), Žeravice, Klis, Kamensko, Kusače (M.), Čelin prope Visoko (Fo.), Okruglica, Ljubina (M.), circa Sarajevo (B.) in valle Koševo (M.), in monte castello coronato, prope Han Hreša (B.), in monte Trebević — 1500 *m.* (B.), Kromelj, Motka, Gradina, Laze (M.) in monte Glog, prope Vučja Luka (Fo.); prope Trnovo, loco Čelina inter Tošići et jugum Vratlo, 1250 *m.* (B.), prope Kalinovik, Vlaholje (Fo.) Pale, Hodided (M.) in agro Zagorje (B.), in montibus Ranjen et Vitez Pl. (B.) Muharnica (M.). — **Hercegovina:** Prope Garež (M.) in monte Preslica (V.) Podvrabac (M.) prope Umoljani (B.), Blaca, Uzriječje, Jacište (M.), Rakitno (Begović f. V.), in monte Velež c. 1360 *m.* (B.), inter Blagaj et Jovanović Karaula (B.), in agro Gatačko polje (Riedel!), circa Trebinje in montibus Gljiva (*P. 1874) et Leotar c. 1229 *m.* (B.), prope stationem Uskoplje (Berger). — **Novi Pazar:** prope Prijepolje (P. Zahlbruckner f. *Hayek 1906).

Formas sequentes juxta typum observavi.

robustum [Schur, Enum. Pl. Transs., 157 (1866); Asch. Gr., Syn., l. c., 506]. Hinc inde. — *platyphyllum* [Beck, Fl. Nied.-Öst. 847 (1892); Asch. Gr., l. c.]. — **Bosna:** Prope Guča gora (Franjić! fide *B.).

Sectio: *Micranthemum*.

[Presl, Symb. bot. I 47 (1832) pro gen.; Čelak. in Öst. bot. Zeit. 24 (1874) 41; Gib. et Belli in Mem. acc. Torino ser. 2, 41 (1891), 197.]

12. *Trifolium glomeratum* [L., Spec. pl., 770 (1753); Reich., Fl. Germ., 491; Vis. Fl. Dalm., III, 296; Reich. f. Ic. l. c., 75, t. 109 fig. III, t. 122 fig. II 9—15; Asch. Gr. Syn., l. c., 508; Gib. et Belli in Att. acc. sc. Torino, ser. 2, XL I, 53, t. 3, f. 1.; Rouy Fouc., Fl. Fr., V, 88]. In agris, locis herbosis, incultis, pascuis in ditone florum mediterraneae. Floret m. Majo—Julio.

Bosna: In locis herbosis montis Hrblijina et prope Rore (*Pr. 1900), non probabiliter. — **Hercegovina:** Prope Trebinje et Bileća (*P 1874).

Sectio: *Mistylus*.

[Presl, Symb., I, 49 (1832) pro gen. — sect. *Vesicastrum* Ser. in DC., Prodr., II 202 (1825) p. p.]

13. *Trifolium multistriatum* [Koch, Syn. fl. Germ., ed. II, 190 (1843); Boiss., Fl. Or., II, 139; Reich f., Ic., l. c., 73, t. 104 fig. II; Asch. Gr., Syn., l. c., 513. — *T. vesiculosum* v. *rumelicum* Gris., Spic. fl. Rum., I, 35 (1843)]. »Calicibus ovato-cylindricis, dense nervosis, inter nervos laevibus vel obsolete rugulosis, dentibus a basi angusta, 3-nervi sensim et longe subulatis facile dignoscitur« (Vandas, Rel. Form., 164). In pratis, graminosis. Floret m. Junio—Julio.

Hercegovina: In monte Busak Pl. prope Blagaj (*Fo. 1890, f. V.); inter Hrasno et Stolac (Br.).

Sectio: *Lupinaster*.

[Adans., Fam., II, 323 (1763) pro gen.; Link, Enum., II, 260 (1822); Ser. in DC., Prodr., II, 203.]

? *Trifolium alpinum* [L. Spec. pl., 767 (1753); Reich. f. Ic., l. c., 74, t. 114, Fig. I; Asch. Gr. Syn., l. c., 517. In alpinis saxosis, lapidosis. Sec. Protić [in Glasn. zem. muz. XIV (1902) 49] in monte Volujak rare, quod propter favorem huius speciei in solum calce carens exactius examinandum sit.

Sectio: *Vesicaria*.

[Crantz, Stirp. Austr., ed. 2, II 412 (1769) pro gen. — Sect. *Galearia* Presl, Symb. I 49 (1830) pro gen.; Gib. et Belli in Mem. acc. sc. Torino, ser. 2, 41 (1891), 149. — Sect. *Vesicastrum* Ser. in DC., Prodr., II, 202 (1825) p. p. Sect. *Fragifera* Koch Syn. fl. Germ., 171 (1835).]

14. *Trifolium resupinatum* [L., Spec. pl., 771. (1753); Vis. Fl. Dalm., III, 299; Reich. f., Ic., l. c., 72, t. 107, fig. II;

Boiss., Fl. Or., II, 137; Posp., Fl. Öst. Küstenl., II, 375; — Asch. Gr., Syn. l. c., 521]. In locis graminosis, agris incultis ac paludosis. Floret m. Aprili—Augusto.

Hercegovina: In monte Vel. Velež prope Mostar c. 1700 m s. m. (F.). Certe erroneum! Jasenica (Baenitz!); prope Šurmanci ad fl. Neretva (M.), circa Čapljina (F.! sub *T. nigricante*), prope Trebinje (*P. 1874), in ditione Sutorina (Studnička, M.); prope stationem Hum (M.)

15. *Trifolium tomentosum* [L., Spec. pl., 771 (1753); Vis., Fl. Dalm., III, 299; Reich. f., Ic. l. c., 72 t. 107, fig. I; Boiss., Fl. Or., II, 138; Asch. Gr. Syn. l. c., 523]. In locis incultis, aridis, lapidosis, ditionis florum mediterraneae. Floret m. Aprili—Junio.

Hercegovina: In lapidosis prope Trebinje (*P. 1874).

16. *Trifolium fragiferum* [L., Spec., 772 (1753); Vis. Fl. Dalm., III, 298; Reich. f., Icon., l. c., 71, t. 106; Beck, Fl. Nied.-Öst., 844; Posp., Fl. öst. Küst., II, 374; Asch. Gr., Syn., l. c., 524. — *Galearia fragifera* Presl, Symb. bot., I, 30 (1832)]. In locis humidis, inundatis, paludibus, rarius graminosis — 1000 m. Floret m. Majo—Sept.

Bosna: Prope Banja Luka (H.), Vrbanje (Fo. f. V.), B. Brod (M.), Pribinić, Tešanj, Kraševo, Žabljak (Fo.); Brčko (B.). — Inter Cazin et Bihać (F. f. M.), prope Ripač, Bjelaj polje, Agino selo, Ključ (Fo.), Kupres (Pr.), in agro Livanjsko polje ad fl. Staretina (Sta.), circa Sgrlove Kuće (Bastasi) (Ha. Fa.), inter Jezero et Jajce (Gross Kneuck.), prope Travnik (Br.), Kiseljak (H.), circa Vareš (Fo., Pr.), Ilidža, in valle Miljacka, in monte Trebević (M.), in colle Debelo Brdo prope Sarajevo (Fo.), in monte Kmur prope Foča (Fo.); in valle Mratinje montis Maglič (Rohlena); prope Pazaric (M.), Uvac (B.). — **Hercegovina:** In monte Glogovo (V.), circa Jablanica (B.), in agro Nevesinjsko polje (Ja.), circa Mostar (Mu.), Mogorjelo (M.), Trebinje, Beljani, Bileća (*P. 1874).

Variat:

Bonanni [Presl, Delic. Prag. 51 (1822) pro spec.; Hand. Maz. in Öst. bot. Zeit. (1905) 485 = *T. fragiferum* Loj., Fl. Sic., I 2, 87 »calyce fructifero tomentoso« non L.].

Bosna: Drvar in fossis juxta viam sub statione viae ferreae, 500 m (*Hand. Maz. 1905).

Sectio: *Lagopus*.

[Bernh., Verz. Erf. 228 (1800) pro gen.; Koch, Syn. fl. Germ., 167 (1836) em.; Lojac in Nuov. giorn. bot. Ital., XV (1883), 228; Gib. et Belli in Mem. ac. sc. Torino, 2. ser., XXXIX (1888), 1.]

17. *Trifolium striatum* [L. Spec. pl., 770 (1753); Waldst. Kit., Pl. rar. Hung., I, t. 25; Reich. f., Ic. l. c., 70 t. 100, fig.

I; Vis., Fl. Dalm., III, 292; Boiss., Fl. Or., II, 130; Gib. et Belli in Mem. ac. sc. Torino, 2. ser., 39 (1888), 19; Beck, Fl. Nied.-Öst., 848; Posp., Fl. öst. Küst., II, 375; Asch. Gr., Syn. l. c., 527]. In incultis, lapidosis, pascuis, ad vias. Floret mens. Majo—Augusto.

Bosna: (*Asch. Kan., Cat. corm., [1877] 102) ubi? Prope Bihać (Boller); Zavidovići, in valle Tribija, prope Kamensko (distr. Kladanj) (M. in litt.) in declivibus Hrastova glava c. 600 m (M). **Hercegovina:** Circa Jablanica (B.). Prope Trebinje, Bileća, Vučjak (*P. 1874). Bijelo Polje prope Mostar (M. in litt.).

Ludit:

conicum [Kit. in Horn. Hort. Hafn. II 717 (1815) pro spec. Murb. in L. nds Univ. Arskr. (1891), 147]. — **Bosna:** Ad fl. Miljacka prope Sarajevo 520 m (*Mu. 1891) prope Ljubina—Milatovići, Mioče—Rudo (M. in litt.).

18. *Trifolium arvense* [L. Spec. pl., 769 (1753); Vis., Fl. Dalm., III, 291; Reich. f., Ic. l. c., 65, t. 95; Boiss., Fl. Or., II, 120; Gib. et Belli in Mem. ac. sc. Torino, ser. 2, 39 (1889) 4; Posp., Fl. öst. Küst., II, 379; Beck, Fl. Nied.-Öst., 848; Asch. Gr., Syn. l. c., 530]. In cultis et incultis, arenosis, aridis, pascuis et pratis siccis, lapidosis. Floret mens. Majo—Julio.

Bosna: Pervulgatum. Circa Sratinska, Bronzani Majdan (Fo.). Prope Ivanjska, in monte Krnin montium Kozara pl. (B.), circa Banja Luka (H.), Varoš, Plitska, Pribinić, in m. Borja Pl. (Fo.). — Prope Brčko (B.), inter Breške et Donja Tuzla (B.), prope Donja Tuzla (M!), Zvornik (I.), Srebrenica (I.). — Prope Krupa, Zalin (Fo.), Petrovac (B.), Đukići, Na podovi (Ha. Fa.), Sitnica, Kola (Fo) Budžak, Ljubačevo, Krmine (Fo.), Kupres (Pr.), in monte Dinara (Degen) et Lisina prope Varcar Vakuf (B.), inter Varcar Vakuf et Jajce (Schiller), prope Preodac, Glamoč (Pr.). — Circa Travnik et in monte Vlašić (*S. 1848); circa Fojnica (B.), Kiseljak (H.), Zavidovići (M.), Žepče (Fo. B.), Orahovica (B.), Vareš, Tarčin (Pr.) Kamensko, Pribija (M.), Visoko (Fo). In Bosna australi frequenter (B.) prope Ilidža (Fo.), in valle fl. Željeznica (Pr.) circa Trnovo, Kalinovik (Pr.), Sarajevo (B.) in valle Koševo. monte Grdonj (M.) Lopata—Bukovik, Trebević (M.), Pale, Ranjen (B.), Susiešno (Fo.), in vallibus fl. Sutjeska et Drina (B.), prope Foča, in monte Vučevo (B.), Ravna Gora prope Jelašća 1300 m; prope Višegrad, Crnce, Pijavica, Drinsko, in monte Paštan Brdo (M.) et a. l. — **Hercegovina:** In valle fl. Trešanica, circa Konjic, Jablanica (B.), Mostar (Mu., Pi!), in agro Bijelo Polje (Raap Call., Pl. Herc., nr. 53!), prope Plužine (Fo.), Trebinje (*P. 1874), Agić Most (B.). — **Novi Pazar:** In valle fl. Lim inter Bistrica et Banja (*B. 1896).

Variat:

α. *typicum* [Beck, Fl. Nied.-Öst., 849 (1892); Asch. Gr., Syn. l. c., 531]. Pervulgatum.

Ludit:

arenivagum [Jordan in Boreau Fl. centre Franc. ed. 3, II, 153 (1857) pro spec.; Beck, Fl. Nied.-Öst., 848 (1892); v. *brachyodon* Čelak., Prodr., Fl. Böhm., 907 (1881) = *T. brachyodon* Čelak. in A. Kern., Sched. ad Fl. exs. austro-hung., V 1 (1888) nr. 1606]. — **Bosna:** Hinc inde prope Petrovac (B.) in jugo inter vallem fl. Miljacka et Mošćanica prope Sarajevo (*M. 1904). — **Hercegovina:** Prope Jablanica (*B.).

alopecuroides [Rouy Fouc., Fl. Franc., V 106 (1899)]. — **Bosna:** Prope Fojnica (Schwarz fide *B.)

Brittingeri [Weitenweber in Opiz, Naturalientausch, IX, 142 (1825) pro spec.; Beck, Fl. Nied.-Öst., 848 (1892); — v. *strictius* Koch in Mert. Koch, Deutschl.-Fl., V, 270 (1839)]. **Bosna:** In agris prope Donji Vakuf c. 520 m (*Ha. Fa. 1905). — **Hercegovina:** Prope Jablanica (*Prodan 1918).

19. *Trifolium Bocconei* [Savi in Atti dell. acc. it. I, 191 fig. 1 (male) fide Observ. Trif. 37 (1810); Boiss., Fl. Or., II, 132; Gib. et Belli in Mem. acc. sc. Torino, ser. 2, 39 (1889), 32; Reich. f., Ic. l. c., 69, t. 98, fig. 1; Asch. Graebn., Syn., l. c., 536].

var. *tenuifolium* [Tenore, Fl. Nap. prodr., p. XLIV et Fl. Nap., V, 145, t. 177, fig. 3; Reich. f., l. c., 69, t. 98, fig. II; Gibelli et Belli, l. c., 35; Asch. Gr., l. c., 537 pro spec.; Griseb., Spic. fl. Rum., II 23 (1844); Beck, Fl. Südb. in Ann. nat. Hofm., XI (1896) 71]. — In locis graminosis, incultis, aridis. Floret mens. Majo—Julio.

Hercegovina: Circa Jablanica (B.), Potoci han (*V. 1890.), Mostar (M.), Vojno (M.), in agro Bijelo Polje (Zawodny).

? *Trifolium trichopterum* [Panč., Verz. Serb. in Verh. zool. bot. Ges., VI (1856), 480 et Fl. princ. Serb., 242; Boiss., Fl. Or., II, 131; Asch. Gr., Syn. l. c., 538. In locis aridis, lapidosis, sterilissimis. Floret mens. Majo—Sept.

In Hercegovina ubi Asch. Kan. [Cat. corm. Serb. 102 (1877)] hanc speciem indicant, deest. Statio Kaznoviči prope Raška, ubi a Pančić [sec. Öst. bot. Zeit. (1870) 181] observatum est, adjacet finibus territorii Novi Pazar in Serbia, non Hercegovinae limitibus, ut Asch. Graebn. [Syn. l. c.] exposuerunt.

20. *Trifolium scabrum* [L., Spec. pl., 770 (1753); Vis., Fl. Dalm., III, 292; Reich. f., Icon. l. c., 70, t. 101, fig. II; Boiss., Fl. Or., II, 130; Gib. et Belli in Mem. acc. sc. Torino, 2. ser., 39 (1893) 44, t. 2 fig. 1—2; Posp., Fl. öst. Küst., II,

II, 376; Asch. Gr., Syn. I. c., 540]. In locis aridis siccis lapidosis et graminosis, pratis siccis, ad vias, in vineis. Floret mens. Majo—Julio.

Bosna: Prope Srebrenica, in monte Ludo brdo (J.), circa Banja Luka (*C. 1888, M.); prope Petrovac (B.). — **Hercegovina:** Circa Mostar (Pi., Gross Kneuck.), in agro Mostarsko polje (Ginzberger) in monte Pod Velež (Fo. f. V.), prope Dretelj et Mogorjelo ad fl. Neretva (M.), circa Trebinje (*P. 1874).

var. *lucanicum* [Gasp. in Guss., Fl. Sic. Syn., II, 328 (1844) pro spec. = *Trif. scabrum* subspec. Rouy Fouc., Fl. Fr., V, 109 (1899) = var. Hal., Consp. fl. Graec., I, 391; Asch. Gr., Syn. I. c., 541.] Fide Asch. Gr. I. c. in Bosna et in Hercegovina.

21. *Trifolium dalmaticum* [Vis., Pl. rar. Dalm. in Flora (1829), Erg. Bl. I, 21 et Fl. Dalm., III, 293, t. XLV; Reich. f. Ic. I. c., 70, t. 102, fig. II; Boiss., Fl. Or., II, 131; Asch. Gr., Syn. I. c., 542. — *T. maculatum* Host, Fl. Austr., II, 373 (1831). — *T. arcunervatum* Griseb. apud Sendtner in Ausl. (1848) 653 sequ. sine descr. fide Asch. Gr. I. c. sed p. 773 Sendtner communicavit = *T. dalmaticum* Pett. non Vis.! — *T. scabrum* subspec. *T. dalmaticum* Gib. et Belli in Mem. acc. sc. Torino, 2. ser., 39 (1888), 50. — Conf. Belli in Mitt. Naturw. Ver. Steierm. 47. Jahrg. 1910 (1911) 200—201]. In pascuis, pratis montanis, locis aridis, lapidosis, siccis, — 1100 m. Floret mens. Majo—Julio.

Bosna: Prope Banja Luka (H.), Donja Tuzla (M.). — Circa Petrovac (B.), Glogovac (Sta.), Donji Vakuf (Ha. Fa.), in mont. Šuljaga, Vel. Malovan, prope Šujica (S.), in monte Kamešnica (Pr.), Prolog (S.), Dinara (Ja., D.), Troglav (Pr.), Vel. Šator (Pr.); Borova glava (*S. 1848), prope Livno, in agro Livanjsko polje prope Čelebić (Ha. Fa.), in monte Krug Pl. — 1000 m (B.). — Circa Jajce (B.), inter Jajce et Jezero (Gross Kneuck.), Bočac (Behrendsen), in valle Orahovica prope Nemila (M.); prope Travnik (*S. 1848 sub. *T. arcunervato*), Paklarevo (S.), Guvna (Fr. Br.), Vrbenac Grad (M.), ad pedem montis Vlašić (S.), Zečeva glava (Reiser) prope G. Vakuf (M.). Inter Kakanj et monast. Sućeska (S.). — Prope Tarčin (Pr.), in valle fl. Željeznica (Pr.), in agro Sarajevsko polje (Blau), Blažuj, Slatina, Reljevo (M.), prope Iližja (Prodan), in monte Igman (M.), circa Sarajevo: in montibus Mojmiilo (M.), Trebević (B.), castello coronato (B.) prope Koševo (M.), Miljevići, in monte Ćrdonj, Borije in vallibus fl. Miljacka et Mošćanica (M.) prope Ophode (M. in Dörf. Herb. norm. nr. 4862), Hreša 1120 m (M.), Han Bulozii, Pale (F.), in monte Hodža (Reiser) prope Kovanje (B.), Rusenovići pr. Rogatica (F. fide M.), in vallibus fl. Drina inter Goražde et Foča (B.) et fl. Sutjeska (Pr.), prope Čajniče (Životsky!), Vardište, prope Strmica ad fl. Lim, Rudo, Uvac, prope Paroš (M.). — **Hercegovina:** In jugo Ivan (D.), in valle fl. Trešanica prope Konjic (B.), Polje, Ljuta, Borci, Boračko jezero, Krupac, prope Glavatičevo, Klinja (M.), Idbar (B.), prope Jablanica (V., B.), in monte Plasa (M.), Drežnica (Prodan). Frequenter circa Mostar (Fo., B., Bornmüller!) in mon-

tibus Stolac (Raap Callier, Pl. Herc. nr. 55!) et Hum (B.), Podvelež (Fo. f. V.), in agro Mostarsko polje (B.) prope Mogorjelo (Behrendsen), Buna (Mu.), Nevesinje (Fo. f. V.), Gacko (M.), Ljubinje (Fo.), Ošanica glavica prope Stolac (B.), Ljubuški, Sovići, Posušje (F.), Beljani (Fo.), Trebinje (*P. 1874), Lastva (Latzel fide M.), Gorica (Baenitz), in monte Leotar—800 m (B.), Agić most (B.) circa Necvijeće, Grančarevo, Vučijak (P.), Bileća (Fo. f. V.), Lastva (Berger).

22. *Trifolium incarnatum* [L., Spec. pl., 769 (1753); Cesati in Linnaea 38 (1863), 257; Reich. f., Ic. l. c., 66, t. 94, fig. II; Boiss., Fl. Or., II, 122; Posp., Fl. Öst. Küst., II 378; Asch. Gr., Syn. l. c., 544. — *T. stellatum* subsp. Gib. et Belli in Mem. acc. sc. Torino, ser. 2, XXXIX, 54 t. 2. f. 2 (1889)]. In pratis, graminosis lapidosis, inter virgulta regionis mediterraneae — 1000 m. Floret m. Majo—Julio.

Variat:

α. *Molinerii* [Balb., Cat. hort. Taur. (1813) App. 1 pro spec.; DC., Fl. Fr., V 556 (1815); Vis., Fl. Dalm., III, 290; Boiss., Fl. Or., II, 122. Asch. Gr., Syn. l. c., 544. — *T. Noeanum* Reich., Fl. Germ. exs., nr. 1366]. Spontaneum.

Hercegovina: Circa Jablanica (Sagorski), Mostar, copiose (Str., Mu., Pi.!) in monte Velež 800 m (B), prope Domanovići (F., Hensch!), Dubrava (Behrendsen), Čaplina (Poeverlein), Stolac (F.), circa Trebinje ad pedem montis Gljiva, prope Vučijak (*P. 1874), circa Bileća (P., Haw.!) — **Novi Pazar:** Prope Prijepolje (P. Zahlbr. f. *Hayek 1906).

Occurrunt: f. *roseum* [Rouy Fl. Fr. V 112] — f. *stramineum* [Presl, Fl. Sic. I p. XX et Symb. bot., I, 48; pro spec.; Gibelli et Belli, Revista in Mem. acc. sc. Tor., ser. 2, XXXIX, 54; Asch. Gr. Syn. l. c., 545; Cfr. Sagorski in Österr. botan. Zeit. (1911) 98. — **Bosna:** Sarajevo, in declivibus montis castello coronati in valle fl. Miliacka (*M. 1904). — **Hercegovina:** Prope Jablanica (Sag.), in monte Velež c. 800 m (*B. 1896).

β. *elatus* [Gib. et Belli, l. c., 54 (1889); Asch. Gr., l. c., 545. — v. *typicum* Pospich., l. c., 379 (1898)]. Planta culta, saepissime culturae aufugit.

Bosna: Prope Fojnica (*S. 1848, Schwarz!), inter Fojnica et Kiseljak (S.), circa Sarajevo (Gross Kneuck.). — **Hercegovina:** In jugo Ivan c. 1000 m (*M. 1899).

23. *Trifolium stellatum* [L., Spec. pl., 769 (1753); Vis., Fl. Dalm., III, 290; Reich. f., Ic. l. c., 66, t. 92; Boiss., Fl. Or., II, 121; Posp., Fl. Öst. Küst., II, 378; Asch. Gr., Syn. l. c., 546; Gib. et Belli in Mem. acc. sc. Torino, ser. 2, XXXIX (1889), 51]. In agris, arvis sterilibus, arenosis, pascuis lapidosis regionis mediterraneae. Floret m. Majo—Junio.

Hercegovina: Circa Mostar (Str., Mu. Pi!), Gradina, in monte Mal. Velež prope Nevesinje, circa Dubrava (Fo), prope stationem Hum (M.), Trebinje (*P. 1874).

f. *xanthinoides* [Rohl. in Magy. bot. lap. (1905) 38 et 4. Beitr. Mont. in Sitzungsber. böhm. Ges. Wiss. 1904 (1905) 38.] »Corollis pallide luteis, vexillo juvenili roseo, demum lutescente«.

Hercegovina: Prope Mogorjelo (*M. 1908).

24. *Trifolium pratense* [L., Spec. pl. 768 (1753); Vis., Fl. Dalm., III, 294; Reich. f., Ic. l. c. 61, t. 83; Gib. et Belli in Mem. acc. sc. Torino, ser. 2, XXXIX (1888) 59, t. 3, f. 2; Boiss., Fl. Or., II, 115; Posp., Fl. Öst. Küst., II, 384; Beck, Fl. Nied.-Öst., 850; Asch. Gr., Syn. l. c., 547]. »Djetelina, tri-prstac, trolist«. In pratis, graminosis, juxta vias —2000 m. Floret m. Majo—Oct.

Bosna: Vulgatum et hinc inde cultum. Enumeratur e Bos. Gradiška, Krnin montis Kozara, Trošelj (Windhorst) (B.) Banja Luka, Maglaj ad fl. Vrbas (H.), Barakovac (Fo. f. V.), Breške (B.), Donja Tuzla (M.). — Circa Krupa (Fo. f. V.), Šehovci (Fo. f. V.), in montibus Grmeč Pl. (B.), prope Petrovac (B.), in montibus Dinara (D.) et Gnjat — 1600 m (Ja. Wa.), Ključ (B.). — Circa Travnik (*S. 1848), Guča gora (Franjić!), Fojnica (S., Mu., B.). In Bosna australi vulgatum. Circa Šarajevo, in monte Trebević, prope Han Hreša, Vučja Luka — 1300 m (B.), in valle fl. Željeznica, Sutjeska (Pr), inter Tošići et Vratlo, prope Tušila gorn., in monte Volujak (B.) et a. l. — **Hercegovina:** In monte Visočica (B.), circa Jablanica (B.). Mostar (Str., Pi!), in monte Velež c. 800 m (B.), Vučja Bara prope Gacko (Mu.), circa Trebinje (*P. 1874). — **Novipazar:** Prope Svetlo borje (*B. 1896); Prijepolje (P. Zahlbr. f. Hayek).

Variat:

α. *genuinum* [Rouy Fl. Fr., V, 119]. Vulgatum usque ad regiones subalpinas — 1400 m rarius altius. Occurunt:

f. *albiflorum* [Pluskal in Verh. zool. bot. Ges. III (1853), 9.] — **Bosna:** In monte Gnjat (*Ja. Wa. 1908). — f. *pilosum* [Heuff. in Abh. zool. bot. Ges. VIII (1858), 88.] — **Hercegovina:** In montibus Prenj, Plasa (*Prodan 1910), Medved montium Čabulja Pl. (Prodan), — f. *microphyllum* [Lej. et Court., Comp. fl. Belg., III, 53 (1836); Asch. Gr., l. c., 550. — *T. microphyllum* Desv., Journ. de bot., II, 316 (1809).] — **Bosna:** In pratis circa Kupina prope Sarajevo (*B.). — f. *Lojkae* [Degen in Bald., It. Alb. (1901) nr. 19; Asch. Gr., Syn., l. c., 551.] Caulis humilis, monocephalus. Foliola breviora et latiora, arista stipularum breviora ad basim latius alata instructa. Corolla brevior, cum tubo curvato. — **Bosna:** In monte Trebević (*Degen, M.), prope Gornji Vakuf (Bucalović).

β. *sativum* [Schreb. in Sturm, Deutschl. Fl. Heft XV t. 12 (1804); Asch. Gr., l. c., 552. — *T. sativum* Crome ap. Boenn., Prodr. fl. Monast., 222 (1824)]. Hinc inde colitur.

γ. nivale [Sieber, Herb. fl. Austr., nr. 236 pro spec. Koch, Syn. fl. Germ., 168 (1835) pro var.; — v. *alpinum* Hoppe apud Sturm, Deutschl. Fl. Heft 32 (1804) t. 16; Sternbg. in Denkschr. Regensb. Ges., II, 129. — *T. alpicolum* Hegetschw. et Heer Fl. Schweiz, 699. — *T. heterophyllum* Tratt., arch., t. 47]. In alpinis montium (—2000 m). Floret m. Julio—Sept.

Bosna: (*Asch. Kan., Cat., 103, 1877) ubi? in montibus Troglav, Vranica, Zec, Bjelašnica, Treskavica, Vratlo, Lelija, Maglić (B.). — **Hercegovina:** in montibus Prenj Pl. (*B.).

f. *pilosum* [Griseb., Spic. fl. Rum., I 25 (1843)] Stipulis plus minus ciliatis saepe villosis. — **Bosna:** In montibus Troglav (B.), Vlašić (B.). — **Hercegovina:** In monte Gubar (Hawelka!) — f. *minus* [Rouy, Fl. Franc., V, 122 (1899). — **Bosna:** In monte Maglić (*Rohlena 1912).

Trifolium carpaticum [Janka in Asch. Kan., Cat. corm. Serb., 103 (1877) sine descr.] ex Hercegovina enumeratum, sec. Asch. Graebn., Syn. l. c., 548 explicari non potest. Etiam in Janka [*Trifolieae* et *Loteae* fl. Eur. in Termész. füz. VIII 3 (1884)] deest.

25. *Trifolium noricum* [Wulf. in Roem., Arch., III, 387 (1805); Vis., Fl. Dalm., III, 296; Reich f., Ic. l. c., 62, t. 85, fig. I; Asch. Gr., Syn. l. c., 558]. In saxosis, lapidosis, alpinis, calcareis (1600—2000 m). Floret m. Junio—Augusto.

Bosna: In montibus Kamešnica, Vel. Malovan (Pr.), Dinara: Janski vrh, Vel. Bat (Ja. Wa), Troglav (Pr.); Vranica Pl.: Krstac (B., Bošnjak) inter culmina Krstac et Ločike (Bošnjak), Treskavica (R.); Bjelašnica (Beck, Pl. Bosn. Herc. nr. 190), Treskavica (*Bl. 1877, Beck, Pl. Bosn. Herc. nr. 80), Vratlo (B.), Bregoč (Pr.), Maglić, Volujak (B.). — **Hercegovina:** In montibus Visočica (B.), Prenj Pl.: Tisovica (D.), Prenj (B.); Plasa (Pr.), Drinača (Prodan), Čvršnica (Pr.); Bjelašica prope Gacko (Mu.).

Ludit:

biceps [G. Beck, Fl. Südbosn. in Ann. nat. Hofmus., XI (1896) 72] Caulis capitulis duobus praeditus. Capitulum secundum minus breviter pedunculatum et folio caulino magis elevato (normaliter sterili) fultum vel primo aggregato. — **Bosna:** In monte Treskavica Pl. (*B. 1896), Bjelašnica (B.).

f. *hirsutum* [Wettst., Beitr. Fl. Alb., 38 (1892)] Folia densius villo a — **Bosna:** in montibus Bjelašnica, Treskavica (*B.) certe alibi.

26. *Trifolium pallidum* [Waldst. Kit., Pl. rar. Hung., I (1802), 35, t. 36; Vis., Fl. Dalm., III, 295; Reich f., Ic. l. c., 69, t. 82, fig. II; Boiss., Fl. Or., II, 125; Asch. Gr., Syn. l. c., 560; Pospich., Fl. Öst. Küst., II, 381]. In graminosis, aridis, pratis. Floret m. Májo, Junio.

Bosna: Prope Banja Luka, Maglaj ad fl. Vrbas (*H. 1882) in monte Grmeč prope Bihać (Boller sec. M.), prope Derventa (Prodan), Zenica (Breindl!), Sarajevo (Fo.), Višegrad (M.) Etiam in monte Kamešnica, Troglav, circa Gubin (Pr.)? In valle Ćrina et in monte Džermanica prope Višegrad (M.)

27. *Trifolium lappaceum* [L., Spec. pl., 768 (1753); Vis., Fl. Dalm., III, 291; Reich. f., Ic. l. c., 64, t. 91, fig. 1; Boiss., Fl. Or., II, 119; Gib. et Belli in Mem. acc. sc. Torino, ser. 2, 39, p. 77 (1888); Posp. Fl. Öst. Küst., II, 377; Asch. Gr., Syn. l. c., 562]. — In herbidis graminosis, arenosis, lapidosis regionis florum mediterraneae (—900 m). Floret m. Majo—Julio.

Bosna: in monte Igman c. 900 m (*Bornmüller!). — **Hercegovina:** Prope Voino (M.), Ljubuški (F!), Trebinje (*P. 1874), Sutorina (M.).

28. *Trifolium Cherleri* [L., Cent. I 24 nr. 70 (1755) et Am. ac. IV 286; Vis., Fl. Dalm., III, 293; Reich. f., Ic. l. c., 64, t. 91, fig. II; Boiss., Fl. Or., II, 119; Asch. Gr., l. c., 564. — *T. hirtum* subsp. Gib. et Belli in Mem. acc. sc. Torino, ser. 2, 39 p. 82, t. IV f. 2]. In pascuis, graminosis, pratis, siccis incultis, regionis mediterraneae (—200 m). — Floret m. Majo, Junio.

Hercegovina: Prope Mostar (*Raap Call. Pl. Herc., nr. 54! 1895), Domanovići, Dubrava (Behrendsen), Voino, Dreteli, Sutorina (M.)

29. *Trifolium medium* [L., Fauna Suec., ed. II, app., 558 (1761) sine descr., Huds., Fl. Angl., 284 (1762); Reich. f., Ic. l. c., 61, t. 84, Fig. I-II; Boiss., Fl. Or., II, 114; Posp., Fl. Öst. Küst., II, 383; Asch. Gr., Syn. l. c., 566. — *T. flexuosum* Jacqu., Fl. Austr., IV, 45 t. 386 (1776); Beck, Fl. Nied.-Öst., 851; Gibelli et Belli in Mem. acc. sc. Torino, ser. 2, 39, p. 87, t. V. f. 2—4. — *T. alpestre* Scop., Fl. carn., ed II, II 79 non L. — *Lagopus flexuosus* Bernh., Syst. Verz. Erf., 239]. In sylvis, dumetis, locis lapidosis usque ad regionem subalpinam (1530 m). Floret m. Junio—Augusto.

Bosna: Prope Banja Luka (H.), Doboj (F.), Brčko (B., M.), in monte Ilinčica prope Donja Tuzla (B.), prope Vranjska (Fo. f. V.) juxta Rajića Košara inter Glamoč et Hrastičevo c. 1400 m, in jugo Kriva Jelika prope Donji Vakuf, Čardak Livade (Ha. Fa.). Pajtov Han pr. Vareš (Pr.), in monte Vel. Žep. prope Vlasenica (R. f. M.) c. 1530 m, in monte Vučja Planina (M.), Trebević (Brancsik, M.) et castello coronato urbis Sarajevo, prope Ophode, Hrasno, Vučja Luka (M.), in monte Dumoš Pl. (Fo.) et Jajac prope Rudo, Strmica (M.). — **Hercegovina:** In monte Preslica Pl. (*V. 1890) et Leotar prope Trebinje (B.) c. 1220 m.

Praeter typum observantur:

f. *ericalycinum* [Hausskn. in Mitt. Thür. bot. Ver. V (1887), 22]. — **Bosna:** In monte Kozara Pl. (B), sub castello urbis Sarajevo (* M, 1910).

β. *pseudomedium* [Hausskn. in Mitt. bot. Ver. Thür. V 3, 71 (1886) pro spec.; Velen. 4. Nachtr. Fl. Bulg. in Sitz. böhm. Ges. Wiss. 29 (1894), p. 7. pro subspec.; Asch. Gr., Syn. l. c., 568 pro var.; subsp. *balcanicum* Velen., Fl. Bulg., 135 (1891) et Suppl. 77].

Bosna: Circa Sarajevo: In monte Trebević, Hrastova glava, sub castello urbis Sarajevo, prope Han Hreša (*M. 1910).

30. *Trifolium patulum* [Tausch in Syll. Ratisb., II 245 (1828); Vis., Fl. Dalm., III, 294; Reich. f., Ic. l. c., 62 t. 81, Fig. 1; Boiss., Fl. Or., II, 114; Asch. Gr., Syn., l. c., 571. — *T. longestipulatum* Ebel, 12 Tage Mont., II, 84, t. 4, f. 2 (1844) — *T. medium* subspec. *patulum* Gib. et Belli in Mem. acc. sc. Torino, ser. 2, 39 (1889) p. 91]. »*Djetelina rastvorena*«. In dumetis, ad sylvarum margines, in sylvis humidis, nemoribus (—1200 m). Floret m. Majo, Junio.

Bosna: (*Asch. Kan., Cat, 103, 1877) ubi? In monte Crni vrh prope Tešanj (Fo.) et Stožer Pl. (B.); in valle fl. Sutjeska prope Suha (Ad.) — **Hercegovina.** In jugo Ivan (V., Landauer!), in valle fl. Trešanica (*Bl. 1877); circa Konjic (Landauer!); Dubočani (M.), Prenj Plan: in m. Borožnica (D.) in montibus Glogovo (V., B.) Prislav; Kremenac pr. Grabovica (B.) in monte Velež pr. Nevesinje c. 1000 m (Mu.). — Prope Milanov odsjek et juxta foveam nivalem Radkuša jama (V.) in valle Raduš prodo prope Vučijak (*P. 1874), Travni do, in monte Svitavac (V.), Konjušnica (V.), prope Grab (Berger).

Ludit:

dalmatinum [G. Beck]. Calycis tubus appresse pilosus. Sepala saepius longiora. — **Hercegovina:** In monte Svitavac (V.) — **Dalmatia:** (Kern. Fl. exs. austro-hung. nr. 1214!). — *tomentosulum* [G. Beck] Calycis tubus copiose patule breviter pilosus, subtomentosus. Sepala saepe breviora. Foliola subtus plurimum copiose pilosa, [Conf. Murb., Beitr. Südbosn. (1891) 146.] vulgatum.

31. *Trifolium Pignantii* [Fauché et Chaub., Exp. Mor., Bot., 219 (1832) t. 28, fig. 2; Vis., Fl. Dalm., III, 295; Reich. f., Ic. l. c., 62 t. 89, fig. 1; Boiss., Fl. Or., II, 115; Asch. Gr., Syn. l. c., 572. — *T. fulcratum* Griseb., Spic. fl. Rum. I 26 (1843). — *T. Pichleri* Vis. f. Pichler in Öst. bot. Zeit. 19 (1869), 156. — *T. flexuosum* v. *Pignantii* Gib. et Belli in Mem. acc. sc. Torino, ser. 2, 39 (1889), 88. — Confer: Ascherson in Öst. Bot. Zeit. (1869) 175 et (1872) 145, et sententiam discrepantem apud Pant. Adnot. in Verh. Ver. Naturk. Pressburg (1874)

126]. In locis graminosis, herbidis, nemoribus fagetis (—1400 m). Floret m. Majo—Julio.

Hercegovina: Skočigrm pr. Lastva (Berger), prope Orahovac, Dubovac, Medov dol, Alinbreg, Begova korita, in valle Raduš prodo prope Vučijak (*P. 1874), in monte Ledenik, prope Milanov odsjek, Radkuša jama, in valle Travni do, prope castellum Konjsko c. 1000 m, in monte Svitavac (V.). — **Novi Pazar:** in monte Metalica inter Novi Pazar et Peć (Ipek) (*Friedrichsthal f. Griseb.).

32. *Trifolium rubens* [L., Spec. pl., 768 (1753); Vis, Fl. Dalm., III, 295; Reich. f., Ic. l. c., 63, t. 86; Boiss., Fl. Or., II, 113; Posp., Fl. Öst. Küst., II 382; Beck, Fl. Nied.-Öst., 849; Asch. Gr., Syn. l. c., 574]. In locis lapidosis, dumetosis, silvis, pratis montanis, ad silvarum margines (—1250 m.). Floret m. Majo—Julio.

Bosna: In monte Mašić brdo pr. Novi et in Kozara Pl. (B.), prope Banja Luka (C.), Maglaj ad fl. Vrbas (H.). In monte Hršin pr. Nov. Kasaba (I), prope Maglaj (Fo.). Prope Krupa, Zalin, Gorjevac. Bjelaj, Petrovac, Smoljana, Janjila (Fo.), in monte Klekovača pr. Potoci (Br.), in monte Ljuša (Sta), prope Glogovac (Ha. Fa.), in monte Kriva Jelika (Ha. Fa.), inter Bugojno et Kupres (Pr.), Osmanagina Kosa prope Bugojno c. 1200 m (Ha. Fa.), in monte Šuljaga (Pr), in monte Prolog (B.), prope Preodac (Pr.). In monte Čelin prope Visoko (Fo), Pajtov Han prope Vareš (Pr.), inter Hadžići et Pazarić (B.), in monte Igman c. 1100 m (F.), circa Sarajevo: prope Kovačići (M.), Hodided (M.), Dovlići (B.), in monte Gradina (M), Trebević in valle fl. Miljacka alibique (F., B.); Koševo (M.) in altiplanitie Dragulja (M.) in valle fl. Željeznica, Zelengora (Pr.), in valle fl. Sutjeska (B). — **Hercegovina:** Prope Janjina, Uzriječje (M.). In declivibus montis Kremenac prope stat. Grabovica (*V. 1890); in montibus Plasa, Čvrstica (Pr.), Čabulja (B.); prope Podgorani et in agro Bijelo polje pr. Mostar (Ružička f. V.).

Ludit:

genuinum [Posp. l. c.] Vulgatum, etiam *albiflorum* occurrit, hoc — **Bosna:** Koševo prope Sarajevo (*Pr. 1908). — *ciliato-stipulatum* [Hauskn. in Mitt. Thür. bot. Ver. Neue Folge VIII (1895) 21. — *ciliferum* G. Beck. Fl. Südbosn. in Ann. nat. Hofm. XI (1896) 73; — v. *ciliata* Posp., l. c.]. Foliola petioli et stipulae plus minus longe ciliata. Calycis tubus glaber. — **Bosna:** In monte Paprenik (Gradište) pr. Sarajevo (*B. 1896). — **Hercegovina:** Prope Dubočani (M.). In monte Hum prope Mostar (Pi. f. *B.).

33. *Trifolium alpestre* [L., Spec. pl., ed. II, 1082 (1763); Vis., Fl. Dalm., III, 294; Boiss. Fl. Or., II, 113; Reich. f., Ic., l. c., 64, t. 84, fig. III; Pospich., Fl. Öst. Küst., II, 382; Asch. Gr., Syn., l. c., 575]. In pratis montanis, inter virgulta, ad silvarum margines, in silvis collucatis —1600 m. Floret mens. Majo—Julio.

Bosna: Pervulgatum. Indicatur prope Orahovo ad fl. Prosara (B.); prope Nova Kasaba (J.). — Circa Petrovac (B), Smoljana (Fo., f. V.), in monte Grmeč Pl. (Boller); in monte Lisina pr. Ključ (B.); prope Ljuša (Ha. Fa.), in monte Hrbliina, prope Šujica (Pr.), in monte Ozren prope Maglaj (R. sec. M.) in montibus Jankovo brdo, Gnjat (Ja. Wa.) circa Rore, Glamoč (Pr.). — Circa Travnik (*S. 1848) in monte Vel. Rađuša (V. Čurčić), Vel. Vran (F.), Fojnica (Mu.), inter Putkovići et Tolovići (S.), circa Vareš, Kralupi (Pr.), Zaruđe, Semizovac (M.), Ljubina (M.). In Bosna australi frequens circa Sarajevo et vicinis (B.), prope Vučja Luka (Bl, B.), in monte Trebević (V., B.), Igman, Hum, Gradina, Bukovik, Motka, Ozren (M.), Gola Jahorina (F.) circa Pale, in monte Romanija (M.), Vitez (F.), Prebilje, Pod Vitez (Pr.), in valle fl. Željeznica, Zelengora, Beleni (r.), Klis (M.), Rusenovići (F.), Strmica, Višegrad (M.), in valle Urdeni do proxime mt. Lelija (Lakatos!). — **Hercegovina:** In montibus Preslica (V.), Crvanj —1400 m (Mu.), prope Rakitno (Begović f. V.), in monte Velež —1600 m (B.). inter Blagaj et Jovanović Karaula (B.), circa Bišina prope Nevesinje (M.), in valle Bukovi dol distr. Ljubuški (R), in monte Bjelašica pr. Gacko (Mu), in montibus Glijiva (*P. 1874), Vučji zub (Čurčić f. M), Svitavac prope Travni do (V.). — **Novi Pazar:** Prope Prijepolje (P. Zahlbruckner f. *Hayek 1906).

Ludit:

distachyum [Ser. in DC, Prodr., II 194 (1825); — *monostachyum* [Ser. . c.]; — *sericeum* Hausskn. in Mitt. Thür. bot. Ver. Neue Folge VIII (1895). 23]. — Pervulgatum. — *lanigerum* [Ser. l. c. 195; Beck Fl. Südbosn. in Ann. nat. Hofm. XI. (1896), 72; — v. *villosum* Čelak, Prodr. fl. Böhm., 667 (1875).] Rarius; circa Vučja Luka (*B. 1896). — *longisetum* [G. Beck; conf. Beck, l. c., 73]. — Planta robusta, foliis oblongo-linearibus, dentibus calycinis elongatis, infimo corollam plurimum conspicue superante. — **Hercegovina:** In monte Raška gora prope Drežnica (*B. 1896).

34. *Trifolium angustifolium* [L., Spec. pl., 769 (1753); Vis., Fl. Dalm., III, 289; Reich. f., Ic., l. c., 65, t. 93. fig. 1; Boiss., Fl. Or., II, 122; Posp., Fl. Öst.-Küst., II, 380; Asch. Gr., Syn., l. c., 579]. In pascuis, arvis, siccis, aridis imprimis in regione florae mediterraneae. Floret m. Sept.—Okt. et Junio—Aug.

Croatia: Ad confines Bosnae prope Zavalje iuxta Bihać (Boller) — **Hercegovina:** Vulgatum. In valle fl. Neretva inter Konjic et Mostar (Bornmüller!) circa Mostar (*Str. 1880, Pi!), in monte Hum (Fo. f. V.) et Stolac (Raap Call. Pl. Herc., nr. 52!), prope Buna (Mu. Jetter!), Žitomišljici (Mu.), inter Domanovići, Pileta, Stolac (B.), inter Vojno et Dretelj (M.), inter Stolac et Ljubinje (Weisbach f. M.), prope Ljubinje (Fo. f. V.); circa Bi-leća (Fo. sub. *T. stellato* f. V.); Sutorina (Čurčić f. M).

35. *Trifolium purpureum* [Lois., Fl. Gall., ed. II, II 125, t. 14 (1828); Reich. f., Ic. l. c., 66, t. 93, f. II; Boiss., Fl. Or., II, 123; Asch. Gr., Syn. l. c., 580]. In arvis, arenosis, sterilibus. Floret mens. Apr.—Julio, ac—Nov.

Hercegovina: [Asch. Kan., Cat. 102 (1877)] ubi?

36. *Trifolium ochroleucum* [Huds., Fl. Angl., 283 (1762); Vis., Fl. Dalm., III, 295; Reich. f., Icon. l. c., 63, t. 85, fig. II; Asch. Gr., Syn. l. c. 581]. In pascuis, pratis, graminosis, silvis frondosis — 1620 *m*. Floret mens. Junio—Aug.

Bosna: Vulgatum. In monte Kozara Pl. (B.) prope Maglaj ad fl. Vrbas (H. 1882); Brankovac prope Banja Luka (Fo. f. V.), in monte Borja Pl. prope Teslić (Fo. f. V.). — Prope Pučenik, Zalin, Han Begovac, Vodjenica (Fo. f. V.), Sratinska (H.), in monte Šiša ad Majkovići (B.), Čardak livade (Ha. Fa.), Na podovi prope Glogovac (Ha. Fa.), Rilić polje prope Malovan (*S. 1848), in monte Vel. Malovan, prope Šuljaga, Hrblijina (Pr.), Prusac prox. Donji Vakuf et in monte Kriva jelika (Ha. Fa.), in monte Kamešnica (Pr.), prope Preodac (Pr.), D. Tuzla (Bucalović sec. M.), Zavidovići (M.). — Circa Travnik (Br.), in monte Vilenica (Fr. Br.); circa Fojnica et in declivibus mts Vranica (Schwarz!), prope Zbilje (Fo. f. V.), circa Vareš (Pr.), Okruglica (M.). In monte Igman — 1200 *m* (Bornmüller!, M.); prope Tošići ad pedem m. Treskavica Pl. (B.), Blažuj; in m. Trebević (V., B.) — 1620 *m* (M.), in valle Miljacka, prope Ophode, Miljevići, Butmir (M.), Lukavica (F.), circa Sarajevo (Fo.), in m. Gradina (M.), Ranjen, Vitez Pl. (B.), Zelengora, Gornja bara (Pr.), in valle fl. Sutjeska (Pr.); prope Foča (F.), in valle fl. Drina inter Foča et Bastasi (B.), prope Čajniče (Životsky!). — **Hercegovina:** In monte Ivan (*V. 1890), circa Podvrabac, Biskup ad fl. Neretva, Blaca (M.), prope Drežnica (Pi.!, Prodan), circa Mostar (Pi.!), in agro Nevesinjsko polje (V.); in monte Tabor prope Podorašac, prope Vojno (M.), Dubrava (Behrendsen). In valle Travni do et in silva Bukovica (V.), in monte Ledenik prope Milanov odsjek (V.). — **Novi Pazar:** In valle fl. Lim inter Prijepolje et Bistrica (*B. 1896).

Ludit: capitulis sessilibus, breviter vel longius pedicellatis, stipite demum saepe capitulo longiore. Flores plurimum 1.5 — 1.7 *cm* longi ac in f. *majus* [Holuby in Jahresb. nat. Ver. Trenčín X (1887) 205], capitula majora floribus 2 *cm* longis composita. Hinc inde.

37. *Trifolium pannonicum* [L., Mant., II 276 (1771); Jacqu. Observ., II 21, t. 42 (1777); Reich. f., Ic. l. c., 63, t. 87; Asch. Gr., Syn. l. c., 583]. In pratis montanis, silvaticis, praealpinis rarius paludosis — 1900 *m*. Floret m. Junio, Julio.

Bosna: In monte Krnin montium Kozara Pl. (B.), prope Maglaj ad fl. Vrbas (H.); Ludo brdo prope Srebrenica (J.). — Circa Vaganac prope Petrovac, prope Han Begovac, Dugopolje, Pogari (Fo. f. V.), Varcar Vakuf (B.), in monte Lisina (B.), Osmanagina Kosa prope Bugojno 1100—1200 *m* (Ha. Fa.), in monte Plazenica (Ja.), prope Mlinište, in m. Koprivnica (Ha. Fa.), circa Kupres, in monte Hrblijina (Pr.); Karaula prope Jajce (Fo. f. V.), in monte Hum prox. Jajce (B.). Circa Travnik (*S. 1848): Paklarevo (S.), Zlokići (Br.), Bukovica (S.) in monte Vlašić, Vlaška gromila — 1900 *m* (S. Br.). Inter monast. Sućeska, Borovica, Vareš (S.), circa Vareš, Kralupi (Pr.)

Podzarude, Žeravice, Kamensko 480 m, Klis (M.). Circa Sarajevo (B.), Crveni Klanac, Ophode (M), prope Kupina (Beck, Pl. Bosn. Herc., nr. 17), Hreša, Biosko, Vučja Luka (B.), in monte Motka, Gradina, Bukovik, Trebević, Glog, Ozren (M.); prope Dovlići, Pale (B.), in altiplanitie Dragulja (M.), Vitez, Kasidol (F.), in districtu Rogatica (F.), in monte Romanija (Fo. f. V.), Klek (F.), Treskavica (B.), prope Grab, in valle fl. Željznica (Mu), in monte Klek pr. Foča (F.), circa Zelena gora, Ravna gora pr. Jelašća (M.), in monte Vukuša Plan. (Bucalović sec. M.), in valle fl. Sutjeska (Pr.). — **Hercegovina**: In monte Preslica (*V. 1890).

Variat:

α. *typicum* [G. Beck]. Foliola caulina ovalia, retusa, suprema modo acuta, 25–60 mm longa, 10–17 mm lata, 2–4× longiora quam lata. Capitula ovata serius subcylindracea longe stipitata, stipite capitulis longiore.

Ludit longitudine dentium calycis porro calyce rubro tincto = *rubrocalycinum* [Podpěra in Verh. zool.-bot. Ges. LII (1902) 646] sic in Bosna prope Pale et in monte Nebešina (*M. 1908). — *minus* [G. Beck] Humilior; capitula subglobosa, breviter pedicellata, stipite capitulo brevior. **Bosna**: Inter Han Hreša et Vučja Luka (*B.).

β. *lancifolium* [G. Beck]. Foliola lanceolato-lineararia, utrinque acuminata, media caulina 7–8.5 cm longa, 10–14 mm lata. Appendices stipularum angustissimae, apice subfiliformes.

Bosna: In monte Krnin montium Kozara Pl. (*B.)

γ. *angustifolium* [Vandas, Rel. Form. 158 (1909)]. Foliola lineararia, summo 6 mm lata.

Bosna: Prope Dugopolje inter Dubovsko et Vrtoče, Smoljana; circa Hreša (Fo. f. *V. 1909).

38. *Trifolium maritimum* [Huds., Fl. angl., 284 (1762); Vis., Fl. Dalm., III, 290; Reich. f., Ic. l. c., 68, t. 88, fig. II; Pospich. Fl. Öst. Küst., II, 380; Gib. et Belli in Mem. acad. sc. Torino ser. 2, 39 (1889) 142; Asch. Gr., Syn. l. c., 587]. In pratis salsis, littoreis. Floret m. Majo–Julio.

Hercegovina: In litore Sutorina (*Pr. 1908).

39. *Trifolium cinctum* [DC., Cat. hort. Monsp., (1813), 152 et Fl. Franc., V, 559; Vis., Fl. Dalm., III, 293, t. 44; Reich. f., Ic. l. c., 66, t. 97, fig. I. — *T. maritimum* subspec., Asch. Gr., Syn., l. c., 588. — *T. succinctum* Vis., Pl. rar. Dalm., nr. 32 in Flora XII (1829), Erg. I, 21]. In pratis udis regionis florum mediterraneae. Floret m. Majo, Junio.

Hercegovina: In litore Sutorina (*M. 1912).

40. *Trifolium echinatum* [M. Bieb., Fl. Taur. cauc., II, 216 (1808); Reich. f., l. c., Ic. 67, t. 90, fig. II; Asch. Gr., Syn. l. c.,

589. — *T. supinum* Savi, Obs. Trif., 46, fig. 2; Vis., Fl. Dalm., III, 290; Boiss., Fl. Or., II, 126. — *T. echinatum* subspec. *T. supinum* Asch. Gr., Syn. l. c., 590]. In herbidis, pascuis, graminosis, arvis, saxosis, vinetis, —100 m. Floret m. Majo, Junio.

Hercegovina: In valle fl. Neretva prope Mostar (*Mu 1891, Pi.!) Buna, Žitomišljici (Mu. 1891), Dretelj (M.).

41. *Trifolium leucanthum* [M. Bieb., Fl. Taur. cauc., II, 214 (1808); Vis., Fl. Dalm., III, 291; Reich. f., Ic. l. c., 68, t. 97, fig. II; Boiss., Fl. Or., II, 128; Asch. Gr., Syn. l. c., 592]. In herbidis, saxosis regionis florum mediterraneae. Floret m. Majo, Junio.

Hercegovina: In monte Podvelež prope Mostar (R. fide *M. 1908).

Sectio: *Calycomorphum*.

Presl, Symb., I 50 (1830) pro gen.; Endl., Gen. 1268; Vis. Fl. Dalm., III 298; Gib. et Belli in Mem. acc. sc. Torino, ser. 2, 43 (1893), 169.]

42. *Trifolium subterraneum* [L., Spec. pl., 767 (1753); Vis., Fl. Dalm., III, 298; Reich. f., Ic. l. c., 71, t. 108; Boiss., Fl. Or., II, 133; Posp., Fl. Öst. Küst., II, 386. Asch. Gr., Syn. l. c., 596]. In agris, arenosis, siccis, herbidis ac silvis frondosis, regionis florum mediterraneae. Floret m. Martio—Junio.

Bosna: Prope Livno (*Ha. Maz. 1905). — **Hercegovina:** Prope Jablanica, Raška Gora (M.), Mostar (Str., Pi.!), Ljubuški (F.), castellum Mogorjelo prope Čapljina (M.), circa Trebinje et Bileća (*P. 1874), in littore Sutorina (Pr.).

Tribus: *Loteae*.

[Benth. Hook., Gen., I, 442.]

13. *Anthyllis*.

[L., Spec. pl., 719 (1753) et Gen. ed. V, nr. 773; Endl., Gen., 1267; Benth. Hook., Gen. I 488 (p. p.); Taubert in Nat. Pflanzenf., III 3, 254. — Confer: Sagorski in Deutsch. bot. Mon. (1890) 129 et Formenkr. der *A. Vulneraria* in Allg. bot. Zeit. (1908) 40; Beck in Fl. Nied.-Öst. 851; W. Becker, *Anthyllis*-Stud. in Beih. Bot. Centralbl. 29 (1912) Abt. II et Sect. *Vulneraria* l. c. 27 (1910) Abt. II; Beck. Formen der *A. Dillenii* in Fl. Südbosn., VIII in Ann. naturh. Hofm. XL (1896) 61—68; Asch. Graebn., Syn. mitt. Fl., VI 2, 618 (1908).] »Ranjenica, ranjenik«.

Sectio: *Vulneraria*.

[Adanson, Fam., II 321 (1763) p. p. rectius Moench, Meth., 146 (1794) pro gen.; DC., Prodr., II, 16 (1825).]

1. *Anthyllis polyphylla* [Kit. ex Besser fide DC., Prodr., II 170 (1825); Pantocs., Adnot. Herc., 124; Kerner in Öst. bot.

Zeit. (1868) 384 et Sched. ad fl. exsicc. austro-hung. nr. 431; Beck, Fl. Nied.-Öst., 852. Becker in Beih. Bot. Centralbl. 22 (1910) 261. — *A. Vulneraria* var. *polyphylla* DC. l. c.; Sagorski in Deutsch. bot. Mon. (1890), 139; Asch. Gr., Syn. l. c., 624. *A. pallida* Opiz exsicc.! nec Britt.?). Perennis pluriceps. Caulis plurimum firmus — 60 cm altus simplex vel saepius ramosus, aequaliter fo'iatus, in parte inferiore vel altius patentim sericeo-villosus. Folia basalia simplicia vel dispariter pinnata, foliolo terminali maximo; caulina 3—6; foliolis 11—13, terminalibus in foliis inferioribus lateralibus majoribus, in summo folio ea aequantibus; omnia supra pilosa vel glabrescentia, subtus villosa. Capitula plura (—6), summa congesta, 15—22 mm longa. Bractearum lacinae acuminatae. Calyx 10—12 mm longus, patentim sericeo-villosus, concolor. Corolla lutea vel ochroleuca rarius ut carina rubescens. Lamina vexilli ungui suo brevior. In incultis, pascuis, graminosis usque ad regionem subalpinam (—1400 m). Floret mens. Majo, Junio.

Bosna: In parte boreali et centrali sec Formánek vulgata, quod in dubio pono. In monte Mašić brdo prope Novi (B.) prope Banja Luka (*H. 1882); in monte Igrisnik prope Srebrenica c. 1400 m (Wettst. f. Sagorski). — Circa Krupa, Zalin, Hašani, Kozini, Lipnik (Fo.); in monte Grmeč Pl. (Boller), prope Jajce (Behrendsen), inter Zenica et Lašva (Ćurčić f. M.) prope Ljubina, in monte Motka (M.). In agro Sarajevsko polje (M.), ad rivulum Ramića banja potok, sub castello urbis, circa Sarajevo frequentius sic circa Kupina (B.) in valle riv. Koševo, in montibus Pašin Brdo, Gradina, Ozren, circa Prača (M.), in monte Trebević (Bl. f. M.), Bijela glavica in monte Vran Pl. (F.)? — **Hercegovina:** Circa Mostar (Lindberg!); prope Jasikovac in agro Zubačko polje (Adam. f. W. Becker) in montibus Glijiva, Jastrebnica (*P. 1874).

Ludit:

Schiwerekii [Sagorski l. c. (1908) 126. — *A. vulneraria* v. *Schiwerekii* DC., Prodr., l. c., 170? neque *A. vulgaris* f. *Schiwerekii* Rouy in Rouy Fouc., Fl. France, IV 287 et Asch. Gr., l. c., 623]. — **Bosna:** In monte Trebević (*M. 1920) et monte Igrisnik (vide supra) in formis transientibus. — f. *glabrescens* [Sagorski in Allg. bot. Zeit. (1911) 38 an W. Becker l. c., 266 sine descriptione non explicare potest]. — **Bosna:** In monte Trebević (Blau) fide W. Becker.

2. *Anthyllis vulneraria* [L. Spec. pl., 719 (1753); emend. rectius Fl. Suec. ed. II 249 (1755) et A. Kern. Sched. ad fl. exs. austro-hung., nr. 430 (1883); Sagorski in Allg. bot. Zeit. (1908), 41 et 129; — v. *typica* G. Beck. Fl. Nied.-Öst., 853; — v. *Kernerii* Sag. in Deutsch. bot. Mon. (1890), 136; Asch. Gr.,

Syn., l. c., 623.] — Perennis, pluricaulis. Caulis aequaliter foliatus, saepe ramosus, —55 *cm* altus, appresse pilosus. Folia dispariter pilosa, foliolo terminali magno, caulina 3—6, foliolis plurimum 11—14; omnia supra glabra, infra appresse pilosa. Capitula 2—11, 17—20 *mm* longa. Lacinae bractearum acuminatae. Flores 12—17 *mm* longi, in capitulis summis majores, in lateralibus minores. Calyx c. 10—12 *mm* longus, erecte sericeo-villosus, concolor vel ad apicem rubescens vel purpurascens. Corolla varie colorata. Lamina vexilli ungui suo brevior. In pratis montanis, pascuis, lapidosis —1400 *m*. Floret Majo —Augusto.

Bosna: Prope Petrovac (B.). In agro Sarajevsko polje (M.). — **Hercegovina:** Circa Mostar (Pi.! fide B.).

Ludit:

unicolor [G. Beck, Fl. Nied.-Öst., 853. (1892). Calyx corollaque unicolor, ochroleuca. In finitima **Croatia** adest, certe in Kraina **Bosnae** reperienda. — *typica* [G. Beck, l. c., 853.] Corolla lutea vel vitellina, carina in apice saepe rubicunda; calyx ochroleucus, concolor.

subdinamica [Sagorski in Allg. bot. Zeit. (1908) 131 pro subspec. et Malý in Glasn. zem. muz. (1920) 130 pro var. Affinis priori sed calyce 12 *cm* longo, erecto-albosericco, plurimum concolore vel apice purpurascente, corolla aurea egregia. Etiam *A. affini* proxima. — **Bosna:** Prope Bili potok in valle Semešnica c. 1400 *m*, prope Pribelja 1100 *m* (Stadlmann f. Sagorski 1908) in monte Vitorog (f. Sagorski). Prope Vučja Luka, in monte Crepol-sko 1466 *m* (M.), prope Kusače (M.) — **Hercegovina:** In monte Mali Prenj (F. sec. *M. 1920).

rubriflora [DC., Prodr. II, 170 (1825) = *A. Dillenii* Schult. in Herb. Balb. sec. DC., l. c. = *Vulneraria supina flore coccinea* Lhwydius in Dillenius, Hort. Eltham., II, 431 t. 320 fig. 413! = *α. Vulneraria β.* Schult. Öst. Fl. ed II, II, 317 (sine nomine). Beck, Fl. Südbosn. in Ann. naturh. Hofm. XI (1896), 64. — *A. tricolor* Vukot., Nov. Bil. in Rad. jugosl. ak. 34 (1876), 5 et 51 (1880), 54 = *A. erythrosepala* Vukot., Prinesci l. c. 44 (1878), 45, vidi orig. — *A. tricolor* v. *erythrosepala* Asch. Graebn. Syn. l. c. 633. — *A. pseudo-Vulneraria* Sag. in Allg. bot. Zeit. (1908) 129 et formae *α*, *γ*, *ε* = *A. Vulneraria* var. Sag. apud Hayek, Fl. Steierm., I, 1067. — *A. Dillenii* subspec. *A. tricolor* Vuk. apud Sagorski l. c. (1908) 132 est planta minor, foliis basi caulis apinquantis. — *A. polyphylla* f. *tricolor* (Vuk.) apud W. Becker in Beih. Bot. Centralbl. 27 (1910) II, 263, 266]. Corolla lutea vel vitellina cum carina rubra, serius cinnabarina

vel tota plus minus rubra-sanguinea. Calyx sursum rubescens vel purpurascens. In aridis lapidosis glareosis. Flores saepius minores, 13—16 mm longi.

Bosna: In monte Radovina c. 1900 m (leg. Schiller f. Sagorski apud Fritsch 1910) ad typum transiens? Ljubuša Plan. (F.)? — **Hercegovina:** In monte Čvrstica prope Petralj (Bucalović *f. M. 1920); in agro Zubačko polje prope Jasikovac (Adamović f. Sagorski) sed in dubio pono propter notam „Annuā et biennis“. Circa Mostar ((F. B), in declivibus montis Velež (B). Prope Drežnica, (F.)?

chlebiana [Malý in Glasn. zem. muz. 32 (1920) 130 pro var. *A^s Dillenii*]. »Biennis vel perennis. Caulis erectus, plus minusve aequaliter foliosus. Capitula parva 1.7—2 cm lata, plus minus manifeste pedunculata, gemmata vel ternata. Bractee fulcrantes flores plus minus superantes. Calyx 8 mm longus, breviter erecto-patenter pilosus, solum apice paulo violaceus. Corolla coccinea, parva. Vexilli lamina 4 mm, unguis 6.5 mm longus«.

Bosna: In monte Prolog prope Livno (F. fide *M. 1919).

3. *Anthyllis vulgaris* [A. Kerner in Sched. ad fl. exs. austro hung. nr. 434 (1883) exsicc. p. p.; Sagorski in Allg. bot. Zeit. (1908) 42. — *A. vulneraria* f. *vulgaris* Koch, Deutschl. Fl., V, 124 p. p.; Sagorski in Deutsch. bot. Mon. (1890) 136; Beck, Fl. Nied.-Öst., 853. subspec. *A. vulgaris* v. *typica* Asch. Graebn., Syn., l. c. 621] Perennis, pluricaulis. Caulis plurimum simplex 10—30 cm altus, appresse pilosus, plurimum in parte inferiore ad mediam modo foliis 2—3 obsitus. Folia inferiora parce dispariter pinnata; caulina excepto suprema dispariter pinnata; foliolis 7—9 omnia supra glabra, infra appresse pilosa. Capitula pauca, 1—3, 15—20 mm longa. Bractee exteriores laciniis oblongis obtusis, interiores laciniis angustioribus subacutis praeditae. Calyx 10—11 mm longus, appresse diluteque, brevius vel longius pilosus. Corolla varie colorata. Lamina vexilli ungui suo brevior. Saepe formis intermediis cum *Aⁱ vulneraria* conjungitur, itaque ambas etiam subspecies vel varietates *A^s vulnerariae* L. ampl. esse interpretari possumus. In pratis montanis, pascuis, lapidosis usque ad regionem subalpinam (— 1700 m). Floret mens. Majo—Aug.

Bosna: Kriva glava prope Novi (B.). — In monte Vitorog —1700 m (Ha. Fa.), Prusac prope Donji Vakuf (Ha. Fa.), in montibus Šuljaga, Vel. Malovan, Kamešnica (Pr.), Prolog (F.), Troglav, Šator (Pr.), Krug Pl. (B.), circa Livno, Borova glava (F.). Circa Travnik (Br.), Gladnik, Kažabaša

(Fr. Br.), in monte Vlašić — 1800 m (*S. 1848)? Inter Kakanj et monast. Sućeska (S.), prope Vareš, Potoci (Pr.), in agro Sarajevsko polje prope Vrucı (M.), circa Sarajevo (Jetter!), in monte Trebević (B.), Romanija (M.), Goła Jahorina — 1700 m (M.), Hodža prope Stambulčić (M.), in monte Treskavica — 1700 m (Mu.), prope Kalinovik (Pr.): in monte Dobro Bože Pl. prope Todor (Lakatos!), Gornje bare, prope Suha (Pr.). — **Hercegovina:** Circa Borci (Bucalović f. M.), in montibus Prenj (*F. 1896), Velež (B.).

Ludit:

genuina [G. B.]. Calyx breviter appresse pilosus, plurimum ochroleucus, apice vix rubellus vel purpurascens. Corolla sulphurea vel vitellina.

f. *bosniaca* [W. Becker in Beih. Bot. Centralbl. 29 (1912) II 25]. »Calyce (appresse piloso? Beck) pallido, corolla lutea etiam plus minus rubescens«. Autor stationes sequentes palam fecit: Resanovača in monte Klekovača 850—1100 m, supra Prusac prope Bugojno versus Koprivnica 800—900 m. prope Meštrovac 1100 m (= *A. tricolor* f. *chrysantha* Sag.), Radovina 1900 m (? transiens ad *As alpestris* formam *dinaricam* et *Ampulchellam*). Mihi ad formam genuinam pertinere videtur sed ex descriptione nimis brevi imperfecta non recognoscenda, synonyma dubiosa.

pseudo-Dillenii [Sag. in Allg. bot. Zeit. (1908) 43. — *A. Dillenii* subspec. *tricolor* Sagorski l. c. 132 ex descriptione]. Corollae carina vel petala omnia rubra. Calyx appresse pilosus, bicolor, sursum ruber vel purpureus. Saepe *Ai illyricae* similis, sed indumento caulis appresse piloso sat diversa.

Hercegovina: Prope Široki Brijeg (Lakatos f. *M. 1920), Dretelj (M.) in monte Hum prope Mostar (B.).

Ad hanc prolem pertinere videntur:

tenera [Sagorski in Allg. bot. Zeit. (1908) 133 pro var. *As tricoloris*]. Annua vel biennis, caule tenuissimo 15—25 cm alto, paucifoliato. Est quasi *A. Weldeniana* v. *praepropera* caule appresse piloso. — **Hercegovina:** In monte Stolac prope Mostar (*Ja. 1910, f. *Sagorski). — *versicolor* [Sagorski, l. c., 133 pro var. *As tricoloris*]. Corolla primum ochroleuca, porro aurantiaca vel subpurpurea, demum fuscorubra vel aurantiaca, carina purpurea calyce discolore. — **Bosna:** Prope Donji Kotorac in agro Sarajevsko polje (*M. 1920). — *expallens* [Sagorski, l. c. 134 pro var. *As tricoloris*] Corolla ochroleuca, saepe violascens, decolorata. — **Bosna:** In declivibus montis Trebević (*M. 1920). — *chrysantha* [Sagorski Formenkreis der *A. Vulneraria* Sep., Nachtr. p. 47 (1909) pro var. *As tricoloris*]. Corolla aurea, serius aurantiaca, carina concolor vel apice rubicunda. — **Bosna:** Prope Meštrovac et in monte Radovina c. 1900 m (Schiller fide *Sagorski 1910).

intercedens [G. Beck Fl. Südbosn. in Ann. nat. Hofm. XI (1896) 66 pro spec.; *A. vulneraria* subsp. *A. pulchella* v. *inter-*

cedens Asch. Gr., Syn., l. c., 639.] Caulis ascendens, appresse breviter pilosus. Folia dispariter pinnata, inferiora subtus appresse, superiora sicut fulcrantia patentim longe pilosa. Segmenta bractearum angusta, acuta. Capitula mediocria. 17—19 mm longa. Calyces patentim villosi, 12—13 mm longi, superne purpurascens vel purpureo-marginati. Corollae ochroleucae pars excedens major, vexillum calycem 4—5 mm superans, eiusdem lamina ungui brevior. Ab *Ai illyrica* indumento brevi appresso caulis inferioris, ab *As alpestris* v. *dinarica* et *picta* (*baldensi*) laciniis bractearum angustis (exterioribus non dilatatis), calycibus demum non cinerascens, lamina vexilli ungue brevior distinguitur. Videtur *vulgaris* — *illyrica*.

Bosna: In glareosis et saxosis montis Dinara 1700—1800 m (Ja. Wa. f. *Sagorski 1908) hic fide Janchen [in Öst. bot. Zeit. (1908), 291.] *Ai scardicae affinis*, floribus 15—16 mm longis, calycibus 11 mm modo longis erecte pilosis. An eadem?, nam *A. scardica* floribus calycibusque minoribus ac calycibus patentim villosis bene differt. — **Hercegovina:** In montibus Bijela gora, Prasa et Vučji zub, m. Julio (l. Hawelka, *B. 1896) in pascuis prope Lastva (Berger).

affinis [Britt. in Koch, Deutschl. Fl., V, 124 (1839) Vidi orig.; Kern. in Sched. ad fl. exs. austro-hung. nr. 436. — W. Becker in Beih. Bot. Centralbl., 27 (1910) II 282 pro spec. — *A. vulneraria* var. Wohlf., Syn. Fl. Deutschl., 530 (1891); G. Beck, Fl. Nied.-Öst., 853; Asch. Gr., Syn. l. c., 625]. — Calyx pallidus, primum erecto-serius subpatule longius dilute pilosus, 10—11 mm longus. Corolla ochroleuca (rarius lutea vel aurea). In subalpinis.

Saepius commutatur cum *A^{is} alpestris* f. *typica* G. Beck, regionis alpinae incola, quae floribus majoribus, vexillorum lamina ungue suo longiore vel eum longitudine aequante, calycibus demum canescentibus, foliolorum numero minore excellit. Confer W. Becker [l. c. 282, 283 et 29 (1912) 17]; Sagorski [in Deutsch. bot. Mon. (1890) 136 et 138; ac Formenkreis *A. vulneraria*, Sep. Nachtr. 46].

Bosna: In monte Cincar 1300—1800 m (B.), Trebević (B.), ad *Am vulnerariam* vergens., in monte Treskavica 1700 m (*M. 1920). — **Hercegovina:** In montibus Mali Prenj (F. f. M. sub *A. vulneraria*); Morinje inter Obrnja et Kruna 1100—1200 m (Bucalović f. *M. 1920).

Quod *A. affinis* in monte Orijen inter Ulice et Travni do (Berger in Allg. bot. Zeit. (1914) 14 et 87) fuit, non explanatur.

f. *Murbeckii* [Sag., Formenkr. *A. vulneraria* Sep., Nachtr. 46]. Capitulis minoribus, bractearum laciniis acutis, corollis.

dilute luteis vel aureis, carina aequicolore, calyce unicolore vix diversa videtur.

Hercegovina: In monte Preslica 1200—1260 *m* (M.); Mali Velež prope Nevesinje 1450—1750 *m* (Mu. f. Sagorski, *Sagorski 1908).

4. *Anthyllis Spruneri* [Boiss., Fl. Or., II 158 (1872); Hal., Consp. fl. Graec., I, 411 pro var. *A^s vulnerariae*; G. Beck, Fl. Südbosn. in Ann. nat. Hofmus., XI (1896) 62]. — Annuua vel biennis vel perennis (fide Sagorski) uni- vel paucicaulis, initio aestatis anni germinationis florens, radice tenui fusiformi. Tota planta et quoque cum calycibus copiose subpatentim pilosa, subvillosa vel caulis sursum appresse pilosus. Caulis mono—pluricephalus. Folia basalia simplicia vel parcepinnata, foliolo terminali majore. Folia caulina 1—3 dispariter pinnata, rarius pariter foliolorum paribus 2—4. Foliola utrinque, subtus copiose pilosa. Capitula 1.5—2 *cm* longa. Lacinae bractearum oblongae saepe obtusae. Calyx 10—12 *mm* longus erecto- vel erectopatentim pilosus, bicolor, sursum obscurius purpureo coloratus. Corolla luteo-rubra vel rubra, carina intensius colorata. Frequenter occurrit in Graecia, Macedonia, Anatolia, Oriente; sec. W. Becker [l. c. (1912) 23] etiam in Dalmatia et insulis adriaticis, quod dubitandum est, quia autor nominatus hoc nomine etiam alias species (conf. l. c. 268) comprehensit. Planta, quae d. Brandis hoc nomine in monte Žaba Pl. Hercegovinae indicavit, exacte probandum sit.

5. *Anthyllis illyrica* [G. Beck, Fl. Südbosn. in Ann. naturh. Hofm., XI (1896), 63 ampl. *A. praepropera* Sagorski in Allg. bot. Zeit. (1908) 156]. Annuua vel biennis 1- vel paucicaulis, cauli tenui, 1- vel bicephalo, vel perennis, pluricaulis, caulibus firmiter saepe ramosis, pluricephalis; omnibus infra cum foliis longe patentim, supra appresse pilosis. Folia basalia nunc simplicia vel parce dispariter pinnata, foliolis terminalibus conspicue majoribus, 2—4 *cm* longis; caulina pinnata, foliolis 7—13; omnia supra glabra vel parce pilosa, subtus pilosa. Capitula —22 *mm* longa. Bractearum lacinae angustae, sublineares, acuminatae. Calyx 10—15 *mm* longus, plurimum bicolor, appresse sericeus. Corolla varie colorata.

f. *praepropera* A. Kern. in Sched. ad flor. exs. austro-hung. nr. 433 (1882) pro var. *A^s Dillenii*; G. Beck Fl. Südbosn. in Ann. naturh. Hofm. XI (1896) 62 pro spec.; = *A. Dillenii* subspec. Sagorski in Allg. bot. Zeit. (1908) 156; = *A. Spruneri*

subspec. W. Becker in Beih. Bot. Centralbl. 27 (1910), 268]. — Annuā, uni-vel paucicaulis, radice tenui fusiformi. Caulis tenuis 1—2-cephalus. Folia inferiora supra plurimum parce, infra copiose pilosa. Foliolum ultimum in foliis inferioribus ceteris conspicue majus. Folia caulina 1—3 excepto summis dispariter pinnata, foliolis 5—7 (—13). Capitula 15—18 mm longa. Calyx plus minus appresse vel erecte pilosus, (10) 12—14 mm longus. — Radice saepius pardurante in f. *illyricam* convertit. In locis lapidosis, graminosis, sterilibus — 880 m. Floret mens. Majo—Junio.

Bosna: In monte Trebević (*B.). — **Hercegovina:** Circa Mostar frequenter (Pi.! Bornmüller!) in monte Stolac (Baenitz!) in monte Leotar prope Trebinje (*V. 1892), prope Ulice, Travni do, Vrbanje (Berger), Suturina (Adamović f. M.).

f. *albana* [Wettst. Beitr. Fl. Alban. (1892) 37, t. II fig. 24, 26 vidi orig.!; Beck Fl. Südbosn. in Ann. nat. Hofm., XI (1896) 66 pro spec. — *A. Webbiana* Griseb., Spic. fl. Rum., I, 13 vidi orig.! non Hook. — *A. Dillenii* subspec. *A. albana* Sagorski in Allg. bot. Zeit. (1908), 26. — *A. Spruneri* subspec. W. Becker in Beih. bot. Centralbl., 27 (1910) II, 268]. Biennis. Caulis plurimum singulus 10—15 cm altus, capitula 1—2 ferens, infra patentim pilosus. Folia inferiora simplicia vel dispariter pinnata, foliolo terminali — 4 cm longo; caulina 1—3, subpariter pinnata, foliolis 5—9. Foliola omnia supra parce pilosa vel glabra, infra patentim pilosa. Bractearum laciniae lineares subobtusae. Capitula 16—19 mm longa. Calyx copiose appresse pilosus, discolor, c. 10 cm longus. Corolla aurea.

Macedonia, Albania (Kobilica). — **Hercegovina:** Prope Mostar in formis proxime accedentibus (B.), in monte Velež (B.).

illyrica [G. Beck, Fl. Südbosn. in Ann. nat. Hofmus., XI (1896) 63 pro spec. — *A. praepropera* f. *illyrica* (Beck) Sagorski in Allg. bot. Zeit. (1908), 156. — *A. Dillenii* Aut. — *A. pulchella* Postenschl. Herb.! — *A. vulneraria* v. *coccinea* Vis., Fl. Dalm., III, 277 pro parte. — *A. polyphylla* Pant., Adnot. 124 ex descr. et loco non Kit. — *A. tricolor* v. *baldensis* Asch. Gr., Syn., l. c., 632]. Perdurans saepe biennis pluricaulis radice lignescente. Caulis saepe firmus, pluriceps, capitulis saepe distantibus, 17—22 mm longis. Folia inferiora conspicue dispariter pinnata, foliolo ultimo saepe maximo; caulina saepe 4—6-juga. Foliola supra glabra vel parcius pilosa, subtus copiose pilosa.

Capitula bracteata (non folio suffulta) aut 2 terminalia appropinquata aut —4 sessilia internodiis conspicuis longis interrupta, 16—22 mm longa. Calyx major, 14—15 mm longus, dense appresse sericeo-pilosus. Corolla colore variat, ochroleuca, lutea, in carina vel tota plus minus rubescens, rubra, coccinea. Abunde per regionem florum mediterraneae. Plantae luxuriosae 30—45 cm altae, habitum *As vulnerariae* L. *typicae* aemulantur, sed caule infra patentim longe plus minus piloso, laciniis bractearum angustis sublinearibus acuminatis recognoscendae sunt. In saxosis, lapidosis aridis, graminosis —1100 m. Floret mens. Majo, Junio.

Bosna: In declivibus montis Trebević (*B. 1896, M.), Draguljevac (Prodan). — **Hercegovina:** Prope Jablanica (Prodan), Drežnica (B.), in monte Čabulja Pl. (B), copiose circa Mostar (*B. 1896), in montibus Hum, Podvelež, Velež (B.); in monte Leotar prope Trebinje (B.), Štedro prope Zupci (Adam. f. Sagorski), in parte australi versus Dalmatiam (Berger), inter Ivanica et Drijeno (B.).

Huc pertinent probabiliter omnes stationes ad *Am Dillenii* prolatae ex Hercegovina: Čvrstica Planina: Diva Grabovica, Jelenak (V.), Drinača (Prodan), Čvrstica (V.); Štitar prope Rakitno (Begović f. V.); Vel. Vljajna, Čabulja (Prodan); Mostar (Str., Mu.), Gljiva prope Trebinje (*P. 1874), Dobrido, Štirovnik, Prasa (V.).

Formae leviores vix constantes ac arripendae sunt: *variiflora* [Sag. in Allg. bot. Zeit. (1908) 157] corolla primum pallida, porro rubescens, demum coccinea. — **Hercegovina.** In monte Hum prope Mostar (*Sagorski 1908). — *pallens* [Sag. l. c. 157]. Corolla ac calyx concolor, albus vel ochroleucus—dilute violacea. — **Bosna.** Paklina Pl. prope Ravno (Stadlmann f. *Sagorski). — **Hercegovina.** In monte Hum prope Mostar (*Sagorski). — *Lindbergii* [Sagorski, l. c. (*A. vulneraria* v. *illyrica* f. *bicolor* Lindberg, It. austro-hung. in Finska vet. soc. Förhandl. 48 (1906) nr. 13, 55)]. Corolla lutea, apex carinae purpureus. — **Hercegovina.** In monte Stolac prope Mostar (*Lindberg 1906).

f. *hercegovina* [Sagorski in Allg. bot. Zeit. (1908), 172 pro subspec. *As Dillenii*] ut mea fert opinio, est forma modo calycibus discoloribus minoribus 11—12 mm longis, quam Sagorski in **Hercegovina** in monte Velež prope Bojište et in agro Nevesinjsko polje collegit. Formas similes ipse collegit in montibus circa Mostar: Velež, Čabulja alibique.

6. *Anthyllis Weldeniana* [Reich., Fl. Germ., 515 (1832) pro spec.? Confer Beck, Fl. Südbosn. in Ann. nat. Hofm. XI (1896), 62. — *A. adriatica* G. Beck, l. c., 62. — *A. Dillenii* aut. p. p. et subspec. *A. Weldeniana* Sag. in Allg. bot. Zeit. (1908) 154. — *A. Spruneri* subspec. *A. Weldeniana* W. Becker in Beih. Bot.

Centralbl., 27 (1910) 268, 270 et *adriatica* W. Becker l. c. 29 (1912) 30, 36. — *A. tricolor* v. *adriatica* Asch. Gr., Syn., l. c., 631. — *A. vulneraria* v. *adriatica* Lindberg, Iter austro-hung. in Finsk. vetensk. soc. förh 48 nr. 13 (1906), 55 sed v. *coccinea* Vis., Fl. Dalm., III, 277 p. p. — Kerner, Fl. exs. austro-hung. nr. 432 (*A. Dillenii*). Perennis rarius annua, pluricaulis. Caules tenues, mediocres, infra cum foliis patentim, supra appresse pilosi. Folia omnia subpariter pinnata; foliola terminalia inferiorum hinc inde lateralibus paulo majora, omnia parvula, summo 15 mm longa, supra subglabra subtus patule pilosa; caulina foliolis 7—11. Capitula 14—18 mm longa, floribus minoribus. Bractearum lacinae angustae, acuminatae. Calyx parvulus, 9—12 mm longus, discolor, appresse sericeus. In saxosis lapidosis, aridis —1300 m. Floret mense Majo, Junio.

Bosna: In monte Džermanica prope Višegrad (*M. 1920.), Statio mira. — **Hercegovina:** Prope Mostar (*Lindberg! 1905); in monte Podvelež (B. non certe), in monte Orijen (Adam. f. Sagorski), inter Uskoplje et Ivanica (Ja. f. Sagorski). — **Dalmatia:** In cacumine Sniježnica (Ilijina Glava). c. 1234 m (Adam. f. Sagorski 1900), prius Neumayr 1853 et Petter 1856).

Lusus *decolorans* [Sagorski in Allg. bot. Zeit. (1908) 154] calyce concolore, pallido, corolla dilute rosea vel pallide lutea, demum dilute coccinea in **Hercegovina** in agro Mostarsko polje (Simonović f. *Sagorski 1910) in monte Stolac pr. Mostar (M.) in valle Sušica prope Trebinje, prope Lastva (M.) collectus est.

f. *decalvans* [Sagorski l. c., 155 = *cinerascens* Sag. in Öst. bot. Zeit. (1911) 89] descripta est »Annu v. biennis caule infra appresse piloso, foliolis subaequalibus, calyce 10—12 mm longo«, huius loci non esse videtur. Indicatur in **Hercegovina** prope Mostar (Sagorski), in agro Bijelo polje, prope Vojno, (*M. 1920).

f. *variegata* [Boiss. in Kotschy Pl. exs. it. cilic. nr. 4, 48, 105a, 220a, vix Fl. Or., II 158 (1872); Beck, Fl. Südbosn. in Ann. nat. Hofmus. XI (1896), 63. pro spec. — *A. Dillenii* subspec. Sagorski in Allg. bot. Zeit. (1908) 174. — *A. vulneraria* subsp. *A. tricolor* v. *variegata* Asch. Gr., Syn., l. c., 633. — *A. pulchella* subspec. W. Becker in Beih. bot. Centralbl. 27 (1910) II 275 p. p.]. Caules —25 cm alti, infra patentim villosi. Foliola saepe utrinque subvillosa. Calyx 8—10 mm longus, vix discolor, patentim villosus. Est *A. Weldeniana* copiosius pilosa. Ab *A. pulchella*, cui W. Becker [l. c.] adjunxit sat diversa; bractee (sec. W. Becker) ad tertiam vel mediam modo incisae hinc inde apud omnes species propinquas reperiuntur neque hanc plantam insignem faciunt.

Dalmatia: In monte Biokovo? (Vidi!). **Taurus!**

7. *Anthyllis pulchella* [Vis., Fl. Dalm. Suppl. I, 141 (1872) in Mem. ist. Ven. 16 (1872), 173; Beck, Fl. Südb. in Ann. nat. Hofm. XI (1896), 65; Sagorski in Allg. bot. Zeit. (1908) 187. — *A. vulneraria* v. *pauciflora* Asch. et Hut. in Exs. — *A. Webbiana* Boiss., Fl. Or., II 158 (1872) non Hook. — *A. Dillenii* subsp. *A. pulchella* Vis. apud Asch. Gr., Syn. l. c., 638. p. p.]. Perennis, 1 — pluricaulis. Caulis humilis — 12 cm altus, appresse vel infra subpatule pilosus. Folia basalia simplicia vel dispariter pinnata, foliolo terminali majore; caulina 1—3 dispersa vel in parte caulis inferiore inserta, foliolis 5—9, omnia supra plurimum glabra, infra appresse sericeo-pilosa. Capitula 11—15 mm longa. Bractearum lacinae plurimum anguste lineares, acutae. Calyx 6—10 mm longus, discolor, apice purpureus, appresse, erecte vel plus minus patule pilosus. Corolla ochroleuca, dilute lutea saepe violascens, demum coccinea, carinae apice purpureo. Lamina vexilli ungue suo $2\frac{1}{2} \times$ brevior.

Variat:

α . *Visianii* [Asch. Gr., Syn., l. c. 638 (1908). — *A. pulchella* Vis. l. c.; Beck, l. c., 65; Sagorski l. c., 187.]. Calyx appresse pilosus. Corolla dilute lutea saepe violaceo tinctorum. Ludit: *typica* [G. Beck]. Caulis humilis, simplex, 1—2 capitula ferens. Lacinae bractearum angustae, lineares, acutae. Calyx 6—9 mm longus.

Hercegovina—Dalmatia. In monte Orijen (Huter! 1867, f. *B. 1896). **Dalmatia.** In monte Biokovo, in montibus Radostak et Dobrostica prope Hercegnovi (Studniczka). **Crna Gora.** In monte Lovćen c. 1896 m (Huter!), Kom Kučki.

Stadlmanni [Sagorski in Allg. bot. Zeit. (1908) 205 pro forma *A^s scardicae*] Bracteae fissae, laciniis longis, acuminatis. **Bosna:** In monte Krug Pl. prope Livno 1200 m (Stadlmann fide *Sagorski 1908).

montenegrina [Degen et Fiala apud Baldacci in Mem. Acc. sc. ist. Bologna, ser. 5, IX (1900) 15 pro var. *A^s scardicae*; Sagorski, l. c., 204. — *A. pulchella* β . *scardica* f. *montenegrina* Asch. Gr., Syn., l. c., 639]. Minus pilosa. Lacinae bractearum subobtusae. Calyx 10 mm longus. **Albania:** In monte Parun (Baldacci 1897 nr. 205. f. Sagorski).

monticola [Sagorski, l. c., 188! = *A. pulchella* Lindb., Iter Austro-hung. in Finsk. Vet. soc. förhandl. 48 (1906) nr. 13, 55 sed descriptio hic data ad formam *typicam* pertinet. Autor mihi autem exemplaria benevole sub nomine *A. scardica*? communicavit, quae in Crna gora »in saxosis apricis supra urbem

Cattaro ad viam vetustam ad Cetinje, c. 700 *m*, « mense Majo 1905 lecta sunt omninoque cum descriptione Sagorskiana congruunt. Caulis altior, basi saepe patentim-pilosus, ex axillis foliorum caulinarum ramosus, —22 *cm* altus, capitula —7 ferens. Bracteae profunde partitae vel fissae. Capitula paulo majora.

Crna Gora: Supra Kotor (Cattaro). Lindberg 1905! cfr. supra); in monte Lovćen c. 1896 *m* (Huter! 1:67). **Dalmatia:** Sniježnica (Ilijina glava) c. 1234 *m*, (f. W. Becker) inter Uskoplje et Ivanica (f. W. Becker).

β. *scardica* [Wettst., Beitr. Fl. Alban. 37 t. II fig. 23, 25, (1892), vidi orig.!!; Beck Fl. Südbosn., l. c., 66; Sagorski l. c., 204. pro spec. — *A. pulchella* v. *scardica* Asch. Graebn., Syn., l. c., 639]. Caulis 5—12 *cm* longus, appresse pilosus. Folia inferiora simplicia vel dispariter pinnata, foliolo terminali elliptico 1·2—3·5 *cm* longo; caulina 1—3, foliolis 5—9 angustis; Foliola supra subglabra, subtus appresse pilosa, ea foliorum superiorum cum bracteis patule pilosa. Bracteae plurimum ad mediam partita, rarius fissae, laciniis acutis. Capitula parvula 11—15 *mm* longa. Calyx 9—10 *mm* longus, in parte superiore purpureo-sanguineus et siccus nigricans, dense patule pilosus, subvillosus, demum inflatus. Corolla pars excedens parva. Unguis vexilli lamina sua 2½ × longior. Corolla (f. Sagorski) ochroleuca saepe rubroincta.

Ludit:

genuina [G. Beck]. Bracteae ad mediam partitae. In alpinis calcareis; floret m. Julio, Augusto.

Bosna: In montibus Maglić et Volujak (*B. 1896). — **Hercegovina:** In montibus Visočica (*B. 1896), Čvrstica (Bucalović f. M.; confer f^m *Janchenianam*), Baba Pl. (Hawelka f. B.). **Crna Gora! Albania!**

Adamovi.ii [Sagorski, l. c., 204]. Bracteae fissae, laciniis angustioribus. Minus pilosa, foliolis minoribus. Fide W. Becker [in Beih. bot. Centralbl. 29 (1912) II, 23] ad *A^m alpestrum* v. *dinaricam* ducenda sit.

Hercegovina — Dalmatia: In monte Vučji zub (Adam. f. *Sagorski 1908).

Jancheniana [Malý in Asch. Graebn., Syn. l. c., 640 (1908) pro spec.; Sagorski, l. c., 188 pro var. *A^s pulchellae*]. Caules graciles 2—6 *cm* alti, procumbentes. Foliola caulina 1—3, cum foliolis 2—7 angustis. Capitula pauciflora, bracteis fissis, laciniis oblongis obtusiusculis. Calyx 6—8 *mm* longus, patule villosus. Mihi forma depasta esse videtur. Formae tales simillimae sed

calycibus appresse pilosis instructas *A^m vulnerariam* v. *paucifloram* Asch. Huter ex parte constituunt.

Bosna: In monte Mali Vran (Stadlmann f. Sag). — **Hercegovina:** In monte Čvrstica (Ibro Bucalović et Stadlmann f. *M. et Sagorski 1908).

W. Becker [in Beih. bot. Centralbl. 29 (1912), II 24] etiam formas inter *A^m pulchellam* et *A^m alpestris* β. *dinaricam* commemoravit, quarum stationes: Bosna in monte Kamešnica et Hercegovina in monte Orijen enumerantur. Ex descriptionibus imperfectis verbis paucis absolutis nil intelligi potest.

8. *Anthyllis alpestris* [Kit. in Schult., Öst. Fl., ed. II, II 317 (1814) pro var. *A^s vulnerariae*; Kit., Addit. in Linnaea 32 (1863), 612; Beck, Fl. Nied. Öst., 853; Sagorski in Allg. bot. Zeit. (1908) 55. — *A. alpestris* Reich., Fl. Germ., 515 (1832) — *A. alpestris* Hegetschw. et Heer, Fl. Schweiz, 693 (1840). — *A. vulneraria* v. *alpestris* Kit. apud Sagorski in Deutsch. bot. Mon., (1890) 136; subspec. = Asch. Gr., Syn., l. c., 626]. Perennis, multicaulis. Caulis simplex 2—pauciceps, rarius ramosus pluriceps, plurimum in parte inferiore foliis 1—3 praeditus (rarius folio summo in media parte caulis inserto), appresse pilosus. Folia basalia simplicia vel dispariter parce pinnata, foliolo terminali elliptico magno; caulina foliolis 7—8 munita; omnia supra glabra, infra pilosa. Capitula magna. Lacinae bractearum exteriorum oblongae interiorum angustiores, omnes copiose longe appresse vel ad basim patentim pilosae. Flores 19—21 mm longi, rarius minores. Calyx 12—17, plurimum 13—14 mm longus primum erecte demum patule villosus, serius fumoso- vel viridule canescens. Lamina vexilli unguem longitudine aequans vel paulo brevior. In alpinis, rarius proluta in subalpinis. In pascuis alpinis, ad nives regionis alpinae c. 1500—2000 m, solo calcareo. Floret mens. Junio—Sept.

Bosna: In montibus: Osječenica (F. sub *Aⁱ polyphylla* f. M.), Klekovača (F., B.), Plazenica (Ha. Fa. ac f. W. Becker) Kamešnica, Dinara, Janjkovo brdo, Troglav (f. W. Becker), Šator (Ja. f. W. Becker), Vlašić (B.), Vranica Pl. in cacaminibus Krstac — Ločike (Simony f. Vierhapper, B.), Zec, (Schwarz f. B.), Bjelašnica (B.), Treskavica (B.), Trebević (Brancsik), Gola Jahorina (M.), Bregoc (Pr.), Maglić (B.), Volujak (Adam., B.), Lelija (R.). — **Hercegovina:** In montibus Lisin prope Ivan (M.); Prenj Pl. (Prodan); Osobac, Sivadija (Pr.), Lupoglav (B.); Plasa (Prodan), Vel. Vlajna in montibus Čabulja Pl. (Prodan), Velež (f. W. Becker).

Variat:

α . *eualpestris* [G. Beck]. Calyx 13—14, hinc inde —17 *mm* longus. Flores majores. Vulgata.

Ludit:

pallidiflora [Jord. fide Sagorski in Deutsch. bot. Mon. (1890) 136 et in Allg. bot. Zeit. (1908) 57; Rouy in Rouy Fouc., Fl. Franc., IV 289 (1897)]. Corolla ochroleuca. Hinc inde.

typica [G. Beck, Fl. Nied.-Öst., 853]. Corolla dilutea lute vel sulphurea. Calyx unicolor. Frequenter.

Hegetschweileri [Brügger in Mitt. Naturf. Ges. Graub., 29 (1884—85), 71 (1886).] Corolla aurea. Calyx unicolor. Rarius.

picta [G. Beck, l. c. 853. — *A. vulneraria* v. *baldensis* A. Kern in Exsicc. p. p.! — *A. alpestris* subspec. *A. baldensis* Sag. in Allg. bot. Zeit. (1908), 58.; *Cherteri* (Brügger) Asch. Graebn., l. c. 628]. Corolla ochroleuca v. lutea, vexillum hinc inde rubrostriatum. Carina rubro-adusta vel rubra. Calyx ad apicem rubescens vel purpurascens. — **Bosna**: In montibus Dinara (Degen) Gnjat (Ja. Wa.), Troglav (*B. 1897). — **Hercegovina**: Ortiš in mont. Prenj Pl. —2000 *m* (*B.).

f. *major* [G. Beck. — ? *valida* Asch. Graebn., Syn. l. c., 628.] Caulis firmior —55 *cm* altus, saepe ramosus et capitulis pluribus ornatus, altius foliatus. Foliola terminalia foliorum basaliū saepe maxima. Flores capitulorum terminalium saepe majora quam ei capitulorum lateralium. Calyx ut in typo. Est planta descendens luxurians stationum subalpinarum demissarum.

In **Bosna** formas propius accedentes observavi. — **Croatia**: Prope lacus Plitvica (Rossi nr. 8203!). Copiosius in Alpium vallibus.

f. *subtypica* [W. Becker in Beih. bot. Centralbl. 29 (1912) II 25] non descripta est. Sec. stationes Vranica Pl. (Krstac — Ločike) et Plazenica sine dubio ad typum *eualpestris* pertinet.

β . *dinarica* [G. Beck Fl. Südbosn. in Ann. nat. Hofm., II (1887) 120]. Caules e basi decumbente ascendentes, humiles, monocephali. Flores lutei vel aurei, minores 14—17 *mm* longi. Calyx 10—12 *mm* longus. Foliola subtus copiosius appresse sericea. Foliolum terminale foliorum basaliū saepe minus vix 2 *cm* longum. In typo (var α .) caules plurimum erecti, capitulis 2 ornati, foliola subtus minus appresse sericea vel glabrescentia, flores calycesque majores, foliolum ultimum foliorum basaliū majus vel maximum. In montium regione summa vulgata, sed ad typum saepe transit.

Bosna: In montibus Dinara (Ja. Wa., Jankovo brdo, Troglav, B.). Vlašić (B.), Vranica: Krstac — Ločike (F., B.), Matorac (R.)?, Zec (B.), Bjelašnica, Treskavica, Lelija, Maglić, Volujak, Ljubičina (B.) — **Hercegovina**: In montibus Prenj usque ad cacumina (B.), Plasa, Čvrstica (V.),

Štitar (Begović f. V.), Velež (B). Etiam f. *picta* observata est in montis Dinara cacumine Jankovo brdo (f. W. Becker) et monte Velež (B.), cum f. *picta* varietatis α supra descripta florum colore congruens.

Sec. W. Becker [in Beih. bot. Centralbl., 29 (1912) II 24] etiam formae intermediae inter *A^m alpestrem* [*dinaricam*] et *A^m pulchellam* in montibus Dinara, Kamešnica, Maglič, Orijen observandae sunt, quae notis paucis datis ad formam *pictam* varietatis β *dinaricae* pertinere videntur. Sed idem autor prius [in Beih. 27 (1910) 276] e contrario professus est.

A. scardica v. *transiens* Sagorski in Allg. bot. Zeit. (1908) 36 in monte Maglič Bosnae a d. Adamović collecta parimodo inter nominatas intercidit.

A. affinis v. *Murbeckii* [Sagorski, Üb. d. Formenkreis d. Anthyllis Vulneraria in Allg. bot. Zeit. (1908) 46 Nachtrag?] cum var. *dinarica* calyce unicolore, corolla aurea se conjungit, confer *A^m vulgarem*.

9. *Anthyllis montana* [L., Spec. pl., 719 (1753); Vis., Fl. dalm., III, 278; Reich. f., Ic. fl. Germ., XXII, 83, t. 125; Beck, Fl. Nied. Öst., 852; Asch. Gr., Syn. l. c., 643]. In saxosis, glareosis, calcareis pascuis 1100—2100*m*. Floret mens. Junio, Julio.

f. *atripurpurea* [Vukot. in Sitzb. Ak. Wien (1857), 537. Reich. f., Ic. l. c. 84, t. 125, fig. III. — *A. atropurpurea* Schloss. Vukot., Syll. (1857) 122. — *A. montana* v. *typica* f. *atripurpurea* Asch. Gr., Syn., l. c., 645]. Flores 9—12*mm* longi, corolla intense rubra — purpurea.

Hercegovina: In monte Plasa (*B.).

f. *Jacquini* [Kern. Dec. pl. nov., I 41 t. 2, fig. 2, 3 in Zeitschr. Ferd. Innsbr. 1870; Pospich., Fl. Öst. Küstenl., II, 387 pro spec.; Reichenb. f., l. c., 83, t. 125 fig. II pro var.; Beck, Fl. Nied.-Österr. 852 pro forma]. Bracteeae flores longitudine aequantes vel eis conspicue breviores. Flores plurimum 10—12*mm* longi. Corolla plurimum dilute lilacea nervis obscurioribus rarius albiflora (= *albiflora* G. Beck). — Saepe in cacuminibus montium humilis, caulibus 3—4*cm* modo longis, capitulis 12*mm* modo longis, bracteis floribus brevioribus, floribus 8—9*mm* longis (= *nana* G. Beck). Sic in monte Ortiš montium Prenj Pl. 2000—2100*m* (B.). Flores plantae illyricae saepius 12*mm* longi *A^m montanam genuinam* Reich. admonent, ac saepe bracteis capitulis brevioribus transitum praebent, qui

apud f. *atroviolaceam* etiam corollae colore apparet. (Confer Burnat, Fl. Alp. Mar. II, 90.)

Vulgata in **Bosnae**: montibus: Osječenica, Klekovača (F., B.), Vitorog (Sta. Fa.), prope Velika vrata, Kupres, in montibus Vel. Malovan, Hodža (Pr.), Vran (F., Br.), Kamešnica (Pichler!), Dinara (Ja.), Troglav (Pr.), Jankovo brdo, Vrsina, Klačari vrh, Janski vrh, Vel. Bat, Strmac (Ja. Wa), Uilica (Ha.), Jedovnik (Ha.), Golja (Sta. Fa.), Šator (Ja., Pr.), Marino brdo (Ja.), Cincar (B., Sta.), Krug (B.), Borova glava (B.); Vlašić (*S. 1848, B.), Vratlo (B. Pl. Bosn. Herc., nr. 59) Treskavica (Pr., M.) Romanija (M.) Gola Jahorina (F. M.), Klek (F.), Lelija (B.), Tovarnica pr. Gornje bare, Volujak (Pr.), prope lacum Kladovoljsko jezero (Knapp f. W. Becker). — **Hercegovina**: Prope Bradina (f. W. Becker?), in montibus Lisin (V.), prope Črepolje (Smetana f. V.); in montibus Prenj (B.) usque ad cacumina —2100 m, Prislav, Borašnica (D.), Porim (V.), prope Rujište (Pi.); Plasa (V.), Sljeme (Prodan), Čabulja in cac. Vel. Vlajna (Prodan), Štitar prope Rakitno (Begović f. V.), copiose in montibus Velež Pl 1150—1800 m (Fo., B., Bornmüller!), Crvanj, Zimomor (Ja.). Bijelašica prope Gacko (Mu.), Orijen (Vesely).

10. *Anthyllis aurea* [Welden apud Host, Fl. Austr., II 319 (1831); Vis., Fl. Dalm., III, 277, t. 42 (1852); Boissier, Flora Orient., II, 157; Reich. f., Icon. fl. Germ., XXII, 83, t. 126; Asch. Gr., Syn., l. c., 645. — *A. polycephala* Reich., Fl. Germ., 516 (1832) non Desf. In saxosis, lapidosis, graminosis, apud nos —1230 m. Floret mens. Majo, Junio.

Hercegovina: Circa Trebinje in monte Leotar (P. 1874, B.) —1229 m, Glijiva (B.), in monte Ilina greda prope Bogojević selo (V.), in valle Travni do (Berger), in montibus Svitavac, Štirovnik, Gnjila greda (V.), supra Ulice (V., Adam.), in monte Orijen (V.), Vlastica (*Fr. Neumayer f. Vis.). — In **Dalmatia** propinqua prope Mrcine (f. W. Becker), in monte Sniježnica (Neumayer, Pichler!).

f. *aurantiaca* [Pant. in Öst. bot. Zeit. 23 (1873) 5] corollis aurantiacis, e Crna Gora nota, nondum observata est.

14. *Hymenocarpus*.

[Savi, Fl. Pis. II 205 (1798) nomen sec. congr. bot. 1905 conservandum; Benth. Hook., Gen., I, 489; Asch. Gr., Syn. mitt. Fl., VI 2, 648. — *Circinnus* Medik., Vorles., II 384 (1787) et Phil. bot., I 208 (1789) (*Circinus*); Taubert in Nat. Pflanzenf., III 3, 255 corrig. Nachtr. 200. — *Medicago* sect. *Hymenocarpus* Ser. in DC., Prodr., II 171; Reich., Consp., 148 (*Hymenocarpus*). — *Anthyllis* sect. *Cornicina* (Boiss.) Endl., Gen., 1267.]

1. *Hymenocarpus circinnatus* [Savi, l. c.; Vis., Fl. Dalm., III 279; Reich. f., Ic. fl. Germ., XXI, 85, t. 128, fig. I; Pospich., Fl. öst. Küst., II, 363; Asch. Gr., Syn., l. c., 648. — *Medicago circinnata* L., Spec. pl., 778 (1753). — *Circinnus circinnatus* O. Kuntze, Rev. gen., I 171 (1891)]. In cultis, pascuis, graminosis.

herbidis apricis, lapidosis in ditone florum mediterraneae. Floret mens. Aprili—Junio.

Hercegovina: Circa Mostar (M.) ut in monte Orlovac (Hawelka f. V.), prope Trebinje (*P. 1874).

15. *Securigera*.

[DC. in Lam. DC., Fl. Franc., IV 609 (1805) nomen sec. congr. bot. 1905 conservandum! Benth. Hook., Gen., I, 489; Asch. Gr., Syn. l. c., 649; Taubert in Nat. Pflanzfam., III 3, Nachtrag 200. — *Securidaca* Mill., Gard. dict., ed. VIII (1768) Gaertn., De fruct., II 337, t. 153 (1791) non L. — *Bonaveria* Scop., Introd., 310 (1777); Endl., Gen., 1280; Taubert, l. c., 256.]

1. *Securigera securidaca* [Bias., Relaz. del viaggio 24 (1841) = Degen Dörfl. in Denkschr. Ak. Wiss. Wien 64 (1897) 718. — *Coronilla securidaca* L., Spec., 753 (1753). — *Securigera coronilla* DC. in Lam. DC., Fl. franç., IV 609 (1805). — *Bonaveria securidaca* Desv., Journ. bot., I (1813) 120 = Reich., Fl. Germ., 541 (1832); Vis., Fl. Dalm., III, 314; Reich. f., Ic. fl. Germ., XXI, 90, 138; Posp., Fl. öst. Küst., II, 404]. In graminosis, herbidis, agris, incultis in ditone florum mediterraneae. Floret mens. Majo, Junio.

Hercegovina: Circa Mostar (Pi., M., Raap Callier Pl. Herc. nr. 60!). Ljubuški (F.), in monte Ošanica glavica prope Stolac —300 m (B.); Dreteli (M.), in monte Glijiva prope Trebinje (*P. 1874).

16. *Dorycnium*.

[Miller, Abridg. gard. dict. ed. IV (1754); Adans., Fam., II, 323 (1763); Scop. Fl. Carn., ed. II, II, 87; Benth. Hook., Gen., I, 490; Taub. in Nat. Pflanzenf., III 3, 257. — Confer: Rikli, Schweiz. *Dorycnium* in Ber. Schweiz. botan. Ges., X (1900), 10 et Die Gatt. *Dorycnium* in Engl., Bot. Jahrb. 31 (1902) 315; Jordan Observ. III (1846) 60—73, Pl. 4 et Jord. et Fourr. Icon. I (1866); Rouy in Bull. ass. franc. bot. I (1898).] »Bijeloglavica«.

Sectio: *Bonjeania*.

[Reich., Fl. Germ., 507 (1832) s. *Bonjeanea*; Endl., Gen., 1269 pro gen.; Boiss., Fl. Or., II, 161 (1872); Rikli, l. c. (1902), 328. — *Lotus* sect. Vis., Fl. Dalm., III, 304.]

1. *Dorycnium hirsutum* [Ser. in DC., Prodr., II, 208 (1825); Bartl., Beitr. 80 (1825); Boiss., Fl. Or., II, 161; Asch. Gr., Syn. l. c., 652; Rikli, *Dorycnium*, l. c., 329. — *Lotus hirsutus* L., Spec. pl., 775 (1753); Vis., Fl. Dalm., III, 304. — *Bonjeanea hirsuta* Reich., l. c., 507; Reich. f., lc. fl. Germ., XXI, 85, t. 134, fig. I; Pospich., Fl. öst. Küst., II, 389]. In locis

aridis, lapidosis, saxosis, dumetis et silvis luminosis in regione florum mediterraneae. Floret mens. Majo—Julio.

Hercegovina: Prope Dračevo (F.), sub castello Carina prope Trebinje (*P. 1874). Gradac prope Neum (Reiser), Sutorina (A.).

Variat:

α . *hirtum* [Rikli, Dorycn., l. c., 338; Asch. Gr., Syn., l. c., 653. — *B. hirta* Jord. Fourr., Brev., I 11 (1866—1868)].

β . *tomentosum* [Rikli, l. c., 334; v. *italicum* Asch. Gr., l. c., 654. — *B. italica* Jord. Fourr., l. c., 12. — *B. hirsuta* var. *italica* Rouy in Rouy Fouc., Fl. Franc., V, 133 (1899)].

Hercegovina: Prope Klek (Asch. fide *Rikli 1902, transiens ad var. *hirtum*).

Sectio: *Eudorycnium*.

[Boiss., Fl. Or., II, 161 (1872); Rikli, *Dorycnium*, l. c., 323 et 352.]

2. *Dorycnium herbaceum* [Vill., Fl. Delph., 80 (1785) et Hist. pl. Dauph., III 417 (1789), t. 41; Reich. f., Icon. fl. Germ., XXI, 86, t. 137, fig. I; Jord., Observ., III 65, t. 4, f. C; Rikli, *Dorycnium* l. c., 353; Beck, Fl. Nied.-Öst., 854; Asch. Graeb., Syn., l. c., 660. — *Lotus Crantzii* Vis., Fl. Dalm., III, 304 (1852). — *D. sabaudum* Reich., Fl. Germ., 867 (1832). — *D. pentaphyllum* β . *hirtum* Neilr., Fl. Nied.-Öst., 945 (1859)]. Inter virgulta, ad margines silvarum, rarius in pratis montanis —1600m. Floret mens. Majo—Augusto.

Bosna: Probabiliter in montosis ubique copiose. Indicatur in Bosna septentrionali et media copiose (Fo.). Masić brdo prope Novi (B.), Ivanjska (B.), Banja Luka (C), Doboj (M.), Žepče (B.), inter Breške et Donja Tuzla (B.), inter Drinjača et Nova Kasaba (J.). Vrnograč (F.), in monte Gomila prope Krupa (B.). prope Bihać (Boller f. Rikli); Prusac prope Donji Vakuf (Ha., Fa.), in monte Hrblijina, prope Kupres, Šujica, Livno, Preodac, Gubin, Glamoč (Pr.); inter Jezero et Jajce (Gross Kneuck.), prope Karaula gora (R. Keller f. Rikli), circa Travnik: prope Paklarevo (*S. 1848 f. Rikli), Putičevo (Fr. Br.), in monte Vlašić (Engler!), prope Zenica (Breindl!), Vareš (Pr.), Kobilja glava (Blau f. Rikli), Tarčin (Pr.), Galjiva njiva (R. Keller), Trnovo (Pr.), copiose ubique circa Sarajevo (B., F., M.), in monte Trebević —1600m (M.), circa Kalinovik, Zelengora, Gornja bara, in valle fl. Sutjeska (Pr.), in monte Treskavica (R. Keller), prope Višegrad (Schiller f. Rikli), Drinsko (M.). — **Hercegovina:** Circa Konjic (D. fide Rikli), prope Borci (Pr.), Jablanica in monte Crni vrh (V.) et in valle fl. Doljanka (Pr.), prope Drežnica (F.), Bojište, Nevesinje (V.), in monte Stolac prope Mostar (Callier f. Rikli), in monte Bjelašica prope Gacko —1200m (Mu.), in valle fl. Jazina in Bijela gora (*P. 1874). — **Novi Pazar:** In valle fl. Lim inter Bistrica et Banja (*B. 1896).

Ludit:

intermedium [Ledeb., Ind. hort. Dorp. (1820) 14 pro spec.; Beck, l. c., 854. — *D. herbaceum* subsp. Asch. Gr., l. c., 661. — *D. pentaphyllum* v. *hirtum* Neir., Fl. Wien, 654. — *D. diffusum* Janka in Öst. bot. Zeit. 13 (1863), 316 (f. vexillo apice truncato vel submarginato in typo rotundato-truncato!)]. Caulis internodia media plus minus patentim longe pilosa superiora etiam puberula. Foliola latiora. Calyx longiuscule pilosus. Vexillum panduriforme. Turiones foliatae villosae. — Vulgatum (*B. 1896).

Planta tota etiam cum calycibus copiose patule pilosa est f. *macedonicum* G. Beck [*D. intermedium* var. Degen et Dörfel, Fl. Alb. Mac. in Denkschr. Wien. Ak. 64 (1897), 718; conf. Rikli, *Dorycn.* l. c. 356]. Tales vidi e Dalmatia [Lapad prope Dubrovnik (B.), ex insula Korčula].

Forma foliolis majoribus calycibus laxe longe pilosis est f. *septentrionale* [Rikli, l. c., in Ber. Schweiz. bot. Ges., X (1900), 43 et *Dorycn.* l. c. 357; Asch. Gr., Syn. l. c., 662].

Hercegovina: In monte Stolac prope Mostar (Raap f. Rikli 1910). Hinc formem *illyricam* modo a collectore collectam vidi.

Forma *diffusum* [Janka l. c.], vix memoriae prodendum quia inconstans in Bosnae monte Stolac prope Višegrad (Čurčić fide M. 1899) collecta est. Confer Kerner in Öst. bot. Zeit. (1869) 12 et Rikli *Dorycn.* l. c. 359.

typicum [G. Beck, Fl. Nied.-Öst., 854; Rikli, *Dorycn.* l. c., 358. — *D. herbaceum* Jord. l. c.; Gremler, Neue Beitr., V, 73. — *D. sabaudum* Reich., Fl. Germ., 867 et Exs. fl. Germ., nr. 649!]. Caulis internodia media pilis parvis appressis tecta. Foliola angustiora. Vexillum minus panduriforme, subintegrum. Cetera ut in priore.

Bosna: Hinc inde. Indicatur: Prope Donja Tuzla (Wettst. f. *Rikli 1910) et prope Zaborak 900—1000 m (Schiller f. Rikli).

illyricum [G. Beck, Fl. Südbosn., in Ann. naturh. Hofm., XI (1896) 73]. Caulis internodia media puberula; eius pili longiores desunt vel pauci. Calyx cum pedicello puberulus, dentibus abbreviatis saepe tubo calycino pluries brevioribus. Foliola parce ciliata.

Bosna: Prope Donja Tuzla (M.). In pratis montanis prope Presjennica (*B.). — **Hercegovina:** In monte Stolac prope Mostar (Raap-Callier,

Pl. Herc., nr. 59!). — **Istria** (Rojana prope Trst [Tergestum], B.). — **Croatia** (Selište ad Drežnik, Rossi nr. 8246!). **Dalmatia** (insula Hvar [Lesina] leg. Portenschlag, Korčula [Curzola], B.; circa Dubrovnik [Ragusa]) — **Crna Gora**: Prope Medun (Szyszyłowicz!), Podgorica, Plavnica (Rohlena). Probabiliter amplius divulgatum.

glabratum [Rikli, Dorycn., l. c., 358]. Caulis internodia media glabra. Foliola vix ciliata. Calyx plurimum puberulus.

Croatia: Ribnik prope Karlovac (Rossi nr. 1413!); in silva Stari gaj prope Sisak (B.).

3. *Dorycnium germanicum* [Rouy, Fl. France, V, 140 (1899); Rikli, *Dorycn.*, l. c., 381. = *D. suffruticosum* Vill. v. = Burnat, Fl. Alp. marit., II 142 (1896), = subsp. apud Asch. Gr., Syn., l. c., 658; var. *sericeum* Beck. Fl. Nied.-Öst., 854. — *D. suffruticosum* Aut. German. et Helvet. non Villars. — *D. pentaphyllum* Scop. var. *sericeum* Kováts apud Neilreich, [Fl. Wien, 654 (1846). — *D. Jordani* v. *germanicum* Gremli, Exk. Fl. Schweiz, 6. Aufl., 496 (1889) et Neue Beitr., V. 72. — *D. decumbens* Kern., Sched. ad fl. exs. austro-hung., nr. 417 (1882) non Jordan]. In aridis lapidosis, pratis montanis, inter virgulta imprimis calcareis usque ad regionem alpinam (—2000m). Floret mens. Majo—Augusto.

Bosna: Prope Donja Tuzla (M.), Grad prope Zvornik (J.). Circa Bihać (Boller), in agro Otaševac ad pedem montis Klekovača (B.), in monte Lisina prope Gornji Vakuf (M.), in agro Rilić polje prope Malovan (*S, 1848), prope Šujica (Pr.), in monte Dinara: in valle Sutina, circa Kozja jama, in jugo Strmac, circa Marica košare (Ja., W.), in monte Uilica (Ja., Wa.), Ravni potok in monte Jedovnik prope Drvar (Ja.), circa Livno (F. fide Rikli, M.), Prisjeka prope Popovići (Ja.), in monte Zec Pl. (Blau fide Rikli). Circa Dubošćica (M.), Sarajevo (Möllendorf f. Rikli), in montibus Draguljevac (Prodan), Trebević (Brancsik), in monte Treskavica (Blau f. Rikli), prope Jelašća (M.), in Zelengora (Lakatos f. M.), in valle fl. Sutjeska (Pr.), inter Rudo et Mioče in valle fl. Lim (M.). — **Hercegovina**: In monte Lisin (V.), prope Konjic (B.) inter Konjic et Podorašac (M.), in montibus Prenj Pl. (B.); Mali Prenj (F.), Prislav, Porim (V.); Čvrtnica (Prodan); prope Drežnica (V.) in montibus Čabulja, Velež (B.), Podvelež (B.), Štitar prope Rakitno (V.); circa Mostar (Bornmüller!), Žitomišljici (Mu.), Liubuški (F.) et prope Crni grm (F.). Circa Trebinje in monte Leotar —1229m (B.) et Gljiva (*P. 1874), prope Arandelovo (V.), in valle Jazina prope Lastva (M.), prope Lastva, Orahovac, in monte Visoka glavica, prope Milanov odsjek, in monte Ledenik, prope Radkuša jama, Konjušnica, Grab, in monte Šljeme, valle Travni do (V.); in montibus Gubar (Hawelka!), Orijen (V., Čurčić f. M.); in Sutorina (R. f. M.). — **Novi Pazar**: Prope Prijepolje (P. Zahlbruckner f. *Hayek 1906).

Ludit:

sericeum [G. Beck = *D. suffruticosum* v. *sericeum* G. Beck, Fl. Nied-Öst., l. c. = *D. pentaphyllum* v. *sericeum* Kováts apud Neilr. l. c. et Synonyma citata]. Tota planta aequaliter dense breviter appresse sericeo-pilosa. Calycis dentes tubum suum longitudine aequantes vel eo breviores. Vulgatum. — Plantas magis suffruticosas, etiam in terris nostris frequentes olim (Fl. Nied.-Öst. 854) typo *Di suffruticosi* detuli. — *incanum* [G. Beck]. Tota planta imprimis in partibus superioribus longius erecto-patule pilosa. Calyx subvillosus. **Croatia:** Prope monast. Trsat supra Rijeka (B.). In ditone nostra solum in formis appropinquatis. — v. *glabrum* [Asch. in Öst. bot. Zeit. (1908) 292 sine descript.] in lapidosis dumetosis montis Dinara (Degen) mihi ignotum est. — f. *brachysepalum* [Asch. Gr., Syn., l. c., 659 (1908)]. — *D. suffruticosum* var. Beck, Fl. Nied.-Öst., 854 (1892)] Calycis dentes abbreviati, superiores subobtusii, inferiores acuti, omnes calycis tubo ter vel quater breviores. **Hercegovina:** In monte Velež (*B. 1896); frequentius in formis accedentibus. — *nanum* [Heldr. et Hausskn., Exsicc. pro spec; Beck, Fl. Südbosn. in Ann. nat. Hofmus. XI (1896) 73 sine descr.; Rikli, *Dorycn.*, l. c., 383; Asch. Gr., Syn., l. c., 659]. Planta nana summo 10 cm alta, internodiis abbreviatis, capitulis paucis 1–3, brevius pedicellatis. In alpinis 1600–2000 m. **Hercegovina:** In montibus Prenj: Borašnica c. 1887 m (*Degen in litt. 1896); Čabulja, Velež (B.), etiam in formis ad formam *sericeum* transiens.

17. Lotus.

[L., Spec. pl. 773 (1753) et Gen., ed. V, nr. 803; Benth. Hook., Gen., I, 490; Taubert in Engl. Prantl, Nat. Pflanzenf., III 3, 257. — Confer Brand; A., Monogr. der Gatt. *Lotus* in Engl., Bot. Jahrb., XXV (1898), 166.] »Svinđuša«.

Sectio: *Xantholotus*.

[Brand, *Lotus* l. c., 204.]

1. *Lotus cytisoides* L., Spec., 776 (1753); Vis., Fl. Dalm., III, 303. — *L. prostratus* Desf., Fl. atl., II 206 (1800) non L. — *L. glaucescens* et *patens* Presl, Del. Prag., 47 (1822). — *L. cornillaefolius* Guss., Fl. Sic. prodr., II 543 (1828). — *L. creticus* var. *cytisoides* Boiss., Fl. or., II, 165 (1872); Brand, *Lotus* l. c. 207]. In arenosis litoreis rarius saxosis. Floret mens. Aprili—Junio.

Hercegovina: Prope Trebinje (*P. 1874). Probabiliter agitur de forma *Allionii* [Desv., Journ. de bot., III (1814) 77; Reich. f., Icon. fl. Germ., XXI, 89, t. 131, fig. II, III sub spec., Willk. Lange, Prodr. fl. Hisp., III 341; Asch. Gr., Syn., l. c., 672 pro var. = *L. cytisoides* All., Fl. Pedem., t. 20, fig. 1] quae in Dalmatia pervulgata est.

2. *Lotus uliginosus* [Schkuhr, Handb., II, 412, t. 211; Brand, *Lotus* l. c., 209; Asch. Gr., Syn., l. c., 675. — *L. corniculatus* v. *major* Ser. in DC., Prodr., II, 214. — *L. major*

Sm., Engl. Fl., III (1825) 313; Reich. f., Ic. fl. Germ., XXI, 90, t. 131, fig. I non Scop.]. In pratis humidis, fossis, ad ripas, in inundatis. Floret mens. Majo—Augusto. In ditone nostra solum observatus est.

v. *decumbens* [Poir., Encycl. Suppl. III 508 (1823) pro sp.; Brand, *Lotus* l. c. 210 sed dubitatur (conf. Asch. Gr., Syn., l. c., 681). — *L. pedunculatus* Cav., Icon., II, 52, t. 164 (1793)].

Hercegovina: In locis lapidosis ad pedem montis Glijiva prope Trebinje et sub castello Carina (*P. 1874). Statio mihi suspiciosa videtur.

3. *Lotus corniculatus* [L., Spec. pl., 775 (1753); Vis., Fl. Dalm., III, 302; Reich. f., Ic. fl. Germ., XXI, 89, t. 129 et 130, fig. II—IV; Beck, Fl. Nied.-Öst., 855; Brand, *Lotus* l. c., 210; Asch. Gr., Syn., l. c., 676]. In pratis, pascuis, herbosis, lapidosis aridis usque ad regionem alpinam (2000 m). Floret mens. Majo—Julio, in superioribus — Augusto.

Frequenter per totas fines **Bosnae** (*S. 1848), **Hercegovinae** (*P. 1874) et districtus **Novi Pazar** (*B. 1896).

Variat:

α. *typicus* [G. Beck, Fl. Nied.-Öst., 855]. Foliola plurimum acuta vel subacuta. Flores plurimum 12—16 mm longi.

Ludit 1. indumento:

f. *arvensis* [Ser., l. c., 214 (1825) = *L. arvensis* Schkuhr, Handb., II, 413, t. 211 (1808). — f. *vulgaris* Koch, Syn. fl. Germ., 177 (1837)]. — f. *ciliatus* [Koch, l. c.; Reich. f., Ic. fl. Germ., XXI, t. 130, f. II; *pilosus* f. Pospich., Fl. öst. Küst., II, 390]. — f. *villosus* [Ser., l. c., 214 (1825) non Thuill.]. — *hirsutus* [Koch, l. c., 178 (1837); Reich. f. l. c., t. 129, f. III = *pilosus* f. Pospich., l. c.]. — Omnes tres vulgatae.

v. *stenodon* [Boiss., Fl. or. II (1867) 166] forma *ciliati* dentibus calycis subangustioribus, longioribus, interdum tubo longioribus, fide autore »vix varietas« quod probam, nec forma quidem propter transitus ad formas normales infinitos. Indicatur in Hercegovinae monte Jastrelica (P. 1874).

L. pilosus Jordan, Pugill., 60 (1852) = *L. cornic.* var. Rouy. Fl. France. V, 148] est forma modo foliolis angustioribus. Fide Prodan in montibus Plasa et Čabulja Hercegovinae repertus.

2. Foliorum magnitudine:

parvifolius [Peterm., Fl. Lips., 540 (1838)]. Foliola minima. Flores minores c. 10 mm longi. Forsan abnormis modo status, quia saepius plantas observavi, quarum caules et normaliter late foliolati et partim parvifoliolati observantur.

Bosna: Prope Donja Tuzla (M.), Travnik (Br.). in montibus Vranica Pl. (Schwarz!) et Klekovača (B.). Velika Raduša: In monte Idovac (Čurčić f. M.).

alpinus [Schleicher, Exs. nr. 75 apud Seringe in DC., Prodr., II, 214 (1825); Boiss., Fl. Or., II 166; Rouy, Fl. France, V, 148; Asch. Gr., Syn., l. c., 680 p. p.; Brand, *Lotus*, l. c. 211; v. *brachyodon* Boiss., Diagn. ser. 2, II, 21 (1856)]. »Caulibus foliisque minimis, floribus saepe extus ruberrimis« [Seringe l. c.]. Glabrescens vel plus minus pilosus; Umbellae 1—3-florae, Calycis dentes tubo suo breviores [Rouy l. c.]. In montium regione alpina. Planta nostra calycis dentibus tubum suum longitudine aequantibus vel paulo superantibus, umbellis 2—6-plurimum plurifloris praestat. Forma *ciliata* alpestris esse videtur.

Bosna: In montibus Hranisava, Bjelašnica, Treskavica (B.), Vratlo, Bregoč, Maglić, Volujak (Pr.), Zec (Schwarz) — **Hercegovina**: In monte Prenj Pl. (B.).

3. Floribus:

minor [G. Beck]. Flores minores c. 10 mm longi. Saepius in ditone florum mediterraneae (B.).

a) calycibus:

Typus, calycis dentibus elongatis saepe angustis, tubum suum longitudine aequantibus [= *euorniculatus* Asch. Gr. Syn., l. c., 677 ex descr.] vulgatus est. Praeterea occurrit: f. *microdon* [Peterm. Anal. Schlüss., 93 (1846)]. **Bosna**: Circa Sarajevo (*B.).

b) Corollae colore:

In typo lutea, vitellina vel aurea, carina pallidior. Hinc inde autem in f. *rubriflorus* [Lamotte, Prodr. fl. centr., 208 (1877—1881)] rubro-aurantiaca vel coccinea. Rare. **Hercegovina**: In monte Baba Pl. (Hawelka!). — f. *purpureus* [G. Beck]. Vexillum plus minus purpureum vel fuscopurpureum, siccum striis latis purpureis ac viridibus pictum. Caetera ut in f. *ciliato*. **Bosna**: Ad lacum Prokoško jezero in monte Vranica Pl. (Schwarz f. *B.).

β. *speciosus* [Val de Lièvre in Öst. bot. Zeit. (1865) 182 = *L. speciosus* Janchen ibidem (1905) 486. — v. *alpicola* G. Beck, Fl. Nied.-Öst., 855 (1892) — v. *alpina* Baumg., Enum. Transs., II 349; Schur, Enum. Transs., 160 non Schleich]. Humilis vel — 35 cm altus. Glaber vel parce ciliatus. Foliola e basi cuneata

obovalia majora et latiora, rotundata vel obtusiora. Umbellae 2—5-florae. Flores majores. Calycis dentes tubo suo sublongiores. Carina apice ustulata. Planta alpestris.

Bosna: In alpinis montis Vlašić (Br.); prope Guča Gora (Franjić!) hic foliolis minoribus. In monte Pogorelica (Schwarz!), Mala Klekovača c. 1760m (Ja. Ha. et Ha. Fa. fide Ja) et Osječenica (F. f. M.). In monte Ljubičina c. 2000m (Schiller f. Ja.).

γ. *tenuifolius* [L., Spec. pl., 776 (1753); Reich. f., Icon. fl. Germ., XXI, 89, t. 130, fig. III, IV; Brand, *Lotus*, l. c., 212; Asch. Gr., Syn., l. c., 683. — *L. tenuis* Waldst. Kit. in Willd., Enum. hort. Berol., 797 (1809); conf. Wallr. in Linnaea XIV, 626. — *L. tenuifolius* Reich., Fl. Germ., 506 (1832); Boiss., Fl. or., II, 166; Pospich., Fl. öst. Küstenl., II, 391]. In arenosis-ripariis, pratis humidis, paludibus, salsis.

Bosna: Prope Bos Brod (V.), Drvar (Ha.), in agris Glamočko polje prope Dubrava et Livanjsko polje (Ja.) prope Sgrlove kuče = Bastasi (*Ha. Fa. 1905). — **Hercegovina:** Circa Konjic (Schiller et Stark f. Ja.), Mostar et ad paludem Mostarsko blato (M. 1891), in agro Nevesinjsko polje prope Bojište (Ja.).

4. *Lotus angustissimus* [L., Spec. pl., 774 (1753); Vis., Fl. Dalm., III, 303; Reich. f., Ic. fl. Germ., XXI 88, t. 136, fig. 1; Pospich., Fl. öst. Küst., II, 391; Brand, *Lotus* l. c., 215; Asch. Gr., Syn., l. c., 685. — *L. gracilis* Waldst. Kit., Pl. rar. Hung., III 254 (1812)]. In graminosis, ad vias in ditione florae mediterraneae. Floret mens. Majo, Junio,

Bosna: (*Asch. Kanitz, Cat., 1877) ubi? In declivibus montanis prope Fojnica (Sendtner sec. M.). — **Hercegovina:** In insula Karaotok paludis Hutovo blato (*M. 1912).

Sec. Malý [in Asch. Gr., l. c. (1908) 686] in Bosna incertus, sed e fonte eodem [in Glasn. zem. muz. 22 (1910) 689] = *L. hispidus* [Sendtn. in Ausland 1848 726—727 non Desf.] prope Fojnicam et inter Fojnicam et Travnik collectus. Non vidi, sed mihi non satis confirmatum esse, videtur.

Tribus: *Galegeae*.

[Benth. Hook., Gen., I, 443; Taub. in Nat. Pflanzenfam., III 3, 258.]

18. *Psoralea*.

[L., Spec. pl., 762 (1753) et Gen., ed. V, nr. 801; Endl., Gen., 1271; Benth. Hook., Gen., I, 491; Taubert in Engl. Prantl, Nat. Pflanzenfam., III 3, 263.]

1. *Psoralea bituminosa* [L., Spec. pl., 763 (1753); Vis., Fl. Dalm., III, 305; Reich. f., Ic. fl. Germ., XXI, 60, t. 139;

Asch. Gr., Syn., l. c., 699]. In lapidosis aridis sterilibus incultis ditionis florum mediterraneae. Floret mens. Majo—Oct.

Hercegovina: Inter Ivan et Konjic (Landauer!), in angustiis fl. Neretva (B.), circa Mostar (B., M.), inter Gabela et Čapljina (B.), circa Dretelj (M.), in monte Ošanica glavica prope Stolac (B.), prope Klek (R. f. Asch. Gr.), Arandelovo (V.), in Sutorina (Pr., R.); prope Ivanica (B.).

Ludit: *plumosa* [Reich., Fl. Germ. exc., 869 (1832) pro spec.; Reich. f., l. c., 91, t. 140, fig. I pro var. Confer Burnat, Fl. Alp. mar., II, 169].

Hercegovina: Prope Stolac (*B.). — Etiam in f. *lanceolata* [Rouy, Fl. France, V 131 (1899)] occurrit.

19. *Amorpha*.

[L., Spec. pl., 713 (1753) et Gen., ed. V, nr. 768; Endl., Gen., 1270; Benth. Hook., Gen., I, 492; Taubert in Nat. Pflanzenfam., III 3, 264]

1. *Amorpha fruticosa* [L., Spec. pl., 713 (1753); Beck, Fl. Nied.-Öst., 857; Pospich., Fl. öst. Küst. II 393; Schneider, Laubholz, II, 72; Asch. Gr., Syn., l. c., 703]. Ex America boreali saepe in hortis colitur, ex iis auffugit et spontanea in ripariis, paludosis rarius aridis occurrit. Sic vidi in Bosna ad ripas fl. Sana ad viam ferream prope Dobrljin. Floret mens. Majo, Julio.

20. *Galega*.

[L., Spec. pl., 714 (1753) et Gen., ed. V, nr. 770; Endl., Gen., 1272; Benth. Hook., Gen., I, 496; Taub. in Engl. Prantl, Nat. Pflanzenfam., III 3, 268.]

»Orlina, ždraljevina«.

1. *Galega officinalis* [L., Spec. pl., 714 (1753); Vis., Fl. Dalm., III, 306; Reich. f., Ic. fl. Germ., XXI, 91, t. 145; Beck, Fl. Nied.-Öst., 857; Pospich., Fl. öst. Küst. II 394; Asch. Gr., Syn., l. c., 708]. In fossis, pratis humidis, ad ripas et vias ac pascuis, dumetis — 1043 m. Floret mens. Majo—Augusto.

Bosna: Inter Dragočaj et Ramići (B.), prope Draksenić ad riv. Rakovica (B.), prope Brankovac (Fo. f. V.), circa Banja Luka (H). Kobaš (Prodan), Matužići (Fo. f. V.), Bos. Brod (Ha., Fa.), Doboj, Dubica prope Svilaj (F). — Prope Brčko (B.), Ratković (B.), Donja Tuzla (M.), inter D. Tuzla i Simin han (B.), prope Zvornik (Wettst. f. Ja.). Prope Vranograč (F.), Krupa (Fo.), Vedropolje, Budžak. Kaunik (Fo.), Bihać (Boll.), Bugojno (Pr.), Travnik (Br.), Vilenica (Fr. Br.), Trebeuša in valle fl. Lašva (B.), Kiseljak (H.), Visoko (Fo.), Blažuj (B.), in agro Sarajevsko polje (M.), prope Ilidža (Mu.), ad fontem fl. Bosna (Gross Kneuck.). Krupac (F.), prope Trnovo (F.), circa Sarajevo (B., F.), in monte Trebević (M.), in jugo Metaljka prope Pale 1043 m (B.), prope Prača (B.), Ranjen (F.), Vitez (B.), in valle fl. Drina circa Goražde, Foča (B.), Uvac (M.), in valle fl. Sutjeska (Pr.). — **Hercego-**

vina: In valle Doljanka prope Rama (F.), in valle fl. Neretva inferioris (B.), in Sutorina (M.). — **Novi Pazar:** In valle fl. Lim inter Prijepolje et Bistrica (*B. 1896).

21. Robinia.

[L., Spec. pl., 722 (1753) et Gen., ed. V, nr. 775; Endl., Gen., 1274; Benth. Hook., Gen., I, 499; Taub. in Nat. Pflanzenfam., III 3, 274.] »Bagrena«.

1. *Robinia pseudoacacia* [L., Spec. pl., 722 (1753); Reich, f., Ic. fl. Germ., XXI, 92, t. 142, f. I—III; Beck, Fl. Nied.-Öst., 858; Posp., Fl. öst. Küst., II, 395; Asch. Gr., Syn., l. c., 714; Schneid., Laubholz., II, 82; Hempel Wilh., Bäum. Sträuch. d. Wald., III 103, t. 58]. Ex America boreali introducta, ubique colitur, e cultura auffugit et quasi spontanea occurrit. Floret mens. Majo, Junio.

Bosna (*H. 1882). — **Hercegovina** (*Str. 1880).

Robinia hispida [L., Mant. I, 101 (1767); Schneid., Laubholz., II, 81] ex America boreali in hortis modo hinc inde colitur.

22. Colutea.

[L., Spec. pl., 723 (1753) et Gen., ed. V, nr. 776 p. p. rectius Medic., Phil. Bot., I, 210; Endl., Gen., 1276; Benth. Hook., Gen., I, 128; Beck, Fl. Nied.-Öst., 858] »Pucalina, pucaljka«.

1. *Colutea arborescens* [L., Spec. pl., 723 α (1753); Vis., Fl. Dalm., III, 306; Reich, f., Ic. fl. Germ., XXI, 92, t. 141, fig. I; Posp., Fl. öst. Küst., II, 396; Schneid., Laubholz., II, 87; Asch. Gr., Syn., l. c., 729]. Inter dumeta, in silvis luminosis, sepibus, lapidosis — 900 m. Floret m. Majo—Julio.

Bosna: In monte Grmeč Pl. (Boller), in angustiis fl. Vrbas (M.), prope Bočac (Gross Kneucker), supra castellum oppidi Travnik (Fr., Br.); in valle fl. Miljacka prope Stari grad (Bl., B.); prope Ustiprača, Strmica (M.), in monte Grad prope Goražde (B.); in valle fl. Rama (Sta.). — **Hercegovina:** In valle fl. Trešnica (Bl., B.), prope Pribilje — 900 m (M.), circa Konjic, inter Lisičići et Ostrožac (B.), in declivibus montis Prenj Pl. (B.), inter Jablanica et Grabovica (B.), in monte Glogovo (V.), Porim — 800 m (M.), in valle fl. Drežanka — 600 m (Simonović f. Ja.), in angustiis fl. Neretva inter Drežnica et Mostar (B.), circa Mostar (Str., Pi!) in montibus Hum (B., Fo. f. V.) et Cim (Fo. f. V.); inter Blagaj et Jovanović kar. (B.), prope Žitomišljici (Mu), inter Tašovčići et Domanovići (B.), prope Ljubuški. Vitina, Sovići (F.); circa Trebinje in montibus Glijiva et Drača, in valle riv. Jazina prope Orahovac (*P. 1874); in Bijelagora (Hawelka!). — **Novi Pazar:** In valle fl. Lim inter Prijepolje et Priboj (*B. 1896).

СРПСКА КРАЉЕВСКА АКАДЕМИЈА

ПОСЕБНА ИЗДАЊА

КЊИГА LXIII

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ПРИРОДЊАЧКИ И МАТЕМАТИЧКИ СПИСИ

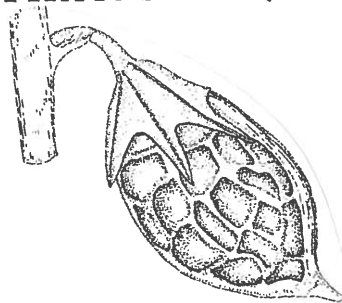
КЊИГА 15

ФЛОРА

БОСНЕ, ХЕРЦЕГОВИНЕ И ОБЛАСТИ
НОВОГА ПАЗАРА

НАПИСАО

Проф. DR. ГИНТЕР БЕК-МАНАГЕТА



БЕОГРАД-САРАЈЕВО

ДРЖАВНА ШТАМПАРИЈА У САРАЈЕВУ

1927

ЦЕНА 60 ДИНАРА

СРПСКА КРАЉЕВСКА АКАДЕМИЈА

FLORA

BOSNAE, HERCEGOVINAE ET REGIONIS
NOVI PAZAR

III. CHORIPETALAE
(FINIS)

ФЛОРА

БОСНЕ, ХЕРЦЕГОВИНЕ И ОБЛАСТИ НОВОГА
ПАЗАРА

III. ХОРИПЕТАЛЕ
(КРАЈ)

НАПИСАО

PROF. DR. GÜNTHER BECK-MANNAGETTA
(У ПРАГУ)

*Prof. Marija Savičkova
апостроф
Београд 1934 год.*

БЕОГРАД-САРАЈЕВО

ДРЖАВНА ШТАМПАРИЈА У САРАЈЕВУ

1927

Ludit:

f. *nummulifera* [G. Beck]. Folia parvula plurimum vix 1 cm summo 1.5 cm longa orbicularia vel suborbicularia subtus cum calycibus copiosius pilosa.

Hercegovina: In monte Hum pr. Mostar (*B.).

f. *microphylla* [Tommasini in Reich. f., Ic. l. c., t. 141, fig. II (an Sendtn. et Tommas. in Verh. zool.-bot. Ges. (1862) 818, 825, t. 14] differt foliolis summo 5—6 mm longis.

Hercegovina: In monte Hum prope Mostar (*B.). — **Dalmatia:** In monte Kozjak prope Split (B.). — **Crna Gora:** Prope Vir (B.).

Caragana arborescens [Lam., Enc., I, 615 (1783); Schneid., Laubholz., II, 95. — *C. caragana* Karst., Deutsch. Fl., 697 (1880—1883); Asch. Gr., Syn., l. c., 736. — *Robinia caragana* L., Spec. pl., 722 (1753)] ex Sibiria in hortis modo colitur.

23. *Astragalus*.

[L., Spec. pl., 755 (1753) et Gen., ed. V, nr. 799; Endl., Gen., 1278 emend. — rectius Benth. Hook., Gen., I, 506 et Bunge, Astr. Spec. geront. I in Mem. acad. sc. St. Petersburg., sér. 7, XI (1868) et II, l. c. XV (1869), nr. 1 (opus gravissimum); Boiss., Fl. or., II, 205. — *Phaca* L., Spec., 755 (1753) et Gen., ed. V, nr. 798; Endl., Gen., 1277.] »Kozlinac«.

Sectio: *Trimeniaeus*.

[Bunge, Astr. I, l. c., 2, 6; Boiss., Fl. Or., II, 206.]

1. *Astragalus sesameus* [L., Spec. pl., 759 (1753); Vis., Fl. Dalm., III, 309; Bunge, Astr. II, l. c., 12; Reich. f., Icon. fl. Germ., XXI, 95, t. 146, fig. I. II; Asch. Gr., Syn., l. c., 747]. In saxosis, aridis. Floret mens. Aprili, Majo.

Bosna: In monte Gnjat montium Dinara P. (*Vis. 1852). — **Hercegovina:** Mogorjelo prope Čapljina (*M. 1905).

Phaca.

[L., Spec. pl., 755 (1753) et Gen. ed. V, 798 emend.; Bunge, Astr. I, 2 18 (1868) et II, 20.]

2. *Astragalus australis* [Lam., Fl. franc., II 637 (1778); Beck in Reich., Ic. fl. Germ., XXI 98, t. 151, fig. II, III; Bunge, Ast., l. c., I 22, II 24; Asch. Gr., Syn., l. c., 756. — *Phaca australis* L., Mant. I 103 (1767)]. In pascuis alpinis, saxosis, glareosis montium. Floret mens. Julio, Augusto.

Crna Gora ad fines **Hercegovinae** in monte Kozin pogled proxime mont. Lebršnik (*Rohlena 1907).

Hypoglottis.

[Bunge, Astrag., l. c., I 46; Beck in Reich., Ic. fl. Germ., XXI, 100.]

3. *Astragalus glycyphyllos* [L., Spec. pl., 758 (1753); Vis., Fl. Dalm., III, 309; Beck in Reich., Ic., l. c., 101, t. 153 et 154, fig. II; Beck, Fl. Nied.-Öst., 864; Posp., Fl. öst. Küstenl., II, 396; Bunge, Astr., l. c., I 25, II 30; Asch. Gr., Syn., l. c., 760]. »Orlovi nokti«. In silvis luminosis, dumetis, sepibus, graminosis — 1580 m. Floret mens. Junio — Sept.

Bosna: Prope Banja Luka (H.), Plitska, Kukavica (Fo.); Doboj (Fo. f. V.), in monte Ilinčica prope Donja Tuzla (B.). Circa Vranograč (F.), Krupa, Zalin, Zaspá, Gorjevac, Kola (Fo.), in montibus Stožer Pl. (B) et Šuljaga, Vel. Malovan (Pr), Kamešnica, Troglav, circa Glamoč, Preodac, Gubin (Pr.), in valle fl. Vrbas prope Jajce (Fo.), circa Travnik (Br), in valle fl. Lašva (B.), prope Visoko (Fo.). Kralupi, Sutiščica, Dabravine (Fo), Vareš, Tarčin (Pr.), in monte Igman, in agro Sarajevsko polje circa Sarajevo (B.), in monte Trebević (Brancsik); inter Previla et Pod Vitez (Pr.), in vallibus fl. Željeznica, Sutjeska (Pr.), prope Suha, Tjentište, Mješajići, Beleni (Pr.) in valle fl. Drina prope Brod (Fo.), Goražde (B), in montibus Površnica, Kmur, Rata (Fo.), Stolac prope Višegrad (Adam.). — **Hercegovina:** Vrabac prope Konjic (Fo.), in monte Velež — 1200 m (Mu., B.), prope Nevesinje (V.), in monte Bjelašnica prope Gacko (Mu.), circa Trebinje in monte Glijiva et in valle Raduš prodo prope Vučijak (*P. 1874).

Ludit:

typicus [G. Beck, Fl. Nied.-Öst., 864]. Rarius. — *rotundifolius* [Presl, Fl. čech. 151 (1819) pro spec.; Čelak., Pro Jr. fl. Boehm., 675 (1874). — **Bosna:** In pratis humidis circa Sarajevo inter Kovačići et Lukavica (F. fide *B. 1896). — *longidentatus* [G. Beck in Reich., Ic., l. c., 101]. — **Hercegovina:** Malo polje prope Buna (Pi. f. *B.).

bosniacus [G. Beck, Fl. Südbosn. in Ann. naturh. Hofm., XI (1896), 75. — *A. glycyphylloides* Davidoff in Öst. botan. Zeit. (1902), 494 ex descr.]. Spicae rhachis, bractee, calyx imprimis limbus suus plus minus pilis nigris praedita. Dentes calycis plurimum tubo longiores. Legumina pilis brevissimis subappressis tecta. Frequenter.

Bosna: In monte Udrč prope Drinjača (Wettst. f. Ja.), prope Žeravice (M.), in monte Vlašić (Br. f. M) et Vranica (Schwarz f. *B. 1896), circa Visoko (Fo.), Putičevo (Br. f. Ja), in montibus Igman, Trebević — 1580 m, Ozren, Romanija, Vitez (M.), circa Sarajevo (*B.), Ilidža, in monte Gradina Siljevina, Udeš (M.), in vallibus Koševo, Miljacka, Prača (M.), circa Rusenovići in distr. Rogatica (F. f. M.), circa Goražde (*B. 1896), circa Mededa et Strmica in valle fl. Lim (M.). — **Hercegovina:** In jugo Ivan (Sündermann f. *B. 1896), in monte Vrabac prope Konjic (Fo.), prope Drežnica (Pi. f. B.) et Prašne Rupe prope Grab c. 880 m (Berger).

4. *Astragalus serbicus* [Pančić sec. Boissier, Fl. Or., II, 268 (1872); Beck in Reich., Ic. fl. Germ., XXI, 102. — *A. galegi-*

formis Panč. in Abh. zool.-bot. Ver. (1856), 482 non L. fide Janka in Öst. bot. Zeit. (1869) 117. — *A. glycyphylloides* Panč., Fl. princ. Serb., 246 (1874) non DC. et v. *A. serbicus* (Panč.) Beck, Fl. Südbosn., in Ann. nat. Hofm., XI (1896) 75. — *A. glycyphylloides* DC. var. *serbicus* Asch. Gr., Syn., l. c., 762]. Caulis subrectus rigidus durus plus minus subpatule pilosus. Stipulae angustae longe acuminatae, integrae, membranaceae. Foliola 15—17 elliptica, breviter apiculatae, subtus et in margine patule pilosa. Racemi nunc foliis fulcrantibus breviores nunc ea longitudine aequantes, densiflori. Calycis dentes inferiores tubo suo longiores vel eum longitudine subaequantes. Calyx, bracteae, pedunculi, rhachis racemi pilis nigris appressis copiosis nigricantia. Bracteolae angustissimae adsunt. Legumina juniora breviter pilosa, matura parcius dilute pilosa, subglabra, longiuscule (6—8 mm longe) stipitata, subrecta, oblonga, utrinque acuta 25—35 mm longa. Semina 8—10, reniformia, 3—3.5 mm lata.

Bosna: Prope Travnik (Br. sub *A^o glycyphylloides?* Non vidi), Crni vrh montis Igman prope Sarajevo c. 1500 m (F. fide *B. 1896) m. Julio; ad silvarum margines montis Trebević prope Sarajevo c. 1100—1600 m (M.!); in monte Radovina c. 1700 m (Schiller f. Ja.) — **Hercegovina:** In valle riv. Brijestov distr. Ulog c. 950 m (*M. in litt.). — **Serbia:** Inter flumina Morava et Timok in montibus Rtanj, Ozren, Plež, Razovati kamen, Suha Pl. (Pančić l. c.). — **Crna Gora:** Perućica dol sub monte Kom (Pančić).

A. glycyphylloides [DC., Prodr., II, 292] fide autore »procumbens, stipulis oblongis substipitatis foliaceis, pedunculis folio brevioribus, leguminibus glabris« describitur, fide Ledeb. [Fl. Ross., I 621] autem stipulis ciliatis, infimis lanceolatis, reliquis lanceolato-linearibus elongato subulatis praestat, quas notas etiam Boissier [l. c.] accepit. Itaque planta nostra ad *A^m glycyphylloides* Ledebour, Boissier et Aschers. Graebn. vix ad plantam De Candolleum pertinere videtur. Ab *A^o glycyphyllo* L. facile habitu indumento patulo, stipulis non herbaceis denticulatis sed integris membranaceis angustissimis, foliolis mucronulatis (non rotundatis vel subretusis) racemis longius pedunculatis, bracteolis calyce cum partibus propinquis indumento nigricante, leguminibus brevioribus subrectis (non curvatis 3—4 cm longis), eorum stipitibus longioribus et tenuioribus (non crassis) seminibus paucioribus (non —18) et majoribus (non 2.5—3 mm latis) distinguitur.

Janchen [apud Fritsch in Mitt. naturw. Ver. Steierm. (1910) Sep. Abdr. 4] *A^m serbicum* Panč. et *A^m Petrovići* [Velen.,

Nachtr. Fl. Bulg. in Sitz. böhm. Ges. der Wiss. (1903) S. A. 4] comprehensit, cui assentiri non possum, quia ultimus »foliolis minoribus angustioribus acutatis (!) pedunculis racemi multo brevioribus, caule eburneo duro glabro fere tereti« insignis apparet.

5. *Astragalus cicer* [L., Spec. pl., 757 (1753); Beck, Fl. Nied.-Öst., 864; Beck in Reich., Ic. fl. Germ., XXI, 102, t. 159, fig. I, II; Pospich., Fl. öst. Küst., II, 397; Asch. Gr., Syn., l. c., 770]. In pratis montanis, graminosis, lapidosis, aridis. Floret mens. Junio, Julio.

Bosna: Prope Banja Luka (*H. 1882), Kobaš (Prodan), circa Donia Tuzla (Wettst. f. Ja.), Zvornik, Vrtoglavica, Drinjača (J.).

6. *Astragalus purpureus* [Lam., Encycl., I, 314 (1783); Vis., Fl. Dalm., III, 307; Bunge, Astrag., l. c., I 51, II 83 p. p.; Beck in Reich., Ic. fl. Germ., XXI, 103, t. 159; *A. glaux* Vill., Pl. Dauph., III, 459 non L.]. In agro nostro solum occurrit:

v. *Gremlii* [Burnat, Fl. Alp. Mar., II, 157 (1896) pro spec. = *A. purpureus* subspec. Asch. Gr., Syn., l. c., 773] foliis supra glabrescentibus, dentibus calycinis latioribus. In locis saxosis glareosis calcareis. Floret mens. Majo—Julio.

Hercegovina: In monte Čvrstica (Bucalović f. *M. apud Asch. Gr., l. c., 1909). Non vidi. — **Bosna-Dalmatia:** In monte Dinara [Welden sec. Rechb., Fl. Germ. exc. v. 867. M. in litt.] (fide Asch. Gr., Syn., l. c., 773 teste Vis., l. c., 307) sed tota dicta falsa sunt, quia Visiani hanc plantam in monte Biokovo modo crescere attulit.

7. *Astragalus depressus* [L., Cent. pl., II 29 (1756) et Amoen. IV, 327; Vis., Fl. Dalm., III, 310; Beck in Reich. f., Ic. fl. Germ., XXI 104, t. 157, fig. II, III; Bunge, Astr., l. c., II 76; Asch. Gr., Syn., l. c., 753]. In saxosis alpinis 1600–2000 m. floret mens. Majo, Junio.

Bosna: In montibus: Dinara (R. f. M.), Bjelašnica, Bukovik (M.), Trebević (Blau, M.), Treskovac, Zelenagora (R. f. M.), Bregoč, Volujak (*Pr. 1902), Muharnica (Ha.). — **Hercegovina:** [*Aschers. Kan., Cat., 104 (1877)]. Ubi? In montibus Prenj Pl. (Beck, Pl. Herc., nr. 60). Plasa (Prodan), Vel. Vlajna montis Čabulja (Prodan), Bjelašica pr Trebinje (R. f. M.).

Astragalus dasyanthus [Pallas, Iter, III, 749 (1776); Bunge, Astrag., l. c., I 33. II 41; Beck in Reich., Ic. fl. Germ., XXI, 105, t. 154, fig. I; Asch. Gr., Syn., l. c., 766] in Hercegovina (fide Asch. Kanitz, Cat. Serb., 104) non crescit. In Serbia modo prope Raška in valle Ibar a Friedrichsthal (fide Griseb., Spic. fl. Rum., I, 60) collecta est.

Cercidothrix.

[Bunge, Astrag., l. c., I 2, II 168.]

8. *Astragalus onobrychis* [L., Spec. pl., 760 (1753); Vis., Fl. Dalm., III, 307; Bunge, Astr., l. c., I, 103, II 183; Beck, Fl. Nied.-Öst., 861; Posp., Fl. öst. Küst., II, 399; Beck in Reich., Ic. fl. Germ., XXI, 110, t. 162; Asch. Gr., Syn., l. c., 785]. In pratis siccis aridis, arenosis, lapidosis — 1700 *m.* Floret mens. Junio—Augusto.

Bosna (*Asch. Kan., Cat., 1877). Ubi? Prope Preodac, in montibus Vještica (Pr.) et Hrbliina prope Rore (Pr.). In monte Vlašić loco Devećani (Br.! fide Ja.) et circa Travnik (Br.), prope Višegrad, solo serpent. (Adam.).

f. *linearifolius* [Pers., Syn., II 336 (1807) pro spec.; Beck in Reich., Ic., l. c., 111; Asch. Gr., Syn., l. c., 787; v. *angustifolius* DC., Astrag., 125 (1800)? v. *stenophyllus* Schur in Öst. bot. Zeit. (1870) 24. — *A. dacicus* Heuff. in Öst. bot. Woch. 8 (1858) 26 et in Abh. zool.-bot. Ges. (1858) 93].

Bosna: Prope Rudo in valle fl. Lim, 370—400 *m* (*M. in Dörfl., Herb. norm., nr. 5254).

9. *Astragalus chlorocarpus* [Griseb., Spic. fl. Rum., I 50 (1843) et It. hung. 293 (11)?; Velen., Fl. Bulg., 152; Halácsy, Consp. fl. Graec., 431; Beck in Reich., Ic. fl. Germ., XXI, 112, t. 164 *fig. I non t. 164, fig. I (quae ad *A^m Rochelianum* Heuff. pertinet); Asch. Gr., Syn., l. c., 789. — *A. onobrychis* v. *chlorocarpus* Boiss., Fl. Or., II, 438]. In saxosis, agris siccis.

Bosna: Prope Rudo in valle fl. Lim solo serp. et schistoso (*M. 1908), ad ripas fl. Drina prope Višegrad (Schiller f. Ja).

10. *Astragalus leontinus* [Wulf. in Jacqu., Misc. bot., II 59 (1781) et Icon. pl. rar., I 15, t. 154; Bunge, Astrag., l. c., I 103, II 183; Beck in Reich., Ic. fl. Germ., XXI, 113, t. 163, fig. I, II; Asch. Gr., Syn., l. c., 791]. In aridis arenosis, glareosis, saxosis. Floret mens. Julio, Augusto.

Bosna: Rare in monte Volujak (*Pr., in Glasn. zem. muz., 1902 [49], 33). Non vidi.

11. *Astragalus monspessulanus* L., Spec. pl., 761 (1753); Vis., Fl. Dalm., III, 310; Beck in Reich., Ic. fl. Germ., XXI, 113, t. 158, fig. I—III; Asch. Gr., Syn., l. c., 793. Conf. Neilr. in Öst. bot. Zeit. (1860), 115]. In aridis, glareosis, graminosis calcareis. Floret mens. Aprili—Julio.

Bosna: Circa Višegrad in monte Bikovac et Džermanica (*M. 1912). Non vidi. — **Hercegovina:** Prope Trebinje, Bileća, in monte Skorupan prope Orahovac (*P. 1874), certe cum *A^o illyrico* commutatus.

12. *Astragalus illyricus* [Bernh., Sel. sem. hort. Erfurt. (1836), nota 1; Vis., Fl. Dalm., III, 310; Beck in Reich., Ic. fl. Germ., XXI, 114, t. 167; Posp., Fl. öst. Küst., II, 398; Asch. Gr., Syn., l. c., 794. — *A. monspessulanus* Scop., Fl. Carn., ed. II, II 77 non L. — *A. incanus* Wulf. in Jacqu., Collect., I, 320 non L. — *A. incurvus* Reich., Fl. Germ., 512 (p. p.) et Koch, Syn. fl. Germ., ed. II, 1021 non Desf.]. In aridis siccis, pascuis calcareis — 1000 *m.* Floret mens. Martio—Julio.

Bosna: In monte Krug Pl. prope Livno (Weisbach f. M.), circa Livno (*F. 1896 sub *A. Wulfeni*), in monte Kamešnica (Pr.). — **Hercegovina:** In valle fl. Trešanica a Konjic—Bradina (M.), in angustiis fl. Neretva (B.), Bahtjevica (Bl.), in monte Porim (*Bl. 1877), circa Mostar (Str., Raap-Callier, Pl. Herc., nr. 61!): in monte Hum (Mu., Bornmüller!), in agro Mostarsko polje (Simonović f. Ja., M.), inter Han Žovnica et Medjine (Ja.), prope Radobolje, Glavlca (M.); in monte Štitar Pl. prope Rakitno (Begović f. V.), prope Trebistovo, Vitina, Radišići in distr. Ljubuški (F.), prope Neum (F.!), Ivanica, Uskoplje, Lastva (Berger), circa Trebinje, Bileća, in monte Skorupan prope Orahovac (P. sub *A^o monspessulano*), prope Bileća (Hensch f. V.).

Variat:

α. *Wulfeni* [Koch, Syn. fl. Germ., ed. II, 207 (1843); Neilr. in Öst. bot. Zeit. (1860), 116 pro spec., Beck in Reich., Ic. l. c., 114. — *A. incurvus* v. *macroceras* Koch, l. c., 1021]. Frequenter.

β. *dinaricus* [G. Beck, l. c., 115]. »Minor; foliolis 7—12-jugis; pedunculis foliis fulcrantibus subbrevioribus. Flores 20—22 *mm* longi; calyce roseo, dentibus viridibus; corolla rubro-lilacina; vexillo emarginata. Legumina non vidi. Dalmatia propinqua. In alpinis montis Dinara c. 900 *m* (*B. 1901).

Calycocystis.

[Bunge, Astrag., l. c., I 2, 133 (1868), II, 230.]

13. *Astragalus vesicarius* [L., Spec. pl., 760 (1753); Vis., Fl. Dalm., III, 308; Bunge, Astr., l. c., I 135, II 231; Beck in Reich., Ic. fl. Germ., XXI, 116, t. 160, fig. I, II; Posp., Fl. öst. Küst., II, 400; Asch. Gr., Syn., l. c., 804]. In saxosis, glareosis, apricis, pascuis in regione subalpina et alpina montium 1100—1950 *m.* Floret mens. Majo, Julio.

Bosna: Inter Šujica et Borova glava (*Pr. 1900); in montibus Lišan, Janski vrh, Vel. Bat montis Dinara 1600—1800 *m* (Ja.); Bregoč, Maglić,

Volujak (Pr.). — **Hercegovina:** In montibus Čvrsnica (Bucalović f. M.), Orlovac prope Mostar (Fo f. V.), Velež 1120—1800 *m* (Mu, B. et al); Baba Pl. (Hawelka!), Leotar (*P. 1874, B.) 1229 *m*, in Bijela gora (Hawelka!).

Variat:

α. *Pastellianus* [Pollini, Veron. pl. nov. (1816), 19 et Fl. Veron., II 500; Bert., Fl. Ital., VIII, 40 pro spec.; ?Reich., Fl. Germ., 510 (1832) rectius Marches., Fl. Trieste, 136 (1896) et Beck in Reich., Ic. fl. Germ., XXI, 116; Asch. Gr., Syn., l. c., 806. — *A. carniolicus* A. Kern., Sched. ad fl. exs. austro-hung., nr. 2408 (1896)]. Frequenter.

Ludit *albiflorus* [G. Beck] corollis albifloris. Hercegovina in monte Velež (Sagorski 1912).

β. *hercegovinus* [G. Beck in Reich., Icon., l. c., 117 (1901); Asch. Gr., l. c., 807]. »Humillimus, dense caespitosus, argenteus, caulibus perbrevibus. Foliola elliptica, minima, 5—7-juga, —7 *mm* longa. Pedunculi scapiformes, summo 10 *cm*, flores 20—23 *mm* longi. Racemi capitati (in typo brevi cylindranei). Calycis tubus rubro-viridis, indumento nigricans, dentibus quartam, tertiam vel dimidiam partem tubi longitudine aequantibus. Vexillum intense lilacinum, alas dilute lilacinas paulo superans, calyce duplo longius.

Hercegovina: In saxosis calcareis alpinis in cacumine Lieljen montis Visočica Pl. 1900—1950 *m* (*B, Fl. Südbosn. in Ann. nat. Hofm. XI [1896] 76 et l. c. 1901); in monte Baba Pl. (Hawelka!); in cacuminibus Medalevo brdo et Medved montis Čabulja Pl. (Prodan).

γ. *albidus* [Waldst. Kit., Pl. rar. Hung., I 39, t. 40 (1802) pro spec.; Beck in Reich., Ic., l. c., 117; Asch. Gr., Syn., l. c., 805] a d. Pantocsek in Hercegovinae monte Leotar prope Trebinje repertus ad var. *Pastellianum* pertinet; crescit autem prope Bare in monte Čvrsnica 1200—1300 *m* (Pi. f. *B.) et Velež 1400—1800 *m* (Bornmüller!). Cum var. *Pastelliano* formis intermediis conjungitur.

14. *Astragalus Fialae* [Degen in Öst. bot. Zeit. (1900), 242 et in Baldacci, Contrib. Fl. Mont. Alb. in Mem. ac. sc. ist. Bologna, ser. 5, IX (1900), 16; Beck in Reich., Ic. fl. Germ., XXI, 117, t. 164*, f. III; Asch. Gr., Syn., l. c., 807; Rohlena, 5. Beitr. Mont. in Sitz. böhm. Gesell. Wiss. (1911), S. A. 33 (1912); Janchen in Öst. bot. Zeit. (1919) 254. — *A. Pastellianus* Poll. v. *bosniacus* Fiala, Pril. in Glasn. zem, muz. Bos. Herc., VIII (1896), 301 et in Wissenschaftl. Mitteil. Bosnien-Herceg.,

VI (1899), 7. sine descriptione fide Degen]. Polyceps, rhizomate ramoso, stolonifero(?), acaulis vel subacaulis, pilis appressis canescens. Stipulae basi petioli adnatae, ceterum liberae, longe acuminatae, membranaceae, superiores angustiores. Folia breviter petiolata, radicalia; foliolis 8—13jugis, oblongis, utrinque rotundato-acuminatis v. rotundatis. Pedunculi floriferi foliis fulcrantibus breviores, saepe deficientes, fructiferi folia paulo superantes; racemis capitatis, pauci- —14floris; floribus erectis, ad 2 cm longis. Bracteolae calyce breviores, nunc minimae nunc longiores calycis tubum subaequantes. Calyx campanulatus, nigro- et albo-subpatule pilosus; dentibus acuminatis, tubo multo brevioribus. Corolla ochroleuca plus minus violaceo-tincta; vexillo oblongo, antice retuso, calyce sesquolongiore, alas carina longiores conspicue superante. Legumina calyce duplo longiora, —13 mm longa, oblongo-trigona, basi rotundata, apice rostrata, dorso sulcata, bilocularia, subpatule albo-nigroque villosa, pilis inaequilongis. Semina reniformia, laevia. In alpinis saxosis 1500—1800 m. Floret mens. Julio.

Bosna: In monte Treskavica Pl. prope lacum Veliko jezero (F. 1893! f. *Degen 1900). — **Crna Gora.** In Monte Dibala prope Kat. Kostica distr. Kući (Baldacci, Iter alb., 1898, nr. 188!) etiam in monte Vila, Pešinjak (Baldacci); Javorje Pl. et Jerinja glava prope Andrijevica (Rohlena). — **Albania:** Maja Limerzit (Baldacci, It. alb. (1900), nr. 263! Proklečija (Dörfler)

24. Oxytropis.

[DC., Astrag., 19, 53 (1802); Endl., Gen., 1277; Benth. Hook., Gen., I 507; Taub. in Nat. Pflanzenf., III 3, 304; Bunge, Spec. gen. *Oxytropis* in Mem. de l'acad. St. Petersb., sér. 7, XXII, nr. 1 (1874). — *Spiesia* Neck., Elem. bot., III 13 (1790) nomen antiquius sed congr. bot. (1905) rejectum. — *Astragalus* sect. *Oxytropis* Rouy, Fl. Franc., V, 187.] »Oštrica«.

Sectio: *Aphracta.*

[Peterm., Fl. Deutschl., 145 (1849). — *Phacoxxytropis* Bunge, Oxytr., l. c., 5 (1874).]

1. *Oxytropis montana* [DC., Astrag., 53 (1802) p. p.; Bunge, Oxytr., l. c., 11, nr. 6; Beck in Reich., Ic. fl. Germ., XXI, 124, t. 173, f. I; Asch. Gr., Syn., l. c., 810. — *Astragalus montanus* L., Spec. pl., 760 (1753); Jacqu., Fl. Austr., II, t. 167].

Intra fines nostros solum var. *Jacquini* [Bunge in Arb. naturf. Ver. Riga, I (1847) 226 et Beitr. Fl. Rußl., 252 (76), pro spec; Beck, Fl. Nied.-Öst., 865 (1892) et in Reich., Ic.,

1. c., 125, t. 174, f. I—III; Asch. Gr., l. c., 812]. In saxosis lapidosis alpinis. Floret mens. Junio—Aug.

Bosna: In montibus Troglav (Pr.), Maglić (*Adam. 1889) sub *O. montana*), Volujak (Pr.).

f. *carinthiaca* [Fischer Ooster in Flora 37 (1854), I 99 pro spec.; G. Beck, Fl. Südbosn. in Ann. naturh. Hofm. XI (1896) 75 (hic explicationes longiores) et in Reich., Ic., l. c., 125, t. 173, fig. I; Asch. Gr., l. c., 812]. Caulescens, caulibus 5—30 cm longis, spicis 2—3 ornatis. Legumina varie pilosa, carpophoro calyce plurimum longiore.

Bosna: In montibus Treskavica et Maglić Pl. (*B. 1896, probabiliter etiam Adam.), Volujak (B.). — **Hercegovina:** In cacumine Ortiš montis Prenj Pl. c. 2000 m et in monte Velež (*B. 1896)

2. *Oxytropis prenja* [G. Beck, Fl. Südbosn. in Ann. nat. Hofmus., II (1887), 122, t. VI, f. 1—3 pro var. *O^s Halleri* et in Reich. f., Ic. fl. Germ., XXI, 124, t. 169*, f. II pro spec. (1901); Asch. Gr., Syn., l. c., 827]. Acaulis, humilis vix 10 cm altus, pluriceps, tota subappresse pilosa. Stipulae persistentes, membranaceae, uninerviae. Foliola 6—7 (5—9)-juga, parva, 3—8 mm longa, ovato-oblonga, subobtusa, supra parcius pilosa et saepius glabrescentia. Pedunculi folia superantes; inflorescentia subcapitata, saepe pauciflora. Flores minores, 15—19 mm longi. Corolla purpurea; vexillo alis paulo longiore, saepe emarginato; alis subacutis. Legumina ovoidea, acuminata inflata, nigro- et sparse albo-pilosa, calyce vix duplo longiora, dissepimento dorsali destituta. — *O. sericea* [DC., Prodr. II, 276 (1825) sub var. *O^s uralensis*; Simonk., Enum. pl. Transs., 178. conf. Beck in Reich., Ic., l. c., 123] notis supra eminentibus, *O. campestris* DC. autem stipulorum nervis reticulatis, foliolis plurijugis, indumento patente partium inferiorum, corollae colore, leguminibus subbilocularibus bene differunt. In alpinis saxosis pascuis, calcareis. Floret mens. Julio—Augusto, 1800—2200 m.

Bosna: In montibus Maglić, 2000—2300 m (Pr.), Vran (*F. 1896, R.!). — **Hercegovina:** In montibus Prenj Pl. usque ad cacumina Ortiš c. c. 2000—2200 m (*B. 1887; Beck, Pl. Bosn. Herc., nr. 37, 191; Ćurčić in Dörfl, Herb. norm., nr. 4242), Ćvrstica in cacuminibus: Plasa (Pr.), Dri-nača (Pr.; Prodan), Vel. Vilinac (Ha.), Ćvrstica (Prodan; hic probabiliter etiam Brandis).

Sectio: *Phragmophora*.

[Peterm., Fl. Deutschl., 145 (1849). — sect. *Euoxytropis* Bunge, Oxytr., l. c., 5 (1874).]

3. *Oxytropis pilosa* [DC., Astrag., 53 et fol. 27, 91 (1802); Bunge, Oxytr., l. c., 58; Beck, Fl. Nied.-Öst., 865 et in Reich., Ic., l. c., 119, t. 168, fig. III—IV; Asch. Gr., Syn., l. c., 817. — *Astragalus pilosus* L., Spec. pl., 756 (1753)]. In arenosis, graminosis, aridis, saxosis, lapidosis. Floret mens. Majo—Augusto.

Bosna: In monte Gredoviti vrh (*Boller 1892). Probandum sit!

4. *Oxytropis campestris* [DC., Astrag., nr. X, 59, fol. 74 (1802); Bunge, Oxytr., l. c., 107; Beck in Reich. f., Icon., l. c., 121; Asch. Gr., Syn., l. c., 820. — *Astragalus campestris* L., Spec. pl., 761 (1753). — *Spiesia campestris* O. Kuntze, Rev. gen., I 206]. In alpinis saxosis herbosis, 2060—1000 m. Floret mens. Junio—Aug.

Variat:

α. *typica* [G. Beck in Reich., Ic., l. c., 121, t. 169; Asch. Gr., Syn., l. c., 820] Parcius pilosa, rarius villosa. Bractee calycis tubum subaequantes vel eo longiores. Corolla ochroleuca vel lutescens (=f. *ochroleuca* Neilr., Veg. Croat., 247 (1868); G. Beck, l. c.); vexilli lamina duplo longior quam lata, saepe maculis duabus lividis vel flavis notata; alae carinam vix vel paulo superantes; carinae cum lateribus saepe violaceo tinctis. Legumina pilis obscuris nigricantia.

Bosna: In montibus: Vel. Malovan (Pr.), Vran (Fr. Br.), Kamešnica, Troglav (Pr), Vel. Šator (Pr.), Krug prope Livno 1000—1300 m (B.), Cincar (B.); Bjelašnica —2060 m (B), Treskavica (*Blau 1877, B.). Vratlo (B.), Zelengora (Lak. f. M.), Lelija, Dumoš (B.), Volujak (B., Pr.), Maglić (Adam.). — **Hercegovina.** In montibus: Visočica, Prenj hic in cacumine Ortiš —2000 m (B.), Plasa, Čvrstica (V.), Velež 1100—1800 m (Fo., B.).

β. *dinarica* [Murbeck, Beitr, Fl. Südbosn. in Lunds Univ. Årsskr., 27 (1891), 143; Beck in Reich., Ic., l. c., 122, t. 169*, fig. III; Asch. Gr., Syn., l. c., 823; subsp. Hand, Janch. in Öst. bot. Zeit. (1905) 486]. »Copiosius pilosus; petioli pedunculique patentim villosi. Foliola plus minus sericeo-villosa. Bractee dense albo pilosae, perbreves, calycis tubo duplo breviores, saepius pedicellos paulo modo superantes. Corolla ochroleuca vel sulphurea, antice mox rufescens. Legumina pilis lucidis pilos nigricantes obscuros obtegentibus villosa. In alpinis 1400—1870 m.

Bosna: In montibus: Vitorog (Sta.), Hrblijina (Br.! sub *O. argentea* Pas. corollis sulphureis, Fl. Travn. in Jahresh. naturw. Ver. Trencsin 13—14 [1890—1891], 63). Dinara (Degen), Troglav (B.), Jedovnik (Ha.), Vel. Šator (Ja.), Cincar (B.), Golja (Sta. Fa.); Treskavica (B.), Lelija (R.), Orlovac (R.), Todor (Lakatos!), Maglič, Volujak (B.). — **Hercegovina:** In montibus: Prenj (Schiller, Prodan, M.), Borožnica (Degen); Plasa (B), Čvrtnica (R.), Medved, Vel. Vlajna (Prodan); Velež 1400—1900 m (Mu., B., Fo.), Orijen (Adam. f. M).

Formae inter α et β intermediae hinc inde reperiuntur. Vidi e montibus Volujak, Prenj. [Conf. Beck, Fl. Südbosn., l. c., 74; Rohlena, 3. Beitr. Mont. in Sitz. böhm. Ges. Wiss. (1903). 26 et 5. Beitrag, l. c. (1911) 33; Janchen in Öst. bot. Zeit. (1919), 254.]

25. Glycyrrhiza.

[L., Spec. pl., 741 (1753) et Gen., ed. V, nr. 788; Endl., Gen., 1271; Benth, Hook., Gen., I, 508; Taubert in Nat. Pflanzenf., III 3, 307.] »Sladić« *Сладкий Корень*

1. *Glycyrrhiza echinata* [L., Spec. pl., 741 (1753); Boiss., Fl. Or., II, 203; Reich. f., lc. fl. Germ., XXI, 93, t. 176; Asch. Gr., Syn., l. c., 833]. »Korijen slatki, konjeda, zelje gospino«. In arenosis, incultis, ripariis, paludosis. Floret mens. Majo—Julio.

Bosna: Posavina prope Kobaš (Prodan), Bos. Brod (*V. 1890. Ha., Fa.), Brčko (F., B.), Šepak, Rača, Bijeljina (F.); Travnik (Br.). — **Hercegovina:** Ad fontem Jasenica agri Mostarsko polje (*Mu, 1891), prope Žito-mišljici (Sagorski), ad lacum Hutovo Blato (M.), circa Metković usque ad arcem Opužen (Rex Frid. Aug. II, 1841, Petter).

2. *Glycyrrhiza Frearitis* [Orphan. Exs. et Boiss., Fl. Or., II, 203 (1872) pro var. *G^{ae} echinatae*]. Differt a *G. echinata* foliis junioribus solum glandulosis (non glandulosis ac pilosulis), inflorescentiis oblongo-cylindraceutis primum densi- sed mox laxiusculis, 3—3.5 cm longis, erectis, pedunculos suos longitudine subaequantibus (non subglobosis, semper densifloris, pedunculo suo pluries brevioribus), rhachi inflorescentiae cum calycibus solum glanduloso-verrucosis (non cum bracteolis pilosulis et glandulosis), stylo graciliore, longiore, pilis fructuum glanduliferis brevioribus ac tenuioribus, leguminis ellipticis saepe 3-spermis (fide Boissier). Ultima non vidi!

Bosna: In humidis arenosis ripariis ad fl. Save prope Brčko (*B.). floret Augusto.

Planta reperta omnino cum planta in Hungaria priore prope Arad a d. Simkovics collecta (Schultz, Herb, norm.

nov. ser. nr. 1341!) congruit. Borbás, Temes megye Veget. in Magy. orv. és term. XXIII (1884), 80 eandem prope Ó-Palanka ad fl. Danubium (Dunav) collegit. Janka [in Term. füz. VIII 4 (1884), 291] *G^m Frearitis* errore synonymum *G^{ae} echinatae* declaravit.

Hedysareae.

[DC., Prodr., II, 307 (1825) em.; Benth. Hook., Gen., I 447; Taubert in Nat. Pflanzenf., III 3, 309. — *Coronilleae* Spreng., Anl., II 2, 758 (1818).]

26. *Scorpiurus*.

[L., Spec. pl., 744 (1753) et Gen., ed. V, nr. 792; Endl., Gen., 1280; Benth. Hook., Gen., I, 508; Taubert in Nat. Pflanzenfam., III 3, 309.]

1. *Scorpiurus subvillosus* [L., Spec. pl., 745 (1753); (*subvillosa*); Vis., Fl. Dalm., III, 311; Beck in Reich. f., Icon., I. c., 128, t. 178 et 178*, fig. 10—21; Asch. Gr., Syn., I. c., 836]. In aridis, lapidosis, incultis, dumetis in regione florum mediterraneae. Floret mens. Majo—Junio.

Hercegovina: Circa Ljubuški (*F. 1895).

27. *Coronilla*.

[L., Spec. pl., 742 (1753) et Gen., ed. V, nr. 789 em.; Endl., Gen., 1280 p. p.; Benth. Hook., Gen., I, 509; Taubert in Engl., Nat. Pflanzenfam., III 3, 311.]
»Grašar«.

Sectio: *Scorpius*.

[Medic. in Vorl. Churpf. phys. Ges., II (1787), 369 et Phil. Bot., I, 209 (1789) pro gen, non Moench (1794); Beck in Reich. fl., Ic. fl. Germ., XXI (1902), 132. — sect. *Scorpioides* Benth Hook., Gen., I, 510 (1865) non al. — *Artrolobium* Desv., Journ. bot., III 121 (1813) p. p. = *Arthrolobium* Reich., Consp., 151 (1832); Endl., Gen., 1280 = *Astrolobium* DC., Prodr. II, 311 (1825) p. p.]

1. *Coronilla scorpioides* [Koch, Syn. fl. Germ., 188 (1837); Vis., Fl. Dalm., III, 313; Beck in Reich. f., Ic. fl. Germ., XXI, 133, t. 181, fig. I, II; Boiss., Fl. Or., II, 183; Pospich., Fl. öst. Küst., II, 401; Asch. Gr., Syn., I. c., 847. — *Ornithopus scorpioides* L., Spec. pl., 744 (1753). — *Ornithopodium scorpioides* Scop., Fl. Carn., ed. II, II, 72 (1772). — *Artrolobium scorpioides* Desv., Journ. bot., I, 121 (1813). — *Scorpius scorpioides* Medic., I. c., 369]. In cultis et incultis, vinetis, olivetis ac saxosis — 600 m. Floret m. Aprili—Junio.

Bosna: Circa Paroš ca. 600 m (*M. 1910). — **Hercegovina:** In valle fl. Neretva circa Bijelo Polje (M.), Mostar (Str., Mu., B.), in monte Stolac

(Raap Callier, Pl. Herc., nr. 57!), ad Mostarsko blato (Mu.), prope Buna, Žitomišljici (Mu.). Circa Dubrava (M.), Ljubuški, Sovići, Posušje (F.). Circa Stolac et in monte Osanica glavica (B.), prope stationem Hum (M.), circa Trebinje (*P. 1874, B.), in valle Zašlap (P.), in litore Sutorina (R. f. M.).

Sectio: *Coronilla*.

[Adans., Fam., II 328 (1763) pro gen.; DC., Prodr., II 309 (1825); Endl., Gen., 1280; Beck, Fl. Nied.-Öst., 867 et in Reich., Ic. fl. Germ., XXI, 133. — sect. *Eucoronilla* Benth. Hook., Gen., I, 510.]

2. *Coronilla vaginalis* [Lam., Encycl. meth., II 121 (1790); Vis., Fl. Dalm., III 312; Boiss., Fl. Or., II, 180; Beck, Fl. Nied.-Öst., 868; Beck in Reich. f., Ic. fl. Germ., XXI, 133, t. 183, fig. I, II; Asch. Gr., Syn., l. c., 853. — *C. minima* Jacqu., Fl. Austr., III, 39, t. 271 non L.]. In saxosis aridis, glareosis calcareis, pascuis usque ad regionem alpinam (—1950 m). Floret m. Majo—Julio.

Bosna: In montibus: Osječenica (B.) et Klekovača (Ha. Fa.), Vitorog prope Pribelja (Ha. Fa.), Vel. Malovan, Šuljaga, Hrblijina, prope Kupres (Pr.), in monte Kamešnica (Pr.), Dinara (Degen), Jedovnik, inter Glamoč et Hrastičevo 1300—1950 m (Ha. Fa.); circa Travnik (Fr. Br.), prope Gladnik (Br.), in monte Vlašić —1750 m (*S. 1848); Trjeska in monte Jahorina (M.), in montibus Romanija Pl. (B.), Bjelašnica (M.), Treskavica, Bregoč, Maglič, Volujak (Pr.), Vran (R. f. M.). — **Hercegovina:** In montibus Prenj usque ad cacumen Ortiš (B), Porim (V.); Plasa (V., B.), Čvrstica, Ostrovača, Drinača —1900 m (B.); Vel. Vljajna in m. Čabulja (Prodan), Velež, Crvanj (Mu.), Jastrebica (*P. 1874).

Ludit:

hercegovinica [Freyn in Öst. bot. Zeit. (1890), 445 pro subspec. *C^{ae} vaginalis*; Asch. Gr., Syn., l. c., 854]. »Typo omnium partium (foliis floribusque) duplo minor, caudiculis densissime fasciculatis, pedunculis subunifloris folio paulo (nec duplo) longioribus, floribus (sicco) aurantiacis« (Freyn). Mihi specimen depastum esse videtur. Hercegovina prope Ljubuški (E. Brandis f. *Freyn 1890).

3. *Coronilla coronata* [L., Syst., ed. X, 1168, nr. 3 B (1759) et Spec. pl., ed. II, 1047; Jacqu., Fl. Austr., I, 59, t. 95; Beck, Fl. Nied.-Öst., 869 et in Reich. f., Ic. fl. Germ., XXI, 135; Posp., Fl. öst. Küst., II, 402; Asch. Gr., Syn., l. c., 851. — *C. montana* Jacqu., Enum. Vind., 134 (1762) = Scop., Fl. Carn., ed. II, II 72, t. 44 (1772); Vis., Fl. Dalm., III, 313; Reich., Iconogr., I 32, t. 33, f. 68 et Reich. f., Ic., l. c., t. 175, f. II].

In dumetis, silvaticis, lapidosis, calcareis usque ad regionem alpinam (—1790 *m*). Floret mens. Majo—Julio.

Bosna: Circa Brekavica (F.), inter Kakanj et monast. Sutiska (*S. 1848). In monte Osječnica —1790 *m* (B.), Ravni potok montis Jedovnik prope Drvar 680 *m* (Ja.); prope Kupres, in montibus Šuljaga, Vel. Malovan (Pr. in litt.). Circa Jajce (M.) et in monte Hum prope Jajce (B.). Circa Travnik (Br.), circa Putičevo (Br. f. Ja.), Vranji dol et in monte Gladnik (Fr. Br.). Circa Sarajevo in valle fl. Miljacka prope Starigrad, in montibus Paprenik, Trebević (B.), in Zelengora (Pr.), in valle fl. Drina prope Ustiprača et Mededa (M.), in angustiis prope Dobrun ad flum. Ržav (M.). — **Hercegovina:** In angustiis Rakitnica (M.), in montibus Porim et prope Brasina in m. Velež (V.); in Bijelagora prope Orahovac, Dubovac, Vučijak (*P. 1874).

4. *Coronilla varia* [L., Spec. pl., 743 (1753); Vis., Fl. Dalm., III, 313; Boiss., Fl. Or., II, 181; Beck, Fl. Nied.-Öst., 868 et in Reich. f., Ic. fl. Germ., XXI, 136, t. 186; Posp., Fl. öst. Küst., II, 402; Asch. Gr., Syn., I, c., 855]. In aridis, incultis et cultis, herbosis, dumetis, ad sepes —1600 *m*. Floret mens. Majo—Julio—Augusto.

In **Bosna** vulgata (Fo., B.). Indicatur prope Bos. Dubica, Ivanjska (B.), Banja Luka (H.), Nova Kasaba (J.), Bugojno, Kupres, (Pr.), Šuljaga. Stožer Vel. Malovan, Šujica, Kamešnica, Prolog, Vještica gora, Gubin, Preodac (Pr.), Varcar-Vakuf, Sinjakovo (B.), (Travnik (*S. 1848), Zenica (B. Breindl!), Fojnica (S.), Vranica Pl. (Schwarz!), Vareš, Rajčevac (Pr.), Tarčin (Pr.), Sarajevo, Trebević (B.), Kovačići (F.), Ilidža (Prodan), vallis fl. Miljacka (M.), Željeznica (Pr.), Trnovo (B.); Pale, Sjetlina, vall. Sutjeska (Pr.), Višegrad (Schiller f. Ja.), Strmica (M.), in monte Romanija (M.), Stolac (Adam.). — **Hercegovina:** Prope Umoljani c. 1600 *m* (B.). Raška gora, Čabulja Pl. (B.), circa Mostar (Pi. B.), in montibus Stolac (Lindberg, M.), Podvelež (B.), in valle fl. Neretva (Mu.); ab urbe Mostar—Gabela et Metković (Mu., B.); circa Ljubuški (F.), Bukovi dol (R.), in agro Gatačko polje —1200 *m* (Mu.), circa Trebinje, Vučjak (*P. 1874), Radkuša jama (V.), Bileća (P.), in monte Gubar (Hawelka!). — **Novi Pazar:** Circa Prijepolje (P. Zahlb. f. *Hayek 1906).

Variat:

α. *typica* [G. Beck in Reich. f., Ic., I, c., 137]. Vulgata, cum formis *microphylla* [G. Beck, I, c.]. Kobiljdol prope Sarajevo (*B.).

f. *acutifoliolata* [G. Beck]. Foliola foliorum inferiorum rotundato-acuta, ea superiorum oblonga e media acuminata, omnia mucronulata. In typo foliola omnia rotundata, obtusa, saepe retusa, mucronulata.

Bosna: Ad sepes et inter virgulta prope Kovačići prox. Sarajevo (F. f. *B.).

hirta [Boiss., Fl. Or., II 182 (1872); *C. hirta* Bunge ibidem in litt.]. Caulis, pedunculi et foliorum rhachis setuloso-hirta.

Bosna: Prope Fojnica (Schwarz f. *B. 1896). — **Hercegovina:** In declivibus lapidosis montis Podvelež (*Bornmüller!, B.), prope Avtovac (Vidović!). — Saepissime formae ad typum vergentes observantur.

β. *latifolia* [Hazslinszky, Magy. füv kézikönyv 58 (1872) fid. Asch. Gr., Syn., l. c., 856—857 = Freyn in Verh. zool.-bot. Ges. 38 (1888), 602; v. *elegans* G. Beck in Reich., Ic, l. c., 137 (1902) = *C. elegans* Panč., Fl. princ. Serb., 262 (1874); Velen., Fl. bulg., 146; confer. Janchen apud Fritsch in Mitt. naturw. Ver. Steierm. 47 (1910) 10]. Robusta Foliola foliorum mediorum 11—13, late ovalia, infra glauca, 3·5—5 cm longa, c. 2 cm lata, iis *Robiniae pseudoacaciae* similia. Pedunculi umbellarum — 20 cm longi. Flores minores, 1 cm longi. Calycis dentes tabescentes. Fructus 5·5—7 cm longi. Notis prominentibus egregia. Pedunculi umbellarum hinc inde et pedicelli florum etiam in var. *typica* aequilongi.

Bosna: In silvaticis prope Stoikovići prox. Travnik c. 600 m (Br. f. *Freyn 1888); in fageto glareoso faucis Smrčevo točilo prope Semeč (Ha.) ca. 900—1000 m. Mens. Julio.

5. *Coronilla cretica* [L., Spec. pl., 743 (1753); Vis., Fl. Dalm., III, 313; Boiss., Fl. Or., II, 182; Pospich., Fl. öst. Küst., II 403; Beck in Reich. f., Ic. fl. Germ., XXI, 137, t. 187; Asch. Gr., Syn., l. c., 857]. In incultis, vinetis, saxosis, graminosis, dumosis in ditone florum mediterraneae. Floret mens. Aprili—Junio.

Hercegovina: Circa Mostar (Pi. M.), Žitomišljici (*Mu. 1891), in monte Ošanica glavica prope Stolac (B.); prope Trebinje (B.), Bileća (Boller, f. Asch. Gr.).

Sectio: *Emerus*.

[Adans., Fam., II 326 (1763) pro gen.; DC., Prodr., II, 309.]

6. *Coronilla emerus* [L., Spec. pl., 742 (1753); confer: Beck, Fl. Nied.-Öst., 867 et in Reich f., Ic. fl. Germ., XXI, 138, t. 182, fig. I. II. — v. *typica* Heimerl in Verh. zool.-bot. Ges. (1884) 98 = Posp., Fl. öst. Küst., II, 404 (1898); Asch. Gr., Syn., l. c., 859 = Fiori, Fl. anal. Ital., II 93 (1899); Schneid., Laubholz., II, 106. — *Emerus major* Mill., Gard. dict., ed. 8, nr. 1 (1768). — *E. alpestris* Scheele in Flora (1843), 443]. In dumetis, nemoribus, lapidosis, saxosis. Floret m. Aprili—Junio.

Bosna: Prope Zvornik, Kvarac et Sase prope Srebrenica (J.), ad fl. Trstionica prope monast. Sutiska (*S. 1848), in monte Trebević (Bl.), prope Kralupi (Pr.), in valle fl. Sutjeska prope Suha (Pr.). — **Hercegovina:** Circa Mostar (Str., Pi.), in monte Podvelež (Fo.), in montibus Glijiva, Drača prope Trebinje (*P. 1874).

Omnes stationes enumeratas ad *C^m emeroides* Boiss. Sprun. pertinere mihi persuasum est, quia *C. emerus typica* aream suam ad Croatiam occidentalem modo expandit.

7. *Coronilla emeroides* [Boiss. et Sprun., Diagn., ser. 1, II 100 (1843); Boiss., Fl. Or., II 179; Hal., Consp. fl. Graec., I, 446; Beck in Reich. f., Ic. fl. Germ., XXI, 139, t. 182, f. III. — *C. emerus* Sibth., Fl. Graec., VIII 7, t. 710 et aut. p. p. non L.; v. *emeroides* Wohlf., Syn. fl. Deutschl., 646 (1891); Pospich., Fl. öst. Küst., II, 404; Asch. Gr., Syn., l. c., 859; v. *multiflora* Čelak. in Abh. böhm. Ges. Wiss. (1887), 536. »Differt a *C^a emerus* L. umbella 5—8-flora (non 2—3- [rarius —4-]flora), foliolis plurimum obcordatis vel retusis (non plurimum obtusis), distributione geographica (a sinu tergestino et flanatice per peninsulam balcanicam ad Orientem):« (Beck.) Confer: Borb. in Öst. bot. Zeit. (1886) 230; Hirc in Ber. deutsch. bot. Ges. (1888), 232; Beck, l. c., 139).

Planta repetite planeque examinata mihi persuasit, magnitudinem florum et petalorum, longitudinem unguium, longitudinem, numerum et formam lomenti articularum (vidi Heimerl, l. c., infra 99), eadem ratione fluctuare quam in *C^a emero* (Beck). Itidem formas sequentes offert:

austriaca [G. Beck in Reich., Ic., l. c., 139. — *C. emerus* var. *austriaca* Heimerl in Verh. zool.-bot. Ges. (1884) 97; Schneider, Laubholz., II, 106 = *C. austriaca* A. Kern. in Sched. ad Fl. exs. austr.-hung., nr. 2802]. Flores foliis praecoces. Ramuli hornotini brevissimi, foliis paucis vix evolutis, internodiis brevibus, pedunculis floriferis fasciculatis, basalibus et axillaribus praediti. Pedunculi primum 2 cm longi, fructus tempore elongati, — 7.6 cm longi, 4—7-, plurimum 5—6-flori. Flores vix 2 cm longi. Foliola 7—11. In dumetis, saxosis, lapidosis. Floret m. Martio—Majo.

Vidi e litorali adriatico: Trst, Rijeka, copiosius in Istria, Dalmatia, Crna Gora, Albania, Graecia, Neapoli, Sicilia. Certe etiam in terris nostris occurrit.

typica [G. Beck, l. c., 139 (1902). — *C. emerus* v. *emeroides* f. *typica* Asch. Gr., Syn., l. c., ex diagn.]. Flores magni et folia

2-3-juga coëtanea. Rami hornotini internodiis elongatis praediti. Pedunculi elongati, floriferi 5—8 cm longi, omnes solum axillares. In saxosis, dumetosis —1200 m. Floret m. Majo, Junio.

Bosna: Prope Zvornik (Wettst. f. Ja.), Jošane in valle fl. Krbava (J.); in arce Sokolac prope Bihać (B.), Ravni potok prope Drvar —1200 m (Ja.); prope Kupres, inter Bugojno et Han Luka (F.), Jajce (M.), in monte Gradište (M.), Trebević (*B. 1887), in faucibus Miljacka (M.), in monte Maglič-Mratinje (Rohlena), prope Višegrad (Schiller f. Ja.), Mededa, in faucibus Razdolina (M.). — **Hercegovina:** Circa Podorašac—Konjic (M.) circa Jablanica (V.), in monte Glogovo (V.), prope Drežnica (Br. f. Ja.), in monte Porim (V.), (*1890), in valle fl. Neretva inter Drežnica et Mostar (B.), inter Bijelo polje et Rujšće (V.), circa Mostar (M., B.), Podvelež (Č.), in montibus Hum (B.) et Podvelež (Fo. sub *C. emerus* f. V.), prope Zito-mišlići (Mu.), prope Stolac, in valle fl. Bregava (F) et in monte Ošanica glavica (B.), in valle fl. Neretva prope Počitelj-Tasovčići (M.), inter Dračevo et Metković (B.), in montibus Leotar et Gljiva prope Trebinje et Vlastica prope Drijeno (V.), Zavala (M.).

28. *Hippocrepis*.

[L., Spec. pl., 744 (1753) et Gen., ed. V, nr. 791; Endl., Gen., 1280; Benth. Hook., Gen., I, 510; Taubert in Engl. Prantl, Nat. Pflanzenfam., III 3, 311.]

»Podkovka«.

1. *Hippocrepis comosa* [L., Spec. pl., 744 (1753); Vis., Fl., Dalm., III 314; Beck, Fl. Nied.-Öst., 869 et in Reich. f., Icon. Fl. Germ., XXI, 140, t. 189, fig. I, II; Posp., Fl. öst. Küst., II, 405; Asch. Gr., Syn., l. c., 861]. In saxosis lapidosis, graminosis pratis montanis, silvis apertis usque ad regionem alpinam —1900 m, solo calcareo. Floret mens. Aprili—Julio.

Bosna: In monte Podgomila prope Krupa (B.), in monte Klekovača (F.), Vel. Vitorog (Pr.), prope Podgorje (Ha. Fa), in montibus Vel. Malovan et Šator (Pr.), Vel. Vrata (Pr.), prope Kupres (F.), in cacumine Bijela glavica montis Vran pl. (F.), in monte Dinara Pl.: Kozija jama, Troglav, Jankovo brdo, Vrsina, Janski Vrh (Ja. Wa.); in monte Uilica (Ja. Wa.). Circa Maglaj (M.), Jajce (C.), Travnik (*S. 1848, Fr. Br.), Bukovica (S.), Guča gora (Franjić!), in monte Vlašić (B.); inter Zenica et Lašva (Čurčić f. M.). Vulgata in terris calcareis Bosnae australis (B.) sic in montibus Bjelašnica, Treskavica, Trebević Lelija (B.), Jahorina, Klek (F.), circa Vlaholje, Suha gora in montibus Bregoč, Volujak (Pr.) et a. l., prope Uvac (F.). — **Hercegovina:** Prope Konjic (B.), in montibus Prenj (B.); Čvrstica, Plasa, Drinača (V., B., Prodan); Štitar prope Rakitno (Begović f. V.), V. Vlajna montis Čabulja (Prodan), circa Mostar (Pi. M.), in monte Velež 800—1700 m (Mu., B.); inter Bileća et Beljani, prope Rudina (V.), in Bijela gora (Hawelka!), in montibus Jastrebnica (*P. 1874), Vučji zub (Čurčić f. M.), Orijen (Degen!); in litore Sutorina (Baenitz!).

Ludit:

ericalyx [G. Beck, l. c., 140]. Tota imprimis in calycibus appresse pilosa. — *gymnocalyx* [G. Beck]. Glabrescens, calycibus glabris. Utraque vulgata. — *major* [Rouy, Fl. France, V 303 (1899)]. Caulis major, internodiis elongatis. Pedunculi umbellarum elongati, 10–15 *cm* longi. Hinc inde (*B.). — In alpinis summis saepe nana occurrit pedunculis brevibus = *alpina* [Rouy, l. c., 304].

Murbeck [Beitr. Südbosn. in Lunds Univ. Årsskr. (1891) 145] in monte Velež exemplaria fructibus — 4 *cm* longis, articulis 4–8 compositis ornata reperit, annotans plantam Europae occidentalis summo articulos 4 demonstrare. Propensus sis ad opinionem, hanc plantam ad formam quandam pertinere, si planta Alpium et terrarum illyricarum non mutuet numero articulorum fructus inter 2–8 (additis sterilibus terminali ac basali).

?*Hippocrepis glauca* [Tenore, Fl. Nap., II 165, t. 69 (1820); Boiss., Fl. Or., II, 184; Beck in Reich. f., Ic. fl. Germ., XXI, 140, t. 189, f. III, IV et 189* fig. III. — *H. comosa* v. *glauca* Gris., Spic. fl. Rum., I, 64 (1843), Vis., Fl. Dalm., III, 315; subspec. Rouy, Fl. Franc., V, 304; Asch. Gr., Syn., l. c., 863]. »Aegre differt ab *H. comoso* dentibus calycis semper puberuli paulo longioribus, articulis lomenti copiose granulato-papilloso supra leviter sinuatis, loculo seminifero leviter arcuato non semicirculari praeditis.« (Beck.) Lomenti *H^{idis} comosae* articula supra conspicue sinuata, utrinque dilatata et compressa, plus minus resinoso-granulata, loculo seminifero semicirculari praedita observantur. (Confer Beck, l. c., t. 189*, fig. II. III.) Notae aliae ex mea animadversione nulli usui sunt ad *H^m glaucam* distinguendam. Sec. Visiani l. c. *H. glauca* varietas est *H^s comosae* et »colore glaucescente, pube in aversa foliorum parte et in calycibus copiosiore et foliolis angustioribus aegre nec semper a specie distingui potest«. Boissier [l. c.], qui plantae graecae lomenta matura non vidit, addit eamque insuper pedunculis umbelliferis tenuioribus folio 2–3plo longioribus, rhizomate magis lignoso, foliolis minoribus (an satis?) differre. Pedunculi umbelliferi *H^s glaucae* gallicae (an verae? Beck) f. Rouy [l. c.] 3–6 × foliis fulcrantibus longiores, in *H^e comosa* autem 1–2 × longiores observantur. Ultimum autem non constat, quia mea animadvertione foliis 2–6 × longiores reperiuntur; itaque huic nota variabili aequae non confidendum, ac ceteris a Visiani et Boissier supra enumeratis. Burnat [Fl. Alp. marit. II 216] confusiones multiplices illustravit.

Indicatur in Hercegovinae aridis prope Trebinje, Bileća et in monte Jastrebnica (*P. 1874), quod probandum sit, namque Rohlena [5. Beitr. Mont. in Sitzber. böhm. Ges. Wiss. (1912) 34] exacte docuit, hanc speciem in Crna Gora non crescere. Etiam omnes stationes dalmaticae dubiae sunt.

2. *Hippocrepis ciliata* [Willd. in Mag. naturf. Freunde Berlin (1808), 173; Vis., Fl. Dalm., III, 315; Beck in Reich. f., Ic. Fl. Germ., XXI, 141, t. 188, f. III; Asch. Gr., Syn., l. c., 865. — *H. flexuosa* Zahlbr. apud Host, Fl. Austr., II, 348 (1831)]. In apricis, saxosis, arenosis dittonis florum mediterraneae. Floret mens. Martio—Junio.

Hercegovina: Ad fl. Neretva prope Mostar (*Mu. 1891, M.); in monte Podvelež (Raap-Callier, Pl. Herc., nr. 58!). Sutorina (M.). Planta egregia est f. Murbeck foliolis omnibus trijugis, sed etiam foliola 4-juga vidi.

29. Onobrychis.

[Miller, Gard. dict., ed. IV (1754) = Adans., Fam., II 327 (1762); Scop., Fl. Carn., ed. II, II, 76 (1772); Endl., Gen., 1286; Benth. Hook., Gen., I. 525; Taubert in Engl. Prantl, Nat. Pflanzenf., III 3, 314. — Confer Beck in Reich. f., Ic. fl. Germ., XXII, 145 et Handel-Mazzetti, Revis. der balk. und vorderas. *Onobrychis*-Arten aus der Sekt. *Eubrychis* in Öst. bot. Zeit. (1909) 369 sequ. et (1910) 5 sequ. — Širjaev, *Onobrychis* gen. revisio critica in Spisy Masar. univ. čis. 56 (1925) et 76 (1926).] »Grahorka«.

Subgenus: **Euonobrychis.**

[Bunge in Boiss., Fl. Or., II, 526 (1872) pro Sect.; Širjaev, *Onobr.*, 18.]

Conspectus specierum.

A. Annua. Racemi pauci- (2—7-)flori. Alae vexillum subaequant. Foveae nucis copiose aculeatae triseriatae.

1. *O. caput galli* Lam.

B. Perennes. Racemi multiflori. Alae vexillo multo breviores. Foveae nucis biseriatae.

a) Carina floris aperti vexillo conspicue longior. Planta montana cum surculis foliatis ad rhizoma. Racemi florentes oblongi, subbreves. Flores 10—14 mm longi. Dentes calycis 1½—2 × tubo suo longiores. Noces 6—8 mm longi (sine aculeis), breviter pilosae, aculeatae.

3. *O. montana* Lam. DC.

b) Carina floris aperti vexillam aequans vel vix brevior.

α. Noces pilis longis patentibus villosae, sine aculeis 5—6 mm longae. Racemi ante anthesim ovato-oblongi, subdensi-

flori, vix serius laxiflori. Flores 9—13 mm longi. Calyx copiose pilosus, eiusdem dentes $2-4\frac{1}{2} \times$ tubo suo longiores. Corolla albida, plus minus rubescens.

2. *O. alba* Desv.

β. Nuces perbrevis appresse pilosae. Racemi serius saepe valde elongati et laxiflori.

*) Racemi ante anthesim ovato-oblongi, apice paulo attenuati vel rotundati, plurimum densiflori, post anthesim laxiflori, 20—25 mm crassi. Flores 10—13 mm longi. Calyx fere patentim pilosus, dentibus $2-3 \times$ tubo suo longioribus. Corolla rosea (rarius alba). Nuces (sine aculeis) 6—8 mm longae, dorso varie longe aculeatae (rarius inermes).

6. *O. vulgaris* Hill.

***) Racemi ante anthesim cylindranei vel fusiformes, plus minus saepe graciliter et longe acuminati, serius valde elongati et laxiflori, florentes 15—20 mm crassi. Flores 8—11 mm longi. Nuces (sine aculeis) 4.5—6 mm longae, dorso aculeis 4—6 varielongis praeditae vel inermes.

†) Racemi ante anthesim graciliter et longe acuminati, jam anthesi elongati et laxiflori. Flores 8—10 mm longi. Dentes calycis lanceolati, paulo $-2\frac{1}{2} \times$ tubo suo longiores. Corolla rosea, vexillum saepe violaceum.

5. *O. arenaria* Ser.

††) Racemi ante anthesim oblongi, apice cylindranei, acuti, dentibus calycinis subcomosi, perbrevis laxiflori et elongati. Flores 9—11 mm longi. Calycis dentes subsetacei, plurimum $3-4 \times$ tubo suo longiores. Corolla carnea vel alba.

4. *O. ocellata* G. Beck ampl.

Sectio: *Lophobrychis*.

[Hand.-Mazz. in Öst. bot. Zeit. LIX (1909), 373; Širjaev. *Onobr.*, 32.]

1. *Onobrychis caput galli* [Lam., Fl. Franc., II 652 (1778); Ser. in DC., Prodr., II, 346; Vis., Fl. Dalm., III, 316; Boiss., Fl. Or., II, 528; Beck in Reich. f., Icon, l. c., 150, tab. 193, fig. I, II et 192, fig. 4—18; Asch. Gr., Syn., l. c., 890; Širjaev, *Onobr. gen. revis.*, 34. — *Hedysarum caput galli* L., Spec. pl., 751 (1753), Sibth., Fl. Graec., t. 723]. In incultis, arenosis, aridis saxosis florum mediterraneae. Floret mens. Aprili—Majo.

Hercegovina (Asch. Kan., Catal. 104, 1877). Ubi? Circa Mostar (Pi. 1899, M.), ad fl. Neretva (Lindberg), in agro Mostarsko polje (M., Ja., Sietzberger); in litore Sutorina (Asch. Gr., M.).

Sectio: *Eubrychis*.

[DC., Mém. Legum., 347 (1825).]

2. *Onobrychis alba* [Desv., Journ. bot. (1814), 83; DC., Prodr., II 345; Vis., Fl. Dalm., III 316 (p. p.); Boiss., Fl. Or., II, 531; Borbás, Adatok Arbe in Math. és term. közlöm. 14 (1877), 171, t. III, fig. dextra.; Beck in Reich., Ic. fl. Germ., XXII, 149, t. 191*, fig. I; Hand.-Mazz., *Onobr.*, l. c. (1910), 65; Širjaev, *Onobr.*, 103. — *Hedysarum album* Waldst. Kit. in Willd., Spec. pl., III 2, 1216 (1803) et Pl. rar. Hung., II 115, t. 111 (1805). — *O. Visianii* Borbás, l. c., 435 (p. p.); Beck, l. c., 149 p. p., t. 191, fig. 1—6 = *O. alba* var. Aschers. Gr., Syn., l. c., 885. — *O. alba* v. *affinis* Hausskn., Symb. fl. Graec. in Mitt. Thür. bot. Ver. (1893), 83; v. *rhodopaea* Deg. et Dörfl., Beitr. Fl. Alb. in Denkschr. Ak. Wiss. Wien 64 (1897), 719 f. Hand.-Mazz. — *O. Halácsyi* Form., 3. Beitr. Fl. Thess. in Verh. naturf. Ver. Brünn 35 (1897), S. A. 80]. In rupestribus calcareis, sterilibus, graminosis — 2000 *m*. Floret mens. Junio, Julio.

Variat:

α . *typica* [G. Beck. — Synonymia supra citata]. Rhizoma plurimum sine surculis foliatis. Caulis strictus, firmior. Racemi oblongo-cylindranei, densiflori, ante anthesim indumento contexti. Flores 9—11 (12) *mm* longi. Calycis dentes $2\frac{1}{2}$ — $4\frac{1}{2}$ \times tubo suo longiores, plus minus ciliati. Vexillum carinam aequans vel paulo brevius. Alae calyce breviores. Legumen 6 *mm* longum apice saepe truncatum, carina alata aculeis 3—6 praedita.

Bosna: Prope Glamoč (Br. f. *B.). — **Hercegovina:** In monte Podvelež prope Mostar 650—850 *m* (Ja. f. *Hand.-Mazz. 1910, B.), in monte Velež 1200—1600 *m* (Bornmüller!)?, in monte Žaba (Vis.).

O. Visianii Borb., l. c., 71, t. III, fig. sinistra est forma nucibus paulo majoribus 6—8 *mm* longis, earum carina dorsali late alata, aculeis 3-pluribus, magnis, altitudinem carinae 3—4 \times superantibus instructa sed notis suis inconstans [conf. O. Hermann in Term. füz. (1879) III 188] saepius cum varietate sequente commutata, quacum formis intermediis conjungitur.

Handel-Mazzetti [in Verh. zool.-bot. Ges. (1909) p. (313) et *Onobrychis*, l. c., 484] *O^m Visianii* Borbás ex descriptione et icone autoris pro maxima parte ad *O^m ocellatam* trahit, sed dentes calycis ex icone Borbásiano tubo suo solum $2\frac{1}{2}$ \times longiores, (non 3—4 \times longiores) nuces appresse subsericeae (non

brevissime pilosae), inflorescentia oblonga brevior, corollae color albidus, vexillum dilute roseo striatum quae notae *Oⁱocellatae* non sunt propriae.

β. *laconica* [Orph. Exs., nr. 565 et in Boiss., Fl. Or., II 530 (1872); Hal., Consp. fl. Graec., I, 456; Asch. Gr., Syn., l. c., 885; Hand.-Mazz., *Onobrychis*, l. c. (1910) 68; Širjaev, *Onobr.*, 110 pro spec. — *O. pulchella* Heldr. in Boiss., Diagn. pl. Orient., ser. II, fasc. 6, 64 (1859) non Bunge. — *O. pentelica* Hausskn., Symb. Graec. in Mitt. Thür. bot. Ver. (1893) 82; Hal., l. c., 457 fide Hand.-Mazz. — *O. Visianii* Beck in Reich. f., Icon., l. c., 149 p. p. et aut. p. p.]. Rhizoma surculis foliatis instructum. Caules tenues, flexuosi. Flores 10—12 (13) *m* longi, Corolla alba, vel pallide rosea, vexillo plus minus roseo-striato. Calycis dentes vix 2—2½ × tubo suo longiores, molliter dense pilosi. Alae calycem aequantes vel paulo longiores (ex Boissier) in planta nostra autem conspicue breviores. In saxosis, argillosis, graminosis usque ad regionem alpinam (2000 *m*). Floret mens. Junio, Julio.

Bosna: In montibus Kamešnica, Prolog (Th. Pichler f. Ha.) 948—1580 *m*. in montis Dinara cacuminibus: Troglav (Br. f. Ha.), Vrsina, Janski vrh 1600—1790 *m* (Ja. Wa. sub *O. Visianii* f. Ha.); in monte Vel. Golja prope Livno (Sta. Fa. sub *O. montana* f. Ha.) 1600 *m*, Krug Pl., 1100—1300 *m* (B.), Cincar (Sta. Fa. f. Ha., B.) —2000 *m*; prope Livno (Fr. Br. sub *O. Visianii*) Ločike in monte Vranica pl. 1800—2000 *m* (R. f. Ha.). — **Hercegovina:** Ubi? (Rakitno?) (Simonović f. *Ha. 1909), in monte Velež 1200—1600 *m* (Bornmüller! sub *O. Visianii*).

3. *Onobrychis montana* [Lam. et DC., Fl. franç., IV. 611 (1805); DC., Prodr., II, 344; Beck in Reich. f., Icon. fl. Germ., XXII, 148; Hand.-Mazz., *Onob.*, l. c. (1910), 9; Širjaev, *Onob.*, 136. — *O. sativa* v. *scardica* Griseb., Spic. fl. Rum., I, 65 (1843); Boiss., Fl. Or., II, 533; subsp. Wettst., Beitr. Fl. Alban. in Bibl. bot., Heft 26, 39 (1892) = *O. scardica* Hal., Beitr. Flora Epirus in Denkschr. Ak. Wiss. Wien, LXI (1894) 236. — *O. sativa* v. *montana* Koch, Syn. Fl. Germ., 190; Boiss., Fl. Or., II, 533. — *O. viciifolia* f. *O. montana* Rouy, Fl. Fr., V, 285. — *O. transsilvanica* Simonkai in Term. füz. X (1886) 180 et Enum. fl. Transs., 191. — *O. onobrychis* v. *montana* et *scardica* Asch. Gr., Syn., l. c., 880 et 881. — *O. vulgaris* v. *montana* Gaud., Fl. Helv., IV, 569 (1829)]. Carina vexillo semper conspicue longiore, rhizomate etiam surculos steriles foliatas formante ac statione alpina bene a prioribus distinguitur. In pascuis saxosis

glareosis regionis alpinae montium 1100—2100 *m*. Floret mens. Junio, Julio.

Bosna: In monte Cincar, c. 1800 *m* (B.), in montis Vranica Pl. cacuminibus —2000 *m*: Bijela gromila (Simony f. Ha.), Krstac (Čurčić!, Simony f. Ha.), Ločike (R.!), Matorac, Smiljeva kosa (Bošnjak), Zec (Bl.); in montibus Bjelašnica (M.). Treskavica: (Bl., B., F. f. Ha.) —1800 *m*; Crveni klanac (R.!), Zagorje (R.!), Orlovač montis Dumoš Pl. (R.!), Vel. Todor (Lakatos!), Bregoč (Pr.), Maglić —2100 *m* (Adam. f. Ha.), Volujak (B., Fr.). — **Hercegovina:** In montibus Visočica (B.), Prenj Pl. 1600—2000 *m* (B.): in cacuminibus. Velika kapa (F. f. Ha.), Kantar (V. f. Ha.), Ortiš (B.), Prenj (Prodan); Lipeta prope Nevesinje (Br. f. Ha.).

Ludit:

scardica [Gris., l. c. pro var.; Širjaev, *Onobr.*, 141 pro spec.] foliolis saepius minimis, iis foliorum inferiorum saepius vix 5 *mm* longis. Passim. **Bosna** (*Bl. 1877). **Hercegovina** (Degen 1896). — *hamata* [Beck, Fl. Südb. in Ann. naturh. Hofmus. XI (1895), 77]. Aculeo nucis supremo ceteris duplo majore et iatiore, pronus curvato, in forma typica aliis minore saepe tuberculoso. **Bosna:** In Monte Maglić (*B. 1896). — *transsilvanica* [Simk., l. c., pro spec.; G. Beck in Reich. f., Icon., l. c., 148 (1902); Širjaev, *Onobr.*, 138]. Aculeis nucis abbreviatis, cristae latitudine brevioribus (sed hinc inde etiam majoribus). In typo aculei elongati, cristam latam longitudine aequantes vel superantes [= *typica*]. **Bosna:** In monte Cincar cum typo (*B. 1902)

4. *Onobrychis ocellata* [Beck in Reich. f., Ic. fl. Germ., XXII. 147. t. 190*, fig. II (1902) = *O. Tommasinii* β. *ocellata* G. Beck ibidem, ampl.; Hand.-Mazz., *Onobrychis*, 484; Širjaev, *Onobr.*, 166; f. *inermis* G. Beck, Fl. Südbosn. in Ann. naturh. Hofmus., XI (1896) 77; *O. arenaria* subspec. *Tommasinii* Asch. Gr., Syn., l. c., 882]. In graminosis, pascuis, saxosis, aridis —1100 *m*. Floret mens. Junio.

Bosna: (*Ha. 1909). In declivibus montis Kamešnica 950 *m* (Ha.), Kozia jama in monte Dinara (Ja. Wa.), Madjaruša prope Pribelja —1100 *m* (Sta. F. W.), prope Livno (Br. f. Ha.). — **Hercegovina:** Circa Mostar (Bornmüller!, M. Lindberg sub *O. Tommasinii*), prope Han Osman-Bakračuša (M. f. Ha.); in monte Podvelež prope Mostar (*B. 1902; Ja. f. Ha.); circa Radovan prope Posušje (F. f. Ha.), circa Posušje (Ha.).

Etiam plantae reperiuntur, quae in *Om arenaream* inclinant.

5. *Onobrychis arenaria* Ser. in DC., Prodr., II, 345 (1825)?; Reich., Fl. Germ., 543; Beck, Fl. Nied.-Öst., 871 et in Reich. f., Icon., l. c., 146, t. 190*, fig. I; Pospich., Fl. öst. Küst., II, 407; Asch. Gr., Syn., 882; Hand.-Mazz., *Onobr.*, l. c., 486; Širjaev, *Onobr.*, 168. — *O. Tommasinii* Jordan, Cat. hort. Gren. (1851) 8 et in Linnaea 25 (1852) 303; Borb., Adat. Arbe in Akad. közl., XIV, 72, t. III; v. *typica* G. Beck in Reich. f.,

Icon., l. c. = *O. arenaria* var. Posp., Fl. öst. Küst., II, 408. — *Hedysarum arenarium* Kit. in Willd., Enum. hort. Berol., Suppl., 51 (1813) et in Schult., Öst. Fl., ed. II, II, 368 (1814) et in Linnaea 16 (1863) 636]. In arenosis, lapidosis, graminosis pascuis pratis, dumetis — 1300 m. Floret mens. Junio—Augusto.

Bosna: In monte Dinara; dolina Kozja jama c. 1000–1300 m (Ja Wa. f. Ha.), prope stationem Lašva (Ha., Ja. f. *Ha 1905), in agro Vinica-polje 600 m (Ha.), Sokolović prope Rudo (Schill. fide Ha.). — **Hercegovina:** (*Ha. 1909); in monte Podvelež 650–850 m (Ja. f. Ha.), in agro Trebistovo prope Rakitno c. 900 m (Ha.) et prope Podklečani (Ha.), in monte Radovan prope Posušje 1000 m (Ha.), Bišina prope Nevesinje (M. f. Ha.), inter Bileća et Korita (Ad. f. Ha.), prope Trebinje (Boller f. Širjaev).

Ludit:

a) Racemi ante anthesim *Myosuri* modo fusiformes, longae-acuminati, perbrevis laxiflori et longissimi. Calycis dentes tubo suo superantes vel eum aequantes.

typica [Pospich., Fl. öst. Küstenl., II 408 (1898) = G. Beck in Reich., Icon., l. c.]. Foliola foliorum inferiorum oblonga, ea superiorum anguste linearia. — *austriaca* [G. Beck, Fl. Nied.-Öst., 871 (1892) et in Reich. Ic., l. c., 147], Foliola foliorum inferiorum elliptica, ea superiorum oblonga.

b) Racemi ante anthesim subcylindracei paulo acuminati. Dentes calycis bis tubo suo longiores. Foliola iis formae typicae similia vel latiora. Flores 10–11 mm longi. Corolla rosea, carnea vel albida = *Tommasinii* [Jordan l. c. sub specie; Posp., l. c., 408]. In *O^m ocellatam* transit.

6. *Onobrychis vulgaris* [Hill, Brit. Herb., 293 (1756) = Gaud., Fl. Helv., IV, 569. — *O. viciaefolia* Scop., Fl. Carn., ed. II, II, 76 (1772); Beck, Fl. Nied.-Öst., 871 et in Reich. f., Icon., l. c., 145, t. 190, fig. I, II; Posp., Fl. öst. Küst., II, 407; Hand.-Mazz., *Onobr.*, l. c. (1910) 5; Širjaev, *Onobr.*, 178. — *O. sativa* Lam., Fl. franç., II, 652 (1778); DC., Prodr., II, 344; Vis., Fl. Dalm., III, 316. — *O. onobrychis* Karst, Deutsch. Fl., 681 (1883); v. *sativa* Asch. Gr., Syn., l. c., 879. — *Hedysarum onobrychis* L., Spec. pl., 751 (1753) α . — *H. echinatum* Gilib., Fl. Lith., IV, 109]. In pratis montanis, saxosis, vix spontanea sed introducta. Cultam non vidi. Floret mens. Majo–Julio.

Bosna: Circa Zvornik (J.), in agro Rilić polje versus Malovan (*S. 1848), prope Livno, Glamoč (Pr.); inter Jajce et Bočac (Behrendsen), in hortis oppidi Travnik (Br. f. Ha.); ad viam ferream prope Han Marica (H.), Travnik (Br.), inter Zenica et Lašva (Čurčić f. Ha.), prope Pajtov han, Tarčin (Pr.), in agro Sarajevsko polje (F. f. Ha.), prope Alipašin Most (M.

f. Ha.), ad viam ferream vallis fl. Miljacka (M. f. Ha.), in faucibus Prača (M.). — **Hercegovina:** Circa Mostar (Pi.), ad viam ferream inter Mostar et Buna (Mu.); prope Grančarevo in Bijela gora (*P. 1874) hiç probanda.

Observata est solum v. *typica* [G. Beck. — *O. viciaefolia* v. *typica* G. Beck in Reich., Ic., l. c., 146] cum f. *sativa* [Lam., l. c. = *O. viciaefolia* var. Wallr. in Linnaea XIV, 616].

Vicieae.

[Bronn, Diss. Leg., 133 (1822) em.; Benth. Hook., Gen., I, 450; Beck, Fl. Nied.-Öst., 871; Taubert in Engl. Prantl, Nat. Pflanzenfam., III 3, 350.]

30. Cicer.

[L., Spec. pl., 738 (1753) et Gen., ed. V, nr. 783; Endl., Gen., 1278; Benth. Hook., Gen., I, 524; Alef. in Öst. bot. Zeit. (1859), 354; Taubert in Nat. Pflanzenf., III 3, 350. Conf. Jaubert et Spach in Ann. sc. nat., ser. 2, 18 (1842), 223.] »Slanutak«.

1. *Cicer arietinum* [L., Spec. pl., 738 (1753); Reich., Fl. Germ., 532; Alef. in Öst. bot. Zeit. (1859) 355; Boiss., Fl. Or., II, 560; Posp., Fl. öst. Küst., II, 409; Beck in Reich. f., Ic. fl. Germ., XXII, 207, t. 267; Asch. Gr., Syn. mitt. Fl., VI 2, 900]. »Nohud, čic, slanutak«. Ex Asia minore introducta colitur et hinc inde spontanea occurrit. Floret mens. Majo, Junio.

Bosna: Circa Sarajevo prius frequentius culta (*M. 1908). — **Hercegovina:** Radišići prox. stat. Konjušnica (V.); spontanea inter Beljani et Trebesin han (*V. 1888). — **Dalmatia:** Colitur circa Metković (B.).

31. Vicia.

[L., Spec. pl., 734 et Gen., ed. V, nr. 782 ampl.; Benth. Hook., Gen., I, 524; Beck, Fl. Nied.-Öst., 871; Taubert in Nat. Pflanzenf., III 3, 350; Beck in Reich. f., Icon. fl. Germ., XXII, 174.] »Grahor«.

(*Spisopuna*) (Hayne; Beck) (Vicia panonica)

I. Viciosae.

[Alef. in Öst. bot. Zeit. (1859), 353 et in Bonplandia, IX (1861). 68.]

Sectio: *Faba*.

[Ludw., Inst., ed. II (1757) 127 p. p.; Adans., Fam., II 331; Moench., Meth., 150; Ser. in DC., Prodr., II, 354; Alef. in Bonplandia IX (1861) 101 pro gen.; Gray, Brit. Pl., II 617 (1821); Beck, Fl. Nied.-Öst., 872 et in Reich. f., Icon. fl. Germ. XXII, 174.]

1. *Vicia faba* [L., Spec. pl., 737 (1753); Reich., Fl. Germ., 531; Hayne, Arzn.-Gew., XI, t. 48; Vis., Fl. Dalm., III. 317; Posp., Fl. öst. Küst., II 412; Beck, Fl. Nied.-Öst., 872 et in

Reich. f., Icon., l. c., 175, t. 238 et t. 240, fig. IV; Asch. Gr., Syn., l. c., 987. — *Faba vulgaris* Moench, Meth., 150 (1794); DC., Prodr., II, 354; Alef. in Bonpl., IX (1861), 101. — *F. sativa* Bernh., Syst. Verz. Erf., 250 (1800). Conf. Trabut in Bull. soc. bot. France, 57 (1910) 424 et 58 (1911)]. »Bob«. Patria est ignota, probabiliter ditio mediterranea orientalis, sed sec. Trabut [l. c. (1910) 424] in Algeria prope Sersou silvestris reperitur. Ab antiquitate in hortis agrisque ad usum oeconomicum colitur. Floret mens. Junio, Julio.

Bosna: (*Asch, Kan., Cat. Serb. 1877) Prope Banja Luka (H.), Sarajevo (M.). — **Hercegovina:** In agro Popovo Polje (M.), prope Trebinje (*P. 1874).

Sectio: *Vicia*.

[Beck, Fl. Nied.-Öst., 872 et in Reich. f., Icon., l. c., 175. — *Vicia* L., l. c., pro gen. p. p.; Endl., Gen., 1279; Reich., Fl. Germ., 529; Peterm., Deutschl. Fl., 152 pro sect. p. p. et sect. *Euvicia* Vis., Fl. Dalm., III, 317; Neilr., Fl. Nied.-Öst., 960; Taubert in Nat. Pflanzenf., III 3, 351 p. p. — *Vicioides* et *Vicia* Moench, Meth., 135 et 147 p. p. — *Hypechusa*, *Wiggersia* et *Vicia* Alef. in Bonpl., IX (1861), 68 et 70.]

2. *Vicia narbonensis* [L., Spec. pl., 737 (1753); Vis., Fl. Dalm., III, 318; Alef. in Bonpl., IX (1861), 100; Boiss., Fl. Or., II 577; Hal., Consp. Graec., I, 482; Beck in Reich. f., Icon., l. c., 175, t. 241; Asch. Gr., Syn., l. c., 984; v. *integrifolia* Ser. in DC., Prodr., II, 365; v. *genuina* Godr. Gren., Fl. franç., I, 463; v. *typica* Posp., Fl. öst. Küst., II, 413]. In cultis et satis incultis graminosis per ditionem florum mediterraneae. Floret mens. Majo, Junio.

Hercegovina: Prope Voino (M.), Mostar (Pi., M., Lindberg), Liubuška (F.), Trebinje (*P. 1874).

Adest:

f. *heterophylla* [Rouy, Fl. Franc., V 221 (1899) = *V. heterophylla* Reich. Fl. Germ., 531 non Presl = ?*V. platycarpus* Roth., Bot. Beob., 10 (187) et Alef. in Bonpl., IX (1861) 100. — v. *intermedia* Strobl in Öst. bot. Zeit. (1887), 287] foliolis foliorum superiorum apicem versus denticulatis. **Hercegovina:** In agris prope Mostar (*Lindberg 1906. M.).

3. *Vicia serratifolia* [Jacqu., Fl. Austr. V, App., 20, t. 8 (1778); Alef. in Bonpl., IX (1861) 100; Beck, Fl. Nied.-Öst., 873 et in Reich., Icon., l. c., 176, t. 240, fig. I—III. — *V. narbonensis* α . *serratifolia* Ser. in DC., Prodr., II 365; Koch, Syn. fl. Germ., ed. II, 215; subspec. Asch. Gr., Syn., l. c. 986. —

Conf.: Clos in Bull. soc. bot. France, ser. 3, V (1898), 429 et (1905) 265]. In graminosis, incultis. Floret mens. Majo, Junio.

Hercegovina (*Asch. Kan., Cat. 105 1877). Ubi? Prope Mostar (Pi!). Vojno (M.).

Ludit:

typica [G. Beck in Reich., Ic., l. c., 176]. Vulgata. — *integrifolia* [G. Beck, l. c., t. 240, f. II]. Foliolis integris e ditione nostra nondum vidi. Adest in **Dalmatia**: Riva dei sette Castelli (Fried. Aug. II rex Saxoniae!).

4. *Vicia pannonica* [Crantz., Stirp., V (1769), 393; Jacqu., Fl. Austr., I, 23, t. 34 (1779); Reich., Fl. Germ., 529; Boiss., Fl. Or., II, 569; Beck, Fl. Nied.-Öst., 374 et in Reich. f., Icon., l. c., 177, t. 243; Posp., Fl. öst. Küst., II, 414; Asch. Gr., Syn., l. c., 981]. In cultis, satis, incultis, dumetis. Floret mens. Majo—Julio.

Variat:

α. *typica* [G. Beck, Fl. Nied.-Öst., 874 (1892) et in Reich., Ic., l. c., 177, t. 243, f. I, II = Posp., l. c., 415 (cum f. *ochroleuca* Tommas.); Asch. Gr., l. c., 981; *V. pannonica* Crantz supra citata. — *Vicioides hirsuta* Moench., Meth., 137 (1794). — *Hypechusa pannonica* Alef. in Bot. Zeit. (1860) 165 et in Bonpl. IX (1861), 168].

Bosna: Tujnica potok prope Novi (B.), circa Banja Luka (H.), ad fl. Kravica prope Nov. Kasaba (J.), prope Donji Vakuf versus Suhara (Ha. Fa.), Hrblijina, Kupres, Grkovac, Rore, Glamoč (Pr.). Circa Jajce (M.), Travnik (*S. 1848), Jankovići (Fr. Br.!), Zenica (Breindl!), inter Fojnica et Kiseljak (S.); prope Tarčin (Pr.), in agro Sarajevsko polje ad fontes fl. Bosna (M.), circa Sarajevo (Blau, Herb., nr. 192, B.), ad fl. Miljacka (Mu.), prope Setihovo (M.). — **Hercegovina**: Prope Konjic (M.), Mostar (Lindberg), Žitomišljici (M.). Čapljina (Poeverlein), Bileća (*P. 1874). — **Novi Pazar**: Prope Priepolje (P. Zahlbr. fide *Hayek 1906).

β. *striata* [Marsch. Bieb., Fl. taur. cauc., II 162 (1808) pro spec.; Gris., Spic. fl. Rum., I, 79 (1843); Beck., Fl. Nied.-Öst., 874 et in Reich. f., Icon., l. c., 178, t. 243, f. III; Posp., Fl. öst. Küst., II, 415; Asch. Gr., Syn., l. c., 982. — *V. purpurascens* DC., Hort. Monsp., 155 (1813). — *V. pannonica* v. *purpurascens* Ser. in DC., Prodr., II, 364; Vis., Fl. Dalm., III, 318. — *Vicioides striata* Moench, Meth., 137 (1794). — *Hypechusa purpurascens* Alef. in Bot. Zeit. (1860), 166. — *V. uncinata* Reich., Fl. Germ., 530 (1832) p. p. non *Vicioides uncinata* Mch., l. c., 136, cuius descriptio minime cum *V^a striata* congruit.

Hercegovina: Circa Mostar (Lindberg, Crawford), in declivibus montis Stolac (Ja.), prope Radobolje (M.), Nevesinje c. 870m (Mu.).

5. *Vicia hybrida* [L., Spec. pl., 737 (1753); Jacqu., Hort. Vind., t. 146; Reich., Fl. Germ., 529; Vis., Fl. Dalm., III, 318; Posp., Fl. öst. Küst., II, 415; Beck in Reich. f., Icon., l. c., 178, t. 244, fig. I; Asch. Gr., Syn., l. c., 979. — *V. Linnaei* Rouy, Fl. Franc., V, 220 (1899). — *Hypechusa hybrida* Alef. in Bot. Zeit. (1860) 166 et in Bonpl., IX (1861) 68]. In agris, graminosis, incultis, saxosis. Floret mens. Martio—Junio.

Hercegovina: Circa Mostar in monte Stolac (B, Pi.), prope Žito-mišlići, Mogorjelo (M), Trebinje (*P. 1874)

6. *Vicia lutea* [L., Sp. pl., 736 (1753); Reich., Fl. Germ., 529; Vis., Fl. Dalm., III, 318; Boiss., Fl. Or., II, 570; Beck, Fl. Nied.-Öst., 875 et in Reich. f., Icon., l. c., 179, t. 245; Asch. Gr., Syn., l. c., 977. — *Wiggersia lutea* G. M. Sch., Fl. Wett., III, 36 (1801/2). — *Hypechusa lutea* Alef. in Bot. Zeit. (1860), 166 et in Bonpl., IX (1861) 68]. In satis, cultis, incultis, graminosis. Floret mens. Majo, Junio.

Variat:

α. *typica* [Posp., Fl. öst. Küst., II 416 synonym. supra citata].

Bosna: Prope Zalužani (*C. 1888); in vallibus fl. Jadra et Kravica inter Drinjača et Nov. Kasaba (J.); circa Podgradina ad pedem montis Kamešnica, prope Grkovci, Crni lug, Livno (Pr.), — **Hercegovina:** Circa Mostar (*Str. 1880).

β. *hirta* [Balbis in Pers., Syn., II, 308 (1807) pro spec.; Lois., Fl. Gall., 462 (1807); Koch, Syn. fl. Germ., 196 (1835); Boiss., Fl. Or., II, 570; Beck in Reich. f., Ic., l. c., 179, t. 245, fig. II; Asch. Gr., Syn., l. c., 978. — *v. pallidiflora* Ser. in DC., Prodr., II, 363 (1825)].

Bosna: Prope Banja Luka (*H. 1882). — **Hercegovina:** Prope Trebinje et Zasad (*P. 1874), in valle fl. Neretva prope castellum Opužen in Dalmatia finitima (rex Fred. Aug. II Saxoniae!).

7. *Vicia melanops* [Sibth. Sm., Prodr. fl. Graec., II, 72 (1813); Sibth., Fl. Graec., VIII, 1, t. 701; Vis., Fl. Dalm., III, 318; Boiss., Fl. Or., II, 571 (excl. legumine); Hal., Consp. fl. Graec., I, 484; Beck in Reich. f., Icon, l. c., 180, t. 246, f. II; Asch. Gr., Syn., l. c., 961. — *V. tricolor* Seb. Mauri, Fl. Rom., 245, t. 4 (1818); Ser. in DC., Prodr., II, 363. — *V. triflora* Reich., fl. Germ., 531 (1832) non Ten. — *Hypechusa tricolor* Alef. in Bot. Zeit. (1860) 166 et in Bonpl. IX (1861), 69]. In

graminosis, dumetis, silvaticis ad sepes in ditone florum mediterraneae. Floret mens. Aprili—Junio.

Hercegovina: Prope Mostar (Pi.!; Raap-Callier, Pl. Herc., nr. 261), Mogorjelo prope Čapljina (M.), circa Ljubuški (F.!), Trebinje (*P. 1874, Adam., Ja.).

8. *Vicia sativa* [L., Spec. pl., 736 (1753) em. All., Fl. Pedem., I, 325; Reich., Fl. Germ., 530; Alef. in Botan. Zeit. (1860), 77 et in Bonpl., IX (1861), 71; Beck, Fl. Nied.-Öst., 876 α et in Reich. f., Icon., l. c., 180, t. 248, fig. I—III et 249, fig. I; Pospich., Fl. öst. Küst., II, 418. — *V. sativa* subspec. *V. notata* Asch. Gr., Syn., l. c., 963. — *V. notata* Gilib., Fl. Lith., II, 105 (1781)]. »Kukolj, grašak«. In agris, incultis, ruderratis. Ad usum oeconomicum saepe colitur. Floret mens. Aprili, Majo, Julio.

Bosna: Prope Banja Luka, Maglaj ad fl. Vrbas (H), Nova Kasaba (J.), Šujica (B.), Donji Vakuf (Sta. Fa), Travnik (*S. 1848), Sarajevo, Hrasnica (Blau 213, 757), Paroš (M.); in Bosna australi saepius culta. — **Hercegovina:** Circa Konjic (Blau, Herb., nr. 2102), Mostar (*Str. Pi.) culta; in agro Mostarsko polje (Simonović f. Ja.), Šurmanci (M.), prope Bileća (Haw.!).

Observantur:

typica [G. Beck, Fl. Nied.-Öst., 876 (1892) et in Reich., Ic., l. c., 181. — *V. sativa* L., l. c.; v. *obovata* Ser. in DC., Prodr., II, 361; Vis., Fl. Dalm., III, 319; v. *nemoralis* Pers., Syn., II 307 f. Seringe; v. *obcordata* Neilr., Fl. Nied.-Öst., 962]. Vulgata.

linearis [Lange, Pug., 379 f. Willk., Prodr. fl. Hisp., III 294; Beck in Reich., Icon., l. c., 181 = Wohlf., Syn. deutsch. Fl., 677]. Floribus majoribus, leguminibus fuscis torulosis a *Vae angustifoliae* formibus bene differt.

Bosna: Prope Donja Tuzla (M. ?quoad spec. imperf.!) In agris prope. Ključ (*B.). — **Hercegovina:** Circa Mostar (Bornmüller! ?quoad spec. imperf.), Jasenica (Pi.).

Cosentini [Guss., Prodr. Sic., II, 426 (1828); Freyn in Abh. zool.-bot. Ges. (1877), 321; Posp., Fl. öst. Küst., II, 418; Wohlf., Syn. deutsch. Fl., 677 pro spec.; Arcang., Comp. fl. Ital., 201 (1882); Beck in Reich., Ic., l. c., 181, t. 248, fig. II; Asch. Gr., Syn., l. c., 966]. Foliolis e basi cuneata oblongis, supra sublinearibus, apice retusis v. obcordatis; leguminibus torulosis, glabris. Priori (f. *lineari* Lange) valde affinis.

Hercegovina: Prope Mostar, Radobolje (*C. Baenitz 1897, M. 1908), Domanovići (Ginzberger), Ljubuški (F. f. M.).

9. *Vicia angustifolia* [L., Amoen. acad., IV, 105 (1759) (deest in Richter, Codex Linn.!)=Reichd., Fl. Moen. Francof., II, 44 (1778)=Roth, Tent. fl. Germ., I 310 (1788); Alef. in Bonpl. IX (1861), 71; Posp., Fl. öst. Küst., II, 419. — *V. sativa* v. *nigra* L., Spec. pl., ed. II, 1037 (1763); v. *angustifolia* Wahl., Fl. Carp., 218 (1814); Ser. in DC., Prodr., II, 361; Vis., Fl. Dalm., III, 319; Beck, Fl. Nied.-Öst., 876 = subsp. Asch. Gr., Syn., 971. — *V. nigra* (L.) Steud., Nomencl., 882 (1821); Beck in Reich., Ic., l. c., 182, t. 250]. Foliolis foliorum superiorum linearibus vel oblongo-linearibus, obtusis vel acutis, mucronulatis, floribus minoribus 15–18 mm longis leguminibus angustis 6–7 mm latis, maturis aterrimis, seminibus globosis minoribus — 3 mm latis a *V. sativa* sat diversa. In agris, graminosis, apricis, lapidosis, in silvis luminosis — 1200 m. Floret mens. Majo—Julio.

Bosna: Kozluk prope Zvornik (J.). In monte Podgomila et Grad prope Krupa (B.), circa Petrovac (B.), prope Podgradina, Gubin, Grkovac, Crni lug (Pr.), Donji Vakuf (Ha. Fa.); circa Travnik (Fr. Br.): prope Bukovica, in monte Vlašić (*S. 1848); prope Fojnica 600 m (Mu.). Circa Sarajevo (B.): in valle fl. Moščanica (Blau 2082), Miljacka, Koševo (M.), in montibus Trebević, Orlovac et castello coronato (B.); prope Foča, Ustikolina (Pr.), Višegrad, Strmica (M.). — **Hercegovina:** Prope Ivan (Blau 1033), Konjic (B.), in valle Idbar (M.), Jablanica (B.), ad lacum Blidinje jezero 1200 m (M.), Mostar (*Str. 1880, Pi.), Vojno (Ja.); prope Stolac (F.), Mogořjelo, circa Sutorina (M.). — **Novi Pazar:** Prope Prijepolje (P. Zahlbr. f. Hayek 1906).

Ludit:

segetalis [Thuill., Fl. Par., ed. II, 367 (1799) pro spec.; Koch, Syn., 197 (1835); Beck in Reich., Ic., l. c., 182, t. 250, fig. III; Asch. Graebn., Syn., l. c., 973. — *V. sativa* var. *segetalis* Ser. in DC., Prodr., II 361 (1825); v. *variifolia* Neilr., Fl. Nied.-Öst., 962. — *V. nigra* v. *segetalis* Beck in Reich., Ic., l. c., 182, t. 250, fig. III]. Frequenter. — *Bobartii* [Forst. in Trans. Linn. soc., XVI (1833) 439 pro spec.; Koch, Syn., 197 = *V. nigra* var. Beck in Reich., Ic., l. c., 182]. Frequenter. — *uncinata* [Desv., Journ. bot. pro spec. f. Boreau, Fl. centr. France, ed. III, 173 non Reichb. — Rouy, Fl. Franc., V, 213 (1900) pro var. — *V. nigra* v. *uncinata* G. Beck in Reich., Ic., l. c., 183, t. 250, fig. IV. — **Hercegovina:** In valle fl. Neretva prope Jablanica (*B.).

10. *Vicia cordata* [Wulf. in Sturm, Deutschl. Fl., Heft 32 cum icon. (1812); Ser. in DC., Prodr., II, 362; Koch, Syn. fl. Germ., 197; Alef. in Bonpl., IX (1861) 72; Vis., Fl. Dalm., III, 319; Posp., Fl. öst. Küst., II, 420; Beck in Reich. f., Icon., l. c., 183, t. 249, fig. II. — *V. sativa* subsp., Asch. Gr., Syn., l. c.,

968; var. Arc., Comp. Ital., ed. II, 524 (1894). — ?*V. intermedia* Viv., Fl. Lib., 42, t. 19, f. 1; Ser., l. c., 361 = *V. sativa* v. Vis., l. c., 319. — *V. (ob)cordata* Reich., Fl. Germ., 530 (1832). — *V. angustifolia* v. *cordata* Boiss., Fl. Or., II 575 (1872)]. Foliolis fol. inferiorum profunde obcordatis, iis fol. superiorum e basi cuneata oblongo-sublinearibus, omnibus apice excisis, in sinu mucronatis, floribus parvulis, solum 10–15 mm longis, leguminibus linearibus, 5 mm latis, maturis nigrescentibus, — 10spermis (in prioribus 4–8spermis), seminibus globosis, nigris, 3 mm latis distinguitur. In apricis, graminosis, dumetis. Floret mens. Aprili—Majo.

Bosna: Prope Banja Luka (*H. 1882), Grkovac, Preodac (Pr.), in valle fl. Željeznica (Pr.). — **Hercegovina:** Prope Mogorjelo (M.), Trebinje, Bileća (*P. 1874).

11. *Vicia peregrina* [L., Spec. pl., 737 (1753); Ser. in DC., Prodr., II, 362; Reich., Fl. Germ., 530; Boiss., Fl. Or., II, 576; Vis., Fl. Dalm., III, 320; Posp., Fl. öst. Küst., II, 416; Beck in Reich. f., Ic., l. c., 185, t. 246, fig. I; Asch. Gr., Syn., l. c., 975]. Stipulis angustis rectangule hamatis plurimum integris, non nectariferis, foliolis linearibus in apice truncatis et subtridentatis actutum a formis *V^{ae} angustifoliae* distinguenda. In cultis, incultis apricis, vinetis. Floret mens. Aprili—Junio.

Hercegovina: In valle fl. Neretva circa Mostar (Bornmüller!, Pi., M., Raap Callier, Pl. Herc., nr. 63!), in agro Mostarsko polje (Ja.), prope Stolac (B.), prope Trebinje (*P. 1874, Baenitz!).

12. *Vicia lathyroides* [L., Spec. pl., 736 (1753); Jacqu., Misc., II, t. 18; Ser. in DC., Prodr., II, 362; Reich., Fl. Germ., 530; Vis., Fl. Dalm., III, 320 (et v. *leiosperma*); Beck, Fl. Nied.-Öst., 874 et in Reich. f., Icon., l. c., 185, t. 242, fig. III, IV; Posp., Fl. öst. Küst., II, 421; Asch. Gr., Syn., l. c., 959. — *V. minima* Lam., Ill., t. 624, f. 2; — *Wiggersia lathyroides* G. M. Sch., Fl. Wett., III, 34 (1801). — *W. minima* Alef. in Bonpl., IX (1861), 69. — *Ervum soloniense* L., Cent. pl., II (1756) et Spec. pl., ed. II, 1040 (1763)]. In graminosis, arenosis, aridis. Floret mens. Aprili—Junio.

Bosna: In valle fl. Spreća prope Turija (*S. 1848). Circa Prosjek, Zlohodane, Djevanje in valle fl. Drina (J.), prope Travnik (Br.). Circa Potoci et Pržići (Pr.), circa Sarajevo in jugo inter valles fl. Miljacka et Mošćanica (F., M.). — **Hercegovina:** Prope Mostar (*Str. 1880).

13. *Vicia grandiflora* [Scop., Fl. Carn., ed. II, II 65, t. 42 ampl.; Vis., Fl. Dalm., III, 319; Beck, Fl. Nied.-Öst., 876 et in

Reich. f., Ic., I c., 186, t. 247; Posp., Fl. öst. Küst., II, 417; Aschers. Gr., Syn., I c., 950. — *Cujunia grandiflora* Alef. in Bonpl., IX (1861) 101].

Variat:

α. Scopoliana [Koch, Syn. fl. Germ., 197 (1836); ed. II, 217; Asch. Gr., I c., 951. — v. *obcordata* Neilr., Fl. Nied.-Öst., 961. — v. *typica* G. Beck, Fl. Nied.-Öst., 876. — *V. grandiflora* Scop., I c. — v. *rotundata* Janch. apud Fritsch in Mitt. naturw. Ver. Steierm., 47 (1910), 14. — *Vicia sordida* v. *rotundata* Seringe in DC., Prodr., II, 363 (1825) f. Janchen et in Reich., Ic., I c., 187, t. 247, fig. I]. In pratis, incultis, vinetis, dumetis, ad sylvarum margines. Floret mens. Aprili—Junio.

Bosna: Prope Donja Tuzla (M., Wettst. f. Ja.), Preodac, in monte Kamešnica (Pr.), Švrakino Selo (M.); Koševo prope Sarajevo (Pr.), in Zelengora, prope Tientište (Pr.). — **Hercegovina:** In valle fl. Trešanica (Bl., B.), prope Konjic (M.), Dubočani (M.), Jablanica (Prodan, M.), Drežnica (Pi.), Mostar (Pi.), Mostarsko blato (B), Vojno (Ja.), circa Domonovići (F.), in silva Dubrava (M.), Bukovi dol distr. Ljubinje (R.), Stolac (F.); Mogorjelo (M.), Gradac (Br.), Hum (M.), Bileća (Hawelka!), Trebinje, in valle Jazina (*P. 1874), in monte Vlastica c. 750m (Berger).

Etiam f. *polychroma* [G. Beck in Reich. f., Ic., I c., 187, t. 247, f. II]. **Hercegovina:** Prope Drežnica, Lastva (M.), Bileća (Hawelka f. *B.). — **Crna Gora:** Krstac supra Kotor (B). — **Dalmatia:** Prope Lastva (B).

β. sordida Waldst. Kit., Pl. rar. Hung., II, 143, t. 133 (1805) pro spec.; Gris., Spic. fl. Rum., I, 78 (1843); Beck, Fl. Nied.-Öst., 876 et in Reich. f., Ic., I c., 187, t. 247, fig. III; Asch. Gr., Syn., I c., 951. — v. *Kitaibeliana* Koch, Syn. fl. Germ., 197 (1836); v. *oblonga* Neilr., Fl. Nied.-Öst., 961. — *Cujunia grandiflora* v. *sordida* Alef., I c., 101]. In cultis, graminosis, incultis, ad sepes.

Bosna: Prope Donja Tuzla (B. M.), Zvornik (Wettst. f. Ja.), in valle fl. Miljacka pr. Sarajevo (M.), inter Sarajevo et Tusin han (*S. 1848). — **Hercegovina:** In agro Mostarsko polje (Šimonović f. Ja), in m. Hum pr. Mostar (M.), prope Trebinje (*P. 1874).

serrata [Pantocsek in Öst. bot. Zeit. (1873), 80 et Annot. fl. Herc. in Verh. Ver. Naturk. Pressb. (1874) 129 pro spec.; Rohlena, 4. Beitrag Fl. Mont. in Sitz. böhm. Ges. Wiss. (1904) 43 pro var.]. Foliolis foliorum inferiorum et mediorum suborbiculatis, superiorum oblongis, omnibus praeter basim cuneatam integerrimam profunde serratis, serraturis utrinque 3—8

ovali-lanceolatis, floribus 14 mm — ultra 20 mm longis, leguminibus glandulosis (?), a *V. grandiflora* v. *Scopoliana* differt.

Hercegovina: In monte Gljiva prope Trebinje (*P. 1873) inter dumetis.

Rohlena [l. c.] in colle Zelenika prope Podgorica in Crna Gora cum typo ac formas intermedias [conf. Rohlena, 5. Beitr., l. c. (1911) 36] in valle fl. Piva observavit. Tales formas ad formam *polychromam* transeuntes cum foliolis foliorum inferiorum dentatis reperi etiam prope Krstac supra Kotor.

14. *Vicia sepium* [L., Spec. pl., 737 (1753); Ser. in DC., Prodr., II, 364; Reich., Fl. Germ., 531; Vis., Fl. Dalm., III, 320; Beck, Fl. Nied.-Öst., 875 et in Reich., Ic., l. c., 188, t. 256; Posp., Fl. öst. Küst., II, 417; Asch. Gr., Syn., l. c., 953. — *Wiggersia sepium* G. M. Sch., Fl. Wett., III, 34 (1801). — *Vicioides sepium* Moench, Meth., 136 (1794). — *Atossa sepium* Alef. in Bonpl., IX (1861) 100]. In pratis, dumetis, silvaticis — 1800 m. Floret mens. Majo.—Sept.

Bosna: Prope Banja Luka et Maglaj ad fl. Vrbas (H.); inter Srebrenik et Gradačac (*S. 1848). In monte Krblijina (Santarius f. M.), Vel. Malovan, prope Gubin (Pr.). Circa Travnik (*S. 1848), prope Paklarevo (S.), Putičevo (Fr., Br.), in monte Vlašić (S.), prope Guča gora (Franjić!); prope Žepče (S.), circa Fojnica (Schwarz!), in monte Vranica Pl. prope Prokoško jezero (Schwarz!); circa Vareš, Pajtov han (Pr.), Tarčin (Pr.). In Bosna australi frequenter, in monte Čubrin, Igman (M.), sic circa Sarajevo, Kozja ćuprija (Blau 1336), in montibus Trebević (Draguljevac) (B.), Borije, prope Stupanj, Pale, Ravna, Bukovik (M.), in Zelengora (Pr.) in valibus fl. Željeznica, Sutjeska (Pr.), in monte Vel. Vran (R.). — **Hercegovina:** Prope Konjic (Blau 2101, 2103), Jablanica (M.), in monte Ljubina: Vrtača (M.), Čvrstica (Prodan), prope Nevesinje (V.), prope Dubovac in Bijela gora (*P. 1874).

Ludit:

subrotunda [Ser., l. c.] — *vulgaris* [Gaudin, Fl. Helv., IV, 518 (1829); Koch, Syn. fl. Germ., 196 (1836)]. Utraque frequenter. — *montana* (Froel. apud Koch, l. c., 196 pro spec.; Koch, l. c., v. *angustifolia* Koch, l. c., ed. II, 215]. **Bosna:** In montibus Treskavica et Gola Jahorina — 1800 m (*M. 1912). — *eriocalyx* [Čelak., Prodr. fl. Boehm., 910 (1881); Beck in Reich. f., Ic., l. c., 188, t. 256, fig. 11]. **Bosna:** Guča gora prope Travnik (Franjić f. *B. 1896), in monte Vranica Pl. (Schwarz f. B.). **Hercegovina:** In monte Baba Pl. (Hawelka f. *B. 1896).

15. *Vicia oroboides* [Wulf. in Jacqu., Coll., IV, 323 (1790); Waldst. Kit., Pl. rar. Hung., III, 269, t. 242; Beck, Fl. Nied.-Öst., 873 et in Reich. f., Ic., l. c., 189, t. 258; Posp., Fl. österr. Küst., II, 414; Asch. Gr., Syn., l. c., 956. — *Orobis vicioides*

Ser. in DC., Prodr., II, 377 (1825). — *O. Clusii* Spreng., Syst., III, 259 [1827]; Reich., Fl. Germ., 356. — *Atossa Clusii* Alef. in Bonpl., IX (1861), 101]. In herbosis, dumetis, silvis subalpinis — 1800 *m*. Floret mens. Majo—Julio.

Bosna: Prope Bihać (Boller f. M.). In montibus Osječenica (B., F.), Mala Klekovača (F., Ha.), Gola Kosa (Ha.). Lisina (B.), Vitorog (Ha. Fa.), Šuljaga prope Donji Vakuf, Slatina (Lindberg), Vel. Malovan (Pr.), Čardak livade, Plazenica 1400—1760 *m* (Ha. Fa), prope Kupres, Šujica (Pr.), in monte Kamešnica, Vještica (Pr.), Troglav (B., Pr.), Šator (Pr.), Jedovnik (Ha.), prope Šarić bunar inter Hrastičevo et Glamoć (Ha. Fa.). Circa Travnik prope Paklarevo in monte Vlašić (*S. 1848) et Vilenica (Fr. Br.). In subalpinis Bosnae australis vulgata (B.) velut in montibus Igman (R.), Bjelašnica (Bl.), Trebević (Orlovac, Blau 229, B., M.), Ravna (M.), prope Vučja Luka (B.), in vallibus fl. Željeznica (Pr.), Govza (B.), Sutjeska (Pr.), in monte Jelenak, prope Tjentište, Beleni (Pr.), in montibus Maglič, Volujak (Pr.). — **Hercegovina**: In montibus Prenj (*B. 1887), Čvrstica (Pr.).

Ludit:

typica [K. Malý in Glasn. zem. muz. Bosn., XI (1899) 133 et in Wiss. Mitt. Bosn. Herc., VII (1900) 533]. Foliola 4—6, racemi 2—7 flori. Vulgata. — *sarajevensis* [K. Malý l. c. pro var.; Beck in Reich., Ic., l. c., 189 pro forma]. Luxurians. Foliola plurimum 6, rarius 7 vel 8, hinc inde unum subterminale. Racemi 7—12 flori sed inferiores etiam pauciflori, **Bosna**: In monte Trebević c. 1300—1600 *m* cum typo (*M. 1899!), prope Vučja Luka c. 1300 *m* (B.). In formis proprius accedentibus hinc inde et in **Croatiae** montibus.

II. Ervosae.

[Alef. in Öst. bot. Zeit. (1859), 353. *Vicia* sect. *Cracca* Endl., Gen., 1279 (1840).]

Sectio: *Abacosa*.

[Alef. in Bonpl. IX (1861) 102 pro gen. — *Cracca* aut. p. p. — sect. *Pseudocracca* Čelak., Prodr. fl. Böhm., 681 p. p.]

16. *Vicia dumetorum* [L., Spec. pl., 734 (1753); Ser. in DC., Prodr., II, 355; Reich., Fl. Germ., 528; Vis., Fl. Dalm., III, 322; Beck, Fl. Nied.-Öst., 879 et in Reich. f., Icon., l. c., 189, t. 253; Posp., Fl. öst. Küst., II, 421; Asch Gr., Syn., l. c., 917. — *Abacosa dumetorum* Alef. in Bonplandia, IX (1861) 104]. In dumetis, ad silvarum margines, in silvis apertis — 1200 *m*. Floret mens. Junio—Aug.

Bosna: Prope Banja Luka (H.), in monte Plane (C.); Trovar in monte Grmeč Pl. (F.); prope Vranograč (F.). In monte Šuljaga, Vel. Malovan (Pr.), prope Preodac, Rore (Pr.). Circa Travnik (Br.): ad fontem Kaurške vrelo (Br. f. Ja.). in monte Vilenica (Fr. Br.), Prope Visoko, Gorjevac (Fo.

f. V.), Tarčin (Pr.), prope stationem Vogošća (B.), in monte Trebević, Igman (Blau 1130, 1759), Starigrad in valle fl. Miljacka (B.): in valle fl. Željeznica et Sutjeska, in Zelengora (Pr.). — **Hercegovina:** In monte Bjelašica prope Gacko (*Mu. 1891).

17. *Vicia onobrychioides* [L., Spec. 735 (1753); Ser. in DC., Prodr., II, 358; All., Fl. Pedem., II, 325, t. 42, fig. 1; Reich., Fl. Germ., 528; Visiani, Fl. Dalm., III, 324; Beck in Reich., Ic., l. c., t. 236, fig. I; Posp., Fl. öst. Küst., II, 426; Asch. Gr., Syn., l. c., 928]. In graminosis, herbosis, dumetis (rarius in satis?). Floret mens. Majo, Junio.

Bosna: In monte Hrblijina (Ja.), prope Šarić bunar inter Glamoč et Hradišćevo c. 1420 m (Ha. Fa.) Circa Rusenovići et Han Lješćice (F. f. *M. 1904). — **Hercegovina:** Circa Mostar (Str., M), in agro Bijelo polje (Raap Call., Pl. Herc. nr. 315), in monte Istočni Velež c. 1000 m (B. sub *V. polysperma*), Čabulja ca. 1250 m (M.), in silva Dubrava (Berger), circa Trebinje et Bileća (*P. 1874), proxime Kraj prope Grab 670 m (Berger), circa Čermerno (Weisbach f. M.), Avtovac (Vidović f. M.).

Sectio: *Vicilla*.

[Schur, Enum. pl. Transs., 170 (1866) sub gen.; Rouy, Fl. Franc., V, 229 sub subgen.; Beck in Reich. f., Ic., l. c., 191 pro sect. — sect. *Pseudocracca* Čelak., Prodr. fl. Böhm. 681 (1874) p. p. — *Ervum* Peterm., Fl. Lips., 552; Alef. in Öst. bot. Zeit. (1859) 360 et in Bonplandia, IX (1861) 125 p. p. — *Ervum* sect. *Wiggersia* Kitzel, Taschenb., 3. Ausg., 1278.]

18. *Vicia pisiformis* [L., Spec. pl., 734 (1753); Ser. in DC., Prodr., II, 355; Jacqu., Fl. Austr., IV, t. 364; Reich., Fl. Germ., 529; Beck, Fl. Nied.-Öst., 878 et in Reich. f., Ic., l. c., 191, t. 254; Asch. Gr., Syn., l. c., 916. — *Ervum pisiforme* Peterm., Fl. Lips., 552; Alef. in Öst. bot. Zeit. (1859) 363. — *Vicilla pisiformis* Schur, Enum. pl. Transs., 170]. In nemoribus silvaticis, silvis caesiis. Floret mens. Majo, Junio.

Bosna: Prope Maglaj ad fl. Vrbas (*H. 1882), in valle Rakovac prope Banja Luka (C.), prope Sase (J.); supra Stojkovići prope Travnik (Br. f. Ja.). — **Hercegovina:** Prope Ljubuški (*Br. 1890/1).

19. *Vicia silvatica* [L., Spec. pl., 734 (1753); Ser. in DC., Prodr., II, 355; Reich., Fl. Germ., 528; Beck, Fl. Nied.-Öst., 879 et in Reich. f., Ic., l. c., 192, t. 255; Asch. Gr., Syn., l. c., 925. — *Ervum silvaticum* Peterm., Fl. Lips., 552 (1838); Alef. in Öst. bot. Zeit. (1859) 362. — *Vicilla silvatica* Schur, Enum. pl. Transs., 170 (1866)]. In dumetis, silvaticis —1400 m. Floret mens. Junio—Augusto.

Bosna: In monte Čardak livade (Ha. Fa.), inter Bugojno et Kupres (Pr.), in monte Hrblijina (Ja.), prope Preodac, Gubin, Glamoč (Pr.), inter Glamoč et Hrastičevo c. 1400 m (Ha. Fa.). Inter Jaice et Bočac (Behrendsen). Prope Travnik (Br.), Putičevo (Fr. Br.), in monte Vilenica (B.). Circa Kralupi et Pajtov han (Pr.), prope Tarčin (Pr.). Circa Sarajevo (H.), prope Kovačići (F.), in montibus Treskavica (Blau 2242), Draguljevac, Trebević (Blau 1590, M.), in valle fl. Miljacka (B.) et prope Starigrad (Blau 405, B.): Dovlići (M.); in faucibus Prača (M.); in valle fl. Željeznica et Sutjeska prope Tjentište, Popov most (Pr.).

20. *Vicia cassubica* [L., Spec. pl., 735 (1753); Ser. in DC., Prodr., II, 356 (excl. β.); Reich., Fl. Germ., 527; Visiani, Fl. Dalm., III, 322; Beck, Fl. Nied.-Öst., 879 et in Reich. f., Ic., I. c., 192, t. 251; Pospich., Fl. öst. Küst., II, 422; Asch. Gr... Syn., I. c., 923. — *V. militans* Crantz, Stirp., V (1769) 388 t. I, f. 2, — *V. Gerardi* Jacqu., Fl. Austr., III (1775) 66, t. 299 non Vill. — *Ervum cassubicum* Peterm., Fl. Lips., 552 (1838): Alef. in Öst. bot. Zeit. (1859), 362. — *Vicilla cassubica* Schur, Enum. pl. Transs., 170 (1866)]. In pratis, nemoribus, dumetis — 1800 m. Floret mens. Junio, Julio.

Bosna: Prope Okruglica ad flum. Misoča; Klis in distr. Vlasenica (M.); Hrasnica prope Sarajevo (Blau, Herb., nr. 758), Bielašnica (M.); Pale, Trčine, Koran, Stambulčić, 830—1000 m (M.). (Asch. Kan., Cat., 1877) Ubi? In valle fl. Sutjeska (Pr.). — **Hercegovina:** In valle Brijestov prope Uzriječje (M.), prope Ljubuški (F. f. *B.).

Variat:

α. *typica* [Posp., I. c., 422]. — f. *pubescens* [Čelak., Prodr. fl. Böhm., 683 (1875)].

Bosna: In monte Krnin montium Kozara Pl. (B.). In fagetis montis Hum prope Jaice (*C. 1888), in pratis silvaticis prope Pale (M.).

β. *bosniaca* [G. Beck in Reich. f., Icon., I. c., 193 (1904)]. Stipulae mediae et superiores lanceolatae. Folia superiora sensim foliolis paucioribus praedita, summa bijuga. Cirrhi partim simplices, saepe mucroniformes. Pedunculi pauci-, summum 5 flori, summi foliis saepe longiores 1—3 flori. Flores 10—12 mm longi. Legumina subelliptica, utrinque acuta.

Bosna: In pratis montis Krnin in Kozara Pl., cum typo (*B. 1903).

Etiam planta *ecirrhusa* Bosnae in monte Vitorog circa 1800 m (Sta. Fa. 1905) reperta est, quae probabiliter ad formam *adriaticam* [Freyn, Fl. Südistr. in Abh. zool.-bot. Ges. (1877) 318; Hirc in Öst. bot. Zeit. (1883), 357; Pospich., I. c., 422] ducenda sit. Ultima in Istria, Croatia ac Dalmatia lecta, cir-

rhis simplicibus, racemis 2—7 plurimum 3—5 floris, floribus laxis, paulo brevioribus praestat.

? *Vicia orobus* [DC. in Lam. DC., Fl. franc., V, 577 (1815); Beck in Reich. f., Icon. l. c., 193, t. 252; Asch. Gr., Syn., l. c., 920. — *Orobus silvaticus* L., Spec. pl., ed. II, 1029 (1763); Reich., Fl. Germ., 538. — *Ervum orobus* Kitt., Taschenb., ed. II, 1163 (1844)]. Certe errore ab Asch. Kan. [Cat. corm, Serb., 105 (1877)] et in Bosna et in Hercegovina enumeratur. Blau nec *V^m cassubicam* nec *V^m orobus* ex ditione nostra edidit.

21. *Vicia montenegrina* [Rohlena in Fedde, Repert. III, 146 (1907) et 5. Beitr. Mont. in Sitz. böhm. Ges. Wiss. (1911) SA. 34; Asch. Gr., Syn., l. c., 922; Malý in Glasn. zem. muz. 31 (1919), 91]. Planta fere plene glabra, tantum foliolorum petioli pilis nonnullis obtecti. Caule acute angulato, stricto, c. 40—60 cm alto; stipulis inferioribus semisagittatis, basi acute 2—3 dentatis, superioribus anguste linearibus; foliis dispariter 8—17 jugis, ecirrhis exaristatisque (itaque foliolum terminale gerentibus), rhachide basi latius superne angustius alata, foliolis petiolulatis oblongis 10—25 mm longis, 4—8 mm latis, basi subrotundis, apice obtusissimis vel subtruncatis apiculatis, subtus pallide viridibus et sublucidis, in margine cartilagineo scaberulis-denticulatis epilosis. Racemis (cum pedunculo) c. 10—6 cm longis, folia plerumque superantibus vel brevioribus, pedunculis racemo subduplo longioribus vel eum circa aequilongis, c. 10—20 floris, cum pedicellis subpuberulis. Pedicellis c. 4 mm longis, calycis tubo sublongioribus; calyce campanulato oblique truncato, ad marginem ciliato, superioribus c. 3 mm, inferioribus 1—1.5 mm longis. Corollis coeruleis. Staminum vagina ore obliquo. Stylo lineari circumcirca subaequaliter hirto. Legumine oblongo, utrinque acuminato, 20 mm longo, 5—6 mm lato; seminibus oblongis, subcylindraceis, e lateribus paulo compressis, 4—5 mm longis, 2—3.5 mm latis, pallide brunneis, obscurius maculatis, laevibus haud lucidis. In dumetis et ad silvarum margines in graminosis, herbosis 1000 - 1760 m. Floret mens. Junio, Julio.

Bosna: Treskavica Planina (Blau Herb. nr. 2241 fide M.). Circa Sarajevo in monte Bukovik 1340 m (M. 1919)!, in monte Jahorina 1730—1760 m inter Pinos montanos (M.); in silvis ad pedem montis Vučja Brda (Knapp* sec. Asch. Gr.). Hactenus solum in Crna Gora, ubi prope Šavniki et supra monast. Piva 1000—1200 m a. d. Rohlena reperta est.

Sectio: *Cracca*.

[Gray, Arr. brit. pl., II (1821), 613 (non L.) Reich., Fl. Germ., 527 Gren. Godr., Fl. Franc., I, 468; Alefeld in Bonpl., IX (1861) 104 et aut p. p. pro gen. rectius Čelak., Prodr. fl. Böhm., 683; Beck, Fl. Nied.-Öst., 872.]

22. *Vicia cracca* [L., Spec. pl., 735 (1753); Beck, Fl. Nied.-Öst., 880 et in Reich, f., Icon., l. c., 194; Asch. Gr., Syn., l. c., 929]. In pratis, dumetis usque ad regionem alpinam 1800 *m*. Floret mens. Majo—Augusto.

Variat:

α. *typica* [G. Beck in Reich. f., Icon., l. c., 194, t. 230. *V. Cracca* L., l. c., Reich., Fl. Germ., 527; v. *vulgaris* Gaud., Fl. Helv., VI 505; subspec. *V. imbricata* Gilib. Fl. Lith., IV 104 (1781), pro spec.; Rouy, Fl. Franc., V, 233; Asch. Gr., Syn. l. c., 930. — *Cracca major* Gren. Godr., Fl. Franc., I 468; Alef. in Bonpl. IX (1861) 125. — *Ervum cracca* Trautv. in Act. hort. Petrop. III (1875), 49]. Tota planta plus minus (plurimum breviter) appresse pilosa saepe glabrescens. Folia media 7—17 *juga*. Flores 10—14 *mm* longi, rarius minores. Calyx parce appresse pilosus, saepe glabrescens.

Bosna: Vulgata. — Dubrave prope Bos. Gradiška (B.) In monte Krnin mts. Kozara Pl. (B.). Prope Banja Luka, Maglaj ad fl. Vrbas (H.), Derventa (B.), Brčko ad fl. Sava (B.), prope Kozluk juxta Zvornik (J.) Prope Vranograč, Cazin, Bihać (F.), Karnovac in monte Grmeč Pl. (B.) Prijedor (Blau Herb. nr. 2434), in monte Vel. Malovan, circa Kupres (Pr.), Šujica (B., Pr.), in monte Prolog (Pr.), Vještica (Pr.), prope Preodac, Livno, Grkovac, Gubin (Pr.), in monte Jankovo brdo, Uilica 15—1600 *m* (Ja. Wa.), in monte Hum prope Jaice (B.). Circa Travnik (Br.), prope Jankovići (Fr. Br.), in monte Vlašić (*S. 1848); prope Fojnica (Pr., Schwarz!), in mont. Vranica (B.), inter Kakanj et monast. Sutiska (S.), prope Vareš (Pr.), Brgule (M.); in Bosna australi frequens (B.). Circa Sarajevo (Blau 534 Mu. B.) in monte Igman, Starigrad (Blau), Motka (M.), Trebević (B.), prope Nahorevo (M.), Hreša (Blau) etc., in jugo Metaljka prope Čelebić (B.), in monte Maglič (B.) prope Dobrun (M.). — **Hercegovina:** In montibus Preslica (M.), Prenj (B.), Plasa (Prodan), Čvrstica (Pi!), prope Jablanica (V.), in monte Crni vrh (Zavodny). Circa Mostar (Str., Pi!), in monte Velež (B.) —1330 *m*, prope Nevesinje (Mu), Trebinje, Vučjak in Bijelagora (*P. 1874).

Ludit:

latifolia [Neilr., Fl. Wien, 666 (1846) et Fl. Nied.-Öst., 959 (1859)]. Hinc inde.

Bosna: Prope Donja Tuzla (*M! 1893). — **Hercegovina:** In monte Čvrstica et ad lacum Blidinje (Pi. f. *B.).

linearis [Peterm., Fl. Lips., 548 (1838), Beck, Fl. Nied.-Öst., 880 et in Reich., Ic. l. c., 195; v. *vulgaris* Neilr., Fl. Wien, 666 (1846). — *V. Kitaibeliana* Reich., Exs., nr. 768 excl. Syn. — *V. luxurians* Vis., Fl. Dalm., III 323].

Bosna: Frequentior. In monte Vranica (B.), Prope Prokoško jezero (R.), circa Sarajevo prope Mrkojevići (*B. 1896) hic etiam in formis ad f. *latifoliam* accedentibus; in valle Prača (M.); — **Hercegovina:** Prope Jablanica (*V.).

Scheuchzeri [Brügg., Fl. Cur. 103 et in 29. Jahresber. Graub. 1884/85 75 pro spec.; Wohlf., Syn. Fl. Deutschl., I, 663 (1891); Beck in Reich f., Icon., l. c., 195 = ? v. *longiflora* C. Koch in Linnaea XV (1840) 721]. Inflorescentiae 2—3 × foliis fulcrantibus longiores, inferiores 15—25 cm longae.

Bosna: Prope Sarajevo (*B.). — **Hercegovina:** In monte Velež, c. 800 m. (*B.).

brevifolia [Beck in Reich., Ic., l. c., 195 (1903) ? v. *tenerima* Schur, Enum. Transs., 166 (1866)] foliis abbreviatis — 10 cm longis, floribus minoribus 6—7 mm longis. Probabiliter est forma inops.

Bosna: Prope Brčko (*B.).

alpina [Verlot in soc. Dauph. nr. 2827; Beck in Reich. fil., Icon. l. c., 195. — *V. imbricata* β. *alpina* Rouy, Fl. Franc., V, 233 (1899)]. Planta nostra appresse puberula, minor, summo 20 cm alta, coarctato-foliata. Internodia brevia, foliis 7—12 jugis pluries breviora, flexuosa. Foliola oblonga, utrinque rotundata, parva, summo 15 mm longa. Inflorescentiae paucae, foliis fulcrantibus breviores — paulo longiores; racemi abbreviati; Pedunculi et calyces appresse puberuli. Flores 9—10 mm longi.

Bosna: In alpinis montis Maglić 1800—2100 m (*B.) flor. Augusto.

β. *Gerardi* [Gaud., Fl. Helv., IV, 506 (1829); Koch, Syn. fl. Germ., 194. — *Vicia Galloprovincialis* Poiret in Lam., Enc., Suppl. V, 471 (1817); Handel-Mazzetti in Öst. bot. Zeit. (1905) 487. — *V. Gerardi* All., Fl. Pedem., I, 325 (1785) p. p. = Vill., Hist. Dauph., I, 256 (1786) et III, 449 (1789); Ser. in DC; Prodr. II 357 (excl. cit. Jacqu.); Koch, Syn. fl. Germ., II, 213; Pospich., Fl. öst. Küst., II 425 non Jaquin (1775). — *V. incana* Gouan, Fl. Monsp. 189 (1765) f. Thellung = Vill., Hist. Dauph., III, 449 (1789) non Lam. (1778); Janchen apud Fritsch in Mitt. naturw. Ver. Steierm., 47 (1910) SA. 16. — *V. Cracca* var. *incana* (Vill.) Burnat, Fl. Alp. mar., II, 182

(1896); = Beck Fl. Südbosn. in Ann. nat. Hofm., VIII (1896), 78 et in Reich. f., Icon. l. c., 195 et t. 233 (sub *V. Gerardi*). — subsp. *V. Galloprovincialis* Asch. Gr., Syn., l. c., 932, 1084. — *V. Candolleana* Ten., Fl. Nap., V, 111. — *V. nr. 5* apud Gerard, Fl. Gallo-Prov., 497, t. 19 (1761). — *Cracca Gerardi* Gren. Godr., Fl. Franc., I, 469 (1848)]. Tota planta (imprimis caules et rhachis foliorum) copiose patule pilosa, saepe sericeo-villosa, pilis longioribus. Autores addunt: Stipulae latiores, numerus foliolorum jugorum major, pedunculi foliis saepe breviores. Legumina utrinque longe attenuata. Calycis dentes inferiores subulati, longiores. Lamina vexilli unguem suum longitudine aequans, carpophorum tubo calycis longius (quod nego). Hilum $\frac{1}{4}$ ambitus seminis amplectens. Sed haec notae omnes inconstantes, etiam *V^{ae} Craccae* propriae, itaque levissimi pretii. Occurrunt praeterea cum typo saepius formae parce pilosae vel glabrescentes, ac plus minus appresse pilosae, quae partim ad typum (var. α .), partim ad *tenuifoliam* inclinant, quibus insuper f. *genuina* et *oxyphylla* continentur.

Bosna: In monte Igrisnik prope Srebrenica 1400 *m* (Wettst. f. Ja.). In monte Podgomila prope Krupa (B.), in montibus Mala Klekovača, 1761 *m* (Ja.), Uilica, Šator, prope Rajića Košara, inter Glamoč et Hradičevno 1400—1760 *m*. (Ha. Fa.). Circa Maglaj (M.) Travnik: prope Bukovica, (S. 1848 sub *V. Cracca v. sericea*), Guča gora (S., Franjić!), in monte Vlašić — 1900 *m* S. sub *v. sericea*, R.!), Vlaška gromila (Fr. Br.), circa Klis (M), Fojnica (Schwarz!); in monte Igman (B) circa Sarajevo (Mu, B, M) in valle fl. Miljacka (M) Krupa, prope Hrasnica (Blau Herb. 175, 2050), in monte Trebević (Mu., B.) prope Vučja Luka, in monte Ozren, Gradište, Romanija, Motka, Bukovik (M.), prope Trnovo 500—1200 *m* (Mu.) Pale (M), in monte Treskavica (F. f. M), Vratlo 1800 *m* (B. sub *V. leptophylla* Fr.), in faucib. Prača (M.), in Zelengora (Lakatoš f. M), in monte Maglić (B.) circa Višegrad, Vardište (M.) — **Hercegovina:** In montibus Plasa et Vel. Vlajna in m. Čabulja (Prodan), prope Bileća (*P. 1874).

Ludit:

Stabiana [Ten., Fl. Nap. V, 112 (1835) pro spec.; Strobl in Öst. bot. Zeit. (1887), 361; *major* G. Beck in Reich. Icon., l. c. 196 (1903), t. 233, f. I.]. Caulis firmus, internodiis elongatis. Foliola majora. Pedunculi foliis longiores, racemi multiflori. Pedunculi, pedicelli ac calyces patule pilosi vel sericeo-villosi. In collinis montanisque frequens.

genuina [Strobl, l. c. = *Gerardi* DC.]. Pedunculi, pedicelli ac calyces appresse saepe parcius pilosi. Stipulae in plantis

nostris angustae, superiores lineari-lanceolatae ut in priore, flores 10—12 mm longi. Folia media 10—14 juga.

Bosna: Prope Fojnica, circa Sarajevo, in monte Trebević (*B.); certe alibi.

alpicola [G. Beck in Reich. f., Icon., l. c., 196 t. 233, f. II]. Minor, plurimum spithamea, vix pedalis; internodiis brevibus, foliis multo brevioribus, flexuosis. Folia 8—13 juga. Pedunculi foliis breviores — paulo longiores, racemis breviores vel eos aequantes. Flores 9—12 mm longi. Petala omnia pulchre coeruleo-violacea, rarius alba (f. *albiflora* G. Beck, l. c.). Minus pilosa ad α formam *alpinam* transit.

Bosna: In alpinis montium Vlašić (B., Br.!) hic etiam corolla alba, Karnovac in monte Grmeč Pl. (B.), in monte Cincar (B.), Trebević, Gola Jahorina (M.), Treskavica, Vratlo, Crvena stijena in monte Romanija Pl. (B.), certe alibi.

oxyphylla [G. Beck, l. c., 196, t. 233, fig. III]. Foliolis imprimis foliorum superiorum longe acuminatis a priore differt, quacum reperitur.

Bosna: In montibus Cincar, 1800 m, Vlašić, Vratlo (*B.) ac in formis similibus. — **Hercegovina:** In monte Velež (*B.).

γ . *tenuifolia* [Roth, Tent. fl. Germ., I, 309 (1788); Seringe in DC., Prodr., II, 358; Reich., Fl. Germ., 528; Wohlf., Syn. fl. Deutschl., 664; Posp., Fl. Öst. Küst., II, 425; Asch. Gr., Syn., l. c., 934 (cum subspec. *V. eutenuifolia*) pro spec.; — Gaudin, Fl. Helv., IV, 507 (1829); Beck, Fl. Nied.-Öst., 880 et in Reich. f., l. c., 196, t. 231; — v. *angustissima* Neilr., Fl. Wien, 665 (1846) et Fl. Nied.-Öst., 959. — *Cracca tenuifolia* Gren. Godr., Fl. Franc., I, 469; Alef. in Bonplandia, IX (1861), 880. — *Ervum tenuifolium* Trautv. in Act. hort. Petrop., III, 50 (1875)]. Caulis appresse pilosus vel glabrescens. Stipulae angustae. Foliola linearia, basi breviter, apicem versus longe acuminata, vix — 3 mm lata, plurimum appresse pilosa. Pedunculi foliis paulo — pluries longiores. Lamina vexilli unguem suum nunc aequans nunc — sesqui vel bis longior. (Confer etiam Neilr., Fl. Wien, 666), in plantis nostris laminam = unguem suum semper observavi. Discrimina ulteriora frustra quaesivi et formis permultis et ad f. *linearem* varietatis α et ad f. *majorem* *V^s incanae* transit. Folia media plantae nostrae 9—12 juga, color petalorum aequaliter coerulea-lilaceus.

Bosna: Ad fl. Kravica prope Nova Kasaba (J.); in monte Prolog 1150 m et prope Petrovac (B.) circa Travnik (*Fr. Br. 1888). Circa Vareš,

inter Kralupi et Pajtov han, prope Droškovac (Pr.). Circa Saralevo —700 m (Mu.), prope Mrkojevići (M.); in monte castello coronato (Gross Kneucker), in valle fl. Miljacka (M.). — **Hercegovina:** In monte Čvrstica (Pr.), prope Rakitno (Begović f. V.), Čabulja (M.), circa Avtovac (Vidović!), prope Trebinje (*P. 1874), in Bijelagora (Havelka!), Travni do sub monte Svitavac (V.), prope Orijenška lokva (V.).

Ludit:

Boissieri [Freyn in Bull. herb. Boiss. III (1896) 191 pro subspec. — f. *platyphylla* Hal., Consp. fl. Graec., I, 487] »foliolis latioribus, 5–6 mm latis vexilli circa 16 mm longi lamina ungue sesqui longiore«. — **Hercegovina-Dalmatia:** In monte Orijen [f. Freyn in Bull. herb. Boiss., III, 191].

nannophylla [G. Beck. — An *V. stenophylla* Velen. Fl. Bulg., 163; Freyn l. c. 192?]. — Caulis tenuis, copiose foliatus. Foliis parvulis, 20–45 mm longis, mediis 7–11 jugis, foliolis minimis 2.5–10 mm longis, linearibus utrinque augustatis, 0.5–2 mm latis. Inflorescentiae paucae, pauciflorae, floribus 8–9 mm longis, vexilli lamina unguem suam aequante. — **Bosna:** In apricis prope Travnik, florentem m. Julio, leg. Brandis.

23. ***Vicia dalmatica*** [A. Kern. in Sched. ad fl. exs. austrohung. nr. 1209! (1886); Beck in Reich. f., Icon., l. c., 196, t. 232. — *V. tenuiflora* v. *laxiflora* Gris., Spic. fl. Rum., I, 82 (1843)?; Vis., Fl. Dalm., III 323 (1852) non *V. laxiflora* Brot. — v. *stenophylla* Boiss., Fl. Or., II, 586 (1872), Hal., Consp. fl. Graec., I, 487 non *V. stenophylla* Vog. — subsp. *V. dalmatica* Asch. Gr., Syn., l. c., 936. — *Ervum dalmaticum* Presl in Weitenweb., Beitr. II 31 (1837)? sed Beck et Szysz., Pl. Mont. in Script. ac. Krak., XIX (1888), 126. — *V. laxiflora* Boiss. in Exs. fide Fl. Or., II 586 (1872) non Brot.] Differt a *V^{ae} cracca* v. *tenuifolia* stipulis plurimum integris (inferioribus hinc inde rectangule hamatis) foliis 5–8 jugis anguste linearibus, acutis, iis foliorum superiorum paucijugorum convolutis, setaceis, pedunculis foliis fulcrantibus semper saepe pluries longioribus, racemis semper laxifloris, floribus saepe remotissimis horizontaliter patentibus, corolla viva intense rubro-lilacina, vexillo dorso sanguinea, panduriformi (Beck). Calyx rubro-purpureus. In cultis, incultis, lapidosis dumetis ditionis florum mediterraneae. Floret mens. Majo–Junio.

Hercegovina: In monte Gljiva prope Trebinje (*P. 1874 sub *V. tenuiflora* v. *laxiflora* (Gris.); in agro Gatačko polje (Riedel!)? propter staturam imperfectam.

24. ***Vicia ochroleuca*** [Ten., Fl. Neap. prodr., 42 et Fl. Nap. t. 174; Spreng., Syst. III 269 (1826); Vis., Fl. Dalm., III 323; Beck in Reich. f., Icon., l. c. 197, t. 237; Asch. Gr., Syn.,

l. c., 937 non Gilib. — *Cracca ochroleuca* Alef. in Bonpl. IX (1861) 123]. In herbis silvaticis montanis. Floret m. Aprili—Julio.

Ludit:

typica [G. Beck]. Foliolis fol. med. linearibus, cum lateribus parallelis, 2—4.5 cm longis. Flores 7—10 mm longi. Corolla exiccata aurantiaco-fuscescens.

dinara [Borbás in Term. közl. pótfüz. 52 (1899) 189 et in Öst. bot. Zeit. (1904) 463. pro spec.; K. Malý in Asch. Gr., Syn., l. c., 938 (1909). — *V. ochra* Sag. in Kat. Thür. bot. Tauschv. (1902) = *V. albescens* Sagorski in Öst. bot. Zeit (1904), 366]. In omnibus partibus tenuior. Foliola plurimum conspicue minora, ea fol. med. plurimum 1—2 cm longa, oblonga, pro rata latiora, maxima subelliptica, marginibus magis arcuatis. Flores minores, dilutiores, sicci pallidi (non ut in typo aurantiaco-fuscescentes) saepius breviter pedicellati. — Minime est species propria vel proles geographica, quia plantas dalmatinas observavi, quarum flores 7—8 mm longi corollas siccas nunc albas nunc fusciscentes-aurantiacas habent. Attamen plantae huius speciei occurrunt in Dalmatia (Duare!, Knin!) foliolis fol. med. longioribus 15—27 mm longis, 2—3 mm latis (in foliis superis etiam solum 1 mm latis), linearibus, cum lateribus parallelis rectis ornatis, quae cum *V. ochroleuca* subspec. *dinara* f. *angustana* Rohl. [5. Beitr. Mont. in Sitz. böhm. Ges. Wiss., (1911) S. A. 36] congruunt. Omnino iis aequales in Italia (prope Palermo! a. l.) occurrunt. Ex contrario ex iisdem locis (Sicilia, Calabria) vidi exemplaria *Vae ochroleucae*, quibus foliola fol. med. oblongo-elliptica cum lateribus curvatis, 20—27 mm longa floresque solum 7—8 mm longi propria erant. Etiam constituere potui, plantam cultam foliola oblonga latiora racemosque multidensifloros procreare.

Bosna: In monte Prolog c. 1000 m (*Ha. 1905). — **Hercegovina:** In monte Prenj Pl. c. 1100 m (Br. f. M.), in monte Velež (B.), prope Bojište iuxta Nevesinje (Sagorski), prope Nevesinje (*Br. 1890/91).

25. *Vicia villosa* [Roth, Tent. fl. Germ., II 2, 182 (1789); Ser. in DC., Prodr., II 359; Reich., Fl. Germ., 527; Beck, Fl. Nied.-Öst. 880 et in Reich. f., Ic. l. c., 198, t. 234; Posp., Fl. Öst. Küst., II, 423; Asch. Gr., Syn., l. c., 940. — *V. polyphylla* Waldst. Kit., Pl. rar. Hung., III, 282, t. 254 (1812) non Desf. —

V. Godroni Rouy, Fl. Franc., V, 237. — *Cracca villosa* Gren. Godr., Fl. Franc., I, 470; Alef. in Bonpl. IX (1861), 122. — *Ervum villosum* Trautv. in Act. hort. Petrop., III, 47 (1875)]. Indumento copioso plus minus villosa, floribus 15—20 mm longis, calycis dentibus inferioribus setaceis patule vel pennatim pilosis a sequentibus bene distinguenda. In agris cultis, incultis. Floret m. Majo—Julio.

Bosna: Prope Banja Luka (*H. 1882). circa Livno, Grkovac, Crni lug (Pr.), prope Marića Košare (Ja. Wa.). — **Hercegovina:** Inter dumeta montis Glijiva prope Trebinje (*P. 1874), quod probandum sit.

26. *Vicia dasycarpa* [Tenore, Viagg. Abbruz. 81 (1830) ampl. et Fl. Nap., V, 116, t. 224; Vis., Fl. Dalm., III, 323; Strobl in Öst. bot. Zeit. (1887) 361; Beck in Reich. f., Ic. l. c., 198; Asch. Gr., Syn., l. c. 943. — *Cracca varia* Godr. Gren., Fl. Franc., I, 469; Alef. in Bonpl., IX (1861) 122]. Differt a priore indumento nullo, parco vel appresso (rarius patule) piloso, partibus junioribus nunquam pellitis, stipulis hinc inde bidentatis, floribus minoribus 10—15 mm longis, calycis dentibus glabris vel appresse pilosis, inferioribus plurimum tubo suo subbrevioribus. Ad saepes, inter virgulta nec non in satis, graminosis imprimis in ditone florum mediterraneae. Floret mens. Martio—Junio.

Ludit:

typica [Posp., Fl. Öst. Küst., II 423 (1898) = Beck, l. c., 198 t. 235 fig. I; v. *latifolia* Rouy, Fl. Franc., V, 238; v. *varia* Asch. Gr., Syn., l. c., 943. — *V. varia* Host, Fl. Austr., II 332 (1831) et v. *parviflora* Čel., l. infra cit.; conf. Freyn in Abh. zool. bot. Ges. (1877), 318; Heimerl ibidem (1881), 174; Čelak. Result. (1889) in Sitz. böhm. Ges. Wiss. (1890), 464]. Pedunculi foliis fulcrantibus longiores, racemum evolutum 6—multiflorum superantes vel aequantes. Flores 10—15 mm longi. Legumina plurimum 4 cm longa, 10—12 cm lata, semina 2—6 continentia. Ad saepes, inter virgulta in ditone florum mediterraneae. Floret m. Martio-Junio.

Bosna: Prope Donja Tuzla (Bucalović f. M.), circa Fojnica, Sarajevo—600 m (*Mu. 1891), inter Rudo et Setihovo (M.). — **Hercegovina:** (*Asch. Kan. Cat., 105, 1874) Ubi? Prope Mostar (Mu., Jetter!), Vojno (Ja.), inter Buna et Žitomišljici (Sagorski).

glabrescens [Beck in Reich. f., Icon l. c., 199, t. 234 fig. II; v. *grandiflora* Wohlf., Syn. Fl. Deutschl., 666 (1891); v. *angusti-*

folia Rouy, l. c., 238. — *V. glabrescens* Heim. in Abh. zool.-bot. Ges. (1881) 173; Beck, Fl. Nied.-Öst., 880. — *V. polyphylla* Koch in Flora (1830), 114; Reich., Fl. Germ., 527 (ex parte) non Waldst. Kit. — *V. pseudovillosa* Schur, Enum. pl. Transs. 166 (1866). — *V. varia* v. *grandiflora* Čel. l. c. 466. — *V. villosa* v. *glabrescens* Koch, Syn. fl. Germ. 194 (1835) et ed. II, 214 ex parte]. In satis, agris, incultis, graminosis ac dumetosis — 1200 m. — Pedunculi (excl. racemis) folia fulcrantia non superantes. Racemi saepe multiflori. Flores 12—15 mm longi. Legumina maxime 9 mm lata. Formis intermediis cum typo conjungitur. Calycis dentes variae longitudinis observavi.

Bosna: Prope Kliuč (B.), Donji Vakuf, Koprivnica, Šuljaga — 1200 m (*Ha. Fa. 1905).

Sectio: *Ervum*.

[L. Spec. pl. 738 (1753) et Gen. ed. V nr. 784 pro gen. p. p.; Gray, Arr. brit. pl. II (1821) 614 et aut. — *Ervilia*, *Parallosa*, *Ervum* p. p. Alef. in Öst. bot. Zeit. (1859) 358—365. — *Vicia* sect. *Ervoidea*, *Ervum*, *Ervilia* Rouy, Fl. Franc., V, 241—248; sect. *Ervilia* Neilr., Fl. Nied.-Öst., 956.]

27. *Vicia hirsuta* [S. F. Gray, Nat-Arr. brit. pl., II, 614 (1821); Koch, Syn. fl. Germ., 191 (1837); Vis., Fl. Dalm., III, 321; Beck, Fl. Nied.-Öst., 877 et in Reich. f., Ic. l. c., 202, t. 260; Asch. Gr., Syn., l. c., 906. — *Ervum hirsutum* L., Spec. pl., 738 (1753); Reich., Fl. Germ., 527; Posp., Fl. Öst. Küst., II 410. — *Ervilia vulgaris* Godr., Fl. Lorr., 173 (1843). — *Cracca minor* Gren Godr., Fl. Fr., I, 473 (1848). — *Endiusa hirsuta* Alef. in Öst. bot. Zeit. (1859), 360. — *Ervilia hirsuta* Schur, Sert. nr. 759 (1853)]. In agris, arvis, incultis, graminosis, lapidosis, ad saepes, inter virgulta. Floret mens. Majo—Julio.

Bosna: In monte Krnin mts. Kozara Pl. (B.); prope Banja Luka (H.) in monte Podgomila pr. Krupa (B.). Circa Podgradina, Grkovac, Crni Lug Livno (Pr.), Donji Vakuf (Ha, Fa.); circa Travnik (*S. 1848): prope Bukovica (S.), in montibus Tarabovac (Fr. Br.), Vlašić (S.); prope Foinica (S.) Pržići prope Vareš (Pr.). In Bosna australi vulgata; prope Tarčin (Pr.) Reljevo (Blau 548), circa Sarajevo (Blau 2041 Mu., B.) in valle fl. Miljacka et Koševo (M.), in augustiis Mošćanica (B.), in monte Igman (Bornmüller!) in valle Prača, prope Višegrad, Mioče-Rudo (M.). — **Hercegovina:** Hac tenus modo in monte Gliiva prope Trebinje (*P. 1874).

Ludit:

eriocarpa [Rouy, Fl. Franc., V, 244 (1900) — v. *typica* Beck in Reich. l. c. 202 (1903) — *Ervum hirsutum* v. *typicum* Posp., l. c., 410.] Vulgala. — *fissa* [G. Beck, Fl. Nied.-Öst., 878 (1892) — *Ervum hirsutum* v. *fissum* G.

Froel. in Schrift. oek. Ges. Königsberg (1885), 6]. — **Bosna:** In valle fl. Miljacka (*M. 1904).

28. *Vicia tetrasperma* [Moench, Meth., 148 (1794); Beck in Reich. f., Ic. l. c., 203, t. 259; Asch. Gr., Syn., l. c., 912. — *Ervum tetraspermum* L. Spec. pl., 738 (1753); Reich., Fl. Germ., 526; Alef. in Öst. bot. Zeit. (1859), 363; Posp., Fl. Öst. Küst., II, 411; — *Vicia gemella* Crantz, Stirp., V (1769), 389; Beck, Fl. Nied.-Öst., 878; Rouy, Fl. Franc, V, 245. — *Ervilia tetrasperma* Schur, Sert., nr. 760 (1853)]. In fruticetis, ad saepes, rarius in pratis incultis, agris, lapidosis — 1000 *m.* Floret mens. Majo—Julio.

Bosna: Circa Banja Luka, Maglaj ad fl. Vrbas (H.). Inter Drinjača et Nova Kasaba (J.). — In monte Podgomila prope Krupa (B.), circa Tihotina proxime Bihać (B.); prope Donji Vakuf (Ha. Fa.), prope Grkovac, Crni Lug, Livno (Pr.) Žepče (M.). Circa Travnik (*S. 1848, Fr. Br.), inter Travnik et Gučaninov Han (S.); circa Sarajevsko Polje (Blau 2145), in valle fl. Miljacka prope Sarajevo (Mu.), prope Pale (M.), in vallibus fl. Željeznica et Sutjeska (Pr.); prope Ifsar, 1000 *m.* (Schiller f. Ja.), Višegrad, Rudo (M.). — **Hercegovina:** In valle fl. Trešanica, circa Konjic (*B. 1887). prope Mostar (Bornmüller!).

Ludit:

typica [Asch. Gr., l. c., 913]. Vulgata. — *tenerrima* [G. Beck]. Gracillima. Foliola fol. med. 3juga, anguste linearia, ea fol. inf. summo 1.5 *mm* lata, ea fol. sup. 0.5— vix 1 *mm* lata; cirrhus foliorum simplex vel furcatus. Flores singuli acirrhusi. Legumina minora, 3sperma. — **Hercegovina:** In valle fl. Trešanica et prope Konjic (*B.).

Vicia longifolia [Poir. Enc. meth. VIII 557]. Syriae incola ab Asch. Kan. [Cat. corm. Serb., 105 (1877)] ex Hercegovina enumeratur, sed serius ab autoribus (Boissier, Asch. Graebn, et al.) neglecta melius delenda est.

29. *Vicia gracilis* [Lois., Fl. Gall., 460 (1806), ed II, 148, t. 12; Koch, Syn. fl. Germ., 192; Vis., Fl. Dalm., III, 321; Strobl in Öst. bot. Zeit. (1887) 364; Beck in Reich. Ic. l. c. 203, t. 264, fig. I. — *V. tetrasperma* v. *gracilis* Asch. Graebn., Fl. nordostd. Flachl., 449 (1898) et Syn., l. c., 913. — *Ervum tenuissimum* (M. B.?) Pers., Syn. II 309 (1807). — *Ervum gracile* DC., Hort. Monsp., 109 (1813); Reich., Fl. Germ., 526; Alef. in Öst. bot. Zeit. (1859), 363]. Differt a priore foliolis 2—4jugis elongatis, linearibus, acutis, pedunculis 1—5floris, mucrone conspicue terminatis, foliis semper denique duplo vel ter longioribus, leguminibus linearibus, plurimum hexaspermis,

hilo seminis minore, $\frac{1}{8}$ — $\frac{1}{10}$ ambitus amplectente. In agris, cultis, dumetis. Floret mens. Majo—Junio.

Bosna: Prope Livno (*Pr. 1900), in valle fl. Sutjeska et Drina (Pr.).

Subsectio: *Ervilia*.

[Link, Enum. hort. Berol., II, 240 (1822). Alef. in Öst. bot. Zeit. (1859) 538 pro gen., Rouy; Fl. Fr., V, 248 pro subgen.; — *Ervum* sect. Ser. in DC., Prodr., II, 366 p. p.; Reich., Fl. Germ. 526.]

30. *Vicia ervilia* [Willd., Spec., III, 1103 (1800); Vis., Fl. Dalm., III, 321; Beck, Fl. Nied.-Öst., 877 et in Reich., Icon., l. c., 204, t. 261; Asch. Graebn., Syn., l. c., 904. — *Ervum Ervilia* L., Spec., 738 (1753); Ser. in DC., Prodr., II, 367; Reich., Fl. Germ., 526. — *Ervilia sativa* Link, Enum. hort. Ber., II, 240; Alef. in Bonpl., IX (1861), 126]. In agris, cultis etiam culta. Floret aestate.

Hercegovina: In agris prope Mostar (*Lindberg 1906).

32. *Lens*.

[Adans., Fam., II (1763), 331; Alef. in Bonpl., IX (1861), 128; Benth. Hook., Gen., I, 525; Beck, Fl. Nied.-Öst., 881; Taubert in Nat. Pflanzenf., III 3, 352. — *Ervum* Koch, Syn. Fl. Germ., 198 (1835); Boiss., Fl. Or., II, 597; sect. *Lens* Ser. in DC., Prodr., II 366 p. p.; Reich., Fl. Germ., 525. — *Lathyrus* subgen. *Lenticula* Peterm., Deutschl. Fl., 155; sect. *Lens* Kitt., Taschenb., 3. Aufl. (1853), 1290; sect. *Ervum* Vis., Fl. Dalm., III, 324] »Leča«.

1. *Lens culinare* [Medic., Vorl. Kurpf. phys. Ges., II (1787), 361; Beck in Reich. f., Ic., l. c., 205, t. 265 (sub *L. esculenta*). — *L. esculenta* Moench, Meth., 131 (1794); Alef. in Bonpl. IX (1861), 130; Beck, Fl. Nied.-Öst., 881. — *L. sativa* Hell., Fl. Wirc., II, 169 (1810). — *L. lens* Huth, Helios Frankf., XI (1893), 134; Asch. Gr., Syn., l. c., 996. — *Ervum lens* L., Spec., 738 (1753); Reich., Fl. Germ., 526. — *Lathyrus lens* Bernh., Syst. Verz. Erf., 248 (1800). — *Cicer lens* Willd., Spec., III, 1114 (1800)]. Ad usum oeconomicum ab antiquitate colitur et hinc inde in agris, cultis, incultis, ruderalis crescit. Patria ignota sed certe in ditone florum mediterraneae orientalis sita. Floret m. Junio—Julio. »Leča, sočivo«. *Leča*

Bosna: Hinc inde colitur. Spontanea ad fl. Miljacka prope Sarajevo, 520m (*Mu. 1891). — **Hercegovina:** Circa Žitomišljici (*M. 1908), Vojno prope Mostar (Ja.), Bijelo Polje (M.), circa Mostar (Raap. Call., Pl. Herc., nr. 65!), Klepci (M.).

2. *Lens nigricans* [Godr., Fl. Lorr., I, 173 (1843); Gren. Godr., Fl. Franc., I, 476; Posp., Fl. öst. Küst., II, 248; Beck in Reich. f., Ic., l. c., 206, t. 266, fig. I—II; Aschers. Gr., Syn., l. c., 998. — *Ervum nigricans* M. B., Fl. taur. cauc., II (1808), 164; Reich., Fl. Germ., 526; — *Lathyrus nigricans* Peterm., Fl. Deutschl., 155; Kitt., Taschenb., 3. Aufl., 1291; Vis., Fl. Dalm., III, 325. — *Vicia Marschallii* Arc., Comp. fl. it., 206 (1882). — *V. nigricans* Janka in Term. Füz. IX (1885), 138. — *Ervum dalmaticum* Presl in Weitenw., Beitr., II (1837), 31]. In aridis, arenosis, saxosis, sterilibus, dumosis in ditone florum mediterraneae, hinc inde spontanea. Floret m. Majo, Junio.

Bosna: In monte Bikovac juxta Višegrad (*M. 1919). — **Hercegovina:** Ad fl. Neretva prope Mostar (*Mu. 1891), in monte Stolac (Pi.). in agro Mostarsko polje (Simonović f. Ja.), in monte Podvelež (Raap. Call., Pl. Herc., nr. 64!), prope Dretelj (M.).

Ludit:

cirrifera [Beck in Reich., Ic., l. c., 206, t. 266, fig. II]. Foliorum cirro simplice, longiore; foliolis saepe 4-jugis. **Bosna:** In valle fl. Lim juxta Strmica et circa Setihovo (*M. 1912). **Hercegovina:** Prope Mostar (Pi. f. *B. 1903) et in monte Stolac (B.).

3. *Lens lenticula* [Alef. in Bonpl. IX (1861), 129; Beck in Reich. f., Icon., l. c., 206, t. 266, fig. III; Asch. Gr., Syn., l. c., 999. — *Ervum lenticula* Schreb. in Sturm, Deutschl. Fl., Heft 32 (1812); Ser. in DC., Prodr., II, 366; Reich., Fl. Germ., 526. — *E. uniflorum* Ten., Prodr. Nap., Suppl. II (1811), 68. — *Lathyrus lenticula* Peterm., Fl. Deutschl., 155 (1846/49). — *Vicia lenticula* Ces. Pass. Gib., Comp. fl. Ital., 685 (1869)]. In agris, aridis, lapidosis. Floret in m. Majo, Junio.

Bosna: In vallibus fl. Sutjeska et Drina (*Pr. 1902), quod probandum sit; in Zagorje prope Borja 1100 m (Adam. f. Ja.).

Ludit:

aristata [K. Malý in Glasn, zem. muz., XX (1908), 562 et in Wiss. Mitt. Bosn., XI (1909) 551]. Pedunculi plurimi aristati. **Hercegovina:** In silva Dubrava (Ginzberger f. *M. 1908).

33. *Lathyrus*.

[L., Spec. pl., 729 (1753) et Gen., ed. V, 781 ampl.; Bernh., Syst. Verz. Erf. 232 et 246; Benth. Hook., Gen., I, 526; Beck, Fl. Nied.-Öst., 881; Taubert in Nat. Pflanzenf., III 3, 353.] »Graholika«.

Orobus.

[L., Spec. pl., 728 (1753) et Gen., ed. V, nr. 780; Reich., Fl. Germ., 536 et aut. pro gen.; Gren. Godr., Fl. Fr., I, 485 p. p.; Taubert in Nat. Pflanzenf., III 3, 353; Beck in Reich. f., Icon. fl. Germ., XXII, 152; Asch. Gr., Syn. mitt. Fl., VI 2, 1042.] »Grašac, orešac«.

1. *Lathyrus vernus* [Bernh., Syst. Verz. Erf., 248 (1800); Vis., Fl. Dalm., III, 331; Beck, Fl. Nied.-Öst., 886 et in Reich. f., Icon., l. c., 152, t. 215 et 216, fig. I; Asch. Gr., Syn., l. c., 1047. — *Orobus vernus* L., Spec., 728 (1753); Reich., Fl. Germ., 536; Posp., Fl. öst. Küst., 440]. Racemi 3—9flori, plurimum 4—6flori. Pedunculi et pedicelli glabri. Flores 13—19 mm longi. Calycis dentes laterales et infimi subaequales, 2 superi acuti dimidio breviores. Legumina glabra. In silvaticis imprimis montanis frondosis, dumetosis — 1700 m. Floret m. Aprili—Majo, in editoribus — Junio.

Bosna: Prope Banja Luka (H.), inter Zelenike et Sijekovac (*S 1848), Velika njiva in monte Majeвица (B.), inter Donja Tuzla et Breške (B.), prope Breške (S.), Kvarac prope Srebrenica (J.); in montibus Osječenica et Klekovača (B., F.). Prope Glogovac (Sta.), Djukići (Ha. Fa), Kriva Jelika prope Donji Vakuf (Ha. Fa.) in monte Dinara — 1200 m (B.); circa Travnik (Fr. Br.), in monte Vlašić — 1700 m (*S 1848), prope Guča gora (Franjić!), in valle fl. Bosna prope Maglaj, Žepče, Golubinja, Vranduk (S.), Crkvice, Zenica (Franjić!), in montibus Orahovička glavica et Smolin prope Žepče (B.), prope Gornji Vakuf (F.), Fojnica (B.), in monte Inac (Schwarz!), circa Vareš (Pr.). Blažuj (Blau), Sarajevo (B.), in monte Čubrin, Motka, Orman (M.), Igman (Blau 70), Bielašnica, Romanija, Bukovik (M.), Trebević (F.), prope Rogatica (F.), Berkovina (M.) et in Bosna australi hinc inde in monte Maglić (Pr., Rohl.). Prijedor (Pr.), circa Smrčevo točilo prope Višegrad (V. Čurčić). — **Hercegovina:** In montibus Ljubina prope Konjic (M.), Preslica, Prislav (*V. 1890), Prenj (F.), Plasa (B.); prope Nevesinje (V.). — **Novi Pazar:** In valle fl. Lim inter Bistrica et Banja (*B. 1876).

Variat:

α. *latifolius* [Rouy, Fl. fr., V, 273 (1899); Beck in Reich. f., Icon., l. c., 152. v. *typicus* f. *latifolius* Asch. Gr., Syn., l. c., 1048. — *Orobus vernus* v. *latifolius* Schur, Enum. Transs., 172 (1866). Vulgatus.

β. *flaccidus* [Wohlf., Syn. Fl. Deutschl., 713; Beck in Reich. f., Ic., l. c., 153, t. 216, fig. II; Asch. Gr., Syn., l. c., 1048 p. p.; var. *angustifolius* Rouy, l. c., 273. — *O. vernus* v. *flaccidus* Ser. in DC., Prodr., II, 377 (1825); Koch, Syn. fl. Germ., ed. II, 221. — v. *angustifolius* Schur, l. c., 172; v. *me-*

dus Simk. in Term. Füz., IX (1885) 46. — *O. pauciflorus*, *flaccidus*, *longifolius* Kit. in Linnaea 32 (1863) 632]. Foliola multo angustiora, 5—8 cm longa, 10—12 mm lata, omnia longissime acuminata, saepe flaccida, ea fol. sup. saepe sublinearia. Saepe formae ad *latifoliam* accedentes observantur.

Bosna: In montibus Osječenica, Klekovača (B.), Romanija Pl. (*B. 1887). — **Hercegovina:** In monte Plasa (*Pr. 1908).

2. *Lathyrus venetus* [Wohlf., Syn. fl. Deutschl. 714 (1891) = Rouy, Fl. Franc., V, 274 (1899); Asch. Gr., Syn., l. c., 1049. — *Orobis venetus* Mill., Gard. dict., ed. VIII, nr. 8 (non t. 193, f. 2); Reich., Fl. Germ., 536. — *O. variegatus* Ten., Fl. Nap., II, 144, t. 68 (1820); Alef. in Bonpl., IX (1861) 143; Posp., Fl. öst. Küst., II, 441. — *O. pyrenaicus* Scop., Fl. Carn., ed. II. II 59 non L. — *Lath. variegatus* Gren. Godr., Fl. Franc., I 485 (1848); Vis., Fl. Dalm., III, 330; Beck, Fl. Nied.-Öst., 886 et in Reich. f., Icon., l. c., 153, t. 217, fig. I—III. — *O. multiflorus* Sieb. in Flora (1821) 97 = *Lathyrus multiflorus* Peterm., Fl. Deutschl., 155 (1849)]. Racemis multifloris, pedunculis et pedicellis breviter pilosis, floribus 12—14 mm longis, calycis dentibus superis minoribus saepe minimis, infimo autem lateralibus angustiore, tubum calycinum superante, corollae colore, leguminibus rubro-glanduloso-punctatis bene a priore distinguitur. In silvis, dumetosis. — 1400 m. Floret m. Aprili—Junio, paulo serius quam *L. vernus*.

Bosna: Circa Banja Luka (H.), in monte Plane (C.), prope Žepče (H.). In monte Grmeč Pl. (B.), Prolog, Vještica gora, Troglav, Vel. Šator (Pr.). Circa Vranduk (Blau), Travnik (*S. 1848), in monte Tarabovac (Fr. Br.), Vlašić (S.), prope Guča gora (S., Franjić!), circa Fojnica, in monte Pogorelica (Schwarz!), in monte Kukavica prope Janjići (S.), prope Han Begov prox. Dobrinje (F.), in monte Bogoš, prope Kralupi et Vareš (Pr.); in monte Igman (Beck, Pl. Bosn. Herc. nr. 89), prope Vrelo Bosne (M.), Blažuj (B.); circa Miljevići, Vrela (M.), Sarajevo (B.), in monte Borije (M.). Trebević (Blau, Herb., 151, 1746), Gradina (M.), in vallibus Koševo, fl. Mijacka (M.), Željeznica, Sutjeska, in Zelengora (Pr.); prope Uvac (F.). — **Hercegovina:** Prope Vojno prox. Mostar (Ja.), in monte Velež — 1400 m (Mu., B.), prope Nevesinje (B.), circa Sovići (F.), inter Jovanović karaula et Nevesinje (B.); circa Bileća (*P. 1874, Hensch!), Hum (M.), in monte Glijiva prope Trebinje (R.).

3. *Lathyrus niger* [Bernh., Syst. Verz. Erf., 248 (1800); Vis., Fl. Dalm., III, 331; Beck, Fl. Nied.-Öst., 885 et in Reich. f., Icon., l. c., 154, tab. 226; Asch. Gr., Syn., l. c., 1051. — *Orobis niger* L., Spec., 729 (1753); Reich., Fl. Germ., 538;

Alef. in Bonpl., IX (1861), 143; Posp., Fl. öst. Küst., II, 441. — *O. paradensis* Kit. in Abh. zool.-bot. Ges. (1863) 554 f. Janka in Öst. bot. Zeit. (1872), 156]. In silvis, dumetosis, ac pratis montanis —1400 *m*. Floret m. Junio, Julio.

Bosna: In valle Dobrnica et monte Masić brdo prope Novi (B.), prope Bihać (Boller), inter Donja Tuzla et Breške (B.), prope Nova Kasaba (J.). Prope Petrovac (B.), Bugojno, Kupres, in monte Vel. Malovan, Šuljaga, Kamešnica, Vel. Šator (Pr.). — Circa Begov Han (F.), Travnik (*S. 1848), in montibus Tarabovac, Vilenica (Fr. Br.), Rapte (M.); circa Fojnica (S., Schwarz!); prope Vareš, Tarčin (Pr.). In Bosna australi vulgatus (B.), sic circa Sarajevo in monte Trebević (B.), Dovlići (M.), prope Kobilja glava (B.), Hreša, Brezovica (M.), Pale (F.), Vitez (M.), in monte Hranisava (Bl.). prope Kamensko (M.), in vallibus fl. Prača (M.), Željeznica, Sutjeska, inter Previla et Pod Vitez (Pr.) et a. l. — **Hercegovina:** In monte Velež 1200—1400 *m* (Mu, B.), Radovan et Snježnica prope Posušje (F.), circa Orahovac, Dubovac (*P. 1874). — **Novi Pazar:** Prope Prijepolje (P. Zahlb. f. Hayek), in valle fl. Lim inter Bistrica et Bania (*B. 1896).

Ludit:

genuinus [Rouy, Fl. Franc., V, 272 et f. *latifolius* Rouy l. c.]. Vulgatus. — *angustifolius* [Rouy, l. c. — *O. niger* v. *angulatus* Peterm., Fl. Lips., 544 (1838)]. Rare. **Bosna:** In monte Igman (*B.). — *rotundifolius* [G. Beck in Reich. f., Icon., l. c., 154]. Foliolis fol. inf. late-ovalibus, iis fol. sup. subrotundis. Rare. **Bosna:** In valle Dobrnica prope Novi (*B.). — *longipes* [Lindbg. Iter Austro-Hungar. (1906) 65 = Rohl., 5. Beitr. Fl. Mont. in Sitz. böhm. Ges. Wiss. (1912), 37 = *Orob. niger* v. Rohl., 1. Beitr., l. c. (1902) 18]. Racemi pedunculis (praesertim superioribus) elongatis, folio $2\frac{1}{2}$ —3× longioribus. **Bosna:** Prope Fojnica (Schwarz!), Pale, in monte Trebević (*M. 1908), Borije prope Sarajevo (M.). Etiam in formis ad typum vergentibus prope Petrovac (B.).

4. *Lathyrus luteus* [Peterm., Fl. Deutschl., 155 (1849); Vis., Fl. Dalm., III, 330; Posp., Fl. öst. Küst., II, 442; Beck in Reich., Ic., l. c., 154; Asch. Gr., Syn., l. c., 1043 non Moench, qui injuste *L^m annum* L. sic mutavit. — *Orob. luteus* L., Syst., ed. X, 1164 et Spec. pl., ed. II, 1028; Reich., Fl. Germ., 538. — *Lath. Linnaei* Rouy, Fl. Fr., V, 567 (1899). Confer Fritsch, Über einige *Orob.*-Arten in Sitz. Akad. Wiss. Wien, math.-nat. Klasse CIV (1895) 479]. Stirps polymorpha, cuius greges mea sententia aliorumque propter inconstantiam vestimenti, formae foliorum et calycis difficillime distinguuntur, itaque vix pro speciebus vel subspeciebus habendae sunt. (Beck.) — In silvis, ad silvarum margines, graminosis subalpinis —1800 *m*. Floret mens. Junio—Augusto.

Variat:

α. laevigatus [Beck in Reich., Icon., l. c., 156, t. 220*; Asch. Gr., Syn., l. c., 1046; *Orobis laevigatus* Waldst. Kit., Pl. rar. Hung., III (1812), 270, t. 243; Reich., Fl. Germ., 536; Fritsch, l. c., 508; — *O. luteus* v. *laevigatus* Ledeb., Fl. Ross., I 690 (1842). — *L. luteus* v. *styriacus* et *laevigatus* Greml., Neu. Beitr., 2. Heft, 6 (1882). — *O. styriacus* Greml. apud Dalla Torre, Anl. 203 (1882). — *O. glaberrimus* Schur, Sert. in Verh. Sieb. Ver., X (1859) 197 et in Öst. bot. Zeit. (1860), 324, Enum. Transs., 174].

Bosna: In montibus Šuljaga, Vel. Malovan, Troglav (Pr. sub *O. luteo*), Osječenica (B., F.), Klekovača (F. sub *O. luteo*), in monte Jabučica (Čauševac) (M.), Brezovača prope Travnik (V.), in monte Bjelašnica —1800 m (M.), Lipovac prope Sarajevo, Jahorina 1760 m (M.).

f. *subalpinus* [Beck in Reich., Ic., l. c., 156. — *Orobis subalpinus* Herb., Stirp. Bucov., 49 (1853)]. Foliolis et calycibus plus minus molliter pilosis. **Bosna:** In monte Osječenica (B.), in cacumine Crni vrh montis Igman, 1500 m (F.! f. *B), in monte Treskavica [B. pro *L. laevigati* forma in Fl. Südbosn. in Ann. nat. Hofm., XI (1896) 79].

5. *Lathyrus montanus* [Bernh., Syst. Verz. Erf., 247 (1800) non Gren. Godr.; Beck in Reich., Ic., l. c., 156, t. 218; Asch. Gr., Syn., l. c., 1060. — *Orobis tuberosus* L., Spec. pl., 728 (1753); Boiss., Flor. Or., II, 260; Posp., Fl. öst. Küst., II, 439; — *L. macrorrhizus* Wimm., Fl. Schles., 166 (1844)]. In silvis, dumetosis, pratis silvaticis. Floret mens. Aprili—Junio.

Bosna: In dumetosis montis Debeljača prope Bihać (*B.). Reperi formam [*genuinam* Beck in Reich. f., Ic., l. c., 157 = *typicus* f. Asch. Gr., l. c. 1061].

Addo v. *pubescens* [G. Beck] Caulis et folia praesertim in partibus superioribus copiose pilosa. **Carniolia:** Hudapoliza prope Smarje (B.) cum typo et formis intermediis.

6. *Lathyrus filiformis* [J. Gay in Ann. sc. nat., ser. 4, VIII (1857) 315; Burn., Fl. Alp. mar., II, 205; Beck in Reich. f., Ic., l. c., 157; Asch. Gr., Syn., l. c., 1054. — v. *coerulea* Čel. in Öst. bot. Zeit. (1888) 45. — *Orobis filiformis* Lam., Fl. Fr., II 568 (1778). — *O. vicioides* Vill., Prosp., 41 (1779). — *O. canescens* L. fil., Suppl., 327 (1781); Alef. in Bonpl., IX (1861), 142. — *L. canescens* Godr. Gren., Fl. Franc., I, 489 (1848); Rouy, Fl. Franc., V, 276]. In pratis, dumetosis, sylvis. Floret m. Majo, Junio. In ditione nostra solum

v. *Bauhini* [Beck in Reich. f., Icon., l. c., 158 (1902); Asch. Gr., Syn., l. c., 1056. — *Orobis ensifolius* Lapeyr. in Mem. mus. Paris. II (1815), 303, t. 12 excl. β . — *O. canescens* v. *ensifolius* Ser. in DC., Prodr., II, 379 (1825). — *O. sessilifolius* v. *coeruleus* Pant. in Öst. bot. Zeit. (1873), 80 non Sibth. Sm. — *O. Bauhini* Genty in Bull. soc. Dauph. nov. ser. (1892), 90. — *Lath. ensifolius* J. Gay, l. c., 313 non Badaro. — *L. canescens* f. *L. Bauhini* Rouy, l. c., 276]. Robustior. Foliola longiora, rigidiora, longe acuminata. Flores majores, c. 22 mm longi. Corolla purpureo-coerulea. Carina in apice integra, acuta, exalata. Filamenta libera aequilonga. Stylus cuneato-oblongus, modice v. conspicue dilatatus. Semina majora. Hilum $\frac{1}{4}$ — $\frac{1}{3}$ ambitus amplectens. (Beck.)

Bosna: In monte Čardak Pl. (Sta.), Čardak livade (Ha. Fa. sub *L. sessilifolio*) in monte Plazenica (Ja.), Hrbljina (Br.! 1888, Pr., Santarius i. M., Ja.) 1300—1400, prope Kupres (Br. f. Asch. Gr.), Drežnica inter montes Cincar et Malovan (Br.! 1893), inter Glamoč et Hrastičevo, prope Koprivnica, in jugo Presedlo prope Podgorje (Ha. Fa. sub *Or. sessilifolio*); Ravna gora in monte Lelija: Poljana 1300 m (M. in litt.).

Ludit *Nicolai* [Rohlena, 3. Beitr. Mont. in Sitz. böhm. Ges. Wiss. (1903), nr. 17, p. 26 pro spec. sub *Orobo (Lathyro)* = *L. filiformis* v. *Nicolai* Rohlena, 5. Beitr. Mont., l. c. (1911), 37]. »Glaber; caule tenui, c. 50 cm alto ascendente, simplici vel ad basin ramoso; foliis pinnatis, foliolis 1—3 jugis lineari-lanceolatis. (4—8 cm longis, 1—4 mm latis) apice basique angustatis acuminatis. Stipulis semisagittatis angustissimis 4—7 mm longis, vix 1 mm latis; petiolis angustis, foliorum inferiorum brevibus (c. 1—2 mm longis), mediorum et superiorum usque 14 mm longis, stipulis saepe duplo longioribus; pedunculis folia superantibus, 3—6 floris. Dentes calycis glaberrimi (non ciliati); corollis coeruleis, calycis tubo 10 nervio, nervis primariis (quinis) in calycis dentes excurrentibus, secundariis alternantibus brevioribus et gracilioribus. Stylo lineari, apice parum vel vix dilatato. Ab *O. sessilifolio* differt praesertim floribus parum minoribus, foliis petiolatis, stylo vix dilatato « (Rohlena.) — Handel-Mazzetti in Öst. bot. Zeit. (1906) 277 petiolos longiores etiam in plantis auctoris non constantes observavit.

Bosna: In monte Čardak Pl. prope Mlinište, c. 1156 m (R. Dvořák).

Lathyrus sessilifollus [Ten., Fl. Nap. prodr., App. 21, I, 103; Beck in Reich., Ic., l. c., 158; Asch. Gr., Syn., l. c., 1057.

Orobus sessilifolius Sibth. Sm., Prodr., II 64, Fl. Graec., t. 692; Boiss., Fl. Or., II 618; Halácsy, Consp. fl. Graec., I, 474 = *O. canescens* v. Alef. in Bonpl., IX (1861) 142] affinis priori Bulgariae, Graeciae et Anatoliae civis est, et rhizomate brevi, longe et crasse fibroso, foliolis 1—2jugis, confertis subdigitatis, stipulis petiolum superantibus v. aequantibus, corolla coerulea, carina acuminata, antice alata etc. praestat. (Beck.) In Bosna probabiliter etiam in Serbia deest et cum priore commutatus est.

7. *Lathyrus alpestris* [Čelak. in Öst. bot. Zeit. (1888), 86; Wohlf., Syn. Fl. Deutschl., 712; Beck in Reich. f., Syn., l. c., 158, t. 219; Asch. Gr., Syn., l. c., 1053 — *Orobus alpestris* W. K., Pl. rar. Hung., II, 133, t. 126; DC., Prodr., II, 377. — *O. vernus* α . *angustifolius* Neilr., Diagn., 43 p. p. — *O. pallens* β . Reich., Fl. Germ., 537]. Rhizoma breve, fibris longis praeditum. Caulis ascendens, angulatus. Stipulae semisagittatae petiolum subaequantes, rhachi elongata 2—3plo breviores. Foliola 2—3juga oblongo-lanceolata, non acuminata, mucronata, remota. Pedunculi pluriflori, folia subaequantes v. superantes. Flores ebracteati. Calycis dentes lati, acuminati, vix longitudine tubi. Corolla purpurascens. Stylus oblongo-complanatus. Legumina subcompressa, acuminata. Semina subrotunda, fusca. In pratis montanis, subalpinis. Floret mens. Majo, Junio.

Bosna: In pratis prope Meštrovac, 1200—1400 m (Schiller f. *Ja. 1910).

8. *Lathyrus pannonicus* [Garcke, Fl. Deutschl., 6. Aufl., 112 (1863) ampl.; Asch. Gr., Syn., l. c., 1057. — *L. albus* Kitzel, Tasch. Fl. Deutschl., 1182 (1844); Beck, Fl. Nied.-Öst., 885 et in Reich. f., Icon., l. c., 152. — *L. asphodeloides* Gren. Godr., Fl. franç., I, 488. — *Orobus austriacus* Crantz, Stirp., V, 374 (1769). (Varietates α . et β . comprehendit.) — *O. albus* Koch, Syn. fl. Germ., ed. II, 225; Alef. in Bonpl., IX (1861), 142].

Variat:

α . *genuinus* [G. Beck. — *Orobus pannonicus* Cram., Elench. Austr. (1756); Jacqu., Enum. Vind., 128 (1762) et Fl. Austr., I 25, t. 39; v. *microrrhizos* Neilr., Fl. Nied.-Öst., 968; — *O. austriacus* Crantz, l. c. p. p. sed, t. I, fig. 1. — *O. albus* L. fil., Suppl. 327 (1781); Reich., Fl. Germ., 537. — *O. asphodeloides* Gouan, Illustr., 48. — *Lath. albus* v. *microrrhizus* Čel., Prodr.

fl. Böhm., 961 (1875); v. *pannonicus* G. Beck, Fl. Nied.-Öst., 885. — *L. pannonicus* v. *austriacus* Malý in Asch. Gr., Syn., l. c., 1058]. In pratis humidis, paludosis rarius montanis. Floret m. Aprili—Julio.

Bosna (*Asch. Gr., Cat. 106). Ubi? Prope Kupres (F. f. Asch. Gr.), Gornji Malovan (Bucalović f. M.), Bastasi prope Livno (R.!). Circa Travnik (Br. f. Asch. Gr.), inter Zenica et Lašva (Čurčić f. M.), prope Mokro (M.), Pale (F.!), Ždralovac blato (R. f. M.). — **Hercegovina**: Prope Borci (*Bl. 1877), Rakitno (F.), in agris Nevesinjsko polje (Sagorski) et Gatačko polje (Riedel! f. Mu.).

β. *versicolor* [Malý in Asch. Gr., Syn., l. c., 1059 (1910). — *Orobis versicolor* Gmel., Syst. veg., II, 1108 (1791); Reich., Fl. Germ., 537. — *O. varius* Sol. in Bot. Mag., t. 675; Ser. in DC., Prodr., II, 376 = *Lath. varius* C. Koch in Linnaea XV (1841), 723. — *O. albus* v. *versicolor* Ledeb., Fl. Ross., I, 692 (1842); Koch., Syn. Fl. Germ., ed. II, 225. — *O. lacteus* M. Bieb., Fl. Taur. cauc., II 152 (1808); Reich., Fl. Germ., 537. — *O. pannonicus* v. *collina* Ortm. in Abh. zool.-bot. Ver., II (1852), 13; v. *macrorrhizos* Neilr., l. c. — *L. albus* v. *macrorrhizus* Čelak., l. c.; v. *versicolor* Beck, Fl. Nied.-Öst., 885 (1893) et in Reich. f., Ic., l. c., 157, t. 227, f. 4. — *L. versicolor* G. Beck, Fl. Hernst, 229 (1884)]. In pratis montanis, aridis, dumetosis. Floret m. Majo, Junio.

Bosna (f. Asch. Gr., Syn., l. c.) sed nondum reperta. In monte Macute prope Vardište (M. in lit). — **Hercegovina**: In monte Velež prope Svinjavina 700 m (Ja.), Rakitno (F.), prope Ljubuški (F.! *B. 1896) sed incerte quia imperfecte collectus.

Sectio: *Aphaca*.

[Adans., Fam., II, 330 (1763); Alef. in Bonpl., IX (1861), 280 pro gen; Reich. Fl. Germ., 533 et aut. — *Orobis* sect. *Aphyllon* Döll, Rhein. Fl., 788 p. p.]

9. *Lathyrus aphaca* [L., Spec., 729 (1753); Reich., Fl. Germ., 533; Vis. Fl. Dalm., III, 325; Posp., Fl. öst. Küst., II, 431; Beck in Reich. f., Ic., l. c., 162, t. 197, fig. I—III; Asch. Gr., Syn., l. c., 1020. — *Aphaca vulgaris* Presl in Weitenw., Beitr. Naturk. II (1837) 24; Alef. in Bonpl., IX (1861) 139. — *Orobis aphaca* Döll., Rhein. Fl., 788 (1843)]. In agris, incultis, dumetis, ad sepes rarius in silvis — 1000 m. Floret m. Majo—Junio.

Bosna: Prope Banja Luka (H.), Vrbanja (C.), Drinjača, Nov. Kasaba (J.). In valle fl. Una (Schill. f. Ja.). Circa Ključ (B), Varcar Vakuf

(B.), ad Kičelovo brdo prop. Glogovac (Ha. Fa.), prope Donji Vakuf (Ha. Fa.) et Privraća (Sta.), Bugojno, Kupres, Šujica, Preodac, Rore, Livno, Gubin, Glamoč (Pr.); inter Jezero et Ja ce (Gross Kneucker), circa Travnik (Wiesb. Fr. Br.), in monte Vlašić —1000 m (*S. 1848), prope Guča gora (Franjić!); prope Kakani, Žepče (M.), inter Zenica et Lašva (Čurčić f. M.); prope Tarčin (Pr.), circa Sarajevo in valle fl. Miliacka (M!), in monte Trebević (Blau, Herb. 1109), prope Ilidža (M.); in vallibus fl. Željeznica et Sutjeska, circa Foča, Ustikolina (Pr.), prope Višegrad (Schiller f. Ja.). — **Hercegovina**: Prope Mostar (Str., Pi.), Žitomišljici (Mu.), Dretelj (M.); circa Bileća (Weisbach f. M.), Trebinje (*P. 1874, Baenitz!), Pridvorci, Gomoljani (V.). — **Novi Pazar**: Prope Prijepolje (P. Zahlb. f. *Hayek 1906).

Ludit:

typicus [Asch. Gr., l. c., 1021 (1910)]. Vulgatus. — *affinis* [Ces. Pass. Gib., Comp. fl. Ital., 693 (1882). — *L. affinis* Guss., Fl. Sic. Syn., II, 853 (1845)] floribus paulo majoribus —1.2 mm longis, stipulis latioribus, apice rotundatis subobtusis. Hinc inde cum typo. — f. *micranthus* [G. Beck in Reich. f., l. c., 162]. Hercegovina: Prope Mogorjelo (M.).

v. *floribundus* [Velen. in Öst. bot. Zeit., 36 (1886) 228 et Fl. Bulg., 156, Nachtr. 91 pro spec.; K. Malý in Verh. zool.-bot. Ges., 54 (1904) 227 pro forma: ?Asch. Gr., Syn., l. c., 1023 pro var.]. Bosna: Prope Dolac in agro Sarajevsko polje (*M. 1904). Non vidi. An verus *L. floribundus* Velen.?, qui f. autoris floribus semperbinatis, leguminibus angustioribus linearibus, rectis, seminibus minoribus utrinque acute truncatis cinereis differt. Asch. Graeb. [l. c.] has notas neglexerunt, itaque eorum v. *floribundum* ac statione (Trst) potius formam *bifloram* varietatis *typicae* interpretari sit. Confer insuper Rohlena [5. Beitr. Mont. in Sitz. böhm. Ges. Wiss. (1911), 36].

Sectio: *Cicercula*.

[Medic., Vorles. Churpf. phys. Ges. II (1787) 358 et Philos. Bot., I (1789) 203; Moench, Meth., 163; Alef. in Bonpl., IX (1861) 147 pro gen.; Godr. Gren., Fl. Franc., I, 481 (1848) pro sect. — sect. *Diplophaca* Kitt, Taschenb., 3. Aufl., 1292.]

10. *Lathyrus sativus* [L., Spec., 730 (1753); Reich., Fl. Germ., 534; Beck, Fl. Nied.-Öst., 882 et in Reich. f., Icon., l. c., 164, t. 199; Asch. Gr., Syn., l. c., 1003. — *Cicercula sativa* Alef. in Bonpl., IX (1861) 147. — *C. alata* Moench, Meth., 173 (1794)]. »Grahorica, grah jarić, grah poljak« In satis, agris, incultis, etiam cultus. Floret mens. Aprili—Junio.

Bosna: Prope Banja Luka (*H. 1882) — **Hercegovina:** In lapidosis prope Stolac (F.), prope Mogorjelo (Behr.) In agris prope Trebinje (*P. 1874).

11. *Lathyrus cicera* [L., Spec., 730 (1753); Boiss., Fl. Or., II, 605; Posp., Fl. öst. Küst., II, 432; Beck in Reich. f., Ic., l. c., 165, sed t. 203, fig. 1—IV?; Asch. Gr., Syn., l. c., 1006. — *Cicercula anceps* Moench, Meth., 163 (1794). — *C. cicera* Alef. in Bonpl., IX (1861), 148]. »Romac, ozimac«. In apricis, graminosis lapidosis, dumetosis. Floret mens. Majo—Junio. Differt a priore: cirrhis simplicibus corolla lateritia vel sordide rubra, carina ecristata viridula, apice violacea, leguminibus angustioribus, in sutura ventrali subrectis anguste bicarinatis, c. 10 mm latis, 3—4× longioribus et saepius indumento setuloso plantae partium inferiorum.

Hercegovina: Circa Mostar (Str.), Voino (Ja.), Žitomišljici (M.), Raška gora (M.), Stolac (F.), Ošanića glava prope Stolac (B.) (hic etiam f. *angustifolia*); Mogorjelo (M.); in Sutorina (Pr.).

Sectio: *Lathyrella*.

[G. Beck in Reich., Ic., l. c., 165. — *Eulathyrus* aut. p. p.; *Leptolathyrus* et *Lathyrus* Kitt., Taschenb., 3. Aufl., 1294—1295 p. p.]

12. *Lathyrus sphaericus* [Retz, Obs. bot., III, 39; Reich., Fl. Germ., 534; Vis., Fl. Dalm., III, 328; Posp., Fl. öst. Küst., II, 433; Beck in Reich. f., Icon., l. c., 166, tab. 222; Asch. Gr., Syn., l. c., 1037. — *L. angulatus* L., Spec. pl., 731 (1753) p. p.; Sibth. Sm., Fl. Graec., VII, 84, t. 696. — *Orobis sphaericus* A. Braun, Ind. sem. hort. Berol. (1853) 23; Alef. in Bonpl., IX (1861), 141]. In aridis, graminosis, lapidosis, vinetis, dumetosis. Floret m. Aprili—Junio.

Bosna: In monte Tarabovac prope Travnik (Br.! 1886 sub *L. nissolia* f. B.), in declivibus montis Igman (*M. 1908), prope Kovačići prox. Sarajevo (M.), — **Hercegovina:** Prope Jablanica, Raška gora, Mostar (M.), Žitomišljici (*Mu. 1891); circa Stolac in monte Paprat (F.!) et Ošanića glavica (B.), prope Trebinje (B.). — **Novi Pazar:** Prope Prijepolje (P. Zahlbr. f. *Hayek 1906).

Ludit:

genuinus [Rouy, Fl. Franc., V, 280 (1899)]. Frequenter. — *setifer* [Velen. in Sitz. böhm. Ges. Wiss. (1893) 25]. In **Bosna et Hercegovina** (*M. apud Asch. Graebn., l. c. 1910): Tarabovac prope Travnik (Br., l. c. f. B.).

13. *Lathyrus inconspicuus* [L., Spec., 730 (1753); Beck in Reich. f., Icon., l. c. 166, t. 223 fig. I et II fig. dextra; Asch. Gr., Syn., l. c., 1038. — *L. parviflorus* Roth, Cat. I, 88 (1799).

— *Orobis inconspicuus* A. Braun, Ind. sem. hort. Berol. (1853), 13. — *Graphiosa inconspicua* Alef. in Bonpl., IX (1861) 128]. Differt a *L^o sphaerico* pedunculis basi articulatis cum petiolis exaristatis, brevioribus, pistillo saepe appresse piloso, leguminibus magis teretibus, minus nervosis, intus inter semina medullosis, etiamque saepe puberulis. Inter segeta, in vinetis. Floret mens. Majo—Julio.

Hercegovina: (*Boué 1840) ubi?

v. *erectus* [Asch. Gr., Syn., l. c., 1039 (1910). — *L. erectus* Lag., Gen. spec. nov. 22 (1810); Stapf in Verh. zool.-bot. Ges. 39 (1889), 209. — *L. stans* Vis. in Flora 12 (1829), Erg. Blatt I 19 = *inconspicuus* var. Vis., Fl. Dalm., III 328 (1852); Beck in Reich. f., Icon. l. c., 166; v. *lasiocarpus* Gren. Godr., Fl. franc., I, 491.]

Hercegovina: Circa Stolac (F.), in monte Ošanića glavica (B.), prope Mogorjelo (M.), Trebinje (*P. 1874).

14. *Lathyrus angulatus* [L., Spec. pl., 731 (1753); Reich., Fl. Germ., 534; Vis., Fl. Dalm., III, 328; Beck in Reich. f., Icon. l. c., 167, t. 221; Asch. Gr., Syn. l. c., 1036]. Differt a *L^o sphaerico* cirrho foliorum sup. saepe ramoso, pedunculis petiolo 4—6 plo longioribus, saepe foliola superantibus, corolla purpurascens, leguminibus sublaevibus, gracilioribus, 2—5 cm longis, c. 3 mm latis, seminibus subcubicis, tuberculatis. In cultis, aridis. Floret m. Majo—Julio.

Hercegovina: Prope Mostar (*Str. 1880). Non vidi.

15. *Lathyrus setifolius* [L., Spec., 731 (1753); Boiss., Fl. Or., II, 612; Posp., Fl. Öst. Küst., II, 434; Beck in Reich. f., Ic. l. c., 167, t. 224; Asch. Gr., Syn., l. c. 1040. — *Orobis setifolius* Alef. in Bonpl. IX (1861) 141.]. In graminosis lapidosis aridis arenosis — 600 m. Floret m. Aprili—Junio.

Hercegovina: Circa Mostar (Pi.! Vidović!) in agro Mostarsko polje (Simonović f. Ja.) ad paludem Mostarsko blato (Mu.) in monte Stolac (Raap Call., Pl. Herc. nr. 62! sub *L^o cicera*, Ja.), prope Šurmanci, Kručevići (M.) prope Trebinje (*P. 1874) Bileća (Weisbach sec. M).

Ludit:

genuinus [Rouy, Fl. Franc., V, 278 (1899)]. Vulgatus. — *angustissimus* [Rouy, l. c.]. — **Hercegovina:** Prope Mostar (*B.) in montibus Stolac (Raap Callier l. c.) et Podvelež (Pi.!). — *amphicarpus* [Gonan, Hort. monsp. 368 (1762) non L. pro spec.; Gren. Godr., Fl. Franc., I 491 (1848)]. — **Hercegovina:** In monte Stolac prope Mostar (*M. 1920).

16. *Lathyrus annuus* [L., Amoen., III, 417 (1756) et Spec. pl. ed. II, 1032; Boiss., Fl. Or., II, 603; Posp., Fl. Öst. Küst., II, 434; Beck in Reich. f., Ic. l. c., 168, t. 202 fig. II—III; Asch. Gr., Syn., l. c., 1004]. In agris, cultis, incultis. Floret m. Majo—Junio.

Hercegovina: In agris prope Grab (*Boller f. M. 1910).

17. *Lathyrus hirsutus* [L., Spec., 732 (1753); Reich., Fl. Germ., 534; Vis., Fl. Dalm., III, 327; Beck in Reich. f., Icon. l. c., 168, t. 203, fig. V, VI; Asch. Gr., Syn., l. c., 1008. — *L. hirtus* Ten. Fl. Nap., IV Syll. 302. (1830). — *L. variegatus* Host, Fl. Austr., II, 327 (1831). — *Lastila variegata* Alef. in Bonpl. IX (1861), 147]. In satis, cultis, incultis, ad vias. Floret m. Junio, Julio.

Bosna: Prope Banja Luka (H. C.) Zalužani (C) Brčko (B.), Zavidovići, Zgošća proxime Kakanj-Doboj (M.) in valle fl. Bosna, prope Sratinska, Ilidža (Fo. f. V.), ad fontem fl. Bosna (Gross Kneucker), Sarajevsko polje, prope Švrakino Selo, ad montem Hum prope Sarajevo (M.) in declivibus austral. montis Trebević 1030 m, circa Mioče in valle fl. Lim (M.). — **Hercegovina:** Prope Mostar (*Mu. 1891).

Sectio: *Anurus*.

[Presl in Weitenw. Beitr. Nat., II (1837) 24; E. Mey. Preuss. Pflanz. Gatt. 258 (1839) pro gen.; Beck in Reich. f., Ic. l. c., 169; *Orobus* subgen. *Omicrusa* Alef. in Bonpl. IX (1861), 140; sect. *Aphyllon* Döll, Rhein. Fl., 788 p. p. *Nissolia* Adans., Fam. II, 330 (1763) non Jacqu. = *Lathyrus* sect. Reich. Fl. Germ., 533 et aut.]

18. *Lathyrus nissolia* [L., Spec., 729 (1753); Reich., Fl. Germ., 533; Beck Fl. Nied.-Öst., 882 et in Reich. f., Icon., l. c., 169, t. 197 fig. IV, V; Asch. Gr., Syn., l. c., 1023. — *Nissolia uniflora* Moench, Meth., 140 (1794). — *Anurus linifolius* Presl in Weitenw., Beitr. Naturw., II 24 (1837). — *A. nissolia* E. Mey., l. c., 258 fide Linnaea XXVIII, 223. — *Orobus nissolia* Döll, Rhein. Fl., 788 (1843)]. In agris, incultis, graminosis, dumetosis, —1150 m. Floret m. Junio, Julio.

Bosna: Prope Banja Luka (H.) In monte Podgomila prope Krupa (B.), in ascensu ad montem Kriva jelika prope Donji Vakuf (Ha. Fa.); prope Travnik (Br.), Guvna (Fr. Br.); Guča gora (Franjić!), in monte Pogorelica prope Fojnica (Schwarz!), in monte Igman 980 m (M.), circa Sarajevo (F.!) in montibus Borije; Debelo brdo, Draguljevac montis Trebević —1150 m, Gradina 840 m (M.); circa Rusenovići distr. Rogatica (F. f. M.) in valle fl. Lim prope Setihovo, Strmica (M.). — **Hercegovina:** (Asch. Kan. Cat. 1877). Ubi? In jugo Ivan (Landauer!).

Ludit:

puberulus [Beck, Fl. Nied.-Öst., 1329 = *pubescens* ibid 882 (1892). — v. *genuinus* Asch. Gr., Syn., l. c., 1024; v. *typicus* K. Malý in Abh. zool.-bot. Ges. (1904), 227. — *Orobus nissolia* v. *genuina* Uechtr. in Öst. bot. Zeit., (1864) 195]. Vulgatus (*B. 1896).

gramineus [A. Kern. in Öst. bot. Zeit. (1863) 188; Borb. in Term. füz., XIII 4 (1890), 159 pro spec.; Beck, Fl. Nied.-Öst., 882 (1892); v. *glabrescens* Freyn in Abh. zool.-bot. Ges. (1877), 325; v. *leiocarpus* Uechtr., Res. Durchf. Schles. in Jahresb. schles. Ges. (1884), 310 (1885)]. Vix deest.

Sectio: *Eulathyrus*.

[Ser. in DC., Prodr., II, 369 p. p. emend; Gren. Godr., Fl. Fr., I, 482 (1848); sect. *Lathyrus* Kitt., Taschenb., 3. Aufl., 1295 p. p.]

19. *Lathyrus tuberosus* [L., Spec., 732 (1753); Reich., Fl. Germ., 535; Boiss., Fl. Or., II, 611; Beck, Fl. Nied.-Öst., 833 et in Reich. f., Icon., l. c., 170, t. 214, fig. I—III; Vis., Fl. Dalm., III, 329; Posp., Fl. öst. Küst., II, 435; Asch. Gr., Syn., l. c., 1019]. In agris, satis, incultis, pratis etiam humidis, vinetis — 900m. Floret m. Majo—Augusto.

Bosna: Prope Banja Luka (H.), Drinača, Nova Kasaba (J.). Circa Novi, Bihać (Fo.), Ključ (Fo.), Preodac, Grkovac, Crni Lug (Pr.), Jajce (B.). Prope Travnik (*S. 1848, Fr. Br), Lašva (Ha. Fa.), Fojnica (Schwarz!), Zgošča prope Kakanj-Doboj (M.), inter Tusin han ad fl. Lepenica et Sarajevo (S.), circa Sarajevo, Lukavica (F.), Butmir, Ilidža, Otez, Miljevići (M.), prope Rusenovići distr. Rogatica (F.). — **Hercegovina**: Prope Konjic (B.), inter Lisičići et Ostrožac (B.); prope Mostar (Bornmüller, Lindbg., M.), in agris Mostarsko et Nevesinjsko polje (Mu.), prope Trebinje (*P. 1874). — **Novi Pazar** (Zahlbr. f. *Hayek 1906).

Ludit:

albanicus [Degen ubi? f. Prodan in Magy. bot. lap. 9 (1910) 103 sine descr. **Hercegovina**: In montibus Plasa (*Prodan 1910) et Vel. Vlajna in monte Čabulja (Prodan).

20. *Lathyrus pratensis* [L., Spec. pl., 733 (1753); Vis., Fl. Dalm., III, 329; Reich., Fl. Germ., 535; Beck, Fl. Nied.-Öst., 822 et in Reich. f., Icon., l. c., 170, t. 207, fig. I, II; Asch. Gr., Syn., l. c., 1029; Posp., Fl. öst. Küst., II, 438. — *Orobus pratensis* Döll, Rhein. Fl., 787 (1843); Alef. in Bonpl., IX (1861), 144]. In pratis, dumetis, ad sepes — 2000m. Floret m. Junio, Julio.

Bosna: In monte Masić Brdo prope Novi (B.), prope Banja Luka, Maglaj ad fl. Vrbas (H.), Donja Tuzla (Wettst. f. Ja.), Prosjek et Zlohanje prope Zvornik (J.). Prope Bugojno, Kupres, Preodac, Grkovac, Livno (Pr.) in montibus Vrsina, Gnjat 1500—1700 *m* (Ja. Wa.). Circa Travnik (*S. 1848), Guča Gora (Franjić!), Guvna (Fr. Br.), in monte Vlašić (Fr. Br.), ad Gučaninov Han (S.), prope Zenica (Breindl!), Fojnica (*S, Mu), Vareš, Tarčin (Pr.). In Bosna australi non rare (B.), circa Sarajevo (H., F.), Hreša, Han Jezero, Ozren, in monte Trebević (M.), Romanija et a. l. (B.), Bjelašnica, Jahorina (M.), Muharnica, prope Rusenovići (F.), in monte Stolac prope Višegrad (V. Čurčić). — **Hercegovina:** In subalpinis montis Preslica (V.), prope Borci (Pr.), circa Mostar (Pi.), in monte Velež (B.), in monte Bjelašica prope Gacko 600—1200 *m* (Mu.). Circa Trebinje in monte Glijiva, prope Orahovac (*P. 1874), inter montes Stirovnik et Svitavac, in monte Ledenik prope Milanov odsjek (V.).

Variat:

α. *pubescens* [G. Beck, Fl. Nied.-Öst., 882 (1892) et in Reich. f., Ic., l. c., 170. — v. *typicus* Posp., l. c., 438 (1898); Asch. Gr., l. c., 1030. — *L. sepium* v. *pubescens* Reich., Fl. Germ., 535]. Vulgatus.

f. *velutinus* [DC., Fl. franç., V, 575 (1815); — v. *lanuginoso-villosus* Fries, Nov. 229 (1814)]. **Bosna:** Čardak livade (Ha. Fa.); in pratis paludosis circa Sarajevo prope Kupina (*B. 1888) et in monte Draguljevac (M.). f. *glabrescens* [G. Beck, Fl. Nied.-Österr., 883]. **Bosna:** Prope Guča Gora (Franjić!), in monte Romanija Pl. (*B.). — f. *dasycarpus* [G. Beck in Reich. f., Ic. l. c., 171 (1903)]. **Bosna:** In alpinis montis Cincar (*B.), Trebević, Treskavica, Bjelašnica (M.).

β. *sepium* [Scop., Fl. Carn., ed. II, II 64 (1772) pro spec. non Koch; Beck, Fl. Nied.-Öst., 883 pro var.; Beck in Reich., Icon., l. c., 171, t. 225; Posp., l. c., 438; v. *latestipulatus* March., Fl. Trieste, 157 (1896)]. Imprimis in subalpinis.

Bosna: In monte Dinara 1800 *m* (*B.), Vlaška gromila in monte Vlašić (Br.!) 1900 *m*. — **Hercegovina:** In montibus Prenj Pl. 2000 *m* (*Prodan 1910) et Vel. Vlajna montis Čabulja (Prodan).

γ. *binatus* [Pančić, Fl. princ. Serb., 256 (1874) pro spec.; Malý in Glasnik zem. muz. XX (1908) 562; v. *acirrhosus* G. Beck, Fl. Südb. in Ann. nat. Hofm., XI (1896) 79. — *Orobis pratensis* v. *binatus* Asch. Kanitz, Cat. corm. Serb., 106 (1877)]. Stolonifer. Humilis. Foliola parvuia, vix 15 *mm* longa et vix 5 *mm* lata, lanceolata, acutissima, subglabra, omnia mucrone filiformi, saepe deflexo desinentia. Racemi pauci- (1—4) flori. Flores magni 15—20 *mm* longi. Dentes calycini tubum suum aequantes vel paulo superantes. In glareosis.

Bosna: Circa Banja Luka (H. f. M.), Sarajevo (Breindl f. *B. 1896), in valle fl. Miljacka (F.!), in angustiis Moščanica (F.!, B.) hic etiam in formis ad typum transientibus! In monte Castello coronato (Gross Kneucker), in Monte Trebević (B., M.), Gradište (M.); prope Strmica ad fl. Lim, in angustiis fl. Prača (M.), in monte Macute prope Vardište (M.). — **Hercegovina**: In monte Prenj Pl. (*B. 1896).

21. *Lathyrus silvestris* [L., Spec., 733 (1753); Reich., Fl. Germ., 535; Jur. in Öst. bot. Zeit. (1858) 391; Münch., ibidem (1860) 401; Boiss., Fl. Or., II, 611; Ginzberger in Sitz. Akad. Wiss. Wien, math.-nat. Klasse CV (1896) 288; Posp., Fl. öst. Küst., II, 436; Beck, Fl. Nied.-Öst., 884 et in Reich. f., Icon., l. c., 171; Asch. Gr., Syn., l. c., 1014 (*silvester*)]. In silvis, dumetis, montanis, aridis. Floret m. Junio—Augusto.

Bosna: (*Asch. Kan., Cat. 106, 1877) ubi? Circa Drinjača (J.); prope Vranograč (F.); prope Koprivnica, inter Bugojno et Kupres (Br. sub *L. latifolio* v.); circa Vareš (Pr.), proxime Miljevići prope Sarajevo 650 m (M.), in monte Trebević (M.), in valle fl. Sutjeska (Pr.). — **Hercegovina**: Prope Mostar (*Str. 1880), in monte Velež (B.).

22. *Lathyrus latifolius* [L., Spec. pl., 733 (1753) emend. et aut.; Reich., Fl. Germ., 535; Posp., Fl. öst. Küst., II, 436; Alef. in Bonpl. IX (1861) 401; Beck, Fl. Nied.-Öst., 884 et in Reich. f., Ic., l. c., 173; Asch. Gr., Syn., l. c., 1010]. In pratis, aridis, agris, dumetosis, silvis luminosis — 1400 m. Floret mens. Junio—Sept.

Bosna: Vulgatus (*S. 1848), exempli gratia: In monte Kozara Pl. (B.), prope Banja Luka (H.), Doboj (Ha. Fa.), Donja Tuzla (B.), Novi, Krupa (Fo. f. V.), Vranograč (F.), in ditone inter fl. Una et Sana (Fo. f. V.), prope Bihać, in agro Dugo polje (Fo.), circa Petrovac (F, B.) Krmine, Agino Selo (Fo.), Čardak livade (Ha. Fa.) Liuša, Glogovac. Pribelja (Ha. Fa.), Donji Vakuf (Sta.), Bugojno, Koprivnica (Ha. Fa.), Kupres, Šujica, Hrblijina (Pr.), Duvno polje (Sta.), Prolog (F.), Rore (Pr.) Livno (F.), in monte Cincar 1400 m (Sta.), Prisjeka (Ja.), Glamoč (Pr.), Karaula gora prope Jajce (Fo.), circa Travnik (*S. 1848, Fr. Br.), Fojnica (Schwarz!), Zenica (Breindl!), Žepče (Fo. f. V.), Lašva (Ha. Fa.), inter Kakanj et monast. Sućeska (S.), prope Kralupi (Pr.), circa Visoko (Fo. f. V.), in monte Vučja Plan., prope Podzarude, Ljubina (M.), Tarčin (Pr.), circa Hrasno, Miljevići (M.), Sarajevo (B.), in valle fl. Miljacka, prope Starigrad, Pale (M.), in monte Igman (Blau Herb. 321; M.), Bukovik, Ozren, prope Hreša, Dovlići (M.), in monte Trebević (Blau, M.), Grab in valle fl. Željeznica (Mu.), in m. Vratlo, Treskavica (B.), prope Rogatica, Rusenovići, Uvač (F.), Višegrad (Schill. f. Ja.), Foča (Fo.), Čajniče (Životsky!), in monte Bijelo Brdo prope Vardište (M.), — **Hercegovina**: In monte Ivan, Preslica, prope Radešice (V.), Umoljane (B.), Rakitno (Begović f. V.), Vojno (M.), Mostar (B., Bornmüller!), Nevešnje (Fo.), Ljubinje (Fo. f. V.), Neum Kula (Fo.), circa Bileća (Fo. f. V.),

Trebinje (*P. 1874, V), Pridvorce (V.), Vučija (P.). — **Novi Pazar**: Prope Prijepolje (P. Zahlbr. f. *Hayek 1906).

α . *rotundifolius* [Reich., l. c. = *L. rotundifolius* Janka in Linnaea XXX (1855), 565 non Willd.; v. *obtusifolius* G. Beck, Fl. Nied.-Öst., 884; v. *brachypterus* G. Beck in Reich., Ic., l. c. 173; — *L. brachyphyllus* Schur in Öst. bot. Zeit. (1861) 85 et Enum. Transs. 176 (excl. syn.). — *L. silvestris* v. *latifolia* Vis., Fl. Dalm., III, 329. — *L. brachypterus* Alef. in Bonpl. IX (1861), 151. — *L. megalanthus* Ginzb. in Sitz. Ak. Wiss. Wien, mat.-nat. Klasse, CV (1896) 332 p. p. — *L. latifolius* v. *megalanthus* f. *rotundifolius* et *brachypterus* Asch. Gr., Syn., l. c., 1011 et 1012]. Foliola fol. fulcrantium late ovalia v. obovalia, plurimum obtusa rarius subacuta, nervis 5—7 firmioribus perducta, 3·8—10 cm longa, 2—5 cm lata, circa 2—2·5 \times longiora quam lata. Alae petiolorum ala caulina plurimum latiores. Vulgatus.

β . *purpureus* [Gilib., Fl. Lith., 260 (1792); Ginzberger, l. c., 331 pro spec. non Presl, Desf.; Beck in Reich. f., Ic., l. c., 173. — *L. grandiflorus* Lang, Syll. Ratisb., I (1824) 182 non Sibth. Sm. Vidi orig. = *L. megalanthus* Steud., Nomencl., ed. II, II, 14 (1841). — *L. latifolius* v. *genuinus* Gren, Godr., Fl. Franc., I, 484 (1848); v. *angustatus* Gremlí, Neue Beitr., III (1883) 7; v. *typicus* G. Beck, Fl. Nied.-Öst., 884]. Foliola elliptica vel oblonga, utrinque rotundato-acuminata v. acuminata, nervis 5 firmioribus perducta, c. 4—8·5 cm longa, 1—2 cm lata, circa 3—4 \times longiora quam lata. Alae petiolorum cum ala caulina subaequilatae vel latiores. Cum α . sat frequenter.

f. *lanceolatus* [Freyn in Verh. zool.-bot. Ges. 27 (1877), 326] foliolis minoribus, brevioribus — 5 cm longis, 5·5—1·7 cm latis, apice rotundatis vel acutis.

Bosna: Prope Novi, Krupa (*Fo.), Vardište (M.), Lukavica, Rusenovići (F.). — **Hercegovina**: In angustiis fl. Neretva (M.), prope Mostar (M.). Trebinje (Fo. sub *L. hirsuto* f. *V. 1909), Bileća (Boller).

γ . *membranaceus* [Presl, Delic. Prag., 40 (1822); Strobl in Öst. bot. Zeit. (1887). 434; Ginzberger, l. c., 339 pro spec.; Beck in Reich. f., Ic., l. c., 174; t, 210, fig. III, IV. — *L. ensifolius* Badaró in Diar. phys. chem. Tic. V (1824) nr. 13 f. Moretti. — *L. longifolius* Ten., Ind. hort. Neap. (1825) 12. — *L. silvestris* v. *ensifolius* Ser. in DC., Prodr., II, 369; Vis., Fl. Dalm., III, 329. — *L. latifolius* v. *angustifolius* Koch, Syn. fl. Germ., ed. II, 224; v. *stenophyllus* Beck, Fl. Nied.-Öst., 884;

v. *neglectus*, *linifolius*, *corsicus ensifolius* Rouy, Fl. Franc., V, 261—262; v. *monspeliensis* Burn., Fl. Alp. mar., II, 202]. Foliola lineari-lanceolata v. linearia, angustissima, basi breviter apice saepe longius acuminata, 7—12 cm longa, 0.2—1 cm lata, 10—40× longiora quam lata, plurimum nervis 3 rarius etiam 2 debilioribus auctis perducta. Alae petiolorum cum ala caulina subaequantes v. latiores.

Bosna: Prope Šemanovci et Pribelja (*Sta. 1911—1912); in monte Bukovik prox. Sarajevo (M.). — **Hercegovina** (*Asch. Kan., Cat., 1877) ubi? In agro Nevesinisko polje (V.), prope Sopilje et Žiljevo 850—900 m (Mu.), circa Trebinje (Fo. f. V.).

34. Pisum.

[L. Spec. pl., 727 (1753) et Gen., ed. V, nr. 779.; Endl., Gen., 1279; Benth. Hook., Gen., I, 527; Taubert in Nat. Pflanzenfam., III 3, 354; Alef. in Bonpl., IX (1861), 126.] »Grašak«.

1. *Pisum sativum* [L., Spec., 727 (1753) ampl.; Poir. in Enc. meth., V, 455; Alef. in Bonpl., IX (1861) 126; Beck in Reich. f., Ic., I, c., 208; Asch. Gr., Syn., I, c., 1063].

Variat:

α. *elatus* [Steven apud M. Bieb., Fl. Taur. Cauc., II 151; Gren. Godr., Fl. Franc., I, 478; Boiss., Fl. Or., II, 623; Rouy, Fl. Fr., V, 281 pro spec.; Asch. Gr., I, c., 1064 pro subsp.; Beck in Reich., I, c., 208, t. 268. — *P. elatum* Bieb. apud Ser. in DC., Prodr., II, 368. — *P. arvense* Sibth. Sm., Fl. Graec., t. 687 non L. — *P. variegatum* Presl, Fl. Sic., I, 13]. Pedunculi 1—3flori, elongati, —20 cm longi, stipulis 2—4× longiores et folia saepe superantes. Corolla colorata. Spontanea ad saepes, inter fruticeta. Floret m. Aprili—Julio.

Hercegovina: Prope fontem Radopolje prox. Mostar (*M. 1908).

f. *albiflorum* [G. Beck in Reich., I, c., 208]. **Hercegovina:** Prope Jablanica (*B.).

β. *arvense* [L., Spec., 727 (1753) et aut.; Boiss., Fl. Or., II, 623, pro spec.; Asch. Graebn., Fl. nordost. Flachl., 453 et Syn. 1066 pro subsp.; Beck, Fl. Nied.-Öst., 887 et in Reich., Ic., I, c., 208, t. 269]. Pedunculi abbreviati, plurimum 1- (rarius 2—3)flori, stipulis breviores, eas aequantes vel superantes. Corolla colorata. In agris, satis, rarius in incultis subspontaneum; saepe colitur. Floret m. Aprili—Junio.

Bosna: Prope Banja Luka (H.), Drinjača ad fl. Jadar (J.), Ljuša prox. Glogovac, Pribelja (Ha. Fa.), in satis Bosnae australis frequens (B.), ad

lacum Blidinje jezero 1100m (*M. 1904). — **Hercegovina**: Radopolje prope Mostar (M.), in monte Baba Pl. (Havelka!). — **Novi Pazar**: Prope Prijepolje (P. Zahlbr. f. *Hayek 1906).

γ. typicum [G. Beck, Fl. Nied.-Öst., 887 (1892) et in Reich. f., Ic., l. c., 209, t. 270. — *P. sativum* L., l. c.; Reich., Fl. Germ., 532; Boiss., Fl. Or., II, 622 et aut.; v. *hortense* Neilr., Fl. Nied.-Öst., 964; v. *sativum* Asch. Kan., Cat. corm. Serb., 105 (1877). — subspec. *P. hortense* Asch. Gr., Syn., l. c., 1066 (1910). — *P. album* Gars., Expl. abr., III 273, t. 460 (1765)]. »Biž, lepen, loznac«. Pedunculi abbreviati, plurimum 1-flori, stipulas aequantes vel iis breviores. Corolla albida. Saepissime colitur et hinc inde e culturis effugit.

Bosna (*Asch. Kan. 1877). — **Hercegovina** (*P. 1874).

Tribus: *Phaseoleae*.

[Bronn, Diss. Legum., 133 (1822); DC, Prodr., II, 381; Benth. Hook., Gen. I 451; Taubert in Engl. Prantl, Nat. Pflanzenf., III 3, 356.]

Phaseolus vulgaris [L., Spec., 723 (1753) ampl., Savi, Observ., III 14 et aut.; Beck in Reich. f., Ic., l. c., 209, t. 272 et Asch. Gr., Syn., l. c., 1077] ex America centrali et *Ph. multiflorus* [Lam., Encycl., III 70 (1789) ampl., Willd., Spec. pl., III 1030 et aut.; Beck in Reich. f., Ic., l. c., 210, t. 271; Asch. Gr., Syn., l. c., 1080] imprimis in v. *coccineus* [L., Spec. pl., 724 (1753) var. *Phⁱ vulgaris*; Koch, Syn. fl. Germ., ed. II, 226 (1843)] et *albiflorus* [Lam., l. c.; Beck, l. c., 270] ex America australi frequenter coluntur. Florent m. Julio—Augusto. »Pasulj«. **Bosna** (*H. 1882). **Hercegovina** (*B.). »Grah, pasulj«.

Ordo LIX: *Thymelaeaceae*.

[Lindl., Nat. Syst., ed. II (1835), 194; Reich., Consp., 82 (1828); Benth. Hook., Gen., III, 186; Gilg. in Engl. Prantl, Nat. Pflanzenf., III, 6a (1894), 216. — *Daphnaceae* St. Hil., Exp. fam., I, 180, t. 130. — *Daphnoideae* Vent., Tabl., II, 235; Endl., Gen., 329. — Confer: Meisner in DC., Prodr., XIV 2 (1857), 493.]

Thymelaeoideae.

[Gilg, l. c., 222.]

1. *Lygia*.

[Fasano in Atti dell' acad. di Napoli (1787), 235, t. 19 f. Meisner; C. A. Mey. in Bull. acad. St. Petersburg. (1843), I, 356; Endl., Gen. Suppl. 4, 65; Beck,

Fl. Nied.-Öst., 596, — *Thymelaea* Lam., Fl. franç., III, 218 (1778) non Mill., Gard. dict., ed. IV (1754); Adans., Fam. II 285 (1763) et Scop., Fl. Carn., ed. II, 275, qui *Thymelaeam* = *Daphne* comprehendunt. sect. *Lygia* Meisn. in DC., I, Prodr., XIV 2, 551; Benth. Hook., Gen., III, 191; Gilg in Natürl. Pflanzenf., III 6a, 237. — *Stellera* L., Amoen., I, 126 et Spec. pl., 559 pro p.] »Vrebina«.

1. *Lygia passerina* [Fasano, l. c. (1787) f. Meisner; Beck, Fl. Nied.-Öst., 596; Posp., Fl. öst. Küst., I, 414; Boiss., Fl. Or., IV, 1052. — *Stellera passerina* L., Spec. pl., 559 (1753); Reich., Ic. fl. Germ., XI, 12, fig. 1167. — *Thymelaea arvensis* Lam., Fl. franç., III, 218 (1778); Meisner, l. c., 551. — *Th. Passerina* Coss. Germ., Introd. à une fl. anal., 180. — *Passerina annua* Wickstr. in Act. Holm. (1818), 320 f. Meisn.; Vis., Fl. Dalm. I, 225]. »Opitnača«. In agris, incultis, arenosis — 900 m. Floret m. Julio—Sept.

Bosna: Prope Novi (Fo. f. V.), Banja Luka (*H. 1882); Donja Tuzla (M.), Kozluk ad Zvornik (J.). Circa Travnik (Br.); in agro Sarajevsko Polje (M.), prope Miljevići prox. Sarajevo (M.), in valle Drina prope Višegrad, circa Paroš in distr. Prozor (M.). — **Hercegovina** (*Asch. Kan., Cat. 29) ubi? Prope Ulog (Fo. f. V.), Jablanica (V.), in monte Podvelež pr. Mostar (Fo. f. V.), in agro Nevesinjsko Polje prope Žiljevo et Kifino Selo (Mu.), circa Drežnica, Vojno (M.), circa Žitomišljici (Mu.), Rečice, Gabela (M.); circa Trebinje prope Pridvorce, Gomiljani, Trebesin han (V.).

Ludit *pilifera* [*Thymelaea arvensis* f. *pilifera* Rohl., 3. Beitr. Flor. Mont. in Sitzungsb. böhm. Ges. Wiss. (1903) Sep. 54]. »Caulis pilis longis albis adpressiusculis vel subpatentibus praeditus.« A varietate *pubescens* [*Stellera pubescens* Guss., Fl. Sic. prodr., I, 466 et Suppl., I, 114 = *Passerina pubescens* Guss., Fl. Sic., I, 451. — *Thymelaea arvensis* β . *pubescens* Ten., Syll. fl. Neap. App. I, 365; Meisn., l. c., 552] vix diversa videtur. **Bosna:** In pascuis prope Ivanjska (*B.).

2. *Daphne*.

[L., Spec. pl., 356 (1753) et Gen., ed. V, nr. 436; Endl., Gen., 330 et Suppl. IV, 67; Benth. Hook., Gen., III, 190; Gilg in Engl. Prantl. Nat. Pflanzenf. III 6a, 237; Meisn. in DC., Prodr. XIV, 530. — *Thymelaea* (Tourn.) Adans., Fam., II, 285 (1763); Scop., Fl. Carn., ed. II, I, 275. — *Mezereum* C. A. Mey. in Bull. ac. Petersb., I 356 f. Pfeiffer. — Confer: Wickström, Diss. bot. *Daphne* ed. II (Stockholm 1820) et Meisner l. c.] »Likovac, maslinica«.

Sectio: *Mezereum*.

[C. A. Mey. in Bull. ac. Petersb., IV, nr. 4 pro gen.; Spach, Hist. veg. Phan., X, 439 (1841).]

1. *Daphne mezereum* [L., Spec. pl., 356 (1753), Meisn., l. c., 530; Reich., Ic. fl. Germ., XI, 15, f. 1181; Boiss., Fl. Or.,

IV, 1046; Posp., Fl. öst. Küst., I, 415; Vis., Fl. Dalm., I, 224; Schneider, Laubholzk., II, 402. — *Thymelaea mezereum* Scop., Fl. Carn., ed. II, I, 276. — *Mezereum officinarum* C. A. Mey., Beitr. V, nr. 112 in Bull. ac. St. Petersb., IV, nr. 4 f. Meisn].
 »Maslinica, vučja lika, ajdučka oputa«. In silvis frondosis, montanis dumetis usque ad dumeta alpina (—1940 m). Floret Martio—Aprili in editoribus serius.

Bosna: In montibus Grmeč Pl. (Boll.), Klekovača, Osječenica (F. B.), Šiša (B.), Stožer (F., Pr.), Čardak (Sta.), prope Podgorje (Ha. Fa.), Veliki Malovan, Troglav (Pr.), Vlašić (*S. 1848, Br., B.), prope Fojnica (Pr.), Visoko (Fo.), Vareš, Tarčin (Pr.). In Bosnae australis silvis montanis et subalpinis vulgata uti in montibus Bjelašnica —1940 m (M.), Treskavica (Pr., B.), Zelengora (Pr.), in valle fl. Željeznica (Pr.), circa Sarajevo (H.), in colle Hum., Mojmilo (M.), in monte Grdonj, Paprenik, Trebević (B.) —1600 m (M.), Romanija (B.), prope Mokro (Fo.), in monte Igman (M.), circa Previla, Podvitez (Pr.), Ravna et Jahorina, Han Pijesak, Veliki Žep (M.), in vallibus fl. Sutjeska et Drina (Pr.), in montibus Javorak (Pr.), Maglić (Pr., B., Rohl.) et Volujak (Pr.) et a. l. — **Hercegovina:** In montibus Preslica, Prislav (*V. 1890), ca. Boračka Draga (Pr.), Rakov Laz prope Konjić (M.).

Ludit: *obtusifolia* [G. Beck, Fl. Nied.-Öst., 597 (1892)]. **Bosna:** In declivibus sept. montis Trebević 1600 m (*M. 1899)

Sectio: *Daphnanthes*

[C. A. Mey. l. c. et in Ann. sc. nat. (1843) 52 em.; Meisn. l. c., 532. Confer: Keissler, Die Arten. der Gatt. *Daphne* aus der Sect. *Daphnanthes* in Engl., Bot. Jahrb., XXV (1898), 29.]

2. *Daphne Blagayana* [Freyer in Flora, XXI (1838) 176; Koch, Syn. fl. Germ., ed. II (1844), 715; Reich., Ic. fl. Germ., XI (1849), f. 1180; Meisn. in DC., Prodr., XIV, 534; Keissler in Engl., Bot. Jahrb., XXV (1898), 102 et in Verh. zool.-bot. Ges. (1896) 220; Schneid., Laubholzk., II, 398. Confer: Beck, Die Königsblume in Wien. ill. Gartenzeit. (1893) 365; Derganc, Geogr. Verbr. der *D. Blag.* in Allg. bot. Zeit. (1902) 176, 195 (1904) 44, (1908) 23. — Icones: Regel, Gartenflora (1880), t. 1020/21, f. 1; Kerner, Pflanzenleben, II, 703; Bot. Mag., t. 7579; Van Houtte, Fl. des serr. 22 (1877), t. 1265, et al. — *D. Lerchenfeldiana* Schur, Enum. pl. Transs., 588 (1866) fide Simonk., Enum. pl. Transs., 476. — *D. alpina* Baumg., Enum. pl. Transs., I 334 (1816) p. p. f. Simonkai]. »Jaglika, borica, drijenak, smilje, jeremičak«. Ad saxa, in dumetis saxosis, silvis pinetosis apertis, rarius sub Piceas regionis montanae,

saepe inter *Ericas carneas*, 450—1120 *m*, solo serpentinico et calcareo. Floret mens. Martio—Majo.

Bosna: In districtu serpentinico: In montibus Čalmaš et Tajan montium Borja Pl. prope Pribinić (J. Froelich). In monte Ozren prope Maglaj (A. Sprung 1889). circa Žepče in monte Smolin c. 1000—1120 *m* (Gschwind, F., B.), Matina (Gschwind 1889), Orlovik (Gschwind); in regione fl. Gostović in montibus Botan, Velež, Žedni vrh, ad pedem mont. Zeleni bor, in valleculis Lemešćak et Kamenica, in monte Jabučica 570—1100 *m* (M.), in monte Konjuh prope Kladanj (Br. 1890), prope Dubošćica (R., Pr.); in monte Zvijezda prope Stupčić (R. sec. M.), Orman prope Hadžići ca. 1000 *m* (*J. Seunik 1886. F.); in monte Cicelj prope Čajniče (St. Delič 1890); in monte Stolac prope Višegrad (Adam.) et in **Serbia** vicina prope Zaovina et Rastište ad occid. a Bajna Bašta (Bornm.), Mokragora et in monte Zlatibor (Pančić 1866); — **Hercegovina** (*Asch. Kan., Cat. corm. [1877], 29) ubi? In valle Lađanica prope Konjic (F.); in monte Glogovo prope Jablanica (V.); in monte Plasa? (Prodan). Adhuc observata est (confer lit. cit., imprimis Beck, Derganc) in Stiria austr., Carniolia, Croatia, Bosna, Hercegovina, Crna Gora, Albania, Serbia, Macedonia, Bulgaria, Romania.

3. *Daphne alpina* [L., Spec. pl., 356 (1753); Reich., Ic. fl. Germ., XI, 14, f. 1175; Meisn. in DC., Prodr., XIV, 532; Vis., Fl. Dalm., I, 224; Posp., Fl. öst. Küst., I, 416; Keissler, l. c., 44; Schneid., Laubholzk., II, 401. — *Thymelaea alpina* All., Fl. Pedem., I, 132. — *Th. candida* Scop., Fl. Carn., ed. II, I, 277]. In rupestribus, lapidosis, ad saxa regionis montanae usque ad subalpinam — 1900 *m*, solo calcareo. Floret m. Majo, Junio.

Bosna: In montibus Kurlaj prope Miličić, Kamešnica (Pr.); Dinara: Troglav (Ja.), Male Poljanice, Gnjat (Ja. Wa.). Circa Sarajevo in declivibus montis Trebević (B.), in valle fl. Miljacka (Beck, Pl. Bosn. Herc., nr. 43). in monte Gradište (M.), Lipovac s. Starigrad (*Bl. 1877). prope Han Bulozii (F.), in faucibus riv. Lapišnica (B.); in monte Strmica prope Nahorevo-Bukovik (M.); in faucibus Razdolina prope Dobrun (M.). — **Hercegovina:** In montibus Prenj: Boračka Draga (Pr.), in faucibus Narontis ad fontem Praporac (M.), Porim (V.); Čvrstica (*Br. 1890/91), Velež 17—1900 *m* (Bornmüller!), ac Orijen (Th. Pichler 1869).

Ludit: *typica* [G. Beck]. Folia vix petiolata, e basi cuneata oblonga, rotundata vel rotundato-acuta, utrinque pilosula. Frequenter. — *glabrescens* [G. Beck — forma transiens inter *D. alpinam* et *oleoides* v. *glandulosam* Keissler, l. c., 52]. Folia ut in f. *typica* sed supra glabra, subtus modo pilosa. **Bosna:** In saxis vallis fl. Miljacka prope Sarajevo et in monte Lipovac 600—800 *m* (Beck, Pl. Bosn. Herc. nr. 43 p. p.), in monte Videš Pl. in ditione Zelengora (Lakatos!). **Hercegovina:** In monte Glogovo c. 1100 *m* (F. 1893 fide Keissler); Bijela Gora (P. f. Keissler).

4. *Daphne oleoides* [Schreb., Icon. et descr. plant. dec. I, 13, t. 7 (1766); Meisn. in DC., Prodr., XIV, 533; Boiss.,

Fl. Or., IV, 1047; Keissl., l. c., 49; Schneid., Laubholz., II, 396].

var. *jasminea* [Meisn., l. c., 534. — *D. glandulosa* Bert., Amoen. ital. 356 (1819) et Fl. Ital., IV 337; Reich., Ic. fl. Germ., XI, 14, fig. 1174 pro spec.; Keissl., l. c., 50 pro var.]. Differt a *D. alpina* foliis coriaceis, perdurantibus, supra glabris nitidulis, subtus pilosulis, saepe albido-punctulatis (quod in plantis nostris non visibile!), laciniis perianthii tubo suo paulo brevioribus vel eum longitudine subaequantibus (non dimidio brevioribus), receptaculo fructifero supra constricto, fasciculis florum 3—5floris.

Hercegovina (*Asch. Kan., Cat. corm., 29 [1877]). Ubi? Ad saxa, in rupestribus montis Baba Pl. (Havelka! fide Vandas) et in montibus Bijela Gora (Havelka!), prope Vučja (*V. 1895). Floret m. Junio. E Crna Gora, Albania, Serbia vicina nota!

5. *Daphne cneorum* [L., Spec. pl., 357 (1753); Reich., Ic. fl. Germ., XI, 14, f. 1176; Meisn. in DC., Prodr., XIV, 532; Posp., Fl. öst. Küst., I, 416; Keissl., l. c., 77; Schneid., Laubholz., II, 396. — Confer J. Tuzson, A *Daphne* génusz *Cneorum* subsectio jarol = De subseccione »*Cneorum*« generis *Daphnes* in Botan. Közlemények (1911) fasc. 5—6. — *D. odorata* Lam., Fl. franç., III, 222 (1778). — *Thymelaea cneorum* Scop., Fl. Carn., ed. II, I, 276]. In apricis lapidosis pascuis usque ad regionem alpinam —2006 m, solo calc. Floret m. Majo — Julio.

Bosna: Inter Sinj et Livno (Marchesetti). Circa Livno in montibus Borova Glava (B.), Krug Pl. 1400—1900 m (*F. 1896), Cincar (F., Pr.) usque ad culmen 2006 m (Br.); in monte Volujak prope Studenci (Havelka f. M.). Plantae nostrae ad fm *dilatata* [Tuzson l. c. 150] foliis spathulatis apice rotundatis pertinent. Observavi radices napiformes.

Sectio: *Laureola*.

[Gray, Brit. pl., II, 266 (1821); Meisn., l. c., 538. — sect. *Eudaphne* C. A. Mey. in Bull. ac. Petersb., IV, nr. 4 p. p. — sect. *Laureola* et *Laureoloides* Spach, Hist. veg. phan., X, 444 et 445.]

6. *Daphne laureola* [L., Spec. pl., 357 (1753); Jacqu., Fl. Austr., II, 49, t. 183; Hayne, Arzn., III, t. 44; Reich., Ic. fl. Germ., XI, 14, fig. 1179; Meisn., l. c., 539; Beck, Fl. Nied.-Öst., 597; Boiss., Fl. Or. IV, 1050; Posp., Fl. öst. Küst., I, 415; Schneid., Laubholz., II, 399. — *D. major* Lam., Fl. fr., III, 221 (1778). — *Thymelaea laureola* Scop., Fl. Carn., ed. II,

I, 276]. »Lisac«. In silvis imprimis fagineis, lapidosis siccis (—1200m). Floret m. Martio, Aprili.

Bosna : *Asch. Kan., Cat. Corm., 29 (1877). Ubi? Prope Banja Luka (H.); in monte Kraljuša prope Bihać (B.). Grmeč Pl. 1200m (F. f. M.); Klekovača (F.); Šiša (B.); circa Vresinska Kosa in insula calcarea regionis serpentinae montis Tajan 760—910m (M.), circa Sarajevo (H.). — **Hercegovina** : Inter Idbar et Tisovica montis Prenj Pl. (*F. 1896).

Ordo LX: **Elaeagnaceae.**

[Lindl., Introd. nat. syst., ed. II. 194 (1836); Benth. Hook., Gen., III, 203; Eichl., Blütendiagr., II, 494; Gilg in Engl. Prantl, Nat. Pflanzenfam., III 6 a, 246. — *Elaeagneae* R. Br., Prodr. fl. Nov. Holl., 350; Endl., Gen., 333. — Confer : A. Richard, Mon. fam. Elaeagn. in Mem. soc. d'hist. nat. Paris, I (1823); Schlecht. in DC., Prodr. XIV, 606. Gilg, l. c. : Servettaz, Monogr. Elaeagn. in Beih. Bot. Centralbl., XXV 2 (1909).]

1. Elaeagnus.

[L., Spec. pl., 121 (1753) et Gen., ed. V, nr. 148; Endl., Gen., 334; Schlecht., l. c., 609; Benth. Hook., Gen., III, 204; Gilg, l. c., 249.] »Dafina igda«.

Elaeagnus angustifolia [L., Spec. pl., 121 (1753); Reich., Ic. fl. Germ., XI, 12, fig. 1166; Posp., Fl. öst. Küst., I, 417; Schneid., Laubholzk., II, 409. — *E. hortensis* M. B., Fl. Taur. Cauc., I, 112 α . *angustifolia* Schlecht., l. c., 609]. Ex Oriente introducta, saepius colitur et hinc inde spontanea occurrit.
Floret mens. Junio.

Bosna : Sarajevo (M. in litt.). — **Hercegovina** : Ad septemtriones prope Mostar (*Str. 1880).

Ordo LXI: **Lythraceae.**

[Lindl., Introd. nat. syst., ed. II. 100; Koehne in Nat. Pflanzenfam., III 7, 1. — *Lythraeae* J. S. Hil., Exp. fam., II, 175, t. 101. — *Lythraeae* DC., Prodr., III, 75; Endl., Gen., 1198; Benth. Hook., Gen., I, 773. — Confer : Koehne, Lythr. in Engl. Bot. Jahrb., I—VII (1880—1886) et in Pflanzenreich, 17. Heft, IV 216, p. 56.]

1. Peplis.

[L., Spec. pl., 332 (1753) et Gen., ed. V, nr. 402; Endl., Gen., 1199; Benth. Hook., Gen., I, 776; Koehne in Nat. Pflanzenf. III 7, 8; Engl., Jahrb., I (1880) 262, IV 392 et in Pflanzenreich, IV 216, p. 56.]

1. *Peplis portula* [L., Spec. pl., 332 (1753); DC., Prodr., III, 77; Koehne in Engl., Jahrb., I 264, IV 392 et in Pflanzenreich, IV 216, p. 57]. »Piličnjak«. In locis humidis, inundatis

stagnis, fossis, ad ripas, lacunas, fontes (—920 *m*). Floret mens. Julio—Sept.

Bosna: *Asch. Kan, Cat. corm. 95 (1877). Ubi? In monte Kozara Pl., Krnin versus Ferići et prope stationem Ivanjska (B.), circa Derventa (Prodan), Maglaj (Fo.), in sylva Otešna montis Babina prope Pepelari c. 920 *m* (B.). in valle Željeznica prope Fojnica (B.), ad fontes prope Fojnica 600—700 *m* (Mu.) prope Kiseljak (H.), Banbrdo (Br.), inter Sitnjica et Varcar-Vakuf (H.), prope Pazarić 630 *m* (M.).

Ludit: *terrestris* [Koehne in Engl., Jahrb. I (1880) 265 et in Pflanzenreich, l. c., 58 em.]. Caulis procumbens, copiose radicans. Folia magna, late spathulata, horizontaliter patentia vel deflexa, 4—8 *mm* lata. Frequenter. — *erecta* [G. Beck; f. *terrestris* Koehne, l. c., p. p.]. Caulis e basi breviter procumbente et radicante erectus. Folia conspicue erecta vel erecto patentia, internodiis evidenter longiora, spathulata, summum 5 *mm* lata. Bosna: In monte Kozara Pl. (*B.). — *minima* [G. Beck]. Humilis. Caulis maxime 3 *cm* altus erectus, simplex vel pauciramosus, dense foliatus, internodiis brevissimis, infimis modo radicantibus vel sine radiculis adventiciis. Folia minima, maxime 6 *mm* longa, plurimum vix 2 *mm* lata, internodiis pluries longiora. Bosna: Ad lacunas viarum in monte Kozara Pl. versus Ferići (*B.) c. 450 *m*. — f. *natans* [Borbás in Ertékez. a termész. köreből 1879, 27; Koehne in Pflanzenreich, l. c., 58. — f. *callitrichoides* Urb. in Verh. bot. Ver. Brandenbg. XXII (1880) 38; = Rohlena apud Domin, 4. Beitr. Fl. Böhm. in Sitz. böhm. Ges. Wiss. (1905) S. A. 20]. Caulis fluitans, elongatus, —50 *cm* longus, pauciramosus, internodiis elongatis. Folia suborbicularia, abrupte petiolata, internodiis breviora. Bosna: Ad rivulum Baštica prope Pale (*M. 1910).

2. Lythrum.

[L., Spec. pl., 446 (1753) et Gen., ed. V, nr. 532; Endl., Gen. 1200; Benth. Hook., Gen., I, 779; Koehne in Nat. Pflanzenf., III 7, 8. — Confer: Koehne in Engl., Jahrb., I 305, IV 392 et in Pflanzenreich, l. c., 58. — *Salicaria* Adans., Fam., II 234 (1762).] »Vrbica«.

Subgenus: **Hyssopifolia.**

[Koehne in Engl., Jahrb., I (1881), 308.]

Sectio: *Salzmannia.*

[Koehne, l. c., 312 et in Pflanzenreich, l. c., 59.]

1. *Lythrum hyssopifolium* [L., Spec. pl., 447 (1753); Koehne in Engl., Jahrb. I, 315 -et in Pflanzenr., l. c., 65. —

Salicaria hyssopifolia Lam., Fl. Fr., III (1778), 103. — *L. thymifolium* β . *hyssopifolium* Vis., Fl. Dalm., III, 197 (1852)]. In locis humidis, arenosis, fossis, paludibus. Floret m. Julio—Sept.

Bosna: Prope Banja Luka, Kiseljak (Bl., H.), Busovača (Bl. fide M.), ad fl. Bosna prope Lašva (V.), ad pedem montis Kobilja Glava et inter Rakovica et Blažuj (*Bl. 1877), in agro Sarajevsko Polje prope Dolac (M.). — **Hercegovina:** In fossis humidis inter Ljubuški et Vitin (*F. 1896).

Subgenus: **Salicaria.**

[Koehne in Engl., Jahrb., I, 326 (1881) et in Pflanzenreich, l. c., 60.]

2. *Lythrum virgatum* [L., Spec. pl., 447 (1753); Koehne in Engl., Jahrb., I, 331 et in Pflanzenreich, l. c., 72. — *Salicaria virgata* Moench, Meth., 665 (1794). — *Lythr. austriacum* Jacqu., Enum. Vind., 80, 243 (1762)]. In locis humidis, paludibus planitie. Floret m. Julio—Sept.

Bosna: Prope Kobaš (Prodan), Kozluk, Drinjača (*J. 1891).

3. *Lythrum salicaria* [L., Spec. pl., 446 (1753); Koehne in Engl., Jahrb., I, 326, IV, 393 et in Pflanzenreich, l. c., 73. — *Salicaria spicata* Lam., Fl. fr., III, 103 (1778). — *S. vulgaris* Moench, Meth., 665 (1794)]. In locis humidis, fossis, ad ripas —1260 m. Floret mens. Julio—Sept.

Bosna: Prope Sasina, Magjir, Vrbanja (Fo.), Čelinac, Ružić, Pribinić, Teslić, Matužići (Fo.), Banja Luka (H.), Kobaš (Prod.), Doboj (Fo.), Donja Tuzla (M.), Kozluk prope Zvornik (J.), Kvarac prope Srebrenica (J.), Žepče (Fo.), Vareš (Pr.). Circa Krupa (Fo.), Bihać (Boll.), Ribić, Ključ, Agino Selo (Fo.), Preodac, Glamoč (Pr.), inter Varcar-Vakuf et Sinjakovo (B.), Jaice (Fo.), Travnik (*S. 1848), prope Fojnica (B., Pr.), Tarčin (Pr.). Hadžići (B.), in valle riv. Zujevina (B.), in agro Sarajevsko Polje (B.), copiose circa Sarajevo (F., B.): Kovačići (Fo.), Kobilja Glava, Velešići (B.), Rogoušići, Miljevići, Trebević (—1260 m, Dobra Voda: Bl. fide M.), Stambulčić 1000 m (M.), Pale, Pod Vitez, Previla (Pr.), Prača, Srednja Pl. (Fo), Rogatica, Plješevica distr. Rusenovići (F.), Zelengora (Pr.), inter Krbljina et Kalinovik (V.), in valle fl. Sutjeska (Pr.), prope Foča (Fo.), in valle Drina pr. Višegrad (M.). — **Hercegovina:** Prope Špiljani, ad lacum Boračko Jezero (M.), in valle Idbar ad mont. Prenj (B.) prope Mostar, Cim (Fo.), in agro Neve-sinjsko Polje (Mu.), ad lacum Hutovo Blato (M.), circa Trebinje: ad rivulum Trebišnjica prope Pridvorci, Lastva prope Orahovac (*V. 1888), in agro Gatačko Polje (Mu., Riedel!). — **Novi Pazar:** Prope Svjetlo borje (*B. 1895).

Variat:

α . *vulgare* [DC., Prodr., III 83 (1828); Koehne in Pflanzenreich, l. c., 77]. Frequenter.

β. *tomentosum* [DC., Cat. hort. Monsp., 123 fide Prodr., III, 83; Koehne in Pflanzenr., l. c., 77].

Bosna: Prope Kobilja Glava prox. Sarajevo (B.), in valle Mošćanica (*M.). — Circa Fojnica etiam f. *latius* [Koehne in Pflanzenr., l. c., 76] abundat. — **Hercegovina:** Prope Konjic (*B.), ad fontem Košutica in valle fl. Narontis (M.).

Ordo LXII: Myrtaceae.

[Pers., Ench., II (1807), 24; DC., Prodr., III (1828) 207; Endl., Gen., 1223; Benth. Hook., Gen., I, 690; Niedenzu in Engl. Prantl, Nat. Pflanzenf., III 7, 57.]

1. Myrtus.

[L., Spec. pl., 471 (1753) et Gen., ed. V, nr. 543; Endl., Gen., 1231; Benth. Hook., Gen., I, 690; Niedenzu in Nat. Pflanzenf., III 7, 57.] »Mrča«.

1. *Myrtus communis* [L., Spec. pl., 471 (1753) p. p.; DC., Prodr., III, 239; Vis., Fl. Dalm., III, 201; Sibth. Sm., Fl. Graec., V, t. 475. — *M. italica* Mill., Gard. dict., ed. VIII (1768), nr. 5]. »Mirta, mrča«. In apricis saxosis, inter dumeta in ditone florum mediterraneae. Floret m. Aprili—Julio.

Hercegovina: Prope Mostar (*Str. 1880) an spontanea? Circa Trebinje, in dumetis montis Gljiva c. 600 m (V.), ad litora maris distr. Sutrina, inter Igalo et Njivice (V., Pr., Hawelka!) et in monte Kobilja (R. f. M.).

Ordo LXIII: Punicaceae.

[Horan, Char. Tetract., 30 (1843); Niedenzu in Engl. Prantl, Nat. Pflanzenf. III 7, 22 (1893). — *Onagreae* trib. *Granatae* Reich., Fl. Germ., 638 (1832), — *Myrtaceae* trib. *Granatae* Eichl., Blütendiagr., II, 488 (1878). — *Granatae* Asch. Kan., Cat. corm. Serb., 96 (1877). — *Granatae* Don in Jameson, Edinb. phil. journ. (1826) 134; DC., Prodr., III (1828), 3.]

1. Punica.

[L., Spec. pl., 472 et Gen., ed. V, nr. 544; Endl., Gen., 1236; Benth. Hook., Gen., I, 784; Niedenzu in Nat. Pflanzenf., III, 7, 25.] »Mogranj«.

1. *Punica granatum* [L., Spec. pl., 472 (1753); Vis., Fl. Dalm., III, 201; Sibth. Sm., Fl. Graec., V, t. 576; DC., Prodr., III, 3; Boiss., Fl. Or., II, 736; Schneid., Laubholz., II, 415]. Ex Oriente introducta saepe colitur et spontanea occurrit in ditone florum mediterraneae (–150 m). Floret mens. Majo—Julio.

Hercegovina: In valle fl. Neretva usque Drežnica (*Boué 1840, B.) exempl. causa in valle Drežnica (Ha.), prope Mostar (Boué, Str., B.), in

monte Hum (B.), prope Cim (Fo.), Blagaj, Vrelo Bune, Podporim (Bl.), prope Žitomišljici, Čapljina (Fo.) in valle fl. Bregava prope Stolac (Hawelka!), prope Stolac, Ljubinje (Fo.), in agro Popovo Polje, circa Trebinje (Hawelka!), ad pedem montis Gljiva (P.), prope Mosko (Fo.), in ditione Sutorina (Sta.).

Ludit: *parva*

α. *spontanea* [K. Malý in Glasn. zem. muz., 31 (1919) 82].
 »Divlji ili zamorski šipak«. Stirps spontanea humilior fruticosa magis spinescens, floribus et fructibus minoribus (Hal., Consp. fl. Graec., I, 547). Pervulgata.

β. *sativa* [K. Malý l. c.]. »Pitomi šipak s. nar«. Stirps culta, arborea, fructibus dulcibus; pulpa floribus nunc rubris subrubente = f. *rubra* [DC., Prodr., III, 3 (1828)] vel petalis albis, calycibus subflavescentibus, fructuum pulpa pallida = f. *albescens* [DC., l. c.] vel floribus plenis = f. *plena* Hort. Solum colitur.

Ordo LXIV: Onagraceae.

[Lindl., Nat. Syst., ed. II, 35 (excl. Halorh.) et Veg. Kingd., 724; Raimann in Engl. Prantl, Nat. Pflanzenf., III 7, 199. — *Onagrarieae* Juss. in Annal. Mus., III, 315. — *Onagrarieae* DC., Prodr., III, 35; Benth. Hook., Gen., I, 785. — *Oenotheraeae* Endl., Gen., 1188. — E. Spach, Monogr. Onagr. in Nouv. Ann. mus., 3. sér., IV, 321—407 (1835).]

Tribus: *Jussieueae*.

[Reich., Consp., 169 (1828) et DC., Prodr., III, 52 (*Jussieae*); Reimann in Engl. Prantl, Nat. Pflanzenf., III 7, 205 et 206; *Jussieuae* Spach Hist. vég. phan., IV 337 (1835); Endl., Gen., 1188.]

1. *Ludwigia*.

[L., Spec. pl., 118 (1753) et Gen., ed. V, nr. 142 (*Ludvigia*); Benth. Hook., Gen., I, 788; Reim. in Nat. Pflanzenfam., l. c., 208. — *Isnardia* L., Spec. pl., 120 (1753) et Gen., ed. V, nr. 145; DC., Prodr., III, 59. — *Dantia* Du Pet. Thouars, Gen. nov. Madag., 49 (1806) = *Isnardia* sect. DC., l. c., 61.]

»Mekčina«.

1. *Ludwigia palustris* [Elliot, Sketch of the bot. South Carol. and Georg., I, 211 (1821). — *Isnardia palustris* L., Spec. pl., 120 (1753); DC., Prodr., III, 61; Reich., Fl. Germ., 634; Sturm, Deutschl. Fl., VI 22. — *Dantia palustris* Du Pet. Thouars, Gen. nov. Madag., 49 (1806). Confer: Debeaux in Revue de bot., XIV, 63; Bennet in Journ. of bot. (1903), 103]. In stagnis, ad ripas. Floret m. Julio, Aug.

Bosna: In stagnis ad fl. Crkvenički Potok prope Han pod Devetinom in distr. Prnjavor c. 140—150 *m* (*B.).

Tribus: *Epilobieae*.

[Spach in Hist. vég. phan., IV 338, 382 (1835).]

2. *Epilobium*.

[L., Spec. pl., 347 (1753) et Gen., ed. V, nr. 426; Endl., Gen., 1192; Benth. Hook. Gen., I 787 p. p.; rectius Spach, Mon. Onagr. in Nouv. Ann. mus. IV (1835) 403; Reim. in Nat. Pflanzenf., III 7, 208; sect. *Lysimachion* (Tausch) Hort. Canal. (1823) et Hausskn. infra cit. 35 et 53. Confer: Haussknecht, Monogr. Gatt. *Epilobium* (Jena 1884) et Nachträge in Mitt. geogr. Ges. Thür., IV 3 (1886) 69 et VII (1888).] »Vrbolika«.

Sectio: *Schizostigma*.

[Hausskn., Mon. Epil., 35 (1884).]

1. *Epilobium hirsutum*—[L., Spec. pl., 347 (1753) excl. β.; Reich., Fl. Germ., 636; Vis., Fl. Dalm., III, 198; Posp., Fl. öst. Küst., II, 118; Hausskn., Mon. Epil., 53. — *Chamaenerion hirsutum* Scop., Fl. Carn., ed. II, I 270 (1772)]. In locis humidis, fassis, ad ripas (—1150 *m*). Floret m. Julio, Augusto.

Bosna: *Asch. Kan., Cat., 95 [1877], ubi? Prope Banja Luka (H.), Bos. Brod, Doboj (Ha., Fa.), Prosjek pr. Zvornik (J.); prope Bronzani Majdan, Gjurici, Plitska (Fo.); circa Lipnik, Vedropolje (Fo. f. V.), Krupa, Bihać, Pritoka, Velagići, Novoselija (Fo.), Preodac, Glamoč (Pr.), Jajce (Fo.); circa Travnik (Fr., Br.), Fojnica (Pr., Schwarz!), Dubošćica, in m. Zvijezda (Pr.), circa Zlokučke Luke (M.); prope Tarčin (B.), in monte Igman (Fo.), circa Sarajevo: Sarajevsko Polje, in monte Trebević —1150 *m*, in valle fl. Miljacka, Mošćanica (M.), Koševo (Fo.), prope Lukavica (F.), Hreša (Fo.); inter Previla et Podvitez (Pr.), in valle fl. Željeznica (Mu., M., Pr.), prope Ilovci 860 *m* (B), Kalinovik, Jehovina (Fo.), in valle fl. Sutjeska prope Tientište (B.). — **Hercegovina** (*Asch. Kan., Cat., 95 [1877]) ubi? Prope Konjic (B.), circa Mostar, in agris Nevesinjsko et Gatačko polje —1000 *m* (Mu.), in valle Vrba prope Gacko (Hawelka, M.).

Ludit: α. *vulgare* [Hausskn., l. c.]. — β. *villosum* [Hausskn., l. c.]. Utrumque frequens.

2. *Epilobium parviflorum* [With., Bot. arr., 225 (1776); DC., Prodr., III 43 (1828). — *E. hirsutum* β. L., Spec. pl., 348 (1753) excl. Herb. — *E. villosum* Curt., Fl. Lond., II, t. 22 (1777). — *E. molle* Lam., Fl. franç., III. 479 (1778). — *E. pubescens* Roth, Tent. fl. Germ., I 167, II 435 (1788). — *Chamaenerium parviflorum* Schreb., Spic. fl. Lips., 146 (1771). — *E. parviflorum* Schreb. et aut.; Reich., Fl. Germ., 636; Posp., Fl.

öst. Küst., II 119; Hausskn., Mon. Epil., 66]. In arenosis humidis, udis humidis, ad rivulos et fontes, ripas (—1300 *m*). Floret m. Julio—Sept.

Bosna: *Asch. Kan., Cat., 95 [1877], ubi? Prope Banja Luka (H.), Vrbanja (Fo.), Donja Tuzla (M.); Krupa, Zalin, Stari Majdan, Dragočaj, Agino Selo, Gustovara (Fo.), in montibus Šuljaga, Vel. Malovan, Šator, Hrblijina, prope Glamoč (Pr.), circa Jajce (Fo.), Travnik (Br.), Putičevo (Fr. Br.), in valle fl. Vrbas prope Donji Vakuf (Sta. Fa.); circa Fojnica (Pr., Schwarz!), in monte Vranica ad lacum Prokoško Jezero (Schwarz!). Circa Zenica, Visoko (Fo.), Tarčin (Mu.). In agro Sarajevsko Polje prope Ilidža (Fo.) et ad fontem Vrelo Bosne (M.); circa Sarajevo (Fo., B.): Prope Kovačići (Fo. f. V.), in m. Glog, prope Hreša (Fo.), circa Pale, in vallibus fl. Miljacka, Mošćanica, Lapišnica (M.), in monte Bukovik, Trebević —1300 *m* (M.); in valle fl. Željeznica (Mu.), in monte Treskavica (F.); inter Previla et Podvitez (Pr.), in faucibus fl. Prača (M.), in valle fl. Sutjeska (Mu.), prope Tjentište (B.), circa Foča, in monte Kmur (Fo.). — **Hercegovina:** Circa Konjic (B., Fo.), Podvrabac (M.), in arenosis ad fl. Trešanica (*B. 1887); prope Jablanica (Bornmüller), ad fl. Doljanka prope Jablanica (Pr.), circa Grabovica (M.), in agro Nevesinjsko polje (Mu.), Hutovo Blato (M.).

Forma *apricum* [Hausskn., l. c., 66] frequentissime observatur.

3. *Epilobium montanum* [L., Spec. pl., 348 (1753)]; Reich., Fl. Germ., 635; Vis, Fl. Dalm., III, 199; Posp., Fl. öst. Küst., II, 120 α ; Beck, Fl. Nied.-Öst., 688; Hausskn., Mon. Epil., 74]. In silvis luminosis, caesis, inter frutices, ad silvarum margines usque ad regionem subalpinam (—1800 *m*). Floret m. Junio—Augusto.

Bosna: In monte Kriva Glava prope Novi (B.), prope Liplje, Pribinić, in monte Borja Pl. prope Pribinić (Fo.), prope Kobaš (Prodan), Zvornik, ad fl. Drinača, circa Nova Kasaba (J.), in monte Grmeč Pl. (Boller), prope Vrajska Badnjevića (Fo. f. V.), in monte Šiša (B.), Kuk Pl., prope Sitnica, (Fo.), in regione fl. Gostović 540—1050 *m* (M.), Kriva jelika pr. Donji Vakuf (Sta. Fa.), in monte Šuljaga, prope Kupres, in monte Vel. Malovan, prope Kurlaj, in monte Kamešnica (Pr.); in jugo Strmac prope Grkovci, in m. Uilica (Ja. Wa.), Troglav, prope Gubin, in m. Šator, prope Preodac (Pr.); circa Travnik, in monte Vlašić (*S. 1848), pr. Guvna (Fr. Br.), circa Fojnica (S., Schwarz!), in monte Vranica Pl. (Mu., Schwarz!), Štit Pl. (Mu.), prope lacum Prokoško Jezero (Schwarz!); inter Fojnica et Kiseljak (S.), Babina prope Žepče (B.), prope Vareš, Dubošćica (Fo.). In Bosna australi frequenter in silvis montanis sicut circa Sarajevo (B.) in valle fl. Miljacka (B.), in monte Trebević, Igman, Bjelašnica (M.), Glog, prope Vučja Luka (Fo.), ca. Ozren, Pale, Ravna Pl. (M.), in monte Treskavica (F., B.), in valle fl. Željeznica (Pr.), in jugo Ranjen (B.), in m. Kmur prope Foča (Fo.), in valle fl. Sutjeska prope Suha (B.), Suha gora (B.), Previla (Pr.), in Zelen-gora (Pr.), in monte Muharnica (F.) et a. l. — **Hercegovina:** In monte Lisin (V.), Vrabac prope Konjic (*Fo. 1889), in monte Pudžim, m. Lelija Pl.

1500 *m* (B.). pr. Ulog (Fo.), Preslica (V.), Boračka Draga (Pr.), Porim (V.), Prenj (Prodan), —1800 *m* (F.); in m. Plasa (M.), Čabulja (Prodan, M.), Crvanj, Bjelašica prope Gacko —1500 *m* (Mu.), Velež prope Nevesinje (Raap Call, Pl. Herc., nr. 175!). — **Novi Pazar:** In jugo Metaljka, prope Svjetlo borje (*B. 1896).

Formas sequentes observavi: *ramosa*, *aprica*, *umbrosa*, *subcordata* [Hauskn., Mon. Epil. 74—75].

4. *Epilobium collinum* [Gmel., Fl. Bad., Suppl. IV, 265 (1826); Reich., Fl. Germ., 636; Beck, Fl. Nied.-Österr., 688; Hauskn., Mon. Epil., 83. — *E. montanum* v. *collinum* Spenn., Fl. Frib., 793 γ. (1829); Mert. Koch, Fl. Deutschl., III, 16; Posp., Fl. öst. Küst., II, 120; *alternifolium* Neilr., Fl. Nied.-Öst., 873; *minus* Wimm, Grab., Fl. Sil., I 371 (1827) f. Hauskn.]. In locis lapidosis, terreis, graminosis usque ad subalpinas (1500 *m*), calcem defugens. Floret m. Junio, Julio.

Bosna: In m. Barakovac prope Vrbanje, in monte Borja Pl. (*Fo. 1889), in m. Vilenica (B.). Circa Fojnica (Mu., B.), prope Mukačin Han, Nadbare in valle fl. Fojnička (Mu.), in monte Vranica Pl. (Mu., Schwarz!), Štit Pl. —1500 *m* (Mu.), Pogorelica (Schwarz!). In monte Igman (Bornmüller!). In jugo Metaljka prope Prača (B.), in monte Ravna Pl. prope Pale (F. sub *E. parvifloro* f. M.).

5. *Epilobium lanceolatum* [Sebast. et Mauri, Flor. Rom. prodr., 138, t. 1, fig. 2 (1818); Visiani, Fl. Dalm., III, 199; Boiss., Flor. Or., II, 747; Hauskn., Mon. Epil., 90. — *Epilobium montanum* v. *lanceolatum* Koch, Syn fl. Germ., 240 (1837)]. In sylvis luminosis, declivibus lapidosis (—1200 *m*). Floret mens. Junio, Julio.

Bosna: In monte Štit Pl. prope Staro Selo (*Mu. 1891), in monte Pogorelica (Schwarz!). — **Hercegovina:** In monte Ivan juxta viam —1200 *m* (*Mu. 1891. Degen, B. sub *E. collino*), in faucibus fl. Trešanica (B. sub *E. collino*). In montibus Svitavac et Štirovnik et in valle Travnj dol (V.).

Sectio: *Synstigma*.

[Hauskn., Mon. Epil., 35, sub divis. 1884.]

6. *Epilobium adnatum* [Griseb. in Bot. Zeit. (1852), 851, 854; Hauskn., Mon. Epil., 97. — *E. tetragonum* L., Spec. pl., 348 p. p. (1753); et aut. plur.; Reich., Iconogr., II, 88, fig. 340]. In fossis, paludibus, locis humidis, ad fontes (—1000 *m*). Floret m. Julio—Sept.

Bosna: Prope Kiseljak, Visoko, inter Sarajevo et Lukavica, Vrelo Bosne (*Mu. 1891), Rajlovac in agro Sarajevsko polje, in faucibus Prača

(M.). — **Hercegovina**: In agro Nevesinjsko Polje, prope Gacko —1000 m (*Mu. 1891).

7. *Epilobium Lamyi* [F. Schultz in Flora (1844), 806; Hausskn., Mon. Epil., 106; Beck, Fl. Nied.-Öst., 690. — *E. tetragonum*. aut. p. p.]. In sylvis caesis, collibus graminosis. Floret m. Julio—Sept.

Bosna: In m. Barakovac prope Vrbanja (Fo. f. *Borbás 1889). Circa Fojnica (Schwarz!). In valle fl. Fojnička inter Fojnica et Kiseliak; prope Vrelo Bosne (Mu.). In monte Kozara Pl. (B.). — **Hercegovina**: In faucibus fl. Trešanica prope Konjic (*B.).

8. *Epilobium obscurum* [Roth, Tent. fl. Germ., I, 168 et II, 438 (1788); Reich., Iconogr., II, 89, fig. 341; Hausskn., Mon. Epil., 114; Beck, Fl. Nied.-Öst., 690. — *E. virgatum* Lam., Enc. meth., II, 375 (1786). — *E. tetragonum* aut. p. p. et var. *obscurum* Willd., Spec., II, 317 (1799). — *E. chodorrhizum* Fries, Sum., 177 (1846). — *Chamaenerion obscurum* Schreb., Spic. fl. Lips., 147 (1771)]. In paludibus, fossis, ad rivulos, in silvis caesis —1500 m. Floret m. Junio—Oct.

Bosna: *Asch. Kan., Cat. 95 (1877). Ubi? Copiose circa Fojnica, in monte Vranica Pl. (M.) inter culmina Krstac et Ločike (Bošnjak); in valle Kruščica pr. H. K. Vitez, prope Han Jezero (M.). ad Jezero prope Ustikolina (Knapp f. Haussknecht), Poljana infra m. Vlasulja (M.). — **Hercegovina**: In jugo Ivan, in agro Nevesinjsko Polje —1500 m (*Mu. 1891), in valle Vrba prope Gacko (M.).

9. *Epilobium roseum* [Pers., Syn., I, 410 (1805); Reich., Iconogr., II, 81, fig. 329; Hausskn., Mon. Epil., 124; Beck, Fl. Nied.-Öst., 689. — *Chamaenerion roseum* Schreb., Spic. fl. Lips., 147 (1771). — *Ep. tetragonum* Linné Herb. nr. 5 fide Uechtr. et Aut. p. p.; Kern. in Sched. ad fl. exs. austro-hung., I 6 nr. 36 (1881)]. In paludibus, ad ripas, in fossis (—1200 m), Floret m. Julio—Sept.

Bosna: *Asch. Kan., Cat., 95 (1877). Ubi? Prope Banja Luka (H.), Sratinska, Sasina (Fo. f. V.), in valle riv. Pepelari prope Mračaj (B.); prope Gubin, Preodac (Pr.); circa Fojnica (Mu., Schwarz!), Kiseliak (Mu.), Vranduk (Bl.), Zlolučke Luke (M.), juxta riv. Džaferov potok in Zelengora (Pr.); circa Sarajevo, Vrelo Bosne, in valle fl. Željeznica (Mu.), in m. Bukovik (Skakavac) (M.); inter Previla et Pod Vitez (Pr.); in valle fl. Sutjeska (Mu.), Mratinje ad mont. Maglić in Crna Gora vicina (Rohlena). — **Hercegovina**: Circa Mostar, inter Čemerno et Grab —1200 m (*Mu. 1891).

10. *Epilobium palustre* [L., Spec. pl., 348 (1753); Haussk.] Mon. Epil., 128; Beck, Fl. Nied.-Öst., 691. — *Chamaenerion palustre* Moench, Meth., 678 (1794)]. In humidis muscosis, tur-

fosis usque ad regionem alpinam (—1750 *m*). Floret m. Junio—Sept.

Bosna: Prope Banja Luka (*H. 1882); Prosjek, Zlohanje, Djevanje (J.), Sase prope Srebrenica (J.), Studena Gora pr. Kusače (M.). In monte Vranica Pl.: circa lacum Prokoško Jezero (Mu., Schwarz!), in m. Matorac (Mu.) prope Tješilske staje 1620 *m* (Simony f. Vierhapper); prope Tarčin (Pr.) in pratis uliginosis montis Zvijezda, pr. Han Toplica, Han Jezero (M.), in monte Maglič (Rohlena), prope Čemernica (Fo.). — **Hercegovina** [*Asch. Kanitz, Cat., 95 (1877)] ubi? In paludibus silvaticis agri Nevesinjsko Polje (Mu.).

Variat:

E. fontanum [Hauskn., Mon. Epil., 132 (1884). — *E. scaturiginum* Wimmer in Schles. Ges. vaterl. Kultur (1848) 125 et in Flora (1849) 690, fide Kerner in Öst. bot. Zeit. (1876) 109—112 et Fl. exs. austro-hung., nr. 486! (e Transsilv. occid.). — *E. Kernerii* Borbás in Öst. bot. Zeit. (1876), 17]. Planta nostra an *alsinifolium* × *palustre*? cum exsiccatis citatis omnino congruens.

Bosna: In monte Zec Pl. (Schwarz f. *B.).

11. *Epilobium alpestre* [Krock., Fl. Sil., I, 605, nr. 588 (1787); Hoppe, Exs. cent., I (1799); Reich., Iconogr., II, 89, f. 342. — *E. montanum* v. *alpestre* Jacqu., Enum. pl. Vind., 64 (1762). — *E. trigonum* Schrank, Bayr. Fl., I, 644 (1789); Hauskn., Mon. Epil., 149]. In lapidosis, herbosis, fruticosis, sylvis caesis in regione subalpina et alpina (1200—1700 *m*). Floret m. Junio—Sept.

Bosna: Ad Skočaj in Croatia vicina, prope Bihać (Boller). In monte Mala Klekovača, inter Ovčara et Gola kosa 1500—1700 *m* (Ha.), in m. Šiša (B.), Vitorog prope Pribelja 1500 *m* (Sta. Fa.), in monte Vlašić prope fontem Šantići (*S. 1848); circa Fojnica (Schwarz!), prope Prokos, in monte Matorac (Mu.); Crni vrh in monte Igman (F.!), circa Kozjače, Han Jezero (M.), Vučja Luka prope Sarajevo (Fo., B.), Glog (Fo. f. Borbás), prope Stupani prox. Pale 1300 *m* (M.) in montibus Ravna Pl. (M.), Trebević (Mu.), Romanija (B.), Treskavica (F, B.), Lelija (M), Bregoč (Pr.), Suha Gora, Maglič (B. Pr.), Volujak (Pr.). — **Hercegovina:** *Asch. Kan., Cat., 95 (1877). Ubi? In m. Preslica (V.), Ljubina Pl.: Vrtača (M.).

Observavi etiam formas: *tetraphyllam* et *angustifoliam* [Hauskn. Mon. Epil., 150].

12. *Epilobium alpinum* [L., Spec. pl., 348 (1753) p. p. et aut. — *E. anagallidifolium* Lam., Encycl., II, 376 (1786); Hauskn., Mon. Epil., 152; Beck. Fl. Nied.-Öst., 691]. Ad nives, in locis humidis muscosis, turfosis regionis alpinae.

Bosna: In monte Vranica Pl. (*Brandis 1890/91). Non vidi, probabiliter per errorem indicatum.

13. *Epilobium alsinefolium* [Villars, Prosp., 45 (1779) et Hist. pl. Dauph., III, 511 (1789); Hausskn., Mon. Epil., 161; Beck, Fl. Nied.-Öst., 691. — *E. organifolium* Lam., Encycl., II, 376 (1786); Reich., Iconogr., II, 74, f. 314]. In locis lapidosis humidis fontanis regionis subalpinae ad alpinam (1200 ad 1800 m). Floret m. Junio—Sept.

Bosna: In monte Vranica Pl.: Ad lacum Prokoško Jezero (Mu., Schwarz!, Br. sub *E. palustri!*), in cac. Matorac (Mu.), Krstac (Bošnjak), Treskavica Pl. (*B. 1887, F., M.), in m. Maglić prope Prijedor 1600—1800 m (Mu.), Volujak, circa Previla (Pr.). — **Hercegovina**: *Asch. Kan., Cat., 95 (1877). Ubi? In m. Visočica (B.), Prenj Pl. (M.).

Formae sequentes observavi: *simplex*, *ramosa*, *latifolia*, *brevifolia* [Hauskn., Mon. Epil., 162], *trichocarpa* [A. Kern. in Öst. bot. Zeit. XXVI (1876), 109].

14. *Epilobium alpestre* × *montanum*. — *E. pseudotrigonum* [Borbás in Öst. bot. Zeit. (1877), 138; (1879), 182. — *E. montanum* × *trigonum* Hausskn. in Focke, Pflanzenmischl., 161 nom. sol. et Mon. Epil., 81].

Bosna: In monte Vranica Pl. inter parentes (*Mu. 1891).

15. *Epilobium alsinefolium* × *montanum* [Hauskn., Mon. Epil., 168]. — *E. salicifolium* [Facchini, Fl. Süd. Tir., 43 (1855)].

Bosna. Vranica Pl.: Ad lacum Prokoško Jezero, 1650 m (Schwarz f. *B.).

16. *Epilobium alsinefolium* × *palustre* [Hauskn. in Focke, Pflanzenmischl., 162 nom. sol. et Mon. Epil., 170]. — *Epilobium Haynaldianum* [Hauskn., Mon. Ep., 177 (1884)]

Bosna: Vranica Pl. ad lacum Prokoško Jezero (*Mu. 1891).

17. *Epilobium montanum* × *obscurum* [Hauskn., Mon. Epil., 78. — *E. montano-virgatum* Krause in Jahresber. schles. Ges. (1851), 89. — *E. obscuro-montanum* Michal. in Bull. soc. bot. Franc., II (1855), 734. — *E. montano-obscurum* F. Schultz in Jahresh. Pollichia (1857) in Beitr. Fl. Pfalz. 108].

Epilobium aggregatum [Čelak. in Sitzungsber. böhm. Ges. Wiss. (1873) f. Čelak. et in Prodr. fl. Böhm. 552 (1875)].

Bosna: Vranica Pl.: In monte Matorac inter parentes (*Mu. 1891).

18. *Epilobium parviflorum* × *roseum* [Hauskn., Mon. Epil., 72. — *E. roseo-parviflorum* Krause in Verh. schles. Ges. (1851), 88. — *E. parvifloro-roseum* F. Schultz, Grundz. Phytost., 143 (1863)].

Epilobium persicinum [Reich., Fl. Germ., 635 (1830). — *E. Knafii* Čelak., Prodr. fl. Böhm., 551 (1874)].

Hercegovina: In valle fl. Sutjeska inter Čemerno et Grab (*Mu. 1891).

3. *Chamaenerium*.

[Scop., Fl. Carn., ed. II. I 269 (1772) p. p. rectius Spach, Mon. Onagr., 401 (1835); Raim. in Nat Pflanzenf., III 7, 211; Beck, Fl. Nied.-Öst., 693. — *Epilobium* sect. *Chamaenerion* Tausch, Hort. Can. ad., t. 7; Hausskn., Mon. Epil., 37; Benth. Hook., Gen., I, 787].

1. *Chamaenerium angustifolium* [Scop., Fl. Carn., ed. II, I, 271 (1772); Beck, Fl. Nied.-Öst., 693; Hayek, Fl. Steierm., I, 1123. — *Epilobium angustifolium* L., Spec. pl., 347, nr. 1 β. (1753); Hausskn., Mon. Epil., 37. — *E. spicatum* Lam., Fl. franç., III, 482 (1778)]. In silvaticis, silvis luminosis caesisque, locis herbosis fruticosis, lapidosis in regione montana ad sub-alpinam editiorem — 1720 m. Floret m. Junio — Augusto.

Bosna *Asch. Kan., Cat., 95 (1877) ubi? Grmeć Pl. (F.). Prope Banja Luka (H.), Kvarac, Srebrenica, Drinača, Nova Kasaba (J.). Prope Sitnica, Varcar-Vakuf (H.), Čardak Livade (Sta. Fa.), Hrblijina, inter Bugojno et Kupres, Šujica, In m. Kamešnica, prope Preodac, Glamoč (Pr.); Uvala prope Janjila (Fo.). Circa Travnik (Br.), in m. Mačak, Vlašić (Fr. Br.); circa Fojnica (Pr.), in monte Vranica Pl.: Štit, Ločike (Mu.), ad lacum Prokoško Jezero (Schwarz!); pr. Vareš, Pogari, Dubošćica, in m. Srednja Pl. (Fo.), pr. Tarčin (Pr.). In Bosna australi vulgatum (B) sicut in valle fl. Željeznica (Pr.), circa Sarajevo prope Vučja Luka (B.), Ozren, Bukovik (M.), in monte Trebević — 1600 m (B., M.), Pavlovac pr. Kasidol, in m. Hodža pr. Stambulčić (M.), in m. Vučja Pl. pr. Nemila, prope Pale, in faucibus Prača (M.), in m. Ravna (M.), Romanija Pl. (B.), Čemernica (Fo.), Treskavica — 1720 m (M.), Bjelašnica: Hranisava (F.), prope Vitez (Pr), Rogatica (F.), Ranjen (B.), in valle fl. Sutjeska (Pr.), in m. Ljubična (B.), Stolac pr. Višegrad (V. Čurčić f. M.). — **Hercegovina:** In faucibus fl. Trešanica (B.), in monte Prenj: Kiser, Obrlin (M.), prope Ostrožac, Jablanica (Fo.), in monte Mali Velež prope Nevesinje (Fo.); in m. Bjelašica prope Gacko (Mu.); pr. Čemerno (M.), in valle Travni do sub m. Svitavac (V.). — **Novi Pazar:** Prope Svjetlo borje (*B. 1896).

2. *Chamaenerion palustre* [Scop., Fl. Carn., ed. II, I, 271 (1772); Beck, Fl. Nied.-Öst., 694. — *Epilobium angustifolium* L., Spec. pl., 347, nr. 1 a (1753). — *E. Dodonaei* Vill., Prosp., 45 (1779) et Hist. pl. Dauph., III, 507; Hausskn., Mon. Epil., 45. — *E. rosmarinifolium* Haenke in Jacqu., Coll., II, 50 (1788). — *E. angustissimum* Weber, Pl. minus cogn. dec., 3 (1784)]. In glareosis, ad ripas, in saxosis, lapidosis arenosis apricis. Floret m. Julio, Augusto.

Bosna: Prope Sase, Zlohanje (J.) in disti. Srebrenica in faucibus Prača pr. Ustiprača (M.); in monte Crni vrh prope Foča (Knapp f. *Hauskn. 1884), prope Foča (Fo.); juxta Spahić Han pr. Višegrad (F. f. M.); in valle Rama (Pr., M.). In angustiis fl. Sutjeska (M.). — **Hercegovina** *Asch. Kan., 95 (1877) ubi? Supra Jezero prope Borci (V.); in valle Diva Grabovica (V.), in angustiis fl. Neretva (Laus, M.) in m. Podvelež (Fo.).

Tribus: *Onagreae*.

[DC., Prodr., III, 40 p. p. rectius Raim. in Engl. Prantl, Nat. Pflanzenf. III 7, 205 (1893).]

4. *Oenothera*.

[L., Spec. pl., 346 (1753) et gen., ed. V, nr. 424; Endl., Gen., 1190; Benth. Hook., Gen., I, 789 p. p.; confr. Leveillé, Mon. *Oenothera* (1902—1908).]

Sectio: *Onagra*.

[Ser. in DC., Prodr., III 46. — *Onagra* Adans., Fam., II 85 (1762) p. p.; Scop., Fl. Carn., ed. II, I, 269 (1772); Spach, Mon. Onagr., 351; Raim. in Nat. Pflanzenf., III 7, 214; Beck, Fl. Nied.-Öst., 664; Small in Bull. Torr. bot. club XXIII (1896), 169.]

1. *Oenothera biennis* [L., Spec. pl., 346 (1753). — *Onagra biennis* Scop., Fl. Carn., ed. II, I, 269 (1772); Beck, Fl. Nied.-Öst., 694; Small in Bull. Torr. bot. club XXIII (1896) 170. — *Onagra europaea* Spach, Hist. nat. veg., IV, 359 = *Onagra vulgaris* Spach, Mon. Onagr., 354].

Introducta ex America boreali. Hactenus in **Bosnae**: Modo in hortis in oppido Travnik observata (*Fr. Br. 1888). Floret m. Junio—Sept.

Tribus: *Circaeae*.

[DC., Prodr., III, 61 (1828) em.; Koch, Syn. fl. Germ., 243 (1836); Raim. in Nat. Pflanzenf., III 7, 206, 222. — *Circaeaceae* Lindl., Nat. Syst. (1830), clav.; Endl., Gen., 1194.]

5. *Circaea*.

[L., Spec. pl., 9 (1753) et Gen., ed. V, nr. 24; Endl., Gen. 1194; Benth. Hook., Gen., I, 793; Raim. in Nat. Pflanzenfam., III 7, 222. Confer; Asch. Magn., Bemerck. in Bot. Zeit. (1870), 745; Leveillé in Bull. geogr. bot., XXI (1912) 217.] »Bahornica«.

Biloculares.

[Asch. Magn., l. c., 762 et Raim., l. c., 223.]

1. *Circaea lutetiana* [L., Spec. pl., 9 (1753); Asch. Magn., l. c., 777; Beck, Fl. Nied.-Öst., 695; Posp., Fl. öst. Küst., II,

114]. In silvis humidis umbrosis, fruticetis usque ad regionem, subalpinam (—1400 *m*). Floret m. Junio—Sept.

Bosna: Vulgata (Fo.). In monte Klekovača (F.) Kriva Glava (B.). Prope Banja Luka (H.), Sratinska, Bistrica, Brankovac, Vrbanja, Opsječko, Varoš, Borja Pl., Liplje, Pribinić, Doboj (Fo.), Kobaš. (Prodan) in monte Majevisa, prope Breške (B.); in regione fl. Gostović 500—760 (M.) prope Drinača, Nova Kasaba, m. Hršin prope N. Kasaba (J.). Prope Vranograč (F.), Krupa, Vranjska, Turski Dubovik, in monte Kozin pr. Hašani, circa Rujevica, Dragočaj, Ripač pr. Bihać (Fo.); in monte Šuljaga (*S.1848); in m. Šator (Pr.); prope Jakotina (Fr. Br.), circa Travnik (Fr. Br.), Fojnica (Pr. Schwarz!), in m. Vranica Pl. (Mu.) in m. Babina pr. Žepče (B.) pr. Vranduk (Bl.). Prope Tarčin (Pr.), Pazarić (F.) in valle fl. Željeznica (Pr.), prope Galjeva Njiva (B.), in jugo Rogoj prope Trnovo (V.), in m. Treskavica (Pr.); prope Pale (F.), in monte Ravna (M.), Trebević (F.), in Zelengora (Pr.), in m. Maglić (Rohlena), Suha Gora (Mu.), in valle fl. Drina inter Foča et Bastasi (B.) inter Previla et Pod Vitez (Pr.), prope Vitez, Ranjen (B.), pr. Goražde (Fo. f. V.) in valle fl. Čehotina prope Brod juxta Foča (B.); inter Ledići et jugum Bijela Lijeska 1300 *m* (B.). — **Hercegovina:** In m. Ivan (B.), Preslica (V.) pr. Špiljani 500 (M.), in m. Vrabac prope Konjic (Fo. f. V.) Prenj: Boračka Draga; Grdača (M.), in declivibus m. Plasa ad vallem fl. Doljanka (F.); prope Nevesinje (V.), in m. Velež (Raap-Callier, Pl. Herc. nr. 176!), Crvanj (Mu.), prope Grab (F.).

Ludit:

ovalifolia [Lasch in Linnaea, II, 446] Vulgata. — *cordifolia* [Lasch, l. c.] Rarius. — *mollis* [Čelak., Prodr. Fl. Böhm. 553. — *villosa* G. Beck, Fl. Nied.-Öst., 695]. — **Bosna:** Circa Fojnica (Schwarz f. *B.).

2. *Circaea intermedia* [Ehrh., Beitr., IV (1789), 42; Čelak. in Öst. Bot. Zeit. (1870), 48; Asch. Magn. in Bot. Zeit. (1870), 763; Beck, Fl. Nied.-Öst., 696. — *C. lutetiano-alpina* (?) Reich., Fl. Germ., 638. — *C. alpino-lutetiana* Neilr., Fl. Nied.-Öst., 877. — *C. alpina* β. *intermedia* Willd., Spec. pl., I, 54]. In silvis humidis, ad rivulos silvaticos. Floret m. Julio, Augusto.

Bosna: In m. Šator Pl. (*Protić in Glasn. zem. muz. XII [1900], 478).

3. *Circaea alpina* [L., Spec. pl., 9 (1753); Asch. Magn. in Bot. Zeit. (1870), 747; Beck, Fl. Nied.-Öst., 696]. In silvis, locis silvaticis humidis, humosis mucosis umbrosis, ad truncos et saxa mucosa in regione montana ac subalpina —1500 *m*. Floret m. Julio, Augusto.

Bosna: (*Boué 1840) In m. Igman, Ravna pr. Pale (M.), Bjelašnica (F.), Treskavica (Pr.), Volujak —1500 *m* (Mu., Pr.), in Zelengora (Pr.), prope Čajniče (Životsky!) in faucibus Suha (M.). — **Hercegovina:** in monte Preslica (*V. 1890).

СРПСКА КРАЉЕВСКА АКАДЕМИЈА

ПОСЕБНА ИЗДАЊА

КЊИГА LXIII

ПРИРОДЊАЧКИ И МАТЕМАТИЧКИ СПИСИ

КЊИГА 15

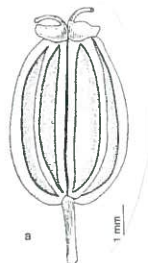
ФЛОРА

БОСНЕ, ХЕРЦЕГОВИНЕ И ОБЛАСТИ
НОВОГА ПАЗАРА

PART 5.

НАПИСАО

Проф. DR. ГИНТЕР БЕК-МАНАГЕТА



БЕОГРАД-САРАЈЕВО

ДРЖАВНА ШТАМПАРИЈА У САРАЈЕВУ

1927

ЦЕНА 60 ДИНАРА

СРПСКА КРАЉЕВСКА АКАДЕМИЈА

FLORA

BOSNAE, HERCEGOVINAЕ ET REGIONIS
NOVI PAZAR

III. CHORIPETALAE
(FINIS)

ФЛОРА

БОСНЕ, ХЕРЦЕГОВИНЕ И ОБЛАСТИ НОВОГА
ПАЗАРА

III. ХОРИПЕТАЛЕ
(КРАЈ)

НАПИСАО

PROF. DR. GÜNTHER BECK-MANNAGETTA
(У ПРАГУ)

*Prof. Manesja Svojkov
апомене
Београд 1934 год.*

БЕОГРАД-САРАЈЕВО

ДРЖАВНА ШТАМПАРИЈА У САРАЈЕВУ

1927

Ordo LXV: **Trapaceae.**

[Dumort., Anal. fam. 36 (1829). — *Hydrocaryes* Link, Handb. II 53 (1831). — *Hydrocaryaceae* Raim. in Nat. Pflanzenfam. III 7, 223 (1893). — *Onagraridae* trib. *Hydrocaryes* DC., Prodr., III, 63 (1828); *Trapaceae* Reich., Fl. Germ., 633 (1832).]

1. **Trapa.**

[L., Spec. pl. 120 (1753) et Gen. ed V, nr. 146; Endl., Gen., 1197; Benth. Hook., Gen., I, 793; Raim. in Nat. Pflanzenfam. III 7, 225.] »Rašak, vragulić«.

Trapa natans [L., Spec. pl., 120 (1753) — Beck, Fl. Nied.-Öst., 697. Confer: Schroeter Contrib. var. *Trapa natans* in Arch. des scienc. phys. et nat. VIII (1899); Nathorst, Fructiformer af *T. natans* in Bihang K. Svensk vet. ak. verh. XIII 3 nr. 10 (1888); Jäggi, Die Wassernuß (Zürich 1883)]. In aquis tranquillis, lacunis planitiei. Floret m. Junio, Julio.

In **Croatia** vicina prope Sela juxta Sisak (Fo.). Probabiliter etiam secundo amni Sava in **Bosna** (Posavina).

Ordo LXVI: **Halorrhagidaceae.**

[Beck, Fl. Nied.-Öst., 697 (1892); Petersen in Engl. Prantl, Nat. Pflanzenfam., III 7, 226 p. p.; Schindl. in Engl., bot. Jahrb., XXXIV, Beibl. nr. 77 (1904). — *Halorageae* R. Brown in Flind., Voyage, II, App. 3, 549 (1814); Endl., Gen., 1194. — *Haloragideae* Dumort., Anal. fam., 36, 39 (1829); Eichl. Blüten-diagr., II, 463. — *Haloragaceae* Lindl., Veg. Kingd., 722 (excl. *Trapa*); Schindl. in Engl., Pflanzenreich IV, 225 (1905).]

Myriophyllum.

[L. Spec. pl., 992 (1753) et Gen., ed. V, nr. 945; Endl., Gen., 1196; Benth. Hook., Gen., I, 676; Petersen in Engl. Prantl, Nat. Pflanzenfam., III 7, 234; Schindler Halorrh. l. c. 77.] »Krocanj«.

1. *Myriophyllum verticillatum* [L., Spec. pl., 992 (1753); Koch, Syn. fl. Deutschl., ed. II, 270; Reich., fl. Germ., 633; Beck, Fl. Nied.-Öst., 698; Schindler in Pflanzenreich l. c. 87]. In aquis tranquillis, lacunis, stagnis. Floret m. Junio—Aug.

Bosna: *Asch. Kan., Catal., 95 (1877). Ubi? In lacubus fl. Miljačka agri Sarajevsko polje (B.), sterile potius ad sequens pertinet. — **Hercegovina:** In fl. Trebižat inter Ljubuški et Kravica (*F. 1896), in lacu Hutovo Blato (M.).

2. *Myriophyllum spicatum* [L., Spec. pl., 992 (1753); Reich., Fl. Germ., 633; Koch, Syn. Fl. Germ., ed. II, 270; Beck, Fl. Nied.-Öst., 698; Schindl. in Pflanzenreich, l. c., 90]. In aquis stagnantibus, lacunis. Floret m. Junio—Aug.

Bosna *Asch. Kan., Cat., 95 (1877) ubi? Prope Banja Luka (H.), Vrbanja (Fo. f. V.). In fl. Una prope Novi (Fo. sub *M. verticillato* f. V.) et Sana pr. Prijedor (Bl. fide M.), Jezero prope Jaice (B., Bl.); in riv. Miljac prope Kupres (B.); in lacubus fl. Bosna (Bl.) et Miljacka in agro Sarajevsko Polje (B.). — **Hercegovina**: In fl. Neretva inter Buna et Žitomišljici (Mu.); in fl. Trebišnjica prope Trebinje (*P. 1874, Matulić f. M.) et Arslanagića Most (B.).

Ordo LXVII: Hippuridaceae.

[Schindl. in Engl. bot. Jahrb. XXXIV, Beibl., 77 (1904). — *Hippurideae* Link, Handb., I, 211 (1819) p. p. et Enum. h. Berol., I, 5 (1821). — *Halorageae* trib. *Hippurideae* DC., Prodr., III, 71.]

1. *Hippuris*.

[L., Spec. pl., 4 et Gen., ed. V, nr. 11; Endl., Gen., 1196; Benth. Hook., Gen., I, 675; Peters. in Engl. Prantl, Nat. Pflanzenf., III 7, 237.]

1. *Hippuris vulgaris* [L., Spec. pl., 4 (1753); Reich., Fl. Germ., 632; Koch, Syn. fl. Germ., 245; Beck, Fl. Nied.-Öst., 699]. In fossis, lacubus, rivulis. Floret m. Junio—Aug.

Bosna: Ad ripas lacus Jezero prope Jaice (*Blau 1877).

Ordo LXVIII: Callitrichaceae.

[Lindl., Nat. Syst, ed. II, 191 (1836); Eichl., Blütendiagn., II, 398; Pax in Engl. Prantl, Nat. Pflanzenf., III 5, 120. — *Callitrichinae* Link, Enum. h. Ber., I, 7 (1821); Léveillé in Ann. soc. Linn. Paris (1824), 229; Endl., Gen., 268. — *Halorhageae* trib. *Callitrichineae* DC., Prodr., III, 70 (1828). — *Euphorbiaceae* trib. *Callitrichideae* Baill., Etud. Euph., 650 (1858). — *Rutaceae* ser. *Callitrichinae* Reich., Fl. Germ., 735. Confer: Hegelmaier, Monogr. *Callitriche* (Stuttgart 1864) et Beitr. zur Kennt. der Wassersterne in Verh. Bot. Ver. Brandenb. (1868), 100; Hoppe in Bot. Taschenbuch (1792), 155; Kützing in Reich., Iconogr., IX, 31—47, fig. 1179—1220 et deutsch. Callitr. in Linnaea VII (1832), 174.]

1. *Callitriche*.

(L., Spec. pl., 968 (1753) et Gen., ed. V, nr. 13; Endl., Gen., 268; Benth. Hook., Gen., I, 676; Pax in Nat. Pflanzenf., III 5, 122. Confer lit. supra citatam.) »Žabovlaska, žabovlasica«.

Sectio: *Eucallitriche*.

[Hegelm., Mon. Call., 54 (1864) et Pax, l. c., 122.]

1. *Callitriche verna* [L., Fl. Suec., ed. II, 2 (1754) et Spec. pl., ed. II, 6 (1762); Kütz. in Reich., Iconogr., IX, 33, f. 1179—

1183; Beck, Fl. Nied.-Öst., 555. — *C. vernalis* Kützing in Koch, Syn. fl. Germ., 245 (1837). — *C. palustris* L., Spec. pl., 969 (1753)] sed species collectiva ab autore ipso sublata. In aquis, fossis, humidis — 1250 m. Floret verne—autumno.

Bosna: In monte Kozara Pl. et prope Ivanjska (B.). In valle flum. Spreča prope Turija (*S. 1848), prope Glamoč (Pr.), Fojnica (B.); Vareš, Tarčin (Pr.), in agro Sarajevsko Polje ad fl. Miljacka prope Halilovići (B.), Ilidža (M.), ad fl Dobrinje (Blau fide Hegelmaier 1868), Bosna (Bl. fide M.), Mokro (M.), prope Vučja Luka, in monte Romanija Pl. (B.). — **Hercegovina:** In lacu Hutovo Blato (M.).

Variet:

α . *minima* [Hoppe, Bot. Taschenb. (1792), 157 pro spec.; Wahl., Fl. Suec., 576]. Hinc inde.

β . *caespitosa* [Schultz, Prodr. fl. Starg., nr. 5 pro spec.; Röm. Schult., Syst., I, 579]. Vulgata.

γ . *stellata* [Hoppe, l. c., 158 pro spec.; Röm. Schult., Syst. addit., 579; Beck, Fl. Nied.-Öst., 555; v. *fontana* Kütz. in Reich., Iconogr., l. c., 33]. Vulgata.

Ordo LXIX: **Cornaceae.**

[Link, Handb., II 2 (1831); Eichl., Blütendiagr., II, 415; Beck, Fl. Nied.-Öst. 660. — *Caprifoliaceae* trib. *Corneae* HBK, Nov. Gen. Am., III, 430. — *Corneae* Endl., Gen., 798. — *Cornaceae* Benth, Hook., Gen., I, 947 p. p.; Harms in Nat. Pflanzenfam., III 8, 250 et in Ber. deutsch. bot. Ges. (1896), 21. — Confer: Beck in Reich., Icon., XXIV, 4; J. M. Coulter and W. H. Evans, A revision of North Amer. Corn. in Bot. Gaz. XV. (1890), 30; Wangerin, *Cornaceae* in Engl., Pflanzenreich, IV (1910), 229; Schneider, Laubholz., II, 433 (1907).]

1. **Cornus.**

[L., Spec. pl., 117 (1753) et Gen., ed. V nr. 139; DC., Prodr., IV, 271; Endl., Gen., 798; Benth. Hook., Gen., I, 950; Harms in Nat. Pflanzenf., III 8, 265. Confer: L'Héritier, *Cornus* (1788); Beck in Reich. Ic. fl. Germ., XXIV 5. Wangerin in Engl., Pflanzenreich, IV (1910) 229 p. 43; Schneider, Laubholz., II, 436]

Sectio: *Macrocarpium.*

[Spach, Hist. vég. phan. VIII (1839), 101; sect. *Tanycrania* Endl., Gen., 798 pp.]

1. *Cornus mas* [L., Spec. pl., 117 (1753); Koch, Syn. fl. Germ., ed. II, 354, Beck, Fl. Nied.-Öst. 661 et in Reich. Ic.

l. c. 5, t. 143; C. Koch, Dendrol., I, 693; Schneider Laubholz. II, 451; Wangerin in Engl. Pflanzenreich IV 229, p. 78. — *C. mascula* L., Syst., ed. X, 897 (1759); Reich., Fl. Germ., 203]. »Drijen«. In collibus siccis, dumosis, montanis, ad silvarum margines (—1200m). Floret m. Febr.—Aprili.

Bosna: (*Boué, 1840). Prope Banja Luka (H.), Vrbanja (Fo.), Donja Tuzla (M.), Zvornik (J.). Prope Krupa, Bihać (Fo.), Ključ (Fo.), Glogovac (Sta. Fa.), prope Prusac (S.), inter Bugojno et Kupres, prope Preodac, Gubin (Pr.), Jajce (Fo.), in valle fl. Jani (Sta.), in regione fl. Krivaja prope Careva Čuprija, Kamensko, Olovo, Čude (M.). Circa Travnik (S.), Fojnica (Pr.), in monte Vranica Pl. (Schwarz!), pr. Vranduk (Bl.), Visoko (Fo.), Vareš (Pr.), Tarčin (Pr.), in monte Igman (B.), Čubrin (M.), prope Semizovac (M.). Circa Sarajevo (H., B.), in valle fl. Miljacka (B.), Mošćanica, Koševa, in collibus Mojmiilo, Hum, in faucibus riv. Kasidolski potok, prope Miljevići, Stanojevići (M.), in m. Trebević, Grdonj, Gradina, Bukovik (Močioći), Gradište, Kukor prope Ljubogošta (M.), Lipovac (B.); prope Bulozij, Ustiprača, in faucibus Prača, in valle fl. Drina prope Višegrad, pr. Pijavice, Vardište, Bijelo Brdo (M.), Bijela voda in m. Dumoš Pl. (Bl.), in valle Govza prope Jeleč (B.), in valle fl. Sutjeska (B. Pr.). — **Hercegovina:** Prope Konjic (B.), Dubravica, in valle Ljuta, m. Vrabac, in faucibus Rakitnica, m. Prenj: Lipeta; prope Košutica, Rujište (M.), in valle Idbar (B.), in valle Narontis prope Grdača (M.), prope Jablanica (Fo.), in valle Doljanka, m. Risovac, prope Grabovica, Drežnica (M.), Mostar (Str.) prope Cim (M., Lindberg) et Velež —1200m (Mu.), prope Crnica, Žitomišljici, Bišina (M.), prope Dol. Hrasno, Hutovo (F.), Poljice, Jasenica Lug, Glavska (M.), Gradac, Neum. (F.), in silva Bročnik prope Ljubinj (Fo. f. V.). — **Novi Pazar:** In valle fl. Lim inter Prijepolje et Bistrica (*B. 1896).

Sectio: *Thelycrania*.

[Endl., Gen., 798. — Sect. *Microcarpum* Spach. Hist. vég. phan., VIII, 92. — Swjda Opiz in Bercht. Opiz, Oek. techn. Flora Böhm., II 1, 174.]

2. *Cornus sanguinea* [L., Spec. pl., 117 (1753); Reich., Fl. Germ., 203; C. Koch, Dendrol., I, 683; Beck, Fl. Nied.-Öst., 662 et in Reich., Ic. fl. Germ., XXIV, 5, t. 144; Schneider, Laubholz., II, 448; Wangerin in Engl., Pflanzenreich, IV, 229 p. 73]. »Svibovina, siba, sudrenika«. In sepibus, dumetis, silvis (—1200m). Floret m. Majo—Julio.

Bosna: Vulgata in Bosna septentionali et media (Fo). Stationes nominantur: Novi (B.), Ribić (F.), Banja Luka (H.), Donja Tuzla (Wettst., f. Hayek), Zvornik, Nova Kasaba (J.); Velika Gomila prope Krupa (B.), Debeljača pr. Bihać (B.); inter Bugojno et Kupres (Pr.), in faucibus Sutina ad m. Dinara (Ja.), prope Preodac, Gubin (Pr.); circa Travnik (*S. 1848), prope Paklarevo inter Travnik et Gučaninov Han (S.), circa Fojnica (Pr.

Schwarz!). Prope Vareš, Kralupi, Tarčin (Pr.), in valle riv. Vogošća (S.). In Bosna australi vulgata (B.). Sicut circa Sarajevo prope Tilava, Miljevići, Hreša, Sarajevsko Polje (M.), in valle fl. Miljacka (B.), et Koševo (M.), in faucibus Moščanica, in m. Lipovac (B.), Igman, Grdonj, Trebević, in faucibus Prača (M.), Bijele Vode in monte Dumoš Pl. (Bl.), in valle fl. Sutjeska (Pr.) et alibi. — **Hercegovina:** In faucibus Rakitnica, prope Konjic (M.). In valle Idbar ad m. Prenj Pl. (B.) in m. Štitar Pl. pr. Rakitno (Begović f. V.), pr. Mostar (Str.), Ljubinje (Fo. f. V.), Bukov dol prope Ljubinje (R. f. M.). Circa Klinje pr. Gacko (Hawelka f. M.), Trebinje in monte Gljiva, Drača, Crkvina (*P. 1874).

Ordo LXX: Araliaceae.

[L., Ordo nat. 46 (1764) p. p.; Vent., Tabl. III 2, (1799); DC., Théor. élém., 246 (1819) Endl., Gen., 793; Benth. Hook., Gen., I, 931; H. Harms in Engl. Prantl, Nat. Pflanzenfam., III 8, 1 — *Umbelliferae* ser. *Aralieae* Baill., Hist. pl., VII, 175.]

1. Hedera.

[L., Spec. pl. 202 (1753) et Gen., ed. V, nr. 249 p. p. Endl. Gen., 795; Benth. Hook., Gen. I, 949; Harms in Nat Pflanzenf., III 8, 41. — Confer: Buchenau, Zur Morph. von *Hedera* in Bot. Zeit. (1864), 233; Tobler, Naturgesch. der Gatt. *Hedera* (Jena 1912).]

1. *Hedera helix* [L., Spec. pl., 202 (1753); Reich., Fl. Germ. 485; Vis., Fl. Dalm., III, 73; Posp., Fl. öst. Küst., II, 131; Beck, Fl. Nied.-Öst., 660]. »Bršljan«. In silvis lapidosis, in dumetis, ad saxa arboresque, muros usque ad regionem subalpinam (—1600 m). Saepe culta imprimis in locis funeribus destinatis. Floret m. Aug.—Nov.

Bosna: Vulgata (*S. 1848 et alii). — **Hercegovina:** Vulgata (*Asch. Kanitz 1877).

Ordo LXXI: Umbelliferae.

[B. Juss. in Hort. Trian. (1759) ordo 21; Crantz, Stirp. Austr., III (1767); Endl., Gen., 762; Benth. Hook., Gen., I 859; Drude in Engl. Prantl, Nat. Pflanzenfam., III 8, 63. *Umbelliferae* trib. 1—5 Baillon, Hist. des plant., VII, 174. Confer: Crantz l. c.; Sprengel, Plant. Umb. prodr. in Schrift. naturf. Ges. Halle, II 1 (1813); Hoffmann G., Gen. plant. Umb. (Mosquae 1814; ed II, 1816); Sprengel in Schult., Syst. veg., VI (1820), et Spec. Umb. (Halae 1818); G. J. Koch, Generum tribuumque pl. Umbell. disp. in Nov. act. Leop. Carol., XII 1, 55 (Bonnae 1824); A. P. De Candolle, Mém. sur la fam. des Ombell. (Paris 1829) et in Prodr., IV. 55 (1830); Reich. f., Ic. fl. Germ., XXI (1867); Drude, l. c.; Briquet, Not. crit. Omb. in Ann. du cons. et jard. bot. Gèneve IV (1900);

Calestani, Contributo alla sistem. Ombrell. in Webbia I, 89 (1905); H. Wolff in Engler, Pflanzenreich, IV 228 Heft 43 et 61 (incompl.) 1910 et 1913.]

Saniculoideae.

[Drude in Nat. Pflanzenf., III 8. 135 (1898).]

Tribus: *Saniculeae*.

[Koch, Umb., 138 (1824) em.; Benth. Hook., Gen., I, 862, 864; Drude, l. c., 115, 135; H. Wolff in Pflanzenreich, l. c., 61. Heft, 47.]

1. *Hacquetia*.

[Neck., Elem., I 182 (1790); Endl., Gen., 767; Benth. Hook., Gen., I, 879; Drude, l. c., 138; H. Wolff, l. c., 61. Heft, 47; *Dondia* Spreng., Umb. Prodr. (1813), 21 non Adans.] »Nizanj«.

1. *Hacquetia epipactis* [DC., Prodr., IV, 85 (1830); Reich. f., Icon. fl. Germ., XXI (1867), 2, t. 1; Bot. Mag., t. 7585; Posp., Fl. öst. Küst., II, 137; H. Wolff, l. c., 48. — *Astrantia Epipactis* Scop., Fl. Carn., ed. II, I, 185, tab. 6; Jacqu., Fl. Austr., V, App. 32, t. 11. — *Dondia Epipactis* Spreng., Umb. prodr., 21 (1813). — *Dondisia Epipactis* Reich. in Mössl., Handb., ed. 2, I, 493 (1827)]. In silvaticis umbrosis, silvis, dumetis alneis. Floret m. Aprili—Majo, rarius Martio.

In Croatia vicina sat frequens (sicut in m. Plješevica Pl.) attamen in Bosna nondum observata est.

2. *Sanicula*.

[L., Spec. pl., 235 (1753) et Gen., ed. V, nr. 289; Endl., Gen., 767; Benth. Hook., Gen., I, 880; Drude, l. c., 137; H. Wolff, l. c., 48.] »Lječura«.

1. *Sanicula europaea* [L., Spec. pl., 235 (1753); Reich., Fl. Germ., 482; Vis., Fl. Dalm., III 26; Beck, Fl. Nied.-Öst., 616; Posp., Fl. öst. Küst., II, 136; H. Wolff, l. c., 61; Reich. f., Ic. fl. Germ., l. c., 4, t. 6, fig. I]. In silvis fagineis, frondosis, inter virgulta usque ad regionem subalpinam editiorem — 1600 m. Floret m. Junio—Aug.

Bosna: Frequens vulgataque per totam ditionem (B.) exempli causa prope Novi (B.), Banja Luka, Žepče (H.), Srebrenica (J.). Dinara, Troglav (B.), Vel. Malovan, Kamešnica, Šator (Pr.), Šiša (B.), Travnik (*S. 1848), Donji Vakuf (Sta.), Fojnica (Schwarz!), Tarčin, Vareš (Pr.), ubique in montanis Bosnae australis (B.): c. Sarajevo (B.), in valle fl. Željeznica, Sutjeska (Pr.), Goražde, Foča (Fo. in litt.), Drina (B.) et a. l. — **Hercegovina** (*Asch. Kan., Cat. 64, 1877) ubi? In montibus Ivan, Preslica (V.), Vrabac pr. Konjic, (Fo.), Prenj, Visočica (B.), Plasa (Pr.), Čabulja (Prodan), Velež (Fo., Raap

Call., Pl. Herc., nr. 1841), prope Nevesinje (V.), in monte Baba Pl. prope Gacko (M.). — **Novi Pazar**: Prope Prijepolje (P. Zahlbruckner f. *Hayek 1906).

Adest v. *genuina* (Wolff, l. c., 62].

3. *Astrantia*.

L., Spec. pl., 235 (1753) et Gen., ed. V, nr. 290; Endl., Gen., 707; Benth. Hook., Gen., I, 879; Drude, l. c., 138; H. Wolff, l. c., 61. Heft, 80. — Confer: Stur, Beitr. Monogr. *Astrantia* in Sitzungsber. Ak. Wiss. Wien, math.-natur. Klasse, XL (1860), 469; Calest. in Webbia, I (1905), 127; Grintzesco, Monogr. *Astrantia* in Ann. Cons. et jard. botan. Genève, XIII—XIV (1910—1911) 66 et Wolff, l. c.] »Zvijezdanka«.

Sectio: *Macraster*.

[Calest. in Webbia, I (1905), 128; Grintz., l. c., 130, Sep. 65; H. Wolff, l. c., 81.]

1. *Astrantia major* [L., Spec. pl., 235 (1753); Hayne, Arzneypfl., I, t. 13; Reich. f., Ic. fl. Germ., XXI, 3, t. 2; Boiss., Fl. Or., II, 830; Beck, Fl. Nied.-Öst., 614; Grintz., l. c., 144, Sep. 79; H. Wolff, l. c., 84]. In pratis montanis praecipue subalpinis, inter frutices, ad silvarum margines, in silvaticis humidis usque ad regionem alpinam (—1800 m). Floret mens. Junio, Julio, Aug.

Variat:

α. *elatior* [Murbeck, Beitr. Fl. Südbosn. in Lunds Univ. Arsskr., XXVII (1891) 116; Beck, Fl. Südb. in Ann. nat. Hofm., X (1895), 199; Sagorski in Mitt. Thür. bot. Ver. XVI (1902) 46; H. Wolff, l. c. 86. — *A. elatior* Friv. in Flora (1836) 434; Calest., l. c., 128 = *A. major* subspec. Malý in Glasnik zem. muz., XVIII (1906), 446. — *A. major* v. *tridentata* Gris., Spic. fl. Rum., I (1843), 339 non Steven. — *A. carinthiaca* Wettst., Beitr. Fl. Alb. in Bibl. bot., Heft 26 (1892), 58. — *A. caucasica* Ten., Fl. Nap., III (1824—1829), 267 = *A. major* v. *caucasica* Fiori Paol., Fl. anal. ital. II (1900), 150 non Spreng: — *A. ranunculifolia* Reich., Sem. hort. Dresd. f. Reich. f., Ic. fl. Germ., XXI (1867) 3, t. 5, fig. I; confer Beck, l. c.]. Umbellis magnis, bracteis involucri 4—5nerviis, integris vel apice 3—7subulato-dentatis, sepalis anguste sensim subulatis petala bis superantibus, fructibus 6—7 mm longis sat praestat.

Bosna: Frequens (B.). In monte Igrisnik prope Srebrenica c. 1400 m (Wettst. f. Hayek). In m. Osječenica, Klekovača (F.), Čardak (J.), pr. Kopriv-

nica, in m. Plazenica (Ha. Ja.), Troglav (B.), Jankovo brdo (Ja. Wa.), Gola kosa (Ha.), in m. Ovčar prope Mlinište (J, Dvořak), Vel. Šator 1100—1650 *m* (J.), inter Glamoč et Rastičevo (Ha. Ja.), in jugo Presedlo prope Podgorje (Sta. Fa.); in m. Hum prope Jajce (B.), in m. Vlašić (Br., B.), circa Fojnica, in monte Vranica, *Zec Pl.* (B.). In m. Bjelašnica (B.), Treskavica (B., F.), Trebević —1600 *m* (Mu., B., M.), Ozren, Gola Jahorina —1600 *m* (M.); circa Sarajevo (B.): prope Hrasno, Nahorevo, Ophode 580 *m* (M.), Lipa (F.), Vučja Luka (Fo. f. V.), Lukavica (F.), Hrastova Glava (M.). Krušev dol distr. Srebrenica (Keller!). Pale, Vitez (M.). In Zelengora, prope Prijedor, Mješajići, Previla (Pr.), in m. Stolac (Čurčić f. M.) et in valle Rijeka pr. Višegrad (Schiller f. Hayek), prope Čajniče (B.), Vikoč (Schiller f. Hayek), in m. Ljubična et Radovina —1800 *m* (Schiller f. Hayek); Maglić (Hawelka fide M.), Muharnica (F.). — **Hercegovina:** In valle Ljuta prope Konjic 320 *m*, pr. Bradina (M.), in m. Prenj, Visočica (B.), Crvanj (Mu.), Plasa (M.), Velež (Mu., B., Raap-Call., Pl. Herc., nr. 185!), prope Bojište (Sagorski), Nevesinje (Mu.), Čemerno (Simonović f. Hayek), prope Dubovac in Bijela Gora (*P. 1874 sub v. *tridentata*).

Ludit, involucris phyllis 3—5 nerviis, nunc apicem versus 3—7 dentibus subulatis instructis, nunc integris (f. *integra* Malý in Glasn. zem. muz, XVIII (1906), 446 pro var.), — utrumque saepius in eadem planta —, modo flores fructusque manifeste superantibus (f. *carinthiaca* Wettst. pro sp.) modo eos longitudine aequantibus, alias viridi-violaceis vel cum pedicellis lilacinis nunc pallidis. Segmenta foliorum basaliū nunc inaequaliter inciso-biserrata nunc inciso-triloba et inaequaliter serrata.

β. *illyrica* [Borbás in Math. naturw. Mitt. Ung. Akad. Wiss. XV (1878), 268 ex Öst. bot. Zeit. (1878), 392; H. Wolff, l. c., 86. — *A. croatica* Tommasini in Öst. bot. Zeit. (1878), 389. — *A. major* v. *A. australis* Huter Porta in Öst. bot. Zeit. (1905) 361. — *A. major* subspec. *montana* Hand.-Mazz. in Öst. bot. Zeit. (1906) 32 non *A. montana* Clairv., Man. d'herbor. Suisse (1811), 78 = v. *montana* Stur, Beitr. Astr., l. c., 16 (1860). quae plantam alpinam varietatis γ ostendit]. Statura graciliore, umbellis paucis, minoribus 1—2 *cm* latis depauperatis, involucris phyllis integris, flores fructusque longitudine aequantibus vel paulo superantibus, sepalis sensim spinuloso-subulatis petala superantibus, fructibus 3—4 *mm* longis egregia. Segmenta foliorum basaliū parvula, inciso biserrata.

Bosna: In monte Jedovnik in faucibus riv. Ravni potok —680 *m* descendens (J.), in m. Mala Klekovača. —1740 *m*; in dolinis m. Jedovnik 1600 *m* cum *Ranunculo thora* (*H. 1906). — **Hercegovina:** In monte Prenj Pl. prope alpem Tisovica (B. sub *minor*) et supra Idbar (B.), in m. Plasa (*Prodan 1910). In Hercegovinae loco quodam (Vandas f. H. Wolff).

In monte Ortiš montium Prenj Pl. c. 2000 *m* observavi plantas simplices umbellam unicam ferentes cuius involucris

phylla apice inciso-tridentata, dentibus apice spinuloso-subulatis medio autem dentibus subulatis tribus instructa. Planta croatica saepe ad var. *elatiorem* transit.

γ. *eumajor* [Grintz., l. c., 153 Sep. 88; H. Wolff, l. c., 87. *A. major* L. autorum]. Saepe major. Umbellae majores. Involucri phylla integra vel apice dentibus subulatis —3prae-dita, flores fructusque longitudine aequantia v. superantia, trinervia. Sepala subabrupte subulata, petala longitudine aequantia vel paulo superantia. Fructus 5mm longi rarius minores.

In ditone nostra profecto rarissima et cum prioribus commutata. Fide H. Wolff (l. c. 87) in Bosna (leg. Blau nr. 187) in f. *pallida*, neque in Hercegovina.

Indicatur:

Bosna: Grmeč Pl. (Boller). Inter Bugojno et Kupres, prope Šujica, in m. Šuljaga, Malovan, Hrblijina, prope Kurlaj, in m. Vještica, (Pr.) Prolog (S.), Šator, prope Jajce (Fo.), Glamoč (Pr.); prope Travnik et in monte Vlašić (*S. 1848); in m. Inac pr. Kreševo (Bl.), circa Vareš, Tarčin (Pr.). Prope Pale, Lipa (F.), Kalinovik, in m. Dumoš Pl., pr. Vlaholje (Fo.). — **Hercegovina:** Prope Ulog, Bijele Vode pr. Klinja, Jablaniči (Fo.); in m. Plasa (Prodan), Mal. Velež prope Nevesinje c. 1000 m (V.), in Bijela Gora: prope Vučja (P. f. *Gris., 1874), circa Češalj et in m. Visoka Glavica (V.)-

Ludit:

f. *pallida* [J. et C. Presl, Fl. čech. (1819), 62 pro spec.; Beck, Fl. Nied.-Öst., 615 pro var.; H. Wolff, l. c. 87 pro subvar.; v. *involutrata* Koch, Syn. fl. Germ., 280 (1837); v. *major pallida* Mert. Koch, Deutschl. Fl. II, 468 (1826). — *A. carinthiaca* Hoppe f. Mert. Koch, l. c. et Koch, l. c. 281 = *A. major* var. Posp., Fl. öst. Küst., II, 135]. Umbellae —4cm latae. Involucri phylla majora in umbella terminali 2—2.9cm longa, flores fructusque semper manifeste saepe bis et ultra superantia, apice plurimum dentibus subulatis paucis instructa. Sepala 2—2.5mm longa, petala conspicue superantia. Fructus 5mm longi. — Fide H. Wolff [l. c. 87] in **Bosna** a d. Blau nr. 187 (=in declivibus montis Trebevič fide M.) collecta. Non vidi.

f. *vulgaris* [Koch, Syn. l. c. 280 pro var.; Grintz., l. c. 159, Sep. 94; H. Wolff, l. c. 87 pro subvar.]. Umbellae 2—3cm latae. Involucri phylla in umbella terminali breviora 1—vix 2cm longa. — Flores fructusque longitudine aequantia v. paulo superantia, integra. Sepala 1—1.5mm longa, petala paulo superantia. Fructus 3(?)—5mm longi. Non vidi. Planta montium Prenj Pl. ab autore sub. v. *minor* Mert. Koch. notata ad var. *illyricam* Borb. pertinet.

Sectio: *Astrantiella*.

[Calest. in *Webbia* I (1905), 128; H. Wolff l. c., 88.]

2. *Astrantia carniolica* [Wulf. in Jaqu., Fl. Austr., V (1778), App. 31, t. 10; Stur in Sitzungsab. Wien. Ak. Wiss. math.-

naturw. Klasse, XL (1860), 503; Reich. f., Icon. fl. Germ., XXI, 3, t. 4; Posp., Fl. öst. Küst., II, 135; H. Wolff, l. c., 89. — *A. minor* Scop., Fl. carn., ed. II, I 187, t. 7 (1772) non L.]. In graminosis, humidis, in silvis luminosis frondosis humidis montanis subalpinis et alpinis calcareis.

Bosna: In montibus Kamešnica (*Pr. 1900), Prijedor, prope Suha (Pr.). — **Hercegovina:** In regionis alpinae graminosis montis Volujak, Prenj: Osobac, Prislap- et Čvrstica: Plasa Pl. (*V. 1890), in valle riv. Ledenica Potok montis Čabulja Pl. (Prodan).

Fide Malý [apud H. Wolff. l. c. 90] planta montis Prislap cum *A. majore* (v. *illyrica* Borb. — M. in litt.) commutata est, quod propter fidem collectoris Vandas nullo modo addubito, sed exemplaria non vidi.

4. Eryngium.

[L., Spec., pl. 232 (1753) et Gen. ed. V., nr. 287; Endl., Gen., 768; Benth. Hook., Gen., I, 878; Drude in Nat. Pflanzenf., III 8, 139; H. Wolff in Engl. Pflanzenreich IV 228 (1913), 106.] »Kotrljan«.

Sectio: *Halobia.*

[Calest. in Webbia I (1905), 126; H. Wolff, l. c., 121.]

1. *Eryngium maritimum* [L., Spec. pl., 233 (1753); Reich. f., Ic. fl. Germ., XXI, 5, t. 8; Vis., Fl. Dalm., III, 26; Boiss., Fl. Or., II 829; Posp., Fl. öst. Küst., II, 134; H. Wolff, l. c., 121]. In arenosis maritimis. Floret m. Junio—Oct.

Hercegovina: Prope pagum Igalo (*V. 1892), in Sutorina (Pr.).

Sectio: *Alpina.*

[H. Wolff, l. c., 123.]

2. *Eryngium alpinum* [L., Spec. pl., 233 (1753); Jacqu., Ic. pl. rar., I, t. 55; Reich. f., Icon. l. c. 5, t. 6; Koch. Syn. fl. Germ., 281; H. Wolff, l. c., 123]. In alpinis, inter pinetis (*Pini mugho*), in subalpinis 1400—1900 m. Floret m. Julio, Augusto.

Bosna: In montibus Grmeč Fl. loco Gredoviti Vrh (Boller), Osječenica (F.), Klekovača (B. H.), Vitorog c. 1500 m (Sta. Fa.), Kamešnica (Pr.), Uilica (H.), Jedovnik 1400 m et inter *Genistam radiatam* (H.) c. 1600—1760 m; Gola Kosa (H.), Ovčar c. 1600 m (Dvořák), Vlašić (*S. 1848, Fr. Br.) c. 1400—1900 m, Bjelašnica (F., M.), Treskavica imprimis in m. Orlica (F.), Gola Jahorina c. 1730 m (M.), Maglić (B.). — **Hercegovina:** In montibus Lisin (*V. 1890, M.), Volujak (Pr.).

Sectio: *Astrantiifolia*.

[Wolff, l. c. 139.]

3. *Eryngium palmatum* [Panč. et Vis., Pl. Serb. dec. III in Mem. del istit. Veneto, XV (1870) 20, t. III, fig. 3 et Fl. princ. Serb., 323; Velen., Fl. Bulg., 227; Wolff, Eryng. l. c., 139. — *E. tricuspdatum* Panč. in Verh. zool.-bot. Ges. V (1856), 46 non L.]. In silvis frondosis luminosis, inter fruticeta, in pratis silvaticis, lapidosis — 1360 *m*. Floret m. Julio Augusto.

Bosna: In monte Igman supra pag. Blažuj (*Blau, 1877), loco Kotsarske čajire supra pag. Vojkovići (F.), Crni Vrh (Vijenac) prope Grkarica 1360 *m*, Kečje doline (M.), versus Jasen (B.); prope Vrelo Bosne (B.), Kalinovik (Knapp It. bosn. nr. 125 f. Wolff), Ocrkavije, supra Jeleč (B.), in m. Dumoš Pl. (Fo. f. V.), in valle fl. Sutjeska imprimis prope Suha (B.), in m. Palež Pl. prope Goražde (B.), ad pedem montis Romanija Pl. prope Hotičina 1100 *m* (M.), in altiplanitie Glasinac prope Pariževići (F.), circa Rusenovići (F.), prope Blaž supra Višegrad (B). In montibus Vukuša Planina (Bucalović fide M.). — **Hercegovina:** (*Asch. Kan. Cat. 1877, 64). Ubi? n declivibus montis Velež ad Nevesinjsko Polje, in montibus Bjelašica prope Gacko, ca. Vučja Bara (*Mu. 1891) c. 900—1200 *m*. — (Raap Call., Pl. Herc. nr. 270 fide Wolff non vidi; 1400 *m*). — **Novi Pazar:** In valle fl. Lim. adversus Djurovo Grad, Jerina Gradina (*B. 1895).

Sectio: *Campestris*.

[Wolff, l. c., 140.]

4. *Eryngium amethystinum* [L., Spec. pl., 233 (1753); Waldst. Kit., Pl. rar. Hung., III, t. 215; Koch, Syn. fl. Germ., ed. II, 309; Vis., Fl. Dalm., III, 27; Reich. f., Ic. fl. Germ., XXI, 6, t. 10; Boiss., Fl. Or., II, 826; Posp., Fl. öst. Küst., II, 134; H. Wolff, Eryng. l. c., 147]. »Kotrljan tokasti, gladež«. In sterilibus, apricis, aridis, pascuis, lapidosis, imprimis in territorio carstiensi — 1220 *m*. Floret m. Julio—Sept.

Bosna: Vulgatum et frequens imprimis solo calcareo in territorio carstiensi, sicut in Bosna septentrionali, orientali, media, australi, velut: Prope Banja Luka (H.), Krupa (B.), Petrovac (F.), Lipnik (Fo.), Šujica (B.), Prolog — 1130 *m* (B), Livanjsko Polje (Sta.), in monte Dinara (B.), Cincar — 1220 *m* (B.), Glamoč, Glamočko Polje (Sta), Maglaj, Žepče (B.), Jaice (Fo.), Fojnica, Kiseljak (Mu.), Visoko, Zenica (Fo.); Tarčin (Pr.); Sarajevsko Polje, Sarajevo (H., B.), in faucibus Miljacka; in m. Igman, Kečje doline — 1220 *m*; Grdonj, Trebević (M.), Rogatica (F.), Kovanje (B.), Zagorje, Kalinovik, Krbiljina (Blau, V.), Lelija (B.), in valle fl. Sutjeska, Drina (Fo., B.), prope Ustiprača (M.), Prozor (Sta.) et a. l. — **Hercegovina:** Vulgatum. Prope Obali, Ulog (V.), Konjic (B), Špiljani, Dubočani, Pribilje, Borci, Lipeta 1120 *m*, Jablanica (M.), Drežnica, Rakitno, Potoci Han (V.), Bijelo Polje, Rujšite (M.), Neve-

sinje (V.), Nevesinjsko Polje (Mu), in declivibus montis Velež (Raap Call., Pl. Herc., nr. 183!), Mostar (Str.), Buna, Žitomišljici, Čapljina (Fo.), Stolac, Ljubinje (Fo.), Gatačko Polje (Mu.), Bileća (Fo.), Mosko (V.), Trebinje (*P. 1874), Lastva (Matulić f. M.), Grab, Vrbanje (V.), Drijeno (Fo.), in m. Vlastica (V) et multis aliis locis territorii florum mediterraneae (B.).

Occurunt:

f. *typicum* [H. Wolff, l. c. 148], quo pertinent Knapp, Pl. Bosn. nr. 412; Blau Exs. nr. 645; M. in Dörfler, Herb. norm. nr. 4474; Raap Call., Pl. Herc., nr. 183 (f. H. Wolff): Folia inferiora $2\times-3\times$, interdum sub $4\times$ pinnatipartita-aculeata, superne palmato-trisecta pinnis remotis, abbreviatis inaequaliter aculeatis \pm decurrentibus. Phylla involucris plurimum aculeata; paleae mucronatae. Vulgatum.

Formae virides, nusquam coeruleae vel coerulescentes saepius reperiuntur.; reperi adeo in m. Cincar prope Livno c. 2000 m.

f. *compactum* [G. Beck]. Folia inferiora ut in f. *typica* sed superne palmato-5-secta, pinnis aggregatis abbreviatis inaequaliter aculeatis. Phylla involucris copiosius aculeata, paleae plurimum tricuspidatae. Vulgatum.

f. *croaticum* [G. Beck]. Folia $1-2\times$ pinnatipartita-aculeata pinnis late decurrentibus elongatis longius acuminatis, aculeis subaequalibus instructis. **Croatia:** Prope Sluinj (B.) -- Forsan f. *transiens* H. Wolff l. c. = *E. multifidum* β . *transiens* Halácsy infra cit., quae foliorum laciniis brevioribus sublatis, a f. *multifido* distinguitur. Confer sequentem. Forma *siculum* [Lojacono f. Ross in Bull. herb. Boiss., sér 2, I (1901) 1213, fig. 4; Wolff, l. c. 148] petiolis multo longioribus, pinnis angustioribus remotissimis bene differt.

f. *multifidum* [H. Wolff, l. c., 149. — *E. multifidum* Smith in Sibth. Sm., Prodr. fl. Graec., I (1806) 175 et Fl. Graec., t. 259; Hal., Fl. Graec., I, 615. — *E. amethystinum* β . *tenuifolium* Boiss. et Heldr. msc. fide Boiss., Fl. Or., II, 826 (1872)]. — Folia bipinnatisecta, laciniis angustelineari lanceolatis, elongatis, secus rhachidem anguste alata spinulosam decurrentibus ex Halácsy l. c. sed descriptionis notae valde se repugnant. — **Hercegovina:** Cum typo prope Bojište in agro Nevesinjensi ca. 850 m (*Sagorski 1902).

5. *Eryngium campestre* [L., Spec. pl., 233 (1753); Jacqu., Fl. Austr., II, 35, t. 155; Koch., Syn. fl. Germ., ed. II, 309; Reich. f., Ic. fl. Germ., XXI, 6, t. 11; Boiss., Fl. or., II, 824; Beck, Fl. Nied.-Öst., 614; H. Wolff l. c., 150]. »Kotrljan, vetrovalj«. In pascuis, aridis, apricis —1100 m. Floret m. Julio—Autumno.

Bosna: Prope Banja Luka (H.), Budžak (Fo.); Krupa, Zalin, Žabljak, Makljenovac (Fo.). Circa Vranjska, Bihać, Goričevac, Vrtoče, Smoljana, Kopljenica (Fo.); Grkovac (Pr.), Glogovac (Sta. Fa.), Hrblijina (Pr.), Koprivnica Han in m. Šuljaga (*S. 1848), Preodac (Pr.). Prope Fojnica (Pr.), Kiseljak (Mu.), Sutiščica (Fo.), Visoko (Fo.), Tarčin (Pr.). Circa Sarajevo (H., B.), prope Han Semizovac, in valle riv. Koševo (B., Fo.), Miljacka, in m. Grdonj, Trebević (M.), castello coronato (B.), prope Hreša (Fo. f. V.); prope Kali-

novik, Vlaholje, in valle fl. Sutjeska (Pr.), fl. Drina inter Foča et Gorazde (B., Fo.), in valle Drina et prope Višegrad, Drinsko, in monte Paštan Brdo (M.), prope Susiešno, Ranjen Karaula (Fo.). — **Hercegovina**: In jugo Ivan c. 1000m (Mu.), prope Konjic (Fo.), Plužine (Fo.), in altiplanitie Ponikve prope Gacko 1100m (M.), Domanovići (Fo. f. V.), Aladinići, Stolac, Ljubinje, Grbeši, Trebinje (Fo.). — **Novi Pazar**: In jugo Gotovuša, inter Plevlje et Jabuka, in valle fl. Lim inter Prijepolje, Bistrica, Banja (*B. 1895).

Apioideae.

[Drude in Nat. Pflanzenf., III 8, 115 et 145.]

Tribus: *Echinophoreae*.

[Benth. Hook., Gen., I, 865; Drude, l. c. 115 et 146; *Smyrnae* Koch, Umb. I. c. 133 p. p.]

5. *Echinophora*.

[L., Spec. pl., 239, (1753) et Gen., ed. V; Endl., Gen., 789; Benth. Hook., Gen, I, 881; Drude, l. c., 146.] »Ježovka«.

1. *Echinophora spinosa* [L., l. c.; DC., Prodr., IV, 235; Vis., Fl. Dalm. III, 67; Koch, Syn. fl. Germ., ed. II, 351; Reich. f., Ic. fl. Germ., XXI, 96, t. 190; Pospich., Fl. öst. Küst., II, 187]. In arenosis maritimis. Floret m. Julio—Sept.

Hercegovina: In Sutorina (*Studnicka 1890; M.), prope Igalo (V.).

Tribus: *Scandicineae*.

[Koch., Umbell., 130; DC., Prodr., IV, 220; Endl., Gen., 786; Drude l. c. 115 et 147. — trib. *Ammineae* subtrib. *Scandicineae* Benth. Hook., Gen., I, 867.]

6. *Freyera*.

[Reich., Handb. Pflanzensyst., 291 (1837); Endl., Gen., 788. — *Biasolettia* Koch in Flora (1836), 163 et Syn fl. Germ., 318 (1837) ed. II, 350 (hic amplius); Drude, l. c., 150 non Presl, nec Bert.; sect. *Eu-Biasolettia* Drude, l. c. — *Chaerophyllum* sec. Benth. Hook., Gen., I. 898. — *Bunium* sect. *Freyera* Paoletti in Fiori Paol., Fl. anal. Ital., II 157 (1900).] »Cvolina«.

A genere *Chaerophyllo* differt radice bulboso globoso, fructus epidermide scabro, crasso, jugis plus minus prominentibus, vittis minimis subevanidis, in latere commissurali nullis, embryone pseudo monocotyledoneo (f. Drude), stylopodiis circumcirca carinatis.

1. *Freyera cynapioides* [Gussone, Plant, rar. Ion. et Adr., 127 (1826) t. 24 sub *Myrrhida*; Griseb., Spic. fl. Rum., 366 (1843), — *F. Biasolettiana* Reich., Pflanzensyst., 291; Vis., Fl. Dalm., III.

66. — *F. tuberosa* Reich., Handb. Pflanzensyst., 291 sec. Reich. f., Ic. fl. Germ., XXI, 92 t. 173. — *Biasolettia tuberosa* Koch. in Flora (1836), 163 et Syn. fl. Germ., 318 (1837), ed. II, 350. — *B. cynapioides* Karst., Fl. Deutschl., 857 (1882); = Drude, l. c. 150 (1898), fig. 58 I, K. — *Bunium cynapioides* Bert., Fl. It., III, 217. — *Myrrhis Bunium* Tenore, Fl. Nap., III, 322 excl. Syn. p. p. — *Chaerophyllum Biasolettii* G. Beck, Fl. Südbosn., VII in Ann. nat. Hofm., X (1895), 212]. Floret m. Majo—Julio. In pratis silvaticis et subalpinis, inter virgulta in silvis frondosis apertis —1500m solo calcareo. Floret Majo—Julio.

Bosna: In m. Vitorog 1400m (Sta. Fa.), Troglav (B), Starigrad pr. Glamoč (Sta. Fa.), in montibus Staretina (Sta.). Prope Donji Sirovci in m. Igman c. 1200m (M), in m. Treskavica (*B. 1895, F., V.). — **Hercegovina:** Prope Rakitno (Begović f. *V. 1890), in m. Preslica, circa Bijela Voda pr. Klinja (M.); in m. Čvrstica (Prodan), prope Petralj (Bucalović f. M.) et ca. Drinača (Prodan). In m. Velež c. 1500m et in m. Ostvelež (B.); in m. Leotar prope Trebinje 1220m (B.).

Ludit indumento nullo vel parco, piloso [= *Bunium cynapioides* b. *tuberosum* Paoletti in Fiori Paol., Fl. anal. Ital., II 157] radiis fructiferis umbellis 2—8× longioribus, fructibus basi pedice lo laevi vel setuloso cinctis, 5—9mm longis.

Fide Hayek [apud Fritsch, Neue Beitr. V im Mitt. naturw. Ver. Steierm. (1914), SA. 29 et in Beitr. Fl. alb. mont. Grenzgeb. in Denkschr. kais. Ak. Wiss. Wien, math.-nat. Klasse 94 (1917) p. 175] etiam *Biasolettia balcanica* [Velen. in Öst. bot. Zeit. (1891) 399 et Fl. Bulg. suppl. 130 = *Freyera balcanica* Hal. in Öst. bot. Zeit. (1892) 370] a *F. cynapioides* Gris. non differt.

7. Physocaulos.

[Tausch in Flora XVII (1834) I, 342 *Physocaulis*; Koch, Syn. fl. Germ., ed. II, 348 (*Physocaulus*); Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 150. subgen. *Euphysocaulus* Peterm., Fl. Deutschl., 247, fig. 304. — *Biasolettia* Bert., Fl. Ital. III, 192 (1837) non Koch. — *Chaerophyllum* Benth. Hook., Gen., I, 898 sect. *Physocaulis* DC., Coll. diss. V, 59 et Prodr., IV, 225; Endl., Gen., 787. Confer Briquet in Festschrift für Ascherson (1904) 350 et Burnat, Fl. Alp. mar. III, 62.] »Miehornjača«

1. *Physocaulos nodosus* [Tausch l. c.; Vis., Fl. Dalm., III 65; Koch, Syn. fl. Germ., ed. II, 348; Reich. f., Ic. fl. Germ., XXI, 90, t. 174; Posp., Fl. öst. Küst. II, 188. — *Scandix nodosa* L., Spec. pl., 257 (1753); Jacqu., Hort. Vindob., III, t. 25. — *Torilis macrocarpa* Gärtn., De fruct. I, 83, t. 25. — *Chaerophyllum nodosum* Crantz, Umb., 76; = Lam., Enc. meth., I, 685;

DC., Prodr., IV, 225. — *Anthriscus nodosa* Pers., Syn., I, 320 = Spreng., Umb. prodr., 27. — *Biasolettia nodosa* Bert., Fl. Ital., III. 192 (1837)]. Ad sepes, in dumetis, locis apricis, umbrosis et sterilibus regionis florum mediterraneae. Floret m. Majo, Junio.

Hercegovina: Prope Mostar et fontem fl. Buna (Lindberg), circa Ljubuški (F. f. M.), Trebinje, Bileća (P. fide *Grisebach 1874).

8. Chaerephyllum.

[L., Spec. pl., 258 (1753) et Gen., ed. V, nr. 320 p. p. *Chaerophyllum* rectius Hoffm., Char. gen. Umb., I, 31 (1814); Koch, Umb., 130; Benth. Hook., Gen., I, 898; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 150: Sect. *Chaerophyllum* Reich. Fl., Germ., 444 1832); sect. *Euchaerophyllum* Endl., Gen., 787. — Rectius scribendum est *Chaerephyllum*! — *Myrrhis* (Tournef.) Adans., Fam. pl., II 96 (1763); Gärtn., De fruct., I 108 et al. p. p. non Scopoli. Conf. Ascherson in Verh. Botan. Ver. Brandenburg VI (1864) 151 pp. Taf. I. II.]

»Krabljica«

1. *Chaerephyllum bulbosum* [L., Spec. pl., 258 (1753); Jacqu., Fl. Austr. t. 63; Reich. f., Ic. fl. Germ., XXI, 86, t. 176 fig. I—V; Posp., Fl. Öst. Küst., II. 189; Beck, Fl. Nied.-Öst., 629. — *Myrrhis bulbosa* Spreng., Umb., 29 non All. — *Scandix bulbosa* Roth, Tent. fl. Germ., I 132]. Ad sepes, vias, inter frutices, in locis sterilibus lapidosis, saxosis. Floret m. Junio, Julio.

Bosna: Vulgatum (Fo, B.) sicut prope Novi (Fo.). Circa Banja Luka (H.), Doboj (Fo.), Bos. Brod (Ha., Fa.); inter Čelebić et Livno, Diukići prope Glogovac (Sta. Fa.), prope Livno (B.). Prope Krupa, Dubovsko (Fo.) Petrovac, Smoljana, Velečevo (Fo. in litt.) Zenica et al. locis (Fo. in litt.) circa Travnik (*S. 1848, Br.) inter Kakanj et monast. Sutjeska, pr. Bukovlje (S.), Jankovići (Fr. Br.); circa Vareš prope Pajtov Han, Kralupi (Pr.), Vogošća (B.), in agro Sarajevsko Polje (M., Fo. in litt.) in vallibus Sušica, Koševo, Miljacka (M.) circa Sarajevo (H., Fa., B.), Kovačići, Lukavica (F.!) Miljevići (M.), Kalinovik (Fo. f. V.), Goražde (Fo. in litt.) et alibi in Bosna australi. — **Hercegovina:** Prope Grdača, ad lacum Jezero pod Crvniem, ca. 1020m (M.). Ad Klinje prope G cko (*Hawelka f. M.).

Variat:

laevigatum [Vis., Fl. Dalm., III 65 (1850) et Reich. f., Ic. fl. Germ., l. c., 86, t. 210 fig. II pro spec.; G. Beck; *Myrrhis bulbosa* v. *laevigata* Asch. in Asch. Kan., Cat. corm. Serb., 68 (1877). — Confer Aschers. in Bot. Zeit. (1877), 637. — »*Ch. tuberosum*, glaberrimum laeve, geniculis tumidis, foliis tripin-natipartitis, lacinulis lanceolato-linearibus elongatis acuminatis, superiorum linearibus, involucellis glabris, fructibus lineari-subclavatis« (Visiani).

»Affine *Ch^o bulboso*, quod praeter hirsutiem differt caule maculato, foliorum laciniis triplo brevioribus, fructuque minore latiore, basi ovato, apice attenuato (confer autem supra!). Reichenbach fil., qui fragmentum typi ab auctore recepit, addit: Moneo fructus me omnio eosdem in *Ch. bulboso* nunc reperisse. Omnes fructus huius speciei fatui clavati videntur«. Sec. Grisebach apud Pant., Adn. 80 (1874) differt ab affini *Ch. Prescottii* [DC., Prodr., IV, 225] »foliis glabris et involucelli foliolis latioribus«. In umbrosis Dalmatiae circa Vrlika et Mavice, vere (Visiani).

Hercegovina: Dubovac in Bijela Gora (P. Fide *Grisebach 1874).

2. *Chaerephyllum temulum* [L., Spec. pl., 258 (1753); DC., Prodr., IV, 226; Koch., Syn. fl. Germ., ed. II, 348; Jacqu., Fl. Austr., t. 65; Vis., Fl. Dalm., III, 66; Reich. f., Icon l. c. 85, t. 175; Beck, Fl. Nied.-Öst., 629; Posp., Fl. öst. Küst., II, 189. — *Myrrhis temula* Gaertn., de fruct., I, 109; Spreng., Umb. prodr., 29. — *Scandix temula* Roth, Tent. fl. Germ., I, 122]. Ad sepes, in dumetis, nemoribus, silvis apertis, inter virgulta, ad silvarum margines. Floret m. Majo—Julio.

Bosna: In arce Sokolac pr. Bihać (B.) pr. Bugojno, in m. Šuljaga Šujica, in m. Kamešnica, Vaganj prope Livno, prope Glamoč, Preodac (Pr.); prope Glogovac (Sta. Fa.), Bočac (Behrendsen). Prope Travnik (*S. 1848) l. Paklarevo, Bukovica, Putkovići, Tolovići (S.); circa Vareš pr. Pajtov Han, Potoci (Pr.); circa Sarajevo vulgatum (B.) in faucibus Miljacka et Mošćanica (M.); in m. Trebević (F.) prope Brod juxta Foča (B.) in faucibus Prača (M.); pr. Tarčin (Pr.). — **Hercegovina:** Ex *Asch. Kan., Cat., 68 (1877) ubi?

Variat:

angustisectum [G. Beck, Fl. Südbosn. III in Ann. naturh. Hofm., III (1887), 92]. Folia angustisecta, lobus ultimus et duo ei proximi secundi ordinis in basi longe cuneato-angustati; lacinae secundi ordinis inferiores pinnatisectae; ultimae omnes subacutae. — In typo folia minus dissecta lacinae secundi ordinis pinnatilobae nec pinnatisectae, eae lobo ultimo proximae in basi breviter cuneatae vel subtruncatae; ultimae rotundato-obtusae et mucronulatae nec acuminatae observantur. — **Bosna:** In m. Lipovac (Starigrad) ad fl. Miljacka inter dumeta (*B. 1887).

3. *Chaerephyllum coloratum* [L., Mant. I, 57 (1767); Jacqu., Hort. Vind., I, 20, t. 51; DC., Prodr. IV, 225; Vis., Fl. Dalm., III, 65; Reich. f., Icon. l. c. XXI, 86, t. 182. — *Myrrhis colorata* Spreng. in Schult., Syst., VI, 515]. Ad sepes in locis apricis graminosis, lapidosis saxosis, inter frutices. Floret m. Majo—Julio.

Bosna: In m. Prolog (F.), Dinara (Degen), prope Livno (B.), Preodac, Gubin (Pr.); in valle fl. Sutjeska (*B. 1887, F.!), prope Mededa (M.), in valle fl. Lim prope Strmica, Setihovo et alibi, in faucibus fl. Rama (M.).

-- **Hercegovina:** Frope Jablanica (V.), in valle Grabovica (Blau), pr. Sjenčine (Fo.); circa Mostar (*Blau f. Ascherson 1869, Jetter!, Baenitz! aliique): in m. Stolac (Behrendsen), Hum (Ja. f. Hayek), prope Bišina (M.), Podgorani (Ružicka f. V.); pr. Žitomišljici (Mu.). Ljubuški (F. f. M.), in monte Žaba Pl. (Br); circa Trebinje (Fo., Adamović), in m. Glijiva, Leotar (P. f. *Grisebach 1874), circa Radešice (V.), Bileća (Fo.), in Sutorina (R. f. M.).

Ludit: *tenuisectum* [G. Beck]. Folia inferiora graciliter 5× pinnatisecta, laciniis quarti ordinis lanceolato-linearibus, summo 5mm longis. Vulgatum. — *longisectum* [G. Beck] Folia infima distanter 3–4× pinnatisecta, laciniis tertii et quarti ordinis elongatis, anguste lanceolatis 1–2cm longis. Rarius.

4. *Chaerephyllum aromaticum* L., Spec. pl., 259 (1753); DC., Prodr., IV, 227; Jacqu., Fl. Austr., II, t. 150; Koch, Syn. fl. Germ., ed. II, 349; Reich. f., Icon., l. c., XXI, 85, t. 181, t. 176, fig. 11--14; Beck, Fl. Nied.-Öst., 629. — *Myrrhis aromatica* Spreng., Umb. prodr., 28 et in Roem. Schult., Syst., VI, 509]. Ad sepes, inter virgulta, in pratis, ad rivulos, in silvaticis humidis, ad silvarum margines, in silvis apertis, usque ad regionem subalpinam (–1300m). Floret m. Julio–Augusto.

Variat:

α. *typicum* [G. Beck]. Caulis supra glaber, infra cum petiolis et petiolulis pilis rigidis, longis, basi bulbosis plurimum copiose obsitus. Fructus 8–14mm longi. In ditone deesse videtur.

β. *brevipilum* [Murbeck, Beitr. Fl. Südbosn. in Lunds Univ. Årsskr., XXVII (1891), 117. — *Myrrhis aromatica* v. *brevipila* Malý in Verh. zool.-bot. Gen. (1904), 234]. Caules et petioli pilis brevibus mollibus densis villosopubescentes Pili longiores rigidi solum in insertione foliorum, vaginis et sub umbellis adsunt. Fructus 12–15mm longi. Odorem *Dauci Carotae* spirat. Typum in terris nostris compensat.

Bosna: Ad fl. Bosnam prope Doboï (V.!), in m. Lisina pr. Varcar-Vakuf (B.), circa Travnik (Br. O), prope Grahovik = Gravik (Fr., Br. O); prope Fojnica et in valle fl. Željeznica (B.); pr. Zenica, Visoko, Zbilje (Fo.), Vareš: in m. Bogoš, pr. Pajtov Han, Potoci (Pr. O), Hadžići, Turovo (B.), Ilidža (Fo. O), ubique circa Sarajevo (Beck, Pl. Bosn. Herc., nr. 101 f. *Murbeck et alii): Sarajevsko Polje, sicut prope Mrkojevići, Nahorevo, Lukavica, Miljevići, Kovačići, in m. Trebević, in valle fl. Miljacka, riv. Moščanica, pr. Jasikovina, Vučja Luka —1300m (B., Fo., M), Pale (Malý in Dörfel. Herb. norm., nr. 5072), Gorovići pr. Vitez (M.), pr. Bastasi ad fl. Drina (B), in valle Kruševica pr. Drinsko (M.), Foča (B.), Đedovo, in m. Kmur

(Fo. O), in valle Govza pr. Jeleč (B.), Rogatica (F. f. M.), in valle fl. Sutjeska, pr. Tjentište (Pr. O), in m. Vučevo et Maglić (B.); pr. Uvac (B.). — **Hercegovina**: In m. Ivan pl. (Fo. O), ad m. Preslica (V.), pr. Konjic (B.), in valle Ljuta 310 m, Spiljani, Bak 1100 m (M. O), pr. Obalj, Ulog, in silva Dubrava (Fo. O), in m. Velež supra Sopilje 1000—1200 m (*Mu. 1891). Prope Vrba (M. O). Autores O notati varietatem silentio tegunt.

5 *Chaerephyllum aureum* [L., Spec. pl., ed. II, 370 (1762); DC., Prodr., IV, 226; Jacqu., Fl. Austr., I, t. 64; Koch, Syn Fl. Germ., ed. II, 348; Reich. f., Ic., l. c., 85. t. 177; Beck, Fl. Nied.-Öst., 630; Posp., Fl. öst. Küst., II, 190. — *Myrrhis aurea* All., Fl. Pedem., III (1785), nr. 1373 = Spreng., Umb. Prodr (1813), 29 et in Roem. Schult., Syst., VI (1820) 511j. In pratis etiam humidis, inter frutices ad silvarum margines usque ad regionem subalpinam (—1400 m). Floret m. Junio—Augusto.

Bosna: In colle Sokolačka Glavica prope Sokolac (Boller); in m. Grmeč Pl. (Fo. f. V.); Osječenica (F.), prope Han Koprivnica et in m. Šuljaga (Pr.). Podosoje pr. Glogovac (Sta. Fa.); in m. Troglav (B.). Uilica (Ja. Wa.), Vel. Šator (I.). Circa Travnik (*S. 1848, Fr. Br.) sicut prope Paklarevo (S.), in m. Vlašić, Crni Vrh (Fr. Br.), in m. Vilenica (B.), prope Fojnica (S.) et Mujaković in m. Vranica Pl. (B); in valle Trstivnica prope monast. Sutjeska (S.), inter Borovica et Vareš, ad fl. Stavnja pr. Vareš (S). In m. Igman (M.), Hrastova Glava (M.), in m. Treskavica (F., M.). Circa Sarajevo (Mu.) sic prope Lukavica (F.), Mrkojevići, Han Biosko (B.), Dr-ljevac, in m. Trebević Bukovik, pr. Pale, Radonići, Dvorište, in jugo Vitez, prope Pavlovac (Kasidol), in m. Vučja Pl. pr. Nemila (M.); pr. Rusenovići in distr. Rogatica (F. f. M.); in m. Maglić (B.) in m. Stolac pr. Višegrad (Čurčić f. M.). — **Hercegovina**: in m. Preslica (*V. 1892) Zvekoša, Vrabac, Bokševica (M.), Prenj: Bjelašnica (B.), Porim (V.); in m. Velež (B.), in declivibus m. Velež versus Nevesinje —1000 m (Mu.) prope Bileća (Hawelka!).

Ludit:

typicum [G. Beck] Caulis et folia plus minus breviter pilosa, in articulis et basi hispidus. Involucelli phylla ciliata.

Vulgatum.

glabriusculum [Koch, Syn. fl. Germ., 317 (1837). = *Ch. maculatum* Willd., Enum. hort. Berol. Suppl. (1813), 15; Hornem. Suppl. hort. Hafn. (1819) 34; Link, En. h. Berol. I (1821) 281 (nomen solum); DC. f. Koch, l. c. = *Ch. aureum* v. *maculatum* Boiss., Fl. Or., II, (1872) 906; Beck, Fl. Südbosn. VII in Ann. nat. Hofmus., X (1875), 212 = *Myrrhis aurea* var. K. Malý in Magy. bot. lap. (1908), 222; DC., Prodr., IV (1830), 226]. Caulis glaber aut basi tantum hispidus, pilis longis; folia glabra in margine et subtus in nervis pilis brevibus vel longioribus pilosa. Involucelli folia ciliata. Inter typum sat frequens. **Bosna**: In m. Cincar prope Livno, 1400 m (B.), in m. Igman (*B. 1895, M.)

circa Sarajevo (B.) sicut prope Lukavica 560m, in m. Bukovik, in valle fl. Miljacka, in m. Trebević (M.). **Hercegovina:** In m. Bjelašnica montis Prenj Pl. (*B.). — *glabrum* [Koch, l. c., 317. = *Ch. monogonum* Kit. in Link, Enum. hort. Berol., I (1821), 281 et in Roem. Schult., Syst. VI, 522 = *Ch. aureum* f. *monogonum* G. Beck Fl. Südbosn., VII in Ann. naturh. Hofm., X (1895), 212]. Caules foliaque omnino glabra; folia in margine tantum appresse breviter setulosa. Involucelli foliola parcius ciliata. Rare. **Bosna:** Prope Fojnica (B.), in m. Maglić (*B. 1895). **Hercegovina:** In m. Velež (*B.). Plantae notis inter formas praecedentes intermediis saepius occurrunt.

6. *Chaerophyllum hirsutum* [L., Spec. pl., 258 (1753) excl. syn. p. p., rectius DC., Prodr., IV, 227; Briquet in Schinz-Keller, Fl. Schweiz, 350 et in Ann. Conserv. bot. Gênevê IV, 193; Burnat, Fl. Alp. mar., IV, 64. (hic amplius). — *Myrrhis hirsuta* All., Fl. Pedem., nr. 1372; Spreng., Syst. veg., I, 902. — *Chaerophyllum palustre* Lam., Enc. meth., I, 683. — Confer etiam Beauverd in Bull. de l'herb. Boiss., sér. 2, II 709 (1902)].

Variat:

α. *cicutaria* [Gaud., Fl. Helv., II, 363 (1828); Briquet, l. c. et in Ann. cit. 195. — *Ch. hirsutum* L., Spec. pl. 258 (1753) excl. syn. p. p., rectius Koch, Syn. fl. Germ., 318 (1837); Reich. f., l. c., 87, t. 180; Beck, Fl. Nied.-Öst., 630; Posp., Fl. Öst. Küst., II, 190. — *Ch. cicutaria* Vill., Prosp., 26 (1779) et Hist. pl. Dauph., II, 644 (1787); Rouy Camus, Fl. France, VII 307. — *Scandix hirsuta* Scop., Fl. Carn., ed II, I, 241.] In locis humidis herbosis, pratis humidis, ad fontes, rivulos, in faucibus silvorum in regione montana usque ad subalpinam. Floret m. Junio—Augusto.

Bosna: In silva Vranjska šuma pr. Krupa (Fa.); in m. Osječenica et Klekovača (F., B.), prope Petrovac, Smoljana, Janjila, Agino Selo, Šehovci (Fo.), inter m. Kriva Jelika et Ljuša pr. Donji Vakuf. in m. Vitorog (Sta. Fa.). Circa Travnik (Br.) in m. Vilenica prope fontem riv. Firotski potok (Fr., Br.), prope Fojnica (*S. 1848). Circa Vareš versus Strica, ad riv. Rajčevac, pr. Pržići (Pr.). In m. Hranisava, Bjelašnica, Treskavica (B.), circa Sarajevo in m. Trebević (M.), prope Vučja Luka (Fo.), in m. Ozren (F.!) Romanija Pl. (B.), Gola Jahorina (F.!) —1760m (M.), inter Previla et Pođ Vitez (Pr.) in Zelengora (Pr.). In faucibus Suha sub monte Maglić (M.). — **Hercegovina:** (*Asch. Kan., Cat., 68) Ubi? In m. Preslica (V.).

Variat:

f. *typicum* [Beck, Fl. Nied.-Öst. 630].

Vulgatum.

f. *glabratum* [DC., Prodr., IV, 227 (1830) p. p. — *Ch. palustre* α-*glabrum* Lam. Enc. meth., I, 683 (1783) p. p. — *Ch. umbrosum* Jord., Obs.,

VII, 30 (1849); Lamotte, Prodr. centr. France, 349. — *Ch. nudum* Kit. Descr. II ined. fide Neilr. Veg. Croat. 159 (1868). — *Ch. hirsutum* v. *umbrosum* Beck, l. c. (1892); Rouy Cam., Fl. Franc., VII, 308 = v. *glabrum* Briqu. in Ann. conserv. bot. Genève, IV 195. Conf. Burnat, Fl. Alp. mar. IV 65 — v. *glaberrimum* Čelak., Prodr. fl. Böhm, 589. — *Rhynchostylis hirsuta* Tausch β . *rosea* Tausch Exsicc.! — *Myrrhis hirsuta* v. *glabra* K. Malý in Verh. zool.-bot. Ges. (1905) 233.] —

Anthriscus rivularis Dolliner ex Vukot., Nove biline in Rada jugosl. ak. znan. i umjetn. 39 (1877) 200, S.-A. 17 fide Borbás in Öst. bot. Zeit. (1880) 330 et (1882) 208 et Knapp ibidem (1877) 350 sed diagnosis non omni ratione convenit]. *Glabrescens* vel *subglabrum*, tantum vaginalium margo, folia involucel'orum ac petala ciliata. Tertium par pinnarum connatum et secundum rhachim cuneato-decurrens (in typo subcordato-lobatum). In locis subalpinis frequentius. **Bosna**: In m. Vranica Pl.: l. Prokoško jezero, Prokoško staje — 1700 m (B.); circa Travnik et ad fl. Stavnja pr. Vareš (*S. 1848), in montibus Hranisava, Igman M.), Treskavica (M., B.), Trebević (M.), Gola Jahorina: prope fontem Trjeska (F!).

Saepeissime petalis roseis vel lilacinis occurrit = *roseum* [Koch, Syn. fl. Germ., 318 (1837); Borbas Florist. Közlem. in Math. Termész. Közlem. XV (1877—78) 304].

β . *Villarsii* [Koch, Syn. fl. Germ. 317 (1837) et aut. pr. spec.; Caruel in Parl., Fl. Ital., VIII, 371 pro var.; Briqu. in Ann. conserv. bot. Genève, IV 195; Beck, Fl. Nied.-Öst., 631; Burn., Fl. Alp. mar., IV, 66 (hic amplius). — *Ch. palustre* β . *hirtum* Lam., Enc. meth., I 683 (1783). — *Ch. hirsutum* Vill., Hist. pl. Dauph., II, 644 (1787) sed L. ex minima parte. — *Ch. cicutaria* Reich., Fl. Germ., 445 non Vill.; Reich. f. Ic. fl. Germ., XXI, 87, t. 179. — *Ch. cicutaria* subsp. *Villarsii* Rouy et Cam., Fl. France, VII, 308. — *Myrrhis Villarsii* Bert., Fl. It., VII, 626.

Bosna: In monte Ljuša et in pratis subalpinis jugi Presedlo (*Sta.-Fa. 1905). Probandum sit. Non vidi.

9. *Anthriscus*.

[Pers., Syn. pl., I (1805) 3:0 p. p. rectius Spreng., Comm. Gotting., II 6 (1813); Hoffm., Umb., I, 38; Endl., Gen., 786; Koch, Umb., 131; Benth. Hook., Gen. I, 899; Drude in Nat. Pflanzenf., III 8, 152. Nomen sec. congressum bot. Brux. anni 1912 conservandum — non Bernh., Syst. Verz. Erf. (1800), 113, cuius genus *Torilidem* Adans. adaequat. — *Myrrhodes* Fabric., Enum. meth. Heimst. (1759) non vidi. — *Chaerofolium* (*Cerefolium*) Haller, Helv., I, 327 (1768) quod genus = *Anthriscus* Spreng. + *Chaerophyllum* L. — *Cerefolium* Link in Ust., Delect opusc., II (1793), 114 rectius Besser, Prim. fl. Galic. I, 139 et 218 (1809); Beck, Fl. Nied.-Öst., 631, nomen planum antiquissimum! — *Torilis* Bernh., Syst. Verz. Erf. (1800), 167 non Adans.] »Krasuljica«.

Sectio: *Cacosciadium*.

[Reich, Fl. Germ. 444 (1832) pro sect. *Chaerophylli*; Neilr. Fl. Nied.-Öst., 643 (1859). — *Chaerophyllum* sect. *Pseudocerefolium* Hayek, Fl. Steierm., I, 1207 (1910).]

1. *Anthriscus silvestris* [Hoffm., Gen. Umb., 40, 46, t. I fig. 19 et p. 210, t. I, B, fig. 17 (1814); Vis. Fl. Dalm., III, 64; DC., Prodr. IV, 223; Koch. Syn. fl. Germ., ed. II, 346; Reich. f., Icon. l. c., 88, t. 183; Posp., Fl. öst. Küst., II, 184. — *Chaerophyllum silvestre* L., Spec. pl., 258 (1753); Reich., Fl. Germ., 414; Jacqu., Fl. Austr., II, t. 149. — *Cerefolium silvestre* Bess., Prim. fl. Gal., I, 218; Beck, Fl. Nied.-Öst., 631. — *Chaerofolium silvestre* Schinz Thellung in Vierteljahrschr. nat. Ges. Zürich, LIII (1908), Heft IV (1909) 554]. In pratis. locis humidis herbosis, ad silvarum margines usque ad regionem subalpinam. Floret m. Majo—Augusto.

Variat:

α . *genuinus* [Gren. Godr., Fl. Fr., I, 742 (1848); v. *pratensis* Neilr., Fl. Nied.-Öst., 643 (1859); v. *leiocarpa* Neilr., Aufz. Ung. 221 (1866). Synonyma supra citata, porro: *A. procerus* Bess., Enum. pl. Volh., 13 (1822) = *A. elatior* Bess., ibidem, 55. — *A. silvestris* f. *A. elatior* Rouy Cam., Fl. Franc., VII, 303; v. *elatior* Burn., Fl. Alp. mar., IV, 73 (1906). — *Cerefolium silvestre* α . *typicum* G. Beck, Fl. Nied.-Öst., 631]. Plurimum in planitie ac locis regionis collinae et montanae.

Bosna: Vulgatus ac frequens (*S. 1848, B., Fo.) exempli gratia prope Zvornik (Ja), Krupa, Bihać (B.), Bugojno, Kupres (Pr.), Travnik, Fojnica (S.), Vareš (Pr.), Sarajevo (B.), Sarajevsko Polje, Ophode, Trebević, Podžeplje (M.), Trnovo, Kalinovik, Zelengora, in valle fl. Sutjeska (Pr.), in m. Maglić (Rohlena) et a. l. — **Hercegovina:** Rarius (Fo., B.), in m. Crvanj (Adam.), pr. Bileća (Hawelka!).

β . *nemosus* [M. B., Fl. Taur. Cauc., III, 237 (1819) pro spec. sub *Chaerophyllo*; v. *trichocarpa* Neilr., Aufz. Ung., 221 (1866); *Chaerophyllum nemorosum* Hoffm., Umb., 45 et 210, t. 1 B, fig. 19. — *Cerefolium silvestre* γ . *nemosum* G. Beck, Fl. Südbosn., VII in Ann. nat. Hofm., X (1895) 211. — *Chaerophyllum silvestre* v. *nemosum* Asch. in Asch. Kan., Cat. corm., 68 (1877). — *Anthriscus nemorosa* Spreng., Umb. prodr., 27; DC., Prodr., IV, 223; Reich. f., Ic., l. c., 89, t. 185]. Fide DC., Prodr., l. c. ab *A. silvestri* differt fructu magis ovato et brevior, semper plus minus setuloso-echinato et basi serie pilorum cincto.

Bosna: Circa Travnik (*Freyn Brandis 1888), in declivibus septentrionalibus montis Maglić (Rohlena). — **Hercegovina:** In pratis montis Čabulja c. 1240 m (*M. 1908).

γ. *alpestris* Wimm. Grab., Fl. Schles., 144 (1832); Reich. f., Icon., l. c., 88, t. 184; v. *nitida* Briqu. in Ann. conserv. bot. Genève, IV, 196 et ap. Schinz Keller, Fl. Schweiz, 351; *Chaerophyllum nitidum* Wahl., Fl. Carp., 85 (1814). = *Anthriscus humilis* Bess., Enum. Volh., 13 (1822). — *A. alpestris* Wimm. Grab., Fl. Siles., I, 289 (1827). — *A. cicutaria* Duby, Bot. Gall., 239; DC., Prodr., IV, 223. — *A. abortivus* Jord., Observ., fasc. VII 28 (1849). — *A. nitidus* Garcke, Fl. Deutschl., ed. VII, 180. — *A. laevigata* Gris., Spic. Rum., I, 367 ex Gris. in Pant., Adnot. in Verh. Ver. Naturk. Pressburg (1874) 80 = *Chaerophyllum silvestre* v. *laevigatum* Asch. in Asch. Kan., Cat. corm., 67 (1877) quae a var. *alpestri* stylis stylopodio duplo (nec multo) longioribus et fructu deorsum magis dilata diversam esse dicitur. — *Chaerophyllum silvestre* v. *nitidum* Asch. in Asch. Kan., l. c., 68. — *Cerefolium nitidum* Čelak., Prodr. Fl. Böhm., 586 (1874) = *C. silvestre* β. *nitidum* Beck, Fl. Nied.-Öst., 631. — Confer: Aschers. in Verh. bot. Ver. Brandenburg, VI (1864), 151—190, t. I—II; Neilr., Nachtr. Fl. Nied.-Öst., 73; Burnat, Fl. Alp. mar., IV, 74 sequ.]. In locis humidis herbosis pratisque regionis subalpinae et *Pini mugho* — 1600 m. Floret m. Junio—Augusto.

Bosna: In m. Osječenica, Klekovača (F., B.), Šiša pr. Ključ (B.), in m. Troglav (B.); Vlašić (*S. 1848), pr. Bukovica (S. sub *A. laevigato* Gris.), in m. Bjelašnica (B.), Treskavica (Pr., B.), in valle Govza pr. Jeleč (B.), in m. Klek (F.), ad Sela prope Ulog in Zagorje (Adam.). — **Hercegovina:** In m. Prenj Pl. (*B. 1887), Crvanj (Adam.), Velež c. 1000 m (Bornmüller!), in m. Gljiva (P. f. Grisebach sub *A. laevigato* Gris.).

Var. *alpinus* [Mert. Koch, Deutschl. Fl., II, 453 (1826) = v. *tenuifolia* DC., Prodr., IV, 223 (1830); Koch, Syn. fl. Germ., 346. — *Chaerophyllum alpinum* Vill., Prosp. (1779), 26 et Hist. pl. Dauph. II, 642 (1787)]. Foliis duplo pinnatisectis, segmentis dissectis cum laciniis remotis linearibus, ab autore errore indicatus est.

2. *Anthriscus fumarioides* [Spreng., Umb. prodr., 27 (1813) et in Schult., Syst. veg., VI (1820), 525; Vis., Fl. Dalm., III, 64; Reich. f., Ic., l. c., 89, t. 186; Posp., Fl. ö. Küst., II, 185 — *Scandix fumarioides* Waldst. Kit., Pl. rar. Hung., III (1812), 249, t. 224. — *Chaerophyllum nemorosum* Reich., Fl. Germ., 444

(1832) non MB. — *Anthr. sicula* Vis., Fl. Dalm., III (1852) 64, t. 27 non DC. — *Cerefolium fumarioides* Beck in Schubert, Park v. Abbazia, 27 (1894). — *Chaerophyllum fumarioides* Asch. Kanitz, Cat. Corm. Serb., 68 (1877). — *Chaerophyllum fumarioides* Asch. in Asch. Kan., Cat. corm. Serb., 68 (1877). — ?*Anth. divaricatum* et *tuberculosum* Poir. in Lam., Enc. meth., IV, 34 et 342. — Confer Watzel: Über *A. fumarioides* in Öst. bot. Zeit., LXII (1912) 201]. Perennis vel biennis. Caulis foliaque infra copiosius supra parce subvelutino-pubescentia, subglabra vel glabra. Folia duplo-tripartita et 5× pinnatosecta, laciniis ultimis plurimum rhomboideis pinnatisectis, petiolulis I et II ordinis divaricatis. Umbellae pedicellatae nunc in plantis robustis dichasiales nunc in humilioribus scorpioideae. Radii 5—12. Fructus oblongo-lineares plus minus saepe densissime verrucoso-setacei, sed etiam parce verrucosi vel laevissimi, 6—7 rarius 8—9 mm longi. In rupestribus umbrosis muscosis, saxosis et glareosis ac in lapidosis fagetis montanis. Floret m. Majo—Julio.

Variat:

α. typicus [*A. fumarioides* Aut. — *Cerefolium fumarioides α. typicum* G. Beck, Fl. Südbosn., VII in Ann. nat. Hofmus., X (1895) 210]. Fructus plus minus saepe densissime tuberculato-setosi-echinulati. Indumentum caulis et foliorum cum vaginis nunc puberulum subvelutinum (= *puberulum* G. Beck) nunc tantummodo in basi caulis et vaginis parcum [= f. *calvescens* K. Malý in Glasn. zem. muz. XXII (1910) 685] vel exceptis margine vaginarum et foliolis involucelli nullum [= *glaber* (Evers) Ginzberger et K. Malý in Glasn. zem. muz., l. c., 685].

Ludit porro laciniis foliorum angustis tenuibus et numerosissimis = *Hladnikianus* Reich. fil., Ic., l. c., 89 = *Chaerophyllum Hladnikianum* Reich, Exs. Fl. Germ., nr. 1703] vel latioribus subcrenatis, inter se tegentibus [= *latilobus* Vis., Fl. Dalm., III (1852), 64 = *A. sicula* Vis., l. c., t. 27 non DC. = *Chaerophyllum fum.* v. *latiloba* Asch. in Asch. Kan., Cat. corm. Serb., 68 (1877)]. — Postremo ludit fructibus densissime tuberculato-setoso-echinulatis vel tuberculis setosis paucis vel verrucis paucis modo tectis, qua ratione ad β transit. Sic vidi e **Bosna** in m. Vlašić (Brandis!, B.), in m. Maglić (Seunik!, B.).

Var. *typicus* cum formis *calvescens* et *glaber* repertus est in monte Kamešnica, Prolog (Pr.), in jugo Strmac versus Grkovci (Ja., Wa.), prope Gubin, in m. Šator (Pr.). Inter Podobzir et Rakita (Kindt), in valle Vaganac, in faucibus fl. Vrbas, prope Jajce, Bočac (Behrendsen). Circa Travnik

(*S. 1848): in m. Vlašić —1750m (S., Br., B.), circa Kajabaša (Br. sub *A. siculo* Vis.) et Jankovići (Br.) hic etiam f. *puberulus*, in valle Vranji dol (Fr., Br.); supra Vareš (Pr.); loc. Vlahinja in monte Bjelašnica (F.) ac —2067m (M.), in m. Treskavica (Blau), Ugljevič in Zelengora (R. f. M.), in in m. Maglić (B.); in valle fl. Drina ab Ustiprača—Međeda (M.), in faucibus Prača prope Banja Stijena (M. in Dörfler, Herbar. norm., nr. 5267), Razdolina prope Dobrun (M.). — **Hercegovina:** In m. Prenj: Pod Kantarom (M.), Glogovo (B.), pr. Rujište (A. Pichler!); in m. Plasa (V), Štitar Pl. pr. Rakitno (Begović fide V.), in m. Čabulja Pl.: Vel. Vlajna (Ha.) hic etiam f. *pubescens*, Ledenica potok (Prodan) et a. l. (M.).

β. *bosniacus* [(Beck) K. Malý in Glasn. zem. muz. XXII (1910) 685. — *Cerefolium fumarioides* Beck v. *bosniacum* G. Beck, Fl. Südbosn., VII in Ann. naturh. Hofm., X (1895) 211. — *Chaerophyllum fumarioides* v. *bosniacum* K. Malý in Magy. bot. lap. (1908) 222]. »Fructus glaberrimi nitidi, laevissimi vel hincinde tuberculis perpaucis epilosis praediti« (Beck).

Bosna: In m. Vlašić loco Kajabaša (Br.! ac f. M., B.) typice ac ad α transiens! et prope Jankovići juxta Travnik (M.), in m. Bjelašnica (M.) et l. Vlahinja (F. in f. *glabro*), in m. Maglić (Seunik fide *B. 1895). — **Hercegovina:** Ljubina Planina: Vrtača (M.). In monte Kantar montis Prenj Pl. (*B. 1895). — Forma *latilobus* non reperisse videtur.

Sectio: *Cerefolium*.

[Reich., Consp., 141 (1828) = Neilr., Fl. Nied.-Öst., 642 (1859)]

3. *Anthriscus cerefolium* [Hoffm., Gen. Umb., ed. II, I, 41, 47 (1816), t. IA, f. 21; DC., Prodr., IV, 223; Vis., Fl. Dalm., III, 64; Reich. f., Icon., l. c., 88, t. 187, fig. I—III; Posp., Fl. öst. Küst., II, 186. — *Scandix cerefolium* L., Spec. pl., 257 (1753); Jacqu., Fl. Austr., IV, t. 390. — *Chaerophyllum cerefolium* Crantz, Stirp. Austr., III 70. — *Ch. sativum* Lam., Fl. fr., III, 438 (1778) et Enc. meth., I, 684; Spreng., Umb. prodr., 30. — *Cerefolium sativum* Bess., Prim. fl. Gal., I, 219 (1809); Beck, Fl. Nied.-Öst., 632. — *Chaerophyllum cerefolium* Schinz Thell. in Vierteljahrschr. nat. Ges. Zürich 53 (1908) Heft IV (1909) 554]. Umbellis sorpioideis vix (exceptis infimis dichasialibus) pedicellatis 3—6 radiis pedicellis fructiferis divaricatis optime eminens. »Krosuljica, kervelj«.

Variat:

α. *sativus* [Endl., Fl. Pos. 336 (1830); v. *leiocarpa* Neilr., Aufz. Ung., 221. Synonyma supra citata. — *Cerefolium sativum* α *typicum* G. Beck, Fl. Nied.-Öst., 632. = *leiospermum* Čelak.,

Prodr. fl. Böhm., 586]. Rare in hortis colitur. Saepe ex hortis effugit, cuius modi sunt stationes prope Kupres, Bugojno, Tarčin, Foča (Pr.) in Bosna. Floret m. Majo—Julio.

β. *trichosperma* [Pers., Syn., pl., II 320 (1807)? = Röm. Schult., Syst., VI, 525 (1820); Vis., Fl. Dalm., t. 26 pro spec., Endl., Fl. Pos., 336 pro var. et Koch in DC., Prodr., IV, 224 (1830); Reich. f., l. c., 88, t. 187 Fig. IV. — v. *trichocarpa* Neilr., Aufz. Ung., 221 — *Chaerophyllum trichospermum* Schult., Öst. Fl. ed. II, I 504 (1814) non Lam. — *Cerefolium sativum* v. *trichospermum* Čelak., Prodr. fl. Böhm., 586 (1874). — *Chaerophyllum cerefolium* v. *trichospermum* Asch. Kan., Cat. corm. Serb., 68 (1877)]. Ad sepes inter frutices, in locis lapidosis, in cultis, graminosis. Floret m. Aprili—Julio.

Bosna: Prope Ključ (B.); circa Travnik (*S. 1848) ad pedem montis Vlašić, prope Guća Gora, Bukovica (S., Br.); Kukavica prope Janjići (S.), prope arcem Srebrnik (S.); circa Sarajevo (H., Beck Pl. Bosn. Herc. nr. 113), in valle fl. Miljacka (B.), Lapišnica et Mokranjska Miljacka (M.), prope Rogatica (F.). — **Hercegovina:** Prope Mostar (Mu), Trebinje, Bileća (P. fide *Grisebach 1874).

f. *psilactis* [G. Beck, Fl. Bosn. VII in Ann. nat. Hofmus. X (1895) 210 (errore typographico sub *Cerefolio anthriscus* inserta)]. Rarii et stipites umbellarum glaberrimi. — **Bosna:** In valle fl. Bistrica prope Sarajevo (*B. 1895, etiam p. p. in Beck, Fl. Bosn. Herc. nr. 113).

4. *Anthriscus vulgaris* [Bernh., Syst. Verz. Erf. (1800) 168 = Pers., Syn. pl., I, 320 (1805); DC., Prodr., IV, 224; Reich. f., l. c., 88, t. 188, fig. I—II; Posp., Fl. öst. Küst., II, 187. — *Scandix Anthriscus* L., Spec. pl., 257 (1753); Jacqu., Fl. Austr., II, t. 154. — *Caucalis scandix* Scop., Fl. Carn., ed. II, I, 191 (1772). — *C. scandicina* Roth, Tent. fl. Germ., I, 121. (1788). — *Myrrhis chaerophyllaea* Lam., Fl. fr., III, 442. — *Anth. Caulis* M. B., Fl. Taur. Cauc., I, 239. — *Anth. scandix* Aschers. in Marsson, Fl. Neu Vorpomm. 209 (1869) = Beck, Fl. Hernst., kl. Ausg., S.-A. 211 non M. Bieb. — *Torilis anthriscus* Gärtner, De fruct., I, 83. — *Cerefolium anthriscus* Beck, Fl. Nied.-Öst., 632 (1892). — *Anthriscus anthriscus* Karst., Fl. Deutschl., 857 (1882). — *Chaerophyllum anthriscus* Crantz, Umb. (1767); Lam., Enc. meth., I, 685 (1783)]. Umbellis inferioribus dichasialibus, superioribus scorpioideis, omnibus stipitatis, fructibus fere ovatis laevibus vel pilis hamatis echinulatis praeditis bene praestat. Ad sepes, inter frutices, in incultis. Floret m. Majo, Junio.

Variat:

α. *gymnocarpus* [Moris, Fl. Sard. II, 235 — *Cerefolium anthriscus* v. *gymnocarpum* Beck, Fl. Südbosn., VII in Annalen naturh. Hofm. X (1895), 211. — *Chaerophyllum anthriscus* v. *gymnocarpum* Asch. in Asch. Graebn. Fl. nordostd. Flachl., 535 (1899)]. Fructibus laevibus. In ditone nostra adhuc nondum repertus.

β. *typicus* [G. Beck. — *Cerefolium anthriscus* v. *typicum* Beck, l. c. 211]. Fructibus muricatis, setulis hamulatis.

Bosna: In arce oppidi Krupa (B.). In arce Sokolac prope Bihać (B.); prope Kluč (B.), Kupres, Šujica, Podgradina, Tarčin, Vlaholje (Pr.); in agro Sarajevsko Polje (B.). — **Hercegovina:** Prope Bileća, Trebinje, Orahovac (P. fide *Grisebach 1874).

10. Scandix.

[L., Spec. pl., 256 (1753) et Gen., ed. V, nr. 319 p. p., rectius Gärtn., De fruct., II, 33, t. 85; Koch, Umb., 132; DC., Prodr., IV, 220; Endl., Gen., 786; Benth. Hook., Gen., I, 899; Drude in Engl. Prantl, Nat. Pflanzenfam., III, 8, 152.] »Igljenjača«.

Sectio: *Pecten.*

[Duby, Bot. Gall., I, 240 (1828); DC., Prodr., IV, 221.]

1. *Scandix pecten Veneris* [L., Spec. pl., 257 (1753) (*pecten* ♀); DC., Prodr., IV, 221; Vis., Fl. Dalm., III, 62 (*Scandix pecten*); Jacqu., Fl. Austr., III, t. 263; Reich. f., Ic. I. c., 90, t. 188; Posp., Fl. öst. Küst., II, 183; Beck, Fl. Nied.-Öst., 633. — *Sc. pecten* Hoffm., Umb., I, 24, t. I, fig. 22. — *Chaerophyllum p. V.* Crantz, Stirp. austr. 189. — *Myrrhis p. V.* Allioni, Fl. Pedem., II, 29 nr. 1376]. »Češljika, podlanica, strilica«. In arvis incultis, lapidosis, juxta vias, in agris, satis, vinetis — 1000m. Floret m. Majo—Sept.

Bosna: Prope Petrovac (B.), Ljuša — 1000m (Sta.), Grkovac, Predodac (Pr.), Grahovo, in jugo Prokos, Halapić prope Glamoč (Ha. Ja.), inter Dubrava et Glamoč, in agro Glamočko Polje (Sta. Fa.); prope Podobzir — Babići (Kindt), circa Travnik (Fr. Br.), Tarčin (Pr.); in agro Sarajevsko Polje (M.) circa Sarajevo (F., B. M.), in monte arce coronato (Mu., M.), prope Ophode, Švrakino Selo, in m. Boriie, Grdonj (M.), Lipovac (v. Stari-grad) (F. f. M.), in valle fl. Miljacka (F., B.); prope Rusenovići distr. Rogatica (F. f. M.). — **Hercegovina:** Prope Potoci Han (Ružička f. V.) et in agro Bijelo Polje (Raap Callier Pl. Herc. nr. 80!), circa Mostar (Str., Bornmüller!), Nevesinje (Adamović f. Hayek), Žitomišljici (Mu.), Ljubuški (F. f. M.), Sovići, Posušje (F.); circa Trebinje (P. f. *Grisebach 1874), Bileća

(P. f. Grisebach, Hawelka!). — **Novi Pazar**: Prope Prijepolje (P. Zahlbruckner f. Hayek 1906)?

Observatur *genuina* Aznav. in Bull. soc. bot. France 46 (1899) 142 non vidi = *typica* K. Malý in Glasn. zem. muz. 31 (1919) 84. Fructus ludunt 5—7 cm longi.

2. *Scandix macrorrhyncha* [C. A. Meyer in Ind. sem. hort. Petrop. IX (1843) 86; Boiss., Fl. Or., II, 915; Hal., Consp. fl. Graec., I, 662 pr. spec.; confer Rohlena 5. Beitr. Fl. Mont. in Sitzungsber. böhm. Ges. Wiss. (1911) SA. 48—49; K. Malý in Glasn. zem. muz. 31 (1919), 84; Vierhapper in Verh. zool.-bot. Ges. Wien L XIX (1919) 239. — *Sc. pecten* subspec. *S. macrorrhynchus* Rouy Camus, Fl. Franc. VII 299 (1901); et Paol. in Fiori Paol., Fl. anal. d' It., II (1900) 198 pro forma. — var. *brevirostris* Caruel in Parl., Fl. Ital. VIII, 376 non Boiss. — *Sc. hispanica* Boiss. in Ann. sc. nat. sér. 3, II, 57 (1844); Gren. Godr, Fl. Franc., I, 740]. Differt a *Sc. pecten veneris* umbellae radiis brevioribus, involucelli foliis lineari-oblongis, integris vel bifidis, stylis stylopodio aequantibus vel vix longioribus, rostris fructuum 3—3.5 cm longorum mericarpiis 3 × (non 4—5 ×) longioribus in parte superiore minus compresso.

Bosna: In valle fl. Miljacka sub arce oppidi Sarajevo (V. Čurčić, M. 1919) et in m. Lipovac (Starigrad) (V. C. f. M.).

Sectio: *Wylia*.

[Hoffm., Umb. I 3 t. 2 (1814) pro gen.; Duby, Bot. Gall., I, 240 (1828); DC. Prodr., IV, 221 et aut. pro sect.]

3. *Scandix australis* [L., Spec. pl., 257 (1753); DC., Prodr., IV, 221; Sibth, Fl. Graec., III, 78, t. 285; Vis., Fl. Dalm., III, 63; Reich. f., Ic. l. c., 91, t. 189, Fig. II—III; Boiss., Fl. Or., II, 917. — *Myrrhis australis* All., Fl. Pedem., nr. 1377. — *Chaerophyllum australe* Crantz, Umb., 76. — *Wylia australis* Hoffm. l. c. I 5, t. 2 f. 1; confer. Vierhapper l. c. 228—237]. Involucelli foliolis elliptico-oblongis, stylo brevi, rostro fructuum 1.5—2.2 cm longorum subpentagono, mericarpio semel vel bis longiore, undique hirto-scabrido insignis. In cultis, agris, arvis, incultis. Floret Aprili—Martio.

In **Bosna** certe errore indicata et cum *Sc. macrorrhyncha* confusa est. — **Bosna**: Circa Bihać (Boller), prope Vareš, Pajtov Han (Pr.), et in monte castello coronato oppidi Sarajevo (Hofmann in Öst. bot. Zeit (1882) 77 et 116 f. *Pantocsek). Confer K. Malý in Verh. zool.-bot. Ges. (1905) 305 et in Glasn. zem. muz. 31 (1919), 84.

11. Myrrhis.

[Miller, Gard. dict., ed. IV (1754) = Scopoli, Fl. Carn., ed. II, I, 207 (1772); Hoffm., Umb., I, 27, t. 1, fig. 23; Koch, Umb., 123; Endl., Gen., 788; DC., Prodr., IV, 231; Benth. Hook., Gen., I, 897; Drude in Engl. Prantl, Nat. Pflanzenfam., III 8, 153 gen. restrictum = *Myrrhis* (Tourn. Inst. 315. t. 166 p. p.) = Adans., Fam., II 96 (1763)? sed. Gaertn., De fruct. I, 108, t. 23 f. 10 = *Myrrhis* Scop. et *Chaerophyllum* non Asch. in Asch. Kan., Cat. corm. Serb., 68 (1877), quae = *Chaerophyllum*. — *Lindera* Adans., l. c. 499 non Thunb. ad *Chaerophyllum hirsutum* pertinere videtur.] »Čehulja«.

A *Chaerophyllo* differt sepalis minimis, fructuum commisura lata, jugibus valde elevatis carinatis fere alaeformibus, intus excepta carina cavis, valleculis angustissimis, vittis nullis vel inconspicuis.

1. *Myrrhis odorata* [Scop. l. c., DC., Prodr., IV, 231; Koch, Syn. fl. Germ., ed. II, 350; Reich. f., Ic. l. c., 92, t. 172 (fructuum transectus falsus); Posp., Fl. öst. Küst., II, 191. — *Scandix odorata* L., Spec. pl., 256 (1753); Jacqu., Fl. Austr. app., t. 37. — *Chaerophyllum odoratum* Crantz, Umb., 75 (1764); Lam., Enc. meth., I, 683 (1783) — *Lindera odorata* Asch. in Asch. Kan., Cat. corm. Serb., 68 (1877); Asch. Graebn., Fl. nordostd. Flachl. 536 (1899)]. In pratis subalpinis, faucibus silvarum, in glareosis regionis subalpinae — 1800 m. Floret m. Junio, Julio.

Bosna: In m. Čardak Pl. (Sta., Ja), Plazenica (Sta.), Vitorog (Sta.), circa Mlinište (Ha.), in m. Gola Kosa (Ha.), in jugo Presedlo pr. Podgorje (Sta. Fa.); in m. Vlašić (*S. 1848, B.), pr. Paklarevo (S.), in m. Brezovača (V.), Vranica Pl.: circa lacum Prokoško Jezero (Schwarz!), in m. Krstac (Bošnjak), Vučja Planina pr. Nemila (M.); in m. Lisac prope Zenica (V.), ad riv. Rajčevac pr. Vareš (Pr.); in m. Ozren, Crni Vrh-Crepolsko (M.); in faucibus Bistrica pr. Pale 870 m (M.), in m. Romanija Pl. (B.), Hranisava (Bucalović f. M.), Bjelašnica (M.), Treskavica (F., B.), Suha Gora, Maglič (B.), Volujak (Pr.) — **Hercegovina:** In montibus Preslica (V.), Prenj Pl. (*B. 1887) sicut in m. Bjelašnica (Beck, Pl. Bosn. Herc. nr. 73), Borošnica, Ljubina (Degen in litt.).

Tribus: *Caucalineae*.

[Benth. Hook., Gen., I, 863, 171. — *Daucineae*, *Caucalineae* Koch, Umb., 76, 79. — *Caucalineae* et *Dauceae* Drude in Engl. Prantl, Nat. Pflanzenfam., III 8, 154 et 247.]

12. Torilis.

[Adans., Fam. pl., II, 99 (1763); Gärtn., De fruct., I, 82, t. 20 f. 6; Spreng., Umb. prodr., 24; Koch, Umb., 80; DC., Prodr., IV, 218; Endl., Gen., 786;

Drude in Engl. Prantl, Natürl. Pflanzenfam., III 8, 155. — *Caucalis* Benth. Hook., Gen., I, 929. Conf. Wallroth in Linnaea XIV, 558.] »Čekinjavka«.

Sectio: *Eu-Torilis*.

[DC., Prodr., IV, 218 (1830). — Drude, l. c., 156 pro subgen.]

1. *Torilis anthriscus* [Bernh., Syst. Verz. Erf., 167 (1800)] = Gmelin, Fl. Bad., I, 615 (1806); DC., Prodr., IV, 218; Koch, Syn. fl. Germ., ed II, 344; Reich. f., Ic. l. c., 82, t. 165 non Gaertn. 1788. — *Tor. rubella* Moench, Meth., 103 (1784); Beck, Fl. Nied.-Öst., 657; Posp., Fl. öst. Küst., II, 208. — *Tordylium anthriscus* L., Spec. pl., 240 (1753); Jacqu., Fl. Austr., t. 261. — *Caucalis anthriscus* Huds., Fl. Angl., 99 (1762); Crantz, Stirp. Austr., III, 122 (1769)]. Ad sepes, inter fructices, ad silvarum margines, in silvis caesis apertisque usque ad regionem subalpinam (—1320 m). Floret m. Julio—Sept.

Bosna: Prope Banja Luka (H.). Prope Krupa, Tursk. Dubovik, Bihać, Ključ, Jajce (Fo.), Bugoino (Pr.), in m. Šuljaga, pr. Koprivnica Han (*S. 1848), Kupres (Pr.), in m. Dinara (Degen), Glamoč, Gubin (Pr.), Putičevo pr. Travnik (Fr. Br.), in m. Vranica Pl., Pogorelica (Schwarz!), pr. Vareš (Pr.); in agro Sarajevsko Polje, prope Malešići ad fl. Bosna (M.), in valle Koševo (M.), riv. Zujevina, prope Tihovići in valle riv. Vogošća (B.), circa Sarajevo, in m. Gradina —1060 m, Trebević, Bukovik —1320 m (M.), pr. Petrovići (M.) Pale, Križevac juxta Žulj (Ćurčić f. M.), in m. Vitez Pl. (B.), in vall. fl. Željeznica et Sutjeska (Pr.), prope Iksar c. 1000 m (Schiller fide Hayek). — **Hercegovina**: [*Asch. Kan., Cat., 67 (1877)] Ubi? prope Domnovići (Fo.).

2. *Torilis arvensis* [Link, Enum. hort. Ber., I, 265 (1821); Gren., Fl. jur. I (1865), 310. — *Caucalis arvensis* Huds., Fl. Angl., 98 (1762). — *C. helvetica* Jacqu., Hort. Vind., III, 12, t. 16 (1776). — *C. infesta* Curt., Fl. Lond., II fasc. VI., t. 23 (1795/6). — *Scandix infesta* L., Syst., ed. XII, 732 (1767). — *Torilis radiata* Moench, Meth., 103? — *T. helvetica* Gmel., Fl. Bad., I (1805), 617; DC., Prodr., IV, 219; Beck, Fl. Nied.-Öst., 657. — *T. infesta* Spreng., Umb. prodr., 24 (1813); Hoffm., Umb., 53 (1814), ed. II, I, 53 (1816); Vis., Fl. Dalm., III, 61; Reich. f., Ic., l. c., 83, t. 166]. In agris, arvis, incultis, vinetis, locis lapidosis dumetosis. Floret m. Julio, Augusto.

Bosna: (*Asch. Kan., Cat., 67 1877) ubi? Prope Banja Luka (Hofm. sub *T. anthriscus* f. M., V.), ad fl. Vrbas (C.); circa Donja Tuzla (M!), prope Zvornik (Wettst. f. Hayek). Prope Travnik (Br.). In agro Sarajevsko Polje (M.), circa Sarajevo: in monte castello coronato (B.), pr. Vasin Han (B.), in valle fl. Miljacka et Mošćanica (M.), in m. Lipovac (B.), in fauci-

bus Prača (M.) prope Višegrad (M.). — **Hercegovina:** (*Asch. Kan., Cat. l. c. 1877) ubi? Prope Jablanica (V., B.) Drežnica, Rakitno (V.), in agro Bijelo Polje (M.), circa Mostar (V., Sag.), in m. Podvelež (B.), prope Žitomišljici (Mu.), in silva Dubrava (Behrendsen).

Variat:

α. typica [Paol. in Fiori Paol., Fl. anal. d' Ital., II, 194; *genuina* Burn., Fl. Alp. mar., IV, 87 (1906)]. Synon. supra citata. Umbellae radii 3—7.

Ludit:

divaricata [Schinz Keller, Fl. Schweiz ed. II; *T. helvetica* v. DC., Prodr., IV, 219; Gren, Godr., Fl. franc., I, 676. — *Scandix infesta* Jacqu., Fl. Austr., I, 28, t. 46 (1773)]. Planta minor, divaricato-ramosa. Umbellarum pedicelli non vel rare ultra 6cm longi; divaricati. Petala paulo radiantia. Vulgata. — *anthriscoides* [DC., l. c. pro var. *Torilidis helveticae*; Paoletti, l. c., 194; *T. arvensis* v. *helvetica* Kern., Sched. ad fl. Austro-Hung. VI, 25 nr. 2094 (1893). — *Caucalis helvetica* Jacqu., Hort. Vind., III, 12, t. 16. (1776)]. Planta major, ramis erectis, umbellarum pedicellis suberectis, 9—17cm longis. Petala paulo radiantia, germen longitudine aequantia. Stylus c. 2 × stylopodio longior. Vulgata.

β. neglecta [Sprengel in Roem. Schult., Syst. VI, 484 (1820); Koch, Syn. fl. Germ., ed. II, 344 pro spec.; Thellung, Fl. adv. Montpell., 395 pro subsp.; Paoletti, l. c. 194]. Nunc divaricato-ramosa humilis nunc major ramis erectis ut in prioribus. (= *T. infesta* var. *longistyla* Reich. f., Ic. l. c., 83, t. 166, fig. III.) Umbellae pedicelli nunc breviores nunc longiores. Petala conspicue radiantia, germen bis superantia. Stylus longior pluries stylopodium longitudine superans (An semper?).

Rara videtur vel neglecta. — **Bosna:** In monte castello coronato urbis Sarajevo (*B.).

Adest tantum f. *typica* = *homocarpa* [Malý in Glasn. zem. muz., 31 (1919) 89] fructibus undique aculeatis. Forma *heterocarpa* Malý l. c. = *T. infesta* v. *heterocarpa* Willk. in Öst. bot. Zeit. (1891) 83 mericarpiis in externo latere aculeatis, in interno muricato-verrucosis vel breviter pappulosis hactenus nondum reperta est. Forma aequalis f. *neglectae* = v. *biformis* [Malý l. c.] etiam deest.

3. *T. heterophylla* [Guss., Prodr. fl. Sic., I, 326 (1827); DC., Prodr., IV, 219; Koch, Syn. fl. Germ., ed. II, 345; Posp., Fl. öst. Küst., II, 209. — *T. infesta* v. *heterophylla* Vis., Fl. Dalm., III, 61; Reich. f., Ic., l. c., 83 et *T. helvetica* var. in t. 167, fig. III. — *T. arvensis* v. *heterophylla* Burnat, Fl. Alp. mar., IV, 88. — *Caucalis purpurea* v. *heterophylla* Caruel in Parl., Fl. Ital., VIII, 560. — *T. arvensis* *β. purpurea* f. *heterophylla* Pao-

letti in Fiori Paol., Fl. anal. d' It., II, 194 (1900). — *Caucalis heterophylla* Arcang., Fl. It., 301 (1882)]. — In agris, incultis, glareosis, dumetosis. Floret m. Aprili—Junio. Folia caulina superiora saepe tripartita vel integra, segmentis elongatis. Umbellae radii 2—3 (4). Petala vix radiantia minima. Stylus brevissimus. Mericarpia saepe in uno latere verruculosa in altero echinata [= *typica* Malý in Glasn. zem. muz. 31 (1919) 89].

Hercegovina: Prope Trebinje (P. fide *Grisebach 1874). In **Dalmatia** frequenter occurrit.

4. *Torilis purpurea* [Guss., Fl. Sic. prodr., I, 325 et Syn., I, 337, II, 803. — *Caucalis purpurea* Tenore, Cors. bot. lez., IV, 209 (1822) et Fl. Nap., III, 279, t. 131 (1824—1829); Caruel in Parl., Fl. Ital., VIII, 559. — *T. helvetica* γ. *purpurea* DC., Prodr., IV, 219. — *T. arvensis* β. *purpurea* Paoletti in Fiori Paol., Fl. anal. d' It., II, 194 (1900) = Halácsy, Prodr. fl. Graec., I, 629 (1901) = Burnat, Fl. Alp. mar., IV, 87 (1906)]. In locis lapidosis, incultis, inter virgulta. Floret m. Majo, Junio.

Hercegovina: Prope monasterium Žitomišljici (*Mu. 1891) et stationem Hum c. 270 m (M.). Adest in **Dalmatia** finitima (in m. Vrmač prope Kotor l. Huter).

Torilis homophylla [Stapf et Wettst. in Denkschr. Akad. Wiss. Wien, math.-naturw. Klasse, 51 (1886) 372]. Sec. descriptione a *T. heterophylla* differt foliis superioribus minus partitis quam inferioribus (bipinnatisectis), segmentis inciso-dentatis, lanceolatis vel saltem in parte inferiore bipinnatisectis (in *T. heterophyllo* lanceolatis integris saepe simplicibus). Umbellarum radii 2—3, petala minima ovario dimidio fere breviora rubella ut in *T. heterophylla* observantur. Intermedia est inter *T^m arvensis typicam* et *T^m heterophyllam*, mea quidem opinione = *Torilis purpurea* Guss.; confer: Burnat, l. c., 88.

5. *Torilis nodosa* [Gaertn., De fruct., I, 82, t. 20, f. 6 (1788); DC., Prodr., IV, 219; Koch, Syn. fl. Germ., ed. II, 345; Vis., Fl. Dalm., III, 61; Reich. f., Ic., l. c., 84, t. 167, fig. I; Posp., Fl. öst. Küst., II, 210. — *Caucalis nodosa* Huds., Fl. Angl., 114 (1762); Scop., Fl. Carn., ed. II, I, 192 (1772). — *Tordylium nodosum* L., Spec. pl., ed. II, 346 (1762). — *Daucus nodosa* Druce, Brit. pl., 32 (1908), cfr. in Journ. of bot. (1897) 362]. In agris, incultis, sterilibus, sub dumetis, juxta vias — 980 m Floret m. Majo, Junio.

Bosna: In Castello oppidi Krupa (B.), prope Livno (Sta. Fa.); circa Zenica (Breindl!), prope Sarajevo olim in valle Mošćanica (Bl f. M.). — **Hercegovina:** Supra pag. Mrakovo — 980 m (M. 1926). Prope Mostar (Str.), ad fl. Neretva prope Buna (Mu.), pr. Trebinje (P. fide *Grisebach 1874).

f. *typica* vel *heterocarpa* [Malý in Glasn. zem. muz., 31 (1919) 89] hactenus observata est.

13. Caucalis.

[L., Spec. pl., 240 (1753) et Gen., ed. V, nr. 294 ex parte; — Hoffm., Umb., 54; Koch, Umb., 79, f. 14; Endl., Gen., 786; Benth. Hook., Gen., I, 928 (restr.); subgen. *Eu-Caucalis* Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 157]. »Sudlanica, Podlanica«.

1. *Caucalis daucoides* [L., Syst., ed. XII (1767), 205 et Mant., II, 351 non L., Spec. pl., 241 (1753). Confer Richter. Codex Linn., 257 et 258; DC., Prodr., IV, 216; Koch, Syn. fl. Germ., ed. II, 344; Jacqu., Fl. Austr., II, t. 157; Vis., Fl. Dalm., III, 60; Reich. f., Icon., l. c., 81, t. 170; fructus pessime-delineati!]. In arvis, incultis et cultis, inter segetes, in vinetis. Floret m. Majo—Sept.

Bosna: Prope Banja Luka (H), Petrovac (B.), Travnik (*S. 1848), inter Bukovlje et monast. Sutjeska (S.), prope Bugojno, in m. Hrblijina, pr. Preodac, Rore (Pr.), in valle Ražano dol pr. Popovići (Ha. Ja.), Crni Lug in agro Livanjsko Polje (Sta. Fa) et (Ja. Wa.), pr. Tarčin (Pr.); in agro Sarajevsko Polje, in faucibus Miljacka, prope Paroš (M.), Rusenovići (F.). — **Hercegovina:** Prope Dubočani, Ostrožac (M.). In agro Mostarsko Polje (Ja. f. Hayek), prope Mostar (Raap Callier, Pl. Herc., nr. 81!. Lindberg, B.), pr. Sovići (F.), Stolac (B.), Žitomišljici, Lastva (M.), circa Trebinje, Bileća, Orahovac (P. f. *Grisebach 1874), in m. Leotar pr. Trebinje (B.).

Variat:

α. *genuina* [Gren. Godr., Fl. franç., I, 674 (1848) = *vulgaris* Reich. f., l. c. (1867)]. Vulgata.

β. *muricata* [Bischoff, Del. sem. hort. Heidelb. (1839) et in Linnaea, Lit. Ber. (1840) 131 pro spec., non Crantz 1767 (quae = *Daucus muricatus* L.); Gren. Godr., l. c. pro var. — Confer. Neilr., Fl. Nied.-Öst., 639]. Adhuc nondum observata est.

13.* Turgenia.

[Hoffm., Umb., I, 59 (1814); Koch, Umb., 80, f. 16; DC., Prodr., IV, 217; Endl., Gen., 786 et al. — *Caucalis* Benth. Hook., Gen., I, 928; subg. *Turgenia* Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 157 (1898).]

1. *Turgenia latifolia* [Hoffm., l. c.; DC., Prodr., IV, 217; Koch, Syn. fl. Germ., ed. II, 344; Vis., Fl. Dalm., III, 60; Reich.

f., Ic., l. c. 82 t. 168; Beck, Fl. Nied.-Öst., 656. — *Tordylium latifolium* L., Spec. pl., 240 (1753). — *Caucalis latifolia* L., Syst., ed. XII (1768) 205]. In agris, arvis, incultis, inter segetes, in locis arenosis. Floret m. Julio, Augusto.

Bosna: In m. Hrblijina, prope Šujica, Glamoč (Pr.); ad pedem montis Vlašić prope Travnik (*S. 1848), in m. Tarabovac (Fr. Br.) prope Paroš in distr. Prozor (M.). — **Hercegovina:** Circa Mostar pr. Glavica (Lindberg), in agro Mostarsko Polje (M.), ad fl. Neretva prope Žitomišljici (Mu., Ja. f. Hayek).

14. *Daucus*.

[L., Spec. pl., 242 (1753) et Gen., ed. V, nr. 296 et Benth. Hook., Gen., I, 928 p. p. — rectius Hofm., Umb., I, 54 (1814); Koch, Umb., 76; Endl., Gen., 785; DC., Prodr., IV, 209; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 248; sect. *Eudaucus* Paoletti in Fiori Paol., Fl. anal. d' Ital., II, 185 (1900). Aculeis jugorum uniseriati distinctis vel basi connatis, glochidiatis.] »Mrkva, merlin«.

Sectio: *Eudaucus*.

[Drude, l. c., 249 (1898); Sect. *Platyspermum* Hofm. et *Carota* DC., Prodr., IV, 210–211.]

1. *Daucus carota* [L., Spec. pl., 242 (1753); DC., Prodr., IV, 211; Koch, Syn. fl. Germ., ed. II, 343; Vis., Fl. Dalm., III, 57; Reich. f., Ic. fl. Germ., XXI, 79, t. 159; Beck, Fl. Nied.-Öst., 654. — *D. Carota* v. *typicus* Paol. in Fiori Paol., Fl. anal. d' It., II, 186 (1900). — *D. communis* subsp. *D. Carota* Rouy Camus Fl. Franc., VII 234 (1901). In pratis, locis arenosis, lapidosis, incultis usque ad regiones subalpinas. Saepissime colitur. Floret m. Majo—Oct.

Bosna: Vulgatus et frequens (Fo., B., Pr.) *Asch. Kan, Cat. corm., 67 (1877). — **Hercegovina:** *Asch. Kan., Cat. 67 (1877) ubi? Prope Konjic (Fo.), ad lacum Boračko Jezero, in monte Lovnica 1440m (M.), prope Mostar (Str., Fo. f. V.), in Sutorina (R. f. M.). — **Novi Pazar:** Inter Han Kovač et Boljanić (*B. 1895).

Variet:

α. *genuinus* [Burnat, Fl. Alp. mar. IV 245 (1906).] Vulgatus. — β. *sativus* [DC., Prodr., IV, 211 (1830).] Colitur.

2. *Daucus major* [Visiani, Fl. Dalm., III, 57 (1850); Freyn Fl. Südist. in Verh. zool.-bot. Ges. XXVII (1877) 344 pro var. *D. carotae*; Posp., Fl. öst. Küst., II, 204 (1898); Fritsch, Exk. Fl. Öst., 2. Aufl. 460 (1909). — *D. mauritanicus* Ali., Fl. Pedem., II, 31, t. 61, f. 1 non L. = *D. communis* subsp. *Carota* v. *Al-*

lionii Rouy Cam., Fl. Fr., VII, 235; confer autem Burnat, Fl. Alp. mar., IV, 245 adnot]. A *D. carota* distinguitur segmentis ultimis foliorum late ovato-rhombeis (non lineari-lanceolatis), inaequaliter pinnatipartitis, umbellis — 40 radiis, petalis lutescentibus et sec. Visiani, aculeis fructuum partim glochidiatis partim uncinatis. In apricis, graminosis. Floret Junio, Julio.

Hercegovina: Prope Jablanica (*B. 1895); pr. Sovići (F.), circa Trebinje, Bileća, Orahovac, Vučija (P. fide *Grisebach 1874).

3. *Daucus guttatus* [Sibth. Sm., Prodr., I, 174 (1806); Sibth., Fl. Graec., III, 63, t. 269; Hal., Consp. fl. Graec., I, 624. — *D. bicolor* Sibth. Fl. Graec., l. c., 64, t. 270; Paol. in Fiori Paol., Fl. anal. d' Ital., II 188. — *D. setulosus* Guss. in DC., Prodr. IV, 211 (1830) et var. *brachylaenus* Boiss., Diagn. X, 47 ex Flor. or., II, 1075. — *D. speciosus* Cesati in Bibl. ital. 77 p. 398 et in Linnaea XI, 322 (1837). — *D. involucratus* Malý in Magy. bot. lap. VII (1908) 225 non Sibth. Sm.]. In pratis aridis. Floret Majo.

Hercegovina: In agro Bijelo Polje (M.), prope Vojno ad fl. Neretva (*M. 1908) et in Sutorina (A. f. M.).

15. Orlaya.

[Hoffm., Gen. Umb., I, 58 (1814); Koch, Umb., 78, f. 12, 13; DC., Prodr., IV, 209; Endl. Gen., 785; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 158; *Daucus* apud Benth. Hook., Gen., I, 928; sectio *Orlaya* Čelak. in Bot. Zeit. 31 (1873) 44; Generi *Dauco* proxima sed pericarpio in latere commissurali cristallifero [Confer Rompel, Krist... in der Fruchtwand der Umb. in Sitzber. Ak. Wiss. Wien CIV (1895)] et aculeis hamatis egregia.] »Moračina«.

Sectio: *Euorlaya.*

Aculei jugorum biseriatae.

1. *Orlaya grandiflora* [Hoffm., Gen. Umb. ed 2, I, 58 (1816); DC., Prodr., IV, 209; Koch, Syn. fl. Germ., ed. II, 343; Vis., Fl. Dalm., III, 59; Reich. f., l. c. I. c., 77, t. 157; Beck, Fl. Nied.-Öst., 655; Posp., Fl. öst. Küst., II, 201. — *Caucalis grandiflora* L., Spec. pl. 240 (1753); Jacqu., Fl. Austr. I, t. 54. — *Daucus grandiflorus* Scop., Fl. Carn., ed. II, I, 189 (1772). — *Platyspermum grandiflorum* Mert. Koch, Deutschl. Fl., II, 360 (1826)]. »Stidak«. In apricis aridis, lapidosis saxosis, in pascuis, inter segetes — 1140 m. Floret m. Junio, Julio.

Bosna: Prope Banja Luka (H.); Breške (B.), Zvornik (Wettst. f. Hayek), Tuzla (Bucalović f. M.), secus riv. Drinača, pr. Srebrenica (J.). Inter Novi et

Otoka (B.), prope Krupa (Fo. f. V.) et in monte arce coronato (B.), circa Pučenik, Tursk. Dubovik, Sasina (Fo.), Drvar ad fl. Unac (Ha. Ja.), in arce Sokolac prope Bihać (B.), prope Glogovac (Sta. Fa.), Zavidovići, Bočac (M.) in valle fl. Vrbas prope Donji Vakuf (Sta. Fa.), prope Bugojno (Pr.) G. Vakuf (M.) Kupres, Šujica, pr. Podgradina, Vagani in m. Prolog (Pr.), in m. Dinara (Ja. Wa.), pr. Preodac, Rore (Pr.), Provo (B.), Livno, Bastasi (Sta. Fa.), Grkovac (Pr.), Gubin (Pr.), in agro Glamočko Polje (Sta.). Circa Jajce (B.), Travnik: pr. Bukovica, in m. Vlašić (*S. 1848), circa Fojnica (Pr., B.), in m. Vranica Pl. (Schwarz!), prope Maglaj, Zenica (Fo. f. V.), circa Vareš: Potoci, Pržići, Strice, Mijakovići (Pr.). — In Bosna australi vulgata et frequens. Prope Zovik (M.), Tarčin (Pr.), Kobiljčol (M.), ad pedem m. Igman (F.), iuxta fontes fl. Bosna (B.), Blažuj (Bl. f. M.), circa Sarajevo (Blau, B.) Sedrenik (M.), in m. castello coronato (Bl., B.), in valle Miljacka et Koševo (M.) pr. Bulozii (B.), Mrkojevići 1000 m (M.), prope Trnovo (B.), in valle fl. Željeznica (Pr.), pr. Kalinovik (Pr.), in valle fl. Sutjeska, Drina (B., Pr.), in m. Vučevo (B.), circa Ošlji Do-Jelašća 1140 m (M.), prope Jeleč, inter Foča et Borja, in Zagorje (Adam.), prope Kovanje (B.) et Rusenovići distr. Rogatica (F.), pr. Meštrovac (Schiller f. Hayek), Gračanica, Paroš (M.), Višegrad, Medjedja (M.). — **Hercegovina:** Vulgata et frequens. In valle fl. Trešanica, pr. Konjic (B.), Ljuta, Košutica, Grdača (M.), in valle Idbar (B), pr. Ostrožac, Mrakovo (M.), Jablanica (V., B.), in valle Diva Grabovica (V.), in m. Glogovo (V.), in valle Doljanka (Pr.) Bijelo Polje (M) circa Mostar (Str., B.): in m. Stolac (M.), Hum (Fo., B.), Podvelež (Fo., B.), Mostarsko Blato (Sag), Šurmanci, Bišina (M.); pr. Rakitno (Beg. f. V.), pr. Žitomišljici (Mu.), Čapljinina (V.), Stolac (B.), Ljubinje (Fo.), Bukovi Do (R.), Hutovo, (V.); inter Obrnja et Kruna ca. 1100 m (Bucalović f. M.); in agro Gatačko Polje (Riedel!), pr. Begovića Kula, Grbeš (Fo.). Vučja Bara 1000 m (M.). Circa Trebinje (P. f. *Grisebach 1874): in m. Glijiva, Hum (V.), pr. Gorica (Fo), Tulje, Grab, Trebesinje Han (V.), Vučja (P.), Glavska (M.), Bileća (P. f. Gris.), Panik, Mosko (Fo.), in Sutorina (M.).

Sectio: *Daucorlaya*.

[*Daucus* sectio *Heteracanthium* Čelak. in Bot. Zeit. 31 (1873), 39—44. Drude in Nat. Pflanzenfam., III 8 (1898), 249.]

Aculei jugorum uniseriati vel p. p. inconspicue biseriati.

2. *Orlaya daucorlaya* [Murbeck, Beitr. Fl. Südbosn. in Lunds Univ. Årsskr. XXVII (1891) 119; Sagorski in Mitt. Thür. bot. Ver., Neue Folge XVI (1902) 47; Janchen in Mitt. naturw. Ver. Univ. Wien V (1907), 60. — *Daucus Daucorlaya* Drude in Engl. Prantl, Natürl. Pflanzenfam., III 8 (1898), 250]. »Caulis erectus, 3—8 dm altus, a medio vel a basi ramosus, striatus glaber; rami erecto-patentes vel divaricati, plus minus elongati. Folia inferiora ambitu ovalia, 3—4 pinnata, longe petiolata, superiora magis triangularia, sessilia, etiam summum

axis primarii bi- — tripinnatum. Folia omnia infra in petiolo et per nervos pilis sparsis patentibus puberula vel summa glaberrima; segmenta supremi ordinis lanceolato-lineararia, abbreviata, acutiuscula. Involucri phylla elongato-lanceolata, involucelli obovata, omnia in margine late membranacea et ciliata. Umbellae 6—10 radiatae; radii phylla involucris bis superantes. Foliola calycis lineari-subulata. Petalum radians caeteris octuplo longius, e basi late rotundata ambitu circulari-obcordatum. Styli 3—4 mm longi, filiformes, tenuissimi, aculeos fructus supremos multum superantes. Mericarpia elliptica, 9—11 mm longa, 5 mm lata. Juga primaria tenuia, setulosa, secundaria omnia aequalia, 1—1.5 mm alta, demum incrassata, verruculis numerosis scabra, non lucida. Aculei jugorum secundariorum exacte uniseriales, validi, aequilongi, in apice hamati, in basi dilatati et plus minus confluentes ibique fructu maturo verruculosi« (Murbeck). — Notis ententibus ab *O. grandiflora* bene distinguitur. *O. platycarpus* axi primaria abbreviata, radiis 2—4 involucra vix superantibus, petalo radiante ceteris 5 × longiore, fructibus 10—15 mm longis, jugis lateralibus nitentibus mediis bis altioribus, aculeis acrius hamatis, styliis brevioribus summo 2 mm longis sat distat. In locis lapidosis, apricis, inter segetes, ad sepes. Floret m. Majo, Junio.

Hercegovina: Circa Mostar et in ditone urbis (*Mu. 1891), in agro Bijelo Polje (Raap Callier, Pl. Herc. nr. 82!) et circa Potoci Han (V.). Circa Stolac (B.). Observata est adhuc in **Istriae** insula Kres (Cherso) supra Smergo (Janchen). — **Dalmatia:** Prope Obrovac (B.), Skradin (Scardona), Šibenik (Sebenico) ad aquas cadentes fl. Krka (Ja), in m. Marian prope Spljīt (Ginzberger); in **Italia:** Prope Caramanico in m. Aprutiis (Porta fide Degen), **Macedonia**, **Thessalia**.

3. *Orlaya platycarpus* [Koch, Umb. disp. 79; DC., Prodr., IV, 209; Koch, Syn. fl. Germ., ed. II, 343; Reich. f., Ic. fl. Germ., XXI, 78, t. 156 excl. f. 14; Boiss., Fl. Or., II, 1071; Hal., Consp. fl. Graec., I, 622; Vis., Fl. Dalm., III, 59; Posp., Fl. öst. Küst., II, 202. — *Caucalis platycarpus* L., Spec. pl., 241; Jacqu., Hort. Vind., III, t. 10. — *Daucus platycarpus* Caruel in Parl., Fl. It., VIII, 533 non Scop., Fl. Carn., ed. II, I, 190 (1772)]. In agris incultis, arvis dumosis, vinetis florum mediterraneae. Floret aestate.

Hercegovina: In satis circa Mostar (Str.); Trebinje, Pridvorci (*P. f. Grisebach 1874).

Tribus: *Coriandreae*.

[Koch, Umb. in Nov. act. Leop., XII 1 (1824), 82; DC., Prodr., IV, 249; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 158.]

16. *Coriandrum*.

[L., Spec. pl., 256 (1753) et Gen., ed. V, nr. 318 p. p.; Endl., Gen., 793; Koch, Umb., 82; Benth. Hook., Gen., I, 926; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 158.] »Papric, paprica, korijandr«.

1. *Coriandrum sativum* [L., Spec. pl., 256 (1753); DC., Prodr., IV, 250; Koch, Syn. fl. Germ., ed. II, 353; Sibth. Sm., Fl. Graec. III, 76 t. 283; Reich. f., Ic. fl. Germ., XXI, 98, t. 202; Posp., Fl. öst. Küst. II, 211; Vis., Fl. Dalm., III, 72]. Inter segetes, ruderalis, vinetis cultis. Floret m. Junio, Julio.

Bosna: (*Asch. Kan., Cat. 68, 1877). Sarajevo: Hrid, in ruderalis (Blau, Herb. nr. 1624). Probabiliter cultum vel spontaneum.

17. *Bifora*.

[Hoffm., Gen. Umb., ed. II, 191 (1816); Koch, Umb., l. c. 83; Endl., Gen., 792; Benth. Hook., Gen., I, 926; Drude in Nat. Pflanzenf., III 8, 160. — *Anidrum* Neck., Elem. I (1790), 188, nomen antiquius sed. congr. bot. 1905 repositum. — *Biforis* Spreng., Anl. II, 1, 635 (1817). — *Corion* Link Hoffm., Fl. Port., II, 457 (1820).]

1. *Bifora radians* [Marsch. Bieb., Fl. Taur. Cauc., III, 233 (1819); DC., Prodr., IV, 249; Vis., Fl. Dalm., III, 71; Reich. f., Ic. fl. Germ., XXI, 99, t. 201, fig. II; Posp., Fl. öst. Küst., II, 211; Beck, Fl. Nied.-Öst., 658. — *Coriandrum testiculatum* Jacqu., Enum. stirp. Vind., 49 (1762) non L. — *Anidrum radians* = Flatt in Köztelek (1899) 89 (843); Degen in Magy. bot. lap. II (1903), 222 = O. Kuntze]. »Smrdljika«. Inter segetes, in agris, incultis. Floret aestate, Junio, Julio.

Bosna: Prope Banja Luka (H.), Doboj (M.), in valle Dobrnica et pr. Sokolac (B.), pr. Petrovac (B. F.), inter Varcar Vakuf et Sinjakovo (B.). iuxta Ljuša pr. Glogovac (Sta. Fa.), pr. Crni Lug (Ja. Wa.); circa Travnik (*S. 1848, Bl., Fr., Br.), Zgošća (M.), inter Kakanj et monasterium Sutiska (S.), prope Bukovlje (S.), pr. Paroš (M.). In agro Sarajevsko Polje, in oppido Sarajevo (Mu.), pr. Blažuj, Nahorevo, alt. 800 m (M.), pr. Dobrun (M.). — **Hercegovina:** Prope Konjic: Polje (M.), Mostar (Lindberg), Domanovići (M.), Sovići distr. Ljubuški (F.). Trebinje, Bileća (P. f. *Grisebach 1874).

2. *Bifora testiculata* [Roth, Enum. Germ., I, 888 (1827); DC., Prodr., IV, 249 (1830) = Reich., Fl. Germ., 440; Vis., Fl. Dalm., III, 71; Reich. f., Ic. fl. Germ., XXI, 98, t. 201 f. I; Posp., Fl. öst. Küst., II, 212. — *Coriandrum testiculatum* L.,

Spec., pl., 256 (1753). — *B. dicocca* Hoffm., Gen. Umb., ed. II, 192. p. p. — *B. flosculosa* Marsch. Bieb., Fl. Taur. Cauc., III, 234 (1819). — *Corion testiculatum* Hoffm. Link., Fl. Port., II (1820) 457. — *Anidrum testiculatum* Flatt in Köztelek (1899) čir. 89 (843)]. »Divlji papric«. Inter segetes, in agris regionis mediterraneae. Floret m. Aprili—Junio.

Hercegovina: Prope Žitomišljici (*M. 1908); Ljubuški (F. f. M.).

Tribus: *Smyrnieae*.

[Sprengel, Anl. II, 2 (1818) 634, rectius Drude in Nat. Pflanzenfam., III 8 (1898), 160. *Smyrniae* Koch, Umb. l. c. 133 et DC., Prodr., IV, 58 et 233 p. p.]

18. *Smyrnium*.

[L., Spec. pl., 262 (1753) et Gen., ed. V, nr. 325 p. p.; Endl., Gen., 791; Koch, Umb., l. c., 133; Benth. Hook., Gen., I, 885; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 166.] »Tumbeo, lesandra«.

1. *Smyrnium perfoliatum* [Miller, Gard. dict., ed. VIII nr. 3; Mert. Koch, Deutschl. Fl., II, 463; DC., Prodr., IV, 247; Vis., Fl. Dalm., III, 69; Sibth. Sm., Fl. Graec., III, t. 289; Posp., Fl. öst. Küstenl., II, 197; Reich f., lc. fl. Germ., XXI, 97, t. 195. — an L., Spec. pl. 262 (1753)? — *S. Dioscoridis* Spreng., Umb. spec., 25 excl. syn.]. In fruticosis, nemoribus, silvis aperitis, ad sepes, in pratis, hortis, pomariis — 1400 m. Floret m. Aprili—Majo, Junio.

Bosna: In parte septentrionali et media ut videtur frequens (Fo., in litt., B.) et vulgatum. Prope Banja Luka (H), Nova Kasaba, in m. Hršin (J.), inter Maglaj et Han Mravići (*S. 1848), pr. Drvar (Ja), Gigič, Prusac (Ha. Ja.), Varcar Vakuf (B.), in agro Medeno Polje pr. Petrovac (B.), Djukići pr. Glogovac, inter Čelebić et Livno, prope Livno (Sta. Fa.), in agro Glamučko Polje (Sta.), Kupres (Pr.), in valle Krivodo inter Han Crljevica et Šekovac (B.), pr. Vodjenica (Fo. f. V.). Prope Bugojno (Pr.). Circa Travnik (*S. 1848 et al.) pr. Bukovica (S.), in colle Tarabovac (Br., Fr), prope Vranduk et inter Travnik et Vranduk (S.), prope Lašva (B.), Zenica (B.), Vareš (Pr.), Tarčin (Pr.), Sarajevsko Polje, Kobiljdo, Paoca, Miljevići (M.), Sarajevo (H, F., B. et al.), Koriya, Ophode, in monte Boriye, Trebević (Ostrog — 850 m) (M.) circa Ilidža, Blažuj, Zovik (M.), Rogatica (F.), Jeleč (Fo. in litt.). In vallibus: fl. Drina inter Foča et Bastasi (B., Pr.), fl. Sutjeska (Pr.), Čehotina (B), Ljepnica pr. Kuliješ (M.), Lim prope Rudo (Schiller f. Hayek). — **Hercegovina:** In jugo Ivan (Landauer et Sündermann); prope Konjic (B.), Živani, Vilište — 950 m (M.), in monte Prenj Pl.: in cacuminibus Bjelašnica et Prenj — 1400 m (B.), prope Mrakovo, in m. Bokševica — 1300 m (M.). Circa Mostar (Str.), prope Potoci Han (Ružička f. V.), in montibus Pod Velež, Hum (Fo.), Velež (Mu.), pr. Blagaj, Bojište, Nevesinje (Fo. in

litt.), in m. Crvanj 1000–1200 *m* (Mu.), prope Stolac, Ljubinje, Panik (Fo.), circa Trebinje (P. f. *Grisebach 1874), Pridvorci, Gomoljani (V.), Gatačko Polje (Hawelka f. M.), Bileća (P. f. Grisebach, Hawelka!), Drijeno (Fo.), Lastva (M.). — **Novi Pazar:** Prope Prijepolie (P. Zahlbr. f. Hayek), prope monast. Trojica juxta Plevlje (*B. 1895).

Ludit:

Kitaibelii [DC., Prodr., IV 247 (1830) = *S. perfoliatum* Waldst. Kit., Pl. rar. Hung., I, 22, t. 23] »foliis superioribus grossius dentatis«.

Bosna: Prope Strojice, Bočac (*Behrendsen 1905); circa Sarajevo, in m. Igman (M.). — **Hercegovina:** Juxta Gradac pr. Ljubuški (F. f. *M. 1908).

19. Danaa.

[All., Fl. Pedem., II, 34, nr. 1392 t. 63 (1785); DC., Fl. Franc., IV, 311; Caruel in Parl., Fl. It., VIII. 485; Burn. Fl. Alp. mar., IV, 98. (Hic amplius conferendum!); Praeterea vide Verh. intern. bot. Kongr. Wien 1906, 205 et 223.) — *Physospermum* Cusson in Mém. soc. méd. Par. V. (1787), 279; Koch, Umb. l. c. 134; DC., Prodr., IV, 246; Endl. Gen., 791; Benth. Hook., Gen., I, 882; Drude in Nat. Pflanzenf., III 8, 166; *Haenselera* Lag., Gen. et Spec., 13 (1816) non Boiss.]

1. *Danaa verticillata* [Janchen in Öst. bot. Zeit LVIII (1908), 296. — *Laserpitium verticillatum* Waldst. Kit., Pl. rar. Hung., II (1805), 186, t. 171; Reich., Fl. Germ., 551; Koch, Syn. Fl. Germ., ed. II, 1025. — *Physospermum acteaeifolium* Presl., Del. Prag (1822) 128; Posp., Fl. öst. Küst., II, 195. — *Alschingeria verticillata* Vis., Fl. Dalm., III, 69 (1852). — *Physospermum verticillatum* Vis., Fl. Dalm., III 358 (1852) et Suppl. I, 113; Reich. f., Ic. fl. Germ., XXI, 97, t. 198. — *Smyrnum verticillatum* Caruel in Parl., Fl. Ital., VIII, 478 (1888)]. »Doljan, komorač divlji«. In rupestribus, silvis montanis, fructicosis pratis in regione montana et subalpina (–1700 *m*). Floret m. Julio, Augusto.

Bosna: In montibus Osječenica alt. 1500–1700 *m* et Klekovača (*B. 1892), in colle ecclesiam ferente pr. Grahovo c. 900 *m* (Ha. Ja.), in declivibus supra Marića Košare montis Dinara (Ja. Wa.), inter Čelebić et Livno (Sta. Fa.). — **Hercegovina:** In montib. Prenj: Prislap (*V. 1890), Porim (V.), prope Bojište (Sagorski), in m. Velež orientali (B.).

2. *Danaa cornubiensis* [Burnat, Fl. Alp. mar. IV, 99 (1906). — *Physospermum aquilegiforme* Koch, Umb. l. c., 134 (1824); DC., Prodr., IV, 246; Rouy, Camus, Fl. Fr., VII, 294 et v. *cornubiensis* Willk., Lange, Prodr. Hisp. III 66. — *Ph. commutatum* Spreng.,

Umb. prodr., 19 (1813). — *Danaa aquilegifolia* All., Fl. Pedem., II, 34, t. 63 (1785); Caruel in Parl., Fl. It., VIII, 485. — *D. cornubiensis* K. Malý v. *aquilegifolia* K. Malý in Magy. bot. lap. (1908), 222. — *Ligusticum aquilegifolium* Willd., Spec. pl., I, 1425 (1797). — *Ph. cornubiense* Hook., Brit. Fl., 134 (1830) = Reich. f., Ic. fl. Germ., XXI 96, t. 197 et DC., l. c. — *Ligusticum cornubiense* L., Cent. pl., II, 13 (1756) et Amoen., IV, 310 (1759) = *Ph. cornubiense* DC., Prodr., IV, 246; confer: Caruel, l. c., 487, Burnat, l. c., 100, K. Malý in Glasn. zem. muz. XXXI (1919) 70]. »Mukavica«. In locis fruticosis, ad sepes, in silvis pratis, — 1100 m. Floret m. Julio, Augusto.

Bosna: In monte Kobilja Glava prope Brezovica ca. 1100 m (M.), Trebević (Sagorski), prope Pale 840—900 m (*M. 1908 in Dörf. Herbar. norm. nr. 4890); circa Višegrad in m. Stolac (Čurčić f. M.) et infra Suha Gora (Schiller f. Hayek); in m. Paštan Brdo prope Rudo c. 800 m (M.).

20. Conium.

[L., Spec. pl., 243 (1753) et Gen. ed. V, nr. 299 p p.; Koch, Umb., l. c., 135; Endl., Gen., 790; Benth. Hook., Gen., I, 883; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 167] »Kukuta, cvolina, cvolika, svinjavac«.

1. *Conium maculatum* [L., Spec. pl., 243 (1753); DC., Prodr., IV, 244; Vis., Fl. Dalm., III, 69; Reich., Fl., Germ., 441; Koch, Syn. fl. Germ., ed. II, 351; Reich. f., Ic. fl. Germ., XXI, 94, t. 191; Beck, Fl. Nied.-Öst., 617; Posp., Fl. öst. Küst., II, 196]. Ad sepes, in hortis, incultis, ruderatis, fruticosis. Floret m. Julio, Augusto.

Bosna: Prope Banja Luka (Fo. f. Borbás). In m. Grad prope Zvornik (J.), prope Donja Tuzla (M.). Prope Maglaj (Fo. f. Borbás). Circa Travnik (Br.) et prope Nev.ća Polje (Fr. Br.), pr. Fojnica (B.) Bugojno (Pr.), Tarčin (Pr.); inter stationem Vogošća et Semizovac, pr. Hadžići, in valle Zujevina (B). Circa Sarajevo, in ditone urbis, in m. castello coronato, in valle fl. Miljacka et riv. Moščanica (M.).

Formam *typicum* [Posp. l. c.] modo observavi.

21. Grafia.

[Reich., Handb. nat. Pflanz., 219 (1837); Caruel in Parl., Fl. It., VIII, 352; Confer Degen in Magy. bot. lap. IV (1905), 108. — *Malabaila* Tausch in Flora (1834) I, 356; Endl., Gen., 791; Koch, Syn. fl. Germ., ed. II, 351 non Hoffm. (1814). — *Hladnikia* Koch in Flora (1836) I, 166 et Syn. fl. Germ., 320 (1837); Drude in Nat. Pflanzenf., III 8, 171 non Rchb. (1830). — *Pleurospermum* Reich., Fl. Germ., 441 (1832); Benth. Hook., Gen. I, 915.] »Divji luštrek«.

1. *Grafia golaka* (Reich., Handb. nat. Pflanz., 219 (1837); Caruel in Parl., Fl. It., VIII, 353. — *Athamanta Golaka* Hacqu.,

Fl. alp. Carn., 14 (25), t. 5 (1782). — *Ligusticum Sprengeliī* Sieb. in Spreng., Spec. Umb., 124 (1818). — *L. Hacquetii* Guss., Pl. rar., 132 (1826). — *L. carniolicum* Host, Fl. Austr., I, 378 (1827). — *Pleurospermum Golaka* Reich., Fl. Germ., 441 (1832). — *Malabaila Hacquetii* Tausch in Flora, XVII (1834), 356; Posp., Fl. öst. Küst., II, 193. — *M. Golaka* Karst., Deutsch. Fl., 860 (1882) = A. Kern. in Fl. Austro-Hung., nr. 619 (1883). — *Hladnikia Golacensis* Koch in Flora (1836), I, 167 et in Syn. fl. Germ., 320 (1837). — *H. Golaka* Reich. f., Ic. fl. Germ., XXI, 95, t. 193 (1867) = Murb., Beitr. Fl. Südbosn., 117 (1891)]. In saxosis, glareosis, locis herbosis et graminosis, pratis subalpinis regionis subalpinae — 1900 m. Floret m. Julio, Augusto.

Bosna: In m. Bjelašnica loco Vlahinja (F. f. M.) et Kotlovi 1700 ac — 1800 m (M.); in m. Treskavica: in cac. Orlica versus Dujmovići c. 1700 m (F. f. *Beck 1895) et sub cac. Oblik — 1680 m (M.); in m. Kmur prope Foča (M.). — **Hercegovina:** In m. Prenj: Prislap (F.) et Porim prope Rujšte (V.), Plasa (M.), Čvrstica — 1900 m (F.); Velež (B) versus Nevesinjsko Polje a. 1200—1500 m (*Mu. 1891) et sub Teleći Lastva (V.).

22. Pleurospermum.

[Hoffm., Umb., praem., p. VIII et XXXII (1814); Koch, Umb. l. c., 137; Endl., Gen., 791; Benth. Hook., Gen., I, 915; Drude in Nat. Pflanzenf., III, 8, 171.] »Koromač«.

Subgenus: **Eupleurospermum.**

[Drude, l. c. — *Pleurospermum* DC., Prodr., IV, 244.]

1. *Pleurospermum austriacum* [Hoffm., Umb. gen. praem., p. X (1814); DC., Prodr., IV, 244; Koch, Syn. fl. Germ., ed. II, 351; Reich. f., Ic. fl. Germ., XXI, 95, t. 192; Caruel in Parl., Fl. Ital., VIII, 354; Posp., Fl. öst. Küst., II, 194. — *Ligusticum austriacum* L., Spec. pl., 250 (1753); Jacqu., Fl. Austr., II, t. 151. *L. Gmelini* Vill., Prosp., 24 et Hist. pl. Dauph., II, 610, t. 13]. In saxosis, herbosis et fruticosis, graminosis, silvarum faucibus praecipue regionis subalpinae usque ad regionem *Pini mugho*. Floret m. Junio—Augusto.

Bosna: In montibus Osječnica (F., B.) et Klekovača (B., F.), Lisina pr. Sinjakovo (V.), Uilica (Ja., Wa.), prope Preodac (Ha.); circa Travnik (Br.): pr. Paklarevo in m. Vlašić (*S. 1848) et in m. Brezovača (V.), pr. Ovčarevo (Fr., Br.); in valle fl. Gostović 360 m (M.), inter Borovica et Vareš (S.); prope Ilidža (Fo. f. Borbàs), in declivibus montis Trebević (V.), in faucibus fl. Miljacka (B.); circa Pale, Rađonići et aliis locis, in m. Ravna:

pr. Dvorište, Gola Jahorina c. 1760m, Romanija, Treskavica alt. —1680m, prope Klis, in m. Veliki Žep (M.). — **Hercegovina** (*Asch. Kan., Cat., 68, 1877) ubi? Inter Orahovac et montem Visoka Glavica (*V. 1888).

23. Cachrys.

[L., Spec. pl., 246 (1753) et Gen., ed. V, nr. 304 em.; Link, Enum., I, 270 (1821); Koch, Umb., l. c., 136; Endl., Gen., 789; DC., Prodr., IV, 236; Benth. Hook., Gen., I, 904; Drude in Nat. Pflanzenf., III, 8, 173.]

Sectio: *Eucachrys.*

[DC., Prodr., IV, 236.]

1. *Cachrys laevigata* [Lam., Enc. meth., I (1783), 259; DC., Prodr., IV, 236; Bert., Fl. It., III, 454; Gren. Godr., Fl. franç., I, 751; Caruel in Parl., Fl. It., VIII, 237; Rouy in Rouy Camus, Fl. France, VII, 297. — *C. Morisonii* All., Auct. fl. Pedem., 23 (1789)]. In vinetis et declivibus lapidosis c. 200 m. Floret m. Majo.

Hercegovina: In vinetis et saxosis ad declives montis Stolac prope Mostar (Raap Callier, Pl. Herceg. nr. 79! sub *C. alpina* MB. f. Halácsy 1895; Baenitz, Herb. Eur., nr. 121 f. *B. 1898) c. 200 m.

Tribus: *Ammineae.*

[Koch, Umb., l. c., 114; Endl., Gen., 768; Benth. Hook., Gen., I, 862 et 866; subsect. *Euammineae* Benth. Hook., l. c. 862 et 866. — *Apiodeae-Ammineae-Carinae* Drude in Nat. Pflanzenf., III, 8, 175.]

24. Bupleurum.

[L. Spec. pl., 236 (1753) et Gen. ed. V, nr. 291; Koch, Umb., in Nov. act., Leop. Carol. XII, 1 (1824) 114; Endl., Gen., 772; Benth. Hook., Gen., I, 886; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 180; H. Wolff, Umb. in Engler, Pflanzenreich, IV 228 p. 36 (hic accuratiora ac literatura). Confer etiam: Timbal Lagr., Monogr. *Bupl.* in Mem. ac. sc. Toulouse 1881, 1884 et 1885; Čelakovsky in Öst. bot. Zeit. (1881) 382; Briquet, Mon. *Bupl.* des Alpes (1897), Wettst., Beitr. Fl. Alban. (1892) 48—58.] »Svinjac, prorašljika«.

Sectio: *Perfoliata.*

[Godr. in Gren. Godr., Fl. Franc., I (1848), 717; Briquet, Monogr. *Bupl.* Alp. mar. (1897), 59; H. Wolff, l. c., IV, 228, p. 40. — *Diatropa* Dumort., Fl. Belg. 76 (1827).]

1. *Bupleurum rotundifolium* [L., Spec. pl., 236 (1753) excl. β.; Koch, Syn. fl. Germ., ed. II, 321; Vis., Fl. Dalm., III, 37; Reich. f., Ic. fl. Germ., XXI, 19, t. 39, f. II; Boiss., Fl. Or., II, 836; Briquet, l. c., 59; Beck, Fl. Nied.-Öst., 623;

Posp., Fl. öst. Küst., II, 150; H. Wolff, l. c., 41]. »Prorašljika«. In satis agrisque, incultis, lapidosis. Floret mens. Junio, Julio.

Bosna: Prope Banja Luka (H.), Cazin-Ostrožac (F.), Varcar Vakuf, inter Varcar Vakuf et Sinjakovo (B.), prope Liskovica (Fo. f. V.), Jajce, ad Jezero fl. Pliva (B.); circa Travnik (*S. 1848, Fr. Br.); inter Kakanj, Bukovlje et monast. Sutjeska (*S.). In oppido Sarajevo et circa oppidum sicut prope Koševo, in valle fl. Miljacka (M.); prope Uvac (F.), Dobrun, Vardište —500 m et Strmica ad fl. Lim (M.). — **Hercegovina:** Prope Konjic (M.), Ostrožac (F.), prope stationem viae ferreae Rama et in valle fl. Rama, Sovići prope Doljani (F.); Mostar (Mu.), Bileća (P. f. *Grisebach 1874). Observata est f. *typicum* [H. Wolff, l. c., 42].

2. *Bupleurum subovatum* [Link apud Spreng., Umb. min. cogn. (1818), 19 et in Roem. Schult., Syst. veg., VI (1820) 365; Rouy Cam., Fl. Franc., VII (1901) 315; H. Wolf, l. c., 46. — *B. protractum* Hoffm. Link, Fl. Port., II (1820) 387; Reich., Ic. crit., IX, 8 f. 1112, 1113; Reich. f., Ic. l. c., 8, t. 39, f. I; Boiss., Fl. Or., II, 836; Vis., Fl. Dalm., III, 37; Posp., Fl. öst. Küst., II, 150]. »Zvinčac prosiljeno«. Inter segetes, in cultis, olivetis, lapidosis ditionis florum mediterraneae. Floret m. Majo, Junio.

Bosna: Prope Bočac ad fl. Vrbas (*Behrendsen 1905). — **Hercegovina:** Circa Mostar (Str.), in agro Mostarsko Polje prope Buna (Pichler!); prope Žitomišljici (M.); Liubuški (F. sub *B. rotundifolio* f. M.), prope Trebinje (P. f. *Grisebach 1874, V.), circa Pridvorci et Gomoljani (V.).

Sectio: *Longifolia*.

[H. Wolff, l. c., 38, 49.]

3. *Bupleurum longifolium* [L., Spec. pl., 237 (1753); Koch, Syn. fl. Germ., ed. II, 320; Reich. f., Ic. fl. Germ., XXI, 19, t. 40; Beck, Fl. Nied.-Öst., 623; H. Wolff, l. c., 50. — *Dia-phyllum longifolium* Hoffm., Gen. Umb., ed. II (1816), 114]. Inter frutices, ad silvarum margines, in silvis, lapidosis montanis usque ad regionem alpinam —2000 m. Floret m. Junio—Augusto.

Bosna: Prope Travnik (*S. 1848, Br.), in m. Vlašić (Fr. Br., B.), prope Vareš (Pr.), inter *Pinos mugo* in m. Bjelašnica, Hranisava, Treskavica, Gola Jahorina (M.). Ljubična 1900—2000 m (Schiller f. Hayek). — **Hercegovina:** Ad pedem montis Lisi Pl. (*V. 1890). Plantae nostrae pertinent ad var. *viride* [H. Wolff, l. c.; *B. coloratum* Schur, Enum. pl. Transs., 254 (1866). — f. *amblyophyllum* [H. Wolff, l. c. 51] cum involucelli phyllis purpurascensibus observavi in m. Vlašić (*B). Ibidem Brandis formam *platyphyllum* [Rouy et Cam., Fl. France VII 317] collegit foliis caulinis —7.7 cm latis (vidi).

Sectio: *Eubupleura*.

[Briqu., Mon. l. c. 52, 70 (1897); H. Wolff, l. c., 59. — sect. *Eubupleurum* Schur, Enum. pl. Trans., 252 (1866) sub *Eugupleurum*.]

4. *Bupleurum aristatum* [Bartl. apud Reich. Iconogr., II 70 (1824) excl syn. sed. t. 178 fig. 311 et in Bartl. et Wendl., Beitr., II (1825) 89; Koch, Syn. fl. Germ., 289 (excl. adn.), ed. II, 319; Visiani, Fl. Dalm., III, 36; Reich. f., Ic. l. c., 23, t. 47 fig. II, III et t. 48, fig. 1—7; Posp., Fl. öst. Küst., II, 150; Wettst., Beitr. Fl. Alban., 51 et in Kern. Fl. exs. austro-hung. nr. 2100. — *B. veronense* Turra, Fl. Ital. Prodr. (1780) 64 sec. Thellung; *B. odontites* Jacqu., Hort. Vind., III 47 t. 91 et aut. p. p. non Linné; v. *intermedium* Cesati in Linnaea XI (1837) 315; v. *Veronense* Pollini, Fl. Veron., I, 362 (1832). — *B. variabile* Bald. in Malp. V (1891), 70. — *B. divaricatum* Lam., [Fl. Franc., III (1778) 410] subspec. *aristatum* Briqu., l. c. 115 (1897); H. Wolff, l. c. 69. De *B^o odontites* et affinibus confer: Cesati in Linnaea (1837), 315; Timb. Lagr. in Mem. ac. Toul. (1883); Wettst. in Kern. Fl. exs. austro-hung., nr. 2100 et Beitr. Fl. Alb., 51—58; Reynier in Bull. soc. bot. France (1908) 7 et Chabert ibidem 437; Thellung in Journ. de bot. II (1909), 29—36 et Fl. adventice de Montpellier (1912) 397—399]. In aridis, collibus apricis graminosis, lapidosis, saxosis imprimis calcareis — 1200 *m*. Floret mens. Junio—Augusto (Sept.).

Bosna: In parte occidentali et australi vulgata. Prope Vranograč, Cazin (F.), Bihać (Boll.), in m. Mala Klekovača 7-800 *m* (Ha. Ja.), circa Glogovac (Sta. Fa.), Prusac prope Donii Vakuf 500—1100 *m* (Ha. Ja.), in agro Rilić Polje versus Malovan (*S. 1848), in m. Vel Malovan (Pr.), prope Nikolići, Jaklići ad m. Raduša Pl. (Sta.), Prozor (Sta.), in m. Kamešnica (Pr.), in jugo Prolog (*S. 1848), in m. Dinara (D., Ja., Va.), Troglav (Pr.), prope Preočaj, Strmac, Rore, Uilića (Ha. Ja.), Grahovo (Ha. Ja.), Drvar, Ribnik (Ha. Ja.), Oblaj, Marino brdo (Ja.), in monte Vel. Šator (Pr.), in agris Livanjsko Polje (Sta.), et Glamočko Polje (Sta.), prope Livno (Sta. Fa.), Glamoč (Ha. Ja.); Pašin Bunar prope Travnik (Fr. Br.) prope Zenica (Breindl!, Fo. f. V.), Visoko, Zbilje (Fo. f. V.), Kralupi, Vareš (Pr.); circa Sarajevo (Fo. f. V., Jetter, B.) sicut: prope Krupac (F.!) in m. Gradište (Paprenik), prope Bulozni (B.), in m. castello coronato (Fo.), in m. Trebević (V.), Vaganj — 1165 *m*, pr. Studenkovići 1045 *m* (M.), in valle fl. Koševo, Lapišnica, Mošćanica (M.), Miljacka (Fo.), in m. Glog, Gradina, Bukovik, Boriže (Fo.), prope Mrkojevići, Nahorevo — 1020 *m* (M.), Faletići (Fo.), prope Rusenovići, Rogatica (F.!), prope Kalinovik (Fo., B.), Gradina (Fo. f. V.); in m. Ručnik, prope Vlaholje (Fo.), in valle fl. Drina a Bastasi — Foča (B.), in valle fl. Sutjeska, prope Mješajići, Beleni (Pr.); in m. Crni Vrh prope Foča (Fo. f. V.), prope Čelebić — 1200 *m* (Schiller f. Hayek), prope Viševina (B.) prope

Višegrad, in valle Rama (M.). — **Hercegovina**: In jugo Ivan, in m. Lisin (V.), prope Dubočani, Borci ad lacum Boračko Jezero (M.), pr. Konjic (B.), in m. Vrabac (M.); Prenj Planina: In valle Idbar (B.), in m. Sivadija (Pr.), in m. Glogovo, Prislap; Kremenac supra Grabovica (V.); prope Ostrožac Jablanica (V.), in valle Doljanka (Sta.) et fl. Drežnica (Pr.), in declivibus m. Plasa (B.), prope Rakitno (V.); circa Liubuški (F.), Mostar (Jetter, B.), in m. Hum (Bornmüller, Fo., B.), Stolac (Raap Callier, Pl. Herc. 180!) Podvelež (Fo. f. V., B.), in agro Mostarsko Blato (Mu.), prope Blagaj (Str.), Buna (Wetschky), Šurmanci, Dretelj (M.), prope Nevesinje (V.), Bišina (M.), in declivibus m. Velež ad Nevesinje (Raap Call., Pl. Herc., nr. 182 f. *nanum*), in m. Busak Pl. (Fo. f. V.), Morinje, prope Plužine (Fo. f. V.); prope Stolac, Žegulja Karaula (Fo.), Ljubinje (Fo. f. V.); Ponikve (M.), Meka Gruda (Hawelka f. M.), circa Trebinje (P. f. *Gris. 1874 sub *B. odontites*; Seunik!, V.): prope Necvijeće, Grančarevo (P.), Carina, Pridvorci, in m. Hum, Glijiva (V.); prope Bileća, Trebesinje Han, Grab (V.), Arslanagića Most (B.); prope Ivanica (Dvořak), Sutorina (Ćurčić f. M.). — **Novi Pazar**: Inter Plevlje et Jabuka (*B. 1896).

Formae sequentes observantur:

f. *elatus* [Bartl., l. c. 98 pro var. H. Wolff, l. c. 70. — *typicum* Posp., l. c., 151]. Est planta normalis bene evoluta. Frequenter. Huc pertinent exsiccatae sequentes: Blau, Bosn. nr. 464; Bornmüll., Pl. Herc. nr. 182 (f. H. Wolff) 1528!, Raap Call., Pl. Herc., nr. 180!

f. *humile* [Vest ex Spreng. in Roem. Schult., Syst. VI (1820) 381 pro spec.; Bartl. in Bartl. et Wendl., l. c. 90, (1825); H. Wolff, l. c., 71; v. *nanum* Koch, Syn. fl. Germ., 289 (1837); v. *contracta* Vis., Fl. Dalm. suppl. I (1876), 106; f. *fastigiatum* Krašan in Öst. bot. Zeit. (1863), 390]. Est planta humilis cum partibus floralibus minoribus saepius congestis e solo arido aprico arenoso et in pascuis sterilibus et sterilissimis enata. Frequenter. Huc pertinent: Blau, Pl. Bosn. nr. 789 (f. H. Wolff); Raap Call., Pl. Herc., nr. 182!

Quid var. *varium* sit, quam Prodan circa Sarajevo sub cacumine Studeno Brdo montis Trebević et in m. Medved montium Čabulja Pl. reperit, nescio.

5. *Bupleurum Karglii* [Vis., Fl. Dalm., III, 35 (1850) sub *Kargli*; Reich. f., Icon. l. c., 22, t. 48 fig. I—II 8—12; H. Wolff, l. c., 73. — *B. longepetiolatum* E. Weiss in Verh. zool.-bot. Ges. (1866), 581. = *B. Kargli* var. Vis., Fl. Dalm. suppl. I (1876), 168. Confer Asch. in Öst. bot. Zeit. (1869), 174. — *B. aristatum* v. *Kargli* Griseb. apud Pant., Adnot. in Verh. Ver. Naturk. Pressb., Neue Folge II (1874), 78]. In lapidosis saxosis glareosis calcareis, declivibus dumetosis, silvis lapidosis, rarius in pratis, imprimis in regione montana et subalpina, 800—1800 m. Floret m. Julio, Augusto.

Bosna: Inter Zahum et fontem fl. Rama (Fr. Br.), in m. Raduša Pl. (*Br. 1890—1891!), in valle fl. Sutjeska (Pr.). — **Hercegovina**: (*Asch. Kan.:

Cat. 65 1877) Ubi? In monte Prenj Pl. versus Glogovo c. 1800 *m* (B.); in m. Porim infra Ploča (V.), Čvrstica prope Petralj (Bukalović f. M.), in valle Diva Grabovica (V.) et Narontis 140 *m* (M.), in agro Bijelo Polje (Zavodny), in declivibus m. Velež supra Potoci Han (V.), supra Sopilje 1600—1800 *m* (Mu.), supra lacum Jezero prope Nevesinje 1150 *m* (Raap Call., Pl. Herc., nr. 181!). In valle Koprivni do sub m. Štirovnik prope Konjsko 800 *m* (V.!); in monte Orijen 1400—1500 *m* (Latzel).

Formae sequentes observantur:

f. *strictum* [H. Wolff, l. c. 73]. Frequenter. (Etiam Raap Call., Pl. Herc. nr. 181 f. H. Wolff.) — f. *patulum* [H. Wolff, l. c. 74]. — **Bosna**: In m. Rađuša Pl. (Br.)! — **Hercegovina**: In m. Prenj Pl. (B.); fide H. Wolff hic pertinent: Blau, Pl. Bosn. nr. 1830 (Durmitor et Piva in Crna Gora); Knapp, It. bosn. nr. 124.

6. *Bupleurum junceum* [L., Spec. pl. ed. II, 343 (1762); Koch, Syn. fl. Germ., ed II, 319; Reich., Ic. crit., II, fig, 297; Reich. f., Ic. l. c., 22, t. 42, fig. II; Boiss., Fl. Or. II, 843; Wettst., Beitr. Fl. Alb., 52, t. III, fig 20—22, 32; H. Wolff, l. c., 80 — *B. Gerardi* Jacqu., Fl. Austr., III, 31 t. 256 p. p.; conf. Wettst., l. c. 48]. In saxosis, lapidosis, dumetosis, usque ad regionem subalpinam —1500 *m*. Floret m. Julio—Sept.

Bosna: Prope Sokolac pr. Bihać (Boller), Kluč (Fo. f. V.), supra castellum oppidi Travnik (Fr. Br.), prope Foča (Fo. f. V), in faucibus fl. Prača, pr. Rudo (M), Prolog (* S. 1848), Troglav (Pr), in valle fl. Rama (F.) in m. Volujak (Pr.). — **Hercegovina**: In m. Tovarnica (F.), in angustiis fl. Neretva prope Prenj ca 140 *m* (M.), in agro Bijelo polje (V.), prope Mostar in m. Podvelež, prope Blagaj (Fo. f. V. s. *B. exaltato*), Bakračuš (M.), in declivibus montis Velež 1300—1500 *m* (Mu.), prope Neuma Kula (Fo. sub. *B. affini* f. V.), circa Trebinje (P. f. *Gris. 1874), Radešići prope stationes Konjušnica, Konjsko (V.!).

Observata est α . *Wettsteinianum* [H. Wolff, l. c., 81 = ? *B. junceum* ssp. *Gerardi* (Jacqu.) Wettst., l. c., 51, in adnot., 53 (f. H. Wolff)]. Frequenter.

Ad hanc pertinent f. H. Wolff: Blau, Pl. Bosn. nr. 671 (Starigrad pr. Sarajevo) et Raap Call., Pl. Herc. nr. 266. et f. *multiflorum* [Velen., Fl. Bulg., 224 (1891); H. Wolff, l. c., 82] e **Bosna** (Knapp, It. bosn., nr. 130). **Hercegovina**.

β . *brachyphyllum* [H. Wolff, l. c., 82]

Hercegovina: In dumetis circa vicum Radešići prope castellum Konjsko (V.! f. *B.).

7. *Bupleurum commutatum* [Boiss. Bal. in Boiss., Diagn., ser. II, 6 (1859), 75; Boiss., Fl. Or., II, 844; Panč., Add. fl. Serb., 155; Wettst., Beitr. Fl. Alb., 52, t. III, f. 29—31, 35; Hal., Consp. fl. graec., I, 692; H. Wolff. l. c. 83]. In agris,

vinetis, lapidosis, saxosis, graminosis, inter dumeta. Floret m. Julio, Augusto.

Bosna: Kajabaša prope Travnik (Br. sub *B. junceum* f. *B.), in saxosis prope Krupac (F. f. *B.); Sarajevo in m. castello coronata (B.).
Hercegovina: In m. Plasa Pl. (F. f. B.).

Plantae floriferae vel defloratae ad v. *pachnospermum* [Pančić, Fl. princ. Serb. 329 pro spec.; H. Wolff, l. c. 85. — *B. Gerardi* Jacqu. et aut. p. p. et v. *glaucocarpum* Borbás in Termész. füz. XIX (1898) 221 in adn. — *B. sparsum* Degen in Kern. Fl. exs. austro-hung. nr. 3278 = *B. affine* v. *sparsum* Simonk. in Term. füz. IX (1885), 343] pertinent.

8. ? *Bupleurum affine* [Sadler, Fl. com. Pest., I, 204 (1825); Koch, Syn. fl. Germ., ed. II, 318; Boiss., Fl. Or. II, 845; Pančić, Fl. Serb., 328; Reich. f., Ic., l. c. 22 t. 46, fig. II; Beck, Fl. Nied.-Öst., 624; H. Wolff, l. c., 95, fig. 12 A. — *B. Gerardi* Jacqu. Herb. et aut. p. p.; Reich., Ic. crit., II, 55. p. p. fig. 294, 295; v. *affine* Wohlf., Syn. Deutschl. Fl., 1060]. In aridis, apricis, graminosis, pascuis, inter frutices. Floret m. Julio—Sept.

Bosna: Plantae indicatae collectionis: B. Br. F. ad *B. commutatum* pertinent. **Hercegovina:** Prope Trebesin (*V. 1888) Non vidi. — Confer praeterea H. Wolff [l. c.] 194.

9. *Bupleurum tenuissimum* [L., Spec. pl., 238 (1753); Reich., Ic. crit., II, 58, f. 298; Reich. f., Ic., l. c., t. 50 f. II; Beck, Fl. Nied.-Öst., 623; H. Wolff l. c., 100]. In aridis apricis arenosis, pascuis, salsis. Floret m. Julio—Sept.

Bosna: In locis lutulentis prope Banja Luka (*C. 1888) Non vidi.

Probabiliter Subsp. *eutenuissimum* [H. Wolff, l. c. 102] reperta est.

10. *Bupleurum ranunculoides* [L., Spec. pl., 237 (1753) em.; Reich., Ic. crit. IX, 8; Reich. f., Ic. l. c., 21, t. 45 f. II, III; Briqu. Mon. l. c. 77; H. Wolff, l. c., 113]. In alpinis saxosis —2000 m. Floret Augusto.

Bosna: In montibus Treskavica (*Blau 1877), Maglić, Volujak (Pr.).

Variet:

α. genuinum [Godr. in Gren. Godr., Fl. franc. I (1848), 719; H. Wolf, l. c. 114].

subvar. *obtusatum* [Lapeyr. Suppl. hist. Pyr., (1818), 42 pro spec.; Briqu., l. c., 83; H. Wolff, l. c., 114].

Bosna: Blau, Pl. Bosn. nr. 2284, 2285 (Treskavica Pl.), f. H. Wolff (f. *majus* H. Wolff, l. c., 115).

subvar. *humile* [Gaud., Fl. Helv. II (1828), 383 pro var.; Briquet, l. c.; H. Wolff, l. c., 115; v. *humilius* Koch. Syn. fl. Germ. 290 p. p. — *B. angulosum* (L.) Reich. Ic. crit., IX, 6, f. 1102].

Bosna: In saxosis graminosis regionis superioris m. Maglić (*Rohlena 1912) in alpinis, —2000 m (*B. sub v. caricinum* DC.).

Var. *gramineum* [Vill., Prosp. pl. Dauph. (1779), 23 et Hist. pl. Dauph., II (1787), 575 pro spec.; Lapeyr., Hist. Pyr., 139 p. p.; H. Wolff, l. c., 118].

Bosna: In collibus prope Veliki Rađić (*Boller 1892) inter Krupa et Bihać. — **Hercegovina:** f. *Asch. Kan., Cat. 65 (1877) ubi?

?11. *Bupleurum falcatum* [L., Spec. pl. 237 (1753); Jacqu., Fl. Austr., II, 38, t. 158; Koch, Syn. fl. Germ., ed. II, 319; Reich. f., Ic. l. c., 21, t. 44 f. II, t. 79, fig. 1; Beck, Fl. Nied.-Öst., 624; subspec. *eufalcatum* [H. Wolff, l. c., 129] In lapidosis, apricis, aridis, saxosis solo calcareo. Floret mens. Julio—Sept.

Bosna: Saepius indicatum sed certe cum *Bi exaltati* formis commutatum [confer: Beck, Fl. Südbosn. VII in Ann. nat. Hofm. (1895), 204] sicut in monte Vel. Malovan (Pr.); prope Kralupi, Vareš (Pr.); circa Sarajevo in m. Draguljevac (Prodan), in valle fl. Miljacka (*Fo. 1890), loco Vlahinja in m. Bjelašnica (F.); Hajdenović prope Čajniče, Crni vrh prope Meštrovac c. 1600 m (Schiller f. Hayek). — Non vidi.

12. *Bupleurum exaltatum* [Marsch. Bieb., Tabl. prov. Casp. (1798) 113 et Casp. 166 app. nr. 30 ex Fl. taur. cauc., I, 204. — *B. falcatum* subsp. *exaltatum* Briqu., Mon. Bupl., em., H. Wolff, l. c., 134]. Foliis basalibus rosulatis nunquam ellipticis v. oblongis sed elongatis, cuneato ligulatis vel lineari-lanceolatis linearibus, nunquam petiolatis, fructibus majoribus ultra 4—5 mm longis, jugis magis carinatis subalatis a *B^o falcato* differt. In pascuis, pratis montanis, lapidosis, saxosis calcareis usque ad regionem alpinam —1800 m. Floret m. Junio—Julio.

Variat:

α. cernuum [Tenore, App. cat. hort. Neap. 38 et Fl. Nap. I, add. 332 et III 270 t. 125 pro spec.; Arcang., Comp. fl. ital., ed. II, 590 (1894); — *B. falcatum* subsp. *exaltatum* var. *cernuum* H. Wolff, l. c., 136. — *B. exaltatum* Koch, Syn. fl. Germ., ed. II, 319; Vis., Fl. Dalm., III, 36. — *B. gramineum* Godr. in Gren.

Godr., Fl. Franc., I, 72l.; Vis., Fl. Dalm., III, 36; Reich. f., Ic. l. c., 21, t. 43]. Foliis elongatis latioribus, basalibus basim versus angustatis subpetiolatis praestat, sed ubique in var. *Sibthorpiantum* transit.

Bosna: In m. Mala Klekovača (J.), Kamešnica (Pr.), Prolog, Vještica (Pr.), Troglav (B.), Uilica, Jedovnik (J. Ha.), Šator (J.) 1200—1750 m.; Pitome doline inter Podosoje et Na Podovi prope Glamoč (Sta. Fa.). — In m. Igman (B.), circa Sarajevo (B.), Luke pr. Petrovići (M), in m. Trebević (B.) cum β. — 1620 m (M); Bjelašnica (F. f. M.), Dumoš (Fo. f. V.), Kovani prope Rogatica (B.), in valle fl. Sutjeska prope Suha (B.), in m. Bregoč (Pr.), Vučevo ad m. Maglić (B.), Volujak (Pr.), Bijela Lijeska prope Ledići (B.). — **Hercegovina:** In jugo circa Umoljani (B.), in montibus Preslica (V.), Zvekuša, pr. Pričepe—Bigolje, Uzriječje (M.), Prislap (V.), Glogovo (B.), cum β., Porim (V.), Plasa, Čvrsnica (V.), prope Blagaj (Fo.); in colle Lednik prope Milanov odsjek (*V. 1888). — **Novi Pazar:** Prope Han Seljačnica, in valle fl. Lim prope Djurovo grad vel Jerina Gradina (*B. 1895). Hic pertinet f. H. Wolff: Blau, Pl. Bosn. nr. 1808 (m. Dumoš) transiens ad *Sibthorpiantum*.

β. *Sibthorpiantum* [Sm., Fl. Graec. prodr. I (1806) 170 et Fl. Graec. III (1819), 58, t. 264; Reich., Ic. crit. IX, 8, fig. 1111; Hal., Consp. fl. Graec., I, 687; Janch. in Öst. bot. Zeit. (1908), 296 pro spec. — *B. falcatum* subspec. *exaltatum* v. *Sibthorpiantum* H. Wolff, l. c., 138. — *B. baldense* Host, Syn. pl. Austr. (1797), 141; Waldst. Kit. Descr. ic. pl. rar. Hung., III (1812), 285, t. 257 non Turra. — ? *B. exaltatum* Vis., Fl. Dalm. III 36. — *B. gramineum* Fritsch, Exkurs. Fl. Öst., 413 non Vill.]. Foliis basalibus linearibus angustissimis, basi vix angustatis, fructibus 4—5 mm longis ab var. α aegre differt.

Bosna: In m. Prolog (Vis.), Troglav (B.), Jankovo Brdo, Sanči Brdo (Ja.), Gnjat (Ja. Wa.), prope Marica Košara (Ja. Wa.); Uilica (Ja. Wa.); Borova Glava (B.), prope Koprivnica Han (Br.). Inter Presjenica et Jasen (B.), in m. Trebević (B.). — **Hercegovina:** Prope Blaca (M.), in m. Prenj (Prodan), Obrlin (M.), Glogovo (B.); Plasa (F.!, Prodan); Čabulja Plan.: Medved, Vel. Vlajna (Prodan); Velež (B.), Orijen (Vis.). Probabiliter multae stationes sub var. α. enumeratae ad hanc varietatem pertinent.

γ. *diversifolium* [Rochel, Pl. Ban., 68, t. XXVIII, f. 57 (*B. heterophyllum* in icone); Reich. f., Ic. l. c. t. 44, fig. I pro spec. — *B. baldense* Baumg., Enum. Stirp. Transs., I 243 non al. — *B. caricifolium* Baumg. l. c. non Willd. — *B. falcatum* subsp. *exaltatum* var. *diversifolium* H. Wolff, l. c., 137; confer etiam Janchen in Öst. bot. Zeit. (1919), 259]. Caule minus ramoso, foliis caulinis basalibus latioribus, basim ampliatis egregium.

Bosna: In alpinis montis Radovina prope Veleniçi 1600 *m* et in m. Ljubična c. 2000 *m* (Schiller f. *Hayek 1915).

25. *Trinia*.

[Hoffm., Gen. Umb. (1812), 92, ed. II (1816), 92; Koch, Umb. (1824), 126; Endl., Gen., 769; Benth. Hook., Gen., I, 887; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 183; H. Wolff, in Pflanzenreich IV 228, 179. — *Apinella* Neck., Elem., I (1790), 191 nomen antiquius sed Congr. bot. 1905 sepositum.]

»*Srdiška*«.

Sectio: *Eutrinia*

[Drude. l. c., 183 pro subgen.; H. Wolff, l. c. 180. *Apinella* Baill., Hist. pl. VII (1880), 223, et sect. *Trinia* Hal., Consp. fl. Graec., I, 674 (1901).]

1. *Trinia glauca* [Dumort., Fl. Belg., 78 (1827); Reich., Ic. crit., V (1827), 25, f. 633; Reich. f., Ic. fl. Germ., XXI, 7, t. 29; Posp., Fl. öst. Küst., II, 138; H. Wolff, l. c., 180. — *Pimpinella glauca* L., Spec. pl., 264 (1753). — *P. pumila* Jacqu., Enum. Vind., 50 et Obs. 227 (1762); Fl. Austr., I, 19, t. 28; Linné Mant. II, 357. — *Seseli pumilum* L., Spec. pl., ed. II, 373 et 1680 (1763) p. p.? — *Pimpinella dioeca* L., Syst. ed. XIII (1774), 241. — *T. glaberrima* Hoffm., Umb. Gen., 93 (1812); ed. II, 93 (1816); Beck, Fl. Nied.-Öst., 618, Abb. 114, fig. 11. — *Trinia Henningii* Mert. Koch, Deutschl. Fl. II (1826), 446 vix Hoffm. et M. B. — *T. vulgaris* DC., Prodr., IV (1830) 103 p. p.; Koch, Syn. fl. Germ., 283; Vis., Fl. Dalm., III 29. — *T. pumila* Reich. in Mössl., Handb. Gewächsk., ed. II, 482 (1827) et Fl. Germ., 473 (1832). — *T. dioica* Gaud. Fl. Helv. II, t. VIII, fig. 1. — *Apinella glauca* Caruel in Parl., Fl. ital., VIII (1889), 503; Hal., Consp. fl. Graec., I, 674]. In pratis montanis, pascuis, locis lapidosis apricis, alpinis usque ad regionem alpinam — 2200 *m*. Floret m. Majo—Julio.

Bosna: [*Asch. Kan., Cat., 64 (1877)] Ubi? Prope Panjak juxta Vedro Polje circa Bihać (Boller). In m. Vel. Malovan, Kurlaj, Kamešnica. Vještića Gora (Fr.), Troglav (B.), Cincar c. 1800 *m* (B.); Borova Glava (B.) in m. Vlašić (Br.), loco Devečani (Fr. Br.); in m. Vranica Pl. culminibus Ločike (Mu.), Krstac (B.). Prope Vareš, Droškovac, Potoci (Pr). In m. Trebević prope Poov čajir 1380 *m*, Varda Pl. (M.), Bjelašnica (B.), Treskavica (B.), prope Suha in valle fl. Sutjeska (Pr.), in m. Bregoč (Pr.), Maglić (Pr.), Volujak (B.), Ljubična (Schiller f. Hayek) c. 2000 *m*; in m. Bijela Glavica montis Vran Pl. (F.). — **Hercegovina:** In m. Lisin (V.); Prenj (B.), Borašnica (D. in litt.), Mali Prenj (F.), Plasa (V.); Čvrstica (Prodan); Čabulja culm. Medved, Vel. Vlajna, Ošljar (Prodan); Zimlje gornje prope Rujšite (Baen.!?); in m. Crvanj 1400—1900 *m* (Mu.); Velež 900—1900 *m*

(Mu., B.); circa Trebinje in m. Gljiva (P. fide *Gris. 1874), Leotar (B.), Jastrebica (P. f. Gris.), Vučji zub, in valle Dobrido sub m. Prasa (V.).

Variat:

α . *euglauca* [H. Wolff, l. c. 181 pro subsp.]. Radix napiformis vel brevi-cylindracea fibrillis paucis apice instructa. Phylla involucri et involucelli desunt. Flores dioici v. polygami. Styli extus carinati. Pedicelli fructibus ovato subrotundis 2·5—3 mm longis 2—5 \times longiores. Pedicelli florum masc. exteriores flores conspicue longitudine superantes. Petala alba vel cum stylopodiis et stylis purpurescentia. Fructus nunc ovato-subglobosi nunc ovato-oblongi, maturi 2—4·5 mm longi.

Formae sequentes observantur.

f. *elatio* [Gaud., Fl. Helv., II (1828), 413, t. VIII. — Schinz Kell., Fl. Schweiz, 359 (1900). — *T. glaberrima* v. *stenocarpa* Rouy Cam., Fl. Fr., VII, 340 (1901), cum fruct. ovato-oblongis]. Planta major —50 cm alta et ultra. Caulis ramuli erecto-patuli supra basim modo orti, itaque caulis ad basim simplex. Sec. Gaudin stylopodia elongato-conica fide Rohlena (5. Beitr. Mont infra cit.) fructus 4—4·5 mm longi. Laciniae foliorum plantae feminae saepius longiores ac angustiores quam in planta masculina. Hinc inde.

f. *pumila* [Jacqu. l. c. — Synon. vide supra. — *T. glaberrima* v. *platycarpa* Rouy Cam., Fl. Franc., VII, 339. c. fruct. subglobosis]. Planta minor saepe pumila. Caulis ramuli sub divaricato-erecto-patuli, jam e basi caulis orti. Involucrum et involucellum 1—oligophyllum. Frequenter usque ad regionem alpinam.

Forma pedicellis fructiferis brevioribus fructus longitudine semper superantibus et externis iis 2—2·5 \times longioribus est f. *carniolica* [= *T. carniolica* Kern. mscpt. fide Janch. in Öst. bot. Zeit. LVIII (1908) 297 pro spec. — *T. pumila* Kern. Fl. exs. austro-hung. nr. 1350. — *T. glauca* subspec. *carniolica* H. Wolff l. c. 182]. Fide Janchen [l. c.] differt a *T. glauca* Dum. »radice cylindracea elongata, caule a basi divaricate ramosissimo, foliorum laciniis brevioribus nervo conspicue perductis, fructuum pedicellis brevioribus sed quam fructus semper brevioribus«. Sed radix nunc etiam napiformis (itidem H. Wolff, l. c) ut in formis enumeratis, in locis sterilibus, pascuis, alpinisque nunc napiformis ac brevius vel longius cylindracea fibrillis paucis saepe elongatis reperitur, quod etiam in planta typica ex Austria inferiore in pascuis enata observavi. Laciniae foliorum apud *T. glaucam* latitudine ac longitudine valde variant. Vidi typice filiformes et longiores ac latiores abbreviatis in f. *elatiore pumila*, praeterea, angustiores et latiores in f. *carniolica*. Forma *carniolica* imprimis in alpinis 1500—2200 m reperta est. **Bosna:** In alpinis dinaricis: Dinara (Ja. Wa., B.), Gnjat, Vel. Bat, Janski Vrh, Jankovo Brdo (Ja.-Wa.), Troglav (Ja. Wa., B.). In monte Vlašić (B.), Treskavica, Bjelašnica (B.), Maglić prope Ledenica —2200 m (Rohlena), Volujak (B.). **Hercegovina:** Prope Blaca (M.). In m. Lisin (M.), Prenj, Plasa (B.).

f. *durmitorea* [Rohlena 5. Beitr. Fl. Mont. in Sitz. böhm. Ges. Wiss. (1911), 50. — *T. vulgaris* var. Rohlena in Fedde, Rep. III (1906) 146 pro var.] fructibus majoribus c. 5 mm longis, 1.5—2 mm latis egregia (B.) in m. Velež reperta est (B.). Etiam m. Plješevica Croatiae et in pascuis prope Ginselsdorf Austriae inferiores observavi.

β. an f. *bosniaca* [G. Beck. — *T. glaberrima* v. *T. bosniaca* Beck, Fl. Südbosn. VII in Ann. nat. Hofmus., X (1895), 200]. Radix brevius vel longius cylindracea fibrillis paucis fusiformibus instructa vel tota fusiformis. Caules humiles ut in f. *carniolica* ramosi 2.5—23 cm alti. Lacinae foliorum anguste lineares saepius abbreviatae vix 0.5 cm longae nunc longiores — ultra 1 cm longae, vix 1 mm latae. Flores saepius polygami, omnes breviter pedicellati, primum plus minus congesti. Pedicelli fructiferi fructibus 2.5—3 mm longis semper conspicue breviores summo $\frac{3}{4}$ longitudinis aequantes. Styli extus non carinati. Involucelli saepe monophylli. Cetera ut in f. *carniolica* quacum formis intermediis conjungi videtur. Forma *bosniaca* ad *T^m Dalechampii* Janch. l. c. 298 (confer infra) propter defectum et jugorum secundariorum et vittarum vallecularium (sicut in Fl. Südbosn. l. c. enuntiavi) non pertinere potest, itaque errore d. Janchen et H. Wolff sub synonymis *T^{ae} Dalechampii* inserta est.

Var. an f. *bosniaca* adhuc observata est in **Bosna**: (*B 1895) In montibus Vlašić (B.), Treskavica (Beck, Pl. Bosn. Herc. nr. 40 p. p.), Vratlo, Maglić, Volujak (B.). **Hercegovina**: In. m. Bjelašnica, Prenj, Plasa, Velež (*B. 1895).

Sectio: *Triniella*.

[Calest. in Webbia I (1905) 146 p. p. pro gen.; H. Wolff, l. c. 187. — *Rumia* Boiss., Fl. Or., II (1872) 853 = *Trinia* sect. Drude in Engl. Prantl, Natürl. Pflanzenf., III 8 (1898) 183 p. p. pro subgen.]

2. *Trinia Dalechampii* [Janch. in Öst. bot. Zeitschr. LVIII (1908) 298; H. Wolff, l. c., 188 excl. syn. pr. p.; *T. vulgaris* γ. *Dalechampii* DC., Prodr., IV (1830) 104; v. *carniolica* Arc., Comp. fl. Ital., 271 (1882). — *T. carniolica* Kern. apud Rigo, Pl. Ital. IV (1898) nr. 370; Huter in Öst. bot. Zeit. (1905) 360; Calest. in Webbia I (1905), 147. — *Meum Dalechampii* Ten., Prodr. fl. Neap., p. XIX (1811)] nec in Bosna nec in Hercegovina crescit. *T. glaberrima* v. *T. bosniaca* G. Beck ad *T^{ae} glaucae* formas ducenda est. (Confer ibidem.) H. Wolff *T^m Dalechampii* ex Crnagora (Adamović) et Albania (Baldacci, Dörfler) enumerat. Non vidi!

Trinia Hoffmanni [Marsch. Bieb., Fl. Taur. Cauc., III (1819), 244; H. Wolff, l. c., 185] in territorio nostro non crescit. Planta montis Vlašić [Brandis in Dörfl., Herb. norm. nr. 2834] ad *T^m glaucam* pertinet.

Trinia longipes [Borb. in Sitz. ung. Ak. Wiss. XVI (1882) 8 et in Öst. bot. Zeit. (1882), 171; = *T. Kitaibelii* M. Bieb., Fl. taur. Cauc., III (1819), 246; forma H. Wolff, l. c. 187] a Prodan indicata (*1910) in m. Plasa Hercegovinae ex statione vix ad *T^m Kitaibelii* pertinere videtur, quae prae arida aprica regionis florum ponticae incolat. Probabiliter ad *Tae glaucae* formam *pumilam* ducenda sit, quae loco indicato observatur. Fide Borbás a *T. glauca* involucellis a *T. Kitaibelii* pedicellis longis differt.

26. Apium.

[L., Spec., 264 (1753) et Gen. ed. V nr. 329 (p. p.); Endl., Gen. 769; Koch Umb., 128; Beck, Fl. Nied.-Öst., 627. — *Apium* subgen. *Euapium* Benth. Hook., Gen., I, 888; Drude in Engl. Prantl, Nat. Pflanzenfam., III, 8, 185; sect. *Euapium* Paoletti in Fior. Paol. Fl. anal. d' Italia, II 161. Confer: Calesani, Consp. spec. Apii in Boll. soc. bot. Ital. (1905), 281.] »Celer«.

1. *Apium graveolens* [L. Spec., 264 (1753); Koch, Syn. fl. Germ., ed. II, 311; Reich. f., Ic. fl. Germ., XXI, 9, t. 13. fig. II; Vis., Fl. dalm., III, 28; Beck, Fl. Nied.-Öst., 627; Posp. Fl. öst. Küst., II, 147. — *Seseli graveolens* Scop., Fl. Carn., ed. II, I, 215. — *Sium apium* Roth, Tent., I, 128]. »Celer«. E ditone litorea mediterranea introducta saepe in hortis colitur. Floret m. Junio—Augusto. Planta culta radicibus bulbosis, carnis excellit [= v. *rapaceum* DC. Prodr., IV, 101 (1830). — *A rapaceum* Mill., Gard. dict., ed. 8, nr. 6 (1768)]. Bosna, Hercegovina.

27. Helosciadium.

[Koch, Umb. disp. 125 (1824); Endl., Gen., 769; Beck, Fl. Nied. Öst., 621; — *Apium* sect. *Mauchartia* Benth. Hook., Gen., I, 888 (1867). subgen. *Helosciadium* Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 185 (1897); sect. Paol. in Fiori Paol., Fl. anal. d' It., II, 161 (1900—1902.)] »Šutranka«.

1. *Helosciadium nodiflorum* [Koch, Umb. disp., 126 (1824) et Syn. fl. Germ., ed. II, 312; Vis., Fl. Dalm., III, 30; Posp., Fl. öst. Küst., II, 146. — *Sium nodiflorum* L., Spec., 251 (1753). — *Apium nodiflorum* Reich. f., Ic. fl. Germ., XXI, 10 t. 15 (1867); Caruel in Parl., Fl. It. VIII, 445. — *Seseli nodiflorum* Scop., Fl. carn., ed. II, I, 213]. In aquosis, fossis, fontanis. Floret m. Junio—Augusto.

Bosna: Circa Preodac et prope Glamoč (*Pr. 1900). — **Hercegovina:** Ad fl. Zašlap prope Grančarevo (P. fide *Grisebach 1874).

28. *Petroselinum*.

[Hill, Brit. Herb., 424 (1756); Hoffm., Gen. Umb. 163 (1814); ed. II, 78 (1816); Endl. Gen., 769; Koch, Umb., 127; Drude in Engl. Prantl, Nat. Pflanzenf. III 8 186. — *Carum* sect. *Petroselinum* Benth. Hook., Gen., I, 891 (1867); Beck, Fl. Nied.-Öst., 620. — *Apium* L., Spec. pl., 264 (1753) et aut. p. p.; sect. *Petr.* Calestani in Boll. soc. bot. Ital. (1905).] »Peršun, peršin«.

1. *Petroselinum vulgare* [Hill, Brit. Herb. (1756) 424. — *Apium petroselinum* L., Spec. pl., 264 (1753); Caruel in Parl., Fl. Ital., VIII, 438; — *P. hortense* Hoffm., Gen. Umb., 163 (1814); Reich. f., Ic. fl. Germ., XXI, 10, t. 16, f. II. — *P. sativum* Hoffm., Gen. Umb. 177; ed. 2 (1816), 78 et 219; Posp., Fl. öst. Küst., II, 143. — *Carum petroselinum* Benth. Hook., Gen. I, 891 (1867); Druce Brit. Pl., 31 (1908). — *P. petroselinum* Karst., Deutsch. Fl., 831 (1882). — *P. vulgare* Fritsch apud Janch. in Mitt. naturw. Ver. Wien. Univ. V. (1907) 96. — *Carum vulgare* Druce in Bot. exch. club rep. (1913), 439]. Frequenter in horticulis ad usum culinarium colitur, hinc inde culturae aufugit et quasi sponteque provenit. Floret mens. Junio—Julio. Bosna: (*Asch. Kan.). Hercegovina: (*Str.).

29. *Cicuta*.

[L., Spec. pl., 255 (1753) et Gen., ed. V nr. 316; Endl., Gen., 768; Benth. Hook., Gen., I, 889; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 187.] »Trubeljika, gugutva«.

1. *Cicuta virosa* [L., Spec. pl., 255 (1753); Reich. f., Ic. fl. Germ., XXI, 7, t. 12; Beck, Fl. Nied.-Öst., 619. — *Cicutaria aquatica* Lam., Fl. franc., III, 445 (1778)]. In fossis, paludibus, lacubus, aquis, ad rivulos planitiei. Floret mens. Julio, Augusto.

Bosna: Hactenus in paludibus prope Bos. Brod (*V. 1890).

30. *Ammi*.

[L., Spec. pl., 243 (1753) et Gen., ed. V, nr. 297; Endl., Gen., 771; Koch, Umbell. I. c., 122; Benth. Hook., Gen., I, 889; Beck, Fl. Nied.-Öst., 622; Drude in Engl. Prantl, Nat. Pflanzenf. III. 8. 189.] »Morač«.

1. *Ammi majus* [L., Spec. pl., 243 (1753); Vis., Fl. Dalm., III, 32; Sibth., Fl. Graec., III, 66, t. 273; Reich. f., Ic. fl. Germ., XXI, 18, t. 23; Beck, Fl. Nied.-Öst., 622; Posp., Fl. öst. Küst., II, 139. — *Apium ammi* Crantz, Stirp. Austr., III, 109. — *Apium ammi majus* Caruel in Parl., Fl. It., VIII, 439]. In ste-

rilibus, incultis at cultis, agris, vineis, arenosis in ditone florum mediterraneae. Floret m. Majo—Oct.

Hercegovina: (Asch. Kan., Cat. 64) ubi? Prope Ljubuški (F.), Lug, Čapljina (V.), Pridvorci juxta Trebinje (V.).

Variat:

tenuifolium [Brot., Fl. Lusit., L, 443 (1804); Röm. Schult., Syst., VI, 528. — *glaucifolium* L., Spec. pl., 243 pro spec. Desv., Journ., bot. III, 47 (1813—1814); Schinz Kell., Fl. Schweiz, 3. Aufl., II, 262; Drude, l. c., fig. 66].

Hercegovina: In agris prope Gnjilišta et Mogorjelo (*M. 1919).

In Dalmatia prope Dubrovnik etiam var. *pilosum* [Degen in Magy. bot. lapok (1910), 104] »caule foliis, involucro et inflorescentiae ramis sparse albopilosis« reperta est.

31. Ptychotis.

[G. I. Koch, Umb., l. c., 124 (1824); DC., Prodr., IV, 107; Endl., Gen., 770; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 189. — *Carum* sect. *Carvi* a Benth. Hook., Gen., I, 892 (1867); *Petroselinum* Reich. f., Ic. fl. Germ., XXI, 10.] »Mirod« /

1. *Ptychotis ammoides* [Koch, l. c., 125 et Syn. fl. Germ., ed. II, 313; Pospich., Fl. öst. Küst., II, 140. — *Seseli ammoides* Gouan, Ill. obs. bot. (1773), t. 16 non Jacqu. — *P. verticillata* Duby, Bot. Gall., 235 (1828); DC., Prodr., IV, 108; Desf., Fl. Atl., I, 260; Vis., Fl. Dalm., III, 30. — *Bunium ammoides* Ces. in Linnaea XI (1837), 323. — *Petroselinum ammoides* Reich. f., Ic. fl. Germ., XXI (1868), 11, t. 17, fig. I. — *Carum ammoides* Arc., Comp. fl. Ital. (1872) 274. — *Apium ammios* Caruel in Parl., Fl. Ital., VIII, (1889) 435. — *Ptychotis ammi* (L.) Hal. Consp. I (1901) 679]. In agris, vinetis, olivetis, lapidosis, saxosis apricis. Floret m. Majo—Julio.

Hercegovina: In regione Dubrava prope Sovići (F.), prope Trebinje (P. fide *Grisebach 1874), in monte Gljiva (V.).

32. Falcaria.

[Bernh., Syst. Verz. Erf. 117, 176 (1800); Host, Fl. Austr., I, 381 (1827); DC., Prodr. IV, 109; Benth. Hook., Gen., I, 892; Drude in Engl. Prantl, Nat. Pflanzenfam., III 8, 191 non Cav. — *Prionitis* Adans., Fam., II, 499 (1763); Delarb., Fl. Auv. ed. 2, 421 (1800); Beck, Fl. Nied.-Öst., 619. nomen antiquissimum! sed congressu bot. 1905 repositum. — *Drepanophyllum* Wib., Fl. Werth., 196 (1799); Hoffm., Umb., I, 109 (1814) p. p.; Koch Umb. l. c., 123 non A. Rich. — *Critamus* Bess., Enum. pl. Volh., 93 (1821); Endl., Gen., 770 non Hoffm.] »Srpak, srpica«.

1. *Falcaria sioides* [Asch. in Asch. Kan., Cat., 64 (1877); G. Beck, Fl. Hernst. Kl. Ausg. 208 (1884). — *Sium falcaria*

L., Spec. pl. 252 (1753); Jacqu. Fl. austr., III t. 257. — *Seseli falcaria* Crantz, Stirp., III (1767), 95. — *Drepanophyllum sio-ides* Wib., Fl. Werth., 196 (1799). — *F. vulgaris* Bernh., Syst. Verz. Erf., 176 (1800). — *Drepanophyllum agreste* Hoffm., Umb., I, 109. (1814). — *Bunium falcatum* M. B., Fl. taur. cauc. III, 207 (1819). — *Critamus agrestis* Bess., Enum. pl. Volh., 93 (1821). — *F. Rivini* Host, Fl. Austr., I, 381 (1827); Reich f., Ic. fl. Germ., XXI, 12, t. 21. — *Drepanophyllum falcaria* Desv. Fl. Anj. 248 (1827) f. Lois. — *Prionitis falcaria* Dum., Fl. Belg., 77 (1827); Beck, Fl. Nied.-Öst., 620. — *F. falcaria* Karst., Deutschl. Fl., 835 (1882).] In locis graminosis, sterilibus, lapidosis, agris, secus vias. Floret m. Julio, agosto.

Bosna: Prope Tarčin (*Pr. 1900). **Hercegovina:** In monte Glijiva prope Trebinje (*V. 1888).

33. Carum.

[L., Spec. pl., 263 (1753) et Gen., ed. V, nr. 327; Endl., Gen., 364; Benth. Hook., Gen., I, 890; Drude in Nat Pflanzenf., III 8, 191; *Apium* sect. *Carum* Calest. in Boll. soc. bot. It. (1905).] »Kumin, kim«.

Sectio: *Carvi.*

[Ludw. Inst, ed. II (1757) 134 pro gen.; DC., Prodr., IV, 115; sect. *Carum* L. pro gen.; Beck, Fl. Nied.-Öst., 620 — *Careum* Adans., Fam., II, 98 (1763).]

1. *Carum carvi* [L., Spec. pl., 263 (1753); Koch, Syn. fl. Germ., ed. II, 314; Beck, Fl. Nied.-Öst., 621; Posp., Fl. öst. Küst., II, 141; Wohlf., Syn. Deutsch. Fl., 1044. — *Apium carvi* Crantz, Stirp., III, 110 (1767); Caruel in Parl., Fl. It., VIII, 431. — *Bunium carvi* M. Bieb., Fl. Taur. Cauc., I, 211, Suppl. 206; Reich. f., Ic. fl. Germ., XXI, 14, t. 31 fig. II]. In pratis, pascuis, graminosis, incultis usque ad regionem alpinam (—2067 m). Floret m. Majo—Junio, in editoribus m. Julio.

Bosna: Vulgata sed hinc inde modo frequentior. Bania Luka (H.), Kupres, Šujica (Pr.), in m. Dinara (Degen), Glamoč, Preodac (Pr.); Travnik (*S. 1848, Br.), Fojnica (B.), Vareš, Potoci, Kralupi (Pr.), Tarčin (Pr.). In Bosna australi vulgata (B.), sicut in montibus Bjelašnica —2067 m (f. M.) pr. Garež 1570 m (M.), Treskavica (B., M. —1630 m) Trebević (B., M.), Crepolsko —1500 m, Bukovik (M.), circa Sarajevo (B., F. et alii) in valle fl. Miljacka (M.), in montibus Ozren, Vitez, Romanija (F. M., B.) in Zelen-gora (Pr.), prope Pale, Vlahovići, Vučja Luka (M.) et a. l. — **Hercegovina:** Rare. Visočica Planina: Prope Pribilje (M.). Prope Rujšće (A. Pichler!); Raduš prodo prope Trebinje (*P. fid. Grisebach 1874). — **Novi Pazar:** Prope Prijepolje (P. Zahlbruckner f. *Hayek 1906).

Praeter formas albifloras etiam formae floribus roseis observatae sunt. Forma *genuina* [Rouy Camus, Fl. France VII 357] involucris phyllis 0—3 frequentissima est.

34. *Bunium*.

[L., Spec. pl. 243 (1753) et Gen. ed. V nr. 298. non aut. plur. — *Bulbocastanum* Miller, Gard. dict., ed. IV (1754); Adans., Fam. pl., II, 97 (1763)?; = Schur, Enum. pl. Transs., 249 (1866). — *Bunium* sect. *Bulbocastanum* Gren. Godr., Fl. Franc., I, 730 p. p. — *Carum* sect. *Bulbocastanum* Koch, in DC., Prodr., IV, 115 (1830) et Syn. fl. Germ., 286 (1837), sect. *Bunium* Beck, Fl. Nied.-Öst., 620.] »*Topana*«.

Genus fructibus (valleculis univittatis etc.) *Cari* sed bulbo et embryone pseudomonocotyledonari egregium. [Confer Irmisch, Beitr. Morph. Pflanz., 17—26, t. III (1854) et Royer, Fl. Côte d'or 193; Briquet in Burnat, Fl. alp. mar., IV, 137.]

1. *Bunium ferulaceum* [Sibth. Sm., Prodr. I, 186 (1806); Vis., Fl. Dalm., III, 32; Reich. f., Ic. fl. Germ., XXI, 15, t. 34; Hal., Consp. fl. Graec., I, 672. — *B. ferulaefolium* Desf. in Ann. mus. XI, (1808) 275, t. 30 et Choix (1808), 55, t. 43. — *B. divaricatum* Cesati in Linnaea XI, 314 non Bert. — *Carum divaricatum* Koch, Syn. fl. Germ., 286 (1837). — *C. ferulaefolium* Boiss., Diagn. ser. I, X (1849) 22 et Fl. Or., II, 886. — *Bulbocastanum ferulaceum* Nym., Consp. (1879), 303]. »*Repica, Koprca*«. In cultis, satis, arvis, lapidosis, vinetis regionis florum mediterraneae. Floret m. Majo—Junio.

Hercegovina: Circa Mostar (Lindberg) et prope Trebinje (P. fide *Grisebach 1874).

Bunium bulbocastanum [L., Spec. pl., 243 (1753); Reich. f., Ic. fl. Germ., XXI, 15, t. 33; Beck, Fl. Nied.-Öst., 621. — *Carum bulbocastanum* Koch, Umb. in Nov. act. ac. Leop. Carol. XII (1824), 121 et in DC., Prodr., IV, 115 (1830). — *Bulbocastanum Linnaei* Schur, Enum. pl. Transs., 249 (1866)]. adhuc in terris nostris nondum observatum est.

35. *Wallrothia*.

[Spreng., Pugill., II, 52 (1815) Anleit., II 1 (1817), 640 (f. Pfeiffer); ed. II 2 (1818), 640 non Roth (1821); Roem. et Schult. Syst. VI (1820) 556; confer Beck, Fl. Südbosn. VII in Ann. nat. Hofmus. X (1895), 201. — *Bunium* Koch in DC., Prodr., IV (1830), 115 et Syn. fl. Germ., ed. II, 315 non L.!; Rouy Camus, Fl. Franc. VII, 349; Vis., Fl. Dalm., III 32; Sect. *Caroides* DC., Coll. mem. V, 14 p. p.; sect. *Eu-Bunium* Drude in Nat. Pflanzenf., III 8 (1898), 194. sed Paoletti in Fiori Paol., Fl. anal. d' Ital., II (1900—1902) 147 p. p. — *Ligusticum* sect. *Wallrothia* Reich. Consp., 143.

(1828). — *Carum* sect. *Bunium* Reich. f., Ic. fl. Germ., XXI, 15 (1867). — *Pimpinella* sect. *Bunioides* Benth. Hook., Gen., I, 894 (1867) confer notas!]

Genus a *Bunio* [L. non aut. plur. = *Bulbocastanum* Mill., Gard. dict., ed. IV (1754) = ? Adans., Fam., II, 97 (1763) — *Carum* sect. *Bulbocastanum* DC., Prodr., IV 115 (1830)] valleculis 2—4 plurimum 3 vittatis a *Caro* [L.] bulbo, valleculis plurivittatis et embryo pseudo-monocotyledoneo bene differt. Differentiae figurae lateris commissuralis parvi momenti sunt (confer Beck, l. c. 202).

1. *Wallrothia alpina* [Beck, Fl. Südbosn. VII in Ann. nat. Hofmus. X (1895), 201 pro subspec. *W^{ae} tuberosae* ampl. — *W. tuberosa* Spreng. ibidem. — *Bunium alpinum* W. K., Pl. rar. Hung. II (1805), 199, t. 182; DC., Prodr., IV, 117; Vis., Fl. Dalm., III, 33; — Confer: Briquet in Arch. des sc. phys. et nat. Genève, Mai 1902 et in Burnat, Fl. Alp. mar., IV, 143

Variat:

α. eualpina [G. Beck. — *Bunium petraeum* Ten. Fl. Neap. prodr., suppl. I in Fl. Nap., I (1811—1815) p. LX.; Cat. pl. 1813 p. 39. — *Ligusticum alpinum* Spreng., Syst. veg. I. 908 (1825). — *Wallrothia tuberosa* Spreng., Pug., II, 52 nr. 100 (1815) et Syst. veg. I. 908. — *W. tuberosa* subsp. *alpina* G. Beck, l. c., 201. — *B. alpinum* W. K. l. c.; Reich. f., Ic. fl. Germ., XXI, 15, t. 35 fig. III (fructu fig. 10 pessime depicto). Minor 3—30 cm altum. Foliorum laciniae appropinquatae, abbreviatae, lanceolato-lineares, mucronulatae carnosae, nervo unico oblecto perductae. Umbellae principales plurimum 5—6 radiatae sed etiam rarius — 10-radiatae, radiis floriferis brevibus, fructiferis umbellas 1—4 × longioribus, rigidis erecto-patentibus. Foliola involucelli ovato-lanceolata saepe subabrupte acuminata, pedicellis fructiferis internis fructu conspicue brevioribus, externis eos aequantibus vel paulo longioribus, omnibus incrassatis. Fructus 3—4 mm longi. Est planta locis apricis, siccis, lapidosis orta, imprimis in saxosis, lapidosis, glareosis regionis alpinae — 2350 m, in Crna Gora — 2400 m adscendens. Floret m. Junio—Julio.

Bosna: In montibus Borova Glava pr. Livno (B.), Cincar (B.) c. 1200 m, Treskavica (*B. 1887), Maglič, Volujak (Pr.). — **Hercegovina:** In montibus Prenj Pl. (V., F., B., Engler!) usque ad culmina Lupoglav 2102 m (V.) et Ortiš, 2123 m (B.); Čvrstica (V.), Plasa (*V. 1890, B.), Drinača (B.), Čabulja: in cac. Medved, Vel. Vlajna, Ošljak (Prodan); in valle Jazina, proxime Skočigrm pr. Lastva, pr. Glavska (M.).

β. *divaricata* [Bertol., Fl. Ital., III (1837) 222 excl. syn. pro spec. sub *Bunio*, non Ces. (1837)]. — *Bunium divaricatum* Bert; Reich. f., Ic. fl. Germ., XXI, 16 t. 35 fig. I, II. — *Bunium montanum* Koch, Syn. fl. Germ., ed. II, 315 (1843). — *Wallrothia tuberosa* Spreng. subsp. *montana* G. Beck, Fl. Südbosn. l. c., 201 conf. notas. — *B. alpinum* v. *montanum* Burnat, Fl. alp. mar. IV, 143 (1906); Malý in Glasn. zem. muz. XX (1908) 559.]. Major, plurimum supra 20 cm altum. Foliorum laciniae separatae, in foliis superioribus magis elongatae, lineares, mucronulatae, uninervii; umbellae principales 6–10-radiatae; involucelli foliola 5–8, lanceolata, acuminata, anguste scariose marginata, pedicellis breviora vel eos subaequantia. Radii fructiferi, subtenuis, 2–7 × umbellis longiores, erecto-patentes vel arcuato-patentes. Pedicelli fructiferi exteriores longitudinem fructus subattingentes — subduplo longiores. In locis humosis et lapidosis inter segetes, sub virgultis in silvis apertis in regione collina et montana, calcarea — 1200 m. Floret m. Majo—Julio.

Bosna: Prope Ljuša (Sta. Fa.), in m. Hrblijina (Pr.), Prolog (*F. 1896, Pr.), prope Preodac, Grkovac (Pr.), Tičevo inter Preodac et Grahovo 1080–1200 m (Ha. Ja.), Crni Lug (Ja. Wa.), supra Radlovići prope Grahovo (H.), in jugo Prokos (Ha. Ja.). Prope Tarčin (Pr.). — **Hercegovina:** Prope Rakitno (Begović f. V.), Bare in m. Čvrstica Pl. (A. Pichler!) in m. Čabulja (M.), in m. Hum (B., M.) et Stolac prope Mostar (Raap Callier, Pl. Herceg. nr. 76!), prope stationem Hum (M.), in m. Gljiva prope Trebinje, et prope Bileća (P. fide *Grisebach 1874), prope Arslanagića Most (B.), prope Viljuša ad confines Crna Gorae (Rohlena).

Hic pertinet: *B. tenuisectum* [Grisebach in Öst. bot. Zeit. XXIII (1873) 267 et in Pant., Adnot. in Verh. Ver. Naturk. Pressburg (1874) 77]. »*B. glabrum* tubere subglobo, caule gracili, tereti sesquipedali, flexuoso, superne ramoso; folio imo longe petiolato ternatisecto: segmentis primariis ad medium nudis tripinnatisectis ambitu ovato-oblongis, ultimis 1.5–2''' longis angustis lineari-acutis, foliis caulinis distantibus segmento medio folii imi conformibus; umbellis 6–9-radiatis; radiis arcuato-adscendentibus, involucri utroque polyphyllo; foliolis oblongo-lanceolatis, margine membranaceis, pedicellis involucellum subaequantibus, fructum (immaturum) ovato-oblongum aequilongis, stylis reflexis, stylopodio depresso aequilongis« (Grisebach). — »A *B. montano* Koch differt (f. Grisebach): foliorum segmentis extimis angustioribus, vix $\frac{1}{4}$ ''' latis brevioribus.

ribus et involucro majori 5—6 phyllo.« — Hercegovina: In saxosis montis Gljiva prope Trebinje, m. Majo (P. fide *Grisebach (1873). Nihil aliud est quam forma gracilis, umbrosa? foliorum laciniis angustissimis, umbellis involucro conspicuo praedita, quae non rare inter typum occurrit.

Bunium arcuatum [Grisebach in Öst. bot. Zeit. XXIII (1873), 267 et in Pantocsek, Adn. in Verh. Ver. Naturk. Pressburg (1874) 77]. »Glabrum tubere subgloboso, caule humili tereti, inferne flexuoso, palmari v. spithameo, folio imo longe petiolato ternatisecto; segmentis primariis bipinnatisectis ambitu ovato-oblongis, ultimis oblongo-linearibus acutis (2—3''' longis, 1/2''' latis), foliis caulinis divaricato-bipinnatisectis, superiorum segmentis longioribus; umbellis 5—7 radiatis: radiis gracilibus (1'' longis) demum arcuato-divaricatis, involucro oligophyllo brevi: foliolis lanceolatis margine membranaceis, involucello conformi, polyphyllo pedicellis duplo superato, his fructu duplo longioribus, stylis reflexis stylopodio aequilongis, fructu ovato-oblongo pedicello aequilongo (1''' longo), valleculis 2—3 vittatis.« — Differt f. Grisebach a simili *B° alpino* W. K. umbellae radiis longioribus demum divaricatis et fructu duplo breviori.

Hercegovina: In saxosis circa Trebinje et in Koristna Greda prope Vučja in Bijela Gora (P. fide *Grisebach 1873).

Ex descriptione (partim in longitudine pedicellorum repugnante) forma minor *Wallrothiae alpinae* varietatis β . *divaricatae* fructibus vix normalibus esse videtur, quae frequenter occurrit.

36. Pimpinella.

[L., Spec. pl., 263 (1753) et Gen., ed. V, nr. 328; Koch, Umb., l. c., 120; Endl., Gen., 771; Benth. Hook., Gen., I, 893 (p. p.); Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 195. — *Apium* sect. Calest. in Boll. soc. bot. Ital. (1905).]

Sectio: *Pančicia*

[Visiani in Sem. hort. bot. Patav. (1857) 9 et Pl. serb. pemptas in Mem. dell' ist. Venet., IX (1860), 168, t. VIII pro gen.; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 195 pro subgen.; G. Beck pro sect. — Jam Benth. Hook., Gen., I, 1008 ad *Pimpinellam* pertinere, pronuntiaverunt.]

Flores hermaphroditici vel germine sterili masculini. Involucris et involucelli foliola setacea 3—6. Sepala obsoleta. Petala inaequilonga, apice inflexo obtuso vel truncato obcordata cum laciniis saepe inaequalibus, alba. Fructus (3.5—4 mm longi,

2 mm lati 1·5—1·7 crassi) oblongo-ovoidei, mericarpiis in sectu transversali pentagonis, jugis omnibus aequalibus conspicue prominentibus obtusiusculis (eorum altitudine circa 2·5—3× crassitudinem pericarpium aequante), vittis vallearum 3—4 (5) in latere commissurae 2—3. Stylopodium subglobosum. Stylus initio nullus vel brevissimus, tardissime (petalis staminibusque delapsis) bene evolutus, extrorsum curvatus, stylopodium mericarpii longitudine aequans. Commissura $\frac{1}{3}$ lateris commissuralis aequans.

A sectione *Tragoselino* jugis modo elevatis et involucris involucellisque evolutis distinguitur [confer Beck, Fl. Südbosn. VII in Ann. nat. Hofmus. X (1895), 204].

1. *Pimpinella serbica* [(Benth. Hook.) Drude l. c., 195. — *Pančićia serbica* Vis. l. c.; Pančić, Fl. princ. Serbiae, 343]. In pratis subalpinis, locis herbosis, alpinis in regione subalpina et alpina montium 1000—2067 m. Floret Junio—Augusto.

Bosna: In m. Lisina pr. D. Vakuf (M.), Vranica Pl. prope lacum Prokoško Jezero (Schwarz!, M.), Stražica (B.). In montibus: Bielašnica —2067 m (M.), Tieskavica (*Blau, 1877; Beck, Pl. Bosn. Herc. exs. nr. 180) —1750 m (M.), Vratlo (Beck, Pl. Bosn. Herc., nr. 111), Trebević (Blau, B.), prope Dovlići 1000—1100 m, Babindol, Igman (M.), circa Drljevac (Blau i. M.), Vučja Luka 1260—1300 m (Blau; Fiala in Kern., Fl. exs. Austro-Hung. nr. 2923! M.). Ozren (Blau), Gola Jahorina —1600 m (M.), Vučja Brda prope Kalinovik (Blau), in Zelengora (Pr.), in m. Lelija (B.). in m. Maglić (B., Rohlena), Vučevo et in valle Blato Jezero (B.); Ljubična (B.); Radovina (Schiller, f. Hayek) c. 1600 m. — **Hercegovina:** In m. Ivan pl. c. 1100 m (F.), Preslica (V.), inter Ledići et Rakitnica (B.), prope Umoljani (Landauer et Sündermann), infra m. Viševica prope Klinja (M.), Pleće 1700 (R. f. M.), ca. Poljane sub m. Lebršnik (M.). — In **Crna Gora** finitima ad lacum Volujačko Jezero 1500 m (M.).

Sectio: *Tragoselinum*

[Adans., Fam. pl., II, 95 (1763); Moench, Meth., 99 (1794) pro gen.; DC., Prodr., IV, 119 (1830). Subgen. *Eu-Pimpinella* Drude Sect. Drude in Nat. Pflanzenf., III 8, 196. — *Pimpinella* Spreng., Umb. prodr., 35.]

2. *Pimpinella major* [Huds., Fl. Angl., 110 (1762); Jacqu., Fl. Austr., IV, 50, t. 396; Burnat Fl. alp. mar. IV, 146. — *P. saxifraga* γ. *major* L. Spec. pl., 264 (1753). — *P. magna* L., Mant., II, 219 (1771); Koch, Syn. fl. Germ., ed. II, 316; Vis., Fl. Dalm., III, 33; Beck, Fl. Nied.-Öst., 625; Posp., Fl. öst. Küst., II, 144; Reich. f., Ic. fl. Germ., XXI, 17, t. 27]. In pratis, fruticetis, silvis apertis. Floret m. Julio—Sept.

Bosna: Prope Banja Luka (*H. 1882), Hadžići (B.). — **Hercegovina:** In m. Vrabac prope Konjic (*Fo. 1890). — **Novi Pazar:** Prope Svetlo borje (*B. 1895).

3. *Pimpinella saxifraga* [L., Spec. pl., 263 (1753) excl. γ.; Koch, Syn. fl. Germ., ed. II, 316; Vis., Fl. Dalm., III, 34; Beck, Fl. Nied.-Öst., 626; Posp., Fl. öst. Küst., II, 144; Reich. f., Ic. fl. Germ., XXI, 17, t. 28]. »Bedrinac«. In pratis, pascuis, / locis arenosis lapidosis usque ad regionem subalpinam. Floret m. Julio—Octobr.

Bosna: Frequens in parte septentrionali et media (Fo.). In cacumine Krnin montis Kozara Pl. (B.); prope Banja Luka (H.). Inter Drinjača et Nova Kasaba, in valle fl. Jadar (J.). Prope Kupres, Šujica, in m. Vel. Malovan, Hrblijina, Kamešnica, Prolog (Pr.), Dinara (Degen) Troglav (B.), in m. Vitorog prope Pribelja (Sta. Fa.), pr. Grkovac, Gubin, Preodac (Pr.); Travnik (*S. 1848), Guvna, Dolac, in m. Vilenica (Fr. Br.), prope Fojnica (Pr.), Vareš (Pr.), Tarčin (Br. f. M., Pr.). In agro Sarajevsko Polje, prope Sarajevo, in m. Hum, Igman, Trebević (M.), pr. Hreša (M.), Brankovići in distr. Rogatica (F. f. M.); prope Goražde (Fo.), Brod ad fl. Drina (B.), Višegrad, Rudo (M.), in m. Vučevo montis Maglić Pl. (B.), prope Gornja Bara, in m. Volujak (Pr.). — **Hercegovina:** Prope Konjic, Jablanica (Fo.), in angustiis fl. Neretva (M.), prope Sušjesno, Plužine, Nevesinje, Mostar Domanovići, Stolac (Fo.). — **Novi Pazar:** Prope Jabuka (*B. 1895).

Variat:

α. *rotundifolia* [Scop., Fl. Carn., ed. II (1772), I, 208 pro spec.; Beck, Fl. Nied.-Öst., 626].

Vulgata imprimis in f. *typica* [G. Beck l. c. — *P. nigra* Willd. Fl. Berol. prodr. 110 (1787); conf. Rabenhorst in Flora (1836), 257 pro spec.; Koch, Syn. fl. Germ., 287 (1837) pro var. — v. *major* f. *integrifolia* Wallr., Sched., 124 (1822); v. *pubescens* Neilr., Fl. Nied.-Öst., 611].

β. *poterifolia* [Wallr., l. c., 123 sub *A. minor*].

Bosna: In faucibus riv. Lapišnica prope Sarajevo, in arce oppidi Sarajevo (*M. 1919).

γ. *neglecta* [K. Malý in Glasn. zem. muz. XXXI (1919), 81]. »Caule ramosissimo, folioso, subpubescente. Foliis caulinis maximis 1—2jugis, segmentis terminalibus subternatis. Foliolis obovato-cuneatis, plus minus dentato-crenatis, inferioribus plus minus paucis lobatis.« (Malý.)

Bosna: In m. Trebević (V. Čurčić f. M. 1919).

δ. *hircina* [Peterm., Fl. Lips., 227 (1838) = Asch. in Asch. Kan., Cat. corm. Serb., 64 (1877) = *P. hircina* Leers, Fl. Herb., 79 (1775). — ? *P. dissecta* Retz, Observ. III (1783), 30

= *P. saxifraga* var. Spreng. in Roem. Schult., Syst. VI, 386; Beck, Fl. Nied.-Öst., 626. Confer: Falck in Öst. bot. Zeit. (1870), 143. — *P. saxifraga* v. *major* f. *dissectifolia* Wallr., Sched., 123 (1822); Koch, Syn. fl. Germ., 287].

Bosna: Inter Putkovići et Tolovići (*S. 1848)

4. *Pimpinella alpina* [Host, Fl. Austr., I, 399 (1827); Wulfen, Fl. Nor., 366 (1858)]. — *P. saxifraga* subsp. *alpina* K. Malý in Glasn. zem. muz. 31 (1919), 81; — v. *alpestris* Spreng. in Roem. Schult., Syst., VI, 386 (1820); Mert. Koch, Deutschl. Fl., II, 436. — *P. alpestris* (Spreng.) G. Beck, Fl. Nied.-Öst., 626 (1892) hic confer differentias]. In locis lapidosis, saxosis, glareosis graminosis in regione alpina et subalpina montium — 1800 m. Floret m. Julio, Augusto.

Bosna: In culmine Vlahinja montis Bjelašnica (*F. 1896), In monte Dinara inter *Festucam pungentem* (Degen). — **Hercegovina:** In m. Prenj Pl. (B.), in declivibus graminosis montis Prislap- et Plasa Pl. (*V. 1890).

Variat:

α. genuina [Synon. supra citata]. Plurimum minor rarius — 35 cm altus. Caulis glaber. Foliola 5—13, minora, summo 16 mm longa. Vaginarum margo saepe puberulus. Umbellae radii 5—6 (7—13). Petala nunc subochroleuca nunc rubella := *erythrocephala* [K. Malý in Glasn. zem. muz. 21 (1919) 81].

Bosna: In m. Bjelašnica Pl. c. 1700 m (F. f. *M. 1919). — **Hercegovina:** In m. Prenj Pl. (B.) forsan f. *minor* var. *β*. ?

Hic (*P. alpina*) pertinet f. K. Malý [l. c.] *P. polyclada* [Adam. in Allg bot. Zeit. (1896), 117 et Fl. jugoist. Srb., 119 non Boiss. Heldr.].

β. erythrantha [G. Beck = *P. saxifraga* var. G. Beck, Fl. Südbosn., VII in Ann. nat. Hofmus. X (1895), 203; conf. Rohlena in Magy. bot. lap. (1907) 155 et in 5. Beitr. Fl. Mont. in Sitzungsber. böhm. Ges. Wiss. (1911), S.-A. 49]. Major — 35 cm altus, rarius minor; caulis glaber vel basi cum petiolis puberulus. Foliola foliorum inferiorum e basi cuneata rotunda, obtusa, grosse acriter serrata, cum dentibus subpungentibus, — 2 cm longa, illa foliorum caulinarum subpalmato-partita. Vaginarum os saepe paulo ciliatum. Umbellae radii (6) 7—10; petala rosea. Styli florescentiae tempore germina longitudine superantes. — Foliolis majoribus minus profunde palmato-partitis, dentibus brevioribus petalis roseis a typo differt.

Bosna: In monte Maglić, m. Augusto (*B. 1895, Rohlena).

Sectio: *Tragium*.

[Sprengel, Umb. Prodr., 26 (1813) pro gen.; DC., Fl. franç., V, 501 (1815) et Prodr., IV, 120 (1830); Endl., Gen., 772; Benth. Hook., Gen., I, 894; Drude in Nat. Pflanzenf., l. c., 196.]

5. *Pimpinella tragium* [Villars, Prosp. 24 (1779) et Hist. pl. Dauph., II, 605; Reich., Fl. Germ., 477; Vis., Fl. dalm., III, 34; Reich. f., Ic. fl. Germ., XXI, 17, t. 26. — *Tragium Columnae* Spreng., Umb. prodr. (1813). 26. — *Apium Tragium* Caruel in Parl., Fl. Ital., VIII (1888) 460. — *P. canescens* Lois., Notice (1810), 47, t. IV].

Hic inserenda sit:

Pimpinella hercegovina [Vandas, Další příspěvky in Progr. Obergymn. Kolin (1895) 20]. »Planta elata ramosa usque 50 cm alta, glaberrima, foliis radicalibus longe petiolatis, pinnatisectis, 3 - 5jugis, segmentis subcoriaceis, ambitu ovatis, basi saepius inaequali cuneatis, inferioribus manifeste bipartitis, partitione altera breviter petiolulata, ad medium fere fissa cum altera manifeste petiolata, saepissime trifida acute dentata; foliis caulinis inferioribus manifeste bipinnatisectis, laciniis fere linearibus, superioribus parum diminutis pinnatipartitis; umbellis 6—10radiis, radiis tenuibus; fructibus breviter tomentellis, ovato-oblongis apice attenuatis, eis *Pae tragium* Vill. duplo fere majoribus.«

Hercegovina: In fissuris rupium praed. Velež prope locum Jarac Kuk c. 1500 m dispersa; etiam in lapidosis sub cacumine Ploča in m. Porim Pl. c. 1200 m.

Sec. Vandas [l. c.] = *P. polyclada* [Boiss. Heldr., Diagn. ser. 2, II, 75 p. p.; Boiss., Fl. Or., II, 872]. var. *hercegovina* Vandas [l. c.], a typo differt glabritie, foliis magis divisius acutiusque dentatis fructibusque majoribus. Fide Rohlena [5. Beitr. Fl. Mont. in Sitzungsber. böhm. Ges. Wiss. (1911) S.-A. p. 49] = *P. tragium* v. vel. subsp. *hercegovina* (Vandas) Rohlena [l. c.] quae proles caule altiore et subglabro, foliis basalibus — 6jugis, foliolis longius petiolulatis (petiolulo interdum ultra 1 cm longo) profunde incisis saepius iterum pinnatis egregia.

Forsan eadem est cum v. *bipinnatisecta* [Griseb. apud Pantocs., Adn. in Verh. Ver. Naturk. Pressburg (1874) 78] quae »foliis imis bipinnatisectis« insignitur et in m. Sinjavina Crna Gorae reperta est.

6. *Pimpinella peregrina* [L., Spec. pl., 264 (1753); DC., Prodr., IV, 121; Jacqu., Hort. Vind., II, t. 131; Vis., Fl. Dalm., III, 34; Reich. f., Ic. fl. Germ., XXI, 16, t. 25 (fig. 5 fructus vix naturalis, ut jam Benth. Hook. [Gen., I, 895] praedicaverunt); Posp., Fl. öst. Küst., II, 145. — *P. hispida* Lois., Not. (1810) 48. — *Tragium peregrinum* Spreng., Umb. prodr., 26 (1813). — *Apium peregrinum* Crantz, Umb., 101 (1767); Caruel in Parl., Fl. It., VIII, 461]. In locis apricis, incultis, graminosis, inter virgulta aperta in ditione florum mediterraneae. Floret m. Junio—Aug.

Hercegovina: In agro Bijelo Polje prope Mostar (M.). Circa Trebinje (P. f. *Grisebach 1874), prope Pridvorci (V.), in Sutorina (M.).

7. *Pimpinella anisum* [L., Sp. pl., 264 (1753). — *Anisum vulgare* Gärtn., De fruct., I, 102, t. XXIII. — *Tragium anisum* Link, Enum. hort. Berol., I, 285. — *Sison anisum* Spreng., Umb. prodr., 35]. »Aniš, onliz, slatki koromač, slatki kumin, slatki januš.« Ex Aegypto in hortis modo olitoriiis hinc inde colitur. Floret aestate.

37. Aegopodium.

[L., Spec. pl., 265 (1753) et Gen., ed. V, nr. 330; Endl., Gen., 771; Benth. Hook., Gen., I, 893; Koch, Umbell., l. c., 122; Drude in Engl. Prantl, Nat. Pflanzenf., III, 8, 196. — *Podagraria* Hill., Brit. Herb., 406 (1756) = Adans., Fam. pl., II, 95 (1763); *Apium* sect. *Aegop.* Calest. in Boll. soc. bot. It. (1905)] »Jarčevac«.

1. *Aegopodium podagraria* [L., Sp. pl., 265 (1753); DC., Prodr., IV, 114; Koch, Syn. fl. Germ., ed. II, 314; Reich. f., Ic. fl. Germ., XXI, 18, t. 20; Vis., Fl. Dalm., III, 32; Posp. Fl. öst. Küst., II, 138. — *Sison podagraria* Spreng., Umb. prodr., 35. — *Apium podagraria* Caruel in Parl., Fl. ital., VIII, 467]. »Sedmolist.« In locis humidis humosis, ad sepes, sub frutices, in silvis apertis usque ad regionem subalpinam (—1600 m). Floret m. Majo—Julio.

Bosna: Prope Doboj (V.); Prosjek, Zlohanje (J.). Circa Krupa (Fo.), in m. Gomila (B.), Debeljača prope Bihać (B.), in m. Šiša prope Kluč (B.), prope Bugojno, Kupres, Grkovac, Gubin (Pr.), in jugo Presedlo pr. Podgorje (Sta. Fa.). Circa Travnik (*S. 1848, Br.!), Putičevo (Fr. Br.), in m. Vranica (M.), pr. Fojnica (S.), Zavidovići (M.), Zenica (S.), Vareš (Pr.), Tarčin (Pr.). Circa Sarajevo (B.), Dovlići (M.), Pale (Pr.), in m. Bukovik, Trebević —1600 m, Ozren (M.), Igman, Treskavica (F.), Gola Jahorina (Pr.), Romanija (B.), prope Trnovo, Kalinovik (Pr.), in Zelengora (Lakatos! f. M.),

pr. Prebila (Pr.), in faucibus Prača (M.), in valle fl. Sutjeska prope Suha (B.), pr. Rusenovići et in m. Stolac (F.), pr. Foča (Pr). — **Hercegovina** (*Asch. Kan., Cat. 64). In m. Preslica (*V. 1890).

Variat:

baldense [Evers in Verh. zool.-bot. Ges. 46 (1896), 72].

Bosna: In monte Trebević prope domum saltuarium superiorem (*M. 1908).

38. Sium.

[L., Spec. pl., 251 (1753) et Gen. ed. V, nr. 310; Benth. Hook., Gen. I, 893 omnes p. p. — sed Mert. Koch, Deutschl. Fl., II, 431 (excl. *S. sisarum*); Endl., Gen. 772; Beck, Fl. Nied.-Öst., 627. — *Sium* subgen. *Eu-Sium* Drude in Engl. Prantl, Natürl. Pflanzenfam., III, 8, 197 (1898); sect. *Sisarum* DC., Prodr., IV, 124; sect. *Sia genuina* Koch, Syn. fl. German., ed. II, 317.]
»Hrenak«.

1. *Sium latifolium* [L., Spec. pl., 251 (1753); DC., Prodr., IV, 124; Koch, Syn. fl. Germ., ed. II, 317; Vis., Fl. Dalm., III, 35; Posp., Fl. öst. Küst., II, 148; Beck, Fl. Nied.-Öst., 628; Reich. f., Ic. fl. Germ., XXI, 13, t. 36. — *Cicuta latifolia* G. M. Sch., Fl. Wett., I, 391]. In paludibus, fossis, ad ripas. Floret m. Julio, Augusto.

Bosna: Prope Bos. Brod (V.); Vranograč (*F. 1896), Šujica, Glamoč, Tarčin (Pr.). — **Hercegovina:** Hutovo Blato (M.).

39. Berula.

[Koch in Mert. Koch, Fl. Deutschl., II, 433 (1826); Endl., Gen., 772; Beck, Fl. Nied.-Öst., 628. — *Sium* subgen. *Berula* Drude in Engl. Prantl, Natürl. Pflanzenf., III, 8, 197; sect. *Berula* (Koch) DC., Prodr., IV, 125.]

1. *Berula erecta* [Coville in Contr. U. S. Nat. Herb. IV (1893) 115; III (1895), 160. — *B. angustifolia* Mert. Koch, l. c.; Reich. f., Ic. fl. Germ., 14. t. 37; Beck, Fl. Nied.-Öst., 628; Posp., Fl. öst. Küst., II, 147. — *Sium latifolium* β. L., Spec. pl., ed. II, 361 = *S. angustifolium* L., l. c., 1672 (1763); Vis., Fl. Dalm., III, 35. — *S. erectum* Huds., Fl. Angl., 103 (1762). — *Apium Sium* Crantz, Stirp., III (1767), 106. — *A. Berula* Caruel in Parl., Fl. It., VIII (1888), 463]. In locis humidis, fossis, rivulis, fontibus, ad ripas in paludibus. Floret m. Julio, Augusto.

Bosna (*Asch. Kan., Cat. 65, 1877) ubi? Prope Vranograč (F.), Banja Luka (H.), prope Krupa (Fo. sub *S. latifolio* f. V.), Šujica, Preodac (Pr.), inter Suhare et Prusac pr. Donji Vakuf (Ha. Ja.); circa Travnik (Fr. Br.), Fojnica (Pr.), Vareš pr. Potoci ed ad fl. Stavnja pr. Pajtov Han (Pr.), circa Tarčin (B., Pr.), prope Ilidža, Vrelo Bosne, Blažuj, Osijek (M.).

СРПСКА КРАЉЕВСКА АКАДЕМИЈА

ПОСЕБНА ИЗДАЊА

КЊИГА LXIII

ПРИРОДЊАЧКИ И МАТЕМАТИЧКИ СПИСИ

КЊИГА 15

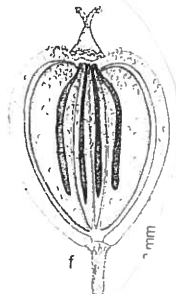
PART 6.

ФЛОРА

БОСНЕ, ХЕРЦЕГОВИНЕ И ОБЛАСТИ
НОВОГА ПАЗАРА

НАПИСАО

Проф. DR. ГИНТЕР БЕК-МАНАГЕТА



БЕОГРАД-САРАЈЕВО

ДРЖАВНА ШТАМПАРИЈА У САРАЈЕВУ

1927

ЦЕНА 60 ДИНАРА

СРПСКА КРАЉЕВСКА АКАДЕМИЈА

FLORA

BOSNAE, HERCEGOVINAE ET REGIONIS
NOVIPAZAR

III. CHORIPETALAE
(FINIS)

ФЛОРА

БОСНЕ, ХЕРЦЕГОВИНЕ И ОБЛАСТИ НОВОГА
ПАЗАРА

III. ХОРИПЕТАЛЕ
(КРАЈ)

НАПИСАО

PROF. DR. GÜNTHER BECK-MANNAGETTA
(У ПРАГУ)

*Prof. Manesja Bojko
апоменеу
Београд 1934 год.*

БЕОГРАД-САРАЈЕВО
ДРЖАВНА ШТАМПАРИЈА У САРАЈЕВУ

1927

Tribus: *Seselineae*.

[Koch, Umb., l. c., 102; Endl., Gen., 773; Benth. Hook., Gen., I, 862 et 868 et aut. — Trib. *Apioideae-Ammineae-Seselinae* Drude in Nat. Pflanzenf., III 8, 198.]

40. *Crithmum*.

[L., Spec. pl., 246 (1753) et Gen., ed. V, nr. 303; Koch, Umb., l. c., 102; DC., Prodr., IV, 164; Endl., Gen., 777; Benth. Hook., Gen., I, 905; Drude, in Engl. Prantl, Nat. Pflanzenf., III, 8, 201.]

1. *Crithnum maritimum* [L., Spec. pl., 246 (1753); DC., Prodr., IV, 164; Jacqu., Hort. Vind., II, t. 187; Vis., Fl. Dalm., III, 46; Koch, Syn. fl. Germ., ed. II, 329; Reichenb. f., Ic. fl. Germ., XXI, 30, t. 59; Posp., Fl. öst. Küst., II, 164. — *Cachrys maritima* Spreng. in Schult., Syst., VI. 442 et Umb. prodr. 20].
»Petrovnjak, petrak, Petrovo zelje, motar, motrika«. In saxis scopulis et arenosis litoreis maritimisque ad mare Adriaticum. Floret m. Julio—Sept.

Hercegovina (*Asch. Kan., Cat., 66, 1877) ubi? Inter Igalo et Njivice (V.) et ad fines **Dalmatiae**: Prope Igalo (Pr.).

41. *Seseli*.

[L., Spec. pl., 259 (1753) et Gen., ed. V, nr. 322; Koch, Umb., l. c. 109; DC., Prodr., IV, 144; Endl., Gen., 774; Benth. Hook., Gen., I, 901; omnes p. p.; Beck, Fl. Nied.-Öst., 635; Drude in Nat. Pflanzenf., III, 8, 201. Confer: Calestani: Consp. europ. Seseleos in Boll. soc. bot. It. (1905) 185 n. v.]

»Seselika«.

Subgenus: **Euseseli**.

[Koch, Umb., l. c., 109; Drude, l. c., 202; *Seseli* aut. pro max. parte.]

Sepala conspicua, parva. Valleculae fructuum univittatae (hinc inde sed rare abnormiterque vittae duae et sub jugis singulae reperiuntur). Vittae commissurales 1+1. Jugae carinato-prominentes. Mericarpia saepius latiora quam alta. Involucra nulla vel oligophylla.

Sectio: *Hippomarathrum*.

[DC., Prodr., IV, 144 (1830) p. p.; rectius Koch., Umb., l. c., 109 et Syn. fl. Germ., ed. II, 324. — sect. *Hippomarathroides* Drude, l. c., 202 non DC. — *Hippomarathrum* Gärtn. Mey. Scherb., Fl. Wett., I, 249 et 413 (1799) non al.]

Folia involucelli plus minus connata.

1. *Seseli rigidum* [Waldst. Kit., Descr. et Ic. pl. rar. Hung., II (1805), 156, t. 146; DC., Prodr., IV, 145; Reich., Fl. Germ., 467; Neilr., Diagn. Ung., 54; Reich. f., Ic. fl. Germ., XXI, 31, t. 70]. »Devesilje«. In saxis et saxosis. Floret m. Julio et Augusto.

Bosna: In m. Grad prope Zvornik (J.) et australem versus (Wettst. f. Hayek); in reg. flum. Gostović, solo calcareo et serpentino 400—1050 m, in valle Dubošćica (M.); prope Žepče (B.). Circa Sarajevo in faucibus fl. Miljacka (B.), Lapišnica, circa Gradina infra m. Siljevina (M.), in declivibus montis Trebević, in m. Lipovac (Starigrad) (B.), Gradina (M.), inter Mrezava et Bulozii (B.), in angustis fl. Željeznica, Kasidolski Potok (M.); in valle riv. Vogošća (B.), in monte Borije, Gradište (M.), Romanija Pl. (R. Keller! f. B.), in faucibus Prača (M.), Suhi dol pr. Višegrad (M.), prope Ponor Rakitnica juxta Rogatica (F.), in faucibus Rzav et Razdolina prope Dobrun (M.), ad riv. Jelovčev pr. Zlatnabor (Hum) (Bucalović f. M.), in m. Grad prope Goražde, in valle Sutjeska imprimis pr. Suha (B.); in m. Maglić versus Mratinje (Rohlena). — **Hercegovina**: In valle fl. Trešanica (Bl., M.), prope Ostrošac (M.), Konjic (*Landauer et Sündermann! M.) ad ostia riv. Ljuta.

f. *intermedium* [Degen in Magy. bot. lap. IV (1905), 126]. A *S. rigido* typico valleculis 1—2vittatis, lateribus commissuralibus 4vittatis distinguitur, propterea formam intermediam inter *S. rigidum* W.K. et *S. serbicum* [Degen in Öst. bot. Zeit. (1898) 122] apparet, quod ultimum valleculis 3vittatis et lateribus 6vittatis excellit.

Bosna: In faucibus riv. Lapišnica prope Sarajevo (M. 1908).

Sectio: *Euhippomarathrum*.

[G. Beck. — *Hippomarathrum* Duby in DC., Bot. Gall., I, 234 (1828), non Link; *Euseseli* sect. *Seselia genuina* Drude in Nat. Pflanzenf., III, 8, 202; Sect. *Euseseli* DC., Prodr., IV, 145 (1830); Endl., Gen., 775.]

Folia involucelli libera.

?2. *Seseli tortuosum* [L., Spec. pl., 260 (1753); ed. II, 373; Vis., Fl. Dalm., III, 43; Reich., Fl. Germ., 467; DC., Prodr., IV, 147; Wohlf., Syn. deutsch. Fl., 1075; Reich. f., Icon. fl. Germ., XXI, 34, t. 65; Paoletti in Fiori Paol., Fl. anal. d' Italia, II, 168; Posp., Fl. öst. Küst., II, 159; Caruel in Parl., Fl. it., VIII, 315]. In saxosis et graminosis apricis regionis florum mediterraneae. Floret m. Augusto—Sept.

Hercegovina: In monte Podvelež prope Mostar (Ja., sed. ? fide Hayek 1915).

Nota di Formánek hanc speciem in Bosna prope Kluč crescere, Vandas [Rel. Form., 235] corrigavit hujus modo *S. glaucum* L. subesse. Etiam notam, eam in m. Gredoviti Vrh montis Grmeč Pl. a d. Boller collectam esse, falsam esse, puto.

3. *Seseli annuum* [L., Spec. pl., 260 (1753) p. p.; Jacqu., Fl. Austr., I, t. 55; Reich. f., Ic. fl. Germ., XXI, 33, t. 66; Beck, Fl. Nied.-Öst., 636; Wohlf., Syn. Deutsch. Fl., 1076. — *S. bienne* Crantz, Stirp. Austr., III, 204 (1769); Reich., Fl. Germ., 467; Rouy Cam., Fl. France, VII, 271. — *S. coloratum* Ehrh., Herb. Linn., nr. 113 et Beitr., V (1790), 179; DC., Prodr., IV, 147; Koch, Syn. fl. Germ., ed. II, 325; Posp., Fl. öst. Küst., II, 159; Caruel in Parl., Fl. It., VIII, 317]. In graminosis aridis, pascuis, pratis montanis, locis saxosis lapidosis fruticosis. Floret m. Augusto—Octobr.

Bosna (*Asch. Kan., Cat., 65) ubi? In m. Kozara pr. Prijedor (Bl. f. M.); prope Banja Luka juxta stationem viae ferreae (C.); pr. Kadina Voda (H.). Circa Petrovac (Fo.), in m. Hrblijina, Prolog, circa Vaganj, Grkovac (Pr.); in colle Tarabovac pr. Travnik (Fr., Br.!) et circa Travnik (Br.), Večeriska (M.); in faucibus fl. Miljacka pr. Sarajevo, in m. Koran pr. Pale, Bare, Trčine (M.), circa Vlaholje (Pr.), Vaganac et in m. Kmur (Fo. f. V.), in valle fl. Drina pr. Višegrad (M.). — **Hercegovina** (Sec. *Asch. Kan., Cat., 65) ubi?

4. *Seseli montanum* [L., Spec. pl., 260 (1753); Reich. f., Ic. fl. Germ., XXI, 33, t. 64; Wohlf., Syn. deutsch. Fl., 1074; Rouy Cam., Fl. Franc., VII, 270. — *S. multicaule* Jacqu., Hort. Vind., II, 59, t. 129 (cultum). — ?*S. glaucum* L., Spec. pl., 260 (1753); confer Burnat, Fl. Alp. mar., IV, 156]. In pascuis siccis et locis saxosis, glareosis. Floret m. Sept.—Oct.

Bosna: Circa Vareš, in m. Droškovac, sub Kralupi versus Pajtov Han (*Pr. 1898). Probetur. — **Hercegovina** (*Asch. Kan., Cat., 65) ubi?

5. *Seseli Tommasinii* [Reich. f., Ic. fl. Germ., XXI, 34, t. 204 (1867); Wohlf., Syn. deutsch. Fl., 1075; Posp., Fl. öst. Küst., II, 158; Freyn, Fl. Südistr., in Verh. zool.-bot. Gesell., XXVII (1877), 343. — *S. montanum* Koch, Syn., Fl. Germ., 295 et ed. II., 325 et Vis., Fl. Dalm., III, 42 (p. p.?). — α . *typicum* b. *Tommasinii* Paol. in Fiori Paol., Fl. an. d' Ital., II, 167]. In pascuis aridis, locis saxosis, lapidosis et terrenis-lutosis solo »terra rossa« ac silvaticis dumetisque. Floret m. Aug.—Octobr.

Bosna (*Asch. Kan., Cat. 65) ubi? In monte Cincar alt. 1150 m (B.), Uilica a. 900 m (Ha. Ja.), prope Višegrad frequens (M.). — **Hercegovina**

(*Asch. Kan., Cat., 65) ubi? In valle fl. Neretva prope Jablanica (M.), Glogovo, inter Grabovica, Drežnica et Vojno (M.). Circa Mostar: In montibus Podvelež (Fo. f. Freyn). Velež versus Mostar (B.), Mali Velež (V.), Hum (Fo.), Busak pr. Buna (Fo.); circa Nevesinje (Fo. f. V.) et pr. Bišina (M.), in agro Nevesinjsko Polje a. 850—1000 *m* (Mu.); pr. Rakitno (Begović f. V.); in silva Dubrava pr. Čapljina, Mogorjelo, Zavala (M.); pr. Orušina juxta Metković (Fo. f. V.); pr. Mosko circa Bileća (Fo. f. V.), ca. Visoka Glavica 1200 *m* (V.).

6. *Seseli varium* [Trev., Ind. sem. hort. Vratisl. (1818), 6; Hort. bot. Vrat. pl. manipulus, 6 (1824) et in Act. ac. Leop. Car., XIII (1826), 168; DC., Prodr., IV, 146; Koch, Umb., l. c., 110 et Syn. fl. Germ., ed. II, 324; Vis., Fl. Dalm., III, 41; Reich., Fl. Germ., 467; Reich. f., Ic. fl. Germ., XXI, 35, t. 61; Beck, Fl. Nied.-Öst., 636]. In locis graminosis, arenosis, glareosis, lapidosis, inter frutices usque ad regionem alpinam. Floret m. Junio—Sept.

Bosna: Inter Jajce et Jezero (Kneucker f. M.) probabiliter ad *S. promonense* pertinet. In monte Vlašić (Br. f. Freyn). Circa Vareš in m. Droškovac, infra Kralupi versus Pajtov Han (Pr.); circa Rusenovići in distr. Rogatica (F. f. M.), in faucibus fl. Prača (M.). — **Hercegovina:** Prope Višnjevo juxta Gacko (Blau f. *Asch.).

Occurrit modo:

typicum [K. Malý in Magy. bot. lap., VII (1908), 224. — *S. varium* Trev., l. c. — Confer Freyn in Bull. herb. Boiss., VI (1898), 985]. »Segmenta ultimae ordinis c. 0·5 *mm* lata vel angustiora. Radii inaequaliter longi, longissimi c. 1½—2 × longiores quam brevissimi, 1·5—4 *cm* longi. Involucellum fructus longitudine aequans, 4 × longius quam pedicelli vel — longitudine aequans. Pedicelli fructiferi ½—1½ × fructu longiores. Fructus 2·8—3·5 *mm* longi, 1·5 *mm* lati, in media parte latisimi.« (s. Freyn, translatum.)

7. *Seseli promonense* [Vis., Fl. dalm., II (1847), t. 29 et III, 42 hic sub syn. *Seos varii*. Confer Freyn, l. c., 984—985. — *S. varium* v. *promonense* Malý in Magy. bot. lap., VII (1908), 224. »Segmenta ultimae ordinis —2 *mm* latae, plurimum bis latiora (minimum) quam in f. *typica*. Radii valde inaequilongi; longissimi 3—3·5 × longiores quam brevissimi (2·5—8 *cm* longi). Involucellum fructus longitudine aequans, pedicellos ⅓—¼ longitudinem eorum fructiferorum aequans. Pedicelli fructiferi fructus longitudine aequantes —4 × longiores. Fructus 4—4·5 *mm* longi, 1·3—1·5 *mm* lati, saepe sursum cuneato-dilatati.« (s. Freyn,

translatum.) Mea opinione statura firmiore, segmentis primae ordinis foliorum inferiorum fere a basi ternatis i. e. segmentis infimis secundae ordinis plus minus rhachi folii appropinquatis, foliis superioribus qua de causa ex vaginis septemradiis, umbellae radiis numerosioribus (—28) longioribusque (—8·5 cm longis), fructibus majoribus a *S. vario* sat differt. — In locis lapidosis saxosisque. Floret m. Junio—Aug.

Bosna: Prope Jajce (B.), Livno (B.). In urbe Travnik circum castellum, in pascuis montis Vlašić (Kajabaša) (Br. f. *Freyn), prope Guvna (Br.!), in valle fl. Rama ad fines Hercegovinae (M.). — **Hercegovina**: Circa Mostar (Br. f. *Freyn 1898); in silvis mixtis apertis collium inter Bišina et Poljana pr. Nevesinje (M.),

Huc pertinere videtur v. *longicarpum* [G. Beck = *S. varium* Trev. var. *longicarpum* Rohlena in Fedde, Rep., III (1896), 146] »fructibus majoribus c. 5 mm longis et 1·5 mm latis lineariblongis, pedicella duplo vel subduplo superantibus« (Rohlena).

Crna Gora: In saxis dumetosis prope Viljuša ad fines Hercegovinae (Rohlena 1896).

8. *Seseli gracile* [Waldst. Kit., Pl. rar. Hung., II, 122, t. 117 (1805); DC., Prodr., IV, 145; Neilr., Diagn., Ung., 55; Reich. f., Ic. fl. Germ., XXI, 32, t. 67]. In locis lapidosis, saxosis, pratis montanis, ad silvarum margines. Floret m. Julio—Sept.

Bosna: Circa Zvornik in montibus Grad, Prosjek, Vrtoglavica (*J. 1891).

9. *Seseli osseum* [Crantz, Stirp. austr., III (1767), 92, ed. II, III, 207 (1769); K. Malý in Glasnik, XXXI (1919), 85, fig. 7 (fructus transectio). — *S. glaucum* L., Spec. pl., 260 (1753) p. p.? sed Jacqu., Fl. austr., II, 27, t. 144; Neilr., Fl. Nied.-Öst., 620; Beck, Fl. Nied.-Öst., 636; Reichenb. f., Ic. fl. Germ., XXI, 34, t. 62 (fructus transectio mala); Wohlff. Syn. deutsch. Fl., 1073. — *S. Beckii* Seefried in Mitt. naturw. Ver. Steierm., XLIV (1907), 203. Confer Beck, Veg. Stud., III in Sitzungsber. Ak. Wiss. Wien, math.-naturw. Klasse, CXXII, 654 ff. — *S. dévényense* Simonk. in Magy. bot. lap., VI (1907), 140 et 142, t. III, f. 2 et 6; confer Teyber in Verh. zool.-bot. Ges. (1910), 255]. In saxosis, lapidosis, aridis graminosis. Floret m. Julio, Augusto.

Bosna: Indicatur prope Kluč (Fo. f. V. 1909) et ad fl. Željeznica (Protić), sed probandum! Statio inter Jajce et Bočac in valle fl. Vrbas (Behrendsen) f. K. Malý ad *S. bosnensem* K. Malý pertinere videtur, statio

in m. Glogovo Pl. (Beck) in Hercegovina potius ad *S. hercegovinum* K. Malý addenda est. Plantam fructiferam ultimae stationis non vidi.

Proprietates, quibus Simonkai ad discrimen *S. dévényensis* et *S. ossei* utitur, nullius pretii sunt. Eiusdem tabula transectus fructuum pessime illustravit et descripsit.

10. *Seseli hercegovinum* [K. Malý in Glasn. zem. muz. XXXI (1919), 86, 85, fig. 6. — *S. bosnense* v. *hercegovinum* (Malý) G. Beck. — *S. elatum* Vand. in Sitz. böhm. Ges. Wiss. (1890), 263 et in Dalši příspěvky květ. Bosn. Herc. (1892) 19 nec L., Koch. — ?*S. glaucum* Beck, Fl. Südb. in Ann. nat. Hofm., X (1895), 205 non aliorum. — *Seselinia elata* Beck, l. c., 207, f. Vandas]. »Habitus *S^{eos}* (*Seseliniae*) *elati* L. (= *S. Gouani* Koch), caule a basi ramoso, internodiis abbreviatis, umbellis breviter stipulatis, radiis 5—6 (4—8), circa 1·2 (0·9—1·7) *cm* longis, fructibus minoribus 2·5 (2—2·75 *mm* longis), breviter ellipsoideis. A *S. (Seselinia) Gouani* differt fructibus farinaceis, jugis resinoso-incrassatis, valleculis univittatis, vittis commissuralibus 1 + 1.« (K. Malý.)

Mea opinione caule elato (0·5—1·3 *m*), dichotome et divaricato ramosissimo, umbellis numerosissimis, radiis umbellarum inferiorum 5—6 (4—8), filiformibus, 0·9—1·7 *cm* longis, umbellulis fructiferis congestis, fructibus 2·5—2·75 *mm* longis, jugis rotundatis, omnibus aequalibus, vitta externa magna instructis a *S. osseo* Crtz. differt, sed a *S. elato* L. (*Gouani* Koch) notis praecedentibus minus distinguendum sit quam imprimis valleculis univittatis, quod ceterum etiam *S. hercegovinum* a *S. bosnensi* separat. Si probatum sit, species *Seseleorum* numero vittarum variare (geminatio vittarum singularium et confluentium duarum frequenter adsunt!), putam *S^m hercegovinum* varietatem quamdam *S^{eos} bosnensis hercegovinum* esse, insuper quia fructus *S^{eos} hercegovini* in jugis omnibus vittas externas singulas adeo magnas quam in *S. bosnensi* possidet et vittae vallecularum apud *S^m bosnensi* saepissime singulae observantur. Transectus quidem mericarporum utriusque species differunt (in *S. bosnensi* pentagonus tam latus quam altus, in *S. hercegovino* semicircularis pentagonus latior quam altus; conf. Malý l. c. f. 5—6). Semel modo vittam lateris commissuralis compositam et vittam jugalem parvam internam in mericarpis *S^{eos} hercegovini* observavi.

In saxosis calcareis, rupium fissuris. Floret m. Julio—Sept.

Hercegovina: In montium Prenj Pl. m. Glogovo (V. 1891; B. sub *S. glauco*); Prislap, sine fructibus (V. 1890). In faucibus fl. Neretva prope stationem Prenj et pr. Aleksin Han et Grabovica c. 140—160 *m* (*M.! 1919). Vidi originalia mihi ab autore benevole communicata. Porim c. 600 *m* (V. 1894),

Subgenus: **Seselinia.**

[G. Beck in Verh. zool.-bot. Ges. XLI (1891), 797 et Fl. Nied.-Öst., 637 (1892), Abb. 115, f. 3 (1892) pro gen.; Drude in Engl. Prantl, Nat. Pflanzenf., III, 8, 203 pro subgen. (1898); Wohlf., Syn. deutsch. Fl. 1072 (1892) pro sect.; confer: Beck in Magy. bot. lap., V (1906), 103—105 et in Sitzungsber. Ak. Wiss. Wien, math.-naturw. Klasse, CXXII, 655 (1913)]

Sepala conspicua parva. Valleculae 2—4 vittatae (rarius hinc inde abnormiterque vittae conjunctae quasi singulae, sed nunquam in omnibus valleculis). Vittae lateris commissuralis 4—8. Sub jugis saepissime vittae parvae internae 1—2 et externae magnae singulae adsunt. Involucra nulla v. paucifolia. Folia involucelli libera. Fructus transectus tam lati quam alti.

11. *Seseli elatum* [L., Mant., II (1771), 357 et Herb. f. Bertoloni; Gouan, Illustr., 16, t. 8 (1773) non L. Spec. pl., ed. II, 375 (1762) quod dubium; confer: Szabó in Bot. Közl. (1910), 159; DC., Prodr., IV, 146 (an p. p.?)]; Vis., Fl. dalm., III, 43; — *S. Gouani* Koch, Syn. fl. Germ., 294 (1837); Reich. f., Ic. fl. Germ., XXI, 35 p. p.; Wohlf., Syn. deutsch. Fl., 1072. — *Seselinia elata* Beck in Verh. zool.-bot. Ges., XLI (1891), 798 et Fl. Nied.-Öst., 637, nota (1892). — *Pimpinella* sec. Benth. Hook., Gen., I, 894 et 902]. In saxosis, lapidosis, glareosis, calcareis. Floret m. Julio—Aug.

Variat:

α. typicum [Posp., Fl. öst. Küst., II, 160 (1898). — *S. Gouani* v. *major* K. Malý in Magy. bot. lap., VII (1908), 223]. Petioli teretes, modo in parte vaginali canaliculati. Folia 3—4 × ternato-pinnatisecta. Caulis florifer altior, —90 *cm* altus, repetitive dichotomus umbellas copiosas ferens. Flores fructusque subcongesti. Radii umbellarum principalium 5—6 (—12), 0·8—2 *cm* longi, glabri. Fructus 3 *mm* longi, primum puberuli demum glabri. Mericarpia in transectu tam lata quam alta. Jugi rotundati, saepe vel hinc inde vittis externis majoribus singulis et 1—2 intimis parvulis instructi. Valleculae 3—5 vittatae. Facies commissuralis vittis 2 + 2, 3 + 3 vel 3 + 4 instructa. Vittae omnes saepe circum circa coronam formantes. Pedicelli fructiferi

fructibus longiores vel interni breviores. Petala ochroleuca. Est planta karstiensis ac Alpibus australibus propria, sed cum β . formis mediis saepissime conjuncta.

Bosna: Prope Kluč (B.) cum radiis 4–6 et habitu *S^o ossei*, sine fructibus, qua de causa dubia. In Croatia, Istria, Dalmatia finitima frequenter occurrit.

β . *Gouani* [Posp., l. c., 161. — *S. elatum* Reich. f., Ic., l. c., t. 63 (pl. monspessulana). — *S. elatum* Aut. Gall.; Gouan, Ill., 16, t. 8; Gren. Godr., Fl. franç., I, 708; Rouy Camus, Fl. fr., VII, 271. — *S. Gouani* v. *minor* K. Malý in Magy. bot. lap., VII (1908), 224]. Plurimum humilior, 20–50 cm altus, e basi divaricatim superne dichotome ramosus. Folia 1–2 \times pinnatisecta. Umbellarum radii 2–6, filiformes, vix 1 cm longi. Petala roseo-carinata. Vittae in valleculis et in latere commissurali utrinque ternae (f. Reich. f.) sed sec. Rouy in latere commissurali 1 + 1.

Adhuc nondum observata, attamen in **Istria** et **Dalmatia** crescit.

12. *Seseli bosnense* [K. Malý in Magy. bot. lap., VII (1908), 223 et in Glasn. zem. muz., XXII (1910), 691; XXXI (1919), 85, f. 4–5. — *S. Gouani* v. *bosnense* K. Malý, l. c. 223. — ?*S. elatum* Conr. in Öst. bot. Zeit. (1888), 19 non L. — ?*S. glaucum* Gross Kneuck., in Allg. botan. Zeit. (1903), Heft 10]. Habitus *S^{eos} elati* α . Radii umbellarum 5–10 (—14), 1.75 (1.2–3.6) cm longi (plurimum longiores quam in *S. elato* = *Gouani*). Pedicelli fructiferi fructu breviores vel eum longitudine aequantes Fructus extus scaberuli, ellipsoidei 3 (2.5–3.5) mm longi. Vittae in valleculis 1–2 [confer etiam Malý in Glasnik zem. muz., 35 (1923), 150] in jugis semper 1 externa magna et hinc inde 1–2 internae parvulae, in latere commissurali 1 + 1, 1 + 2 vel 2 + 2. Jugae resinoso-incrassatae, obtusae nec carinatae.

Ses. elatum L. (*Gouani* Koch) differt sec. K. Malý brevitate caulis internodiorum; vittis minimis, plurimum radiis brevioribus (sed apud f. *serotinam* Evers radii 1.7–5 cm longi reperiuntur). *S. Gouani minor* K. Malý, l. c., 224 = *S. elatum* v. *Gouani* Posp., l. c. praeterea habitu *Trinia* cuiusdam simili, petalis rubellis differt (K. Malý).

Mea quidem opinione a *S. elato* α . vittis externis magnis jugorum, illis vallecularum singulis hic inde geminis, vittis omnibus non coronatis (observavi 7–10 internas et insuper 5 externas in jugis), asperitate fructuum, jugis firmis bene differt.

In *S. elato* α . vittae externae magnae in jugis rare modo occurrunt.

In saxosis. Floret m. Julio—Augusto.

Bosna: Circa Jajce: in faucibus fl. Vrbas (*M. 1910), inter Jajce et Jezero (Kneucker sub *S. glauco* f. M.), in m. Hum (Conrath sub *S. elato* f. M.) et in m. Grić (M.).

Subgenus: **Cyathoselinum.**

[Benth. Hook., Gen., I, 912 (1867) pro gen.; Drude in Engl. Prantl, Natürl. Pflanzenf., III, 8, 203 pro subgen.; Paoletti in Fiori Paol., Fl. an. It., II, 167 pro sect. (1900).]

Involucrum 0. Folia involucelli connata. Sepala parvula. Valleculae 3—4 vittatae. Vittae lateris commissuralis 6—8. Petala pilosula.

13. *Seseli tomentosum* Vis., Stirp. Dalm. spec., 6, t. III, f. 1 (1826) et Fl. Dalm., III, 40; DC., Prodr., IV, 144. — Reich. f., Ic. fl. Germ., XXI, 32, t. 73]. In saxosis, glareosis, aridis. Floret m. Augusto—Octobr.

In **Dalmatia** finitima prope Vrpolje (Degen) et Topolje (B.) juxta Knin, in Dalmatia omnino frequens sed in **Bosna** et **Hercegovina** nondum observatum.

Subgenus: **Libanotis.**

[Drude in Engl. Prantl, Natürl. Pflanzenf., III, 8 (1898), 203; sectio = Bluff Fing., Comp. I (1825), 384 et Gren. Godr., Fl. Fr., I, 710 (1848); *Libanotis* Crantz, Cl. Umbell., 105 (1767) et Stirp. Austr., III, 112; Scop, Fl. Carn., ed. II, I (1772), 192 (p. p.); DC., Prodr., IV, 149; Koch, Syn. fl. Germ., ed. II, 325; Endl., Gen., 775; sect. *Eulibanotis* DC., Mem. Umb., V, 17 et Prodr., IV, 150: *Seseli* subgen. *Eulibanotis* Rouy Cam., Fl. Fr., VII (1901), 274.]

Involucrum polyphyllum, reflexum. Sepala conspicua. Fructus valleculae uni—bivittatae; vittae in latere commissurali 1 + 1, 1 + 2 vel saepius 2 + 2, in jugis hinc inde singulae sparsaeque. Jugae minus prominentes.

14. *Seseli libanotis* [Koch, Umb., l. c., 111 (1824); Beck, Fl. Nied.-Öst., 635; Caruel in Parl., Fl. Ital., VIII, 323; Hayek, Fl. Steierm., 1165; — var. *bipinnatum* Čelak., Prodr. Fl. Böhm., 572 (1874). — *Athamanta Libanotis* L., Spec. pl., 244 (1753); Jacqu., Fl. Austr., IV, t. 392. — *Libanotis montana* Crantz, Stirp. Austr., III, 117 (1767); Koch, Syn. fl. Germ., ed. II, 325; Posp., Fl. öst. Küst., II, 161; Wöhlf., Syn. deutsch. Fl., 1077. — *L.*

daucoides Scop., Fl. Carn., ed. II, I, 193 (1772). — *L. vulgaris* DC., Prodr., IV, 150 (1830) excl. var. nonn. — *L. Libanotis* Karst., Deutsch. Fl., 842 (1882)]. In locis silvaticis, dumetosis, lapidosis, pratis montanis-subalpinis — 1500 m. Floret m. Junio— Augusto.

Bosna: Prope Bihać (Boller); in m. Osječenica (F.), Kamešnica, Vel. Šator (Pr.); pr. Tušnica versus Duvanjsko Polje (Sta.); inter Jajce et Bočac (Behrendsen); prope Karaula juxta Jajce (Blau, Fo.); in m. Hum pr. Jajce (B.); circa Travnik (Br.). in m. Šiša pr. Ključ (B.); in m. Vlašić (*S. 1848), Vlaška Gromila (Br. Fr.); in m. Bijela Gromila-Krstac montis Vranica Pl. (Simony-Vierh.), sec. riv. Rajčevac et c. Vareš (Pr.), in m. Maglič (Rohlena). — **Hercegovina:** In m. Lisin, Porim (V.), Prenj (Prodan), in faucibus riv. Ledenica potok montis Čabulja Pl. (Prodan); in m. Orijen c. 1500 m (*V. 1888).

Variat:

α. *pubescens* [Koch, Syn. fl. Germ., 296 (1837) = Rouy Cam., Fl. Fr., VII, 275. — *Athamania pubescens* Retz., Obs., III, 28 (1783); DC., Fl. Fr., V, 511. — *L. vulgaris* β. *pubescens* DC., Prodr., IV, 150]. »Caule valde angulato pubescente, fructibus magis villosis.« (DC.) Planta in alpinis saepe minor, copiose ramosa, petalis roseis. Haec est *minus* [*Lib. montana* β. *minor* Koch, Syn. fl. Germ., 296 (1837) cum diagnosi: »Pedalis, caule pubescente, foliis minus compositis.« Confer: Freyn in Öst. bot. Zeit., L (1900), 426].

Bosna: In glareosis montis Vel. Šator supra lacum Jezero a. 1600 ad 1700 m (Ja. f. *Ha. Fa. 1906) sed? quia in foliis modo reperta.

β. *sibiricum* [Rouy Cam., Fl. Fr., VII, 275 (1901). — *Athamania sibirica* L., Mant., 56 (1767). — *Libanotis sibirica* Koch, Syn. Fl. Germ., 296 (1837), ed. 2, 326. — *L. montana* v. *sibiricum* Wohlf., Syn., l. c., 1078 (1892). — *L. vulgaris* v. *sibirica* DC., Prodr., IV, 150 (1830). — *Seseli sibiricum* Reich. f., Ic., l. c., 36, t. 75 (1867) = Boiss., Fl. Or., II, 967 (1872). — *Ligusticum sibiricum* Spr., Prodr. Umb., 40]. »Foliis pinnatis, pinnis grosse inciso-dentatis, basi pinnatifidis dentatisque dentibus ovatis acuminatis, involucrio universaliter polyphylo nullo fructibus hirtis.« (Koch.)

Bosna: Prope Karaula juxta Jajce (Fo. sub *Lib. montana* f. *V. 1909). Mihi dubiosum, quia *S. sibiricum* regiones boreales incolat. An forma quaedam *S. libanotidis*?

15. *Seseli medium* [Handel-Mazzetti, Stadlm., Janch. et Falt. in Öst. bot. Zeit., LVI (1906), 35. — *Ammi daucifolium*

Scop., Fl. carn., ed. II, I 207, t. 10 (1772) fortuitu cum involucris foliis pinnatisectis. — *Ligusticum athamantoides* Spreng., Spec. Umb., 126 (1818) p. p. — *Athamanta daucifolia* Host, Fl. Austr., I, 362 (1827). — *Lib. athamantoides* DC., Prodr., IV, 150 (1830) p. p.; Koch, Syn. fl. Germ., 296; Fritsch, Exk. Fl. Öst., 416 (1897). — *L. vulgaris* γ. *daucifolia* DC., Prodr., IV, 150 (1830) p. p. — *Libanotis daucifolia* Reich., Fl. Germ., 468 (1832) p. p.; Fritsch, Exk. Fl. Öst., 3. Aufl., 374 (1922) non *Seseli daucifolium* C. B. Clarke (1879). — *Athamanta media* Nym., Syll. fl. Eur., 154 (1855) excl. loc. Schurii. — *Seseli libanotis* β. *athamantoides* Reich. f., Ic. fl. Germ., XXI, 36 (1867), t. 77, f. 1 (fructus). — *Lib. montana* v. *athamantoides* Rohl., 5. Beitr. Fl. Mont., 47 (1912); Wohlf., Syn. deutsch. Fl., 1078 (1892) = *Seseli athamantoides* (DC.) G. Beck, Fl. Südbosn., VII in Ann. nat. Hofmus. X (1895), 205]. Differt a *Sⁱ libanotide* Koch: habitu saepe firmo, caule crasso profunde sulcato, laciniis foliorum ultimis angustioribus, magis lanceolatis, longius acuminatis, subaculeato-apiculatis, radiis et pedicellis glabris vel parce pilosis, fructibus minutissime pilosis, primo aspectu glabris, a *Sⁱ leiocarpo* [= *Libanotis leiocarpa* Sim., Enum. Pl. Transs., 259 (1887) = *L. montana* v. *leiocarpa* Heuff. in Abh. zool.-bot. Ges., VIII (1858) 115] foliis 3× pinnatisectis, laciniis ultimis angustioribus, magis lanceolatis, angustioribus; quia foliorum forma saepe in eam *S. libanotidis* inclinatur (confer etiam Hand.-Mazz. et socii l. c. 35) verisimiliter var. modo *S^s libanotidis*, quod autores et Rohlena [5. Beitr. Fl. Mont., 47 (1912)] iterum praedicaverunt. In pratis subalpinis et alpinis, herbosis silvis apertis — 1850 m. Floret m. Julio—Augusto.

Bosna: In silva aperta Resanovci ad pedem orientalem montis Klekovača, prope Poljana a. 1000 m (*Ha. Fa. 1905); loco Veliki Vrh montis Šiša (B.); in herbosis m. Bjelašnica c. 1740 m (M.); in alpinis m. Gola Jahorina 1800—1850 m (M. in Dörfler, Herb. norm. nr. 4887); in m. Stolac pr. Višegrad c. 1300 m (Schiller f. Hayek), pr. Dobrun a. 390 m (M.), in m. Maglič supra Mratinje in Crna Gora ad confines Bosnae (Rohlena). — **Hercegovina:** In montibus (Prenj): Glogovo; (Čvrstica) Plasa (B. sub *S. libanotide*), Velež Pl. (*B. 1895).

16. *Seseli nitidum* [Reich. f., Ic. fl. Germ., 36, t. 76 (1867). *Libanotis nitida* Vis., Fl. Dalm., II, t. 28 (1847) = *L. nitens* Vis. in Synonymia *Athamantae libanotidis* Vis., Fl. Dalm., III, 43 (1852). — *Athamanta libanotis* var. *nitida* Vis., Fl. Dalm., Suppl. I (1872), 109. — *Libanotis pubescens* A. Kern., Fl. exs.

Austro-Hung. nr. 1335! non Retz excl. Syn.] a *S^{eos} libanotidis* varietatibus differre videtur: luxuria totius plantae plus minus pilosae, caule profunde sulcato, foliis nitidis (f. Visiani), adultis subcoriaceis, 3—4× pinnatifidis, laciniis ultimis lanceolatis, acuminatis et subfalcatis apice subaristulatis, umbellarum maximarum radiis numerosissimis, firmis, rigidis, cum pedicellis involucris, involucellis ac fructibus (plurimum copiose) pilosis, hinc inde subvillosis, pilis subrigidis, petalis extus pilosis. Fructus observavi 3 mm longos valleculeas partim uni- partim bivittatas, latera commissuralia vittis 1+1, 1+2, 2+2 instructa, hinc inde vittas singulas in jugis, sepala conspicua triangulari-lanceolata, scabra. Est quasi *S. medium* in omnibus partibus copiosius scabro-pilosum. In rupestribus silvaticis (—1400 m). Floret m. Augusto.

In **Croatiae** montibus Velebit frequens!; in **Bosnae** monte Osječnica plantam foliiferam modo legi, quae ad hanc speciem pertinere videtur (B.).

42. Gasparrinia.

[Bert., Fl. It., III, 614 (1839). — *Silaus* sect. *Bunioides* Nym., Syll., 154 (1854—1855); *Gasparrinia* Boiss., Fl. Or., II, 974. — *Foeniculum* Benth. Hook. (Gen., I, 902) in Kew. Ind., II, 972. — *Seseli* sectio *Gasparrinia* G. Beck olim.]

Involucrum foliis pluribus formatum. Sepala obsoleta, annulo crenato-undulato compensata. Valleculae 1—3-vittatae. Vittae in latere commissurali 2+2 vel 1+1. Petala luteo-virescentia. A genere *Seseli* calycis forma aegre distincta.

1. *Gasparrinia peucedanoides* [Thell. in Hegi, III. Fl. Mitt.-Eur., V, 2 (1925), 1298. — *Bunium peucedanoides* M. B., Flor. taur. Cauc., I (1808) 211, et Boiss., Fl. Or., II, 974. — *Sium virescens* Spreng. in Roem. Schult., Syst., VI (1820) 542 et Umb., 92 (1818). — *Bunium virescens* DC. in Mém. soc. Gen., IV (1828) 499; DC., Prodr., IV (1830) 116. — *Silaus carvifolius* C. A. Meyer, Ind. Cauc., 125 (1831). — *Gasparrinia virescens* Bert., Fl. It., III, 615 (1837). — *Selinum Rochelii* Heuff. apud Rochel, Reise in das Banat (1838), 78 nom. solum. — *Silaus virescens* Gris., Spic. fl. Rum., I (1843), 362; Reich. f., Ic. fl. Germ., XXI, 46, t. 83 = Boiss. in Ann. sc. nat., sér. 3, 1 (1844), 301 = *Silaus Gasparrinii* Nym., Syll., 154 (1854—55). — *Foeniculum virescens* et *peucedanoides* Benth. Hook. f., Gen., I (1867), 902; Kew. Ind., II, 972. — *Silaus peucedanoides* Kern. in Öst. bot. Zeit., XX (1870), 139; Borbás, Flor. Közlem. (1878),

25; Halácsy, Consp., I, 646. — *Silaus Rochelii* Simk., Enum. fl. Transsilv. (1887) 261. — *Seseli virescens* G. Beck in Fl. Südbosn., VII in Ann. nat. Hofmus., X (1895) 205 et *Seseli peucedanoides* G. Beck in Sched. Confer: Beck, l. c., Benth. Hook., l. c.; Janka in Öst. botan. Zeit. (1879), 309. — *Silaus virescens* Gris. (sec. ex. in m. Vlašić collect.) propter valliculas conspicue univittatis et latus commissurale 1 + 1 vittatum ad *Seseleos* pertinet; sed sec. Reich. f., l. c. etiam vittae binae et ternae observantur. Calycis dentes autem oblitterati, petala que lutea (in genere *Seseli* plurimum alba) repugnant. Ad genus *Foeniculum*, cui Benth. Hook., l. c. inserere volunt propter petala subobcordata, canaliculato-emarginata pertinere non potest. In pratis imprimis montanis, aridis, inter dumeta — 1800 m. Floret m. Julio, Augusto.

Bosna: In m. Glumina pr. Zvornik et in monte Igrisnik pr. Srebrenica c. 1400 m (Wettst. f. Hayek sub *S. Rochelii* Simk.); prope Smoljana, Vodjenica (Fo. f. V.), circa Gigić pr. Drvar (Ha., Ja.), Mlinište (Ha.), in m. Orlovac pr. Rore 800—1300 m (Ha. Ja.), pr. Starigrad juxta Glamoč (Sta. Fa.), Kusače in distr. Vlasenica 970 m (M), prope Travnik (Br.), in monte Vlašić (Br., B.), pr. Vareš (Fo. f. V.), in m. Smolin pr. Žepče (B.). Circa Sarajevo: sub Jasikovina in m. Nebešina, pr. Pavlovac juxta Kasidol (M.), in m. Glog (M.), in m. Trebević a. 1000—1600 m (Bl., C., B., M.), Siljevina, pr. Hreša, Drljevac, Gradina, Bukovik, Romanija, Gola Jahorina — 1800 m (M.), pr. Han Jezero, Poov čajir, Ravna Gora pr. Jelašća (M.), Rusenovići (F. f. M), prope Pale, Radonići, Gorovići, in m. Hodža — 1380 m (M), in Zagorje (Bl.), prope Bijele Vode prope Klinja (B.). — **Hercegovina**: In m. Porim supra Zimlje Polje (V.), supra Rujište (V.). Circa Mostar, in m. Orlovac et Velež (Fo. f. V.), supra Sopilje 1200 m (Vu.), in m. Velež (B.), prope Nevesinje (V.), inter Obrnje et Kruna (Bucalović f. M.), in altiplanitie Ravno juxta Lipnik (Bl.).

43. *Foeniculum*.

Miller, Gard. dict., ed. IV (1754) = Hill, Brit. Herb. (1756) 413 = Adans., Fam., II, 101 (1763); Hill, Hort. Kew., 103 (1769); Hoffm., Umb., ed. II, I, 120; Koch, Umb., 112; DC., Prodr., IV 142; Endl., Gen., 774; Benth. Hook., Gen., I, 902; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 208.] »Komorač, koromač, morač«.

»Genus *Seseli* valde affine, differt calycis dentibus obsoletis et petalis luteis integrioribus.« (Benth. Hook.)

1. *Foeniculum vulgare* [Hill, Brit. Herb., 414 (1756) = Mill., Gard. Dict., ed. VIII (1768), nr. 1 = Gaertner, De fruct., I (1788), 105. — *F. capillaceum* Gilib., Fl. Lith., IV (1782), 40; Beck, Fl. Nied.-Österr., 637; Wohlf., Syn. deutsch. Fl., 1070;

v. *typicum* Posp., Fl. öst, Küst., II, 157. — *F. officinale* All., Fl. Pedem., II (1785), 25; Vis., Fl. Dalm., III, 39; Reich. f., Ic. fl. Germ., XXI, 37, tab. 89; Koch, Syn. fl. Germ., ed. II, 323 et v. *capillaceum* Burnat, Fl. Alp. mar., IV, 179. — *F. dulce* Link, Enum. hort. Berol., I, 1, 284 (1821). — *F. foeniculum* Karst., Deutsch. Flora, 837 (1882). — *Anethum Foeniculum* L., Spec. pl., 263 (1753). — *Meum Foeniculum* Spreng., Prodr., 32 et in Roem. Schult., Syst., VI, 433]. In apricis saxosis. Floret aestate. Ceterum frequenter in hortis colitur et ex iis aufugit spontaneum in cultis et incultis observatur.

Bosna: Cultum modo ac spontaneum sic prope Ovčar in prato quodam silvatico (Dvořak 1924) (*H. 1882). — **Hercegovina:** Circa Mostar (Simonović f. Hayek), prope Blagaj (*Str. 1880), in monte Podvelež (Fo. fide V.).

Planta culta est *F. dulce* [Miller, l. c., nr. 2. — *F. sativum* Bert., Fl. It., III, 339 = *F. vulgare* v. *sativum* et *dulce* Paol. in Fiori Paol., Fl. anal. d' Ital., II, 173]. »Anason«. Jugis crassioribus, fructibusque majoribus saepe curvatis, sapore plus minus grato egregium.

44. Oenanthe.

[L., Spec. pl., 254 (1753) et Gen., ed. V, nr. 314; rectius Lam., Diss., IV, 526 (1796); Endl., Gen., 773; Koch, Umb., l. c., 112; DC., Prodr., IV, 136; Benth. Hook., Gen., I, 905; Drude in Engl. Prantl, Nat. Pflanzenf., III, 8. 204. Confer: J. Briquet in Bullet. de l'herbier Boissier, VII (1899), 467—488: Münch in Öst. bot. Zeit. (1862), 219.] »Trbulja«.

Subgenus: **Oenanthe.**

[Peterm., Fl. Deutschl., 225 (1849). — subgen. *Eu-Oenanthe* Drude, l. c., 204 (1898). — Sect. *Oenanthe* Koch, Umb., l. c., 112. — Sect. *Euoenanthe* Neilr., Fl. Nied.-Öst., 618 (1859); Benth. Hook., Gen., I, 906 (1867); Boiss., Fl. Or., II, 955.]

1. *Oenanthe fistulosa* [L., Spec. pl., 254 (1753); DC., Prodr., IV, 136; Koch, Syn. fl. Germ., ed. II, 321; Reich. f., Ic. fl. Germ., XXI, 26, t. 57 (fructus fig. 3, 4 pessime delineati); Beck, Fl. Nied.-Österr., 641; Wohlf., Syn. deutsch. Fl., 1062; Posp., Fl. öst. Küstenl., II, 153]. In paludibus, fossis, stagnis et rivulis. Floret m. Junio, Julio.

Bosna: Prope Bania Luka (*H. 1882), Bos. Brod (V.); pr. Krupa (Fo. f. V.), Bihać (Fo.), Pritoka (Fo. f. V.), in agro Livanjsko Polje (Sta.), ibidem pr. Srglove Kuće = Bastasi (Sta. Fa.), in palude Ždralovac blato pr. Livno (Bucalović f. M.). — **Hercegovina:** In agro Nevesinjsko Polje ad riv. Zalomski Potok a. 800 m (*Mu. 1891).

2. *Oenanthe silaifolia* [Marsch. Bieb., Fl. Taur. Cauc., III, 232 (1819); Koch, Syn., fl. Germ., ed. II, 322; Reich. f., Ic. fl. Germ., XXI, 27, t. 52; Caruel in Parl., Fl. It., VIII, 496; Beck, Fl. Nied.-Öst., 641; Wohlf., Syn. deutsch. Fl., 1064; Posp., Fl. öst. Küst., II, 153. — *Oe. virgata* Koch in DC., Prodr., IV, 137 (1830) in Syn. *Oe. silaifoliae* non Poir. — *Oe. prolifera* Host., Fl. Austr., II, 282 non L. — *Oe. globulosa* Petter, Bot. Wegw., 88. — *Oe. pimpinelloides* L. v. *silaifolia* Paoletti in Fiori Paol., Fl. anal. d' It., II, 209 (1900). — *Oe. Biebersteinii* Simon in Rouy, Rev. bot. Syst., I, 93 (1903)]. In pratis humidis, paludibus, ad fontes aquasque. Floret mens. Majo—Julio.

Bosna: *Asch. Kan., Cat., 65 (1877) ubi? Prope Banja Luka (H.). Prope Kupres, Šujica, Preodac, Pržići (Pr.). — **Hercegovina:** Inter dumetos in agro Bijelo Polje pr. Potoci Han (V., Pr.), in montibus Hum et Gljiva prope Trebinje (*V., 1888).

Variat:

α. typica [G. Beck, Fl. Nied.-Öst., 641. — Synonyma vide supra].

Fide Rouy Cam. [Fl. Fr., VII, 262]. *Oe. silaifolia* est planta orientalis et Africae septentrionalis et differt ab *Oe. media* Gris. notis sequentibus: Feuilles toutes conformes, à divisions courtes, lancéolées; pétales extérieurs non ou à peine rayonnants; rayons des ombelles très épaissis (2·5–3·5 mm de diam.); réceptacles ombellaires et ombellulaires fructifères dilatés; fruits cylindriques à côtes plus larges; pédicelles épaissis-enflés, aussi larges ou plus larges que la base du fruit et les extérieurs généralement plus longs que lui.« Confer, quod contra dicitur apud Burnat, Fl. Alp. mar., IV, 169.

β. media [Beck, Fl. Nied.-Öst., 641 (1892); Wohlf., Syn. deutsch. Fl., 1065. — *Oenanthe media* Griseb., Spic. fl. Rum., I, 352 (1843); Reich. f., Ic. fl. Germ., XXI, t. 56, f. I; Boiss., Fl. Or., II, 958; Neilr., Diagn. Ung., 54; Rouy Cam., Fl. Fr., VII, 262. — *Oe. silaifolia* Aut. p. p. — Confer: Burnat, Fl. Alp. mar., IV, 169]. Lacinae foliorum elongato-lineares, supra 10 mm longae, sed saepius ut in var. *α.* breviores, lanceolatae. Radii 5–8–10, crassiores. Petala exteriores plurimum radiantia, 3–4 mm longa.

Bosna: Prope Dobrljin (B.). Inter Banja Luka et Petrićevac, prope Vrbanja (C.), pr. Banja Luka (*H. etiam sub *Oe. peucedanifolia* 1882); Kobaš, Derventa (Prodan), Doboј (Fo.), Slana Bara prope Bratunac (J.). Prope

Pritoka et Novi (Fo. f. V.). In valle Dobrnica pr. Bihać (B.), Ribić (F.), Travnik (Br.), Zavidovići, Kamensko in distr. Kladanj (M.), pr. Zalin, Brdari, Čelinac, Buletić (Fo.), Livno (F.!). Žepče (Fo.), Travnik (Br. Fr.), Circa Sarajevo (B), pr. Kovačići (Fo.), in agro Sarajevsko Polje (B., M.); ad fl. Željeznica (Pr.), ca. Rusenovići (F. f. M.). — **Hercegovina:** *Asch Kan., Cat., 65 (1877) ubi? Prope Mostar (*Mu. 1891; Bornmüller!), in palude Mostarsko Blato (B.), prope Gnjilišta, Čapljina (M.).

Frequenter et iterum formas observavi laciniis abbreviatis oblongo-lanceolatis sed floribus exterioribus conspicue radiantibus itaque intermediis inter *Oe. silaifoliam* et *Oe. mediam* Gris. = f. *ambigua* [G. Beck].

Porro legi formas aequales sed radicis fibrillis crassiusculis autem nec oblongo-fusiformibus nec napelliformibus. Has ultimas (quas prope Sarajevo juxta Švrakino Selo et in palude Mostarsko Blato legi) primum pro *Oe. thracica* [Gris., Spic. fl. Rum., I, 355 (1843) habui, sed fructus maturis non observavi. Forma propria *decipiens* [G. Beck] esse videtur.

3. *Oenanthe peucedanifolia* [Poll., Palat., I, 289, t. 2, f. 3 (1776); DC., Prodr., IV, 137; Koch, Syn. fl. Germ., ed. II, 322; Reich. f., Ic. fl. Germ., XXI, 28, t. 53, f. I; Caruel in Parl., Fl. It., VIII, 495; Rouy Cam., Fl. Fr., VII, 263; Wohlf., Syn. deutsch. Fl., 1064. Confer: Foucaud in Revue de botan. syst. geogr. (1903) 141 et Malinvaud in Bull. soc. bot. Fr., 56 (1909), 370. — *Oe. Pollichii* Gmel., Fl. Bad., I, 679 (1805). — *Oe. filipenduloides* Thuill., Fl. Par., ed. II, 146 (1799). — *Oe. pimpinelloides* δ . *peucedanifolia* Paol. in Fiori Paol., Fl. an. d' It., II, 209]. In pratis humidis — 1290 m. Floret m. Junio, Julio.

Variat:

α . *typica* [K. Malý in Glasn. zem. muz., XXXI (1919) 78].

Bosna: Prope Travnik ad pedem montis Vlašić (*S. 1848); prope Pale (M.) inter H. Jezero et pr. Toplice 1170—1290 m, pr. Kusače (distr. Vlasenica), Podžeplje (M.).

β . *stenoloba* [Schur, Enum. pl. Transs., 255 (1866) pr. spec.; K. Malý, l. c. pro var.].

Bosna: Prope Pale (*M. 1919), Vučja Luka 1250 m, Okruglica (distr. Vareš) (M.).

4. *Oenanthe pimpinelloides* [L., Spec. pl., 255 (1753); Jacqu., Fl. Austr., t. 394; DC., Prodr., IV, 137; Koch, Syn. fl. Germ., ed. II, 322; Vis., Fl. Dalm., III, 38; Reich. f., Ic. fl. Germ., XXI, 26, t. 54; Beck, Fl. Nied.-Öst., 641; Rouy Cam.,

Fl. Fr., VII, 259; Posp., Fl. öst. Küst., II, 155; Caruel in Parl., Fl. It., VIII, 498; Burnat, Fl. Alp. mar., IV, 165]. In locis sub-humidis graminosis pratis, inter dumeta ac locis lapidosis — 1220 m. Floret m. Majo—Julio.

Bosna: Prope Kobaš (Prodan); circa Travnik (*S. 1848, Br.). In palude Rovno pr. Busovača (Br.), pr. Zaviđovići (M.); inter Kakanj et monast. Sutjeska (S.), pr. Kakanj (M.). In agro Sarajevsko Polje (M.), pr. Ilidža (Fo. f. V., M.); circa Sarajevo (Mu.): in valle Koševo, pr. Kromolj (M.), in monte Bukovik — 1220 m (M.), pr. Halapi (B.), Švrakino Selo (M.), Lukavica (M.), inter Lukavica et Kovačići (F.), pr. Kovačići (Fo. f. V.), Hrasno, Miljevići (M.), Ilidža, Vrelo Bosne, Ophodže juxta Da Riva, in m. Trebević (M.) et al. loc. — **Hercegovina:** Prope Jablanica (B.), in agro Bijelo Polje pr. Vojno (M.), pr. Raštani juxta Mostar (A. Pi.), in silva Dubrava (Behrendsen) et pr. Sovići (F.). Prope Trebinje et Grančarevo (P. f. *Grisebach 1874); hic etiam »foliis imis crassidis«.

Variat:

α. *chaerophylloides* [DC., Prodr., IV, 137 (1830); *typica* Posp., Fl. öst. Küst., II, 155 = K. Malý in Verhandl. zool.-bot. Ges. (1905) 235. — *Oe. chaerophylloides* Pourr. in Mém. ac. Toul., III, 323 (1788)] »tuberibus longe pedunculatis« (DC.). Frequens.

β. *pimpinellaefolia* [DC., l. c.; v. *rapacea* Koch, Syn. fl. Germ., 293 (1837). — *Oe. virgata* Poir., Voy., II, 138 (f. Koch)] »tuberibus brevius stipitatis, ovato-rapiformibus« (Koch).

Bosna: Circa Sarajevo pr. Švrakino Selo, Lukavica (*M. 1905).

Oenanthe angulosa [Griseb., Spic. fl. Rum., I, 354 (1843); Hal., Consp. fl. Graec., I, 654 = *Oe. incrassans* var. *angulosa* K. Malý in Verh. zool.-bot. Ges. (1904), 234 (1905)] differt a *Oe. pimpinelloides*, cui proxima, sec. Grisebach »foliorum forma aequali, radicis fibrillis crassiusculis, deorsum attenuatis, napulis nullis, caule profunde sulcato, strictiore radiis fructiferis exterioribus pedicellum incrassatum aequantibus, annulo calloso ad basim cinctis«.

In **Bosna** prope Banja Luka a d. Hoffmann in Öst. bot. Zeit. (1882) 115 indicatur, sed certe commutata.

5. *Oenanthe incrassans* [Bory et Chaub., Exped. Morée, III, 3, 87, t. 8 (1832); Hal., Consp. fl. Graec., I, 654; confer K. Malý in Verh. zool.-bot. Ges. (1904), 234 (1905). — *Oe. incrassata* Chaub. et Bory., Fl. Pelop., 19, t. 9 (1838); Boiss., Fl. Or., II, 956 et Suppl. 261]. Radicis fibrillis et filiformibus et apicem versus napuligeris. Segmentis foliorum inferiorum

ovatis, incislobatis, superioribus anguste linearibus, radiis umbellarum 4—10 incrassatis, involucelli phyllis lanceolato-linearibus. In locis humidis. Floret m. Majo, Junio.

Hercegovina: In ditone Dubrava prope Soviçi (F. sub n. *O. media* f. *M. 1905) ed ad fl. Sutorina (R. f. M.).

Subgenus: **Phellandrium.**

[Peterm., Fl. Deutschl., 225 (1849) = Drude in Engl. Prantl, Nat. Pflanzenf., III, 8, 204 (1898). — *Phellandrium* L., Spec. pl., 255 (1753) et Gen., ed. V, nr. 315; Ludw., Inst., ed. II (1757), 134 et aut. — *Oenanthe* sectio = Reich., Consp., 143 (1828); Koch, Syn. fl. Germ., 293 (1836). — *Dasyloina* DC., Prodr., IV, 140 p. p. — *Oe.* sect. *Dasyloina* Benth. Hook., Gen., I, 906.]

6. *Oenanthe aquatica* [Poir. in Lam., Enc. meth., IV, 530 (1795—6); Wohlf., Syn. deutsch. Fl., 1066. — *Oe. phellandrium* Lam., Fl. Fr., III, 432 (1778); DC., Prodr., IV, 138; Koch Syn. fl. Germ., ed. II, 322; Vis., Fl. Dalm., III, 39; Reich. f., Ic. fl. Germ., XXI, 29, t. 55; Beck, Fl. Nied.-Öst., 640; Posp., Fl. öst. Küst., II, 155. — *Phellandrium aquaticum* L., Spec. pl., 255 (1753). — *Ligusticum phellandrium* Crantz, Stirp. Austr. fasc. III, 84 (1767)]. »Bedreničak«. In aquis, fossis, fluviis, stagnis. Floret m. Junio, Julio.

Bosna: Prope Banja Luka (*H. 1882), Kobaš, Derventa (Prodan), Bos. Brod (Fa.), in paludibus Bara pr. Dolnji Svilaj (F.), Slana Bara pr. Bratunac (J.). Circa Šujica, Preodac (Pr.), prope Strice juxta Vareš (Pr.), Tarčin (Pr.). — **Hercegovina**: Prope Mostar ad fl. Neretva (*Str. 1880), in palude Hutovo Blato (M.).

45. **Aethusa.**

[L., Spec. pl., 256 (1753) et Gen., ed. V, nr. 317; Koch Umb. 111; DC., Prodr., IV, 141; Endl., Gen., 774; Benth. Hook., Gen., I, 907; Drude in Engl. Prantl, Nat. Pflanzenfam., III, 8, 205.] »Peršunjak, divlji peršun, mala kukuta«.

1. *Aethusa cynapium* [L., Spec., pl., 256 (1753); Koch, Syn. fl. Germ., ed. II, 323; DC., Prodr., IV, 141; Reich. f., Ic. fl. Germ., XXI, 25, t. 60; Posp., Fl. öst. Küst., II, 156; Beck, Fl. Nied.-Öst., 643]. In hortis, cultis et incultis, ruderratis sub dumeta. Floret m. Junio—Oct.

Bosna: Prope Banja Luka (H.), Žepče (Fo), prope monast. Fojnica (*S. 1848), in valle Kruščica pr. H. K. Vitez (M.). In agris et hortis urbis Sarajevo (Bl. f. M.), in declivitate australi montis Trebević —1200 m (M.), prope Kalinovik (Bl.). — **Hercegovina**: *Asch. Kan., Kat, 65 (1877). Ubi? Konjic (M.)

Variat:

α. *typica* [Beck, l. c., 643; v. *domestica* Wallr., Sched., 119 (1822); v. *hortensis* Boenn., Prodr. fl. Monast., 85 (1824); v. *vulgaris* Reich., Fl. Germ., 465].

β. *agrestis* Wallr., l. c.; v. *pygmaea* Koch, Syn. fl. Germ., 293 (1837)]. Utraque vulgata.

γ. *segetalis* [Boenn., l. c., 85 pro spec.; Reich., Fl. Germ., 465; Beck, l. c., 643].

Bosna: In valle Koševo pr. Sarajevo (*M. 1919).

46. *Portenschlagia*.

[Visiani, Fl. Dalm.; III, 45 (1850); Benth. Hook., Gen., I, 901; Reich. f., Ic. fl. Germ., XXI, 43, t. 86; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 205 non Tratt. — *Athamanta* aut. — *Seseli* Paol. in Fiori Paol., Fl. anal. d' It., II, 168.]

1. *Portenschlagia ramosissima* [Vis., Fl. Dalm., III, 45 (1850); Reich. f., l. c., 44, t. 86; Caruel in Parl., Fl. It., VIII, 492. — *Athamanta ramosissima* Portenschl. in Röm. Schult., Syst. veg., VI (1820), 496; DC., Prodr., IV, 155. — *Ath. verticillata* Portenschl. in Tratt., Enum. pl. Dalm., 14 (1824), t. 4 (male) non Sibth. — *Seseli ramosissimum* Ces., sulle Ombr., 15 (1836) f. Caruel; Paoletti. l. c., 168]. »Divlji koromač«. In saxis, saxosis, glareosis, lapidosis apricis — 900 m. Floret aestate.

Bosna: *Asch. Kan., Cat., 66 (1877). Ubi? Ad fontem Bistrice pr. Livno (F. 1896; B., Sta., Fa.); in m. Prolog versus Bili Brig (S.) jam in **Dalmatia**. — **Hercegovina**: In declivibus orientalibus montis Čvrstica (*Sta. 1911—1912). — In **Dalmatia** finitima frequenter occurrit sicut pr. Breno, Ombla, Split, Ubli in Krivošije, Kotor etc.

47. *Athamanta*.

[L., Spec. pl., 244 (1753) et Gen., ed. V, nr. 301; restricta et rectius Koch, Umb, l. c., 106 (1824); Endl., Gen, 776; Benth. Hook., Gen., I, 900 (p. p.); Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 206 non Scopoli] »Nevesika«.

?*Athamanta cretensis* [L., Spec. pl., 245 (1753); DC., Prodr., IV, 155; Koch, Syn. fl. Germ., ed. II, 327; Reich. f., Ic. fl. Germ., XXI, 42, t. 94, fig. II; Beck, Fl. Nied.-Öst., 638; Posp., Fl. öst. Küst., II, 163. — *A. Lobelii* Caruel in Parl., Fl. Ital., VIII, 348 (1888). — *Libanotis cretensis* Scop., Fl. Carn., ed. II, I, 192 (1772). — *Seseli athamanta* Cesati in Linnaea, XI, 318 (1837)]. In saxis, saxosis et glareosis. Floret m. Majo—Augusto sec. altitudinem stationis.

Varietas typica est: *hirsuta* DC., Prodr., IV, 155 (1830); *typica* G. Beck, Fl. Nied-Öst., 638; v. *minor* Neilr., Fl. Nied-Öst., 638 p. p. — *A. hirsuta* Lam., Fl. Fr., III 428 (1778) et Briquet in Ann. conserv. Génève, IV (1900), 199. — *A. Lobelii* Caruel v. *hirsuta* Rouy, Fl. Fr., VII, 256. — *A. cretensis* Jacqu., Fl. Austr., t. 62 (1773).

Omnes stationes in **Bosna** [S., Pr.] et **Hercegovinae** [*Asch. Kan., Cat., 65 (1877) ubi?] ad *A^m Haynaldi* Borb. et Uechtr. pertinere videntur. E ditioe nondum vidi.

1. *Athamanta aurea* [Vis. in Nyman, Sylloge, 154 (1854—55); = Neilr., Nachtr. ad Malý, Enum., 198 (1861) = Reich. f., Ic. fl. Germ., XXI, 42, t. 94, I (1867). — *Libanotis aurea* Vis., Fl. Dalm., III, 44 (1852)]. In apricis saxosis. Floret aestate.

Bosna: *Asch. Kan., Cat. 66 (1877) = (Trebević; Herb. Blau nr. 2164 = *A. Haynaldi* f. M.). In monte Prolog (Vis., Fl. Dalm. l. c., leg. G. Reich) probabiliter jam in Dalmatia.

Species dubia imperfecte descripta. Plantae pars superior flavescens. Folia ut in *A. cretensi*, viridia sparse breviterque pilosula. Radii umbellarum 10—12 cum involucro et involuella puberuli — villosi. Petala pilosula in unguem longum attenuata, flava. Fructus oblongi, setis flavidis patentibus hirti, eorum anatomia ignota. Ab *A. cretensi* L. involucri polyphylli foliis minus membranaceis, forma et colore petalorum minorum differre videtur.

? *Athamanta rupestris* [Reich., Fl. Germ., 470 (1830) = Kern., Fl. exs. Austro-Hung., nr. 1333; Reich. f., Ic. fl. Germ., XXI, 43, t. 93. — *Libanotis rupestris* Scop., Fl. Carn., ed II, I 192 t. 9 (1772). — *A. Matthioli* Wulf. in Jacqu., Collect., I, 211 (1786); DC., Prodr., IV, 155; Koch, Syn. fl. Germ., ed. II, 328; Reich., Fl. Germ., 470 (f. superne rigide patentim ramosa); Posp., Fl. öst. Küst., II, 163. — *A. Turbith* Karst., Fl. Deutschl., 842 (1882) an L.?]. In rupium fissuris, saxosis, glareosis, calcareis. Floret m. Junio, Julio.

Bosna: In m. Osječenica (*F. 1896). In montibus Vel. Malovan, Kamešnica, Prolog, Vještica Gora, circa Banja, Rore (Pr.). In valle fl. Sutjeska, circa Vlaholje (Pr.). — **Hercegovina:** In valle inferiore fl. Trešanica (*Blau 1877). Mea opinione omnes stationes probandae v. erroneae sunt et ad *A^m Haynaldi* pertinent. (Confer etiam Wettst, Beitr. Fl. Alb., 46).

2. *Athamanta Haynaldi* [Borbás et Uechtr. in Öst. bot. Zeit. XXVI (1876), 280 sine descr. et in Termész. füz. I, 30—32

et 54—55, t. VII, VIII (1877); Borbás, Flor. Közl, (1878) 283, Sep. 19; Confer: Wettst., Beitr. Fl. Alb., 46 (1892). — *A. cretensis* var. *major* Hirc, Fl. ok. Bakarske, 161 (1884) f. Borbás; v. *Haynaldi* Szysz., It. Crna gora, 82 (1888). — *A. major* Hirc in Öst. bot. Zeit. (1882) 157 sine descr. — *A. Matthioli* Gris., Spic. fl. Rum., I, 360 (1843) non Wulf. et v. *elata* Gris. apud Vandas, Dalši přisp. in Progr. Gymn. Kolin (1895) 20 an Griseb.?]. »Perennis, radix cylindrica simplex, plerumque horizontalis, mono-, saepissime polycephala; caulis 18—40 cm (—80 cm Beck) altus, a basi ramosissimus, cum ramis pilis brevissimis sparsis pubescens vel subglaber, strictus (cavus B.); folia ambitu latissime triangularia, triternato-partita, superiora minora, simpliciora, summa pinnata petiolis destituta et cum basi petiolorum secundariorum vaginis adnata; lacinae lineares divaricatae glaberrimae (vel plus minus breviter pilosae, —1.5 mm latae B.) nitidae, superiores interdum sparse pubescentes; petioli semiteretes aut subcylindrici, cum vagina oblonga margine late membranacea pubescentes; rami erecti, saepe verticillati; umbella 12—20, in specimenibus robustioribus etiam 25 (et — 37-Beck), rarissime septem-radiata; radii patentes ut in *A. cretensi* L (sed non patentissimi ut in *A. Matthioli* Wulf.); involucrium polyphyllum aequale, foliola linearia lineari-lanceolataque, membranacea, alba costa solum media viridis et foliacea, tota superficie lanuginosa (nunquam sed breviter pilosa B.) margineque ciliata, apice acuminata, radiis duplo breviora; involucellum aequale polyphyllum, aequale, foliola iis involucri aequilata aut paulo latiora, lanceolata vel oblongo-lanceolata, pedicellos aequantia vel superantia, ceterum structura ab iis non diversa; radii dispositione eos *A^{ae} cretensis* aemulantes et radioli pilis patentibus minoribus hirti; petala alba, inaequalia exteriora duo radicania, iis *A^{ae} cretensis* paulo minora, profundius biloba apiculo lanceolato inflexo, dorso margineque ciliata, basi in unguem longiusculum abruptim attenuata, filamentis sesqui-, subduplo breviora; fructus 4—5 rarius 6 mm longi, oblongi, oblongo-lanceolati, pedicellis subaequales aut sesquibreviores, hirti, pilis patentissimis albidis canescentes, mericarpii juga 5, filiformia, pilis occulta, styli fructu maturo duplo triploque breviores, divaricati aut patentissimi, stylopodium

subglobosum glabrum; valleculae trivittatae, (hinc inde 1-, 2—4 vittatae Beck) commissura 4-vittata; carpophorum apice tantum bifidum.« (Borbás.)

Mea quidem opinione a *A. rupestri* Rchb. laciniis foliorum brevioribus, 10—15 mm longis — 1.5 mm latis (non 15—30 mm longis subsetaceis) radiis etiam — 37 firmioribus, involucelli foliis late membranaceis, stylopodiis brevioribus (non oblongo-elongatis), fructibus sursum vix attenuatis, petalis pilosis a *A. cretica* et imprimis suae varietate *mutellinoides* (Lam.) laciniis foliorum longioribus 10—15 mm longis (haud 2—10 mm longis) radiis 10—37 (non 5—18), in volucris phyllis late membranaceis indumento umbellarum nunquam villosis, area geographica alpina distinguitur. (*A. rupestris* in monte Učka [Mte Maggiore] versus orientem et australes consistit.)

In locis saxosis, lapidosis — 1760 m.

Floret m. Majo—Augusto.

Bosna: Prope Zvornik (Wettst.), in m. Igrisnik, Crvene stijene prope Srebrenica, pr. Udrč (Wettst.). In m. Osječenica (B.), Klekovača (Ha. Ja); Hrbljina, Kamešnica, Vještica Gora, Šator (Pr. sub *A. cretensi*). In m. Dinara: Troglav (B., Ja. et Pr. sub *A. cretensi*), Male Poljanice, Gnjat, Dinara, Jankovo Brdo, Janski Vrh (Ja. Wa.). Circa Travnik (S. sub *A. cretensi*, Br.!), in m. Vlašić loco Devečani — 1700 m (*Br. Fr. 1888!), in faucibus Petrovići (distr. Kladanj, M.); circa Vareš, Kralupi (Pr. sub *A. cretensi*). Circa Sarajevo: in m. Gradina, Bukovik (M.), in valle riv. Moščanica (B.), in m. castello coronato (B. sub *A. mutellinoidi*), in valle fl. Miljacka a Sarajevo—Pale (F.!, B.); ca. Starigrad (Bl.), in m. Trebević (Bl. Mu., B.), Treskavica (M.), in faucibus Prača (M.); in m. Romanija Pl. (B.); in valle fl. Željeznica (Pr. sub *A. cretensi*), loco Vlahinja in m. Bjelašnica (F. sub *A. mutellinoidi*), inter Špilje et Trnovo (M.), in m. Vratlo prope Kalinovik (B.), loco Crveni Klanac montis Orlovac in Zagorje (R.!), in valle fl. Sutjeska prope Popov most, in m. Bregoč (Pr. sub *A. cretensi*), in faucibus Rzava et Razdolina pr. Dobrun, pr. Vardište (M.) — **Hercegovina:** In m. Porim (V. sub *A. cretensi major*). In valle Narontis, prope Jablanica (V.), in m. Plasa (Prodan), Crvanj (Adam. f. Hayek); in m. Svitavac, Gnjila Greda (V.), Prasa, Vučji zub (V.).

Ludit:

typica [G. Beck] Folia glabra vel subglabra. — *pilosa* [Wettst., Beitr. Fl. Alban., 46 (1892)]. Folia sparse vel plus minus breviter pilosula. Formae haec frequenter occurrunt sensimque inter se transeunt. — *croatica* [Schiller in Mitt. naturw. Ver. Univ. Wien (1903) 27]. Involucellum tempore florescentiae pedicellos longitudine aequans distinguere non possum, quia in eadem planta longitudine valde variat.

48. Meum.

[Hill, Brit. Herb., 404 (1756) = Adans., Fam., II, 97 (1763); Gaertn., de fruct. I 105, t. 23 f. 6 (1788); Benth. Hook., Gen., I 911; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 210 ex parte sed Koch, Umb. l. c., 103; DC., Prodr., IV, 62; Endl., Gen., 776.]

1. Meum vulgare [Hill, Brit. Herb., 404 (1756). — *Athamanta meum* L., Spec. pl., 245 (1753). — *Ligusticum meum* Crantz, Stirp. Austr., III 82 (1767). — *M. athamanticum* Jacqu., Fl. Austr., IV, 2, t. 303 (1776); DC., Prodr., IV, 162; Koch, Syn. fl. Germ., ed. II, 329; Reich. f., Ic. fl. Germ., XXI, 39, t. 91 fig. I; Beck, Fl. Nied.-Öst., 639; Wohlf., Syn. deutsch. Fl., 1088. — *Ligusticum capillaceum* Lam., Fl. Fr., III, 454 (1778)]. In pratis subalpinis et alpinis, herbosis et lapidosis. Floret m. Junio, Julio.

Bosna: Circa Travnik (Br.), in m. Stožer pr. Bugojno (Br.). Copiose in montibus Vranica Pl.: uti in cacuminibus Krstac (Bošnjak), Rosin (V. Čurčić), Stražica, Tikva, Luka, Matorac, Gruda, Vitruša (B., Schwarz!), prope Bistrica (Schwarz!), inter Dubočica et m. Matorac (Bošnjak) in m. Pogorelica (Schwarz!). — **Hercegovina:** In m. Ivan (M.), Lisin (*V. 1890), Bokševica (M.).

Ludit:

nanum [G. Beck]. In omnibus partibus nanum. Caulis summo 5cm altus, umbellas singulas vel binas ferens.

Bosna: In alpinis montis Vranica Pl. (B.), Grab, Ulice (V.).

49. Selinum.

[L. Spec. pl., 244 (1753) et Gen., ed. V, nr 300; rectius Gaertn., De fruct. I, 89, t. 21, fig. 8 (1788); Hoffm., Umb., Gen., I, 150 (1814); Koch, Umb., 100; DC., Prodr., IV, 165; Endl., Gen., 778; Benth. Hook., Gen., I, 914 (incl. *Cnidio*); Beck, Fl. Nied.-Öst., 64 (incl. *Cnidio*); Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 210] »Selenka«.

Sectio: *Euselinum.*

[Benth. Hook., l. c.; sect. *Selinum* Beck, l. c. (descriptio jugorum et spec. commutata).]

Juga vasculis fibrovasalibus applanatis radiatim perducta.

1. Selinum carvifolium [L., Spec. pl., ed. II, 350 (1762) (*carvifolia*); Koch, Syn. fl. Germ., ed. II, 330; Jacqu., Fl. Austr. I, t. 16; Reich. f., Ic. fl. Germ., XXI, 51, t. 101, fig. I; Posp., Fl. öst. Küst., II, 166; Beck, Fl. Nied.-Öst. 644; Wohlf., Syn. deutsch. Fl., 1094. — *Laserpitium selinoides* Scop., Fl. Carn., ed. II, I, 198 (1772). — *Sel. angulatum* Lam., Fl. franç., III 419

(1778). — *S. pseudo-carvifolia* All., Fl. Pedem., II, 9 (1785) = Spreng., Umb. prodr., 16 (1813). — *S. membranaceum* Vill., Cat. hort. Strassb., t. 6 (1807). — *Angelica carvifolia* Spreng. Umb. Prodr., 16 (1813) et apud Roem. Schult., Syst., VI, 666 (1820). — *Mylinum carvifolia* Gaud., Fl. Helv., II, 344 (1828). — *Ligusticum carvifolia* Caruel in Parl., Fl. It., VIII, 339 (1889)]. In dumetis silvisque humidis opacis, juxta vias silvaticas, ad silvarum margines, in pratis humidis — 1100 m. Floret m. Julio—Augusto—Octobr.

Bosna: Prope Vrbanja, Buletić, Doboј (Fo. f. Borbás), in m. Borja Pl., pr. Plitska, Pribinić (*Fo. 1889); circa Fojnica (B.), Okruglica in distr. Vareš, in faucib. Suha agri fl. Gostović, solo serpentino (M.), in agro Sarajevsko Polje (M.); circa Sarajevo: In m. Trebević, Bukovik (M.), pr. Hreša — 1100 m, Pale (M.), Lukavica (F.); inter Previla et Podvitez (Pr.). — **Hercegovina:** In m. Gubar (Hawelka f. *B.).

2. *Selinum silaifolium* [G. Beck. — *Cnidium silaifolium* Simonk., Fl. Transs., 259 (1887); Briquet in Schinz Kell., Fl. Schweiz, 369 (1900) et in Ann. cons. Jard. Génève, IV, 201. — *Laserpitium silaifolium* Jacqu., Fl. austr. V, 52, app. t. 44 (1778). — *Ligusticum Lobelii* Vill., Prosp., 24 (1779) et *cicutae-folium* Vill., Hist. pl. Dauph., II, 612, t. XVI (non XV); Caruel in Parl., Fl. It., VIII, 336. — *Lig. apioides* Lam., Enc. meth., III, 577 (1789). — *Selinum Segueri* All., Auct. fl. Pedem., 24 (1789) non L. — *Cn. apioides* Spreng., Umb., prodr., 40 (1813); Hoffm., Gen. Umb., ed. II, 157 (1816) sec. Spreng. in Roem. Schult., Syst. veg., VI, 552 = DC., Prodr., IV, 152; Koch, Syn. fl. Germ., ed. II, 326; Reich. f., Ic. fl. Germ., XXI, 40, t. 81; Vis., Fl. Dalm., III, 46; Wohlfl., Syn. deutsch. Fl., 1079; Posp., Fl. öst. Küst., II, 162. — *Lig. silaifolium* Gaud., Fl. Helv., II, 399 (1828). — *Cn. athoum* Gris., Spic. fl. Rum. I, 363 (1843), II, 508. — *Sel. apioides* Arc., Comp. fl. It., 289]. — Inter dumeta, in lapidosis fruticosis, locis apricis aridisque, saxosis regionis montanae — 1400 m. Floret m. Junio—Augusto.

Bosna: *Asch. Kan., Cat. 65 (1877). Ubi? Vel. Malovan (Pr.), Kamešnica (Pr.), Dinara (Degen, Ja. Wa), Jedovnik supra Radlovići prope Grahovo (H.) 1000—1300 m; in m. Šator (Pr.). In faucibus fl. Prača (M.) in altiplanitie Glasinac (F. f. M.); in valle fl. Sutjeska (Pr.), pr. Suha (F.). In m. Visočica pr. Pribilje 1000—1200 m (M.). — **Hercegovina:** Prope Ulog (Fo. f. V.). Inter Konjic et Borci (Degen), pr. Podvrabac (M.), supra lacum Boračko Jezero (Bl.), in m. Vrabac, pr. Konjic (Fo. f. V., M.), in m. Borošnica (Degen), pr. Glavatičevo, Grdača, Vilišta (M.), inter Bišina et Paljev Dol (M.), in declivibus m. Porim (V.), supra Bojište (Sagorski), in

agro Bijelo Polje (Zawodny), in m. Velež Pl. (Mu., V.!) supra Potoci Han (V.); in m. Podvelež (Str.), in silvis Dubrava pr. Sovići (F. f. M.), in m. Bjelašnica pr. Gacko — 1400 m (M.), in Bijela Gora: Pr. Dubovac, Koristna Greda pr. Vučja, in valle fl. Zaslav pr. Grančarevo (P. f. *Grisebach 1874), Konjušnica (Konjsko), Grab, Ulice (V.).

Anatomia mericarpiorum omnino ei *Selini carvifoliae* aequalis: Juga lateralia in utroque dorsalibus vix magnitudine differunt. Endocarpium sclerenchymaticum, quod vittas [sec. Drude, l. c. 210] includere dicitur nec in *Cnidio silaifolia* nec in *C. venoso* vidi. Ultima species autem ad sectionem *Selini Cnidium* [Benth. Hook., Gen. I, 914; Beck, Fl. Nied.-Öst., 644 (1892) (descriptio jugorum et species hic errore commutata)] pertinet, quae mericarpiorum jugis in media parte fasci unico in transectu fructus rotundo, parenchymo cincto perducitur.

50. Ligusticum.

[L., Spec. pl., 250 (1753) et Gen., ed. V, nr (*Ligusticum* et *Levisticum* Koch) rectius Koch, Umb., 104 (1824); DC. Prodr., IV, 157; Endl., Gen., 776; Benth. Hook., Gen., I, 911; Drude in Engl. Prantl, Nat. Pflanzenf., III, 8, 211.]
»Koprenjak«.

Subgenus: **Eu-Ligusticum.**

[Drude, l. c. — sect. *Euligusticum* Rouy Cam., Fl. Fr., VII, 284 (1901).]

? *Ligusticum ferulaceum* [All., Auct. hort. Taur., 80 (1770—3) et Fl. Pedem., II, 13, t. 60, fig. 1 (1785); Reich. f., Ic. fl. Germ., XXI, 41, t. 84; Rouy Cam., Fl. Fr., VII, 284; Koch Syn. fl. Germ., ed. II, 328. — *L. Seguierii* Vill., Prosp., 25, (1779) non Koch]. In pascuis alpinis. Floret aestate.

Bosna: In monte Maglić, rare (*Pr. in Glasnik XIV [1902], 43.)

L. ferulaceum All. est species Jurae, Alpium occidentalium et maritimarum, qua de causa statio mihi vix credibilis.

1. *Ligusticum Seguieri* [Koch, Umb., l. c., 105 (1824) et Syn. fl. Germ., ed. II, 328; DC., Prodr., IV, 158; Vis., Fl. Dalm., II, 46; Reich. f., Ic. fl. Germ., XXI, 41, t. 85; Posp., Fl. öst. Küst., II, 164; Wohlf., Syn. deutsch. Fl., 1086. — *Selinum Seguieri* Jacqu., Hort. Vind., I, 24, t. 61 (1770); L. fil., Suppl., 179 (1781). — *Imperatoria Seguieri* Spreng., Umb. spec. 65 (1818). — *Lig. pyrenaicum* β . *Seguieri* Caruel in Parl., Fl. It., III, 329 (1888)]. In pratis montanis, herbosis, umbrosis, lapidosis et saxosis in regione subalpina et alpina — 1780 m. Floret m. Julio, Augusto.

Bosna: In m. Mala Klekovača a. 1750 *m* (Ha. Ja.), in m. Uilica (Ja. Ha. Wa.) a. 1200 *m* an var. β ?; in m. Jedovnik (H.); Šator, supra lacum (l.) 1550—1650 *m*; Golja a. 1600 *m* (St. Fa.). In m. Vlašić (Br. f. *Freyn 1888). In monte Treskavica: Sub m. Oblik et in pratis montanis loco Prostrta a. 1680—1780 *m* (M.), in cacuminibus saxosis montis Preslica (V.). — **Hercegovina:** In m. Porim supra Rujište, in m. Velež sub Teleća Lastva (*V. 1895) —1 *m* altum. In m. Orijen (Neumayer f. Visiani).

Variat:

α . *typicum* [G. Beck. — Synonyma supra citata.]

β . *dinaricum* [G. Beck in Ann. naturh. Hofm., V (1897), 482. sub var.? — *L. dinaricum* subspec. *dinaricum* Beck in Magy. bot. lap., IV (1905) 252 = subspec. *liburnica* Degen et Wettst. in Sep. 8 ex l. c. huius operis]. Folia basalia longe petiolata, quater pinnatisecta. Pinnae in paribus 5, remotissimae, longe petiolulatae, intimae secundas longitudine superantes. Pinnulae in paribus 3—4, infimae pinnarum inferiorum conspicue petiolulatae. Laciniae ultimae oblongo-lineares, acutae, mucronulatae, 15—20 *mm* longae, 2—3 *mm* latae, glabrae et laeves. Umbellae radii patententes.

L. Seguieri Koch *typica* egregia est foliis 4—5 \times pinnatisectis, paribus pinnarum 8—10 et paribus pinnularum 6—9 instructis. Pinnae infimae rare longiores sunt quam par secundum et longiuscule petiolulatae, pinnulae sessiles, laciniae tenuiores, breviores, vix 10 *mm* longae multo augustiores, vix 0.5 *mm* rarius —1 *mm* latae observantur. — *L. pyrenaicum* Gouan, cui planta nostra fissura foliorum magis accedit, praestat foliis 5 \times pinnatisectis, paribus pinnarum 8—9, paribus pinnularum 6, laciniis longioribus in margine scabris, jugis collenchymaticis caulinis minus prominentibus.

Bosna: Inter saxa in cratere montis Troglav (*B. 1897). In montibus Croatiae vulgatum.

2. *Ligusticum mutellina* Crantz, Stirp. Austr., III, 81 (1767); All., Fl. Ped., II, 12, t. 60, f. 2 (1785); Rouy Cam., Fl. Fr., VII, 286. — *Phellandrium mutellina* L., Spec. pl., 255 (1753); Jacqu., Fl. austr., t. 56. — *Meum mutellina* Gaertn., De fruct., I, 106, t. XXIII (1788); Koch, Syn. fl. Germ., ed. II, 329; DC., Prodr., IV, 162; Reich. f., Ic. Fl. Germ., XXI, 39, t. 92; Caruel in Parl., Fl. It., VIII, 331; Beck, Fl. Nied.-Öst., 639; Wohlf., Syn. deutsch. Fl., 1089]. In alpinis pascuis et lapidosis (—1900 *m*). Floret m. Julio, Augusto.

Bosna: Prope Travnik in m. Vlašić (Br.) sed? In montibus Vranica Pl.: in cacuminibus Ločike (F., R.! et alii), solo calcareo? Stražica, Tikva (B.), solo schistoso —1900m; supra pagum Potoci (Pr.) in m. Zec (*Mölanderoff apud Blau 1877); in m. Volujak loco Vratnica (Pr.).

Formam *genuinam* [Rouy Cam., l. c.] modo observavi.

Tribus: *Peucedaneae*.

[Reich. in Mössl., Handb., I, XLIV (1827) et Fl. Germ., 453; Koch, Syn. fl. Germ., ed. II, 332; Endl., Gen., 778; Benth. Hook., Gen., I, 683; Drude in Nat. Pflanzenf., III 8, 215.]

51. *Angelica*.

[L., Spec. pl., 250 (1753) et Gen., ed. V, nr. 309 = *Angelica* + *Archangelica*. — restricta: Hoffm., Umb., I, 158; Koch, Umb., 99; Endl., Gen., 778; Benth. Hook., Gen., 916. — Ampliata: Drude in Engl. Prantl, Natürl. Pflanzenf., III 8, 220.] »Kravojac«.

Addo ad diagnosem generis: Flores polygami (hermaphroditici, feminei ac masculini) in umbellis polygamis, femineis (plurimum primis) et masculinis (plurimum ultimis). Alae laterales fructuum fascibus fibrovasalibus duobus plus minus conjunctis, juga dorsalia fasci unico, parenchymo poroso perducta. In fascibus fibrovasalibus omnium jugorum frequenter vitta unica parva in transectu rotunda observatur.

Subgenus: *Angelicastrum*.

[Drude in Natürl. Pflanzenf., III 8, 220; Sectio *Euangelica* DC., Prodr., IV, 167 (1830); sect. *Angelica* Reich., Fl. Germ., 462 (1832).]

1. *Angelica silvestris* [L., Spec. pl., 251 (1753); DC., Prodr., IV, 168; Koch, Syn. fl. Germ., ed. II, 331; Reich. f., Ic. fl. Germ., XXI, 48, t. 95; Beck, Fl. Nied.-Öst., 645; Wohlff., Syn. deutsch. Fl., 1096; Posp., Fl. öst. Küst., II, 167. — *Selinum sylvestre* Crantz, Stirp. Austr., III, 47 (1767). — *Imperatoria sylvestris* Lam., Fl. Fr., III, 417 (1778); DC., Fl. Fr., IV, 286. — *Sel. angelica* Roth, Germ., I, 133 (1788). — *Peucedanum angelica* Caruel in Parl., Fl. It., VIII, 281 (1888)]. In pratis humidis, ad silvarum margines, in silvis apertis usque ad subalpinas. Floret m. Julio—Sept.

Bosna: *Asch. Kan., Cat., 66 (1877). Ubi? In montibus Šuljaga, Vel. Malovan, Šator, Kamešnica, Troglav (Pr.), in m. Vranica prope lacum Prokoško Jezero (Simony-Vierhapper); prope Lašva ad fl. Bosna (M.!), prope Kupres, Bugojno (Pr.); circa Vareš, in m. Zvijezda (Pr.). Circa Sarajevo:

in monte castello coronato (M.); in agro Sarajevsko Polje, prope Ilidža (M.); in m. Treskavica (F.), in Zelengora (Pr.); prope Podvitez (Pr.), ad fl. Kruščica prope H. K. Vitez (M.); in valle fl. Sutjeska (B.). — **Hercegovina**: Prope lacum Boračko Jezero (*M. 1923).

Variat:

α. vulgaris [Avé Lall. in Fischer, Cat. hort. Petrop., 59 (1842); v. *genuina* Gren. Godr., Fl. fr., I, 685 (1848). — v. *latisecta* Neilr., Nachtr. Fl. Wien, 230 (1851). — *typica* Beck, Fl. Nied.-Öst., 645 (1892). — *nemorosa* Burn., Fl. Alp. mar., IV, 194 (1906)]. Folia in plantis minoribus 2×, in majoribus 3× pinnatisecta. Segmenta ultima ovata, e media attenuata c. 2× (rare 3×) longiora quam lata, infima saepius inaequaliter biloba vel oblique cordata, terminalia basi plurimum cuneato-contracta. Fructus normales 3·5—6:3—4·5 mm. Alae laterales seminis latitudinem latitudine aequantes. Juga dorsalia rotundata vel carinato-prominentia.

Ludit foliolis infra imprimis in nervis copiosius rigide pilosulis = *pratensis* [fr. Presl, Fl. čech., 61 (1819) pro spec.], foliis in partitionibus primis foliolis paucis minutis instructis = *appendiculata* [Heuff. in Verh. zool.-bot. Ges., VIII (1858), 116. — *A. macrophylla* Schur, Fl. Transs., 262 (1866) f. Simonkai] foliolis grossius serratis (non inaequaliter parvule aristato-serratis) = *grossedentata* [Rouy Cam., Fl. Fr., VII, 402 (1901)]. Hinc inde. — *incisa* [Asch., Fl. Brand., I, 251 (1864)]. Foliola irregulariter incisa. Bosna: Juxta Sijekovac ad fl. Save *M. 1919). — *oblongata* [Beck]. Folia 3×-pinnatisecta. Foliola ovali-oblonga, ex infima tertia apicem versus attenuata, inaequaliter aristato-serrata, sub 3× longiora quam lata, infra subcopiose rigide-pilosa. Foliolorum basis ut in var. *α*. Croatia: In monte Klek prope Ogulin (B.).

β. villosa [Lag., Gen. Spec. nov., 12 (1816) pro spec.; Willk. Lange, Prodr. Fl. Hisp., III, 46. Confer Strobl, Fl. Nebrod., 453 et in Flora, LXIX, 566. — *A. nemorosa* Ten., Syll., 561 (1831) et Fl. Nap., V, 337, t. 231. — *A. silvestris* v. *Bertolonii* Reich. f., Ic. fl. Germ., XXI, 48, t. 95, fig. III (1867) = v. *nemorosa*]. Foliola subrotundo-ovata, breviter acuta, paulo longiora quam lata, argute serrata, infra dense puberulo-scabriuscula v. villosa. Petala saturate rosea. Cetera ut in var. *α*.

Bosna: Inter dumeta ad fl. Vrbas prope Banja Luka (*C 1888). Mihi dubiosum! — **Hercegovina**: Ad fontes in angustiis fl. Neretva prope sta-

tionem Prenj (*M. 1919). Propter notam, hic etiam formam foliis subtus glabris repertam esse, potius ad formas varietatis α . pertinere videtur.

γ . *elatior* [Wahlenbg., Fl. Carp., 84 (1814) sec. aut. — *A. Razunii* All. Fl. Pedem., II, 10, nr. 1310 (1785) non Gouan. — *A. montana* Schleich. apud Spreng., Umb. prodr., 16 (1813) et Cat. Helv. (1815), 6 sine descr. = Gaud., Fl. Helv., II, 341 (1828) non Broteri (1804). — *Imperatoria montana* DC., Fl. Fr., V, 504 (1815). — *A. silvestris* v. *decurrentis* Avé Lall. in Ind. sem. hort. Petrop. (1842), 59. — v. *angustisecta* Neilr., Nachtr. Fl. Wien, 230 (1851). — v. *montana* Asch. in Bot. Zeit. (1852), 294 et Fl. Brand., I, 251 (1860) = Gremli, Fl. Schweiz, 5. Aufl. — *A. alpina* Schur., Fl. Transs., 262 (1866) f. Simonkai]. Firmus saepe hominis altitudine, in omnibus partibus luxurians. Foliola (pinnae secundae et tertiae ordinis) oblongo-lanceolata vel lanceolata, $3\times-5\times$ longiora quam lata, 2–3 cm lata rarius latiora, longe acuminata, summa cuneato-decurrentia. Foliorum vaginae ample ventricoso-bullatae. Radii umbellae fructiferae 5–18 cm longi. Involucelli folia saepe umbellis longiora. Mericarpia 5–6:5.5–6 mm. Alae laterales seminis diametrum longitudine aequantes vel paulo superantes. In saltibus, silvosis imprimis in silvis subalpinis ad ripas fluviorum sed frequenter fluviis proluta. Floret m. Julio—Sept.

Bosna: Prope Banja Luka (*Hofm. 1882). Circa Travnik, in valle Gujni Dol m. Vlašić (Fr., Br.); in regione fl. Gostović a. 360–1107 m (M.), pr. Lašva ad fl. Bosna 360 m (M.), in valle riv. Lužnica in distr. Vareš a. 570 m (M.), inter Stambulčić et Pale a. 900 m (M.) cum fructibus 4.5:4 mm; in m. Treskavica (F.).

Ludit.

microcarpa [G. Beck]. Mericarpia 3–4–4.5:3–3.5–4.5 mm hinc inde scaberula. Alae laterales seminis diametrum latitudine aequantia vel paulo superantia.

Bosna: In valle Lužnica agri Varešensis solo serpentino c. 570 m (M.! 27. IX. 1920), prope Stambulčić—Pale c. 900 m (M.! 23. IX. 1906), in valle Krušćica prope H. K. Vitez a. 660 m (M.! 9. IX. 1920). Etiam in Alpibus austriacis crescit.

maxima [G. Beck. — Reich. f., Ic. fl. Germ., XXI, t. 96]. Maxima ultra hominis altitudinem alta. Foliola ut in typo sed latiora, 4.5–8 cm lata, $3\times$ longiora quam lata, grossius simpliciter serrata. Magnitudo fructuum maturorum in eadem planta variat, 3–5 mm:3–3.5 saepe aequae longa quam lata. Petala lilacea.

Bosna: In fauce Prača prope Banja Stijena 360—560 m (M. 20. VII. 1920 sub *A. Pančičii* K. Malý non Vandas = *A. montana* apud K. Malý in Glasn. zem. muz. [1923], 124 f. *B.).

illyrica [K. Malý in Glasn. zem. muz., XXXI (1919), 65, fig. 1—3 pro spec.; *A. Pančičii* v. *illyrica* K. Malý in Sched. ibidem = *A. silvestris* subsp. *montana* var. *illyrica* K. Malý in Glasn. zem. muz. (1923), 124]. Fructus jugis omnibus aequaliter undulato-alatis (vel juga dorsalia pro parte modo alata f. Beck). — Sec. K. Malý. »Affinis *A^{ae} Pančičii* Vand. a qua differt jugis fructuum omnibus late aequaliter undulato alatis et umbellulae radiis hispidis. Foliola mucronato crenato-dentata. Mericarpia 5—5.5:4—4.5 mm. Vittae commissurales obtectae. Fructus juniores glabri. Flores ignoti.« Certe mutatio notabilis *A^{ae} montanae*.

Bosna: In glareosis calcareis faucium Gudura Prače cum typo et in consocio *Peucedani aegopodioïdis* Vand. a. 570 m (*M. 12. IX. 1909).

Prope Lašva ad fl. Bosnam K. Malý collegit plantas, quorum juga dorsalia in fructibus rotundata, alae laterales autem eleganter undulatae observari sunt.

Angelica Pančičii [Vandas in Sitz. böhm. Ges. Wiss. (1888) 448; Velen., Fl. bulg., 200; non K. Malý in Glasn. zem. muz. XXXI (1919), 66 sec. M. in Glasn. (1923) 124]. »Robusta monoica, caule elato crasso interdum giganteo (60—150 cm alto) striato fistuloso etiam cum ramis alternis erecto-patentibus glabro sub umbellis tantum dense et breviter hispidulo, foliis mediis et inferioribus maximis triternato pinnatim decompositis, foliolis infimis breviter petiolulatis ceteris sessilibus, ovato-ellipticis vel ellipticis basi inaequalibus, acute biserratis subtus pallidioribus glabris, terminali acuminato subsessili plus minus profunde 2—3 lobo, terminali proximis semper decurrentibus, (foliolis infer. 5—6:3—4 cm); foliis superioribus minoribus vaginis maximis bullatis pallide rubellis insidentibus biternatis, segmentis bipinnatisectis, involucro nullo, umbellae fructiferae magnae multiradiae radiis fere 60nis breviter hispidulis (7—9 cm longis), umbellulae multiradiae (100); involucello sub 10 phyllo reflexo, phyllis basi lanceolatis abrupte attenuatis acutissimis uninerviis albis glabris, margine minutissime denticulatis; floribus parvis, masculis albis vel laete rubellis, femineis apetalis disco et stigmatibus rubellis; mericarpiis ovato-

oblongis late alatis, ala latitudinem seminis adaequante, basi emarginata, jugis validis obtusis rectis approximatis vittas obtegentibus, radiis glabris 2—4plo brevioribus, fructibus 4—5:3·5 *mm.*« (Velenovský)

»Planta saepissime gigantea, caule crassissimo basi interdum manu validiore foliis vaginisque maximis obsito, umbellis maximis multiradiatis, umbellulis polyphyllis.«

»Ab *A. silvestri* differt jam vero proportionibus omnino majoribus, praecipue autem foliis multo magis decompositis, nam inferiorum segmenta primae ordinis biternatim decomposita sunt, segmentumque ordinis secundae 5—7na segmenta utrinque gerit, quorum unum quodque utrinque 3—4 foliola habet. *A. brachyradia* Freyn quae est species parallela in montibus Bosnae, statura valida nostrae sat similis est.... *A. Pančičii* tamen ab ea notis hisce dignoscitur: Foliis glabris, vaginis superioribus magnis latis bullatis, fructibus fere dimidio minoribus, radiis umbellarum 2—4plo brevioribus.« (Velenovský.) — Mea opinione foliis triternato-pinnatim decompositis (apud *A^m silvestrem* et eiusdem varietates 3× decrescenter pinnatisectis) pinnis inferioribus secundae ordinis laciniis 5—7 munitis (in *A. silvestri* v. summum 5), alis fructuum semen latitudine aequantibus (non latoribus) ab *A. silvestri* et eiusdem varietatibus differt. Sec. K. Malý [in Glasn. zem. muz., XXXI (1919) 67] etiam *A. silvestris* ad *A^m Pančičii* vergit. Forsan igitur solum *A. silvestris* v. *Pančičii* (Vand.)?

Planta in **Hercegovina** in faucibus Rakitnica, a. 400 *m* (M. 9. VIII 1908) lecta propter fructus 5—6 *mm* longis, 3·5—4 *mm* latis ad *A^m silvestrem* v. *montanam* pertinet (Sec. K. Malý in Glasn. zem. muz. [1923] 124). *A. Pančičii* in peninsula balcanica orientali (Serbia, Bulgaria) et in Crna Gora reperta est.

2. *Angelica brachyradia* [Freyn in horto bot. Pragensi et in Verh. zool.-bot. Ges. 38 (1888), 607 = *A. globifera* Freyn in litt. ad Brandis (1884). Confer K. Malý in Glasn. zem. muz., XXXI (1919) 65]. »Herba perennis, suborgialis, hemisphaerica, monoica, caule striato, crasso, fistuloso, superne hispidulo a basi fere ramoso, ramis erecto patentibus, opposite ramulosis vel simplicibus. Folia, supera excepta, magna, ambitu triangularia, tripedalia, aequae lata ac longa, triternato-pinnatim decomposita, foliolis ovato-ellipticis vel ellipticis, obliquis, dentato serratis, subtus pallidioribus et ad nervos breviter hirtis, petiolo

valido subfistuloso insidentes. Involucrum nullum. Umbella pedem diametro vel minor, multiradia, breviter hispida; radiis usque ad 100, semipedalibus, strictis validis. Umbellulae parvae, multi- (sub 100-) radiae, involucello 5—12 phyllo, reflexo, phyllis triangulari-lanceolatis, longe acuminatis, acutissimis, 1 nerviis, basi subdiaphanis, radiisque brevibus, hispidis. Flores minutissimi, genitalibus longe exsertis, disco albicante. Flos masculus petalis ellipticis acutis, subcarinatis ex roseo pallescentibus; flos femineus apetalus. Mericarpia cordato-obovata, parva, radio subaequilonga jugis validis obtusis; alae semine subaequilatae. (Freyn) Fructus magis ellipticos (5—)6—7:4—5 mm, jugis dorsalibus saepius carinato prominentibus, hinc inde parce scaberulos observavi. (Beck) — Ab *Angelica silvestri* v. *elatiore* differt foliis bis-ternatis pinnis secundae ordinis pinnatisectis vel solum tripartitis, umbellis fructiferis globosis, pedicellis internis fructibus subbrevioribus, externis bis longioribus (in *A. silvestris* varietatibus semper multo longioribus). Foliis biternatis *A^{ae} Pančićii* affinis, sed pedicellis fructiferis brevioribus, fructibusque majoribus distinguenda!

In subalpinis silvaticis, saltubus. Floret m. Julio, Augusto.

Bosna: Circa Travnik in cac. Crni Vrh et in valle Gujni Dol montis Vlašić (Brandis! f. *Freyn 1888); in m. Vranica Pl. prope lacum Prokoško Jezero (Schwarz!, sel ?); in valle silvae Kruščica prope Vitez (Br! f. M.); in m. Vučja Pl. pr. Nemila (M.).

Variat:

planinensis [K. Malý in Glasn. zem. muz. XXXI (1919) 65]. Humilis (—40 cm alta). Foliola glaberrima mucronato-crenato-dentata. Involucelli phylla late lanceolata, glabra (margine modo scabra — Beck). Petala obscure rosea.

Bosna: In pratis uliginosis alpinis mont. Treskavica Pl. c. 1540 ad 1680 m (*M. 1919!) florifera m. Augusto.

52. Anethum.

[L., Spec. pl., 263 (1753) et Gen. ed. V, nr. 326 p. p.; Koch, Umb., 91; Endl., Gen., 780; Hofm., Umb., 119; Drude in Nat. Pflanzenf., III 8, 208. — *Peucedanum* sect. *Eupeudenum* Benth. Hook., Gen., I, 919.] »Kopar, mirodija«.

1. *Anethum graveolens* [L., Spec. pl., 263 (1753); DC., Prodr., IV, 186; Koch Syn. fl. Germ., ed. II, 337; Vis., Fl. Dalm. III. 53; Reich. f., Ic. fl. Germ., XXI, 66, t. 127; Posp., Fl. Küst., II, 176; Caruel in Parl., Fl. It., VIII, 294; Wohlf., Syn. deutsch.

Fl., 1113. — *Pastinaca graveolens* Bernh., Verz. Pflanz. Erf. 171 (1800). — *P. Anethum* Spreng. in Röm. Schult., Syst., VI, 587. — *Selinum Anethum* Roth, Tent. fl. Germ., I, 134 (1800). — *Peucedanum graveolens* Benth. Hook., Gen., I, 919 (1867) f. Index Kew.; Baillon, Hist. pl., VII, 97 (1878/79); Arc., Comp. fl. it., 294; Beck, Fl. Nied.-Öst., 647. — Potius ad *Peucedanum* pertinet!]

Ex Europa mediterranea et Oriente ortum, saepissime in hortis ad usum culinae colitur et frequenter spontaneum occurit. Floret m. Julio—Augusto. Spontanea observatum in **Bosna** prope Banja Luka (*H. 1882) in **Hercegovina** inter segetes prope Mostar (*Str. 1880), in m. Podvelež prope Mostar (F.).

53. *Levisticum*.

[Hill, Brit. Herb. (1756) 423; Koch, Umb., I. c. 101 f. 41 (1824); Mert. Koch, Deutschl. Fl., II, 393; Endl., Gen., 778; Benth. Hook., Gen., I, 916.] »Miloduh«.

1. *Levisticum vulgare* [Hill, l. c., 423 (1756) = Reich., Fl. Germ., 463 (1832). — *Ligusticum levisticum* L., Spec. pl., 250 (1753). — *Angelica paludapifolia* Lam, Fl. fr., III, 451 (1778) et Enc. meth., I, 173. — *A. Levisticum* All., Fl. Pedem. II, 10 nr. 1309 (1785). — *L. officinale* Koch, Umb. in Nov. Act. Leop. Car. XII 1, 101 (1824); Beck, Fl. Nied-Öst., 642; Posp., Fl. öst. Küst., II 165; Wohlf., Syn. Deutschl. Fl. 1093. — *L. paludapifolium* Asch., Fl. Brand., I, 250 (1864); = Reich. f., Ic. fl. Germ., XXI, 50 t. 100 (1867). — *Lev. levisticum* Karst., Deutschl. Fl., 844 (1882)].

Ex Asia austro-occident. (Thellung in Verh. Naturf. Ges. Basel XXXV, 27—33) introductum in hortis ad usum culinae colitur, ex iis auffugit spontaneumque rare observatur. Floret m. Junio—Augusto. **Bosna**: In hortis urbis Banja Luka (*H. 1882), in locis sepulturae turcicae urbis Sarajevo (Degen), in hortis rusticis prope Kukavičko Jezero (Pr.), pr. Pavlovac juxta Kasidol a. 1300 m et in m. Bijelo brdo prope Uvac (M.). Ubique in hortis rusticis Bosnae (M.).

54. *Ferulago*.

[Koch, Umb., I. c., 96 (1824); Boiss., Fl. Or., II, 996 (et sectio *Euferulago* p. 997); Drude in Nat. Pflanzenf., III 8, 232. — *Ferula* sect. *Ferulago* DC., Prodr., IV, 171 (1830); Endl., Gen., 779; Rouy Cam., Fl. Fr. VII, 398; Genus generibus *Ferulae* et *Peucedano* valde affine. Confer: Bentham Hooker, Gen. I, 917 (sub *Ferula*) et Drude, l. c., 229; Burnat, Fl. alp. mar. IV, 200.]

»Devesilj«.

1. *Ferulago galbanifera* [Koch, Syn. fl. Germ., 302 (1837) (sec. K. Malý in Magy. bot. lap. (1908) 224 nota 1 jam. 1836). Koch Fl. Germ., ed. II, 332; Wohlf., Syn. Deutsch. Fl., 1099; Posp., Fl. öst. Küst. II, 167. — *Ferula ferulago* L., Spec. pl.,

247 (1753); DC., Prodr., IV, 171; Vis., Fl. Dalm., II, 48; Reich. f., Ic. fl. Germ., XXI, 54, t. 107. — *Ferula nodiflora* Jacq., Fl. austr., V, 28, t. 5 non L. — *F. galbanifera* Mill., Gard. dict., ed. VIII, nr. 2 (1768). — *Ferula sulcata* Bert., Pl. Gen., 46 non Desf. — *Ferula nodiflora* Koch, Umb. l. c. 98 (1824) et Mert. Koch, Deutschl. Fl., II, 388 (1826)]. Caule carinato, foliis basilibus in circuitu late ovatis, fructibus magnis 12—17:8—10 margine alato non corticoso 2—2.5 mm lato, fere dimidiam latitudinis seminis aequante egregia. In collibus apricis, saxosis ad agrorum margines, in vinetis regionis mediterraneae. Floret m. Julio, Augusto.

Hercegovina: Asch. Kan., Cat. 66 (1877) ubi? In faucibus fl. Neretva (Laus), in ascensu m. Porim pr. Podporim 830 m (M.), in m. Podvelež (Fo.) pr. Mostar et in m. Velež? (Bornmüller, Sagorski) a. 100—150 m, in planitie edita prope Han Osman-Bišina ca. 900 m (M.).

2. *Ferulago silvatica* [Besser in Reich., Iconogr., IV, 53, tab. 371, fig. 555 (1826) = Heuffel in Verhandl. zool.-bot. Ges., VIII (1858) 116; Neilr., Diagn. Ung., 56. — *Ferula sylvatica* Besser f. Roem. Schult., Syst., VI, 592 (1820); Besser, Enum. pl. Volh., 44 (1822); Reich. f., Ic. fl. Germ., XXI, 54, t. 106. — *F. Ferulago* b. *commutata* Rochel, Pl. Ban. rar., 63, t. 24, f. 50 (1828). — *F. Barrelieri* Ten., Fl. Neap., III (1824), p. VI et 342, t. 133 f. Neilreich, Paoletti. — *Lophosciadium Barrelieri* Gris., Spic. Rum., I (1843), 372 p. p.]. Foliis circuitu angustis, elongato-oblongo-lanceolatis, pinnis e media ad apicem et basim decrescentibus, fructibus minoribus, alis corticatis sat eminentibus. In pratis montanis et subalpinis, declivibus graminosis, in dumetosis lapidosis, saxosis ac in silvis apertis, solo calcareo, —1600 m. Floret m. Junio—Julio. »(Gorki) komorač«.

Bosna: Sat frequens imprimis in Bosna orientali et australi. In monte Velika Gomila 730 m (B.); prope Petrovac (B.); ad m. Klekovača prope Otaševac, Krivo Dol inter Han Crljevica et Šekovac, Kapljino pr. Bos. Petrovac et Bjelavski Do ca. 700—800 m (B.), circa Gorjevac, Dubovsko, Dugo Polje, Vrtoče, Bjelajsko, Medena Glavica, Smoljana, Janjila, Šurjan (Fo.); pr. Varcar-Vakuf (Schill.), in m. Vitorog a. 1500 m (Sta. Fa.), inter Bugojno et Kupres (Pr.), circa Kupres (F.), Koprivnica, Šuljaga 1000—1350 m (Ha. Ja.), in agro Suho Polje ad m. Plazenica (Sta.), in m. Prolog (F.), Vještica Gora (Pr.), Dinara (B.), supra Marica Košare (Ja. Wa.), pr. Marino Brdo (Ja.), Borova Glava prope Livno (F.), pr. Grkovac (Pr.), circa Glamoč: Inter Podosoje et Na Podovi (Sta. Fa.), inter Glamoč et Hrastičevo (Ha. Ja.), pr. Mlinište (Ja.), Prisjeka (Ja.), Popovići (Ha. Ja.). Pribelja (Sta. Fa.); ad riv. Banjalučica pr. Prozor (Fr. Br.), pr. Strojice, Popuže (Behrendsen).

Circa Travnik (*S. 1848), in m. Vlašić —1300 *m* (S.), pr. Fojnica (B.), in m. Ločike (R.!) montis Vranica Pl., in m. Lisina pr. G. Vakuf (M.). In valle Trstivnica prope monast. Sutiska (S.), inter Kukavica et Janjići (S.); circa Vareš, Potoci, Pajtov Han (Pr.), Dubošćica (Fo.). In m. Igman, Bjelašnica (B.), circa Sarajevo: In valle Vogošća (B.), in m. Motka, Ober, Gradina, Bukovik, Crepolsko, Ozren (M.), pr. Drljevac (M.), Vučja Luka c. 1300 *m* (B.), in m. Paprenik-Gradište (Beck, Pl. Bosn.-Herc., nr. 25 sub *F. monticola*), in valle fl. Miljacka (F.!, B.), Koševo pr. Radava —680 *m* (M.), in m. Lipovac (B.); pr. Dovlići, Han na Romanija (Fo.). Prope Trnovo (B.), in m. Čelina ad m. Treskavica 1250 *m* (B.), in m. Vratlo (Fo. f. V.); Kalinovic (Fo.), in Zagorje (B.), m. Dumoš Pl. (Fo.), Vučevo (B.), Grad pr. Goražde (B.), pr. Vražalice a. 900 *m* (M.), pr. Ravna Gora pr. Jelašća, Iksar et in m. Bić Pl. a. 1200 *m* (Schiller f. Hayek). — **Hercegovina:** Supra Bradina (Behrendsen). Prope Konjic (Degen, Landauer et Sündermann!), pr. Ostrožac, in m. Bokševica, Preslica (M.), pr. Umoljani a. —1300 *m* (B.), in m. Porim a. 1400 *m* (V.); in m. Velež a. 1200—1400 *m* (Mu.), in valle Brijestov pr. Uzriječje (M.), prope Nevesinje (V.); Vučja Bara pr. Gacko (M.), pr. Ivanica (A.), circa Posušje et Gradac (F.). In m. Leotar pr. Trebinje (P. fide *Gris. 1874); inter Milanov Odsjek et Radkuša (V.). — **Novi Pazar:** Inter Han Kovač et Boljanić (*B. 1895).

Variat:

α. *stenocarpa* [Borb., Flor. közlem. (1878), 291 et in Öst. botan. Zeit. (1880), 287; Reich. f. l. c., t. 106. Conf. Hayek apud Fritsch in Mitt. naturw. Ver., 51 (1914), Sep. 9]. Caulis teres. Foliorum segmenta angustissima, c. 0·3 *mm* lata. Radii 6—8. Fructus maturi 8:4·5 *mm*. Juga dorsalia subacriter prominentia; jugum marginale 0·5 *mm* latum (sec. Hayek) sec. Reich. c. $\frac{1}{3}$ diametri seminis aequans.

E terris nostris nondum vidi.

β. *commutata* [Borb., Flor. közl. (1878), 27 ibidem amplius. — *Ferula Ferulago* b. *commutata* Roch., Plan. Ban. rar., 63, t. 24, f. 50 (1828). — *F. silvatica* v. *macrocarpa* Borb. in Öst. bot. Zeit. (1880), 287. — *F. Rocheliana* Nym., Consp. fl. Eur., suppl. II (1889), 137. — *F. commutata* Hayek, l. c., 11 (1915). — *Ferulago monticola* aut. Hung.]. Caulis inconspicue carinatus, non costatus. Foliorum segmenta c. 0·7—1 *mm* lata. Fructibus 8—10:4·5—5·5 *mm* (8:6 *mm* Hayek) ellipticis, margine 1 *mm* lato semine triplo (non duplo) angustiore. Vittae numerosae, approximatae, spatio ipsis (vittis) vix aequilato disjunctae in margine corticoso, seminis diametro aequilato vel duplo angustiore supra 1 *mm* lato carinato (vix undulato) cincta. (Borbás.) In *F. monticola* [Boiss. Heldr., Diagn., ser. 2, II, 91; Hal., Consp., fl. Graec., I, 643] mericarpia 10:6—7 *mm*.

Bosna: In monte Igman c. 800—1600 *m* (M.), in m. Paprenik (Gradište) pr. Sarajevo (*B. 1895), in m. Dumoš Pl. c. 1000 *m* (Blau f. M.). — **Hercegovina:** In m. Visočica c. 900 *m* (*M. 1919)

Propter defectum fructuum maturorum non dici potest, quot stationes prius adnumeratas ad hanc varietatem forsitan in terris nostris unicam pertinere.

55. Opopanax.

[Ludw., Inst. ed. II, 153 (1757) = Koch, Umb., l. c., 96 (1824); DC., Prodr., IV, 170; Endl., Gen., 779 (*Opopanax*); Benth. Hook., Gen., I, 922; Drude in Engl. Prantl, Nat Pflanzenfam., III 8, 234.] »Kirovnica«.

1. *Opopanax chironium* [Koch, Umb., 96 (1824); Gren. Godr., Fl. Fr., I, 693; Vis., Fl. Dalm., III, 50; Reich. f., Ic. fl. Germ., XXI, 51, t. 102 et 149, f. 6; Rouy Camus, Fl. Fr., VII, 370. — *Laserpitium chironium* L., Spec. pl., 249 (1753) p. p. — *Pastinaca opopanax* L. l. c. 262; Waldst. Kit., Pl. rar. Hung. III, t. 211; — *Ferula opopanax* Spreng., Spec. Umb., 77 (1818) et in Roem. Schult., Syst. VI 597; Caruel in Parl., Fl. It., VIII, 295. — *Opopanax glabrum* Bernh., Sel. sem. hort. Erf. (1837—38); Arc., Comp. fl. It., 296. — *Op. opopanax* Karst., Deutsch. Fl., 847 (1882)]. In apricis saxosis glareosis, graminosis inter dumeta ad sepes regionis fl. mediterraneae. Floret m. Junio, Julio.

Hercegovina: Circa Mostar: Pr. fontem Radobolje (Cim) (M.), in m. Stolac (Raap. Callier, Pl. Herc. exs. nr. 78!, Baenitz!), in m. Busak Pl. (Fo. f. V.); circa Trebinje in m. Gljiva et circa Gluha Smokva inter Trebinje et Drijeno (*V. 1895).

56. Peucedanum.

[L., Spec. pl. 244 (1753) et Gen. ed. V nr. 302 — ampl. Koch, Umb., l. c., 92; Endl., Gen., 779; Benth. Hook., Gen., I, 918; Drude in Nat. Pflanzenf., III 8, 234. Confer: Calestani, Consp. *Peuc.* in Boll. soc. bot. It. (1905) 193 n. v.]
»Smudnjiak«. Endocarpium sklerenchymaticum deest.

Subgenus: **Eu-Peucedanum.**

[Drude l. c. 235 (p. p. excl. *Palimbia*). Sectio: DC., Prodr., IV, 176.]

Sectio: *Eupeucedanum.*

[DC., Prodr., IV, 176 (1830). *Peucedanum* Gaertn., De fruct. I, t. 21. — *Peucedana legitima* Koch, Umb., 92.]

1. *Peucedanum officinale* [L., Spec. pl., 245 (1753); DC., Prodr., IV, 177; Koch, Syn. fl. Germ., ed. II, 333; Reich. f., Ic. fl. Germ., XXI, 56, t. 112; Beck, Fl. Nied.-Öst., 647; Wohlf.,

Syn. deutsch. Fl., 1104. — *Selinum Peucedanum offic.* Crantz, Stirp. austr., fasc. III, 30 (1767); Wigg., Prim. fl. Hols., 25].
 »Siljevina«. In pratis, graminosis apricis, ad silvarum margines.
 Floret m. Julio—Sept.

Hercegovina: Prope Trebinje in pratis montis Gljiva (P. f. *Grisebach, 1874).

2. *Peucedanum longifolium* [Waldst. Kit., Pl. rar. Hung., III (1812) 279, t. 251; DC., Prodr., IV, 177; Vis., Fl. Dalm., III, 51; Reich. f., Ic. fl. Germ., XXI, 56, t. 111 fig. I—IV, 7—12; Neilr., Diagn. Ung., 57]. In saxosis, lapidosis, herbosis, fruticosis —1400 m. Floret m. Augusto—Sept.

Bosna: (*Asch. Kan., Cat. 1877) Ubi? In angustiis prope Prača a. 580 m (*M. 1920). — **Hercegovina:** In declivibus montis Porim supra Rujšte (V.); in m. Velež (B., Fo. f. V.) in planitie karstiensi prope Han Osman et Poljane ca. 1000 m (M.) in valle Vučja Bara, in m. Bjelašica prope Gacko —1400 m (M.). Circa Trebinje in montibus Leotar et Gljiva (P. f. Grisebach 1874, V., B.), in montibus Svitavac, Štirovnik, Gnjila Greda (V.), Orijen (Tommasini, V.), Subra (*Weiss. 1866, V.). — **Dalmatia** in Krivošije (Visiani) locis pluribus.

? *Peucedanum ruthenicum* [Marsch. Bieb., Fl. taur. Cauc., I, 215 (1808), III, 214 (1819); DC., Prodr. IV, 177; Ledeb., Fl. ross., II 1, 309; Reich. f., Ic. fl. Germ., XXI, 56 t. 116, f. I; Boiss., Fl. Or., II, 1017. — *P. tauricum* Marsch. Bieb., Fl. taur. Cauc., I, 215 (1808). — *Ferula ruthenica* Spreng., Umb. prodr., 14 (1813). — *P. Besserianum* DC., Prodr., IV, 177 (1830) f. Besser]. Sec. Asch. Kan., Cat. corm., 66 (1877) in Hercegovina repertum esse, dicitur, quod dubitari potest, quia *P. ruthenicum* Rossiam et terras caucasicas incolat.

3. *Peucedanum Schottii* [Besser in DC., Prodr., IV, 178 (1830); Koch, Syn. fl. Germ., ed. II, 334; Reich. f., Ic. fl. Germ., XXI, 58, t. 114.; Posp. Fl. öst. Küst., II, 170; Wohlf., Syn. deutsch. Fl., 1103. — Confer: Burnat, Fl. Alp. mar., IV, 205; Hy in Bull. soc. bot. France, sér. 4, I (1901) vel XLVIII, 105. — *Pastinaca glauca* Scop., Fl. Carn., ed. II, 1,203 (1772) sine ulla dubitatione sec. Pospichal non *Peucedanum glaucum* DC. — *Pteroselinum glaucum* Reich., Fl. Germ., 453 (1832)]. In saxosis, lapidosis, graminosis, dumetis, ad marginem dumentorum. Floret m. Aug., Sept.

Hercegovina: Sub dumeta in montibus Glogovo (Prenj) et Čvršnica (V.); in valle fl. Zalomska prope Plužine juxta Nevesinje (Ja.); in m. Ilina Greda supra Bogojević-selo (*V. 1888), juxta Radešići prope Konjsko (V.).

4. *Peucedanum coriaceum* [Reich., Fl. Germ., 866 (1832); Reich. f., Ic. fl. Germ., XXI, 57, t. 108; (sub *Petteri* Vis). — *P. parisiense* Koch, Syn. Fl. Germ., 303 (1836) et ed. II, 332 non DC., Fl. fr., IV, 336 et Reich. f., Ic. 58, t. 109 = *P. gallicum* Latourr., Chl. Lugd. (1785), 7 sed Caruel in Parl., Fl. It., VIII, 268; Wohlf., Syn. deutsch. Fl., 1103; confer: Reich. f., l. c. — *P. Petteri* Vis., Cat. sem. hort. Pat. (1837); Bert., Fl. It., III, 347; Vis., Fl. Dalm., III, 51. — *Pastinaca? Petteri* Vis. apud Reich., l. c.]. In pratis humidis paludosis ac aridis, pascuis ad sylvarum margines — 1200 m. Floret m. Julio, Sept.

Bosna: Prope Preodac a. 900 m (Ha.). In agro Livanjsko Polje (B.), prope Grabeš (Ha. Ja.), in palude Buško Blato pr. Livno (F. !); Vedro Polje (Fo. f. *Freyn 1890). — **Hercegovina:** Inter Obrnja et Krupa ca. 1100—1200 m (Bucalović f. M.); prope Nevesinje (V.), in agris Nevesinjsko Polje (Mu.), Gatačko Polje (Mu.), Dabar Polje prope Bjeljani (*V. 1888).

Sectio: *Cervaria*.

[DC., Prodr. IV, 179 (1830) ampl. — *Cervaria* Gaertn., De fruct., I, 90 t. 21 f. 10 (1788) non L. — *Oreoselinum* Adans., Fam. pl. II, 100 (1763), et var. aut. — *Peucedanum* subg. *Eu-Peucedanum* § *Cervaria* Drude, l. c. 236. sect. *Selinoides* Koch, Umb. 94; DC., l. c., 180 — *Thysselinum* Hoffm., Umb. gen., I, 153 (1814) non aliorum = *Peuc.* sect. M. Koch, Fl. Deutschl., II, 380 (1826). — *Pteroselinum* Reich., Fl. Germ., 453 (1832) = *Peuc.* sectio apud Mössl, Handb., I, 450 (1827).]

5. *Peucedanum cervaria* [Lapeyr., Hist. pl. Pyren., 149 (1813): DC., Prodr., IV, 180; Vis., Fl. Dalm., III, 52; Reich. f., Ic. fl. Germ., XXI, 59, t. 118; Koch, Syn. fl. Germ., ed. II, 334; Burnat, Fl. Alp. mar. IV, 211; Beck, Fl. Nied.-Öst., 650; Posp., Fl. öst. Küst., II, 172; Wohlf., Syn. deutsch. Fl., 1105. Autor est Lapeyrouse non Cusson; confer: Burnat, l. c. — *Selinum cervaria* L., Spec. pl., 1194 (1753); Crantz. Inst. II (1766) 125 et Stirp. Austr., fasc. III, t. 3. f. 1 (1767). — *Athamanta cervaria* L., Syst., ed. X, 956 (1758—59); Jacqu., Fl. Austr., I, 44, t. 69. — *Sel. glaucum* Lam., Fl. Fr., III, 419 (1778). — *Cervaria Rivini* Gaertn., de fruct. I, 91, t. 21 f. 10 (1788). — *C. rigida* Moench, Meth. 95 (1794). — *Ligusticum cervaria* Spreng., Umb. prodr., 40 (1813) et Syst. I, 907 (1825). — *Cervaria glauca* Gaud., Fl. Helv. II, 326 (1828)]. »Jelenčica«. In pratis montanis, inter dumeta, locis lapidosis, in silvis apertis — 1220 m. Floret m. Julio, Augusto.

Bosna (*Asch. Kan., Cat. 66, 1877) ubi? Prope Banja Luka (H.), Sasina, Sratinska, Tešanj, Žabljak (Fo.). In m. Gomila (B.); circa Krupa, Zalin,

Zaspa, Drenovo, Tijesno, Bihać, Gorijevac, Vrtoče, Vodenica, Bjelaj, Medena Glavica, Petrovac, Smoljana, Janjila, in silva Gredina prope Velečevo, Šehovci, Belajsko Polje, Prhinje (Fo.); in m. Osječenica (F.), Karaula pr. Jajce, Resanovača pr. Poljane a. 1000 m (Ha. Ja.), Starigrad pr. Glamoč (Sta. Fa.) (Fo f. V.); circa Travnik (Br.), in monte Vilenica (Fr. Br.), circa Zenica (Fo. fide V.). Prope Vareš, in m. Droškovac, prope Kralupi (Pr.), prope Visoko, Zbilje (Fo.), Pazarić (F.), Hadžići (F.) in m. Igman (Fo.), ad pedem montis Bjelašnica pr. Krupa (B.). Circa Sarajevo: (Fo. f. V.), in faucibus Miljacka, Moščanica, Lapišnica, in vall. riv. Vogošća (M.), in m. Trebević (M.), Paprenik-Gradište (B.), Lipovac (F.), c. Nahorevo, Miljevići, Paoca, Tvrđinići, Pribanj, Trčine, Pale (M.); in faucibus Prača (M.), juxta Kovanje pr. Rogatica (B.). In montibus Maglić, Volujak, Vratnica (Pr.). — **Hercegovina** (*Asch. Kan., Cat. 66, 1877) ubi? In m. Zvekoša Pl., in faucibus fl. Neretva (M.), in m. Glogovo (V.); pr. Šehovina juxta Nevesinje (Fo.), in m. Busak Pl., Kokorina (Fo.), in m. Leotar pr. Trebinje (B.) a. 1220 m., prope Vučjak, stat. Konjušnica (Konjsko), Radešići (V.).

6. *Peucedanum oreoselinum* [Moench, Meth. pl., 82 (1794); DC., Prodr., IV, 180; Vis., Fl. Dalm., III, 52; Koch, Syn. Fl. Germ., ed. II, 335; Reich. f., Ic. fl. Germ., XXI, 60 t. 119; Beck, Fl. Nied.-Öst., 649; Wohlf., Syn. deutsch. Fl., 1106; Posp., Fl. öst. Küst., II, 173. — *Athamanta oreoselinum* L., Spec. pl., 244 (1753); Jacqu., Fl. Austr., I, 43. t. 68; — *Selinum oreoselinum* Crantz, Stirp. Austr., fasc. III, 33 (1767); Scop., Fl. Carn., ed. II, I, 201. — *Oreoselinum legitimum* Marsch. Bieb., Fl. taur. Cauc., III, 210 (1819); Reich, Fl. Germ., 455. — *Cervaria oreoselinum* Gaud., Fl. Helv., II, 324 (1828)]. »Šutranka«. In locis arenosis, graminosis, pascuis, pratis inter virgulta — 1400 m. Floret m. Julio, Augusto.

Bosna: Prope Banja Luka (H.). In valle riv. Jedovica pr. Prnjavor (B.), in m. Crni Vrh pr. Tešanj (Fo. f. Borbás), pr. Žabljak (Fo. f. Vukotinović), Prope Cazin (F.), in m. Gomila pr. Krupa (B.), circa Bihać, Barakovac, Zaspa, Zalin (Fo. f. V.), Petrovac (B.), in m. Šuljaga, Kamešnica, Troglav, Vel. Šator (Pr.), in m. Borova Glava pr. Livno (B.), Cincar (B.), inter Djukići et Na Podovi, prope Starigrad juxta Glamoč (Sta. Fa.), ad lacum fl. Pliva prope Jajce (B.), in agro flum. Gostović, solo calcareo et serpentinico 400—1290 m (M.). Prope monast. Fojnica (*S. 1848); pr. Maglaj (Fo. f. Borbás), Žepče (Fo. f. V.) Janjići, Zenica, Visoko (Fo. in litt.), Dubošćica, Vareš, in m. Droškovac, pr. Kralupi (Pr.), Šikulje, Brgulje, Okruglica (M.). In m. Motka, Bukovik (Uževica), Igman (Bl.) 1180 m (M.), Trebević (Bl.), pr. Sarajevo (Fo. f. V.), Pale (M.), in m. Tovarnica pr. Gornje Bara (Pr.), Glasinac (F.), supra Višegrad (B.), pr. Rudo, Žeravice, Klis, Podžeplje (M.). — **Hercegovina:** In faucibus Rakitnica (M.), prope Podorašac, Konjic (Fo. f. Borbás, M.), Košuta, Glavatičevo, Kiser (M.), Jablanica (B.), Grahovica (Bl. M.), in m. Prislav, Porim (V.), Mali Prenj (F.), pr. Mogorjelo (M.).

Variat:

α. normale [G. Beck]. Laciniis 1—2× pinnatisectis, terminalibus cum lobo medio plus minus rhombeo, acuminato, inciso—dentato.

Vulgatum.

Ludit: *latifolium* [Vis., Fl. Dalm., III, 52]. Segmentis late ovatis lateque inciso-lobatis, basi subtruncatis.

Hercegovina: Pr. Jablanica (*B.).

cordifolium [Vis. l. c.]. Segmentis magnis, cordato-ovatis, subtrifidis, lobis latissimis, grosse dentatis.

Bosna: (*Asch. Kan., Cat., 66, 1877.)

angustifolium [Ugolini in Comm. Ateneo Brescia (1907), 102—142] segmentis laciniisque angustissimis. Vulgatum.

minutilobum [G. Beck]. Segmentis minimis, summo 5—7 mm longis.

Bosna: In agro Kruško Polje montis Cincar a. 1150—1400 m (*B.).

β. pseudoaustriacum [Murr in Allg. bot. Zeit., XIII (1907), 42]. Segmentis lineari-lanceolatis, integris.

Bosna: In monte Smolin prope Žepče (B.), in monte Botan, solo serpentino (M.), pr. Glasinac, Vranograč (*F. f. M., 1910).

γ. obtusifolium [G. Beck]. Foliis tripinnatisectis, laciniis brevibus c. 1 cm longis, cruciato-trilobis, obtusis, antice modo dentatis.

Bosna: Prope Petrovići (*B.).

7. *Peucedanum austriacum* [Koch, Umb., l. c., 94; Mert. Koch, Fl. Deutschl., II, 384; Koch, Syn. fl. Germ., ed. II, 335; DC., Prodr., IV, 180; Reich. f., Ic. fl. Germ., XXI, 61, t. 122, f. I, II; Caruel in Parl., Fl. It., VIII, 277; Beck, Fl. Nied.-Öst., 649; Posp., Fl. öst. Küst., II, 174; Wohlf., Syn. deutsch. Fl., 1108. — *Selinum austriacum* Jacqu., Enum. agr. Vind., 49 et 220 (1762) et Fl. Austr., I, t. 71. — *S. argenteum* Crantz, Stirp. austr., fasc. III, 43, t. IV, f. 2 (1767). — *Pteroselinum austriacum* Reich., Fl. Germ. 454]. In locis dumetosis, pratis montanis ac rupestribus calcareis — 1700 m. Floret m. Julio—Sept.

Bosna: Prope Banja Luka ad riv. Stravica (C.); in valle Zmajevac pr. Tešanj (V.); pr. Prosjek juxta Zvornik (J.), in m. Igrisnik pr. Srebrenica a. 1400 m (Wettst. f. Hayek). Prope Ostrožac in valle fl. Una (Boller), in m. Šiša (B.), in m. Šuljaga, Hrblijina, Vel. Šator (Pr.), Cincar — 1400 m (B.). Circa Travnik (Br.), prope Guvna, in m. Vlašić (Fr. Br.) in m. Bre-

zovača Pl. (V.), Vranica (Schwarz!). Circa Vareš: Prope Potoci, Kralupi. Pajtov Han (Pr.), Dubošćica (Fo. f. V.). In m. Igman (B.), inter Trnovo et jugum Vratlo (B.). Circa Sarajevo: Prope Koševo (Fo.), in m. Glog (Fo. f. V.), prope Hreša (M.), circa Vučja Luka a. 1260 *m* (B.), in m. Paprenik (Gradište), pr. Bulози (B.), in m. Lipovac (F.), in valle fl. Miljacka (F. & B.); in m. Draguljevac (Prodan), in m. Trebević —1600 *m* (Bl, B., F., M.), Bukovik, pr. Petrovići, Pale (M.), Bijela Voda pr. Klinja (*Blau 1877), in Zelengora in valle Urdeni Dol, pr. Kriva Bara —1700 *m* (Lakatos!), in m. Bregoč (Pr.), Ravna Gora pr. Jelašća (M.), in valle fl. Sutjeska (B.), prope Popov Most (Pr.), in m. Volujak, Maglić (Pr.), Ulobić (B.). In m. Lupoglav montis Romanija Pl., 1550 *m* (B.), in faucibus Prača (M.), prope Kovanje juxta Rogatica (B.). In m. Vel. Rađuša (Idovac) (Ćurčić f. M.). — **Hercegovina** (*Asch. Kan., Cat., 66, 1877) ubi? In faucibus Boračka Draga pr. Borci (Pr.), in m. Porim (V.), Bjelašica pr. Gacko (M.), Mali Velež (Fo. f. V.),

Ludit:

latifolium [Caruel in Parl., Fl. It., VIII (1888), 277. — v. *genuinum* Posp., Fl. öst. Küst., II, 174 (1898)]. Laciniis ultimis latoribus rotundato-acutis v. acutis, —3 *mm* latis; obtusas nunquam observavi (ut Pospichal).

montanum [Borbás, Flor. Közl. in Math. és Term. Közl., XV (1878), 294 = Posp., Fl. öst. Küst., II, 174 (1898) = Paol. in Fiori Paol., Comp. fl. It., II, 181 (1900). — *Selinum polymorphum* Spreng., Pug., II (1815), 50. — *S. montanum* Schleich., Exs.; Link, Enum. hort. Berol., I, 268 (1821). — *Peuc. montanum* Koch, Umb., l. c., 94 (1824). — *P. involucratum* Koch, Umb., 94 (1824)? — *S. nigricans* Gaud., Fl. Helv., II, 333 (1828). — *Pteroselinum montanum* Reich., Fl. Germ., 454 (1832) = *Selinum sulcatum* Bert., Fl. It., III, 367 (1837) et X, 481. — *Peuc. austriacum* β. (sine nomine) Ledeb., Fl. Ross., II, 1, 314 (1844). — *P. sulcatum* Nym., Syll., 152 (1854). — *P. intermedium* Schur., Fl. Transs., 265 (1866). — *P. austriacum* v. *involucratum* Arc., Fl. Ital., 291 (1882); v. *angustifolium* Caruel, l. c. (1888) = var. *intermedium* Rouy Camus, Fl. Fr., VII, 393 (1888)]. Laciniis ultimis angustioribus, magis lineari-lanceolatis, acuminatis v. acutis, paulo supra 1—2 *mm* latis. Formis numerosissimis intermediis quae locis umbrosis oriri solent cum f. *latifolio* conjunctum!

Utraque forma l. c. occurrunt.

8. *Peucedanum alsaticum* [L., Spec. pl., ed. II, 354 (1762); DC., Prodr., IV, 179; Koch, Syn. fl. Germ., ed. II, 335; Reich. f., Ic. fl. Germ., XXI, 60, t. 120; Beck, Fl. Nied.-Öst., 648;

Wohlf., Syn. deutsch. Fl., 1107. — v. *typicum* Beck, l. c. = *luteolum* Burn., Fl. Alp. mar., IV, 210. — *P. silaus* Jacqu., Enum. Vind., 46 (1762) non L. — *Selinum alsaticum* Crantz Stirp, austr. III 17 (1767), Umb. prodr., 40 et *Cnidium alsaticum* Spreng. in Roem. Schult., Syst., VI, 417 (1820). — *Cervaria alsatica* Gaud., Fl. Helv., II, 327 (1828). — *Pteroselinum alsaticum* Reich., Fl. Germ., 454 (1832). — *Xanthoselinum alsaticum* Schur, En. fl. Transs., 264 (1866)]. In locis aridis, lapidosis, inter dumeta. Floret m. Julio, Sept.

Bosna: (*Asch. Kan. Cat. 66, 1877) ubi? — In m. Masić Brdo pr. Novi (B.). In m. Kozara pr. Prijedor (Bl. f. M.); circa Vareš, Potoci, in m. Droškovac (Pr.), circa Višegrad ad fl. Drina (M.).

9. *Peucedanum venetum* [Koch, Syn. fl. Germ., 305 (1837); Reich. f., Ic. fl. Germ., XXI, 61, t. 121; Caruel in Parl. Fl. It., VIII, 270; Posp., Fl. öst. Küst., II, 173; — *Selinum venetum* Spreng., Umb. Spec., 73 (1818). — *P. alsaticum* v. (sine nomine) Mert. Koch, Deutschl. Fl., II, 382 (1826); v. *albiflorum* DC., Prodr., IV, 179; *venetum* Wohlf. Syn. deutsch. Fl., 1108 = Burn., Fl. Alp. mar., IV, 209 (hic amplius); subsp. *P. venetum* Rouy Cam., Fl. Fr. VII, 392. — *Pteroselinum alsaticum* β. *venetum* Reich., Fl. Germ., 454. — *Cervaria alsatica* v. *albiflora* Gaud., Fl. Helv., II, 328]. Ad sepes, inter dumeta, in fossis, pratis. Floret m. Aug.—Sept.

Hercegovina: In pratis silvaticis prope Nevesinje (*V. 1888).

10. *Peucedanum palustre* [Moench, Meth., 82 (1794); Reich. f., Ic. fl. Germ., XXI, 63, t. 125; Caruel in Parl., Fl. It., VIII 269; Beck, Fl. Nied.-Öst., 648; Posp., Fl. öst. Küst., II, 175. Wohlf., Syn. deutsch. Fl., 1112. — *Selinum palustre* L., Spec., 244 (1753). — *Selinum tysselinum* Crantz, Stirp. austr. Fasc. III, 35 (1767). — *S. silvestre* Jacqu., Fl. aust., I, t. 152 (1773) non L. — *Thysselinum palustre* Hoffm., Gen. Umb., I, 154, 179 (1814); Koch., Syn. fl. Germ., ed. II, 336. — *Peucedanum sylvestre* DC., Prodr., IV, 179 excl. syn. L.)]. In pratis paludosis, ad aquas, in locis humidis. Floret m. Julio—Augusto.

Bosna: Prope Cazin (*F. 1896).

Sectio: *Taeniopetalum*.

[Vis., Fl. Dalm., III (1850), 49 pro gen.; Rchb. f., Ic. fl. Germ. XXI, 63 (1867) pro sect.; *Eupeucedanum* §. *Taeniopetala* Drude, l. c. 236.] »Ošak«.

? *Peucedanum arenarium* [Waldst. Kit., Pl. rar. Hung., I (1802), 18, t. 20; DC., Prodr., IV, 177; Reich. f., Ic. fl. Germ.,

XXI, 63, t, 117; Neilr., Diagn. Ung., 58; Beck, Fl. Nied.-Öst., 648; Wohlf., Syn. deutsch. Fl., 1111; Confer: Degen in Öst. bot. Zeit. 45 (1895) 63—67]. In arenosis graminosis, inter dumeta. Floret m. Aug.—Sept.

Hercegovina: In declivibus fruticosis montis Glogovo (*V. 1890). Propius vero est, plantam collectam ad sequentem speciem pertinere.

11. *Peucedanum Neumayeri* [Reich. f., Ic. fl. Germ., XXI, 63 t. 116 (1867). — *P. macedonicum* Janka in Öst. bot. Zeit. (1873), 203 f. Hayek. — *Taeniopetalum Neumayeri* Vis., Fl. Dalm., III (1850), 49 et Suppl. I, 110. — *P. arenarium* var. *Neumayeri* K. Malý in Glasn. zem. muz. 31 (1919) 79. Confer: Reich. f., l. c. et Degen in Öst. bot. Zeit. XLV (1895), 63; Hayek apud Fritsch in Mitteil. naturwiss. Ver. Steierm., 51 (1914), SA. 40]. In saxosis, lapidosis, glareosis. Floret m. Augusto, Sept.

Bosna: *Asch. Kan., Cat. 66 (1877) ubi? Certe erroneum! — **Hercegovina:** *Asch. Kan., Cat., 66 (1877) ubi? In declivibus m. Zvekuša Planina (M.). Ad arcem Gyaurski Grad prope Konjic (Degen 1895); in valle fl. Neretva a stat. Prenj usque ad Drežnica a. 110—160 m et altius (M. in Dörfler, Herb. norm. nr. 5065), in faucibus Diva Grabovica (M.). In valle fl. Jazina pr. Lastva (M.).

Subgenus: *Peucedanopsis*.

[G. Beck. — *Peucedanopsis* G. Beck in schedis.] Vittae minimae, subevanidae sed praeterea per omnia juga alasque cavernae tubulosae oleiferae (vittae) 2—3 magnae pericarpium pertinent.

12. *Peucedanum aegopodioides* [Vandas in Sitzungsber. böhm. Ges. d. Wiss. (1888) 449; C. F. Seidel in Isis (1888), 86—92, t. II—III f. K. Malý in Glasn. zem. muz. XXXI (1919) 79; Velen., Fl. Bulg., 203; Hal., Consp. fl. Graec., 639. — *Pteroselinum Olympicum* Rchb. Ind. sem. hort. Dresd. 1856. — *Aegopodium involucreatum* Orph. in litt. 1862; Fl. Graec. exs. nr. 1017. — *Physospermum aegopodioides* Boiss., Fl. Or., II, 923 (1872). — *Ostericum palustre* Panč. Flora princip. Serbiae (1874) 351 f. Petrović, non Bess. — *Peucedanum rivulare* et *P. serbicum* Petrović Add. ad fl. Nyss. (1885) 89—90. — *P. serbicum* Petr. in Magnier, Scrinia fl. selectae. Fasc. VIII (1889) 154 cum b. *rivulare* Petr. f. M. in litt. — *Aegopodium Podagraria* L. v. *involucellatum* Freyn et Sint., Iter thessalicum 1896 nr. 1119 f. M. in litt.]. Tota planta primo aspectu *Aegopodio Podagrariae*

simillima, glabrum, rhizomate longissime repente, caule erecto crassiusculo fistuloso subangulato striato oligophyllo, sparse et alterne ramoso, 80—100 *cm* alto. Foliis inferioribus amplis longe petiolatis (petiolis 20—30 *cm* longis) vagina longa suffultis, ambitu triangularibus ternatim bipinnatisectis, segmentis magnis petiolulatis rarius sessilibus, basi truncatis vel cuneatis late ovatis vel ovato-oblongis longe acuminatis grosse serratis, dentibus apice albo-flavidis, segmentis imparibus trilobis vel tripartitis, lateralibus saepe bifidis (limbo 30 *cm* longo latoque, segmentis 7—5 *cm* : basi 2·5—3·5 *cm*), foliis superioribus decrescentibus sessilibus vagina longiuscula margine fusco-membranacea suffultis subsimpliciter pinnatisectis, summis et rameis ad vaginas breves dilatatas sensim reductis; ramis lateralibus simplicibus alternis rarissime suboppositis; umbellis solitariis umbellam terminalem majorem non superantibus terminatis, umbellae radiis numerosis subaequalibus, sublente pruinosis (4—6 *cm* longis), involucri 3—6 phyllo raro 0—2 phyllo (f. *rivulare* (Petr.) Malý in litt.) phyllis lineari-subulatis deflexis, involucelli phyllis 5—8 nis lineari-setaceis pedicellos aequantibus vel parum superantibus, petalis albis vel roseis (f. *serbicum* (Petr.) M. in litt.) obovatis apice emarginatis lacinula inflexa instructis, mericarpiis marginibus contiguis late alatis, ala semineae aequilata ovato orbiculatis vel late ellipticis apice leviter basi manifeste emarginatis, (5—7:4—5 *m*) jugis tribus dorsalibus apteris tenuibus aequidistantibus vittas duo (—3 Beck), manifestas gerentibus, vittis val-ecularum solitariis tenuissimis in fructu maturo fere inconspicuis, vittis commissuralibus binis tenuibus, carpophoro filiformi demum bipartio (Velenovský). In silvaticis alpinis et subalpinis humidis graminosis, saepius ad rivulos. Floret m. Augusto.

Bosna: Ad ripas humidas fl. Lašva pr. Lašva frequens (V. 1894) 350—360 *m* (M. 10. IX. 1911). In faucibus Prača prope Ustiprača et Banja stijena 350—570 *m* (M. !); in faucibus riv. Stupčanica infra pag. Klis et pr. Petrovići, prope Klis, solo serpentino et calcareo, 810—1020 *m* (M.). Circa Sarajevo. Hinc inde sic in agro Sarajevsko Polje sec. fl. Bosnam 480—500 *m*, ad rivulum prope castellum urbis Sarajevo, in m. Trebević ad riv. Bistričam et in m. Bukovik, rare (M.). Inter dumeta in valle fl. Sutjeska prope Suha ad pedem montis Maglić (*B. 1895 sub *P. serbico*).

Subgenus: **Palimbia.**

[G. Beck. — Bess., Enum. Volh., 94 (1822); DC., Prodr., IV, 175; Beck, Fl. Nied.-Öst., 635 sub gen.; Endl., Gen., 779; Reich. f., Ic. fl. Germ., XXI, 58 pro sect; subgen. *Eucaroselinum* Rouy Cam., Fl. Fr., VII, 385 (1901), — *Caroselinum* Gris., Spic. fl. Rum., I (1843), 374. — *Schlosseria* Vukot. in Öst. bot. Woch. (1857), 350. — *Peucedanum* sect. *Palimbioidea* Boiss., Fl. Or., II, 1014 (1872); subgenus *Eu-Peucedanum* Drude sect. l. c. 235. — *Ferula* sect. *Palimbia* Endl., Gen, suppl. V, 8 (1850).] »Korevina«.

13. *Peucedanum carvifolium* [Vill., Prosp., 25 (1779), Hist. pl. Dauph., II (1787), 630 (*carvifolia*); Reich. f., Ic., l. c., 58, t. 113; Caruel. in Parl., Fl. It., VIII, 263. — *Selinum carvifolium Chabraei* Crantz, Stirp. austr., fasc. III, 22, t. III, fig. 2 (1767) et ed. II, 162 et Jacqu., Fl. Austr., I, 46, t. 72 (1773) non L. — *Selinum lactescens* Lam., Fl. franç., III (1778), 418 α . — *Ligusticum decussatum* Moench, Method. (1794), 81. — *Imperatoria Chabraei* Spr., Umb. spec., 64 (1818); R. & Schult., Syst., VI, 609. — *Oreoselinum Chabraei* M. B., Fl. Taur. Cauc., III (1819), 209. — *Peucedanum Chabraei* Reich. in Mössl., Handb., 2. Aufl., I, 448 (1827); Gaud., Fl. Helv., II, 330 (1828); Boiss., Fl. Or., II, 1020; Koch, Syn. Fl. Germ., ed. II, 334; Posp., Fl. öst. Küst., II, 171; Wohlf., Syn. deutsch. Fl., 1104. — *Palimbia Chabraei* DC., Prodr., IV, 176 (1830); Beck, Fl. Nied.-Öst., 653. — *Pteroselinum Chabraei* Reich., Fl. Germ., 453 (1832). — *Caroselinum Chabraei* Griseb., Spicil.- (1843) 374. — *Schlosseria heterophylla* Vukot. in Öst. bot. Woch., VII (1857), 350. — *Sch. Chabraei* Schloss. Vuk., Fl. croat. (1869). 474]. In pratis, graminosis, ad silvarum margines, in silvis et dumetis — 1360 m. Floret m. Julio—Oct.

Bosna: Prope Banja Luka et in valle Rakovac (C.); prope Kraševo (Fo. f. V.), pr. Prosjek ad fl. Drina, Djevanje, Zlohanje (J.); in m. Grmeč Pl. (Boller). Gostulj pr. Travnik (Br.), ad pedem m. Lisar pr. Zenica (V.), in reg. fl. Gostović, sol. serpentino 390–958 m (M.), circa Dubošćica (V.); in m. Igman — 1360 m (M.), in agro Sarajevsko Polje (M.), prope Ilidža (Fo. f. V.); circa Sarajevo: in valle fl. Miljacka (Fo. f. F.), Koševo, in colle castello coronato (M.), pr. Drljevac 1120 m (M.), in m. Trebević (V., Engler!), Bukovik, Boriže (M.), ca. Koran pr. Pale, Gorovići (M.); ca. Križevac pr. Žulj (Čurčić f. M.). — **Hercegovina** (*Asch. Kan., Cat., 66, 1877) ubi? In montibus Glogovo (B.), Porim (V.), circa Nevesinje (V., Fo. f. V.), in agro Nevesinjsko Polje (Ja.).

Ludit:

selinoides [Reich., Icon fl. Germ., XXI (1867), 59. — *P. Chabraei* β . *selinoides* Vis., Fl. Dalm., III (1852), 51. — *Pastinaca*

selinoides Vis. in Flora (1829), Ergänz.-Bl., I, 10, nr. 12. — *Peucedanum heterophyllum* Vis., Cat. sem. hort Patav., 1836, p. 3, 4].

Bosna: In pratis prope Lukavica juxta Sarajevo, m. Oct. (Fiala! f. *B., 1895), pr. Stanojevići, in m. Trebević, pr. Omerova česma (M.).

14. *Peucedanum illyricum* [K. Malý in Glasn. zem. muz., XXXI (1919), 79 hic amplius. -- *P. latifolium* Pančić in Verh. d. zoolog.-botan. Gesellsch. in Wien, VI (1856), 525; do. Flora princip. Serb., 356 non M. B. f. M. — *P. cervaria* v. *simplex* Vandas in Öst. bot. Zeit., 38 (1888), 369. — *Palimbia illyrica* G. Beck in Sched.]. Folia caulina et radicalia bipinnatisecta rarius tripinnatisecta. Pinnis primae ordinis in paribus solum 4; segmentis paucis in pinnis infimis primae ordinis 3—5 indivisis (praeter terminalia saepissime triloba), ovato-oblongis, basi valde inaequali, subcordata, sessilibus, simpliciter spinuloso-serratis utrinque concoloribus. Radii umbellarum interne glaberrimi nec scabridulo-puberuli. Involucri phylla reflexa. Fructus ovati 5—7 mm longi, 3.5—4 mm lati, anguste marginati. Valleculae mericarporum 3—4 vittatae; commissura 4—6 vittata. Cetera ut in *P. cervaria*, cui affine. In pratis siccis et in silvis pinetis — 1000 m. Floret m. Augusto.

Bosna: Inter Višegrad et Jagodinja (Čurčić f. M.), in m. Rudina et Stražište pr. Višegrad, solo serpentino, 350—700 m (M.). — **Hercegovina:** In declivibus montis Zvekuša vallis fl. Neretva supra Konjic (*M. 1919), in angustis fl. Neretva pr. stat. Prenj, Karaula, Grabovica a. 130—160 m (M.); in silva inter Bišina et Paljev dol juxta Nevesinje a. 1000 m (M.). Circa Trebinje in m. Gljiva a. 800 m (V. sub *P. cervaria* v. *simplex*) et in m. Leotar (B.). Occurrit etiam in Serbia et Crna Gora.

57. *Pastinaca*.

[L. Spec. pl, 262 (1753) et Gen., ed. V, nr. 324 em.; Koch., Umb., l. c., 90; Endl., Gen., 781; Drude, l. c., 238; *Peucedanum* spec. Benth. Hook., Gen., I, 919; sect. *Pastinaca* Beck, Fl. Nied.-Öst., 646; *Heracleum* sect. *Pastinaca* Beck in Sched.] »Pastrnjak, pastinak«.

Strato sklerenchymatico pericarpium interno in alarum margine incrassato, vittis dorsalibus extra, commissuralibus intus stratum sitis, cavitate inter alas et semen optime a *Peucedano* differt. Itaque *Heracleo* valde affinis sed vittis dorsalibus longioribus (commissuralibus ut in *Heracleo* abbreviatis) petalis luteis eis florum exteriorum nunquam radiantibus, stylo brevioris aegre differt.

1. *Pastinaca sativa* [L., Spec. pl., 262 (1753); DC., Prodr., IV, 189; Koch, Syn. fl. Germ., ed. II, 337 (excl. *opaca*); Posp., Fl. öst. Küst., II, 177. — *Selinum Pastinaca* Crantz, Stirp. Austr., fasc. III, 21 (1767). — *Anethum Pastinaca* Wib., Fl. Werth., 146 (1799). — *Peucedanum pastinaca* Baill., Hist. pl., VII, 96; G. Beck, Fl. Nied.-Öst., 650. — *Peucedanum sativum* G. Beck (Combinatio in Benth. Hook., l. c., deest); D. Jackson, Ind. Kew., III, 481 (1894). De variatione confer: Burnat, Fl. Alp. mar., IV, 218. — *Heracleum sativum* (L.) G. Beck in Schedis.]. In pratis, graminosis, juxta vias agrosque — 900 m, rarius culta. Floret m. Julio—Oct.

Bosna: Ut videtur vulgatum. Prope Banja Luka (H.), Vrbanje (Fo.), Bronzani Majdan, Dabovci, Kukavica, Tešani, Kraševo, Matužići (Fo.), Donja Tuzla (M.), Bugojno, Kupres, Šujica, Gubin, Rore (Pr.), Maglaj, Žepče (Fo.), Fojnica (*S. 1848), Vareš praecipue inter Vareš et Kralupi (Pr.), Visoko (F.), Tarčin (Pr.), Hadžići (B.). Circa Sarajevo: In agro Sarajevsko Polje (M.), in valle riv. Koševo (M.), pr. Kovačići (Fo.); pr. Vlaholje, Kalinoyik (Fo.), in vallibus fl. Govza (B.) et Sutjeska (B.), pr. Mješajići, Tjentište, Beleni (Pr.), in m. Vučevo, prope Goražde (B.). — **Hercegovina**: *Asch. Kan., Cat., 67 (1877). Ubi? Ad lacum Boračko Jezero (M.), in valle Idbar ad pedem m. Prenj (B.), pr. Nevesinje a. 850—900 m (Sagorski), Domanovići (Fo.).

Variat:

α *typica* [Posp., Fl. öst. Küst., II 177 (1898); — *genuina* Čelak., Prodr. Fl. Boehm., 574 (1874); Burn., Fl. Alp. mar. IV, 218. — *Pastinaca sativa* L. et aut. p. p.; Reich. f. Ic. fl. Germ., XXI, 70, t. 141; — subspec. *P. silvestris* Rouy Camus, Fl. Fr., VII (1901) 372 p. p. — *P. pratensis* Jord. apud Boreau, Fl. centre Fr., éd. III, 286 (1857) non alior. — *Peuc. pastinaca* α. *typicum* G. Beck, l. c., 650 (1892)].

Planta culta est v. *hortensis* [Gaud., Fl. Helv., II, 322 (1828) = v. *edule* DC., l. c., 189]. — De forma foliorum confer: Freyn in Öst. bot. Zeit. (1898) 249 c. iconibus.

β *silvestris* [DC., Prodr., IV, 89 (1830); Burn., l. c., 219. *P. silvestris* Mill., Gard. dict., ed. VIII, nr. 1 (1768). — *P. opaca* Bernh. in Horn., Hort. Hafn., add. 961 (1815). — *P. sativa* var. *opaca* Vis., Fl. Dalm., III, 53 (1850); Čel., Prodr., l. c., 888. — Subsp. *P. silvestris* (Mill.) Rouy Cam., l. c., 373 Ad. — *Peuc. pastinaca* v. *opacum* Beck, Fl. Nied.-Öst., 650. Confer: Čelak. in Öst. bot. Zeit. 27 (1877) 128 et in Sitzungsber. böhm. Ges. Wiss. Nov. 1882].

Bosna: Prope Bos. Brod (M.). Circa Podosoje pr. Glogovac, in jugo Presedlo pr. Podgorje, in agro Livanjsko Polje pr. Grabeš (Sta. Fa.); pr. Vranduk (Degen in litt.) circa Travnik (*Fr. Br. 1888), pr. stationem Lašva (Ha. Ja.), in agro Sarajevsko Polje (M.), prope Sarajevo (Degen in litt.), inter Rudo et Setihovo (M.).

58. *Heracleum*.

[L., Spec. pl., 249 (1753) et Gen. ed. V, nr. 307; Koch, Umb., l. c. 89; Endl., Gen. 781; Benth. Hook., Gen., I, 921; Drude in Engl. Prantl, Nat. Pflanzenf., III 8, 239. = *Sphondylium* Ludwig, Inst. ed. II (1757), 133; Adans., Fam., II, 100 (1762); Scop., Fl. Carn., ed. II, I, 203. — *Wendia* Hoffm., Umb. Gen., I, 136.] »Popanak«.

Sectio: *Sphondylium*.

[Bluff. Fing., Comp. fl. Germ., I 366 (1825); sect. *Euheracleum* et *Sphondylium* DC., Prodr., IV, 191—192.]

1. *Heracleum sphondylium* [L., Spec. pl., 249 (1753); DC., Prodr., IV 192 (p. p.); Koch, Syn. Fl. Germ., ed. II, 338; Reich. f., Ic. fl. Germ., XXI, 67, t. 128, 129 fig. I; Beck, Fl. Nied.-Öst., 651; Posp., Fl. öst. Küst., II, 178; Rouy Cam., Fl. Fr., VII 379; Wohlf., Syn. deutsch. Flora, 1116 (p. p.). — subspec. *australe* L. W. Neumann, Sver. Fl., 240 (1901) — v. *australe* Hartm. Handb. Skand. fl., ed. III, 66 1838 f. Thellung. — Subsp. *Branca ursina* Asch. Gr., Fl. Nordostd. Flachl., 530 (1899) = *H. Branca ursina* All., Fl. Pedem. II, 4 (1785). — Subsp. *eusphondylium* Briqu. Étud., l. c.; — *H. protheiforme* α. *Branca ursina* Crantz, Stirp. Austr., fasc. III, 11 (1767). — *Sphondylium Branca* Scop., Fl. Carn., ed. II, I 204 (1772); Caruel in Parl., Fl. It., VIII 248 β. *medium* an *latifolium*? — De *H. sphondylium* et *affinibus* confer Briquet, Étud. *Heracl. sphond.* in Arch. des sc. phys. et nat. 4. pér. XV (1903); Nevole, Beitr. zur Kennt. *Heracleum* in Öst. bot. Zeit. (1920) 50; Thellung, Über krit. *Heracl.* ibidem (1924), 200]. »Mečja šapa«. In pratis locis humidis, ad rivulos, ad silvarum margines, in dumetosis usque ad subalpinas. Floret m. Julio—Sept.

Bosna: In parte septentrionali mediaque vulgatum (Fo.). Prope Banja Luka (H.); Dobovci, Žabljak, Dobož (Fo.). Circa Krupa, Zalin, Lipnik, in m. Osječnica (F.); prope Bugojno, Kupres, Sujica, Pothum, Ublje, Preodac (Pr.), in m. Dinara (Degen, B.); in m. Stožer (B.), pr. Fojnica (*S. 1848), Maglaj, Zenica (Fo.), Vareš, Tarčin (Pr.). In m. Hranisava, Igman (B.), Trebević (M.! sub *H. sibirico*), circa Sarajevo (F.), pr. Kovačići (Fo), Vuč'a Luka (Fo.), in valle fl. Miljacka, prope Bulozni (F.). In m. Treskavica (Pr.), in Zelengora (Pr.), in jugo Metaljka pr. Pale (B.), inter Previla et Pod Vitez (Pr.), pr. Čajniče (B.). — **Hercegovina:** Prope Umoljani (B.),

in m. Vrabac juxta Konjic (Fo. 1889), in silvis fagineis m. Velež —1400 m (B.), circa Nevesinje 850—900 m (Sagorski).

Variat:

α. *latifolium* [Gaud., Fl. Helv., II, 315 (1828); — v. *latilobatum* Neilr., Nachtr. Fl. Wien, 233 (1851), Fl. Nied.-Öst., 634].
Ludit:

chaetocarpum [Neum. et Thellg. in Hegi, Illustr. Fl. v. Mitteleur., V, 2 (1925), 1435 pro subsp. — *H. chloranthum* Borb., Fl. comit. Temes. (1884), 57 nom. sol. et Geogr. Castrif. 236. — *H. sphondyl.* var *chloranthum* Malý in Glasn. zem. muz., XXXI (1919) 74]. Ovarium breviter setuloso-hispidum. Flores flavescenti-virescentes, marginales vix radiant.

Bosna: Prope H. K. Vitez circa Pale pr. Bare, Trčine, in jugo Vitez, in planitie edit. Dragulja pr. Pale (*M. 1919) in m. Trebavić, pr. Pavlovac prox. Kasido, pr. Klis (ditr. Vlasenica (M.).

Ad hanc formam omnes plantae pertinere videntur, quae sub nom. *H^o sibirico* L. editae sunt, quod autem germinibus glabris excellit.

Bosna: Inter Drinjača et Nova Kasaba in valle fl. Jadar (J.), in m. Mala Klekovača (H.), Čardak Pl. (Sta., Ha.), pr. Pribelja (Sta. Fa.) Resanovača (H.), in m. Plazenica (Ha. Ja.), Gola Kosa (H.) pr. Mlinište, Branešci juxta Halapić, pr. Koprivnica 900—1700 m (Ha. Ja.), in m. Vitorog, jugo Presedlo (Sta. Fa.), juxta jugum Privija pr. Uništa, pr. Marića Košare (Ja. Wa.). Circa Travnik pr. Nevića Polje, in m. Vilenica (Fr. Br.), in m. Trebević pr. Sarajevo (M.) —1600 m, in valle fl. Miljacka (M.). — **Hercegovina:** Prope Nevesinje (Sagorski).

Petala observantur frequenter viridula saepe cum margine rubro, albida nervis rubellis (K. Malý, in litt.).

Ad f. *chaetocarpum* pertinent praeterea:

involutum [K. Malý in Glasn. zem. muz., 31 (1919) 75 sub v. *chlorantho*; M.]. Involuti phyllis c. 5, lanceolatis, reflexis, hirsutis.

Bosna: In valle fl. Miljacka prope Sarajevo (*M. 1919).

varbossanum [K. Malý, l. c. 75 sub v. *chlorantho*; M.]. Folia ut in v. *stenophyllo* [Jord. Cat. Grain. jard. Gren. 16 (1849) pr. spec.; Dörfl. Herb. norm. 5066 = v. *stenophyllum* Gaud., Fl. Helv., II 316 (1828); Burn., Fl. Alp. mar., IV, 226] flores ut in v. *chaetocarpo*.

Bosna: In m. Trebević (*M. 1919).

f. *atropurpureum* [K. Malý in Glasn. zem. muz. 32 (1920) 139 sub v. *chlorantho*; M.]. Petala sordide atropurpurea, subaequalia.

Bosna: Circa Sarajevo in agro Sarajevsko Polje 485 m, in m. Igman 1350 m, Gradina, Trebević 1320 m (*M. 1920).

2. *Heracleum angustifolium* [Jacqu., Enum. Vind., 45, 217, t. II, f. 1—2 (1762) non L. et Jacqu., Fl. Austr. II, 46, t. 173? em. Beck, Fl. Nied.-Öst. 652. — *H. sphondylium* v. *angustilobatum* Neilr., Nachtr. Fl. Wien 233 (1851). — Subsp. *montanum* Briqu., Étud. *Her. sph.* in Arch. des sc. phys. nat. 4. pér. XV (1903) 4 fig. 3, 4. — Subsp. *elegans* Neum. in Verh. zool.-bot. Ges. 52 (1922), 168—169. — *H. Panaces* Koch, Syn. fl. Germ., ed. II, 338 p. p. non L.; *H. montanum* aut.].

Variat:

α. *Pollinianum* [G. Beck = *H. Pollinianum* Bert., Fl. It., III, 433 (1837); V, 618; Vis., Fl. Dalm., III, 54; Reich. f., Ic. fl. Germ., XXI, 68, t. 135. — *H. pyrenaicum* Poll., Hort. Ver. pl. nov., 8 = Kern. in Sched. ad fl. exs. Austro-Hung., nr. 112 vix Lam.? — *H. angustifolium* α. *pyrenaicum* Beck, Fl. Nied.-Öst., 652. — *Sphondylium branca* v. *amplifolium* Caruel in Parl., Fl. It. VIII, 249. p. p.]. In graminosis, pascuis, saxosis, in saltibus et silvis apertis regionis subalpinae — 1500 m. Floret m. Julio—Augusto.

Bosna: In m. Vlašić, supra Ovčarevo (*Fr. Br. ! 1888), in m. Troglav (B. sub *H. pyrenaico*); Orlica in Treskavica Pl. versus Dujmovići a. 1700 m (F.!), Maglić (Rohlena). — **Hercegovina:** *Asch. Kan., Cat., 67 1877 ubi? sub *H. pyrenaico*. In m. Ortiš (B.), Prislap, Porim (*V. 1890), Čvrstica (R.!) I. Badnji (A. Pi.!), in silvis fagineis m. Velež — 1500 m (B.), inter montes Svitavac et Štirovnik, in m. Gnjila Greda et Orijen (V.).

H. pyrenaicum [Lam., Enc. meth., I, 403 (1783) = *H. alpinum* subsp. *pyrenaicum* Rouy Cam., Fl. Fr., VII, 383; Pers., Syn., I, 314 pro var. = *H. angustifolium* v. *pyrenaicum* G. Beck in Sched.] est planta occidentalis pyrenaea, praestans foliis subtus ± albido-tomentosis (non in nervis subtus modo scabrido-pilosis). — Forma foliis inferioribus tripartitis, fere ternatis, segmentis subpalmato pinnatifidis = *ternatum* Borbás, Flor. Közl. in Math. term. Közl. XV (1878) 295 pro var. *H. Polliniani*.

β. *Orsini* [G. Beck. — *H. Orsini* Guss., Pl. rar., 133 t. 27 (1826); DC., Prodr., IV, 191; Bert., Fl. It., III, 435; Degen in Glasn. zem. muz. XI, 37 et Wiss. Mitt. Bosn., VI, 744 = *H. sphondylium* η *Orsini* Paol. in Fiori Paol., Comp. fl. It., II, 183 = *Sphondylium Branca* δ. *amplifolium* Caruel in Parl., Fl. It. VIII, 249 (1888)]. A var. *Polliniano* aegre differt foliis subcoriaceis, supra plurimum laevibus, nitidis, laciniis foliorum basalibus

saepius rotundatis petalis viridulis (non albis infra saepe rubellis). Folia *Hⁱ Polliniani* in glareosis alpinis adeo coriacea et saepissime supra laevia gignuntur ut in *H^o Orsini*. — Fide Degen indumento foliorum superficiei insigniter scabro, foliis latis, crassioribus, firmioribus, in circuitu suborbicularibus, palmatim et minus profunde lobatis, utrinque viridibus, nervis subtus valde prominentibus, segmentis lateovatis, breviter acuminatis, fructibus minoribus a *H. montano* diversum esse dicitur.

In glareosis, lapidosis regionis alpinae et subalpinae, solo calcareo, —1750 *m*. Floret *m.* Julio, Augusto.

Bosna: In *m.* Dinara (*Ja. Wa. 1908) et cacuminibus Jankovo Brdo versus Aldukovačka Lokva (Ja. Wa.), in cratere montis Troglav (Ja. Wa.); in *m.* Šator supra lacum a. 1550—1650 *m* (Ja.), in *m.* Treskavica (M., F.! a. 1680—1700 *m*), Muharnica (M.). — **Hercegovina:** In montibus Prenj Pl. in ascensu ad Idbar ad Tisovica a. 1400 *m* (R. F.), ad pedem cacum. Lupoglav, Osobac, Cvetinje a. 1600—1750 *m* (R., F.), in *m.* Čvrsnica (F. f. M.) et Vel. Čvrsnica (R. f. *Degen 1899), inter Velika Kosa et Bijela Gruda c. 1700 *m*, In *m.* Velež Pl. cac. Botin sub rupes versus sept. orient. (Ja.).

Ludit:

typicum [K. Malý in Glasn. zem. muz. 31 (1919) 74]. Folia utrinque subconcoloria, supra glabra vel rarius sparse tuberculato-pilosa, subtus in nervis venisque hispidula. Vulgatum.

hypoglaucum [K. Malý, l. c.]. Folia subtus pallidius virentia, plus minus dense hirta. Cetera ut in priore.

Bosna: In *m.* Bjelašnica a. 1700—1800 *m* (*M. 1919), Vlašić (Br. sub *Polliniano* f. M.). — **Hercegovina:** In *m.* Prenj Pl. (F. f. *M. 1919) et Čvrsnica (R. f. M.).

γ. *heterotrichum* [G. Beck. — *Heracl. angustifolium* v. *elegans* f. *heterotrichum* Beck, Fl. Südbosn., VII in Ann. nat. Hofmus. X (1895) 208]. Folia ut in *H. Polliniano* sed subtus in tota lamina dense molliter breviterque pilosa, canescentia, subvelutina in nervis autem hirta, supra scaberrima. Cetera ut in *H. Polliniano* (non *H. elegante*).

Bosna: In glareosis montis Maglić c. 1700 *m* (*Beck 1895).

δ. *elegans* [Beck, l. c. 652. — *H. protheiforme* v. *elegans* aut *problematicum* Crantz, Stirp. austr. fasc. III, 11, t. II f. 2 (1767). — v. *elegans* Crantz, Class. Umb., 57 (1767). — *H. angustifolium* l. c., fig. 1 et *H. elegans* Jacqu., Fl. Austr., II 46, t. 175. — *H. sphondylium* v. *elegans* Spreng. ap. Roem. Schult. Syst. VI, 572 (1820) — var. *arctifrons* Briqu. l. c., 4 fig. 5 f. Thellung].

Bosna: In alpinis montis Treskavica (B. sed ?; etiam Pr.).

Variates: *montanum* [G. Beck — *H. montanum* Schleich., Cat. ed. IV, 19 (1821) sine diagn.; Gaud., Fl. Helv., II, 319 (1828). — *H. sphondylium* v. *montanum* Schleich., Cat., ed. III, 16 (1815) sine diagn. — *H. asperum* Mert. Koch, Fl. Deutschl. II 374 (1826) p. p. non M. B. — *H. Panaces* DC., Prodr., IV, 193 et aut non L.] — *verum* [G. Beck = *H. angustifolium* Jacqu., l. c., t. II, f. 1—2]. — *longifolium* [Beck, l. c. 652 = *H. longifolium* Jacqu., Fl. Austr., II 46, t. 174 (male) (1774)] in ditone nostra adhuc non reperiae sunt.

59. Tordylium.

[L., Spec. pl. 239 (1753) et Gen. ed. V, nr. 293; Koch, Umb. l. c. 87; Endl., Gen., 782; Benth Hook., Gen., I, 924 (p. p.); Drude l. c., 241.]

»Orjašica vrtovile«.

Sectio: *Eutordylium.*

[DC., Prodr., IV, 197 (1830); Boiss., Fl. Or., II 1031. — *Tordylium* Hoffm., Umb., I, 198; Koch, Umb., 87.]

1. *Tordylium maximum* [L., Spec. pl., 240 (1753); DC., Prodr., IV, 197; Koch, Syn. fl. Germ., ed. II, 339; Vis., Fl. Dalm., III, 54; Reich. f., Ic. fl. Germ., XXI, 71 t. 139; Beck, Fl. Nied.-Öst. 653; Posp., Fl. öst. Küst., II 181; Wohlf., Syn. Deutsch. Fl., 1122]. Ad sepes, silvarum margines, in incultis aridis, lapidosis arenosis et graminosis. Floret m. Junio — Augusto.

Bosna: *Asch. Kan., Cat. 67 (1877) ubi? Circa Banja Luka (Fo.), ad fl. Vrbas (C.); pr. Sasina, Maglaj (Fo. f. V.). Prope Vranjska, Ključ (Fo. f. V.), Podosoje pr. Glogovac inter Čelebić et Livno (Sta. Fa.), pr. Livno (B.), Crni Lug (Ja. Wa.). Circa Travnik (Fr. Br.), inter Donji Vakuf et Prusac (Ha. Ja.); Bugojno, Tarčin (Pr.), prope Zbilje (Fo. f. V.). Prope Krupac et Vojkovići ad fl. Željeznica (F.), circa Sarajevo: In vallibus riv. Koševo, Mošćanica et fl. Miljacka, in m. castello coronato, pr. Dolac (M.), pr. Kovačići (F. f. M.); Petrovići (M.), prope Rusenovići juxta Rogatica (F. f. M.), Višegrad (M.). — **Hercegovina:** Prope Konjic (Pr.), Jablanica (V., B.), circa Mostar (Bornmüller! M.), in m. Hum (B.), Podvelež (Bornm.), pr. Žitomišljici (Mu.), Ljubuški (F. f. M.), Vučja Bara pr. Gacko — 1250 m (Hawelka, M.). In Bijela Gora pr. Orahovac (V.), inter Orahovac et Dubovac (P. f. *Grisebach 1874). — **Novi Pazar:** Prope Prijepolje (P., Zahlbr. f. *Hayek 1906)

2. *Tordylium officinale* [L., Spec. pl., 239 (1753); Vis., Fl. Dalm., III, 55; Koch, Syn. fl. Germ., ed. II, 1024; DC., Prodr., IV, 198; Sibth. Fl. Graec. III, 60, t. 267; Reich. f., Ic. fl. Germ.,

XXI, 71, t. 138; Posp., Fl. öst. Küst., II, 181; Wohlf., Syn. Deutsch. Fl., 1123. — *T. apulum* Reich., Fl. Germ., 452 non L. — *T. microspermum* Ten., App. sem. hort. Neap. (1827) 3]. In saxosis apricis sterilibus, incultis et herbosis ditionis florum mediterraneae. Floret m. Aprili—Junio.

Hercegovina: Circa Mostar (Str.) et Trebinje in m. Crkvice (P. f. *Grisebach 1874).

Sectio: *Condylocarpus*.

[DC., Prodr., IV, 198 (1830) p. p.; Koch, Syn. Fl. Germ., 309 (1837). — *Condylocarpus* Hoffm., Umb., I, 202; Koch, Umb. i. c. 86 non Desf.]

3. *Tordylium apulum* [L., Spec. pl., 239 (1753); DC., Prodr. IV, 198; Vis., Fl. Dalm., III, 54; Koch, Syn. Fl. Germ., ed. II, 340; Reich. f., Ic. fl. Germ., XXI, 71, t. 137; Posp., Fl. öst. Küst., II, 182; Wohlf., Syn. Deutsch. Fl., 1123. — *T. grandiflorum* Moench, Meth., 78. — *T. officinale* Reich., Fl. Germ., 452 non aut. — *Condylocarpus apulus* Hoffm., Umb., I, 203]. In pratis, pascuis, incultis, herbosis. Floret m. Martio—Junio.

Bosna: In m. Hrblijina (*Pr. 1900). — **Hercegovina:** Circa Raška Gora, Vojno (M.), Mostar (Str.), in decliv. montis Stolac (Ja. f. Hayek), in agro Mostarsko Polje (Ginzberger), Žitomišljici, Dretelj (M.), Mogorjelo (Ginzberger), Ljubuški (F.), Ljubinje (F.), Trebinje (P. f. *Grisebach 1874), in Sutorina (M.).

Subtribus: *Silerineae*.

[Koch, Umb., l. c., 84 (1824) pro trib. — *Silerinae* Drude, l. c. 242. Nunc ad *Peucedaneis*, nunc ad *Laserpitieas* tractae!]

60. *Siler*.

[Miller, Gard. dict. ed. IV (1754)? = Ludwig, Inst., ed. II, 134 (1757) = Crantz, Stirp. austr., fasc. III, 60 p. p. (1764 et 1767) et Class. Umb., 68; rectius Scop., Fl. Carn., ed. II, I, 217 (1772); Koch, Umb., 84; Endl., Gen. 783; Benth. Hook., Gen., I, 908; Drude l. c. 242. — *Laser* Borkh., in Der Botaniker XIII—XV (1795) 246. — Confer: Thellung in Le monde des plant. 3, sér. nr. 38—153 (1925), 2.] »*Raskovnik*, timoj«.

1. *Siler trilobum* [Crantz, Stirp. austr., fasc. III 62 (1767); Scop., Fl. Carn. ed. II, I, 217; DC., Prodr., IV, 200; Rchb. Icon. fl. Germ. XXI t. 143. — *Laserpitium trilobum* L., Spec., 248 (1753)? sed Jacq., Enum. Vind. 48 (1762). — *Laser trilobum* Borkh. in Der Botan. XIII—XV (1795), 246. — *Siler aquilegifolium* Gaertn., De fruct. I, 92 (1788); Spreng., Umb., 41 et in Roem. Schult., Syst., VI, 449; Mert. Koch, Deutschl. Fl., II, 368; — *Angelica aquilegifolia* Lam., Enc. meth., I, 173 et Fl.

Fr., III, 452. — *Laserpitium aquilegifolium* Jacqu., Fl. Austr., II, 29, t. 147]. In lapidosis dumetosis, silvis. Floret m. Majo—Junio.

Bosna: In m. Šuljaga, Vel. Malovan, Kamešnica, Prolog, pr. Preodac (Pr.) Prope Kralupi et Pajtov Han (*Pr. 1898). Sec. fl. Željeznica, circa Trnovo, in Zelengora, sec. fl. Sutjeska, inter Previla et Podvitez (Pr.).

Non vidi. Aliquid admirationis habet, d. dr. Protić modo nec neminem exploratorem terratum nostrarum hanc plantam insignem in ditione nostra reperisse.

Tribus: *Laserpitieae*.

[Benth. Hook. Gen. I, 863 et 872; Drude, l. c., 115. — Tausch in Flora (1834) I, 346 pro subtrib.]

61. *Laserpitium*.

[L., Spec. pl., 248 (1753) et Gen., ed. V nr; Koch, Umb., l. c., 73; Endl., Gen., 784; Benth. Hook., Gen., I, 929; Drude l. c. 246. — *Laserpicium* Ascherson, Flora Prov. Brandenburg (1864) 256.] »Gladac«.

Sectio: *Eulaserpitium*.

Juga secundaria (alata) solida, basi vitta unica conspicua perducta. Juga primaria sine vitta.

1. *Laserpitium latifolium* [L., Spec. pl., 248 (1753); DC., Prodr., IV, 204; Jacqu., Fl. Austr., II, t. 146; Koch, Syn. fl. Germ., ed. II, 340; Vis., Fl. Dalm., III, 56; Reich. f., Ic. fl. Germ., XXI, 73, t. 144; Beck, Fl. Nied.-Öst., 659; Posp., Fl. öst. Küst., II, 198; Wohlf., Syn. deutsch. Fl., 1126]. In lapidosis glareosis apricis, dumosis, ad silvarum margines, in pratis subalpinis —1600 m. Floret m. Julio, Augusto.

Bosna: Prope Kosa, Vodjenica, Bjelajsko, Petrovac, Smoljana, Janjila (Fo.). Loco Krivodol inter Han Crljevica et Šekovac ad m. Klekovača (B.), in m. Šuljaga, Vel. Malovan, Šujica (Pr.), in m. Koprivnica 700—1100 m (Ha. Ja.), in m. Jedovnik, in faucibus Ravni Potok pr. Drvar (J.), in m. Uilica (Ja. Wa.), in agro Livanjsko Polje pr. Brezovača (Sta.). Podgradina (Pr.) et Starigrad pr. Glamoč (Sta. Fa.), in agro Glamočko Polje (Pr.). Circa Travnik (*S. 1848) et in m. Vlašić (Br.!), in m. Vranica prope Prokoško Jezero (Schwarz!), pr. Kreševo et in m. Inac (Bl.). Circa Vareš: Pr. Dubošćica (Fo.), Pogari (Fo.), Vareš, Potoci, sec. fl. Stavnja usque ad Pajtov Han, pr. Pržići (Pr.). In m. Igman (B.) —1350 m (M.), Trebević (B.) —1400 m ca. Puhov čajir (M.) et Lipovac, in valle fl. Miljacka (B.), sec. fl. Željeznica, in m. Hodža (Pr.), pr. Trnovo (Pr.), circa Vlaholje, Kalinovik (Fo.), in m. Treskavica (F., V.), in Zelengora, in valle fl. Sutjeska; inter Previla et Pod Vitez (Pr.), in m. Vučja Pl. pr. Nemila (M.). — **Hercegovina:** In m. Podveléz c. 800 m (*B. 1895).

Variat:

α *glabrum* [Crantz, Stirp. Austr., fasc. III, 54 (1767); DC., Prodr., IV, 204; Jacqu. l. c.; pro spec.; Soy. Will., Obs., 154 (1828) = Koch, Syn. fl. Germ., 310 (1837). — *L. Libanotis* Lam., Enc. meth. III, 423. — *L. latifolium typicum* Beck, Fl. Nied.-Öst., 659]. Vulgatum.

β . *asperum* [Crantz, l. c.; DC., l. c. 204 pro spec.; Soy. Will. l. c. = Koch, l. c. — *L. cervaria* Gmel., Fl. Bad., I 657].

Bosna: Rarius. In m. Grmeč loco Karnovac (B.), in m. Klekovača (B). In angustiis prope Travnik (*Fr. Br. 1888), in m. Vlašić (B.) In m. Igman (B.) hic ad α transiens; m. Bukovik pr. Sarajevo (M.).

2. *L. Krapffii* [Crantz, Class. Umb., 67 (1767). — *Laserpitium marginatum* Waldst. Kit., Pl. rar. Hung., II, 210 t. 192 (1805); DC. Prodr., IV, 205; Reich. f., Ic. fl. Germ., XXI, 73. Wohlf., Syn. Deutsch. Fl., 1127; Posp., Fl. öst. Küst., II, 199 α].

Variat:

α . *marginatum* [Thellung in Monde de pl. (1925) pro sub-spec. — *L. marginatum* W. K., l. c.; Koch, Syn. fl. Germ., ed. II, 341; Borb., Flor. Közl. in Math. Term. Közl. XV (1878) 297. — *genuinum* Reich. f., l. c. 73 t. 146 (1867) — *typicum* Beck, Fl. Südbosn. VII in Ann. nat. Hofm., X (1895) 209; Posp., l. c., 199 et f. *scabrosum* Reich. f., l. c. — *L. alpinum* v. *nemorosum* Stapf in Kern., Fl. exs. Austro-Hung. nr. 1319! Conf. Borbás in Öst. bot. Zeit. (1887) 71 et Andrae in Bot. Zeit. (1855) 291; Borbás, l. c.]. Folia biternato pinnatisecta, laciniis subtus in nervis longe pilosis—glaberrimis. Radii inaequales plus minus scaberuli r. glabri (M. in litt.). Pedicelli fructiferi valde inaequilongi, fructibus longiores—breviores. Mericarpia 8—13 mm longi, eorum juga rigidule appresse pilosa—glabra. Petala plurimum luteo-viridia, rubropurpureo-marginata. In pratis montanis, locis graminosis dumetosis, ad silvarum margines lapidosis ac saxosis imprimis regionis subalpinae et alpinae solo calcareo — 1900 m. Floret m. Julio—Sept., rarius prius.

Bosna: In m. Grmeč (Fo. sub *L. latifolio* f. V.), Vel. Klekovača a. 1900 m (Ha. Ja.), in m. Dinara: Troglav (B.), Jankovo Brdo (Ja. Wa.), in m. Cincar a. 1650 m (B.), in m. Lisina pr. Sinjakovo (V.). Prope Karaula juxta Jaice (Fo. sub *L. latifolio* f. V.). Circa Travnik: In m. Vilenica (Br.), Brezovača Pl (V.), pr. Paklarevo et in m. Vlašić — 1900 m (*S. 1848); in m. Inac prope Kreševo (Bl.), in m. Vranica cac. Tikva (Bošnjak) et Ločike (R.), in ditone riv. Gostović pr. Žepče (M.) hic a. 360—1278 m et solo

serpent. — In m. Igman (M.), circa Sarajevo: in m. Ozren, Bukovik (M.), pr. Han Biosko (B.), in m. Gradište (M), Lipovac in valle fl. Miljacka (B.), in declivibus montis Trebević (V., B. et alii), pr. Hodided, Pale (M.); in m. Bjelašnica, Romanija (M.), Treskavica (F. f. M. — 1650m), ca. Ravna Gora pr. Jelašća, Žeravice (distr. Vlasenica), in m. Veliki Žep (M), in valle fl. Sutjeska, pr. Suha (F.). In jugo Vitez, in m. Hodža pr. Stambulčić, in m. Vučja Pl. (M). — **Hercegovina:** *Asch. Kan., Cat. 67 (1877) ubi? In m. Lovnica, in valle Ljuta pr. Konjic 310m!, pr. Širbegova Kosa, Kiser (M.). In m. Lisin (V.), Bokševica (M.), Plasa, Čabulja in faucibus riv. Ledenica Potok (Prodan), in m. Velež (Ja.).

Ludit:

ochroleucum [*L. marginatum* v. K. Malý in Glasn. zem. muz. 32 (1920), 140]. Petala adulti ochroleuca. Cetera ut in typo.

Bosna: In m. Vranica Pl., in cac. Grohot et Matorac, solo schist. (Bošniak, p. p. f. M.), pr. Pale a. 840—900 m (*M. 192.).

bosniacum [*L. marginatum* f. K. Malý in Verh. zool.-bot. Ges. LIV (1904) 235]. Laciniae foliorum inferiorum oblongae, grosse serratae, acutissimae. Fructus dilute brunneae.

Bosna: In m. Trebević (*M. 1904).

aruncus [*L. marginatum* f. Reich. f., l. c., 73, t. 150. — *L. aruncus* Fritsch Exk. Fl. Öst. 2. Aufl. 460 (in Syn.) (1909) in Öst. bot. Zeit. (1906) 69]. »Foliorum partitionibus oblongo-elongatis illas folii *Arunci* aemulantibus« (Reich. f.). Folia ter ternato-pinnatisecta (ex icone).

Bosna: In pratis montanis m. Plazenica a. 1700 m, in cacumine montis Gola Kosa (*Ha. 1906) hic? in m. Troglav (B), saepe in formis appropinquatis.

β. *Gaudini* [Thellung in Monde des pl. (1925) 2 pro subsp. = *L. Gaudini* Moretti in Comoll., Prodr, Fl. Com., 52 (1824) et in Bot. It. III (1825), 33 f. DC., Prodr., IV, 204; Vis., Fl. Dalm., III, 56 pr. spec. — *L. marginatum* var. Reich. f., l. c. 73 t. 147 (fruct. male) (1867). — *L. luteolum* Gaud., Fl. Helv., II (1828), 348]. Radiis umbellarum elongatis laevibus, fructibus glabris. In silvis subalpinis, rupestribus.

Bosna: Prope Pale (M.). In m. Preslica (*V. 1890). — **Hercegovina:** In montibus Porim et Prislav Pl. (V.), Čvrstica (Begović f. V.), prope Nevesinje in m. Mali Velež a. 1100 m (V.); in m. Baba pr. Gacko (Boller f. M.) Bijela Gora: ca. Koristna Greda pr. Vučjak (P. f. *Grisebach 1874); pr. Radkuša Jama, in m. Ledenik, Svitavac, Gnjila Greda (V.).

Laserpitium alpinum [Waldst. Kit., Pl. rar. Hung., III, 281, t. 253 (1812). — *L. marginatum* var. *alpinum* Reich. f., Ic. fl.

Germ., XXI, t. 145 fig. I, II. — *L. Krapfii* Crantz, l. c. subspec. *alpinum* Thell., l. c. — *L. trilobum* Roch., Pl. Ban. rar., 65, t. XXVII f. 53. — *Laser trilobum* Baumg., Enum. Transs., I, 228. — *Siler alpinum* Baumg., l. c. 229. Confer: Borbás, Flor. Közl. (1878) 298]. Est planta carpathica orientalis a *L. marginato* WK. diversa foliis saepe magis compositis, 2—3 × ternato-pinnatisectis, laciniis plerumque minoribus saepissime acutis, petalis albis, plus minus roseis (nunquam luteo-viridibus purpureo marginatis) jugis mericarpiorum semper scaberrimis.

Fide Protić [in Glasn. zem. muz. XIV (1902), 44] ca. Vratnica montis Volujak in Bosna crescere dicitur quod dubitandum sit.

3. *Laserpitium archangelica* [Wulfen in Jacqu., Collect., I, 214 (1786) et Fl. nor., 390; Jacqu., Ic. pl. rar., I, 6, t. 58 (1781—86); Koch, Syn. fl. Germ., ed. II, 342; Reich. f., Ic. fl. Germ., XXI, 74, t. 152; Wohlf., Syn. deutsch. Fl., 1129. — *L. chironium* Scop., Fl. Carn., ed. II, I, 197 (1772) non L.]. In pratis subalpinis, herbosis, inter virgulta, ad silvarum margines. Floret m. Julio—Sept.

Bosna: Prope Paklarevo ad m. Vlašić (*S. 1848). In faucibus Stupčanica pr. Žeravice ca. 800 m, ca. Poajerka 1070 m, pr. Klis (distr. Vlasenica) 990—1020 m (M.), in Zelengora (Pr.). Non vidi.

4. *Laserpitium pruthenicum* [L., Spec., 248 (1753); DC., Prodr., IV, 206; Koch, Syn. fl. Germ., ed. II, 342; Jacqu., Fl. Austr. II, t. 153; Reich. f., Ic. fl. Germ., XXI, 76, t. 151; Beck, Fl. Nied.-Öst., 658; Posp., Fl. öst. Küst., II, 200; Wohlf., Syn. deutsch. Fl., 1131. — *L. gallicum* Jacqu., Enum. Vind., 48 et Scop., Fl. Carn., ed. II, I, 196 non L.]. In pratis imprimis humidis, ad silvarum margines. Floret m. Julio, Augusto.

Bosna: *Asch. Kan., Cat. (1877) ubi? In m. Kozara pr. Prijedor (Blau, Herb. nr. 2407), pr. Sitnica (H f. M.). Circa Travnik in m. Vilenica et prope Tirota (Fr Br.!). Prope Dubošćica (Fo. f. V.), Vareš ad riv. Rajčevac (Pr.), in m. Trebević (Fo. f. V., —1300 m M.), pr. Miljevići, inter Han Jezero—H. Toplice 1290 m, pr. Pale (M.).

Ludit:

typicum [Beck l. c. 658 = v. *hirtum* Wallr., Sched., 118 (1822). — *L. selinoides* Crantz, Stirp. austr. fasc. III 55 (1767)].

glabrum [Wallr., l. c. — *glabratum* Rochel, Pl. Ban., f. 54 (1828); DC., Prodr., IV 206 (1830) — *scabrum* Čelak., Prodr., Fl. Boehm., 582 (1874)].

5. *Laserpitium peucedanoides* [L., Amoen. acad., IV, 310 (1759); Jacqu., Ic. pl. rar. II, t. 349; DC., Prodr., IV, 205; Koch,

Syn. fl. Germ., 342; Reich. f., Ic. fl. Germ., XXI, 76 t. 149, f. I, II; Caruel in Parl., Fl. It. VIII, 522; Posp., Fl. öst. Küst., II 200]. In pratis et pascuis alpinis. Floret m. Julio, Augusto.

Bosna: In montibus Kamešnica, Troglav, Vel. Šator (*Pr. 1900).

Nescio an ad var. *latifolium* [Arcang., Comp. fl. Ital., 303 (1882)] pertineat.

β. *vulgare* [Pevalek, Oblici vrste *Laserp. peucedanoides* in Acta bot. inst. bot. univ. Zagreb I (1925), 118 f. 3—4].

Croatia: In m. Klek prope Ogulin (B.). Planta nostra laciniis foliorum linearibus, elongatis angustissimis, 1—summum 2.5 mm latis excellit.

Sectio: *Neo-Siler*.

[*Siler* Miller, Gard. dict. ed. IV (1754)? sed patr. bot. ac Crantz, p. p. non Scop.; confer Thellung, in Le monde des pl. 3, sér. nr. 38—153 (1925), 2.]

Juga secundaria alata, basi concavitate in transectu triangulari perducta. Juga primaria vitta parvula intrajugali (i. e. in parte interna, inter fascies vasculares et endosperma sita instructa).

6. *Laserpitium Siler* [L., Spec. pl., 249 (1753); Jacqu., Fl. Austr., II, t. 145; Vis., Fl. Dalm., III, 56; Reich. f., l. c. 75, t. 148; Beck, Fl. Nied.-Öst., 659; Posp., Fl. öst. Küst., II, 199. — *Siler montanum* Crantz, Stirp. Austr., fasc. III, 60 (1767) = *L. montanum* Lam., Fl. Fr., III, 415]. »Siljevina raskovnik«. In saxosis, lapidosis, glareosis, inter virgulta, in silvis apertis aridis, graminosis imprimis regionis montanae et subalpinae —1700 m. Floret m. Junio—Augusto.

Bosna: In m. Osječnica (F.), Plazenica (Sta.) Kamešnica, Troglav, Vel. Šator (Pr.), Uilica (Ja. Wa.), in m. Vlašić (B.), ut in loco Kajabaša (Fr. Br.). Circa Vareš, Kralupi (Pr.), in reg. flum. Gostović, solo serpent. 480—1278 m, in m. Lisin pr. G. Vakuf (M.), in m. Igman (B.), sicut in cacum. Crni vrh (F.); circa Sarajevo: Trebević —1600 m, in m. Puhov čajir pr. Dovlići, Bukovik (M.), Romanija (Blau Herb. nr. 2009), in valle fl. Miljacka, in m. Lipovac (B.); in valle fl. Željeznica (Pr.); in m. Treskavica —1680 m (M.), pr. lacum Vel. Jezero a. 1600 m (B.), in valle fl. Sutjeska (Pr.), in Zagorje (B.), m. Maglić (Rohlena). Prope Rudo in faucibus fl. Lim 360 m, prope Dobrun (M.). — **Hercegovina:** In m. Lisin (V.), Prenj Plan. pr. Kiser (M.), in m. Plasa (Prodan), pr. Vučja Bara, in m. Baba et Bjelašica pr. Gacko (M.), Svitavac (Adam. f. Hayek), Gljiva (V.).

Variat:

α. *stenophyllum* [Borb., Fl. Közl. in Math. term. Közl. XV (1878) 299]. Est planta typica, foliolis oblongis v. oblongo-

ellipticis utrinque attenuatis plus minus acuminatis, plurimis petiolulatis. Radii scabro-puberuli. Vulgatum.

Ludit: *angustissimum* [G. Beck = v. *stenophyllum* K. Malý in Glasn. zem. muz., 31 (1919) 76 non Borbás]. Foliola lineari lanceolata, angustiora. Rarius — *latius* [G. Beck]. Foliola elliptica latiora, basim versus longe attenuata et plurimum petiolulata, apice rotundato-acuta non acuminata. Non rare.

β. *macrophyllum* [Borbás, l. c. 299]. Foliola majora late elliptico-ovata, basi rotundata, apice rotundato-acuta.

Croatia: In m. Klek (B.). — **Hercegovina:** In faucibus Rakitnica ca. 400 m (M.)?

γ. *latifolium* [Vis., Fl. Dalm., III, 56 (1852). — *L. garganicum* Bert., Fl. It., IV 399; Halácsy, Consp. fl. Graec, I 620. — *L. siler* var. = Paol. in Fiori Paol., Comp. Fl. Ital., II 191. — *Ligusticum garganicum* Ten., Fl. Nap., I. 122 t. 24 (1811—1815); Sylloge (1831) 144. — *Siler (montanum* subsp.?) *garganicum* Thellung l. c. p. 4]. Foliola late ovata vel elliptica, obtusa vel rotundata, cum apiculo, lateralia saepe oblique cordata, saepe sessilia. Radii laeves v. scabro-puberuli. Folia involucri et involucelli magis oblongo-lanceolata, latius marginata. Alae fructuum latiores (nunc angustiores vel nullae f. Murbeck).

Hercegovina: In glareosis montis Velež ad agrum Nevesinjsko Polje (Mu) ca. 1600—1700 m. Etiam hic et in m. Leotar collegi plantam ad f. *latius* inclinantem (B.). In graminosis m. Leotar pr. Trebinje (P. f. *Grisebach 1874). In **Bosna** prope Jajce in faucibus fl. Vrbas (Behrendsen 1905) vix crescit. Ac nota in Asch. Kan. [Cat. 67, 1877] ubi? certe erronea!

Etiam var. α alis varie latis occurrit sicut in f. *brachypterum* et *platypterum* [Schmidely in Bull. soc. bot. Génève, III (1884) 104].

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