

Linzer biol. Beitr.	56/1	149-199	August 2024
---------------------	------	---------	-------------

The genus *Virgichneumon* HEINRICH in the West Palaearctic region (Hymenoptera, Ichneumonidae, Ichneumoninae)

Matthias RIEDEL

A b s t r a c t : The West Palaearctic species of the genus *Virgichneumon* HEINRICH are reviewed and some new distributional and host records are presented. 20 valid species are keyed, shortly described and illustrated here.

Two species are described as new: *Virgichneumon hinzi* nov.sp. and *Virgichneumon scopator* nov.sp.; *Barichneumon monostagon nigranator* AUBERT, 1994 is a new synonym of *Virgichneumon atricolor* (BERTHOUMIEU, 1910) and *Ichneumon spicicornis* BERTHOUMIEU, 1906 a new synonym of *Virgichneumon tenuipes* (BERTHOUMIEU, 1896).

Three species are transferred to *Virgichneumon*: *Virgichneumon gemellus* (GRAVENHORST, 1829), comb. nov., *Virgichneumon rhenanus* (HABERMEHL, 1916), comb. nov., and *Virgichneumon submontanus* (HEINRICH, 1951), comb. nov.

For *Virgichneumon albignator* AUBERT, 1994 and *Virgichneumon atricolor* (BERTHOUMIEU, 1910), the hitherto unknown ♂♂ are described.

Key words : new species, Ichneumonidae, Ichneumoninae, *Virgichneumon*, West Palaearctic

Introduction

The genus *Virgichneumon* HEINRICH, 1977 is a small genus of the family Ichneumonidae, subfamily Ichneumoninae with actually 26 valid species from the Holarctic and Oriental regions (YU et al. 2016). Members of this genus are pupal parasitoids of Lycaenidae, Noctuidae, Erebidae (Lepidoptera); imagines are not known to overwinter.

The genus was separated from other genera of the *Barichneumon* genus-group within the Cratichneumonina sensu HEINRICH (1968) by HEINRICH (1977) mainly due to a slightly different structure of flagella, gastrocoeli and thyridia (see the key below) though the separation of the European material into these different genera is not always unequivocal due to intermediate morphological features in some cases.

A comprehensive key of the *Virgichneumon* species from the European part of the former USSR has been published by RASNITSYN & SIYTAN (1981) on the base of Russian material mainly determined by HEINRICH, but some European species have not been included in this key.

Here, I present an extended key and review of the West Palaearctic species of *Virgichneumon* as first part of an ongoing revision of *Barichneumon* THOMSON and allied genera from the Western Palaearctic region.

Material and methods

For this survey, I was able to study the *Virgichneumon* material from several institutions, especially from the Zoologische Staatssammlung Munich/Germany, the Biologiezentrum Linz/Austria, the Aubert collection of the Zoological Museum Lausanne/Switzerland, and the National Museum of Scotland, Edinburgh/Scotland together with my own material and several species kindly sent by other collectors.

Morphological terms follow BROAD et al. (2018). Distributional data were mainly taken from the catalogue of YU et al. (2016). New distributional records are marked with an asterisk.

For the measurements, the following relationships were used: length of 1st flagellar segment was measured in lateral view (length without annellus), width of gena and length and width of hind femur in lateral views. For the punctation of body parts, the following definitions were used: very sparse – distance between punctures $> 2\times$ the diameter of punctures; sparse – distance $1.1\text{--}2.0\times$ the diameter of punctures; rather dense – distance about as large as puncture diameter; dense – puncture diameter larger than distance between punctures.

For measurements, an Olympus SZX 7 stereomicroscope with dividing eyepiece was used. The figures were mainly taken with an Olympus SC 50 CCD-camera using the cellSens Imaging software and processed with Helicon Pro software, Microsoft Office Picture Manager and photoshop.

Abbreviations:

OED – distance between lateral ocellus and compound eye; OOD – distance between lateral ocelli; MI – malar index: length of malar space in relation to width of mandibular base; HT – holotype, PT – paratype.

Key of the genera related to *Barichneumon* THOMSON

(modified after RASNITSYN & SIYTAN 1981 and TERESHKIN 2005)

- 1 Flagellum of ♀ strongly lanceolate, widest flagellar segment usually more than $2\times$ as wide as long. Genal carina usually reaching hypostomal carina at or close to mandibular base. Sometimes body large (>13 mm) and basal tergites with ivory spots. Thyridium in both sexes poorly developed or absent, Gastrocoelus slightly impressed.....
..... *Melanichneumon* THOMSON
- Flagellum of ♀ filiform, bristle-shaped or slightly lanceolate, widest flagellar segment less than $2\times$ as wide as long. If genal carina reaching hypostomal carina at mandibular base, then body smaller (usually less than 13 mm) and basal tergites without ivory color pattern. Gastrocoelus and thyridium variously developed.....2
- 2 Thyridium of ♂ separated from the base of 2nd tergite by more than its width, closer to base than its width in ♀. Subtegular ridge \pm slender and sharp, black, rarely with small ivory marks. Flagellum of ♀ filiform, and of ♂ often with ivory ring. Head black, vertex and facial orbit rarely with ivory spots, clypeus black. Frons usually densely and coarsely rugose-punctate. 6th and 7th tergites (in ♂ sometimes 7th tergite and paramere) with ivory spots. Lateral lobe of mesoscutum usually densely punctate.
..... *Virgichneumon* HEINRICH

- Thyridium in both sexes closer to the base of 2nd tergite than their width; if widely separated, then subtegular ridge thick and ivory AND/OR head including frontal orbit and vertex with extended ivory coloration. If subtegular ridge (rarely) sharp, then lateral lobe of mesoscutum and often frons with sparse punctures. Flagellum of ♀ bristle-shaped or slightly lanceolate, in ♂ usually without ivory ring. Metasomal apex in ♂ often (rarely in ♀) without ivory spots.3
- 3 1st flagellar segment at least 1.5×, often more than 2× as long as wide. In ♂, 6th flagellar segment distinctly longer than wide. In ♀, face with clypeus rather narrow, at most 2× as wide as long (usually narrower), in ♂ usually longer than wide. Gastrocoelus ± distinctly impressed and with longitudinal ridges. Body length sometimes more than 12 mm, flagellum with more than 26 segments.*Virgichneumon* HEINRICH
- 1st flagellar segment in ♀ usually not more than 1.5× as long as wide. In ♂, 6th flagellar segment transverse or square. Face with clypeus in ♀ more than 2× as wide as long, usually with protruding median field, in ♂ transverse. Gastrocoelus often not or weakly impressed and ± smooth. Body length not more than 12 mm, usually much smaller. Flagellum sometimes with fewer segments.*Barichneumon* THOMSON

Key of the West Palaearctic species of *Virgichneumon* HEINRICH

(modified after RASNITSYN & SIYTAN 1981)

♀ ♀:

- 1 Metasoma black, apical tergites often with ivory spots (fig. 20).1
- At least 2nd and 3rd tergites red, apical tergites often with ivory spots (fig. 19).13
- 2 Frontal orbit with large ivory spot dorsally covering about 1/3 of frontal width (fig. 76). Legs black. Mesosoma covered with brown setae. Flagellar ring, scutellum and spots on 6th and 7th tergites ivory. 12-14 mm.*V. albilineatus* (GRAVENHORST, 1820)
- Frontal orbit at most with narrow ivory stripes.3
- 3 Flagellum filiform, preapical flagellar segment distinctly transverse and about as wide as 1st segment (fig. 79). Mesosoma black. Metasoma black, 6th and 7th tergites with ivory median spots. Median field of postpetiole ± striated. 2nd tergite between thyridia with longitudinal rugae (fig. 49). 8-11 mm.*V. faunus* (GRAVENHORST, 1829)
- Flagellum bristle-shaped or ± lanceolate, preapical flagellar segments square or slightly transverse, narrower than 1st flagellar segment, (figs 77-78) Apical tergites with or without ivory coloration. Postpetiole and 2nd tergite often with different structure.4
- 4 6th and 7th tergites with large ivory spots; also 5th tergite with ivory spot OR orbit opposite to antennal groove ivory. Hind femur red, sometimes blackish apically. Hind coxa without scopa. Pterostigma ochreous.5
- 6th tergite black; if with ivory spot, then orbit opposite to antennal groove black OR hind femur black. Hind coxa with or without scopa. Pterostigma ochreous, brown or black.6
- 5 Scutellum ivory. Hind femur red, at most with narrow infusate apex. 5th tergite with ivory spot; orbit opposite to antennal groove black. Hind coxa with sparse punctures apico-ventrally (as fig. 94). 9-13 mm.*V. maculicauda* (PERKINS, 1953)
- Scutellum black. Hind femur red, usually widely infusate apically. 5th tergite black, orbit opposite to antennal groove sometimes with ivory spot. Hind coxa with dense punctation ventrally. 8-11 mm.*V. krapinensis* (SCHMIEDEKNECHT, 1928)
- 6 Metasoma completely black or at most 7th tergite with small ivory spot.7
- 7th tergite, often also 6th tergite with large ivory spot.8
- 7 Flagellum lanceolate; 1st flagellar segment 1.6-1.9× as long as wide, widest segments wider than long. Scutellum entirely yellow. Hind coxa with sparse punctures ventrally, sometimes partly smooth ventrally (fig. 94). Hind femur red, brown or black. Pterostigma chestnut-brown.*V. atricolor* (BERTHOUMIEU, 1910)

- Flagellum filiform; 1st flagellar segment 2.5× as long as wide, widest flagellar segments longer than wide. Scutellum black or with apical yellow margin. Hind coxa densely punctate ventrally. Hind femur red. Pterostigma blackish. 11 mm..... *V. albignator* AUBERT, 1994
- 8 6th tergite with wide ivory spot. Median field of postpetiole often with longitudinal rugosity (fig. 48).....9
- 6th tergite at most with narrow ivory apical margin. Median field of postpetiole with regular punctation (fig. 46).....11
- 9 Hind coxa with distinct scopa (as fig. 92). Scutellum black. Hind femur red. 10-12 mm. *V. extremator* (THUNBERG, 1822)
- Hind coxa without scopa. Scutellum ivory or yellowish apically. Hind femur red or black.....10
- 10 Smaller, 8-10 mm. Flagellum with 34-38 segments. In profile, gena at most as wide as eye. Hind femur black or reddish-brown. External surface of hind tibia without or with few (1-2) denticular spines (as fig. 101)..... *V. dumeticola* (GRAVENHORST, 1829)
- Larger, 12-15 mm. Flagellum with 45-47 segments. In profile, gena wider than eye (fig. 89). Hind femur often ± red. External surface of hind tibia with several (5-7) denticular spines (as fig. 99)..... *V. monostagon* (GRAVENHORST, 1820)
- 11 Hind coxa with scopa (as fig. 93). In profile, gena wider than eye (fig. 80). 2nd and 3rd tergites with rather coarse punctures (fig. 43). 8-11 mm..... *V. albosignatus* (GRAVENHORST, 1829)
- Hind coxa without scopa, with ± regular punctation. In profile, gena narrower than eye and almost not narrowed in ventral half (fig. 83). Punctuation of basal tergites various.....12
- 12 Scutellum completely ivory. Flagellum with 34-36 segments. Epicnemial carina slightly elevated behind fore coxa. Punctuation of 2nd and 3rd tergites weaker (fig. 46). 8-10 mm. *V. digrammus* (GRAVENHORST, 1820)
- Scutellum with small apical reddish or ivory spot. Flagellum with 41 segments. Epicnemial carina ± elevated behind fore coxa. Rugose punctuation of 2nd and 3rd tergites coarser (fig. 59). 11-12 mm. *V. tenuicornis* (HEINRICH, 1930)
- 13 Epicnemial carina ± elevated and bilobed behind fore coxa.....14
- Epicnemial carina low behind fore coxa, not bent forward.16
- 14 Hind coxa with scopa (fig. 92). Femora black. Vertex with weak reddish spot (fig. 9). Mesosoma black, only scutellum yellow. 11 mm. *V. hinzi* nov.sp.
- Hind coxa without scopa. Femora usually red, rarely ± black. Vertex usually with ivory stripe (fig. 13). Collar and subtegular ridge ivory OR scutellum black.15
- 15 Collar, subtegular ridge and scutellum yellow. Flagellum with 33-36 segments. 8.5-10 mm. *V. perversus* (KRIECHBAUMER, 1893)
- Collar, subtegular carina and scutellum black. Flagellum with 37 segments. 9-10 mm. *V. submontanus* (HEINRICH, 1951)
- 16 Scutellum ivory, slightly elevated, without or with lateral carina at basal 0.2.17
- Scutellum black, almost flat, with lateral carina in basal half.18
- 17 Hind coxa without scopa. Median field of postpetiole not distinctly separated by latero-median carina. 2nd and 3rd tergites densely punctate, smooth between punctures (fig. 45). External surface of hind tibia with numerous denticular spines (fig. 99). 7-9 mm..... *V. callicerus* (GRAVENHORST, 1820)
- Hind coxa with scopa (as fig. 93). Median field of postpetiole separated from lateral fields by ± distinct latero-median carina. 2nd and 3rd tergites densely punctate; 2nd tergite with ± longitudinal rugae medially (fig. 56). External surface of hind tibia with few (2-4) denticular spines (fig. 101). 8-9 mm..... *V. rhenanus* (HABERMEHL, 1918)
- 18 Postpetiole without distinct latero-median carina, median field not separated from lateral fields (fig. 60). 5th tergite with ivory spot. In profile, gena 0.6× as wide as eye. 10 mm. *V. tenuipes* (BERTHOUMIEU, 1896)

- Postpetiole with latero-median carina, median field \pm elevated and separated from lateral fields (fig. 50). 5th tergite without ivory spot. In profile, gena at least as wide as eye (fig. 91).19
- 19 Hind coxa without scopa. 1st flagellar segment 2.1-2.2 \times as long as wide. MI 1.1-1.2. External surface of hind tibia with multiple denticular spines (as fig. 99). 8-10 mm.*V. tergenus* (GRAVENHORST, 1820)
- Hind coxa with distinct scopa. 1st flagellar segment 1.8 \times as long as wide. MI 0.6. External surface of hind tibia with 1-2 denticular spines (as fig. 101).*V. gemellus* (GRAVENHORST, 1829)

♂♂: of *V. tenuipes* (BERTHOUMIEU) unknown.

- 1 Metasoma black, apical tergites often with ivory median spots.2
- At least 2nd and 3rd tergites red; apical tergites and paramere often with ivory spots.15
- 2 Ivory stripe of frontal orbit \pm widened dorsally. Legs black, tibiae with ivory stripes dorsally, fore and mid tarsi usually with ivory spots. Flagellum black, not reddish ventrally. Apical margin of postpetiole usually ivory. Fore metatarsus with apical tooth (as fig. 95). 14-16 mm.*V. albilineatus* (GRAVENHORST, 1820)
- Ivory stripe of frontal orbit - if present - not widened dorsally. Coloration of legs various, tibiae and tarsi usually without larger ivory stripes or spots. Apical margin of postpetiole black (if sometimes \pm ivory in *V. faunus*, then face entirely ivory). Fore metatarsus with or without apical tooth.3
- 3 Clypeus and face completely ivory (fig. 67). Posterior margin of hypopygium triangularly elongate medially. Collar and upper margin of pronotum, subtegular ridge, two spots on scutellum (sometimes confluent), sometimes posterolateral spots on postpetiole and 2nd tergite, large spots on 6th and 7th tergites and spot on paramere ivory. Median field of postpetiole and 2nd tergite between thyridia \pm striate (fig. 49). Fore metatarsus without apical tooth (as fig. 96). Flagellum reddish-brown ventrally. 8-11 mm.*V. faunus* (GRAVENHORST, 1829)
- Clypeus and face black medially. Posterior margin of hypopygium \pm rounded. Ivory coloration on mesosoma and metasoma often less extended. Paramere black. Postpetiole and 2nd tergite with various structure. Fore metatarsus often with apical tooth.4
- 4 Flagellar segments 13-16 ivory dorsally. Tyloids from 4th flagellar segment on. Mesosoma and metasoma except reddish apical margin of 2nd and 3rd tergites entirely black. Fore metatarsus with strong apical tooth (as fig. 95). 14-15 mm.*V. extremator* (THUNBERG, 1822)
- Flagellum without ivory stripe or band. Tyloids from 6th or 7th, rarely from 5th flagellar segment on. Mesosoma and metasoma often with ivory marks. Fore metatarsus with or without apical tooth.5
- 5 Fore metatarsus with strong apical tooth (as fig. 95). Median field of postpetiole rugose-punctate, sometimes with \pm smooth surface. 2nd tergite with longitudinal rugae, at least basally (fig. 50). Metasoma completely black.6
- Fore metatarsus without apical tooth (fig. 96). Surface of postpetiole and 2nd tergite different. Apical tergites often with ivory spots.7
- 6 Flagellum with 44-45 segments. Clypeus \pm punctate, without distinct longitudinal striae. Outer orbit black. Collar usually ivory, but subtegular ridge and upper margin of pronotum often black. Flagellum blackish. Scutellum \pm ivory or black. 12-15 mm.*V. monostagon* (GRAVENHORST, 1820)
- Flagellum with 35-37 segments. Clypeus punctate, with fine longitudinal striae or rugae medially. Outer orbit with ivory stripe. Collar and hind edge of pronotum, usually also subtegular ridge yellow. Flagellum \pm ochreous ventrally. Scutellum often with posterolateral spots, sometimes confluent medially. 11-12 mm.*V. gemellus* (GRAVENHORST, 1829)
- 7 6th and 7th tergites with ivory median spots. Hind femur red, sometimes blackish apically. Pterostigma ochreous.8

- 6th tergite black or at most with narrow ivory apical margin. Hind femur red or black. Pterostigma often darker.9
- 8 Scutellum completely or mainly ivory. Hind femur red, at most with narrow infusate apex, 3.2-3.3× as long as wide. Flagellum entirely black, with 38-40 segments. Inner orbit with narrow ivory stripe (fig. 70). 9-13 mm. *V. maculicauda* (PERKINS, 1953)
- Scutellum black or with apical ivory spot. Hind femur red, usually widely infusate apically, 3.7-3.8× as long as wide. Flagellum reddish or yellowish ventrally, with 31-33 segments. Inner orbit with wide ivory stripe (fig. 69). 8-11 mm. *V. krapinensis* (SCHMIEDEKNECHT, 1928)
- 9 Hind femur and tibia mainly black.10
- Hind femur and tibia red, sometimes ± infusate apically.12
- 10 Larger, body length 13 mm. Flagellum with 42 segments, black. Tibiae not ivory basally. Pterostigma chestnut-brown. *V. atricolor* (BERTHOUMIEU, 1910)
- Smaller, body length 7-10 mm. Flagellum with at most 36 segments, often ± reddish ventrally. Tibiae sometimes ivory basally. Pterostigma brown.11
- 11 Tyloids large, long-oval, maximally as long as their segments (fig. 98). Temple strongly narrowed behind eye. Base of hind tibia usually narrowly ivory. 9-10 mm. *V. dumeticola* (GRAVENHORST, 1829)
- Tyloids smaller, oval, maximally 0.7-0.8× as long as their flagellar segments (fig. 97). Base of hind tibia red or black. 7-9 mm. *V. digrammus* (GRAVENHORST, 1820) var.
- 12 Larger, body length 15 mm. Flagellum with 45 segments. Frontal orbit with narrow ivory stripe; head and mesosoma otherwise black.cf. *V. albignator* AUBERT, 1994
- Smaller, body length 8-11 mm. Flagellum with <40 segments. Head and mesosoma often with more extended ivory marks.13
- 13 Seen from lateral, temple wider than eye and strongly narrowed in ventral half. 2nd and 3rd tergites with rather coarse punctures and mainly rugose-punctate (fig. 43). Upper margin of pronotum black, at most with small ivory spot at hind edge. Pterostigma ochreous. 8-11 mm. *V. albosignatus* (GRAVENHORST, 1829)
- Seen from lateral, temple narrower than eye and almost not narrowed in ventral half. Posterior half of upper margin of pronotum ivory.14
- 14 Epicnemial carina narrow behind fore coxa. Punctuation of 2nd and 3rd tergites weaker, intervals in apical half of tergites usually shining. Facial orbit and clypeus laterally ivory (fig. 64). 8-10 mm. *V. digrammus* (GRAVENHORST, 1820)
- Epicnemial carina ± elevated behind fore coxa. 2nd and 3rd tergites with coarse rugose-punctuation. Facial orbit ivory, clypeus usually black (fig. 74). 11 mm. *V. tenuicornis* (HEINRICH, 1930)
- 15 Epicnemial carina elevated behind fore coxa and ± bent forward towards fore coxa.16
- Epicnemial carina low behind fore coxa, not bent forward towards fore coxa.18
- 16 Scutellum entirely ivory. Hind femur black. 6th and 7th tergites with ivory spots. *V. hinzi* nov.sp.
- Scutellum black or apically ivory. Hind femur red or black. Apical tergites black, without ivory spots.17
- 17 Hind femur red, basally and apically ± infusate. Posterolateral spots on scutellum ivory. *V. perversus* (KRIECHBAUMER, 1893)
- Hind femur black, narrowly red basally. Scutellum black. *V. submontanus* (HEINRICH, 1951)
- 18 Scutellum with two posterolateral ivory spots (sometimes confluent medially). Postpetiole black. Hind legs black. Median field distinctly separated from lateral fields, latero-median carina present. 8-10 mm. *V. tergenus* (GRAVENHORST, 1820)
- Scutellum mainly or entirely ivory. Postpetiole often ± red. Hind femur black or ± red. Latero-median carina of postpetiole absent or present; if present, then postpetiole and 2nd tergite with longitudinal rugae medially.19

- 19 Clypeus punctate, without longitudinal rugae medially (fig. 63). Median field of postpetiole usually not distinctly separate from lateral field, latero-median carina absent. 2nd and 3rd tergite densely punctate, smooth between punctures. 7-9 mm *V. callicerus* (GRAVENHORST, 1820)
- Clypeus punctate, with fine longitudinal striae or rugae medially (fig. 73). Median field separated from lateral field, latero-median carina present. 2nd and 3rd tergite densely punctate, with \pm extended longitudinal rugae medially. 9-10 mm. *V. rhenanus* (HABERMEHL, 1918)

List and description of species

Virgichneumon albignator AUBERT, 1994, new ♂, (figs 21, 41)

Holotype: (♀) [red] Type; *Barichneumon albignator* ♀; 2400 m J.-F. AUBERT 9.7.1970 (A.M.) Col de la Lonarde; Holotype *Barichneumon albignator* AUBERT, 1994a labelled by S. KLOPFSTEIN (Lausanne), type studied.

syn. *Barichneumon albignator africanus* AUBERT, 1994

Holotype: (♀) [red] Type; *Barichneumon albignator* ♀; J.F. AUBERT 12-3-1947 Maroc Marrakesh; Holotype *Barichneumon albignator africanus* AUBERT, 1994a labelled by S. KLOPFSTEIN (Lausanne), type studied.

Description: ♀. Body length 11 mm. Flagellum with 45 segments, almost filiform and slightly narrowed apically; 1st flagellar segment 2.5× as long as wide; all segments longer than wide. Temple strongly narrowed behind eye. OED 1.0× ocellar diameter. Frons transversely rugulose-punctate; gena with longitudinal rugosity. MI 1.2. Genal carina reaching hypostomal carina far away from mandibular base. Hypostomal carina not elevated.

Mesoscutum coarsely punctate, shining; mesopleuron and metapleuron with longitudinal rugose punctures. Epinomial carina moderately elevated behind fore coxa, about as wide as distal segment of maxillary palp. Scutellum slightly convex, about as long as wide, with lateral carina in basal 0.8 and very sparse punctures. Area basalis with strong central tubercle. Area superomedia hexagonal, about as long as wide, with strong longitudinal striae; costula distinct, reaching its middle (fig. 21). Hind coxa punctate, smooth, without scopa. Hind femur 3.9-4.2× as long as wide. External surface of hind tibia with several denticular spines. Areolet pentagonal, frontal distance between 2rs-m and 3rs-m 2× their width. Vein 1cu-a postfurcal.

Postpetiole widened, with distinct latero-median carina, median field with longitudinally striated punctures. Gastrocoelus impressed. Thyridium transverse, 0.5× as wide as interval between thyridia (fig. 41). 2nd tergite 1.2× as wide as long. 2nd and 3rd tergites coarsely and densely punctate, with longitudinally striated punctures medially (fig. 41); 4th and 5th tergites with very superficial punctures. Ovipositor sheath slightly extending beyond metasomal apex.

Color: black. Flagellar segments 10-16 dorsally, narrow frontal orbit and apical margin of scutellum ivory or yellow (black in var. *africanus* AUBERT). All coxae, trochanters and trochantelli black; legs otherwise red; hind tibia infuscate in apical 0.2; hind tarsus \pm blackish. Pterostigma blackish.

♂. Body length 15 mm. Flagellum with 45 segments. Tyloids on flagellar segments 6-18, long-oval, maximally 0.8× as long as their segments. Occiput with transverse rugae. Temple slightly and roundly narrowed behind eye. OED 1.4× and OOD 1.1× ocellar

diameter. Frons with transverse rugose punctation. Gena wide, in profile $1.3\times$ as wide as eye, with dense punctures. Clypeus partly with sparse punctures, flat, with sharp straight apical margin. Lower mandibular tooth turned inwards by 45° . MI 0.8.

Notaulus distinct in frontal 0.4 of mesoscutum. Mesoscutum, mesopleuron and metapleuron with coarse dense punctures, mesopleuron partly rugose, speculum smooth. Juxtacoxal carina present. Scutellum moderately elevated, about as long as wide, with dense punctures, without lateral carina. Area superomedia horseshoe-shaped, slightly longer than wide; costula reaching its middle. Fore metatarsus without apical tooth. Hind femur $4.0\times$ as long as wide; hind tibia with several denticular spines externally. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m $2\times$ their width; vein 2m-cu reaching its middle. Vein 1cu-a postfurcal by $1\times$ its width.

Postpetiole with distinct latero-median carina; lateral field of postpetiole as wide as median field, the latter with longitudinal striated punctures. Gastrocoelus almost triangularly impressed, with strong ridges. Thyridium oblique, $0.7\times$ as wide as interval between punctures. 2nd tergite about as long as wide. 2nd to 4th tergites with rugose punctation, 2nd tergite with some longitudinal rugae medially, dull.

Color: black. Narrow stripe on frontal orbit yellowish. Coxae and trochanters black; hind trochantellus, femora, tibiae and tarsi red; hind tibia darkened on apical 0.2, hind tarsus blackish. Pterostigma ochreous.

Taxonomical remark: Due to the limited material, the correlation of both sexes is questionable and should be confirmed by additional specimens and genomic studies.

The studied ♂ (label: Holotypus *Ichneumon monostagon* var. *inornata* KRB. 1894 ♂ HILPERT 1990 (ZSM), according to HORSTMANN (1997) name not available) differs from *V. monostagon* (GRAVENHORST) by: fore metatarsus without apical tooth, malar space wider, ivory color of face largely reduced, and pterostigma ochreous, not black.

Studied material: from Hungary* (ZSM), Morocco and Switzerland.

***Virgichneumon albilineatus* (GRAVENHORST, 1820) (figs 22, 42, 61, 76)**

Holotype: (♀) (Wroclaw), studied and comb. nov. by RASNITSYN (1981).

Description: ♀. Body length 12-14 mm. Flagellum with 43 segments, slightly lanceolate; 1st flagellar segment $1.6-1.7\times$ as long as wide; 8th segment square, widest segments $1.6\times$ as wide as long. Temple moderately and roundly narrowed behind eye. OED $1.5\times$ and OOD $1.2\times$ ocellar diameter. Frons finely rugose-punctate. Clypeus with rather dense punctures. Gena with striated and ventrally sparse punctures. MI 0.8.

Epicnemial carina low behind fore coxa. Scutellum about as long as wide, without lateral carina, with sparse punctures. Area superomedia heart-shaped or hexagonal, slightly transverse or longer than wide; costula reaching at or posterior to its middle (fig. 22). Hind coxa densely punctate, without scopa. Hind femur densely punctate, $4.1\times$ as long as wide. External surface of hind tibia with few (3-4) denticular spines. Areolet pentagonal, frontal distance between 2rs-m and 3rs-m $3\times$ their width; vein 2m-cu distad its middle; vein 1cu-a postfurcal by $1-2\times$ its width.

Postpetiole without latero-median carina; median field slightly elevated, coarsely punctate. Gastrocoelus rectangularly impressed, with ridges. Thyridium $0.5\times$ as wide as interval between thyridia (fig. 42). 2nd tergite $1.4\times$ as wide as long. 2nd and 3rd tergites

with rather fine dense punctures, 2nd tergite slightly rugose medially (fig. 42). Ovipositor sheath not or slightly extended beyond metasomal apex.

Color: black. Setae of mesosoma brownish. Flagellar segments 8-13 dorsally, large and wide spot of frontal orbit opposite to lateral ocellus (fig. 76), scutellum and dorsal spots on 6th and 7th tergites ivory. 2nd tergite sometimes with narrow red apical margin. Legs blackish. Pterostigma reddish-brown.

♂. Body length 14-16 mm. Flagellum with 43-44 segments. Tyloids on flagellar segments 6-16, oval, maximally almost as long as their segments. Temple moderately and roundly narrowed behind eye, occiput \pm concave. OED 1.1 \times and OOD 1.2 \times ocellar diameter. MI 0.4. Clypeus with sparse punctures. Area basalis with strong central tubercle. Area superomedia hexagonal, slightly wider than long; costula reaching at its middle. Fore metatarsus with strong apical tooth. Hind femur 3.7-4.0 \times as long as wide. 2nd tergite 1.1 \times as wide as long.

Color: black. Often sides of clypeus, wide facial orbit, frontal orbit (widened dorsally opposite to lateral ocellus) (fig. 61), collar and upper margin of pronotum, spot on tegula, subtegular ridge and scutellum ivory. Postpetiole often with narrow ivory hind margin. Legs black; fore femur reddish frontally; fore and mid femora apically and fore and mid tibiae frontally ivory, fore and mid tarsi with \pm extended ivory stripes; hind tibia with subbasal ivory stripe. Pterostigma blackish.

Studied material: from Germany, Georgia, Iran, Italy, Sweden.

***Virgichneumon albosignatus* (GRAVENHORST, 1829) (figs 1, 23, 43, 62, 80)**

Lectotype: (♂) (Wroclaw), studied and comb. nov. by RASNITSYN (1981).

Description: ♀. Body length 7.5-10.5 mm. Flagellum with 35-39 segments, slightly lanceolate; 1st flagellar segment 1.5 \times as long as wide; 5th segment square; widest segments 1.1-1.3 \times as wide as long. Temple slightly to moderately and roundly narrowed behind eye (fig. 1). OED 1.6-1.9 \times and OOD 2.0-2.2 \times ocellar diameter. Clypeus with sparse punctures. Gena wide, 1.2-1.3 \times as wide as eye, with very sparse punctures ventrally (fig. 80).

Epinemial carina low behind fore coxa. Scutellum wider than long, without or with lateral carina in the basal 0.2. Area superomedia heart-shaped, slightly longer than wide or wider than long; usually posterior to its middle with costula (fig. 23). Hind coxa densely punctate, with large scopa. Hind femur densely punctate, 3.1-3.3 \times as long as wide. External surface of hind tibia with few (2-4) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 2 \times their width; vein 2m-cu distad its middle. Vein 1cu-a postfurcal.

Postpetiole with distinct latero-median carina; median field elevated, densely punctate and \pm rugose. Gastrocoelus almost triangular. Thyridium slightly oblique, 0.4-0.5 \times as wide as interval between thyridia (fig. 43). 2nd tergite 1.4 \times as wide as long. 2nd and 3rd tergites densely punctate, strongly shining; 2nd tergite slightly rugose basally (fig. 43). Ovipositor sheath slightly extending beyond metasomal apex.

Color: black. Setae of mesoscutum brownish. Scopa whitish. Flagellar segments 8-14 dorsally, small spot on frontal orbit opposite of ocelli, scutellum and large dorsal spot of 7th tergite ivory. Coxae and trochanters black; legs otherwise red; hind tibia infuscate in apical 0.1-0.2; hind tarsus blackish. Pterostigma ochreous.

♂. Body length 9.0-11.0 mm. Flagellum with 35-41 segments, bristle-shaped, distal segments slightly nodose; 1st flagellar segment 2.3× as long as wide. Tyloids on flagellar segments 5/7-16/18, linear to long-oval, as long as their segments. Temple slightly and roundly narrowed behind eye. OED 1.5-1.7× and OOD 1.6-2.1× ocellar diameter. Clypeus with sparse punctures. MI 0.5. Fore metatarsus without or with weak blunt apical tooth. Hind femur 3.5-4.0× as long as wide. 2nd tergite 1.1× as wide as long. 2nd to 4th tergites with dense coarse punctures and fine granulation.

Color: black. Palps and mandible except teeth reddish, rarely brownish. Side of clypeus usually, wide facial orbit, narrow frontal orbit (fig. 62) and scutellum ivory; sometimes also spot of collar, spot of tegula and median mark of 7th tergite ivory. Coxae and trochanters black; legs otherwise reddish; hind tibia in apical 0.1-0.2 and hind tarsus completely black. Pterostigma ochreous.

Taxonomical remarks: The ♂♂ are separated in two groups: with ivory scutellum and 7th tergite, but with black clypeus, frontal orbit, tegula and subtegular ridge OR with black 7th tergite and sometimes scutellum, but with ivory clypeus and frontal orbit and at least ivory spots on tegula and subtegular ridge.

The systematic position of these groups is unclear yet, and genomic studies should be helpful to solve the taxonomic relation of these groups in the future.

New host record: *Euclidia glyphica* (LINNAEUS, 1758) (Lep. Erebiidae) (ZSM).

Studied material: from Austria, France, Georgia, Germany, Italy, Kazakhstan, Kirghizstan* (Linz), Norway, Russia, Slovakia* (Linz), Sweden, Turkey.

***Virgichneumon atricolor* (BERTHOUMIEU, 1910), new ♂, (figs 2, 24, 44, 81, 77, 94)**

Lectotype: (♀) Casset Ht Alpes; 49; type; *Ichneumon atricolor* n sp (Berth. vedit) (Paris), high resolution photos studied.

syn. nov. *Barichneumon monostagon nigranator* AUBERT, 1994

Paratypes: (2♀♀) Graun, 820 m, Italy, Tirol (Kaatatsch) 22-23.VIII.1973 (ZSM), paratypes studied.

Description: ♀. Body length 10.0-13.0 mm. Flagellum with 47-48 segments, moderately lanceolate; 1st flagellar segment 1.5-1.9× as long as wide; 7th segment square, widest segments 1.5-1.8× as wide as long, preapical segments wider than long, tip of flagellum blunt (fig. 77). Temple moderately and roundly narrowed behind eye (fig. 2). OED 1.1-1.6× and OOD 1.5× ocellar diameter. Frons coarsely rugose-punctate. Clypeus with partly sparse punctures. Gena 0.9-1.3× as wide as eye, with coarse striated punctures dorsally and sparse punctures ventrally (fig. 81). MI 0.9-1.0. Hypostomal carina moderately elevated.

Mesoscutum coarsely rugose-punctate. Notaulus impressed in frontal 1/5-1/6 of mesoscutum. Mesopleuron and metapleuron coarsely striate-punctate, speculum punctate. Epicnemial carina low behind fore coxa. Scutellum about as long as wide or slightly wider than long, with sparse punctures and lateral carina in basal 0.2-0.5. Area basalis with strong median tubercle. Area superomedia heart-shaped or hexagonal, about as long as wide or slightly longer, at or posterior to its middle with costula (fig. 24). Area petiolaris slightly impressed, rugosely punctate, with lateral carina. Hind coxa densely punctate, but with partly sparse punctures apico-ventrally (fig. 94), without scopa. Hind femur densely punctate, 3.3-3.7× as long as wide. External surface of hind tibia with

several (4-8) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 2-3× their width, vein 2m-cu distad its middle; vein 1cu-a postfurcal by 1-2× its width.

Postpetiole with latero-median carina; median field elevated, coarsely striate- or rugose-punctate. Gastrocoelus impressed, with ridges. Thyridium slightly oblique, 0.5× as wide as interval between thyridia (fig. 44). 2nd tergite 1.2-1.3× as wide as long. 2nd and 3rd tergites coarsely rugose-punctate, ± dull (fig. 44). 4th tergite with dense superficial punctures, ± shining. Ovipositor sheath extending beyond metasomal apex by 0.5-1.0× length of 7th tergite.

Color: black. Setae of mesoscutum brownish. Flagellar segments 9/10-14/16 dorsally, spot on frontal orbit opposite to lateral ocellus and scutellum completely or apically ivory. Metasoma black; 2nd tergite sometimes with narrow red apical margin; 7th tergite sometimes with small ivory dorsal spot. Legs blackish or femora, tibiae and tarsi ± brownish or red; if hind tibia red, then infusate in apical 0.3 and hind tarsus entirely black. Wings hyaline; pterostigma reddish-brown to brown.

♂. Body length 13 mm. Flagellum with 42 segments. Tyloids on flagellar segments 7-19, long oval, ca. 0.7× as long as their segments. OED 1.2× ocellar diameter. Frons fine rugose-punctate. Face punctate. Clypeus densely punctate. Gena with dense punctures ventrally. MI 0.7. Hypostomal carina not elevated, reaching genal carina far from mandibular base.

Notaulus impressed on frontal 1/6 of mesoscutum. Mesoscutum with fine dense punctures. Mesopleuron and metapleuron coarsely and densely punctate, partly striate. Scutellum moderately elevated, slightly wider than long, without lateral carina and with sparse punctures. Area basalis with strong median tubercle. Area superomedial hexagonal, about as long as wide; costula weak, reaching shortly anterior of its middle. Area petiolaris with transverse rugae and lateral carina. Hind femur 4.3× as long as wide. Fore metatarsus without apical tooth. External surface of hind tibia with multiple denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 3× their width, vein 2m-cu reaching distad its middle. Vein 1cu-a postfurcal by 1× its width.

Postpetiole punctate, without distinct latero-median carina; median field moderately elevated. Gastrocoelus impressed, with fine ridges. Thyridium almost transverse, 0.4× as wide as the interval. 2nd to 4th tergites densely and finely rugose-punctate; 2nd tergite with some longitudinal rugae medially.

Color: black. Setae of mesoscutum brownish. Palps, side of clypeus, wide facial and narrow frontal orbits, ventral spot of scape, collar and hind edge of pronotum, apical 2/3 of scutellum and frontal spots on fore and mid coxae ivory. Fore and mid femora apically and fore and mid tibiae and tarsi frontally yellowish. Hind tarsus black dorsally, brownish ventrally. Wings hyaline, pterostigma ochreous.

New host records: *Spilosoma lubricipeda* (LINNAEUS, 1758) (Lep. Erebidæ) (ZSM), *Diaphora sordida* (HÜBNER, 1803) (Lep. Erebidæ) (ZSM).

Studied material: from Andorra* (ZSM), Austria* (ZSM), France, Germany* (ZSM), Italy* (ZSM).

***Virgichneumon callicerus* (GRAVENHORST, 1820) (figs 3, 25, 45, 63, 82, 99)**

Lectotype: (♀) (Wrocław), studied and comb. nov. by RASNITSYN (1981).

Description: ♀. Body length 7-8 mm. Flagellum with 29-33 segments, slightly lanceolate; 1st flagellar segment 2.1-2.2× as long as wide; 6th or 7th segment square; widest segments 1.3× as wide as long. Temple strongly and roundly or almost linearly narrowed behind eye (fig. 3). OED 1.2-1.5× and OOD 2.0-2.1× ocellar diameter. Clypeus with sparse punctures. Gena almost parallel to compound eye, 0.8× as wide as eye, with rather dense punctures (fig. 82). MI 1.2.

Notaulus slightly impressed frontally; mesoscutum with dense punctures, shining. Mesopleuron and metapleuron with coarse punctures; juxtacoxal carina present. Scutellum wider than long, with lateral carina in basal 0.1-0.4. Area superomedia heart-shaped, slightly longer than wide; at its middle with costula (fig. 25). Hind coxa densely punctate, without scopa. Hind femur stout, 2.8-3.1× as long as wide. External surface of hind tibia with multiple (6-10) denticular spines (fig. 99). Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 3-4× their width, vein 2m-cu reaching distad its middle. Vein 1cu-a postfurcal by 1-2× its width.

Postpetiole without latero-median carina; median field slightly elevated, not clearly separated, densely punctate. Gastrocoelus rectangular, with ridges, often ± confluent medially. Thyridium 0.4-0.7× as wide as interval between thyridia (fig. 45). 2nd tergite 1.3-1.4× as wide as long; 2nd and 3rd tergites densely punctate, smooth and shining between punctures. Ovipositor sheath slightly extending beyond metasomal apex.

Color: black. Setae of mesoscutum brownish. Palps, apical clypeus, scape, pedicel and basal flagellar segments sometimes ± reddish. Flagellar segments 7-11/12 dorsally, often spot on facial orbit opposite to antennal groove, stripe on frontal orbit opposite to lateral ocellus, collar and often hind edge of pronotum, subtegular ridge, scutellum, and wide apical spots on 6th and 7th tergites, sometimes also on 5th tergite ivory. Postpetiole, 2nd and 3rd tergites red; 4th tergite reddish baso-laterally. Coxae and trochanters black; legs otherwise red or all femora ± black, hind femur and hind tibia infusate apically; hind tarsus blackish. Pterostigma brownish, often paler basally.

♂. Body length 8-10 mm. Flagellum with 30-35 segments, filiform. Tyloids on flagellar segments 4/5-15, oval to long-oval, maximally 0.8× as long as their segments. OED 1.1-1.5× and OOD 1.5× ocellar diameter. Frons and face with moderately fine punctures, shining; clypeus partly smooth. Gena with partly sparse punctures ventrally. Hypostomal carina low, reaching genal carina far from mandibular base. MI 0.5. Mesoscutum and mesopleuron coarsely and densely punctate and shining, punctures of metapleuron sparser. Scutellum moderately elevated, about as long as wide, with lateral carina in basal 0.5. Area superomedia hexagonal, about as long as wide; costula reaching at its middle. Hind femur 3.1-3.5× as long as wide. Fore metatarsus without apical tooth. External surface of hind tibia with multiple denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 3-4× their width; vein 2m-cu reaching distad its middle.

Postpetiole punctate, usually without latero-median carina (sometimes ± present basally), but median field differentiated. Gastrocoelus slightly impressed. Thyridium oblique, 0.5-0.7× as wide as interval between thyridia. 2nd to 4th tergites with coarse punctures, punctures of 4th tergite sometimes superficial.

Color: black. Setae of mesoscutum grey. Flagellum yellowish or reddish ventrally (1♂ from Mongolia with flagellum entirely reddish-yellow). Palps, mandible except teeth, side of clypeus and inner orbit up to vertex, outer orbit, scape ventrally (fig. 63), collar and hind edge or upper margin of pronotum, subtegular ridge, often tegula, scutellum, sometimes postscutellum, apical bands on 5th to 7th tergites (rarely apical spot of 4th tergite), sometimes spots on fore coxa and trochanter ivory. Postpetiole, 2nd and 3rd tergites entirely and usually 4th tergite basally and/or laterally red. Legs except coxae and trochanters reddish-yellow; fore and mid femora ± darkened basally; hind femur blackish or red with black apex; hind tibia in apical 0.3 and hind tarsus completely blackish. Pterostigma brown.

New host record: *Plebejus argus* (LINNAEUS, 1758) (Lep. Lycaenidae) (coll. Riedel).

Studied material: from Austria, Bulgaria, France, Germany, Greece* (Linz), Hungary, Iran, Italy, Kazakhstan (Linz), Kirghizstan* (ZSM), Mongolia* (Linz), Norway, Sweden, Turkey, Ukraine, Uzbekistan* (Linz).

***Virgichneumon digrammus* (GRAVENHORST, 1820) (figs 4, 26, 46, 64, 83, 97)**

Holotype: (♂) (Wroclaw), studied and comb. nov. by RASNITSYN (1981).

Description: ♀. Body length 7.0-9.0 mm. Flagellum with 34-36 segments, slightly lanceolate; 1st flagellar segment 1.9-2.1× as long as wide, 5th or 6th segments square, widest segments 1.2× as wide as long. Temple distinctly and almost linearly narrowed behind eye (fig. 4). OED 1.1-1.4× and OOD 1.5-1.8× ocellar diameter. Gena coarsely striate-punctate, with finer sparse punctures ventrally, about as wide as eye (fig. 83). MI 1.0. Hypostomal carina slightly elevated.

Epicnemial carina slightly elevated behind fore coxa. Scutellum wider than long, with sparse punctures. Area superomedia heart-shaped, slightly longer than wide; at or slightly posterior to its middle with costula (fig. 26). Hind coxa densely punctate, without scopa. Hind femur densely punctate, 3.4-3.6× as long as wide. External surface of hind tibia with several (5-6) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 1-2× their width; vein 2m-cu reaching distad its middle; vein 1cu-a postfurcal.

Postpetiole with latero-median carina; median field elevated, densely punctate and often with some longitudinal rugae. Gastrocoelus impressed, with ridges. Thyridium slightly oblique, 0.5× as wide as interval between thyridia (fig. 46). 2nd tergite 1.4× as wide as long; 2nd and 3rd tergites densely punctate, 2nd tergite ± rugose medially (fig. 46). Ovipositor sheath extending beyond metasomal apex by length of 3rd hind tarsomere.

Color: black. Setae of mesoscutum brownish. Flagellar segments 8/10-13/14 dorsally, narrow frontal orbit, entire scutellum, and dorsal spot of 7th tergite, sometimes also narrow hind margin of 6th tergite, ivory. Coxae and trochanters black (sometimes diffusely reddish); legs otherwise red; hind tibia in apical 0.1-0.3 and hind tarsus blackish. Wings slightly infusate, pterostigma black or dark brown.

♂. Body length 8.0-10.0 mm. Flagellum with 35-38 segments, bristle-shaped, distal segments ± nodose; 1st flagellar segment 2.6× as long as wide. Tyloids on flagellar segments 6/7-15/17, oval, maximally 0.7-0.8× as long as their segments (fig. 97). Temple strongly and roundly narrowed behind eye. OED 1.0-1.1× and OOD 1.6× ocellar diameter. Fore metatarsus with weak apical tooth. Hind femur 3.5-3.8× as long as wide.

2nd tergite 0.9-1.1× as long as wide. Postpetiole and 2nd tergite densely punctate, 2nd tergite sometimes rugose-punctate basally.

Color: black. Flagellum black, ± reddish ventrally. Palps, clypeus laterally, inner orbit up to lateral ocellus (fig. 64), collar and upper margin of pronotum ±, spots of tegula and subtegular ridge, and apical 2/3 of scutellum ivory or yellowish. Coxae and trochanters black; legs otherwise reddish; hind femur often ± infuscate apically, sometimes entirely black; hind tibia in apical 0.3-0.5 and hind tarsus entirely black. Pterostigma brownish.

Taxonomical remarks: The ♂♂ with black hind femora are easily confused with the ♂♂ of *V. dumeticola* (GRAVENHORST). They differ slightly by the form of tyloids (oval and shorter than their flagellar segments, fig. 97) and darker base of hind tibia.

Studied material: from Germany, Greece: Crete* (Linz), Italy, Russia, Spain, Sweden, Turkey.

***Virgichneumon dumeticola* (GRAVENHORST, 1829) (figs 5, 27, 47, 65, 98)**

Holotype: (♂) (Wroclaw), studied and comb. nov. by RASNITSYN (1981).

Description: ♀. Body length 8.5-10.0 mm. Flagellum with 34-38 segments, slightly lanceolate; 1st flagellar segment 2.1-2.2× as long as wide; 9th or 10th segment square; widest segments 1.2-1.3× as wide as long. Temple slightly to moderately and roundly narrowed behind eye (fig. 5). OED 1.0-1.2× and OOD 1.5-1.6× ocellar diameter. Gena 1.0-1.1× as wide as eye, with dense punctures ventrally. MI 0.9-1.1. Hypostomal carina low or slightly elevated.

Mesopleuron including speculum densely rugose-punctate, partly striate; metapleuron with very coarse rugose-punctuation. Epicnemial carina low behind fore coxa. Scutellum wider than long, with sparse punctures. Area superomedia heart-shaped, about as long as wide; slightly posterior to its middle with costula (fig. 27). Hind coxa with dense punctures and rather dense setae, without or with weak scopa. Hind femur 3.9-4.1× as long as wide, densely punctate. External surface of hind tibia without or with few (1-2) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 1-2× their width; vein 2m-cu reaching distad its middle. Vein 1cu-a postfurcal by 1-2× its width.

Postpetiole with median field of postpetiole elevated, densely punctate; latero-median carina indistinct. Gastrocoelus impressed, with some ridges. Thyridium transverse, 0.4-0.5× as wide as interval between thyridia (fig. 47). 2nd tergite 1.3× as wide as long. 2nd and 3rd tergites with fine and very dense rugose-punctuation, ± dull; following tergites shining. Ovipositor sheath reaching beyond metasomal apex by length of 7th tergite.

Color: black. Setae of mesoscutum brownish. Flagellar segments 7/8-14/15 dorsally, frontal orbit dorsally, scutellum, wide apical stripe of 6th tergite and 7th tergite largely ivory. Side of clypeus sometimes yellowish. 2nd tergite often with narrow reddish hind margin. Pterostigma blackish.

♂. Body length 9-10 mm. Flagellum with 34-37 segments. Tyloids short-oval, on flagellar segments 5/7-14/18, maximally as long as their segments (fig. 98). MI 0.6. Fore metatarsus without apical tooth. Hind femur 3.7-3.8× as long as wide. 2nd tergite 1.1× as long as wide.

Color: black. Clypeus laterally, inner orbit up to lateral ocellus (fig. 65), collar and hind edge or upper margin of pronotum, often spot on tegula, subtegular ridge and apical 2/3 of scutellum, sometimes spot on postscutellum and spots on fore and mid coxae ivory. Flagellum often ochreous ventrally. Legs black; fore and mid femora apically and fore and mid tibiae and tarsi mainly yellowish-brown; sometimes hind femur with chestnut-brown suffusion; hind tibia usually with ivory or yellowish basal spot. Pterostigma brown.

Taxonomical remarks: For a differentiation of ♂♂ of *Virgichneumon dumeticola* and *V. digrammus* (with black hind femora) see the remarks under *V. digrammus*.

Studied material: from Austria, Bulgaria, Georgia, Germany, Italy, Russia, Sweden, Turkey.

***Virgichneumon extremator* (THUNBERG, 1822) (figs 6, 28, 48, 66, 84)**

Lectotype: (♀) (Uppsala), studied by ROMAN (1912), comb. nov. by RASNITSYN (1981).

Description: ♀. Body length 12.0-13.0 mm. Flagellum with 36-38 segments, slightly lanceolate; 1st flagellar segment 1.8-2.0× as long as wide; 8th segment square; widest segments 1.1× as wide as long. Temple slightly and roundly narrowed behind eye (fig. 6). OED 1.6-1.9× and OOD 2.0× ocellar diameter. Gena wide, 1.2× as wide as eye, with rather sparse punctures ventrally (fig. 84). Clypeus with sparse punctures, strongly shining. MI 0.8.

Epicnemial carina low behind fore coxa. Scutellum wider than long, with sparse punctures and apical striation, with lateral carina in basal 0.3. Area superomedia heart-shaped, slightly longer than wide; slightly posterior to its middle with costula (fig. 28). Hind coxa with scopa apico-ventrally; if scopa indistinct, then with very fine and dense punctures in this area. Hind femur densely punctate, 3.6-3.8× as long as wide. External surface of hind tibia with few (1-3) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 2× their width; vein 2m-cu reaching distad its middle. Vein 1cu-a postfurcal by 1× its width.

Postpetiole without latero-median carina; median field slightly elevated, smooth, with sparse punctures. Gastrocoelus triangularly impressed. Thyridium oblique, rather large, 0.8-0.9× as wide as interval between thyridia (fig. 48). 2nd tergite 1.4× as wide as long. 2nd and 3rd tergites densely punctate, 2nd tergite with longitudinal rugosity baso-medially (fig. 48). Ovipositor sheath not distinctly reaching beyond metasomal apex.

Color: black. Setae of mesoscutum brownish. Flagellar segments 7-13 dorsally, triangular dorsal spot of 6th tergite and longitudinal dorsal spot of 7th tergite ivory. Palps and mandible except teeth reddish-brown. Frontal orbit narrowly yellowish. Coxae and trochanters black; scopa of hind coxa whitish; legs otherwise red; narrow apices of hind femur and hind tibia infuscate apically; hind tarsus blackish. Pterostigma black.

♂. Body length 13.5-15.0 mm. Flagellum with 38 segments; 1st flagellar segment 2.5× as long as wide. Tyloids on flagellar segments 4-13, long-oval, maximally 0.8× as long as their segments. MI 0.3-0.4. Scutellum moderately elevated, lateral carina in basal 0.4. Fore metatarsus with strong apical tooth. Epicnemial carina slightly elevated behind fore coxa. Hind femur 3.6-4.2× as long as wide. Median field of postpetiole smooth or finely aciculate with sparse coarse punctures. 2nd tergite 1.1× as wide as long.

Color: black. Flagellum \pm reddish ventrally. Flagellar segments 13-16 dorsally, clypeus laterally, wide facial orbit and narrow frontal orbit ivory (fig. 66). Mesosoma and metasoma black; 2nd to 4th tergites sometimes with narrow apical reddish margins. Coxae and trochanters black; legs otherwise red; hind tibia narrowly darkened at apex; hind tarsus black. Pterostigma dark-brown to blackish.

Studied material: from Germany, Hungary, Italy, Norway.

***Virgichneumon faunus* (GRAVENHORST, 1829) (figs 7, 29, 49, 67, 79)**

Holotype: (♂) (Wroclaw), studied and comb. nov. by RASNITSYN (1981).

Description: ♀. Body length 8.0-9.0 mm. Flagellum with 29 segments, moderately lanceolate; 1st flagellar segment $2.0\times$ as long as wide, 8th or 9th segment square; widest segments $1.5\times$ as wide as long, preapical segment wider than long, tip blunt (fig. 79). Temple moderately and roundly narrowed behind eye (fig. 7). OED $1.1-1.2\times$ and OOD $1.3\times$ ocellar diameter. Frons with fine superficial punctures, granulate. Gena about as wide as eye, with sparse punctures ventrally. MI $1.0-1.1$.

Epicnemial carina low behind fore coxa. Scutellum slightly wider than long, rather coarsely punctate, without lateral carina. Area superomedia heart-shaped, about as long as wide; at its middle with costula (fig. 29). Hind coxa without scopa, densely punctate. Hind femur $3.6\times$ as long as wide. External surface of hind tibia without or with few (1-2) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m $2\times$ their width; vein 2m-cu reaching distad its middle. Vein 1cu-a postfurcal by $1\times$ its width.

Postpetiole with latero-median carina; median field elevated, punctate and \pm aciculate. Gastrocoelus rectangular. Thyridium $0.6-0.7\times$ as wide as interval between thyridia. 2nd and 3rd tergites densely punctate; 2nd tergite distinctly aciculate basally (fig. 49). Ovipositor sheath extending beyond metasomal apex by length of 7th tergite.

Color: black. Setae of mesoscutum grey. Flagellar segments 7-12 dorsally, spot on frontal orbit opposite to lateral ocellus, and 6th and 7th tergites almost completely ivory. Coxae and trochanters black; legs otherwise red, sometimes hind femur and usually hind tibia \pm infusate apically, hind tarsus blackish. Pterostigma ochreous.

♂. Body length 9.0-10.5 mm. Flagellum with 32-34 segments; 1st flagellar segment $2.7\times$ as long as wide. Tyloids on flagellar segments 5-13/15, long-oval, black, maximally $0.8\times$ as long as their segments. OED $1.1-1.2\times$ and OOD $1.2\times$ ocellar diameter. Fore metatarsus without apical tooth. Scutellum with lateral carina in basal 0.3. Hind femur $3.4-3.5\times$ as long as wide. Median field of postpetiole often \pm striate. Posterior margin of hypopygium with a triangular and pointed median extension.

Color: black. Flagellum reddish ventrally. Palps, mandible, clypeus and face (fig. 67), scape ventrally, frontal and outer orbits, collar and upper margin of pronotum, spot on tegula, subtegular ridge, two postero-lateral spots on scutellum (sometimes confluent), sometimes small posterolateral spots on postpetiole and 2nd tergite, wide spots on 6th and 7th tergites, spot on paramere, and hind margins of apical sternites ivory. Coxae and trochanters black; legs otherwise red; hind femur and hind tibia apically (or mainly) and hind tarsus entirely infusate. Pterostigma pale brownish.

Taxonomical remark: The ♀ differs from *V. krapinensis* by wider preapical flagellar segments, blunt flagellar tip, and reduced denticular spines on hind tibia.

Studied material: from Austria, Czechia, Georgia, Germany, Norway, Russia, Sweden.

***Virgichneumon gemellus* (GRAVENHORST, 1829), comb. nov. (figs 8, 30, 50, 68, 85)**

Lectotype: (♂) (Wrocław), studied and designated by RASNITSYN (1981).

Description: ♀. Body length 8.5-10.0 mm. Flagellum with 34-35 segments, moderately lanceolate; 1st flagellar segment 1.8-1.9× as long as wide; 4th segment square, widest segments 1.2-1.5× as wide as long. Temple moderately and roundly narrowed behind eye (fig. 8). OED 1.0-1.2× and OOD 1.1-1.4× ocellar diameter. Frons and face punctate, partly with transverse striation, smooth and shining. Clypeus with sparse punctures. Clypeus 2.2-2.5× as wide as long. Gena with sparse punctures ventrally, 1.0-1.2× as wide as eye (fig. 85). MI 0.6-0.7. Hypostomal carina low.

Notaulus impressed in frontal 1/4 of mesoscutum. Mesoscutum, mesopleuron and metapleuron densely punctate; mesopleuron posteriorly with longitudinal striation. Epicnemial carina low behind fore coxa. Scutellum slightly elevated, as wide as long, without or with lateral carina in basal 0.2-0.4. Area superomedia large, about as wide as long or slightly wider, hexagonal or half-moon-shaped; at its middle with costula (fig. 30). Hind coxa with large scopa. Hind femur stout, 3.4-3.8× as long as wide. External surface of hind tibia without or with few (1-3) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 2× their width; vein 2m-cu reaching its middle. Vein 1cu-a postfurcal by 1× its width.

Postpetiole with ± distinct latero-median carina, lateral field punctate, 0.8× as wide as median field, median field with coarse longitudinal striato-punctures. Gastrocoelus strongly impressed, with ridges. Thyridium almost transverse, 0.8× as wide as interval between thyridia. 2nd tergite 1.3× as wide as long. 2nd and 3rd tergites densely punctate, medially with longitudinal aciculation (fig. 50). Ovipositor sheath slightly extending beyond metasomal apex.

Color: black. Setae of mesoscutum grey. Flagellar segments 7-13/14 dorsally, long narrow stripe on upper frontal orbit up to vertex, sometimes side of clypeus and spot on collar, and large marks on 6th and 7th tergites ivory. 2nd and 3rd tergites reddish-brown, also postpetiole apically and 4th tergite, sometimes 5th tergite laterally. Legs black; fore leg yellowish frontally; hind tibia reddish or reddish-brown in basal 2/3. Pterostigma brown.

♂. Body length 11.0-12.5 mm. Flagellum with 35-37 segments; 1st flagellar segment 2.0× as long as wide. Tyloids on flagellar segments 5/6-11/12, long-oval to linear, 0.7× as long as their segments. Temple roundly narrowed behind eye. OED 0.9× ocellar diameter. Frons finely transversely rugose-punctate. Face with fine punctures and fine granulation. Clypeus with scattered punctures and fine longitudinal rugae medially (fig. 68). Gena 0.9× as wide as eye. MI 0.2. Hypostomal carina slightly elevated.

Side of pronotum with superficial punctures dorsally and striated ventrally. Lateral field of mesoscutum punctate, smooth between punctures. Mesopleuron punctate; metapleuron with coarse punctures. Scutellum slightly wider than long, punctate, with lateral carina in basal 0.5-0.6, with longitudinal rugae apically. Area superomedia rather large, halfmoon-shaped, slightly wider than long; costula reaching posterior to its middle. Fore metatarsus with large apical tooth. Hind coxa densely punctate, with long

setae. Mid femur lamella-like widened ventrally and concave ventro-apically. Hind femur with sparse punctures ventrally, 3.4-3.6× as long as wide. Vein 1cu-a strongly postfurcal; vein M+RS (basal vein) with sharp edge.

Postpetiole with distinct latero-median carina. Lateral field 0.8-1.2× as wide as median field, median field with 8-12 longitudinal striae. Gastrocoelus distinctly impressed. Thyridium oblique, 1.0-1.2× as wide as interval. 2nd tergite 0.9-1.1× as long as wide. 2nd to 5th tergites with rather superficial punctures, finely rugose laterally, 2nd and 3rd tergites with longitudinal rugae medially.

Color: black. Setae of mesoscutum grey. Flagellum reddish ventrally. Base of mandible, palps, side of clypeus, facial orbit, frontal orbit up to vertex (fig. 68), outer orbit, usually spot on scape ventrally, collar and hind edge of pronotum, usually spot on subtegular ridge, sometimes frontal spot of fore coxa, often lateral spots on scutellum (sometimes confluent medially) yellowish. Legs black or brownish; fore femur apically and fore tibia frontally yellowish; hind tibia usually dark brown, black apically. Hind tarsus black. Pterostigma brown to black.

Taxonomical remarks: The correct generic position of *Virgichneumon gemellus* (GRAVENHORST) has been a matter of discussion in the past. RASNITSYN (1981) transferred this species to the (Afrotropical) genus *Rugosculpta* HEINRICH, 1967 which was rejected by HILPERT (1992) who provisionally re-included *V. gemellus* in the genus *Barichneumon*, together with the closely related *V. rhenanus* (HABERMEHL). HILPERT (1992) also mentioned that the generical separation of *Barichneumon* and allied genera needs further investigation. Despite the differences between typical members of *Rugosculpta* and *V. gemellus*, TERESHKIN (2005) re-established the position of *V. gemellus* in *Rugosculpta*.

In my opinion, the differences between *V. gemellus* and the two known Afrotropical members of *Rugosculpta* (e.g. almost completely carinated scutellum and strongly convergent temples behind eyes), do not support the view of RASNITSYN (1981) and TERESHKIN (2005). Due to the rather slender basal flagellar segment, structure of postpetiole with distinct lateral-median carina and distinctly impressed gastrocoelus, the species is newly transferred to *Virgichneumon* here.

Studied material: from Austria, France, Georgia, Germany, Greece, Kirghizstan, Norway, Sweden, Switzerland, Ukraine, United Kingdom.

***Virgichneumon hinzi* nov.sp. (figs 9, 19, 31, 51, 86, 92)**

Material examined: Holotype: (♀) 30.VII.1983, Saillagouse (Pyr.) F; E020400 N422900; ♀, 2672 (ZSM). Paratypes: (♀) Interneppo-Friaul, 1960 3.7., leg. Max Schwarz (ZSM); (♂) Mt. Ventoux (1450 m), 1.8.1994, Wall (coll. Riedel); (♂) Glaserbach Au, Salzburg 25.6.55, P. Babiy leg. auf Dolde (ZSM).

Etymology: The species name refers to the collector of the holotype (and many other interesting Ichneumoninae), R. Hinz.

Description: ♀. Body length 10.0-11.0 mm (fig. 19). Flagellum with 37-38 segments, moderately lanceolate; 1st flagellar segment 1.7-1.8× as long as wide; 6th or 7th segment square; widest segments 1.6-1.8× as wide as long. Temple strongly and roundly narrowed behind eye (fig. 9). OED 1.2-1.5× and OOD 1.4-1.8× ocellar diameter. Frons densely rugose-punctate. Face densely punctate. Clypeus slightly convex, 2.2× as wide

as long, with sparse punctures and subapical row of fine punctures; apical margin sharp and straight. Seen from lateral, gena almost parallel to compound eye and slightly sinusoid in ventral half, $0.8\times$ as wide as eye, with rather dense punctures (fig. 86). MI 1.1-1.4. Hypostomal carina moderately elevated (about as wide as distal maxillary palpomere).

Mesoscutum densely punctate, median lobe rugose-punctate. Notaulus impressed in frontal $1/6$ of mesoscutum. Mesopleuron rugose-punctate, speculum punctate. Epicnemial carina moderately elevated behind fore coxa (about as wide as distal maxillary palpomere), dorsally reaching frontal margin of mesopleuron. Subtegular ridge narrow and with sharp margin. Scutellum almost flat, about as wide as long, with sparse punctures and lateral carina in basal 0.2. Area basalis with central tubercle. Area superomedia heart-shaped, slightly longer than wide or as long as wide, finely rugose, at its middle with costula (fig. 31). Area petiolaris strongly impressed, rugose, with \pm distinct lateral carina. Hind coxa densely punctate, with small but distinct scopa ventro-apically (length $1/5$ of coxal length) (fig. 92). Hind femur $3.5-3.6\times$ as long as wide. External surface of hind tibia with several (5-6) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m $2\times$ their width; vein 2m-cu reaching distad its middle. Vein 1cu-a interstitial.

Postpetiole moderately widened, with weak latero-median carina; median field slightly elevated and densely rugose-punctate. Gastrocoelus almost triangularly impressed, with 3-4 ridges. Thyridium oblique, $0.6\times$ as wide as interval between thyridia (fig. 51). 2nd tergite $1.3-1.4\times$ as wide as long; 2nd and 3rd tergites densely punctate; 2nd tergite rugose-punctate medially (fig. 51). Following tergites with superficial punctures and \pm shining. Ovipositor sheath extending beyond metasomal apex by $1.0-1.5\times$ length of 7th tergite.

Color: black. Setae of head grey and of mesoscutum brownish. Flagellar segments 7/8-13/14 dorsally, scutellum and wide dorsal spots on 6th and 7th tergites ivory. Vertex with indistinct dark reddish (in holotype) or yellowish (in paratype) spot opposite lateral carina. Postpetiole, 2nd and 3rd tergites entirely and 4th tergite baso-laterally red. Legs black; fore and mid tibiae and fore tarsus reddish; hind tibia reddish in basal half. Wings hyaline, pterostigma ochreous.

♂. Body length 10.0-10.5 mm. Flagellum with 32-39 segments, bristle-shaped; 1st flagellar segment $2.7\times$ as long as wide. Tyloids on flagellar segments 6-15, long-oval, maximally $0.7\times$ as long as their segment. OED $1.2\times$ ocellar diameter. MI 0.7. Hypostomal carina moderately elevated.

Mesoscutum densely punctate, median lobe rugose-punctate. Mesopleuron densely punctate, speculum with finer punctures. Epicnemial carina \pm elevated behind fore coxa. Scutellum moderately elevated, wider than long, with coarse sparse punctures and lateral carina in basal 0.5. Fore metatarsus without apical tooth. Hind femur $3.8\times$ as long as wide. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m $1\times$ their width; vein 2m-cu reaching distad its middle. Vein 1cu-a interstitial.

Postpetiole densely punctate. Gastrocoelus impressed, with longitudinal ridges. Thyridium slightly oblique, $0.6\times$ as wide as interval between thyridia. 2nd and 3rd tergites with coarse dense punctures; punctures of 4th and 5th tergites dense but \pm superficial.

Color: black. Palps brown. Flagellum black. Facial orbit, spot on vertex opposite lateral ocellus, sometimes spot on collar and hind edge of pronotum, spot on tegula and sub-

tegular ridge, scutellum sometimes, narrow transverse apical stripe on 5th tergite, large spots on 6th and 7th tergites and sometimes spot on paramere ivory. 1st to 3rd tergites red, petiolus \pm black basally. Coxae, trochanters and trochantelli black; fore and mid legs reddish or blackish; fore and mid tibiae yellowish frontally; hind femur black; hind tibia sub-basally or in basal 2/3 reddish; hind tarsus black. Pterostigma ochreous.

Taxonomical remark: This new species is intermediate between *Virgichneumon* and *Vulgichneumon*. The narrow and sharp subtegular ridge in both sexes and ivory color pattern of the metasoma in ♂ would be typical for *Vulgichneumon*, but the form of gastrocoelus and thyridium is characteristic of the genus *Virgichneumon*.

Studied material: from Austria*, France* and Italy*.

***Virgichneumon krapinensis* (SCHMIEDEKNECHT, 1928) (figs 10, 32, 52, 69, 87)**

Types lost.

Description: ♀. Body length 8.0-9.0 mm. Flagellum with 32-34 segments, moderately lanceolate; 1st flagellar segment 2.3-2.5 \times as long as wide, 7th to 9th segments square; widest segments 1.2-1.4 \times as wide as long. Temple moderately or strongly and almost linearly narrowed behind eye (fig. 10). OED 1.1-1.3 \times and OOD 1.4-1.9 \times ocellar diameter. Frons with fine dense punctures, shining. Gena about as wide as eye, with rather dense punctures ventrally (fig. 87). MI 1.0-1.1.

Epicnemial carina low behind fore coxa. Scutellum as wide as or slightly wider than long, rather coarsely punctate, with lateral carina in basal 0.3-0.5. Area supermedia heart-shaped, usually wider than long; at or posterior to its middle with costula (fig. 32). Hind coxa without scopa, densely punctate. Hind femur 3.3-3.6 \times as long as wide. External surface of hind tibia with several (4-8) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 1-2 \times their width, vein 2m-cu reaching distad its middle. Vein 1cu-a interstitial or slightly postfurcal by 1-2 \times its width.

Postpetiole with weak latero-median carina; median field elevated and densely punctate. Gastrocoelus triangularly impressed. Thyridium oblique, 0.5-0.7 \times as wide as interval between thyridia (fig. 52). 2nd and 3rd tergites densely punctate; 2nd tergite with longitudinal rugosity medially. Ovipositor sheath extending beyond metasomal apex by 0.5-1.0 \times of 7th tergite length.

Color: black. Setae of mesoscutum grey. Basal flagellar segments often \pm reddish. Flagellar segments 7/8-12 dorsally, frontal orbit dorsally or completely, sometimes facial orbit opposite antennal groove, sometimes spots on collar, hind edge of pronotum and subtegular ridge and large transversal spots on tergites 6 and 7 ivory. Coxae and trochanters black; legs otherwise red; hind femur sometimes infusate apically; hind tibia usually \pm infusate apically, hind tarsus \pm infusate. Pterostigma dark ochreous.

♂. Body length 8.0-10.0 mm. Flagellum with 31-34 segments. Tyloids on flagellar segments 6/7-16, large, long-oval, maximally as long as their segments. Apical margin of clypeus with small median tubercle. MI 0.4. Fore metatarsus without apical tooth. Hind femur 3.7-3.8 \times as long as wide. 2nd tergite 1.2 \times as wide as long. 2nd to 4th tergites with coarse dense punctures, median parts of 2nd tergite with longitudinal rugosity.

Color: black. Flagellum yellowish ventrally; tyloids yellowish-red. Palps, mandible, clypeus laterally, wide facial orbit, narrow frontal orbit (fig. 69), scape ventrally, collar and

hind edge of pronotum, spot on tegula, apical spots on 6th and 7th tergites and often spot on parameres ivory. Coxae and trochanters black; legs otherwise red; hind femur and hind tibia \pm infusate apically; hind tarsus \pm infusate. Pterostigma dark ochreous or brownish.

Taxonomical remark: The ♀ from UK (ex *Satyrium w-album*) differs from the continental specimens by its brownish instead of red legs and less strongly narrowed temple behind eye, but is otherwise typical.

New host record: *Satyrium w-album* (KNOCH, 1781) (Lep. Lycaenidae) (Edinburgh).

Studied material: from Georgia* (coll. Riedel), Germany* (ZSM), Norway* (coll. Riedel), Russia, Sweden, United Kingdom* (Edinburgh).

***Virgichneumon maculicauda* (PERKINS, 1953) (figs 11, 33, 53, 70, 100)**

Replacement name for *Ichneumon perscrutator* WESMAEL, 1845, preoccupied by *Ichneumon perscrutator* THUNBERG, 1822.

Description: ♀. Body length 9.0-11.0 mm. Flagellum with 41-42 segments, almost bristle-shaped; 1st flagellar segment 2.1-2.2 \times as long as wide, 7th or 8th segment square, widest segments 1.0-1.1 \times as wide as long. Temple moderately and roundly narrowed behind eye (fig. 11). OED 1.5-1.6 \times and OOD 1.5-1.7 \times ocellar diameter. MI 1.0. Gena with rather dense punctures, 1.0 \times as wide as eye. Hypostomal carina slightly elevated.

Epicnemial carina not or slightly elevated behind fore coxa. Scutellum wider than long, with rather coarse but sparse punctures, without lateral carina. Area superomedia hexagonal or heart-shaped, as long as wide or slightly longer than wide; posterior to its middle with costula (fig. 33). Hind coxa without scopa, with sparse or very sparse punctures ventro-apically. Hind femur 2.9-3.0 \times as long as wide. External surface of hind tibia with several (3-5) denticular spines (fig. 100). Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 2 \times their width; vein 2m-cu reaching distad its middle. Vein 1cu-a postfurcal.

Postpetiole with distinct latero-median carina; median field elevated, with coarse punctures and \pm distinct aciculation. Gastrocoelus impressed, with some ridges. Thyridium transverse, 0.6-0.7 \times as wide as interval between thyridia (fig. 53). 2nd tergite 1.4-1.5 \times as wide as long. 2nd and 3rd tergites densely punctate, 2nd tergite \pm rugose medially. Ovipositor sheath slightly reaching beyond metasomal apex.

Color: black. Setae of mesoscutum pale brownish. Mandible except teeth reddish. Flagellar segments 9-14/15 dorsally, frontal orbit opposite to lateral ocellus, scutellum, large dorsal spots on 5th to 7th tergites, sometimes smaller dorsal spot of 4th tergite ivory. Basal tergites sometimes \pm brownish. Coxae and trochanters black; legs otherwise red; hind tibia apically and hind tarsus (sometimes also mid tarsus) \pm infusate. Pterostigma brownish.

♂. Body length 9.0-11.0 mm. Flagellum with 38-40 segments. Tyloids on flagellar segments 6/7-16/17, long-oval, maximally as long as their segments. MI 0.5-0.6. Fore metatarsus without apical tooth; hind femur 3.2-3.3 \times as long as wide. Tergites coarsely punctate, \pm dull. 2nd tergite 1.1-1.2 \times as wide as long.

Color: black. Clypeus laterally, wide facial orbit, narrow frontal orbit up to lateral

ocellus (fig. 70), collar and hind edge of pronotum, spot on tegula and subtegular ridge, scutellum, sometimes postscutellum, large spots on 5th to 7th tergites, sometimes on 4th tergite ivory. Legs colored as in ♀. Pterostigma brownish.

Studied material: from France, Germany, Norway, Turkey, United Kingdom.

***Virgichneumon monostagon* (GRAVENHORST, 1820) (figs 12, 34, 54, 71, 78, 89, 95)**

Lectotype: (♂) (Wroclaw), studied and comb. nov. by RASNITSYN (1981).

Description: ♀. Body length 11.5-13.0 mm. Flagellum with 45-47 segments, moderately lanceolate; 1st flagellar segment 1.8-1.9× as long as wide, 6th segment square; widest segments 1.4-1.5× as wide as long, tip ± pointed (fig. 78). Temple strongly and almost linearly narrowed behind eye (fig. 12). OED 1.1-1.3× and OOD 1.3-1.4× ocellar diameter. Frons coarsely punctate. Gena 1.0-1.1× as wide as eye, with sparse punctures ventrally (fig. 89). Clypeus with sparse punctures. MI 0.8.

Mesoscutum coarsely punctate, with microsculpture but ± shining. Mesopleuron coarsely punctate, rugose posteriorly; sometimes mesopleuron and metapleuron with striated punctures. Scutellum wider than long, with sparse punctures and lateral carina in basal 0.2. Area superomedia heart-shaped, about as long as wide; at or posterior to its middle with costula (fig. 34). Hind coxa with dense punctures, punctures sometimes sparse apico-ventrally, without scopa. Hind femur densely punctate, 3.6-3.9× as long as wide. External surface of hind tibia with several (5-7) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 3-4× their width; vein 2m-cu reaching distad its middle. Vein 1cu-a postfurcal by 1-2× its width.

Postpetiole with distinct latero-median carina; median field elevated and with longitudinally striated punctation. Gastrocoelus ± rectangularly impressed. Thyridium slightly oblique, 0.5× as wide as interval between thyridia. 2nd tergite 1.3-1.4× as wide as long. 2nd and 3rd tergites coarsely and densely rugose-punctate (fig. 54). Ovipositor sheath extending beyond metasomal apex by 0.5-1.0× of 7th tergite length.

Color: black. Mandible reddish centrally. Flagellar segments 8-14 dorsally, small spot of frontal orbit opposite to lateral ocellus, scutellum, and dorsal spots on 6th and 7th tergites ivory (6th tergite sometimes entirely black). Legs black, fore tibia yellowish frontally OR if femora, tibiae and tarsi red, then hind tibia infusate in apical 0.2-0.3 and hind tarsus black. Pterostigma blackish.

♂. Body length 11.5-15.0 mm. Flagellum with 43-47 segments; 1st flagellar segment 2.2× as long as wide. Tyloids on flagellar segments 5/6-15/16, oval, situated basad, maximally almost as long as their segments. OED 1.0× ocellar diameter. MI 0.2. Scutellum with lateral carina in basal 0.5-0.7. Area superomedia as long as or wider than long, hexagonal; costula reaching posterior to its middle. Fore metatarsus with strong apical tooth (fig. 95). Hind femur 3.5-4.1× as long as wide. Lateral field of postpetiole 0.8× as wide as median field, the latter with longitudinally striated punctures. Thyridium 0.7× as wide as interval between thyridia. 2nd tergite 0.9-1.2× as long as wide. 2nd to 4th tergites with rugose punctures; 2nd tergite with more or less extended longitudinal rugae medially, dull.

Color: black. Labial palps in part, clypeus laterally, wide facial orbit, narrow frontal orbit (fig. 71), often collar and spot on subtegular ridge, often apical half or apical spots on scutellum ivory. Legs usually black; fore and mid femora and tibiae ± reddish or

yellowish frontally. Sometimes legs except black coxae and trochanters red; hind tibia infusate in apical 0.2 and hind tarsus black. Pterostigma dark brownish or blackish.

Host: *Spilosoma lubricipeda* (LINNAEUS, 1758) (Lep., Erebiidae) (ZSM).

Studied material: from Armenia* (coll. Riedel), Austria, France, Germany, Italy, Sweden, Switzerland.

***Virgichneumon perversus* (KRIECHBAUMER, 1893) (figs 13, 35, 55, 72)**

Holotype: (♀) 19; *I. perversus* m.; [rot] Holotypus *Ichneumon perversus*, DILLER 1976 (ZSM), type studied.

Description: ♀. Body length 8.5-10.0 mm. Flagellum with 34-37 segments, moderately lanceolate; 1st flagellar segment 2.0-2.3× as long as wide; 10th segment square; widest segments 1.3-1.5× as wide as long. Temple slightly and roundly narrowed behind eye (fig. 13). OED 1.2-1.4× and OOD 1.5× ocellar diameter. Face with rather dense punctures, clypeus with sparse punctures. Gena with very sparse punctures ventrally, about as wide as eye. MI 1.0. Genal carina reaching hypostomal carina close to mandibular base, hypostomal carina slightly elevated.

Notaulus impressed in frontal 0.2 of mesoscutum. Epicnemial carina moderately elevated behind fore coxa. Mesoscutum, mesopleuron and metapleuron with rather dense punctures, smooth and shining between punctures. Scutellum as wide as or slightly wider than long, with sparse punctures and with lateral carina in basal 0.2-0.3. Area superomedia heart-shaped, wider than long or longer than wide; in or posterior to its middle with costula (fig. 35). Hind coxa densely punctate, without scopa. Hind femur densely punctate, 3.4-3.6× as long as wide. External surface of hind tibia with several (6-7) denticular spines.

Postpetiole without or with weak latero-median carina, punctate; median field slightly elevated, densely punctate. Gastrocoelus almost rectangularly impressed, smooth, sometimes confluent medially. Thyridium slightly oblique, 0.5× as wide as interval between thyridia (fig. 55). 2nd tergite 1.2× as wide as long. 2nd to 4th tergites densely punctate, smooth and shining between punctures. Ovipositor sheath slightly extending beyond metasomal apex.

Color: black. Setae of mesoscutum grey. Flagellar segments 7/9-13 dorsally, sometimes spot on orbit at antennal grooves, spot of frontal orbit opposite to lateral ocellus, collar, spot of subtegular ridge, apical spot of scutellum and wide apical spots on 6th and 7th tergites ivory. Clypeus sometimes reddish laterally. Often petiole apically, postpetiole and 2nd to 3th tergites entirely and 4th tergite basally or ± completely red, following tergites black. Coxae and trochanters black. Legs otherwise red; fore and mid femora ± darkened dorsally; hind tibia slightly infusate apically; mid and hind tarsi reddish-brown. Pterostigma ochreous or brown.

♂. Body length 10.0-10.5 mm. Flagellum with 36 segments; 1st flagellar segment 2.1× as long as wide. Tyloids on flagellar segments 5-12/13, linear, indistinctly differentiated. Temple moderately and roundly narrowed behind eye. OED 1.0-1.1× and OOD 1.5-1.6× ocellar diameter. Frons with dense punctures and transverse rugosities; face densely rugose-punctate. Clypeus smooth and shining, with sparse punctures. MI 0.2. Seen from lateral, gena distinctly narrowed ventrally and rather densely punctate ventrally. Hypostomal carina slightly elevated.

Mesoscutum, mesopleuron and metapleuron densely punctate, smooth between punctures; speculum partly smooth. Epicnemial carina distinctly elevated and bilobed behind fore coxa. Scutellum moderately elevated, slightly wider than long, lateral carina in basal 0.3-0.5. Area superomedia heart-shaped, slightly longer than wide; costula reaching at 7/10 its length. Fore metatarsus with distinct apical tooth. Hind femur 3.4-3.7× as long as wide. External surface of hind tibia with several denticular spines.

Postpetiole densely punctate, without latero-median carina; median field not differentiated. Gastrocoelus impressed, but almost smooth. Thyridium slightly oblique, 0.7× as wide as interval between thyridia. 2nd to 5th tergites with dense punctures.

Color: black. Setae of mesoscutum brownish. Flagellum black, distal flagellar segments reddish ventrally. Palps partly, clypeus laterally, wide facial orbit and narrow frontal orbit up to vertex (fig. 72), sometimes spot of collar and hind edge of pronotum, spot of subtegular ridge, and posterolateral spots on scutellum ivory. Petiole black. Postpetiole ± and 2nd to 5th tergites entirely red; 6th and 7th tergites black. Coxae and trochanters black; legs otherwise red; fore and mid femora infusate ventrally; fore and mid tibiae yellow frontally; hind femur red, baso-ventrally and apically ± infusate; hind tibia red, black in apical 0.3; hind tarsus black. Pterostigma reddish-brown.

Taxonomical remarks: The form of the gastrocoelus of this species resembles some members of the genus *Barichneumon* THOMSON but the long 1st flagellar segment is typical for *Virgichneumon* (see RIEDEL 2014). It should be noted that the species has been usually misidentified in the past: *Barichneumon perversus* sensu RASNITSYN & SIYTAN (1981) belongs to a different *Barichneumon* species.

Studied material: from Germany and Italy.

***Virgichneumon rhenanus* (HABERMEHL, 1916), comb. nov. (figs 14, 36, 56, 73, 101)**

Holotype: (♂) 3.192; Worms (8) 1904 Habermehl; *Ichneumon rhenanus* HAB. ♂ (Frankfurt), studied and comb. nov. by HILPERT (1992).

Description: ♀. Body length 8.0-9.0 mm. Flagellum with 32-33 segments, moderately lanceolate; 1st flagellar segments 1.8× as long as wide; widest segments 1.5× as wide as long; apical segments slightly narrowed. Temple distinctly and roundly narrowed behind eye (fig. 14). OED 1.3× and OOD 1.5× ocellar diameter. Frons and face transversally striato-punctate. Gena with longitudinally striated punctures dorsally and sparse punctures ventrally. MI 0.7-0.9. Genal carina reaching hypostomal carina away from mandibular base, hypostomal carina slightly elevated.

Notualus pit-like impressed at frontal margin of mesoscutum. Mesoscutum densely and coarsely punctate. Mesopleuron densely punctate, partly longitudinally striato-punctate. Epicnemial carina not bent or elevated ventrally. Scutellum wider than long, slightly elevated. Area superomedia heart-shaped, about as long as wide; distinctly posterior of its middle with costula (fig. 36). Area petiolaris not distinctly narrowed apically. Hind coxa densely punctate, with distinct scopa. Hind femur 3.4× as long as wide. External surface of hind tibia with few (2-3) denticular spines (fig. 101). Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 2× their width; vein 2m-cu reaching its middle. Vein 1cu-a postfurcal.

Postpetiole with latero-median carina; lateral field 0.8× as wide as median field, the latter coarsely rugose-punctate. Gastrocoelus deeply impressed. Thyridium indistinct

(fig. 56). 2nd tergite 1.3× as wide as long. 2nd and 3rd tergites coarsely punctate, 2nd tergite longitudinally rugose medially; 4th tergite superficially punctate. Ovipositor sheath slightly extending beyond metasomal apex.

Color: black. Basal flagellar segments often reddish. Flagellar segments 7-12 dorsally, stripe of frontal orbit opposite to lateral ocellus, collar, spot on subtegular ridge, scutellum and large median marks on 6th and 7th tergites ivory. 1st to 4th tergites reddish-brown; following tergites darkened. Coxae and trochanters black or brown; legs otherwise red; hind tibia narrowly darkened apically; hind tarsus brownish. Pterostigma yellowish.

♂. Body length 10 mm. Flagellum with 34-35 segments; 1st flagellar segment ca. 2× as long as wide. Tyloids on flagellar segments 6-12, long-oval, maximally 0.5-0.7× as long as their segments. Temple roundly narrowed behind eye. Frons transversely rugose-punctate. Face rugose-punctate; clypeus with fine longitudinal striae or rugae medially. Hypostomal carina low.

Notaulus impressed at frontal 0.2 of mesoscutum. Mesoscutum, mesopleuron and metapleuron coarsely punctate and shining; mesopleuron dorsally and posteriorly with ± distinct striation. Epinenial carina low behind fore coxa, not bent forward ventrally. Scutellum moderately elevated, wider than long, lateral carina in basal 0.5. Area supermedia large, heart-shaped, almost square or wider than long; costula reaching posterior to its middle. Hind femur 3.2× as long as wide. Fore metatarsus with apical tooth. Ventral side of mid femur slightly concave in apical 1/3. Areolet almost pointed frontally, veins 2rs-m and 3rs-m almost joining each other in front; vein 2m-cu reaching its middle. Vein 1cu-a postfurcal.

Postpetiole widened, lateral field wide, 0.8× as wide as median field, the latter with coarse longitudinal rugosities. Gastrocoelus distinct. Thyridium large, oblique, about as wide as their interval. 2nd tergite about as long as wide. 2nd and 3rd tergites with coarse punctures and median longitudinal rugae.

Color: black. Setae of mesoscutum brownish. Palps, mandible, clypeus laterally, wide facial and narrow frontal orbits up to lateral ocellus (fig. 73), stripe on outer orbit, scape ventrally, spot on collar and hind edge of pronotum, spot on subtegular ridge, scutellum on greater part ivory. Flagellum ± reddish ventrally. Postpetiole apically and 2nd and 3rd tergites entirely and 4th tergite basally red. Legs except black coxae and trochanters red; hind femur often blackish; hind tibia in apical third and hind tarsus darkened to black. Pterostigma brown.

Taxonomical remarks: For the discussion of the generical position of this species, see taxonomical notes under *V. gemellus* (GRAVENHORST).

Studied material: from Austria* (ZSM), Germany and Switzerland* (ZSM).

***Virgichneumon scopator* nov.sp. (figs 15, 20, 37, 57, 90, 93)**

Holotype: (♀) M. Etna-Maletto, C. da Fontanamurata, m. 1000, 7.VII.1996, coll. Turrisi (coll. Turrisi).

E t y m o l o g y : The species name refers to the large scopa on the hind coxa.

D e s c r i p t i o n : ♀. Body length 11.5 mm (fig. 20). Flagellum with more than 28 segments, almost bristle-shaped (tips broken off); 1st flagellar segment 2.9× as long as

wide, 8th to 10th segments square; widest segments 1.1× as wide as long. Temple slightly and roundly narrowed behind eye (fig. 15). OED 1.3× ocellar diameter. Frons coarsely punctate. Gena 1.1× as wide as eye, coarsely striate-punctate (fig. 90). Clypeus with sparse punctures. MI 0.9.

Mesoscutum coarsely rugose-punctate. Mesopleuron and metapleuron coarsely rugose-punctate, speculum punctate. Scutellum wider than long, with sparse punctures and lateral carina in basal 0.2. Area superomedia hexagonal, 1.2× as long as wide; at 4/10 of its length with costula (fig. 37). Area petiolaris rugose, with lateral carina. Hind coxa with dense punctures and distinct scopa apico-ventrally (1/4 of coxal length) (fig. 93). Hind femur densely punctate, 3.9× as long as wide. External surface of hind tibia with multiple (ca. 11) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 2× their width; vein 2m-cu reaching distad its middle. Vein 1cu-a postfurcal by 1-2× its width.

Postpetiole with distinct latero-median carina; median field elevated, coarsely rugose-punctate. Gastrocoelus rectangularly impressed. Thyridium slightly oblique, 0.7× as wide as interval between thyridia (fig. 57). 2nd tergite 1.2× as wide as long. 2nd and 3rd tergites coarse and densely rugose-punctate, ± dull. Following tergites with superficial punctures, shining. Ovipositor sheath extending beyond metasomal apex by 0.5-1.0× of 7th tergite length.

Color: black. Setae of mesoscutum brownish. Flagellar segments 9-14 dorsally, small spot on frontal orbit opposite to lateral ocellus, scutellum, dorsal triangular spot on 6th tergite, and wide dorsal spot on 7th tergite ivory. Legs except black coxae and trochanters red; hind tibia shortly infusate at apex; hind tarsus black. Pterostigma blackish.

♂ unknown.

Taxonomical remark: This new species closely resembles *V. monostagon*, but differs by slenderer basal flagellar segments and ± distinct scopa of hind coxa.

Distribution: Only known from Sicily*.

***Virgichneumon submontanus* (HEINRICH, 1951), comb. nov. (figs 38, 58)**

Holotype: (♀) Holotypus; *Barichneumon submontanus* i. l. 1951 Heinr; Oberlaussa, A.s., leg. A. Franz (ZSM), type studied.

Description: ♀. Body length 9.5 mm. Flagellum with 37 segments, moderately lanceolate; 1st flagellar segment 2.0× as long as wide; 10th segment square; widest segments 1.5× as wide as long. Temple strongly and almost linearly narrowed behind eye. OED 1.5× and OOD 2.1× ocellar diameter. Gena with rather dense punctures, 0.9× as wide as eye. MI 1.0.

Epicnemial carina moderately elevated behind fore coxa and bilobed. Scutellum moderately elevated, slightly wider than long, with lateral carina in basal 0.5 and with coarse sparse punctures. Area basalis narrow, about as long as wide. Area superomedia heart-shaped, wider than long; posterior to its middle with costula (fig. 38). Hind coxa densely punctate, without scopa. Hind femur densely punctate, 3.4× as long as wide. External surface of hind tibia with multiple (8-10) stout bristles. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 2× their width; vein 2m-cu reaching distad its middle. Vein 1cu-a postfurcal by 2× its width.

Postpetiole without latero-median carina, strongly punctate. Gastrocoelus triangularly impressed, almost smooth. Thyridium oblique, $0.8\times$ as wide as interval between thyridia (fig. 58). 2nd tergite $1.3\times$ as wide as long. 2nd to 4th tergites densely punctate. Ovipositor sheath extending beyond metasomal apex by length of 7th tergite.

Color: black. Setae of mesoscutum grey. Mandible except teeth reddish. Flagellar segments 8/9-13 dorsally, spot on vertex opposite to lateral ocellus, triangular spot of 6th tergite and 7th tergite mainly ivory. Mesosoma black. Postpetiole, 2nd and 3rd tergites completely and 4th basally and laterally red. Coxae, trochanters and trochantelli black; legs otherwise reddish; fore and mid femora \pm black; hind tibia narrowly infusate apically, hind tarsus blackish. Pterostigma brown.

♂. Body length 11.0-12.0 mm. Flagellum with 36-37 segments; 1st segment $2.1\times$ as long as wide. Tyloids indistinct, on flagellar segments 5/6-12, linear, maximally $0.7-0.8\times$ as long as their segments. Temple slightly narrowed behind eyes. OED $1.0-1.1\times$ and OOD $1.7\times$ ocellar diameter. Occiput slightly impressed medially. MI $0.2-0.3$. Face, gena and clypeus with dense punctures. Epicnemial carina distinctly widened behind fore coxa, bilobed ventrally. Scutellum moderately elevated, wider than long, with sparse punctures and with lateral carina in basal $0.6-0.7$. Area superomedia wider than long; costula reaching posterior to its middle. Fore metatarsus without apical tooth. Hind femur $3.3-3.6\times$ as long as wide.

Postpetiole without latero-median carina, median field punctate. Gastrocoelus triangularly impressed. Thyridium oblique, $0.6-0.7\times$ as wide as interval between thyridia. 2nd tergite $1.0-1.1\times$ as long as wide; 2nd to 5th tergites with coarse punctures.

Color: black. Flagellum black. Palps partly, clypeus laterally, inner orbit up to lateral ocellus, collar, sometimes hind edge of pronotum and subtegular ridge ivory. Postpetiole, 2nd and 3rd tergites completely and 4th tergite \pm red. Coxae and trochanters black; fore leg otherwise red; mid leg black, mid femur apically and mid tibia frontally reddish or yellowish; hind leg black, hind femur basally narrowly red, hind tibia red in basal half. Pterostigma brown or black.

Taxonomical remark: One ♀ from Germany (Bodman near Bodensee) has already been labeled as "*Virgichneumon* sp. det. Heinrich" (ZSM).

Studied material: from Austria, Germany* (ZSM), Switzerland* (coll. Riedel).

***Virgichneumon tenuicornis* (HEINRICH, 1930) (figs 16, 59, 74)**

Type lost.

Description: ♀. Body length 9.5-10.0 mm. Flagellum with 41 segments, almost filiform and slightly narrowed apically; 1st flagellar segment $2.5\times$ as long as wide, 8th segment square; widest segments $1.2\times$ as wide as long. Temple moderately and almost linearly narrowed behind eye (fig. 16). OED $1.2\times$ and OOD $1.7\times$ ocellar diameter. Frons coarsely rugulose-punctate. Gena with rather dense punctures ventrally, rugose-striate dorsally. MI 0.9 . Hypostomal carina moderately elevated.

Notaulus shortly impressed on frontal margin of mesoscutum. Mesoscutum coarsely punctate, shining. Mesopleuron and metapleuron coarsely rugose-punctate, partly striate. Speculum partly smooth. Epicnemial carina elevated behind fore coxa, about as wide as apical segment of maxillary palp. Scutellum slightly convex, slightly wider than long,

with fine sparse punctures and with lateral carina in basal 0.7. Area basalis with strong central tubercle. Area superomedia hexagonal, about as long as wide, rugose; posterior to its middle with costula. Area petiolaris strongly impressed, with coarse transverse rugae. Hind coxa punctate, smooth, without scopa. Hind femur $3.7\times$ as long as wide. External surface of hind tibia with several (4) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m $2\times$ their width; vein 2m-cu slightly distad its middle. Vein 1cu-a postfurcal by $2\times$ its width.

Postpetiole with distinct latero-median carina; lateral field with coarse punctures, median field with longitudinally striated punctures. Gastrocoelus impressed, with fine ridges. Thyridium transverse, $0.5\times$ as wide as interval between thyridia (fig. 59). 2nd tergite $1.2\times$ as wide as long. 2nd and 3rd tergites very coarsely rugose-punctate; 4th and 5th tergites with fine sparse punctures. Ovipositor sheath extending beyond metasomal apex by length of 7th tergite.

Color: black. Setae of mesoscutum brownish. Flagellar segments 9-15 dorsally, narrow frontal orbit and large spot of 7th tergite ivory. Scutellum with reddish apical suffusion. Coxae, trochanters and trochantelli black; legs otherwise red; hind tibia infusate in apical 0.2, hind tarsus blackish. Pterostigma blackish.

♂. Body length 11 mm. Flagellum with >23 segments (tips broken off); 1st flagellar segment $2.6\times$ as long as wide. Tyloids on flagellar segments 8-15, large, oval, maximally as long as their segments. Temple distinctly and almost linearly narrowed behind eye. OED $1.0\times$ ocellar diameter. Gena $0.8\times$ as wide as eye. MI 0.7.

Epicnemial carina strongly widened behind fore coxa, bilobed. Scutellum moderately elevated, about as long as wide, with lateral carina in basal 0.4. Area basalis with median tubercle. Area superomedia halfmoon-shaped, $1.5\times$ as wide as long; costula reaching posterior to its middle. Fore metatarsus without apical tooth. Hind femur $4.5\times$ as long as wide. External surface of hind tibia with numerous denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m $2\times$ their width; vein 2m-cu reaching its middle. Vein 1cu-a interstitial.

Median field of postpetiole slightly elevated, not separated, longitudinal rugose. Thyridium transverse, $0.8\times$ as wide as interval between thyridia. 2nd tergite $1.2\times$ as long as wide. 2nd and 3rd tergites coarsely punctate and granulate; 2nd tergite with some striated rugae basally.

Color: black. Flagellum black. Inner orbit and spot on vertex (fig. 74), hind edge of pronotum and spot on subtegular ridge ivory. 2nd tergite with narrow reddish hind margin. Fore and mid legs black; fore and mid tibiae and tarsi yellowish frontally; hind femur and tibia red; hind tibia infusate in apical $2/3$, hind tarsus black. Pterostigma reddish-brown.

Studied material: from France* (ZSM) and Sicily.

***Virgichneumon tenuipes* (BERTHOUMIEU, 1896) (figs 17, 39, 60)**

Lectotype: (♀) La Macta; 1; type; Rev. Bourb. 96 N 107-108 p.193; *I. tenuipes* n. sp. (Paris), comb. nov. by DILLER & HORSTMANN (1997), photos of type studied.

syn. nov. *Ichneumon spicicornis* BERTHOUMIEU, 1906: 59, ♀.

Lectotype: (♀) Frenah Alg; type; *I. spicicornis* BERTH. n. sp. (Berth. vid) (Paris), comb. by DILLER & HORSTMANN (1997), photos of type studied.

Additional material: (♀) Marokko, Moyen Atlas, Tizi-n-Tretten, 1900 m, 24.05.1995, ex pupa *Cigaritis zohra*, leg. M. SANETRA (ZSM).

Description: ♀. Body length 10.0 mm. Flagellum with 30-32 segments, bristle-shaped and pointed apically; 1st flagellar segment 2.1-2.5× as long as wide; 9th segment square; widest segments about as long as wide. Temple rather short, strongly and almost linearly narrowed behind eye (fig. 17). OED 1.0× and OOD 1.8× ocellar diameter. Head coarsely punctate, shining. MI 1.2. In profile, gena 0.6× as wide as eye, widest at connection of hypostomal and genal carinae. Hypostomal carina low.

Epicnemial carina not elevated behind fore coxa. Scutellum with lateral carina in basal 0.5. Propodeum with complete carination. Area superomedia halfmoon-shaped, 1.0-1.1× as wide as long; at 7/10 of its length with costula (fig. 39). Hind coxa punctate, shining, without scopa. Hind femur 3.5× as long as wide. External surface of hind tibia with several (6) denticular spines.

Postpetiole densely punctate, smooth, without latero-median carina; median field not separated from lateral field. Gastrocoelus impressed, slightly sculptured. Thyridium weakly impressed, 0.4× as wide as interval between thyridia (fig. 60). 2nd tergite 1.4-1.5× as wide as long. 2nd and 3rd tergites with dense punctures, shining; 4th tergite with superficial puncture.

Color: black. Flagellar segments 8-12 dorsally, halfmoon-shaped spot of vertex opposite of lateral ocellus, collar, narrow transversal apical stripe on 5th tergite and 6th and 7th tergites almost completely ivory. 1st to 3rd or 4th tergites red, following tergites black. Coxae, trochanters and trochantelli black. Other parts of legs mainly dark brown, fore tibia yellowish frontally, hind tibia with indistinct reddish-brown ring sub-basally. Pterostigma brown, pale proximally.

♂ unknown.

Taxonomical remark: The ♀ resembles *Virgichneumon tergenus*, but postpetiole without latero-median carina, 5th tergite with ivory stripe, and 1st tergite completely red.

New host record: *Cigaritis zohra* DONZEL, 1847 (Lep. Lycaenidae) (ZSM).

Studied material: from Algeria and Morocco.

***Virgichneumon tergenus* (GRAVENHORST, 1820) (figs 18, 40, 75, 91, 96)**

Types lost.

Description: ♀. Body length 8.5-10.0 mm. Flagellum with 31-32 segments, slightly lanceolate; 1st flagellar segment 2.1-2.3× as long as wide, 6th or 7th segment square, widest segments 1.2-1.3× as wide as long. Temple strongly and almost linearly narrowed behind eye (fig. 18). OED 1.3-1.5× and OOD 1.7-2.0× ocellar diameter. Frons coarsely punctate. Face ± medially protruding. Clypeus with sparse punctures. Gena in profile 1.0-1.2× as wide as eye, widest at the junction of genal and hypostomal carinae, with sparse punctures ventrally (fig. 91). MI 1.1-1.2. Hypostomal carina slightly elevated.

Mesoscutum coarsely punctate, shining. Scutellum slightly wider than long, with sparse punctures and with lateral carina in basal 0.3. Epicnemial carina low behind fore coxa. Scutellum slightly wider than long, punctate, lateral carina in basal 0.4. Area superomedia heart-shaped, about as long as wide; at or slightly posterior to its middle

with costula (fig. 40). Hind coxa densely punctate, without scopa. Hind femur densely punctate, $3.6\text{--}3.8\times$ as long as wide. External surface of hind tibia with several (5-8) denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m $2\text{--}3\times$ their width; vein 2m-cu reaching almost at its middle. Vein 1cu-a postfurcal by $2\times$ its width.

Postpetiole with distinct latero-median carina; median field elevated and densely punctate, sometimes with some longitudinal rugae. Gastrocoelus rectangularly impressed, with ridges. Thyridium small, $0.4\times$ as wide as interval between thyridia. 2nd tergite $1.4\text{--}1.5\times$ as wide as long. 2nd and 3rd tergites densely punctate, smooth and shining between punctures, rarely 2nd tergite with some rugae between gastrocoeli. Ovipositor sheath extending beyond metasomal apex by length of 7th tergite.

Color: black. Setae of mesoscutum grey. Palps, flagellar segments 8-12 dorsally, spot on vertex opposite to lateral ocellus, and wide apical spots on 6th and 7th tergites ivory. Apical half of 1st tergite, 2nd to 4th tergites entirely, sometimes 5th tergite laterally red. Legs black; fore tibia often yellowish frontally; hind tibia sometimes dark reddish sub-basally. Pterostigma black.

♂. Body length 8.0-10.0 mm. Flagellum with 31-34 segments; 1st flagellar segment $2.7\times$ as long as wide. Tyloids on flagellar segments 6-15, long-oval, small, maximally $0.6\times$ as long as their segments. OED $1.0\times$ and OOD $1.3\times$ ocellar diameter. MI 0.7. Fore metatarsus without apical tooth (fig. 96). Hind femur $3.8\times$ as long as wide. 2nd tergite $1.1\times$ as wide as long; 2nd to 4th tergites with coarse dense punctures.

Color: black. Flagellum sometimes reddish apically. Palps mainly, mandible basally, usually clypeus laterally, facial orbit and spot on frontal orbit or inner orbit completely (fig. 75), stripe on outer orbit, ventral spot of scape, collar and upper margin of pronotum, spots on tegula and subtegular ridge, two posterolateral spots on scutellum (often confluent medially), apical bands or stripes on 6th to 7th tergites (sometimes apical band on 5th tergite) ivory. 2nd and 3rd tergites completely and sometimes basal part of 4th tergite red. Legs black; fore and mid femora, tibiae and tarsi \pm yellowish frontally; hind tibia sometimes reddish-brown sub-basally. Pterostigma blackish.

Host: *Satyrum pruni* (Linnaeus, 1758) (Lep. Lycaenidae) (ZSM).

Studied material: from Austria, Bulgaria, Germany, Italy, Norway, Russia, Sweden, Turkey* (ZSM), Ukraine.

Species excluded from *Virgichneumon*

Ichneumon monostagon var. *grandis* KRIECHBAUMER, 1894

Material examined: (♂) Tegernsee (ZSM), according to HORSTMANN (1997) an infra-specific name and therefore not available.

Description: ♂. Body length 18 mm. Flagellum with >37 segments (tips broken off); 1st flagellar segment $2.6\times$ as long as wide. Tyloids indistinct. Temple strongly and almost linearly narrowed behind eye. Occiput with transverse impression medially. OED $1.0\times$ and OOD $1.3\times$ ocellar diameter. Frons rugose-punctate. Gena about as wide as eye, with dense punctures. Clypeus densely punctate. MI 0.3.

Notaulus distinctly impressed in frontal 1/4 of mesoscutum. Mesoscutum coarsely and

densely punctate, smooth and shining between punctures. Mesopleuron and metapleuron with coarse dense punctures; mesopleuron partly rugose, speculum smooth. Juxtacoxal carina present. Scutellum slightly elevated, about as long as wide, with sparse punctures and with lateral carina in basal 0.4. Area basalis without median tubercle. Area superomedia rectangular, frontal margin rounded, slightly wider than long; costula indistinct. Fore metatarsus without apical tooth. Hind femur 3.8× as long as wide. External surface of hind tibia with several denticular spines. Areolet pentagonal, frontal distance between veins 2rs-m and 3rs-m 3× their width; vein 2m-cu reaching its middle. Vein 1cu-a postfurcal by 1× its width.

Postpetiole with strong latero-median carina; lateral field punctate, slightly wider than median field; median field with irregular rugae. Gastrocoelus rectangularly impressed, with strong ridges. Thyridium 0.4× as wide as interval between thyridia. 2nd tergite about as long as wide. 2nd to 4th tergites with dense coarse punctation and fine granulation, dull, 2nd tergite ± finely rugose.

Color: black. Palps in part, narrow facial and ventral half of frontal orbits, collar and hind edge of pronotum, spot on subtegular ridge and 2 apical spots on scutellum yellowish. Legs dark brownish; fore and mid femora and tibiae yellowish-brown frontally. Pterostigma dark reddish-brown.

Taxonomical remark: This large specimen was described as a variety of *Ichneumon percussor* [recte: *Virgichneumon monostagon*] by KRIECHBAUMER (1894), and mentioned as belonging to this species in HORSTMANN (1997) and YU et al. (2016). I have studied this specimen in the ZSM. Due to its large size and form of propodeum (area basalis without median tubercle), it actually belongs to the *Cratichneumonina* sensu HEINRICH and is probably a species of *Cratichneumon*.

Zusammenfassung

In dieser Studie werden die westpaläarktischen Arten der Gattung *Virgichneumon* HEINRICH revidiert und einige neue Verbreitungs- und Wirtsangaben gemacht. 20 valide Arten werden kurz beschrieben und illustriert sowie in einem Bestimmungsschlüssel aufgetrennt.

Zwei Arten werden neu beschrieben: *Virgichneumon hinzi* nov.sp. und *Virgichneumon scopator* nov.sp.; *Barichneumon monostagon nigranator* AUBERT, 1994 ist synonym zu *Virgichneumon atricolor* (BERTHOUMIEU, 1910) und *Ichneumon spicicornis* BERTHOUMIEU, 1906 ist synonym zu *Virgichneumon tenuipes* (BERTHOUMIEU, 1896).

Drei Arten werden erstmals in die Gattung *Virgichneumon* transferriert: *Virgichneumon gemellus* (GRAVENHORST, 1829), comb. nov., *Virgichneumon rhenanus* (HABERMEHL, 1916), comb. nov. und *Virgichneumon submontanus* (HEINRICH, 1951), comb. nov.

Für *Virgichneumon albignator* AUBERT, 1994 und *Virgichneumon atricolor* (BERTHOUMIEU, 1910) werden die bisher unbekannten ♂♂ beschrieben.

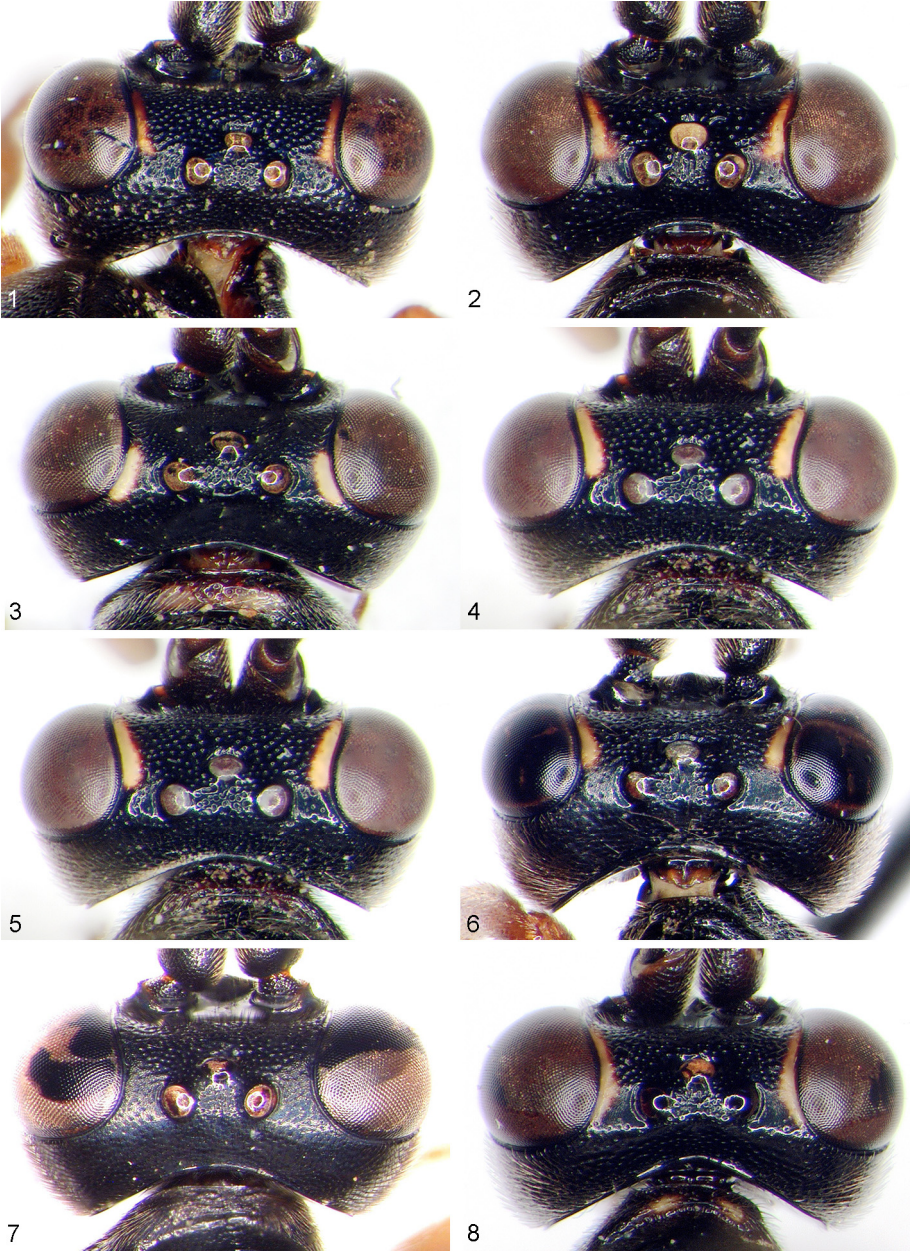
Acknowledgments

I'd like to thank E. Ockermüller and M. Schwarz (Linz/Austria) and S. Schmidt (Munich/Germany) for their kind allowance to study the large Ichneumonidae collections of their institutions. I also thank A. Freitag (Lausanne/Switzerland) for the loan of *Virgichneumon* material from the Aubert collection, G.F. Turrisi (Catalania/Italy) for the loan of his Sicilian specimens, and M.R. Shaw (Edinburgh/Scotland) for some reared *Virgichneumon* specimens from United Kingdom.

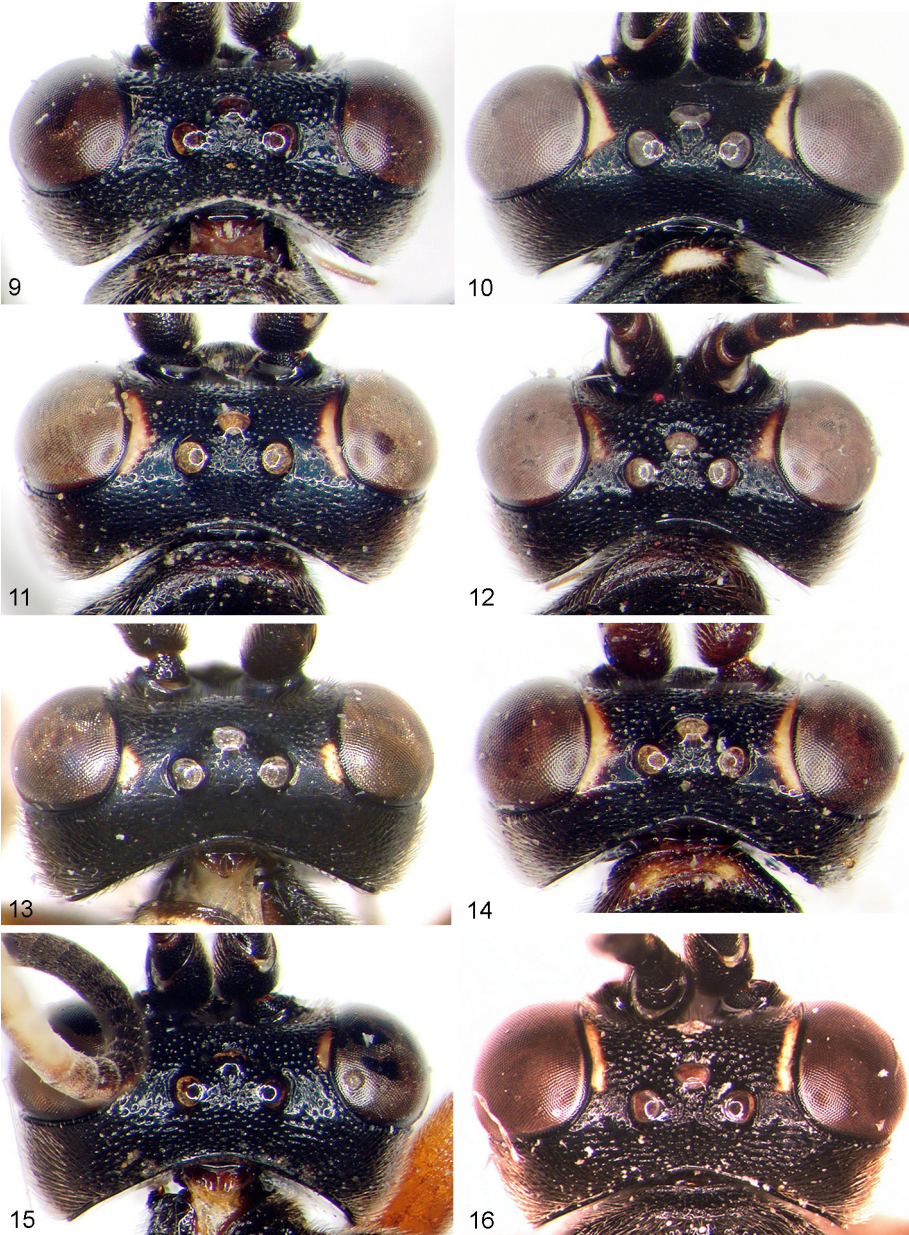
References

- AUBERT J.-F. (1974): Recherche des types de Kriechbaumer au museum de Munich (Ichneumon. cyclopneusticae, Cryptinae et Ophioninae). — Bulletin de la Société Linnéenne de Lyon **43**: 262-272.
- AUBERT J.-F. (1994): Nouvelles observations sur quelques *Barichneumon* THS. — Bulletin de la Société Entomologique de Mulhouse **1994**: 1-4.
- BROAD G.R., SHAW M.R. & M.G. FITTON (2018): Ichneumonid wasps (Hymenoptera: Ichneumonidae): their Classification and Biology. — Handbooks for the Identification of British Insects. Vol 7. Part 12. Royal Entomological Society, London, 1-418 pp.
- CEBALLOS G. (1924): Estudios sobre icneumonidos de Espana. I. Subfam. Joppinae. — Trabajos del Museo Nacional de Ciencias naturales, Serie Zoologica **50**: 1-335.
- DILLER E. & K. HORSTMANN (1997): Typenrevision der von Victor Berthoumieu beschriebenen Ichneumoninae (ohne Phaeogenini). — Spixiana **20**: 39-71.
- HEINRICH G.H. (1968): Synopsis and Reclassification of the Ichneumoninae Stenopneusticae of Africa South of the Sahara, Vol. IV. — Farmington, 695-941 pp.
- HEINRICH G.H. (1977): Ichneumoninae of Florida and Neighboring States. — Arthropods of Florida and Neighboring Land Areas **9**: 1-350.
- HILPERT H. (1992): Zur Identität von *Stenobarichneumon constantineanui* HEINRICH, 1972 und Bemerkungen zu den europäischen Arten des Genus *Rugosculpta* HEINRICH, 1967. — Spixiana **15**: 143-148.
- HORSTMANN K. (1990): Revision einiger Typen der von Otto Schmiedeknecht beschriebenen paläarktischen Ichneumonidae. — Beiträge zur Entomologie **40**: 31-61.
- HORSTMANN K. (1997): Über infrasubspezifische Namen von Formen und Varietäten der Autoren Kriechbaumer, Athimus, Pfankuch, Ulbricht und Hedwig in der Familie Ichneumonidae (Hymenoptera). — Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen **49**: 47-56.
- KRIECHBAUMER J. (1894): Ichneumoniden-Studien. Untersuchung Tischbein'scher Schlupfwespen-Typen. Fortsetzung. — Entomologisches Nachrichten **20**: 248-256.
- PERKINS J.F. (1953): Notes on British Ichneumoninae with descriptions of new species. — Bulletin of the British Museum of Natural History, Entomology **3**: 105-176.
- RASNITSYN A.P. (1981): Gravenhorst's and Berthoumieu's types of Ichneumoninae Stenopneusticae preserved in Wroclaw and Cracow, Poland. — Polskie Pismo Entomologiczne **51**: 101-145.
- RASNITSYN A.P. & U.V. SIYTAN (1981): [A guide to the insects of the European part of the USSR. Hymenoptera, Ichneumonidae. Subfamily Ichneumoninae.] (in Russian) — Opredeliteli Faune SSSR **3** (3): 505-636.
- RIEDEL M. (2014): Zur Taxonomie der europäischen Ichneumoninae (Hymenoptera: Ichneumonidae). — Mitteilungen der Münchner Entomologischen Gesellschaft **104**: 103-108.
- TERESHKIN A. (2005): Illustrated key to the Western Palearctic genera of the subtribe Cratichneumonina (sensu HEINRICH) and taxonomic notes on European species of *Rugosculpta* HEINRICH, 1967 (Hymenoptera: Ichneumonidae: Ichneumoninae: Ichneumonini). — Russian Entomological Journal **13**: 277-293.
- WESMAEL C. (1845): Tentamen dispositionis methodicae. Ichneumonum Belgii. — Nouveaux Mémoires de l'Académie Royale des Sciences, des Lettres et Beaux-Arts de Belgique **18**: 1-239.
- YU D.S., VAN ACHTERBERG C. & K. HORSTMANN (2016): World Ichneumonoidea (2015). Taxonomy, biology, morphology and distribution. — Taxapad interactive catalogue, Nepean, Ottawa. [database on flash-drive].

Address of the author: Matthias RIEDEL
 Blumenlage 22 C, D-29683 Bad Fallingb., Germany
 E-mail: mamaflo.riedel@t-online.de



Figs 1-8: Heads of *Virgichneumon* ♀♀, dorsal view: (1) *V. albosignatus* (GRAVENHORST), (2) *V. atricolor* (BERTHOUMIEU), (3) *V. callicerus* (GRAVENHORST), (4) *V. digrammus* (GRAVENHORST), (5) *V. dumeticola* (GRAVENHORST), (6) *V. extremator* (THUNBERG), (7) *V. faunus* (GRAVENHORST), (8) *V. gemellus* (GRAVENHORST).



Figs 9-16: Heads of *Virgichneumon* ♀♀, dorsal view: (9) *V. hinzi* nov.sp. HT, (10) *V. krapinensis* (SCHMIEDEKNECHT), (11) *V. maculicauda* (PERKINS), (12) *V. monostagon* (GRAVENHORST), (13) *V. perversus* (KRIECHBAUMER), (14) *V. rhenanus* (HABERMEHL), (15) *V. scopator* nov.sp. HT, (16) *V. tenuicornis* (HEINRICH).



17



18



19



20

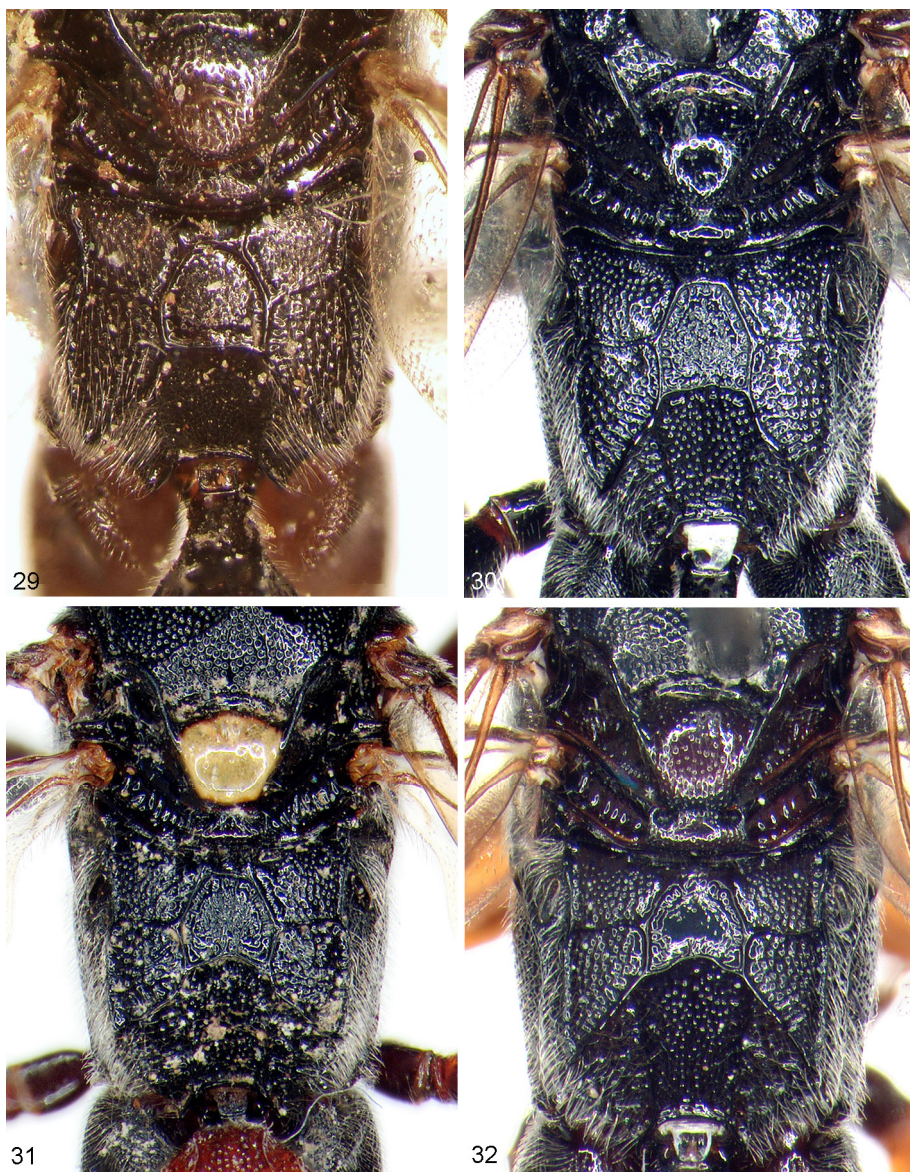
Figs 17-18: Heads of *Virgichneumon* ♀♀, dorsal view: (17) *V. tenuipes* (BERTHOUMIEU), (18) *V. tergenus* (GRAVENHORST). **Figs 19-20:** Habitus of *Virgichneumon* ♀♀: (19) *V. hinzi* nov.sp. HT, (20) *V. scopator* nov.sp. HT.



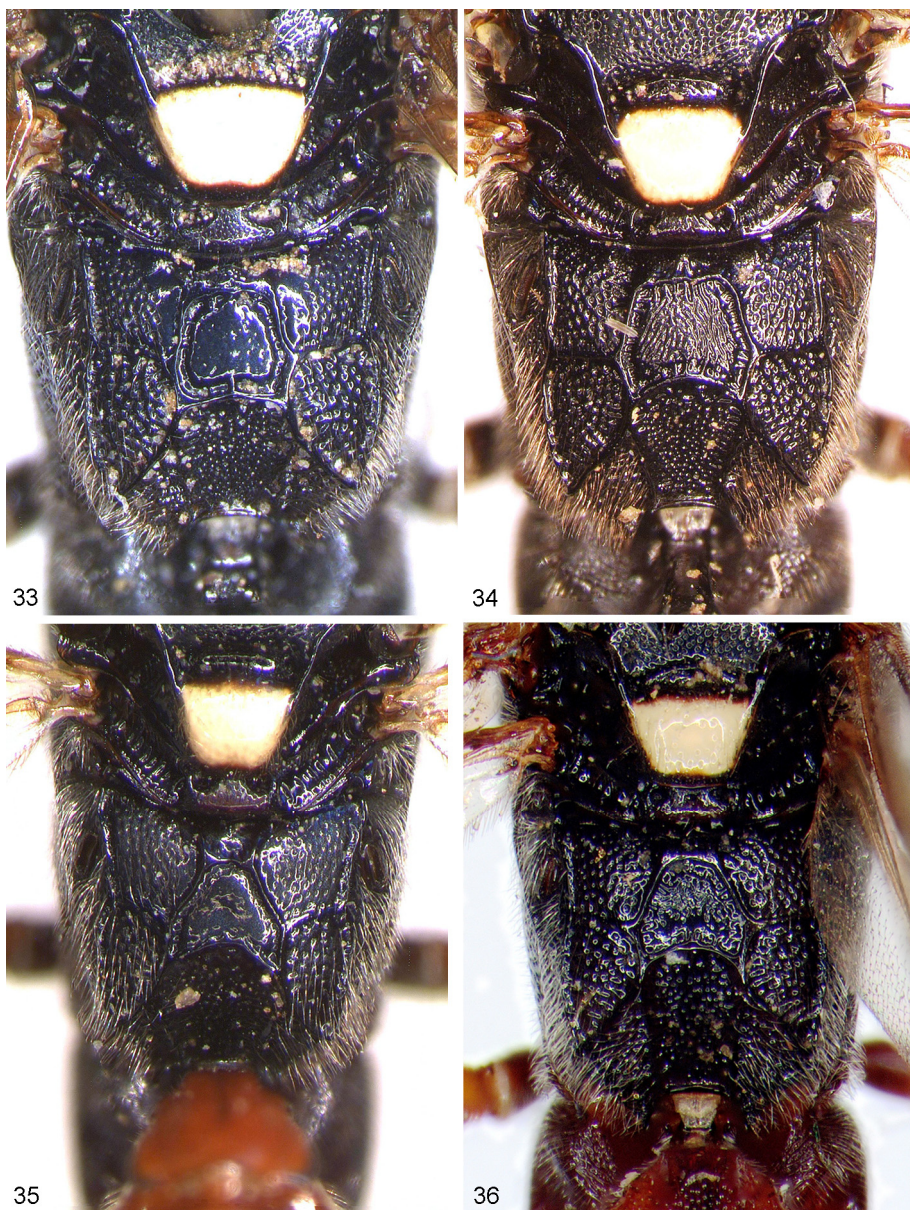
Figs 21-24: Propodeum of *Virgichneumon* ♀♀, dorsal view: (21) *V. albignator* (AUBERT), (22) *V. albilineatus* (GRAVENHORST), (23) *V. albosignatus* (GRAVENHORST), (24) *V. atricolor* (BERTHOUMIEU).



Figs 25-28: Propodeum of *Virgichneumon* ♀♀, dorsal view: (25) *V. callicerus* (GRAVENHORST), (26) *V. digrammus* (GRAVENHORST), (27) *V. dumeticola* (GRAVENHORST), (28) *V. extremator* (THUNBERG).



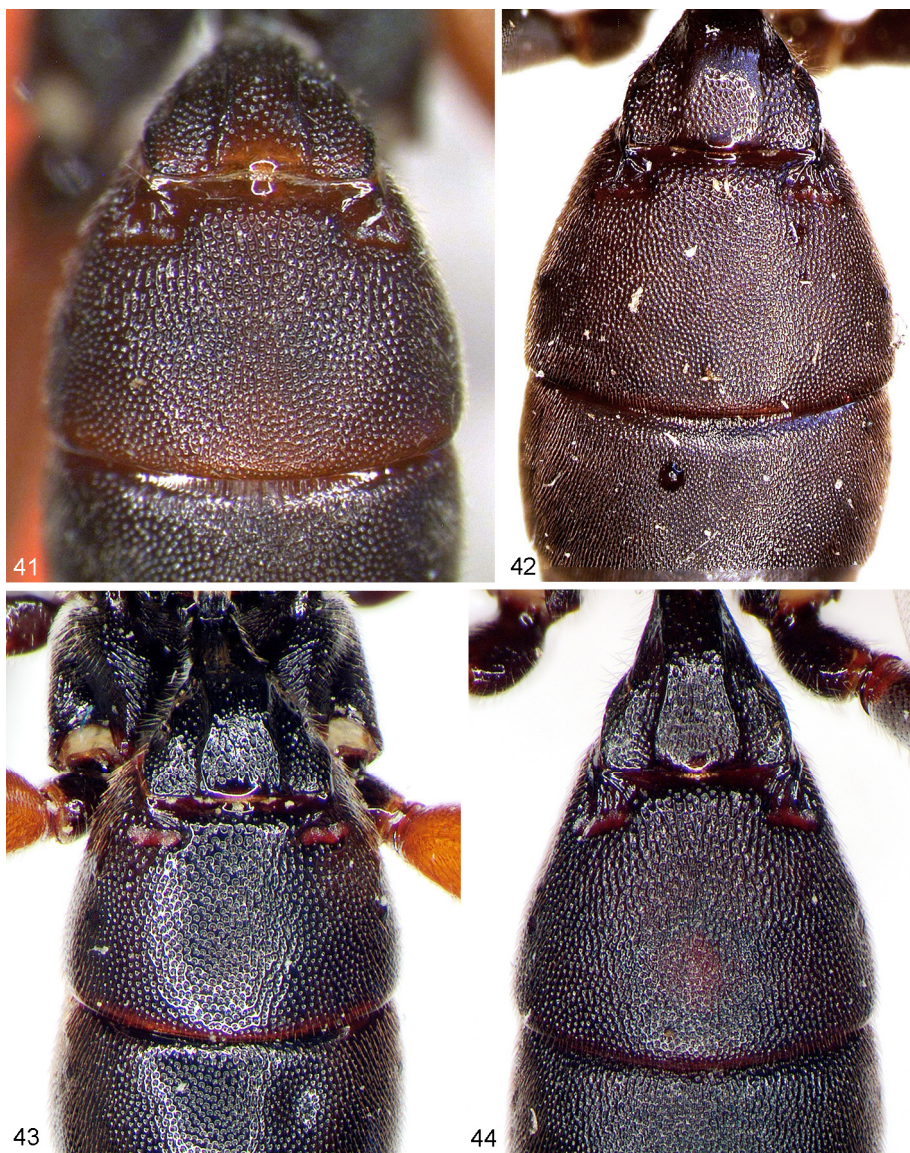
Figs 29-32: Propodeum of *Virgichneumon* ♀♀, dorsal view: (29) *V. faunus* (GRAVENHORST), (30) *V. gemellus* (GRAVENHORST), (31) *V. hinzi* nov.sp. HT, (32) *V. krapinensis* (SCHMIEDEKNECHT).



Figs 33-36: Propodeum of *Virgichneumon* ♀♀, dorsal view: (33) *V. maculicauda* (PERKINS), (34) *V. monostagon* (GRAVENHORST), (35) *V. perversus* (KRIECHBAUMER), (36) *V. rhenanus* (HABERMEHL).



Figs 37-40: Propodeum of *Virgichneumon* ♀♀, dorsal view: (37) *V. scopator* nov.sp. HT, (38) *V. submontanus* (HEINRICH), (39) *V. tenuipes* (BERTHOUMIEU), (40) *V. tergenus* (GRAVENHORST).



Figs 41-44: Basal tergites of *Virgichneumon* ♀♀, dorsal view: (41) *V. albignator* (AUBERT) HT, (42) *V. albilineatus* (GRAVENHORST), (43) *V. albosignatus* (GRAVENHORST), (44) *V. atricolor* (BERTHOUMIEU).



Figs 45-48: Basal tergites of *Virgichneumon* ♀♀, dorsal view: (45) *V. callicerus* (GRAVENHORST), (46) *V. digrammus* (GRAVENHORST), (47) *V. dumeticola* (GRAVENHORST), (48) *V. extremator* (THUNBERG).



49



50



51



52

Figs 49-52: Basal tergites of *Virgichneumon* ♀♀, dorsal view: (49) *V. faunus* (GRAVENHORST), (50) *V. gemellus* (GRAVENHORST), (51) *V. hinzi* nov.sp. HT, (52) *V. krapinensis* (SCHMIEDEKNECHT).



Figs 53-56: Basal tergites of *Virgichneumon* ♀♀, dorsal view: (53) *V. maculicauda* (PERKINS), (54) *V. monostagon* (GRAVENHORST), (55) *V. perversus* (KRIECHBAUMER), (56) *V. rhenanus* (HABERMEHL).



57



58

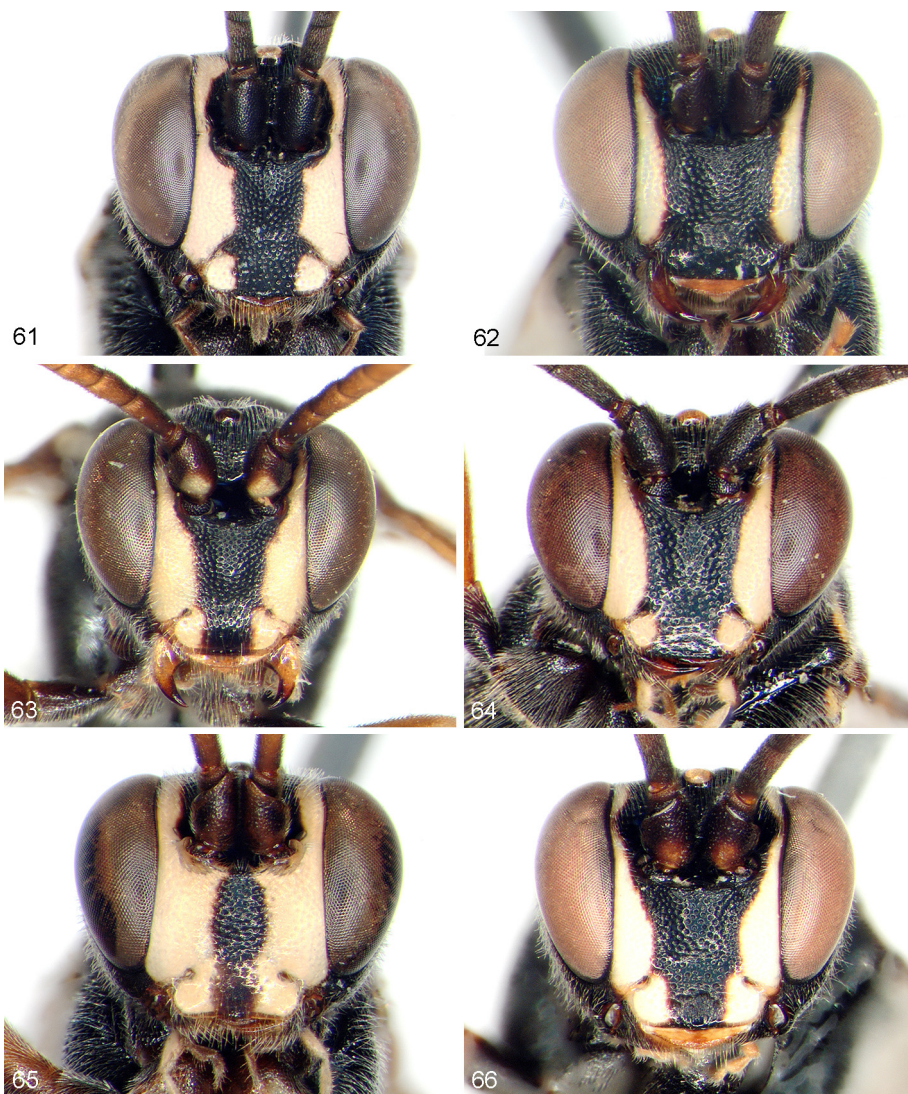


59



60

Figs 57-60: Basal tergites of *Virgichneumon* ♀♀, dorsal view: (57) *V. scopator* nov.sp. HT, (58) *V. submontanus* (HEINRICH) HT, (59) *V. tenuicornis* (HEINRICH), (60) *V. tenuipes* (BERTHOUMIEU).



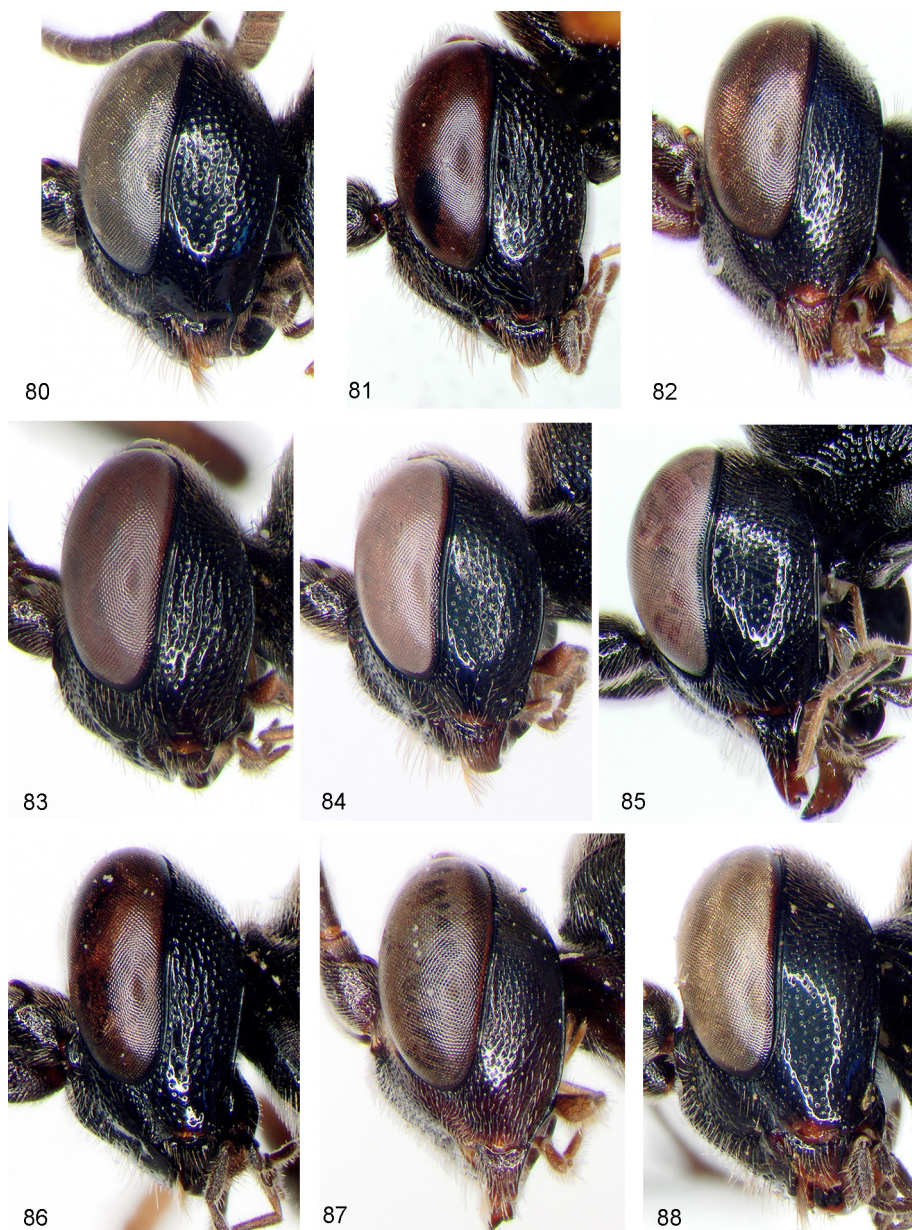
Figs 61-66: Faces of *Virgichneumon* ♂♂, frontal view: (61) *V. albilineatus* (GRAVENHORST), (62) *V. albosignatus* (GRAVENHORST), (63) *V. callicerus* (GRAVENHORST), (64) *V. digrammus* (GRAVENHORST), (65) *V. dumeticola* (GRAVENHORST), (66) *V. extremator* (THUNBERG).



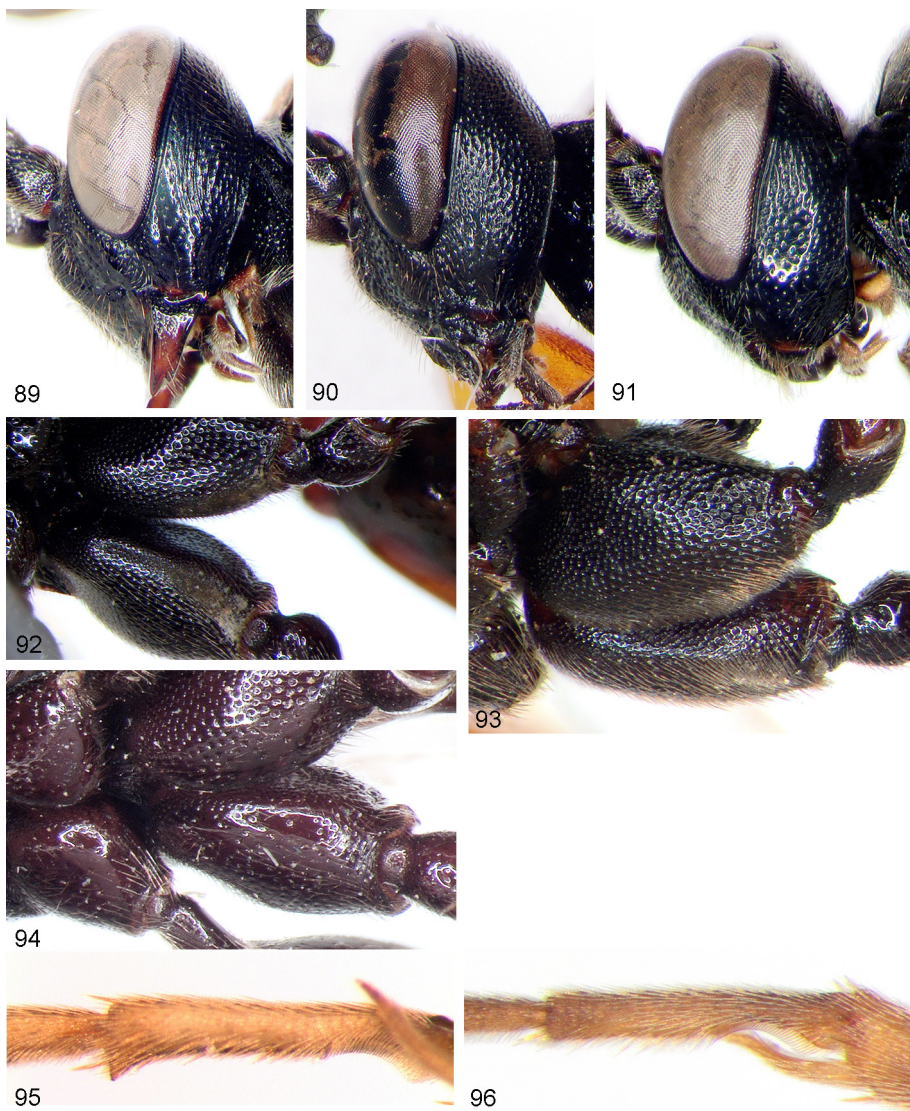
Figs 67-72: Faces of *Virgichneumon* ♂♂, frontal view: (67) *V. faunus* (GRAVENHORST), (68) *V. gemellus* (GRAVENHORST), (69) *V. krapinensis* (SCHMIEDEKNECHT), (70) *V. maculicauda* (PERKINS), (71) *V. monostagon* (GRAVENHORST), (72) *V. perversus* (KRIECHBAUMER).



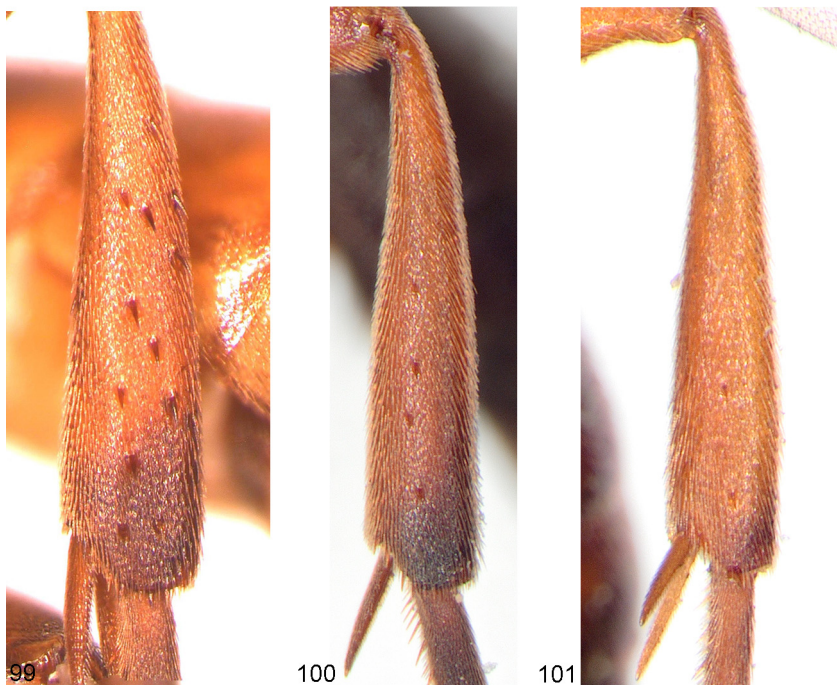
Figs 73-76: Faces of *Virgichneumon* ♂♂, frontal view: (73) *V. rhenanus* (HABERMEHL), (74) *V. tenuicornis* (HEINRICH), (75) *V. tergenus* (GRAVENHORST), (76) head of *V. albilineatus* (GRAVENHORST) ♀, fronto-dorsal view. **Figs 77-79:** Flagellar tips of *Virgichneumon* ♀♀, lateral view: (77) *V. atricolor* (BERTHOUMIEU), (78) *V. monostagon* (GRAVENHORST), (79) *V. faunus* (GRAVENHORST).



Figs 80-88: Genae of *Virgichneumon* ♀♀, lateral view: (80) *V. albosignatus* (GRAVENHORST), (81) *V. atricolor* (BERTHOUMIEU), (82) *V. callicerus* (GRAVENHORST), (83) *V. digrammus* (GRAVENHORST), (84) *V. extremator* (THUNBERG), (85) *V. gemellus* (GRAVENHORST), (86) *V. hinzi* nov.sp. HT, (87) *V. krapinensis* (SCHMIEDEKNECHT), (88) *V. maculicauda* (PERKINS).



Figs 89-91: Genae of *Virgichneumon* ♀♀, lateral view: (89) *V. monostagon* (GRAVENHORST), (90) *V. scopator* nov.sp. HT, (91) *V. tergenus* (GRAVENHORST). **Figs 92-94:** Hind coxae of *Virgichneumon* ♀♀: (92) *V. hinzi* nov.sp. HT, (93) *V. scopator* nov.sp. HT, (94) *V. atricolor* (BERTHOUMIEU). **Figs 95-96:** Fore metatarsi of *Virgichneumon* ♂♂: (95) *V. monostagon* (GRAVENHORST), (96) *V. tergenus* (GRAVENHORST).



Figs 97-98: Tyloids on flagellar segments 8-15 of *Virgichneumon* ♂♂: (97) *V. digrammus* (GRAVENHORST), (98) *V. dumeticola* (GRAVENHORST). **Figs 99-101:** Hind tibiae of *Virgichneumon* ♀♀, lateral view: (99) *V. callicerus* (GRAVENHORST), (100) *V. maculicauda* (PERKINS), (101) *V. rhenanus* (HABERMEHL).

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Linzer biologische Beiträge](#)

Jahr/Year: 2024

Band/Volume: [0056_1](#)

Autor(en)/Author(s): Riedel Matthias

Artikel/Article: [The genus *Virgichneumon* HEINRICH in the West Palaearctic region \(Hymenoptera, Ichneumonidae, Ichneumoninae\) 149-199](#)