

## Catalogue of newly reported and confirmed vascular plant taxa from Albania (1990–2012)

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*Summary:* The flora of Albania is rich in vascular plants, comprising about 3250 species which are included in 'Flora e Shqipërisë' (Flora of Albania Vols 1–4). However, several hundred taxa mainly reported by foreign authors were not included. Some of them can be found in the 'Flora ekskursioniste e Shqipërisë' (Excursion flora of Albania) and also have been referred in 'Flora Europaea' and some taxa were mentioned in 'Dendroflora e Shqipërisë' (Dendroflora of Albania). Many botanical explorations have been taking place since then and many taxa have been newly reported or confirmed.

As a result of these explorations made by different authors from 1990–2012, a catalogue containing 436 wild vascular plant taxa including 353 species and 83 subspecies is presented here. About 42 taxa are endemic to the Balkans, while 73 species and 24 subspecies are endemic to Albania and neighbouring countries, and 30 species and 10 subspecies were only found in Albania. We believe that further field work and research in various herbaria will result in confirmation and addition of hundreds of further taxa to the flora of Albania in the near future.

*Keywords:* Flora of Albania, wild vascular plants, endemic and subendemic species, list of plant taxa

A complete listing of all known Albanian plant species has been considered desirable for a long time, but has remained an elusive target for generations of botanists. The adoption of the Global Strategy for Plant Conservation (<http://www.cbd.int/gspc/>) has reinforced the urgent need for a national plant checklist to support, facilitate and monitor the conservation and the sustainability of plants.

Checklists have been compiled by various qualified individuals over years. Much of the work was done during the second half of the previous century by PAPANISTO et al. (1962, 1988), DEMIRI (1983), QOSJA et al. (1992, 1996), VANGJELI et al. (2000), VANGJELI (2003), BALL (2011), MEYER (2011) and others.

Existing checklists for Albania record about 3228 species and 662 subspecies of wild and cultivated vascular plants (VANGJELI 2003). Taking into account dozens of species reported erroneously (BARINA et al. 2013), this number should be less. However, botanical exploration has expanded greatly during the last twenty years (DEFAYES 2004; RAKAJ 2006, 2008, 2009a, 2009b, 2011; RAKAJ & KASHA 2007; BARINA & PIFKÓ 2008b, 2008c, 2011; MALO & SHUKA 2008a, 2009; BARINA et al. 2009, 2010, 2011, 2013; RAKAJ & ROSTANSKI 2009; SHUKA 2009, 2010a, 2010b; SHUKA et al. 2009, 2010, 2011; SHUKA & TAN 2009; MULLAJ & TAN 2010; MEYER 2011; SHUKA & MALO 2011; TAN et al. 2011; etc. ). These and other sources estimate that over 3600 species and 850 subspecies of wild vascular plants occur in Albania.

This paper presents a list of wild vascular plant taxa reported or confirmed for Albania after 1990, since the main Albanian flora 'Flora e Shqipërisë' Vols 1–4 was published (PAPANISTO et al. 1988; QOSJA et al. 1992, 1996; VANGJELI et al. 2000). All listed taxa were not included in

Flora e Shqipërisë and most of them were not reported in 'Flora Europaea' (TUTIN et al. 1964, 1968, 1972, 1976, 1980, 1993).

The major criterion for taxa to be included in the list was the existence of a herbarium specimen. Through this process, it became apparent that the National Herbarium in Tirana has good collections especially of the local flora; however, the number remains rather modest compared to other herbaria (Vienna, Budapest, Jena, Kew, etc.). Currently, interest increases in finding a way to consolidate all herbaria data in a virtual environment (e.g., Global Biodiversity Information Facility, <http://www.gbif.org/>) which could be continually updated and accessed as 'Flora of Albania'.

Albanian botanists in collaboration with their colleagues of Hungarian Natural History Museum are concentrated on compiling a checklist of wild vascular plant taxa of Albania. It is anticipated that the completed checklist will be published in the next two or three years.

## Materials and Methods

Based on a multi-year study of publications on the flora of Albania, we could compile a list with a large number of plant species found in Albania but not being mentioned in 'Flora e Shqipërisë Vols 1–4' (PAPARISTO et al. 1988; QOSJA et al. 1992, 1996; VANGJELI et al. 2000), a key publication for the flora of Albania. This list includes historical reports of Albanian authors (MITRUSHI 1955, 1966; PAPARISTO et al. 1965; DEMIRI 1983) and foreign authors (BALDACCIO 1901; HAYEK 1917, 1924; JANCHEN 1920; JÁVORKA 1926; MARKGRAF 1927, 1932; KOŠANIN 1939; ALSTON & SANDWITH 1940; GREUTER et al. 1984, 1986; etc.).

Main sources for the list were recent scientific papers by VANGJELI et al. (1995), BARNES (1997), JALAS et al. (1999), GREUTER & RAUS (2000), TAN & MULLAJ (2000), KASHTA & RAKAJ (2002, 2003), DESFAYES (2004), KURTTTO et al. (2004, 2007, 2010), MEYER (2006, 2011), RAKAJ (2006, 2008, 2009a, 2009b, 2011), HROUDOVÁ et al. (2007), RAKAJ & KASHTA (2007), BARINA & PIFKÓ (2008a, 2008b, 2008c, 2011), MALO & SHUKA (2008a, 2008b, 2009, 2012), SHUKA (2008, 2009, 2010a, 2010b), SHUKA & KASHTA (2008), ALBACH et al. (2009), BARINA et al. (2009, 2010, 2011, 2013), KURTTTO (2009), RAKAJ & ROSTANSKI (2009), SHUKA & HALLACI (2009), SHUKA & TAN (2009), SHUKA et al. (2009, 2010, 2011), HONG (2010), MULLAJ et al. (2010), MULLAJ & TAN (2010), SHUKA & MALO (2010, 2011), BALL (2011), BRANDES (2011), TAN et al. (2011), RAKAJ & HYSENI (2012), RAKAJ & SHEHU (2012), SHUKA & XHULAJ (2012).

Other sources were literature searches like 'Flora Europaea' (TUTIN et al. 1964, 1968, 1972, 1976, 1980, 1993), 'Flora e Shqipërisë' (PAPARISTO et al. 1988; QOSJA et al. 1992, 1996; VANGJELI et al. 2000), 'Udhëheqës fushor i florës së Shqipërisë' (VANGJELI 2003), 'Flora ekskursioniste e Shqipërisë' (DEMIRI 1983), web-based resources like The Euro+Med PlantBase ([www.europlusmed.org/EuroPlusMed/](http://www.europlusmed.org/EuroPlusMed/)), PESI ([www.eu-nomen.eu/portal/](http://www.eu-nomen.eu/portal/)), WCSP (<http://apps.kew.org/wcsp/>) and GRIN Taxonomy for Plants ([www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl](http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl)), our field trips and references to herbarium specimens from Albania and different European countries. We participate in completing the synonymy list of accepted taxa by Euro+Med PlantBase and we have evaluated information for all accepted species by the end of 2010. The Pan-European Species directories Infrastructure (PESI) and GRIN Taxonomy for Plants were also sources for scientific names used in this list.

## Catalogue of newly reported vascular plant taxa from Albania (1990–2012)

**Table 1.** Taxonomic synopsis of vascular plant taxa reported.

	Families	Genera	Species	Subspecies	Endemic
Lycopodiophyta	1	2	2	–	–
Pteridophyta	6	6	6	–	–
Gymnospermae	1	1	1	–	1
Angiospermae					
Monocotyledoneae	18	58	126	18	22
Dicotyledoneae	46	165	218	65	116
<b>Total</b>	<b>72</b>	<b>232</b>	<b>353</b>	<b>83</b>	<b>139</b>

Divisions, families and genera are arranged phylogenetically according to APG III (THE ANGIOSPERM PHYLOGENY GROUP 2009), while species are arranged alphabetically within genera.

Most of the species listed are stored at the National Herbarium in Tirana, at Friedrich-Schiller-Universität in Jena [JE] and in the Hungarian Natural History Museum [BP] in Budapest.

## Results and Discussion

The list comprises 72 families and 232 genera, which accounts for 436 wild vascular plant taxa or 353 species and 83 subspecies. According to taxonomic groups, they belong to: clubmosses 2, ferns 6, gymnosperms 1, monocotyledons 144 (126 species and 18 subspecies) and dicotyledons 283 (218 species and 65 subspecies) (Table 1). Families with most taxa are: Asteraceae 50, Poaceae 47, Cyperaceae 31, Caryophyllaceae 29, Brassicaceae 23, Fabaceae 21, Rosaceae 17. Genera with the most species and subspecies are: *Carex* 21, *Potentilla* 10, *Viola* 8, *Crocus* 7, *Dianthus* 7, *Festuca* 7, *Orobanchae* 7, *Gagea* 6.

About 73 species and 24 subspecies are local endemics of Albania or of Albania and neighbouring countries (subendemic). 30 species and 10 subspecies were found only in Albania (\*), 43 species and 14 subspecies were found in Albania and also in neighbouring countries: 23 species and 7 subspecies in Albania and Greece (\*\*), 20 species and 7 subspecies in Albania and former Yugoslavia (Serbia, Montenegro, Bosnia-Herzegovina, Macedonia and Kosovo) (\*\*). 42 species and subspecies are endemic to the Balkans (\*\*\*), while 23 species are alien (+).

## List of vascular plant taxa

### Lycopodiophyta

#### Lycopodiaceae

1. *Lycopodium annotinum* L. (BARINA et al. 2011)
2. *Selaginella denticulata* (L.) Spring (JANCHEN 1916; HAYEK 1917; GREUTER et al. 1984; PAPANISTO et al. 1965; BARNES 1997)

### Pteridophyta

#### Ophioglossaceae

3. *Ophioglossum lusitanicum* L. (BARINA et al. 2011)

#### Blechnaceae

4. *Blechnum spicant* (L.) Sm. (DEMIRI 1983; GREUTER & al. 1984; TUTIN et al. 1993)

Thelypteridaceae

5. *Phegopteris connectilis* (Michx.) Watt (BARINA & PIFKÓ 2011)

Adiantaceae

6. *Anogramma leptophylla* (L.) Link (BARNES 1997; BARINA et al. 2010; BRANDES 2011)

Salviniaceae

7. *Salvinia natans* (L.) All. (DESFAYES 2004; XHULAJ & SHUKA 2007; BARINA & PIFKÓ 2011)

Azollaceae

8. +*Azolla filiculoides* Lam. (BARINA et al. 2013)

Gymnospermae

Pinaceae

9. \*\**Abies cephalonica* Loudon (HAYEK 1927; MITRUSHI 1955; MEYER 2011)

Monocotyledoneae

Alismataceae

10. *Caldesia parnassifolia* (Bassi) Parl. (KASHTA & RAKAJ 2003; DESFAYES 2004)

Hydrocharitaceae

11. +*Najas flexilis* (Willd.) Rostk. & W.L.E. Schmidt (RAKAJ 2011)

Potamogetonaceae

12. *Potamogeton coloratus* Hornem. (BARINA et al. 2009)  
13. *P. praelongus* Wulfen (BARINA et al. 2011)  
14. *P. trichoides* Cham. & Schltld. (RAKAJ & HYSENI 2012)

Xanthorroaceae

15. *Hemerocallis lilioasphodelus* L. (DEMIRI 1983; BARINA & PIFKÓ 2011)

Colchicaceae

16. *Colchicum bivonae* Guss. (BARINA et al. 2011)  
17. \*\*\**C. doerfleri* Halászy (MEYER 2011; MALO & SHUKA 2013)  
18. \*\*\**C. haynaldii* Heuff. = *C. kochi* Parl. (MARKGRAF 1932; MEYER 2011)  
19. *C. triphyllum* Kunze (MALO & SHUKA 2013)

Liliaceae

20. *Gagea bohemica* (Zauschn.) Shult. & Shult. f. (BARINA et al. 2010)  
21. *G. chrysantha* (Jan) Schult. & Schult. f. = *G. amblyopetala* Boiss. & Heldr. (BARINA et al. 2010)  
22. *G. fistulosa* (Ramond ex DC.) Ker Gawl. (BARINA & PIFKÓ 2008b)  
23. *G. granatellii* (Parl.) Parl. subsp. *granatellii* (Parl.) K. Richt (MALO & SHUKA 2008a)  
24. *G. pratensis* (Pers.) Dumort. (BARINA & PIFKÓ 2011)  
25. *G. villosa* (M. Bieb.) Sweet = *G. arvensis* (Pers.) Dumort (SHUKA & JAHOLLARI 2007)  
26. \**Tulipa albanica* Kit Tan & Shuka (SHUKA et al. 2010)

Asparagaceae

27. *Bellevalia dubia* (Guss.) Schult. & Schult. f. (BARINA et al. 2009)

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28. \*\**B. hyacinthoides* (Bertol.) K. Persson & Wandelbo (SHUKA 2010b)
29. \*\**Hyacinthella dalmatica* (Baker) Chouard (RAKAJ & KASHTA 2007)
30. *H. leucophaea* (C. Koch) Schur (BARINA et al. 2009)
31. *Ornithogalum montanum* Cirillo (BARINA et al. 2009; MEYER 2011)
32. *O. oligophyllum* E. D. Clarke (DEMIRI 1983; BARINA et al. 2009; MEYER 2011)
33. \**O. ostrovicense* F. K. Meyer (MEYER 2011)
34. \**Scilla albanica* Turrill (TURRILL 1932; MEYER 2011; RAKAJ & SHEHU 2012)
35. \*\**Prospero elisae* Speta = *Scilla elisae* (Speta) Valdes (TURRILL 1932; MEYER 2011)
36. \**P. ionicum* Speta (MEYER 2011)

## Amaryllidaceae

37. *Allium pallens* L. (BARINA & PIFKÓ 2011)
38. *A. rhodopeum* Velen. = *A. paniculatum* subsp. *villosulum* (Halácsy) Stearn (BARINA & PIFKÓ 2011)
39. *A. subhirsutum* L. (FIORI 1928; ALSTON & SANDWICH 1940; SCHÜTT 1945; BARINA et al. 2011; MEYER 2011)
40. *A. tenuiflorum* Ten. = *A. pallens* subsp. *tenuiflorum* (Ten.) Stearn = *A. paniculatum* subsp. *tenuiflorum* (Ten.) K. Richt. (BARINA et al. 2010; MEYER 2011)
41. *Galanthus reginae-olgae* Orph. subsp. *reginae-olgae* (SHUKA et al. 2011)
42. *G. regina-olgae* Orph. subsp. *vernalis* Kamari 1982 (MALO & SHUKA 2008a)

## Iridaceae

43. *Crocus biflorus* Mill. (SHUKA 2009; MEYER 2011)
44. *C. biflorus* Mill. subsp. *adamii* (J. Gay) K. Richt. (SHUKA & JAHOLLARI 2007; SHUKA 2009)
45. *C. biflorus* Mill. subsp. *weldenii* (Hoppe & Fürnr.) K. Richt. (SHUKA 2009; RAKAJ 2009a; MEYER 2011)
46. *C. cancellatus* Herb. subsp. *mazziaricus* (Herb.) B. Mathew (SHUKA 2009; MEYER 2011)
47. *C. flavus* Weston (DEMIRI 1983; SHUKA 2009)
48. \*\**C. hadriaticus* Herb. (SHUKA 2008, 2009)
49. *C. pulchellus* Herb. (SHUKA 2009)
50. *C. tommasinianus* Herb. (MEYER 2011)
51. *Iris graminea* L. (ASCHERSON & KANITZ 1877; JANCHEN 1920; HAYEK 1927; KOŠANIN 1939; DEMIRI 1983; BARINA et al. 2013)
52. *I. pumila* L. subsp. *attica* (Boiss. & Heldr.) K. Richt. (SHUKA & XHULAJ 2012)
53. \*\*\**I. reichenbachii* Heuff. = *I. bosniaca* (Beck) Doerf. (HAYEK 1924; KOŠANIN 1939; RAKAJ 2009a; BARINA et al. 2009; MEYER 2011)
54. *I. variegata* L. (HAYEK 1924; SHUKA & XHULAJ 2012)
55. *Romulea linaresii* Parl. subsp. *graeca* Béguinot (MARKGRAF 1932; RAKAJ 2011)
56. +*Sisyrinchium angustifolium* Mill. (BARINA et al. 2013)

## Orchidaceae

57. *Anacamptis palustris* (Jacq) R. M. Bateman, Pridgeon & M. W. Chase subsp. *elegans* (Heuff.) R. M. Bateman, Pridgeon & M. W. Chase = *Orchis laxiflora* subsp. *elegans* (Heuff.) Soó (DIEKJOBST & SISCHKA 2006; RAKAJ 2008)

58. *Himantoglossum adriaticum* H. Bauman (BARINA & PIFKÓ 2011)
59. *H. caprinum* (M. Bieb.) Sprengel = *H. hircinum* (L.) Spreng. subsp. *caprinum* (L.) Soó 1928 (GOELZ & REINHARD 1984; DIEKJOBST & SISCHKA 2006; RAKAJ 2008)
60. *Serapias bergonii* E. G. Camus = *S. vomeracea* (Burm. f.) Briq. subsp. *laxiflora* (Soò) Goelz & Reinhard (HAYEK 1917; MARKGRAF 1927; DIEKJOBST & SISCHKA 2006; RAKAJ 2008)

#### Juncaceae

61. *Juncus minutulus* (Albert & Jahand.) Prain (MEYER 2011)
62. *J. sphaerocarpus* Nees (BARINA & PIFKÓ 2011; RAKAJ 2011)
63. *J. tenageia* Ehrh. ex L.f. (SCHÜTT 1945; BARINA & PIFKÓ 2008c; DHORA & RAKAJ 2010)
64. *Luzula luzuloides* (Lam.) Dandy & Wilmott subsp. *luzuloides* (DEMIRI 1983; BARINA & PIFKÓ 2011; MEYER 2011)
65. *L. luzuloides* (Lam.) Dandy & Wilmott subsp. *rubella* (Hoppe ex Mert. & W.D.J. Koch) Holub (MEYER 2011)
66. *L. pindica* (Hausskn.) Chrtek & Krisa (ALSTON & SANDWITH 1940; KITANOV 1948; MEYER 2011)

#### Commelinaceae

67. +*Commelina communis* L. (BARINA et al. 2011)

#### Cyperaceae

68. *Cyperus glaber* L. (SCHÜTT 1945; DEMIRI 1983; RAKAJ 2009b; MEYER 2011)
69. *C. michelianus* (L.) Delile = *Scirpus michelianus* L. (DEMIRI 1983; DESFAYES 2004; RAKAJ 2009b; BARINA & PIFKÓ 2011)
70. *Eleocharis carniolica* W.D.J. Koch (SCHÜTT 1945; BARINA et al. 2011)
71. *E. ovata* (Roth) Roem. et Schult. (SCHÜTT 1945; RAKAJ 2011; BARINA et al. 2012)
72. *E. uniglumis* (Link) Schult. (ALSTON & SANDWITH 1940; DESFAYES 2004; RAKAJ 2009b)
73. *Bolboschoenus glaucus* (Lam.) S. G. Sm. = *Scirpus macrostachys* Willd. (HROUDOVÁ et al. 2007)
74. *Isolepis setacea* (L.) R.Br. = *Scirpus setaceus* L. (BALDACCIO 1896; ALSTON & SANDWITH 1940; BORNMÜLLER 1933; DEMIRI 1983; BARINA & PIFKÓ 2008c; RAKAJ 2009b)
75. *Schoenoplectus litoralis* (Schrud.) Palla = *Scirpus litoralis* Schrad. (DEMIRI 1983; DESFAYES 2004; RAKAJ 2011)
76. *S. supinus* (L.) Palla = *Scirpus supinus* L. (BARINA et al. 2012)
77. *Carex appropinquata* Schumach. = *C. paradoxa* Willd. (MEYER 2011)
78. *C. canescens* L. = *C. curta* Gooden. (JÁVORKA 1926; DEMIRI 1983; BARINA & PIFKÓ 2011)
79. *C. cespitosa* L. = *C. neglecta* Peterm. (BARINA et al. 2011)
80. *C. cuprina* (Heuff.) Kern. (DEMIRI 1983; DESFAYES 2004; RAKAJ 2009b)
81. *C. davalliana* Sm. (BARINA & PIFKÓ 2008c; MEYER 2011)
82. *C. demissa* Hornem. = *C. viridula* Michaux subsp. *oedocarpa* (Andersson) B. Schmid (RAKAJ 2011)
83. *C. digitata* L. (DEMIRI 1983; MEYER 2011)
84. *C. distachya* Desf. (TUTIN et al. 1980; BARINA & PIFKÓ 2010; MEYER 2011)

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85. *C. divulsa* Stokes subsp. *leersia* (Kneuck.) W. Koch (TUTIN et al. 1980; MEYER 2011)
86. *C. ericetorum* Pollich (KOŠANIN 1939; BARINA et al. 2011)
87. *C. filiformis* L. = *C. tomentosa* L. (KOŠANIN 1939; ALSTON & SANDWICH 1940; TUTIN et al. 1980; BARINA & PIFKÓ 2008c)
88. *C. flacca* Schreber subsp. *serrulata* (Biv.) Greuter (DEMIRI 1983; MEYER 2011)
89. *C. hispida* Willd. (MEYER 2011)
90. *C. lepidocarpa* Tausch (MARKGRAF 1932; SCHÜTT 1945; BARINA & PIFKÓ 2008c; MEYER 2011)
91. *C. melanostachya* Willd. (RAKAJ 2009b)
92. *C. michelii* Host (BARINA et al. 2011; RAKAJ 2011)
93. *C. phyllostachys* C. A. Meyer (BARINA & PIFKÓ 2011)
94. *C. punctata* Gaudin (BARINA et al. 2013)
95. *C. spicata* Huds. (HAYEK 1924; KOŠANIN 1939; DEMIRI 1983; BARINA & PIFKÓ 2011; MEYER 2011)
96. *C. umbrosa* Host subsp. *umbrosa* = *C. caryophyllea* var. *umbrosa* (Host) Fiori (BARINA et al. 2011)
97. *C. vesicaria* L. (DEMIRI 1983; RAKAJ 2009b)
98. *C. viridula* Michaux subsp. *viridula* = *C. oederi* Ehrh. = *C. serotina* Mérat (ALSTON & SANDWICH 1940; KOŠANIN 1939; DESFAYES 2004; BARINA & PIFKÓ 2008c)

## Poaceae

99. *Agropyron cristatum* (L.) Gaertn. (BARINA et al. 2011)
100. *Festuca dalmatica* (Hack.) K. Richt. (JANCHEN 1920; KITANOV 1948; SCHÜTT 1945; DEMIRI 1983; MEYER 2011)
101. \*\**F. galicicae* Horvat ex Markgr.-Dann. (SHUKA 2011)
102. \*\*\**F. illyrica* Markgr.-Dann. (MEYER 2011)
103. *F. jeanpertii* (St.-Yves) Markgr. subsp. *campana* (N. Terrac.) Markgr.-Dann. (MEYER 2011)
104. *F. microphylla* (St.-Yves) Patzke (MEYER 2011)
105. *F. nigrescens* Lam. (MEYER 2011)
106. *F. nitida* Kit. ex Schult. (SCHOLZ 2003)
107. \*\*\**F. nitida* Kit. ex Schult. subsp. *macrathera* (Hack.) Foggi & Signorini (SCHOLZ 2003; VALDES 2003)
108. \**Festucopsis serpentini* (C. E. Hubbard) Melderis subsp. *lurensis* F. K. Meyer (MEYER 2011)
109. *Desmazeria sicula* (Jacq.) Dumort (DIMITROV 2009)
110. *Heteropogon contortus* (L.) P. Beauv. ex Roem. & Schult. = *Andropogon contortus* L. (BARINA et al. 2011)
111. *Vulpia ligustica* (All.) Link (PAPARISTO et al. 1965; DEMIRI 1983; BARINA & PIFKÓ 2011)
112. *Poa palustris* L. (MEYER 2011)
113. *Dactylis glomerata* L. subsp. *hackelii* (Asch. & Graebn.) Cif. & Giacom. (SCHOLZ 2003)
114. *Melica nutans* L. = *M. montana* Huds. (BARINA & PIFKÓ 2008c)
115. *M. taurica* K. Koch = *M. ciliata* subsp. *taurica* (K. Koch) Tzvelev (HEMPEL 2004)
116. *Bromus parvispiculatus* H. Scholz (SCHOLZ 2003)

117. \*\*\**Bromopsis cappadocica* subsp. *lacmonica* (Hauskn.) H. Scholz & Valdés 2006 = *Bromus lacmonicus* Haussk. (DEMIRI 1983; TUTIN et al. 1980; MEYER 2011)
118. *B. riparia* (Rehman) Holub = *Bromus riparius* Rehman (MEYER 2011)
119. *Brachypodium phoenicoides* (L.) Roem. & Schult. (MEYER 2011)
120. *Glyceria arundinacea* Kunth (MEYER 2011)
121. *G. maxima* (Hartm.) Holmb. = *G. aquatica* (L.) Wahlb. (DEMIRI 1983; DESFAYES 2004; DHORA & RAKAJ 2010)
122. *Elytrigia elongata* (Host) Nevski = *Elymus elongatus* (Host) Runemark (BARINA et al. 2013)
123. *Aegilops comosa* Sm. subsp. *heldreichii* (Boiss.) Eig = *A. heldreichii* (Boiss.) Halácsy (SCHOLZ 2003)
124. *Avena sterilis* L. subsp. *atherantha* (C. Presl) H. Scholz (SCHOLZ 2003)
125. \*\*\**Helictochloa aetolica* (Rech. f.) Romero Zarco = *Avenula aetolica* (Rech. f.) Holub (LANGE 1995)
126. *H. praeusta* (Rchb.) Romero Zarco = *Avena praeusta* Rchb. (BARINA & PIFKÓ 2011)
127. *H. versicolor* (Vill.) Romero Zarco subsp. *versicolor* = *Avena versicolor* Vill. (VALDÉS 2003)
128. \*\**Danthoniastrum brevidentatum* H. Scholz. (VALDÉS 2003; MEYER 2011)
129. *Koeleria australis* A. Kern. = *K. splendens* C. Presl. var. *albanica* Domin (BRULLO et al. 2009)
130. *K. pyramidata* (Lam.) P. Beauv. subsp. *pyramidata* (ALSTON & SANDWITH 1940; MEYER 2011)
131. \**Deschampsia cespitosa* (L.) P. Beauv. subsp. *scardica* F. K. Meyer (MEYER 2011)
132. *D. media* (Gouan) Roem. & Schult. subsp. *media* (BALDACCI 1901; TUTIN et al. 1980; MEYER 2011)
133. *Agrostis vinealis* Schreb. subsp. *vinealis* (BARINA & PIFKÓ 2011)
134. *Polypogon maritimus* Willd. subsp. *maritimus* (WEISS 1866; DEMIRI 1983; MULLAJ et al. 2010)
135. *Calamagrostis arudinacea* (L.) Roth. (MARKGRAF 1932; SCHÜTT 1945; DEMIRI 1983; STRID & TAN 1991; BARINA & PIFKÓ 2011; MEYER 2011)
136. *C. varia* (Schrad.) Host subsp. *varia* (HAYEK 1924; JÁVORKA 1926; KITANOV 1948; SCHÜTT 1945; STRID & TAN 1991; RAKAJ 2009a; MEYER 2011)
137. *Crypsis alopecuroides* (Piller & Mitterp.) Schrad. = *Heleochloa alopecuroides* (Piller & Mitterp.) Host (BALDACCI 1896; JANCHEN 1920; DEMIRI 1983; TUTIN et al. 1980; BARINA et al. 2013)
138. *Phleum exaratum* Griseb. subsp. *exaratum* = *P. graecum* Boiss. & Heldr. (MEYER 2011)
139. \*\*\**Stipa balcanica* (Martinovský) Kožuharov = *S. joannis* Čelak subsp. *balcanica* Martinovský (MEYER 2011)
140. *S. endotricha* Martinovský (MEYER 2011)
141. \*\**S. mayeri* Martinovský (MEYER 2011)
142. *S. rechingeri* Martinovský (STRID & TAN 1991; BARINA & PIFKÓ 2011)
143. \**S. tirsia* Steven subsp. *albanica* Martinovský (TUTIN et al. 1980; DEMIRI 1983, VALDES 2003)
144. +*Panicum dichotomiflorum* Michx. (BARINA & PIFKÓ 2011)
145. *Sphenopus divaricatus* (Gouan) Rchb. (BARINA & PIFKÓ 2011)



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Araceae

146. *Arum lucanum* Cavara & Grande = *A. orientale* subsp. *lucanum* (Cavara & Grande) Prime (MEYER 2011)
147. *A. orientale* M. Bieb. subsp. *longispathum* Rchb. (Engl.) = *A. longispathum* Rchb. (MEYER 2011; RAKAJ & SHEHU 2012)

Lemnaceae

148. *Lemna gibba* L. (DEMIRI 1983; BARINA et al. 2011)
149. +*L. minuta* Kunth. (DESFAYES 2004)
150. *Spirodela polyrrhiza* (L.) Schleid. (KASHTA & RAKAJ 2002; DESFAYES 2004)

Sparganiaceae

151. *Sparganium angustifolium* Michx. (BARINA & PIFKÓ 2011)

Typhaceae

152. *Typha laxmannii* Lepech. (DEMIRI 1983; DESFAYES 2004)
153. *T. minima* Hoppe (MULLAJ & TAN 2010; BARINA et al. 2011)

Dicotyledoneae

Salicaceae

154. *Salix serpyllifolia* Scop. (MITRUSHI 1966; RUCI 1985; MEYER 2011)

Urticaceae

155. *Parietaria lusitanica* L. subsp. *lusitanica* (RAKAJ 2007; BRANDES 2011)

Santalaceae

156. *Thesium bergeri* Zucc. (BALDACCI 1899; BARINA et al. 2009)

Polygonaceae

157. *Oxyria digyna* (L.) Hill. (HAYEK 1924; JALAS & SOUMINEN 1980; GREUTER et al. 1989; TUTIN et al. 1993; MEYER 2011)

Aristolochiaceae

158. \*\**Aristolochia elongata* (Duch.) E. Nardi = *A. pallida* var. *elongata* (GREUTER et al. 1989; TUTIN et al. 1964; SHUKA et al. 2011)
159. *A. lutea* Desf. = *A. croatica* Horvatic (GREUTER et al. 1984; SHUKA et al. 2011)
160. \*\**A. merxmülleri* Greuter & E. Mayer (SHUKA & HALLACI 2009; SHUKA et al. 2011)
161. *A. sempervirens* L. (VANGJELI et al. 1995)

Berberidaceae

162. \**Gymnospermium maloi* Kit Tan & Shuka (TAN et al. 2011)

Paeoniaceae

163. *Paeonia arietina* G. Anderson = *P. mascula* subsp. *arietina* (G. Anderson) Cullen & Heywood (TUTIN et al. 1993; HONG 2010)
164. *P. officinalis* L. subsp. *italica* N. G. Passal. & Bernardo (HONG 2010)
165. \*\*\**P. saueri* D. Y. Hong, X. Q. Wang & D. M. Zhang (HONG et al. 2004)

Ranunculaceae

166. *Anemone ranunculoides* L. (KOŠANIN 1939; BARINA & PIFKÓ 2008b; RAKAJ 2009)
167. *Pulsatilla alpina* (L.) Delarbre = *Anemone alpina* L. (BARINA & PIFKÓ 2011)

168. *P. halleri* (All.) Willd. = *Anemone halleri* All. (JALAS & SOUMINEN 1986; RUCI 1985; VANGJELI et al. 1995; BARINA et al. 2009)  
 169. *Ceratocephala falcata* (L.) Pers. (HAYEK 1927; GREUTER et al. 1989; BARINA et al. 2010)  
 170. \*\*\**Ranunculus illyricus* L. (BARINA et al. 2011)  
 171. *R. montanus* Willd. (SCHÜTT 1945; RAKAJ & KASHTA 2007)  
 172. *R. penicillatus* (Dumort) Bab. (BARINA & PIFKÓ 2008c)  
 173. *R. polyanthemos* L. subsp. *polyanthemoides* Boreau = *R. polyanthemoides* Boreau (MEYER 2011)  
 174. \*\**R. wettsteinii* Dörfler (HAYEK 1924; DEMIRI 1983; VANGJELI et al. 1995)

## Papaveraceae

175. *Papaver dubium* L. subsp. *lecoquii* (Lamotte) Syme (MEYER 2011)  
 176. *Corydalis pumila* (Host) Rchb. (BARINA & PIFKÓ 2008b; MEYER 2011)  
 177. *Pseudofumaria alba* (Mill.) Lidén subsp. *alba* (GREUTER et al. 1989; TUTIN et al. 1993; BRANDES 2011)  
 178. \*\*\**P. alba* subsp. *leiosperma* (Conrath) Lidén (BRANDES 2011; MEYER 2011)

## Amaranthaceae

179. *Chenopodium rubrum* L. (BARINA et al. 2013)  
 180. *Halopeplis amplexicaulis* (Vahl) Ung.-Sternb. ex Ces., Pass & Gibelli (BARINA & PIFKÓ 2011)  
 181. +*Amaranthus viridis* L. (GREUTER & RAUS 2000)

## Portulacaceae

182. *Montia fontana* L. subsp. *chondrosperma* (Fenzl) Walters (BARINA & PIFKÓ 2008c)

## Caryophyllaceae

183. *Minuartia attica* (Boiss. & Spruner) Vierh. subsp. *attica* = *M. verna* L. subsp. *attica* (Boiss. & Spruner) Hayek (ALSTON & SANDWITH 1940; JÁVORKA 1926; MEYER 2011)  
 184. \*\*\**M. glomerata* (M. Bieb.) Degen subsp. *macedonica* (Degen & Doerfl.) McNeill = *M. velutina* Boiss. et Orph. (MEYER 2011)  
 185. \*\**M. pseudosaxifraga* (Mattf.) Greuter & Burdet (SHUKA et al. 2011)  
 186. *M. viscosa* (Shreb.) Schinz & Thell. (MEYER 2011)  
 187. \**Arenaria cikae* F.K. Meyer (MEYER 2011)  
 188. *Sagina maritima* D. Don (BARINA et al. 2011)  
 189. *Spergula pentandra* L. (BARINA et al. 2010)  
 190. \*\**Cerastium brachypetalum* Desp. ex Pers. subsp. *pindigenum* (Lonsing) P.D. Sell & Whitehead (MEYER 2011)  
 191. \**C. grandiflorum* Waldst. & Kit. subsp. *serpentini* F.K. Meyer (MEYER 2011)  
 192. \*\**C. smolikanum* Hartvig (SHUKA & TAN 2009; MEYER 2011)  
 193. *Stellaria alsine* Grimm = *S. uliginosa* Murray (BARINA & PIFKÓ 2011)  
 194. *S. holostea* L. (KOŠANIN 1939; PAPANISTO & QOSJA 1978; BARINA & PIFKÓ 2008b)  
 195. *S. palustris* Hoffm. (MEYER 2011)  
 196. \*\*\**Herniaria nigrimontium* F. Herm. (MEYER 2011)  
 197. \*\**Paronychia albanica* Chaudhri subsp. *albanica* (GREUTER et al. 1984; MEYER 2011)  
 198. \*\**P. macedonica* Chaudhri (MEYER 2011)  
 199. *Heliosperma pusillum* (Waldst. & Kit.) Reichenb. subsp. *monachorum* Niketić & Stevanović (SHUKA et al. 2011)

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200. *Silene lerchenfeldiana* Baumg. (SHUKA et al. 2011)
201. \*\**S. parnassica* Boiss. & Spruner subsp. *serbica* (Vierh. & Adamovic) Greuter (STRID & TAN 1997; MEYER 2011)
202. *S. uniflora* Roth. (TUTIN et al. 1964; GREUTER et al. 1984; BARINA et al. 2012)
203. *Drypis spinosa* L. subsp. *jacquiniana* Murb. & Wettst. = *D. jacquiniana* Murb. & Wettst. (MEYER 2011)
204. \*\*\**Petrorhagia obcordata* (Margot & Reut.) Greuter & Burdet (JANCHEN 1920a; BALTISBERGER & BALTISBERGER 1995; GREUTER et al. 1984; JALAS & SOUMINEN 1986; TUTIN et al. 1993; MEYER 2011)
205. \*\**Dianthus behriorum* Bornm. (RAKAJ & KASHTA 2007)
206. \*\**D. biflorus* Sm. (MEYER 2011)
207. *D. monadelphus* Vent. subsp. *pallens* (Sm.) Greuter & Burdet (BARINA et al. 2012)
208. *D. monspessulanus* L. (JALAS & SOUMINEN 1986; MEYER 2011)
209. \*\*\**D. myrtinervius* Griseb. (BARINA et al. 2011)
210. *D. superbis* L. (SHUKA et al. 2011)
211. \**D. sylvestris* Wulfen subsp. *alboroseus* F.K. Meyer (MEYER 2011)

## Brassicaceae (Cruciferae)

212. \*\*\**Erysimum calycinum* Griseb. (MEYER 2011)
213. *E. crassistylum* C. Presl. (STRID & TAN 2002; MEYER 2011)
214. *Hesperis sylvestris* Crantz subsp. *sylvestris* (DEMIRI 1983; MEYER 2011)
215. \*\*\**H. theophrasti* Borbás (MEYER 2011)
216. \*\*\**Malcolmia flexuosa* (Sm.) Sm. (HAYEK 1924; MEYER 2011)
217. *Rorippa palustris* (L.) Besser = *R. amphibibia* (L.) Besser var. *palustre* L. (BARINA & PIFKÓ 2008c)
218. *Cardamine chelidonia* L. (MEYER 2011)
219. \**Aubrieta albanica* F.K. Meyer (MEYER 2011)
220. \**Alyssum albiflorum* F.K. Meyer (MEYER 2011)
221. \**A. elatius* F.K. Meyer (MEYER 2011)
222. \**A. lurensense* F.K. Meyer (MEYER 2011)
223. \**A. serpentinicola* F.K. Meyer (MEYER 2011)
224. *Aurina rupestris* (Heynh.) Cullen & T.R. Dudley = *Ptilotrichum cyclocarpum* subsp. *pindicum* Hartvig (HAYEK 1924; JÁVORKA 1926; TUTIN et al. 1964; MALO & SHUKA 2009)
225. \*\*\**Draba lacaitae* Boiss. = *D. erostra* Halácsy (GREUTER et al. 1995)
226. *Camelina microcarpa* DC. = *C. sylvestris* Wallr. (HAYEK 1924; BARINA & PIFKÓ 2010)
227. \*\*\**Noccaea aptera* (Velen.) F.K. Meyer = *Thlaspi kovatsii* Heuff. (MEYER 2011)
228. *N. brevistyla* (DC.) Steud. = *Hutschinsia brevistyla* DC. (MEYER 2011)
229. \*\**N. brevistyla* subsp. *pseudorivularis* (Hausskn. ex Bornm.) F.K. Meyer (MEYER 2011)
230. *N. viridisepala* (Podp.) F.K. Meyer = *Thlaspi praecox* var. *viridisepalum* Podp. (MEYER 2006)
231. \*\*\**Diplotaxis viminea* (L.) DC. (ASCHERSON & KANITZ 1877; BARINA et al. 2011)
232. *Brassica cretica* Lam. subsp. *aegaea* (Heldr. & Hal.) S. Snogerup, M. A. Gustavsson & Bothmer 1990 (BARINA et al. 2011)
233. \*\**Aethionema saxatile* (L.) R.Br. subsp. *graecum* (Boiss. & Spruner) Hayek (BALL 2011)

234. \*\*\**A. saxatile* (L.) R.Br. subsp. *oreophyllum* I. A. Andersson, Carlström, Franzén, Karlén & H. Nybom. (TUTIN et al. 1964; GREUTER et al. 1986; MEYER 2011)

## Crassulaceae

235. \*\*\**Sempervivum macedonicum* Praeger (TUTIN et al. 1964; GREUTER et al. 1984; MEYER 2011)
236. *Jovibarba globifera* (L.) J. Parn. subsp. *globifera* = *Sempervivum globiferum* L. (TUTIN et al. 1964; MEYER 2011)
237. *Sedum amplexicaule* DC. subsp. *tenuifolium* (Sm.) Greuter (BARINA & PIFKÓ 2008a)
238. *S. grisebachii* Boiss. & Heldr. (TUTIN et al. 1964; MEYER 2011)
239. *S. telephium* L. subsp. *maximum* (L.) Schinz & Thell. (GREUTER et al. 1986; JALAS et al. 1999; MEYER 2011)
240. *Rhodiola rosea* L. (BARINA et al. 2013)

## Saxifragaceae

241. *Saxifraga moschata* Wulfen (HAYEK 1927; KOŠANIN 1939; TUTIN et al. 1964–80; JALAS et al. 1999)

## Rosaceae

242. *Rubus sanctus* Schreb. = *R. ulmifolius* Schott subsp. *dalmatinus* (Tratt.) Focke (MARKGRAF 1927; SCHÜTT 1945; JÁVORKA 1926; KURTTO 2009)
243. *Potentilla alba* L. (KOŠANIN 1939; KURTTO et al. 2004; BARINA & PIFKÓ 2011)
244. \*\*\**P. hirta* L. subsp. *laeta* (Focke) Prod. (KOŠANIN 1939; KURTTO et al. 2004)
245. *P. pedata* Nestl. = *P. hirta* L. subsp. *pedata* (Willd.) Holmb. (TUTIN et al. 1968; MEYER 2011)
246. *P. pindicola* (Nyman) Hausskn. = *P. virescens* (Boiss.) Halácsy (ALSTON & SANDWICH 1940; MEYER 2011)
247. *P. pusilla* Host = *P. neumanniana* Rchb. (MEYER 2011)
248. *P. recta* L. subsp. *laciniosa* (Nestl.) Nyman (KURTTO et al. 2004)
249. *P. recta* L. subsp. *pilosa* (Poir.) Jáv. (KURTTO et al. 2004)
250. \*\*\**P. speciosa* Willd. subsp. *illyrica* Sojak (KURTTO et al. 2004; MEYER 2011)
251. *P. tommasiniana* F. W. Schultz (HAYEK 1924; KOŠANIN 1939; KURTTO et al. 2004)
252. \*\*\**P. tridentula* Velen. = *P. hirta* L. subsp. *tridentula* (Velen.) Sojak (MEYER 2011)
253. *Sibbaldia parviflora* Willd. (BARINA et al. 2009)
254. *Alchemilla glaucescens* Wallr. = *A. pubescens* auct. (KURTTO et al. 2007)
255. \*\*\**A. velebitica* (Janch.) Degen (DEMIRI 1983; TUTIN et al. 1968; KURTTO et al. 2007)
256. *Aphanes arvensis* L. = *Alchemilla arvensis* (L.) Scop. (DEMIRI 1983; TUTIN et al. 1968; MEYER 2011)
257. *Sorbus austriaca* (Beck) Hedl. (JÁVORKA 1926; MITRUSHI 1966; BARINA & PIFKÓ 2008c; RAKAJ 2009; MEYER 2011)
258. *Prunus tenella* Batsch = *P. nana* (L.) Stoke (RAKAJ & KASHTA 2007; KURTTO 2009)

## Fabaceae (Leguminosae)

259. +*Acacia saligna* (Labill.) H. L. Wendl. = *A. cyanophylla* Lindl (TAN & MULLAJ 2000)
260. *Glycyrrhiza glabra* L. (BALDACCI 1894; DEMIRI 1983; TUTIN et al. 1968; GREUTER et al. 1989; BARINA & PIFKÓ 2012)

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261. *Lens nigricans* (M. Bieb.) Godr. = *Ervum nigricans* M. Bieb. (KOŠANIN 1939; GREUTER et al. 1984; BARINA & PIFKÓ 2012)
262. *Lupinus angustifolius* L. (GREUTER et al. 1989; BARINA & PIFKÓ 2011)
263. \*\*\**Astragalus angustifolius* Lam. subsp. *balcanicus* Brullo, Giusso & Musarella (BRULLO et al. 2012)
264. *A. hypoglottis* L. subsp. *gremlii* (Burnat) Greuter & Burdet = *A. gremlii* Burnat (HEYWOOD 1968; GREUTER et al. 1989; PODLECH 1996)
265. \*+*Oxytropis halleri* W. D. J. Koch subsp. *korabensis* (Kümmerle & Jáv.) Chrték & Chrtkova = *O. korabensis* (Kümmerle & Jáv.) F. K. Meyer (GREUTER et al. 1989; MEYER 2011; RAKAJ & SHEHU 2012)
266. *O. pilosa* (L.) DC. (BARINA et al. 2009)
267. *Vicia abbreviata* Sprengel = *V. truncatula* M. Bieb. (KOŠANIN 1939; BARINA & PIFKÓ 2011)
268. *Lathyrus pallescens* (M. Bieb.) K. Koch. (BARINA & PIFKÓ 2008b)
269. *L. saxatilis* (Vent.) Vis. (BARINA & PIFKÓ 2008b)
270. \**Medicago coeruleascens* F. K. Meyer (MEYER 2011)
271. *M. disciformis* DC. (BARINA & PIFKÓ 2011)
272. *Melilotus messanensis* (L.) All. (BARINA et al. 2012)
273. *Lotus alpinus* (DC.) Schleich. ex Ramond (DEMIRI 1983; MEYER 2011)
274. *L. cytisoides* L. (TAN & MULLAJ 2000; MEYER 2011)
275. *Cytisus eriocarpus* Boiss. = *Chamacytisus eriocarpus* (Boiss.) Rothm. (BARINA et al. 2009)
276. *Corothamnus adpressopilosus* (H. Lindb.) Skalická (BARINA & PIFKÓ 2011)
277. *C. glaber* Skalická (BARINA & PIFKÓ 2011)
278. \**Genista albanica* F. K. Meyer (MEYER 2011)
279. *G. monspessulana* (L.) L. A. S. Johnson = *Teline monspessulana* (L.) L. Koch (MITRUSHI 1966; GREUTER et al. 1989; BARINA & PIFKÓ 2008b)

Oxalidaceae

280. +*Oxalis stricta* L. = *O. europaea* Jord. (TUTIN et al. 1968; MEYER 2011)

Linaceae

281. \*\*\**Linum flavum* L. subsp. *albanicum* (Janchen) Hartvig. = *L. tauricum* Willd. subsp. *albanicum* (Janch.) Greuter & Burdet (MALO & SHUKA 2009)
282. \*\**L. punctatum* C. Presl. subsp. *pyncnophyllum* (Boiss. & Heldr.) Gustavsson = *L. pyncnophyllum* Boiss. & Heldr. (SHUKA 2009)

Malvaceae

283. \*\*\**Kitabelia vitifolia* Willd. (BARINA et al. 2013)

Thymelaeaceae

284. *Thymelaea hirsuta* (L.) Endl. (DIMITROV 1997; BARINA et al. 2011)

Aceraceae

285. \*\*\**Acer hyrcanum* Fisch. & C. A. Meyer subsp. *intermedium* (Pančić) Bornm. (GREUTER et al. 1984; MEYER 2011)
286. *A. monspessulanum* L. subsp. *athoum* (Bornm. & Sint.) Lippold ex F. K. Meyer = *A. monspessulanum* L. (MEYER 2011)

Balsaminaceae

287. +*Impatiens balfourii* Hook. f. (BARINA & PIFKÓ 2008c)

Rhamnaceae

288. \**Frangula pedunculata* F.K. Meyer (MEYER 2011)

Onagraceae

289. +*Oenothera fallax* Renner (RAKAJ & ROSTANSKI 2008, 2009)  
 290. +*Oenothera glazioviana* Micheli (RAKAJ & ROSTANSKI 2008, 2009)  
 291. +*Oenothera parodiana* Munz. subsp. *parodiana* (RAKAJ 2006; RAKAJ & ROSTANSKI 2008)  
 292. +*Oenothera suaveolens* Desf. ex Pers. (RAKAJ & ROSTANSKI 2008, 2009)

Hypericaceae (Guttiferae)

293. *Hypericum linarioides* Bosse (SHUKA 2009)  
 294. *H. perforatum* L. subsp. *veronense* (Schränk) H. Lindb. (JÁVORKA 1926; KOŠANIN 1939; SCHÜTT 1945; GREUTER et al. 1986; MEYER 2011)

Cistaceae

295. *Cistus creticus* L. subsp. *creticus* = *C. incanus* L. subsp. *creticus* (L.) Heywood (GREUTER et al. 1984; MEYER 2011)

Violaceae

296. \**Viola acrocerauuniensis* Erben (MALO & SHUKA 2008b; MEYER 2011)  
 297. \*\**Viola albanica* Halácsy (MALO & SHUKA 2008a; SHUKA 2009)  
 298. *V. arvensis* Murray subsp. *megalantha* Nauenb. (MEYER 2011)  
 299. \*\**V. epirota* (Halácsy) Raus (MALO & SHUKA 2009; MEYER 2011)  
 300. \*\*\**Viola eximia* Formanek (SHUKA 2010a)  
 301. \**V. raunsiensis* W. Beck. & Košan. (KOŠANIN 1939; TUTIN et al. 1968; MULLAJ et al. 2010)  
 302. \*\**V. schariensis* Erben (MEYER 2011)  
 303. *V. tricolor* L. subsp. *macedonica* (Boiss. & Heldr.) A. F. W. Schmidt = *V. macedonica* Boiss. & Heldr. (MEYER 2011)

Euphorbiaceae

304. \**Euphorbia cikaea* F.K. Meyer (MEYER 2011)  
 305. \*\**E. deflexa* Sibth. & Sm. (BARINA & PIFKÓ 2011)  
 306. +*E. lathyris* L. (FIORI 1928; RAKAJ 2012)

Apiaceae (Umbelliferae)

307. \*\**Eryngium serbicum* Pančić (KOŠANIN 1939; STEVANOVIĆ & VUKOJIČIĆ 2006; BARINA & PIFKÓ 2008c)  
 308. \*\*\**Dichoropetalum lavrentiadis* (Strid & Papan.) Pimenov & Kljuykov = *Peucedanum lavrentiadis* Strid & Papan. (STRID 1986; PIMENOV et al. 2007)  
 309. \**Seseli angustum* F.K. Meyer (MEYER 2011)  
 310. +*Cyclospermum leptophyllum* (Pers.) F. Muell. (BARINA et al. 2011)  
 311. \*\*\**Grafia golaka* (Hacq.) Rechb. (RAKAJ 2009a; BARINA & PIFKÓ 2011)  
 312. *Lagoecia cuminoides* L. (BARINA et al. 2009)  
 313. *Sison amomum* L. (BARINA et al. 2011)  
 314. \*\**Trinia glauca* Dumort. subsp. *pindica* Hartvig (SHUKA & MALO 2010)

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Plumbaginaceae

315. \**Acantholimon albanicum* O. Schwarz & F. K. Meyer (MEYER 1987; GREUTER et al. 1989; SHUKA & MALO 2010)  
 316. \**Limonium himariense* F. K. Meyer (MAYER 2011)

Ericaceae

317. *Erica multiflora* L. (MITRUSHI 1966; DEMIRI 1983; GREUTER et al. 1989; MULLAJ & TAN 2010)  
 318. *Bruckenthalia spiculifolia* (Salisb.) Reichenb. (MITRUSHI 1966; DEMIRI 1983; TUTIN et al. 1972; GREUTER et al. 1986; BUZO et al. 1997)  
 319. *Rhododendron ferrugineum* L. (MITRUSHI 1966; DEMIRI 1983; GREUTER et al. 1986; BUZO et al. 1997; RAKAJ & SHEHU 2012)

Gentianaceae

320. *Gentiana acaulis* L. = *G. kochiana* Perr. & Songoon (HAYEK 1917; SCHÜTT 1945; GREUTER et al. 1986; BARINA et al. 2012)  
 321. \*\**Gentianella albanica* (Jáv.) Holub = *Gentiana albanica* Jáv. (JÁVORKA 1926; GREUTER et al. 1984; MEYER 2011; RAKAJ & SHEHU 2012)

Convolvulaceae

322. *Convolvulus oleifolius* Desr. (MEYER 2011)  
 323. *Cuscuta monogyna* Vahl. (DEMIRI 1983; BARINA et al. 2011)

Boraginaceae

324. *Myosotis refracta* Boiss. (ALSTON & SANDWITH 1940; BARINA et al. 2009)  
 325. *M. speluncicola* Schott ex Boiss. (BARINA & PIFKÓ 2008c)  
 326. \*\**Onosma halacsyi* Hayek = *O. helvetica* sensu Halácsy non A. D. C. Boiss. (MEYER 2011)  
 327. *O. pseudoarenaria* Schur (GREUTER et al. 1989; MEYER 2011)  
 328. \**O. pseudoarenaria* Schur subsp. *albanica* (Dörfl. & Ronniger) Rauschert = *O. albanica* Dörfl. & Ronniger (HAYEK 1924; MARKGRAF 1927; ALSTON & SANDWITH 1940; MEYER 2011)  
 329. *O. pseudoarenaria* Schur subsp. *fallax* (Borbas) Rauschert = *O. arenaria* Waldst. & Kit. subsp. *fallax* (Borbas) Jávorka (GREUTER 1989; MEYER 2011)  
 330. \*\**O. pygmaeum* Riedl. (MULLAJ & TAN 2010)

Lentibulariaceae

331. *Utricularia australis* R.Br. = *U. neglecta* Lehm. (SCHÜTT 1945; DESFAYES 2004; RAKAJ & HYSENI 2012)

Lamiaceae (Labiatae)

332. *Lamium garganicum* L. subsp. *striatum* (Sm.) Hayek = *L. garganicum* L. subsp. *pictum* (Boiss. & Heldr.) P. W. Ball (BALDACCIO 1894, 1896; MEYER 2011)  
 333. \*\**Nepeta argolica* Bory & Chaub. subsp. *malacotrichos* (Baden) A. Strid & Kit Tan (MEYER 2011)  
 334. *Phlomis tuberosa* L. (BARINA & PIFKÓ 2008c; SHUKA 2011)  
 335. *Scutellaria orientalis* L. subsp. *pinnatifida* J. R. Edm. (KOŠANIN 1939; SCHÜTT 1945; BALTISBERGER 2002)

336. \*\**Stachys canescens* Bory & Chaub. (BARINA et al. 2010)  
 337. \**S. officinalis* (L.) Trevis. subsp. *skipetarum* Jáv. = *Betonica officinalis* L. subsp. *skipetarum* Jáv. (JÁVORKA 1926; SCHÜTT 1945; KOVÁTS 1998)  
 338. \*\**S. parolinii* Vis. (CHRTEK JUN. 1992; MEYER 2011)  
 339. \*\**S. recta* L. subsp. *baldaccii* (K. Malý) Hayek (CHRTEK JUN. 1992; BALTISBERGER 2002)  
 340. \**S. recta* L. subsp. *doerfleri* (Hayek) Hayek (CHRTEK JUN. 1992)  
 341. *Satureja montana* L. subsp. *variegata* (Host) P.W. Ball = *S. variegata* Host (MEYER 2011)  
 342. \*\**Micromeria albanica* (K. Malý) Šilić (ŠILIC 1979; GOVAERTS 2003)  
 343. \*\**M. croatica* (Pers.) Schott = *Satureja croatica* (Pers.) Briq. (DIMITROV 2001; MEYER 2011)  
 344. *M. nervosa* (Desf.) Benth. (MEYER 2011)  
 345. *Origanum vulgare* L. subsp. *hirtum* (Link) Jetsw. (MEYER 2011)  
 346. *Thymus leucotrichus* Halászy (MEYER 2011)

### Scrophulariaceae

347. \*\*\**Verbascum glandulosum* Delile (MEYER 2011)  
 348. *V. orientale* (L.) All. (BARINA & PIFKÓ 2008b)  
 349. \*\*\**V. phoeniceum* L. subsp. *flavidum* (Boiss.) Bornm. (MEYER 2011)  
 350. \*\**Cymbalaria minor* (Cufod.) Speta = *C. microcalyx* (Boiss.) Wettst. subsp. *minor* (Cufod.) Greuter (SHUKA et al. 2011)

### Plantaginaceae

351. *Kickxia spuria* (L.) Dumort. subsp. *integrifolia* (Brot.) R. Fern. (TUTIN et al. 1972; MEYER 2011)  
 352. +*Veronica peregrina* L. (BARINA et al. 2011)  
 353. \**V. saturejoides* Vis. subsp. *munellensis* M. A. Fischer (FISCHER 1970; ALBACH et al. 2009)  
 354. *V. verna* L. (DEMIRI 1983; BARINA & PIFKÓ 2008c)  
 355. *Globularia punctata* Lapeyr. = *G. elongata* Hegetschw. = *G. willkommii* Nym. (SCHÜTT 1945; BARINA et al. 2011)  
 356. *Callitriche lenisulca* Clavaud = *C. acroptera* (Clav.) Rouy (BARINA et al. 2011)  
 357. *C. palustris* L. = *C. verna* L. (JANCHEN 1920; SCHÜTT 1945; RAKAJ & HYSENI 2012)

### Orobanchaceae

358. *Euphrasia illyrica* Wettst. (MEYER 2011)  
 359. *Lathraea squamaria* L. (SCHÜTT 1945; RAKAJ 2006; BARINA & PIFKÓ 2008c)  
 360. \**Pedicularis ernesti-mayeri* Stevan., Niketic & D. Lakusic (SHUKA et al. 2011)  
 361. \*\**Melampyrum trichocalycinum* Vandas (MEYER 2011)  
 362. *Orobanche hederæ* Duby (BARINA et al. 2011; MEYER 2011)  
 363. *O. lavandulacea* Rchb. (BARINA & PIFKÓ 2008b; MALO & SHUKA 2008a)  
 364. *O. nowackiana* Markgr. (FOLEY 2000; MARKGRAF 1927, 1932; GREUTER et al. 1989; SHUKA & KASHTA 2008)  
 365. *O. oxyloba* (Reut.) Beck (MEYER 2011)  
 366. *O. pubescens* d'Urv. = *O. versicolor* F.W. Schultz (HAYEK 1924; GREUTER et al. 1989; BARINA & PIFKÓ 2008c)  
 367. *O. purpurea* Jacq. (MEYER 2011)  
 368. *O. rechingerii* Gilli (BARINA & PIFKÓ 2008c; MULLAJ et al. 2010)



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Rubiaceae

369. \*\**Galium oreophilum* Krendl. (MEYER 2011)

Adoxaceae

370. \*\*\**Viburnum maculatum* Pant. (RAKAJ 2009a)

Caprifoliaceae

371. \*\**Lonicera alpigena* L. subsp. *glutinosa* (Vis.) Kit Tan & Ziel. = *L. glutinosa* Vis. (MEYER 2011)
372. *Valeriana collina* Wallr. = *V. officinalis* L. subsp. *collina* (Wallr.) Nyman = *V. wallrothii* Kreyer (MEYER 2011)
373. *V. sambucifolia* J. C. Mikan = *V. officinalis* L. subsp. *sambucifolia* (J. C. Mikan) Çelak (MEYER 2011)
374. *Valerianella microcarpa* Loisel (BARINA et al. 2009)
375. \*\**Centranthus longiflorus* Steven subsp. *junceus* (Boiss. & Heldr.) I. Richardson (DIMITROV 2001; GREUTER & RAUS 2001)

Dipsacaceae

376. *Scabiosa columbaria* L. subsp. *portae* (A. Kern. ex Huter) Hayek = *S. taygetea* Boiss. subsp. *portae* (A. Kern. ex Huter) Kokkini (MEYER 2011)

Campanulaceae

377. \**Campanula korabensis* F. K. Meyer (MEYER 2011)
378. \**C. latifolioides* F. K. Meyer (MEYER 2011)
379. \**C. longipetiolata* F. K. Meyer (DIMITROV 1997; MEYER 2011)
380. \*\**C. radicata* Bory & Chaub. (MEYER 2011)
381. *Legousia falcata* (Ten.) Janch. (MEYER 2011)
382. \*\**Edraianthus australis* (Wettst.) Lakusić (MEYER 2011)
383. \**E. caespitosus* F. K. Meyer (MEYER 2011)
384. *E. graminifolius* (L.) A. DC. subsp. *graminifolius* = *E. albanicus* (Degen & Kümmerle) Lakusić (HASHANI & SHUKA 2012)
385. \*\**E. montenegrinus* Horak (MEYER 2011; RAKAJ & SHEHU 2012)
386. \**E. pubescens* F. K. Meyer (MEYER 2011)

Asteraceae (Compositae)

387. +*Erigeron annuus* (L.) Desf. (BARINA et al. 2013)
388. *Filago asterisciflora* (Lam.) Sweet = *Evax asterisciflora* (Lam) Pers. = *Gnaphalium asterisciflorum* Lam. (BARINA et al. 2011)
389. *Gnaphalium uliginosum* L. = *Filaginella uliginosa* (L.) Opiz. (DEMIRI 1983; TUTIN et al. 1976; BARINA & PIFKÓ 2008c)
390. *Phagnalon saxatile* (L.) Cass. (DIMITROV 1997; BARINA et al. 2010)
391. *Inula hirta* L. (SCHÜTT 1945; KOŠANIN 1939; BARINA & PIFKÓ 2011)
392. *Limbardia crithmoides* (L.) Dumort. subsp. *longifolia* (Arcang.) Greuter = *Inula crithmoides* subsp. *longifolia* Arcang. (BLAISE et al. 1992)
393. +*Bidens frondosus* L. (DESAYES 2004)
394. \**Chrysanthemum albanicum* Markgr. (MARKGRAF 1932; DEMIRI 1983; VANGJELI et al. 1995)

395. *Anthemis tomentosa* L. (MULLAJ et al. 2010)
396. *Cota tinctoria* (L.) J. Gay subsp. *australis* (R. Fern.) Oberpr. & Greuter = *Anthemis tinctoria* L. subsp. *australis* R. Fern. (MEYER 2011)
397. \**Achillea cunorae* F.K. Meyer (MEYER 2011)
398. \*\*\**A. pindicola* Hausskn. subsp. *corabensis* (Heimerl) Greuter = *A. corabensis* (Heimerl) Micevski (MEYER 2011)
399. *A. setacea* Waldst. & Kit. = *A. fililoba* Freyen (MARKGRAF 1927; DEMIRI 1983; MEYER 2011)
400. *Adenostyles alpina* (L.) Bluff & Fingerh. = *A. glabra* Mill. (KITANOV 1948; RAKAJ 2009a; BARINA & PIFKÓ 2011)
401. +*Senecio angulatus* L. f. (BARINA et al. 2011)
402. *S. squalidus* L. subsp. *rupestris* (Waldst. & Kit.) Greuter = *S. rupestris* Waldst. & Kit. (HAYEK 1917; KITANOV 1948; RAKAJ 2009a)
403. \*\*\**Tephroseris papposa* (Rchb.) Schur subsp. *wagneri* (Degen) B. Nord. = *Senecio papposus* (Rchb.) Less. subsp. *wagneri* (Degen) Cufod. (MEYER 2011)
404. \*\*\**Amphoricarpos autariatus* Blečić & E. Mayer subsp. *bertiscus* (Nyman.) Blečić & Mayer (RAKAJ 2009a)
405. \*\*\**A. neumayerianus* (Vis.) Greuter = *A. neumayeri* Vis. (MEYER 2011)
406. *Arctium nemorosum* Lej. = *A. minus* Bernh. subsp. *nemorosum* (Lej.) Syme (BARINA & PIFKÓ 2011)
407. *Carlina acanthifolia* All. subsp. *utzka* (Hacq.) Meusel & Kästner (MEYER 2011)
408. *Carduus carduelis* (L.) Gren. (MEYER 2011)
409. \**C. quercifolius* F.K. Meyer (MEYER 2011)
410. *Cirsium alsophilum* (Pollini) Soldano = *C. montanum* (Willd.) Spreng. (BARINA & PIFKÓ 2011)
411. *Prilostemon chamaepeuce* (L.) Less. (BARINA et al. 2010)
412. \**Centaurea decora* F.K. Meyer (MEYER 2011)
413. \*\**C. ipecensis* Rech. f. = *C. alba* L. subsp. *ipecensis* (Rech. f.) Dostal (SHUKA et al. 2011)
414. \**C. leucomelaena* Hayek (BALDACCI 1894; HAYEK 1931; MARKGRAF 1932; TUTIN et al. 1964–80; BALL 2011)
415. \*\**C. prespana* Rech. f. (SHUKA et al. 2011)
416. \*\**C. vlachorum* Hartvig (SHUKA & TAN 2009)
417. \*\**Cyanus epirotus* (Halácsy) Holub = *Centaurea epirota* Halácsy (MARKGRAF 1931; HALÁCSY 1892; HAYEK 1924; MALO & SHUKA 2009; MEYER 2011)
418. *Hypochaeris radicata* L. subsp. *platylepis* (Boiss.) Jahand. & Maire = *H. platylepis* Boiss. (FÖRTHNER & PODLECH 2002)
419. *Leontodon hispidus* L. subsp. *hastilis* (L.) Corb. = *L. hispidus* L. subsp. *danubialis* (Jacq.) Simonk. (HAYEK 1917; MEYER 2011)
420. \**L. incanus* (L.) Schrank subsp. *albanicus* F.K. Meyer (MEYER 2011)
421. *Picris hieracioides* L. subsp. *spinulosa* (Bertol. ex Guss.) Arcang. = *P. spinulosa* Bertol. ex Guss. (MEYER 2011)
422. *Tragopogon porrifolius* L. subsp. *porrifolius* (BARINA & PIFKÓ 2011)
423. *Crepis commutata* (Spreng.) Greuter (MEYER 2011)
424. *C. paludosa* (L.) Moench (MEYER 2011)
425. +*Eclipta prostrata* (L.) L. (BARINA & PIFKÓ 2011)

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426. \*\**Taraxacum cylleneum* Fürnkranz (MEYER 2011)
427. \*\*\**T. haussknechtii* Uechtr. = *T. serotinum* (Waldst. & Kit.) Poir. subsp. *haussknechtii* (Uechtr.) Gajić (ALSTON & SANDWICH 1940; MEYER 2011)
428. \*\*\**T. janchenii* Kirschner & Štěpánek = *T. hoppeanum* Griseb. (MEYER 2011)
429. \*\*\**Willemetia stipitata* (Jack) Dalla Torre subsp. *albanica* (Kümmerle & Jáv.) Kirschnerová (KIRSCHNEROVÁ 1996)
430. *Pilosella hoppeana* (Schult.) F. W. Schultz & Sch. Bip. subsp. *macrantha* (Ten.) S. Bräut. & Greuter = *Hieracium macranthum* (Ten.) Ten. subsp. *macranthum* (MEYER 2011)
431. *P. hoppeana* (Schult.) F. W. Schultz & Sch. Bip. subsp. *testimonialis* (Peter) P. D. Sell & C. West = *Hieracium macranthum* (Ten.) Ten. subsp. *testimoniale* (Peter) Gottschl. (MEYER 2011)
432. *P. procera* (Fries) F. W. Schultz & Sch. Bip. = *Hieracium echioides* Lumn. subsp. *procerum* (Fries) P. D. Sell (BARINA et al. 2009)
433. \*\**Hieracium albanicum* Freyn subsp. *albanicum* (TUTIN et al. 1976; MEYER 2011)
434. \*\**H. albanicum* Freyn subsp. *pivae* Rohlena & Zahn (ZAHN 1938; HAYEK 1924; MEYER 2011)
435. \*\**H. tommasinianum* K. Malý subsp. *setosissimum* (Naegeli & Peter) Gottschl. (ZAHN 1938; HAYEK 1924; MEYER 2011)
436. *H. waldsteinii* Tausch subsp. *nipholeucum* Zahn = *H. plumulosum* A. Kern. subsp. *nipholeucum* Zahn (ZAHN 1938; HAYEK 1924; MEYER 2011)

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