

Revision of the West Palaearctic species of the genus *Bassus* Fabricius (Hymenoptera: Braconidae)

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The West Palaearctic species of the genus *Bassus* Fabricius, 1804 (Braconidae: Agathidinae) are revised and keyed, together with the similar *Agathis mediator* group. Twenty-two species of *Bassus* and four species of the *Agathis mediator* group are recognized, of which three are new: *B. barbieri* from Algeria, *B. epinotiae* from Great Britain, and *B. graecus* from Greece. Seven species are synonymized: *Microdus lugubrior* Ratzeburg, 1852 with *B. mediator* (Nees, 1814), *Microdus punctatus* Abdinbekova, 1975 with *B. rugulosus* (Nees, 1834), *Microdus annae* Enderlein, 1908, *Microdus victoris* Telenga, 1955, and *M. anuphrievi* Tobias, 1986 with *B. tumidulus* (Nees, 1814), *Microdus rufiventris* Abdinbekova, 1975 with *B. nugax* (Reinhard, 1867), and *Agathis minuta* Niezabitowski, 1910, with *Cenostomus lugubris* Foerster, 1862. Three genera are synonymized with *Bassus*: *Camptothlipsis* Enderlein, 1920, *Hormagathis* Brues, 1926 and *Obesomicrodus* Papp, 1971. Lectotypes are designated for the following species: *Cenostomus lugubris* Foerster, 1862; *Microdus arcuatus* Reinhard, 1867; *M. brevicaudis* Reinhard, 1867; *M. fortipes* Reinhard, 1867, and *M. nugax* Reinhard, 1867. Neotypes are designated for *Microdus cingulipes* Nees, 1814; *M. claussthalianus* Ratzeburg, 1844; *M. dimidiator* Nees, 1834; *M. linguarius* Nees, 1814; *M. mediator* Nees, 1814; *M. pumilus* Ratzeburg, 1844; *M. rufipes* Nees, 1814; *M. rugulosus* Nees, 1834; and *M. tumidulus* Nees, 1814. *Orgilus abbreviator* (Ratzeburg, 1852) comb. nov. may be a senior synonym of *O. nanellae* Tobias, 1986. *Bassus niger* (Papp, 1971 nec Telenga, 1955) is renamed as *B. nigrisoma* nom. nov.

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Introduction

In the West Palaearctic region (Europe, Asia Minor, and North Africa) the subfamily Agathidinae Nees, 1814 (= Bassinae Nees, 1812) is represented mainly by two genera: *Agathis* Latreille, 1804 sensu stricto and *Bassus* Fabricius, 1804 (= *Microdus* Nees, 1814, and *Baeognatha* auct. (except its type species because of its aberrantly shaped claws; figs 138, 140, 141)). The division (based on the relative elongation of the head) has been problematic to taxonomists because some species are intermediate. Muesebeck (1927) and Muesebeck & Walkley (1951) united the two genera, but most subsequent authors have separated them on morphological grounds (Telenga, 1955; Nixon, 1986; Chou & Sharkey, 1989), or on biological grounds (restricting *Agathis* for the species from (semi-)arid areas adapted to drinking the concealed nectar of flowers; Tobias, 1976). Both genera belong to the tribe Agathidini Nees, 1814, characterised by the claws lacking a subapical tooth (van Achterberg, 1990). The genus *Agathis* has a Holarctic distribution with species in the intermediate zones between the Oriental and Neotropical regions, and some species even occur in the Andean area (as far south as Chile); *Bassus* has a cosmopolitan distribution.

Neither of the most recently published keys (Nixon, 1986; Chou & Sharkey, 1989) satisfactorily separate the two groups, leaving species difficult to assign to either group. The development of the propodeal foramen and of the metasternal hind coxal cavities is more variable for the European species than was supposed by Nixon (1986).

According to our experience it is best to include all species with a moderately convex clypeus in *Bassus*, which have at least part of the clypeus flattened and the head somewhat elongated (figs 5, 37, 72). *Agathis* is used for all species with a distinctly convex clypeus; in addition most of its species have a distinctly elongated head (figs 99, 100). The group of *Agathis mediator* (Nees, 1814) and its relatives, including *A. lugubris* (Foerster, 1862), is intermediate because the head is less elongate ventrally and the labio-maxillary complex is not or hardly protruding (as in *Bassus*). However, the convex clypeus and the aberrant shape of the head (figs 99-

101, 115) indicate that it has its affinities with *Agathis* rather than with *Bassus*. In practice this agrees with Nixon's interpretation, except for the *Agathis mediator* group which is included in this paper for convenience. Nixon's keys may be problematic for the intermediate species; therefore in the first key the species Nixon considered to belong to *Bassus* are included and we have included in the second key the whole *A. mediator* group, as far as it is known from the West Palaearctic area.

The reduction of vein r-m of the fore wing, resulting in the absence of the second submarginal cell, traditionally regarded as characteristic of the genus *Bassus* (the *Valerius*

occurred several times within different species groups of *Bassus* and *Agathis*. It even varies within species, e.g. the type species of *Baeognatha* may have vein r-m present (figs 131-133) or absent (fig. 144), and vein r-m may, exceptionally, be absent in *Bassus nugax*. Therefore we have included all these species with normal tarsal claws and a partly flattened clypeus in the genus *Bassus*, because recognition of a separate genus for these species would make the genus *Bassus* paraphyletic.

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for these species would make the genus *Bassus* paraphyletic.

An unresolved question concerns which group is the sister group of *Agathis*. Possibly *Agathis* evolved from a species-group within the genus *Bassus*. If this is correct then *Bassus* sensu lato becomes a paraphyletic group because of the exclusion of the *Agathis*-group, and we should return to Muesebeck's interpretation and include all species in one genus, *Agathis* sensu lato. However, the inclusion of the *Agathis mediator* group in *Agathis* makes this less likely.

Further complications concern the loss of many types of European *Bassus* and

Genus *Bassus* Fabricius, 1804

- Bassus* Fabricius, 1804: ix, 93; Shenefelt, 1970: 312 (synonym of *Agathis* Latreille, 1804); van Achterberg, 1982: 133; Chou & Sharkey, 1989: 151. Type species (designated by Curtis, 1825): *Ichneumon calculator* Fabricius, 1798 [examined].
- Microdus* Nees, 1814: 184; Shenefelt, 1970: 313 (synonym of *Agathis* Latreille, 1804); Tobias, 1976: 286-288; van Achterberg, 1982: 133; Nixon, 1986: 215; Tobias, 1986: 286; Chou & Sharkey, 1989: 151. Type species (designated by Haliday, 1840): *Ichneumon calculator* Fabricius, 1798 [examined].
- Diplozon* Haliday, 1833: 263; Shenefelt, 1970: 312 (synonym of *Agathis* Latreille, 1804). Type species (by monotypy): *Ichneumon calculator* Fabricius, 1798 [examined].
- Therophilus* Wesmael, 1837: 15; Shenefelt, 1970: 313; Chou & Sharkey, 1989: 151. Type species (designated by Viereck, 1914): *Microdus (Therophilus) conspicuus* Wesmael, 1837 [examined].
- Eumicrodus* Foerster, 1862: 247. Invalid emendation of *Microdus*.
- Lytopylus* Viereck, 1905: 267 nec Foerster, 1862; Shenefelt, 1970: 313; Chou & Sharkey, 1989: 151. Type species (by monotypy): *Lytopylus azygos* Viereck, 1905.
- Ioxia* Enderlein, 1920: 119; Shenefelt, 1970: 312; Chou & Sharkey, 1989: 151. Type species (by monotypy): *Ioxia faceta* Enderlein, 1920 [examined].
- Camptothlipsis* Enderlein, 1920: 166; Shenefelt, 1970: 378; Tobias, 1986: 289 (as synonym of *Baeognatha* Kokujev, 1903); Nixon, 1986: 229 (id.). **Syn. nov.** Type species (by original designation): *Camptothlipsis costalis* Enderlein, 1920 [examined], = *Bassus costalis* (Enderlein, 1920) **comb. nov.**
- Hormagathis* Brues, 1926: 287; Shenefelt, 1970: 309 (synonym of *Aerophilus* Szépligeti, 1902). **Syn. nov.** Type species (by monotypy): *Hormagathis mellea* Brues, 1926 [examined], = *Bassus melleus* (Brues, 1926) **comb. nov.**
- Obesomicrodus* Papp, 1971: 338. **Syn. nov.** Type species (by monotypy): *Obesomicrodus nigra* Papp, 1971 [examined], = *Bassus niger* (Papp, 1971 nec Telenga, 1955, = *B. nigrisoma* **nom. nov.**) **comb. nov.**

Diagnosis.— Head at most moderately narrowed ventrally (figs 5, 150), in frontal view trapezoid (not triangular), and only slightly or not elongate ventrally (figs 5, 18, 37), exceptionally longer (fig. 79); area between antennal sockets triangular to nearly flat, or with a shallow or deep median groove (figs 5, 18, 28, 37); antenna shorter than body and with 23-38 segments, its apex without an apical spine (fig. 70); scapus more or less punctate; clypeus at least partly flattened (figs 65, 79), transverse or quadrate (figs 72, 79), truncate or concave ventrally; labio-maxillary complex not or hardly protruding (figs 10, 78, 155) and its galea not longer than wide; area behind antennal sockets slightly to moderately depressed (figs 73, 79); frons without lateral carinae (fig. 73); frons without a strong median ridge; depression in front of anterior ocellus usually absent, but may be shallowly impressed (figs 16, 38); stemmaticum not protruding dorsally, and comparatively transverse (figs 8, 12, 73); ocelli in a low triangle with posterior tangent to anterior ocellus usually cutting or at least touching posterior pair of ocelli (figs 12, 16); malar suture and subocular groove absent (fig. 10); malar space distinctly longer than basal width of mandible (figs 10, 78); epomia single; lateral pronope (= subpronope) shallow or absent (fig. 10); dorsal pronope absent; prepectal carina complete, evenly curved laterally and strongly developed, but less so in *B. cingulipes* and *rugulosus*, and it may be reduced ventrally; mesopleuron shiny and more or less punctulate; precoxal sulcus at least partly present, narrow and crenulate (figs 10, 45); middle lobe of mesoscutum without a pair of longitudinal depressions anteriorly (fig. 4); notauli present (but may be reduced posteriorly) and usually narrow (figs 4, 50); scutellum usually without a distinct elevation subposterio-ly (fig. 4), but this may be weakly developed; metapleuron and propodeum normally setose; propodeal spiracle medium-sized, round (fig. 10) or slightly elliptical, distinctly removed from anterior margin of propodeum; propodeum reticulate,

rugose or punctate, and without extensive areolation, but an elongate medial areola may be present (fig. 6); vein r-m of fore wing present (fig. 20, typical *Bassus*), obsolescent or absent (figs 116, 144, "*Camptothlipsis/Baeognatha*"), and this may be infraspecifically variable, e.g. *B. nugax*); second submarginal cell without ramellus (fig. 1); vein 1-SR+M of fore wing at least medially absent (figs 1, 67, 93); veins SR1, m-cu, M+CU1 and CU1 of fore wing present; vein r of fore wing issuing near middle of pterostigma (figs 1, 64, 93); vein 1r-m of hind wing shorter than vein SC+R1; vein M+CU of hind wing shorter, equal to or longer than vein 1-M (figs 1, 47, 93); vein 2-1A of hind wing shorter than vein cu-a or absent; vein 2-CU of hind wing present, connected to vein cu-a or closely situated to it; tarsal claws simple, medium-sized and usually with a lobe (fig. 3); fore tibial spur normal (fig. 3), 0.4-0.5 times as long as fore basitarsus (fig. 3); length of inner spur of middle tibia 0.4-0.6 times middle basitarsus; apical half of middle tibia with peg(s) present above subapical cluster of pegs (fig. 7); hind trochantellus with its lower edges rounded, medium-sized; hind coxa shiny, punctulate or punctate, or rather mat and granulate; length of inner spur of hind tibia 0.4-0.6 times hind basitarsus; propodeal foramen distinctly removed from metasternal hind coxal cavities and separated by a sclerotized bridge; first metasomal tergite sessile and robust, its length 0.9-1.4 times its apical width, and laterope present (fig. 7); first-third tergites smooth, or partly or completely sculptured (figs 6, 30, 32, 33, 43, 81, 94); second suture distinctly impressed, but sometimes shallow; second and third tergites frequently with a transverse depression (figs 6, 77); ovipositor straight, medium-sized to long; ovipositor sheath subparallel-sided and subtruncate apically, its length 0.6-2.0 times fore wing; hypopygium medium-sized, truncate apically (fig. 10).

Distribution.—Cosmopolitan.

Biology.—Endoparasites of concealed larvae of Tortricidae, Gelechiidae, Scythrididae, Tineidae, Coleophoridae and Blastobasidae.

Key to West Palaearctic species of the genus *Bassus* Fabricius (for a key with less emphasis on sculpture, see p. 11)

1. Mesoscutum and scutellum entirely or partly yellowish- or reddish-brown 2
- Mesoscutum and scutellum entirely black, or partly dark (reddish-)brown 5
2. Tarsal claws without basal lobe; hind femur dark brown or blackish; first metasomal tergite (partly) coarsely (rugose-)striate; scutellum finely rugulose medio-posteriorly *B. calculator* (Fabricius)
- Tarsal claws with basal lobe (fig. 97); hind femur yellowish-brown; first tergite finely sculptured; scutellum largely smooth medio-posteriorly, except for subposterior depression (fig. 26) 3
3. Vein r-m of fore wing absent; length of first tergite about twice its apical width, and nearly completely granulate *B. armenicus* (Telenga)
- Vein r-m of fore wing present (fig. 17); length of first metasomal tergite 1.0-1.2 times its apical width and its surface sparsely and finely striate 4
4. Area between antennal sockets triangular (figs 15, 16); second and third metasomal tergites largely densely rugulose; vein SR1 of fore wing curved towards pterostigma, resulting in a narrow marginal cell basally (fig. 17); first tergite black; (Spain; N Africa) *B. barbieri* spec. nov.

- Area between antennal sockets divided by a median groove (fig. 54, 57); second and third tergites smooth; vein SR1 of fore wing straight and marginal cell wider basally (fig. 53, 59, 88); first tergite black or yellowish-brown (fig. 60) 13
- 5. First metasomal tergite with weak granulate sculpture in which longitudinal elements are absent (fig. 32); notauli smooth or nearly so 6
- First tergite striate, with longitudinal striae of variable intensity, or (*B. mediator*) somewhat rugose (figs 29, 30, 43, 52, 94), exceptionally granulate with few longitudinal elements laterally; notauli more or less micro-crenulate; fore and middle femora unicoloured 7
- 6. Vein r-m of fore wing present (fig. 128); precoxal sulcus nearly complete; fore and middle femora usually bicoloured; prepectal carina normal; clypeus distinctly concave ventrally (fig. 129) *B. eriphyle* (Nixon)
- Vein r-m of fore wing absent; precoxal sulcus absent except for a shallow and smooth depression; fore and middle femora unicoloured; prepectal carina strongly enlarged, thin and upcurved (similar to *B. tumidulus*, cf. fig. 89); clypeus nearly straight ventrally *B. canariensis* (Szépligeti)
- 7. Sculpture of metasoma nearly or completely restricted to first tergite, only occasionally some vague sculpture present mainly near the curved transverse groove (figs 77, 81) 8
- Metasomal sculpture extended to second and third tergites (figs 29, 30, 33, 43, 49, 52, 94), but sculpture sometimes only distinctly developed in anterior half of second tergite 18
- 8. Ovipositor sheath short, 0.3-0.5 times length of fore wing and about 0.7 times length of metasoma; length of fore wing 2-2.5 mm; marginal cell of fore wing usually comparatively wide (figs 47, 92); vein M+CU of hind wing longer than vein 1-M (fig. 47); hind tibia with distinct subbasal dark brown patch (cf. *B. rugulosus*, fig. 51) *Agathis pumila* (Ratzeburg)
- Ovipositor sheath at least 0.6 times fore wing and about as long as metasoma or longer; length of fore wing more than 3.0 mm; marginal cell of fore wing usually narrower (figs 53, 59, 61, 74, 80, 88, 91); relative length of vein M+CU of hind wing and colour of hind tibia variable 9
- 9. Area between antennal sockets triangular (fig. 18), and at most with a shallow groove; about apical half of hind tibia infusate, remainder of tibia whitish and with infusate patch subbasally (fig. 87); hind femur blackish or infusate; vein SR1 of fore wing nearly always strongly curved towards pterostigma (figs 19, 20); metasoma usually entirely black 10
- Area between antennal sockets with median groove or wide median depression (figs 54, 57, 62, 63, 72, 73, 75); hind tibia usually without whitish parts or dark subbasal patch, and usually largely yellowish-brown, and infusate apical part usually less than half of tibia; hind femur usually yellowish-brown, if largely infusate (*B. nugax*) then area between antennal sockets with pair of acute crests (fig. 63); vein SR1 of fore wing and colour of metasoma variable 11
- 10. Vein r-m of fore wing absent (fig. 116); marginal cell of fore wing somewhat wider (fig. 117); prepectal carina strong ventrally (nearly as strong as *B. tumidulus*: fig. 89); lobe of hind claws comparatively small (fig. 118); dark hind telotarsus contrasting with preceding segments; area between antennal sockets with shallow groove (fig. 120); first tergite more slender (fig. 121); length of ovipositor

- sheath about 0.8 times fore wing; parasite of Tortricidae on coniferous trees *B. epinotiae* spec. nov.
- Vein r-m of fore wing present (fig. 20); marginal cell of fore wing narrow (figs 19, 20); prepectal carina rather weakly developed ventrally; lobe of hind claws comparatively large (fig. 119); hind telotarsus coloured similarly to the preceding tarsal segment; area between antennal sockets without distinct groove (fig. 18); first tergite less slender; length of ovipositor sheath about equal to fore wing; parasite of Coleophoridae and Gelechiidae on herbs *B. cingulipes* (Nees)
 - 11. Crests of area between antennal sockets acute, medially nearly flat, with only a shallow and wide depression (figs 38-40, 62, 63, 75) which may be connected dorsally to a blunt keel directed towards anterior ocellus (fig. 38); vein SR1 of fore wing usually slightly curved (figs 35, 44, 46, 61, 74); vein M+CU of hind wing longer than vein 1-M (figs 46, 76) 12
 - Crests of area between antennal sockets convex dorsally (figs 25, 54, 57, 72, 73), this area with a narrow median groove (fig. 12), and no distinct keel present (figs 57, 73); vein SR1 straight (figs 11, 21, 88, 91), or strongly curved (figs 19, 20, 27), exceptionally slightly curved (fig. 80); vein M+CU of hind wing variable 13
 - 12. Ovipositor sheath longer than body and 1.4-1.6 times fore wing; head in frontal view distinctly elongate (fig. 37); length of fore wing 3.5-4.5 mm and body usually longer than 5 mm; crests of area between antennal sockets strong (figs 38-40); metasoma usually largely brownish or brownish black, with second tergite partly reddish-brown *B. linguarius* (Nees)
 - Ovipositor sheath as long as body and 0.8-1.1 times fore wing; head in frontal view less elongate (fig. 62); length of fore wing 2.0-3.7 mm, and of body 2.8-3.5 mm; crests of area between antennal sockets usually comparatively weak (figs 63, 75); metasoma usually black *B. nugax* (Reinhard)
 - 13. Hind margin of head, in lateral view, distinctly concave near lower level of eyes (fig. 78); head in frontal view elongate (fig. 79); wing membrane distinctly infusate *B. zaykovi* (Nixon)
 - Hind margin of head in lateral view usually slightly concave near lower level of eyes (fig. 108); head in frontal view transverse (fig. 72); wing membrane subhyaline 14
 - 14. Vein SR1 of fore wing straight (figs 11, 21, 53, 59, 88); inner rims of antennal sockets rather widely separated (figs 12, 13, 72, 73); medio-posterior depression of scutellum comparatively shallow and undivided, at most crenulate (fig. 55) 15
 - Vein SR1 of fore wing frequently strongly curved (fig. 27), but occasionally less so (fig. 91); inner rims of antennal sockets comparatively close to each other (fig. 16); medio-posterior depression of scutellum usually deep and divided into two parts (fig. 26) *B. conspicuus* (Wesmael)
 - 15. Area above occipital flange distinctly concave (figs 107, 109); anterior ocellus at level of depressions behind antennal sockets (fig. 105); frons conspicuously setose laterally; hind tibia pale yellowish or whitish, except apically dark brown and subbasally with a dark brown or infusate patch; eyes somewhat larger; antennal segments of ♀ about 38 and length of ovipositor sheath 0.8-1.1 times fore wing *B. arcuatus* (Reinhard)
 - Area above occipital flange not or only slightly concave (figs 108, 110); anterior ocellus distinctly above level of depressions behind antennal sockets (fig. 106);

- frons moderately setose laterally; hind tibia more or less brownish-yellow, if exceptionally pale yellowish (*B. tumidulus* var. *annae*) then without subbasal infuscation; eyes comparatively small; antennal segments of ♀ 28-39, if about 38 then length of ovipositor sheath 1.6-1.9 times fore wing 16
16. Length of ovipositor sheath 1.6-1.9 times fore wing; antennal segments of ♀ 36-39; mesosternal sulcus narrow and largely smooth
..... *B. clausethalianus* (Ratzeburg)
- Length of ovipositor sheath 0.8-1.4 times fore wing; antennal segments of ♀ 27-35, exceptionally 36; mesosternal sulcus variable 17
17. Area between antennal sockets wide V-shaped, its inner surface flat anteriorly and more or less rugose (fig. 122); tarsal claws slightly more slender and with smaller lobes (fig. 124); scapus distinctly narrowed apically and comparatively slender (fig. 127); second metasomal tergite may be pale yellowish-orange (British specimens), but fourth tergite black; tegulae dark brown; body somewhat more slender *B. tegularis* (Thomson)
- Area between antennal sockets nearly flat, shallowly grooved to narrow V-shaped, its inner surface convex (if distinctly grooved) and largely smooth, at most punctate or with some rugulae (fig. 123); tarsal claws more robust and with somewhat larger lobes (fig. 126); scapus not narrowed apically and comparatively robust (fig. 125); second metasomal tergite usually black, if yellowish then usually comparatively dark yellowish(-brown) and fourth tergite may be yellowish; tegulae blackish, dark brown or yellowish; body somewhat more robust
..... *B. tumidulus* (Nees)
18. Vein r-m of fore wing absent; first metasomal tergite granulate, with some rugae laterally; inner orbits of eyes yellowish *B. niger* (Telenga)
- Vein r-m of fore wing present; first metasomal tergite striate or somewhat rugose; inner orbits of eyes black, exceptionally pale 19
19. Ovipositor sheath short, about 0.5 times length of fore wing and at most somewhat longer than metasoma; length of vein M+CU of hind wing longer than vein 1-M (fig. 42); second submarginal cell sessile and usually quadrangular (fig. 42) ..
..... *Agathis mediator* (Nees)
- Ovipositor sheath more than 0.5 times length of fore wing and distinctly longer than metasoma; length of M+CU of hind wing variable (figs 48, 64); second submarginal cell of fore wing usually petiolate and triangular (figs 64, 67, 93) 20
20. Sculpture of metasoma distinctly developed beyond second metasomal suture (figs 49, 52), resulting in a distinctly sculptured third tergite 21
- Sculpture of metasoma ending abruptly at second suture, or in front of it (figs 29, 30, 33, 94); if sculpture occasionally extends beyond second suture, then it is obsolescent and sparse (fig. 34) 23
21. Apical 0.4 of hind tibia infusate; ovipositor sheath as long as fore wing or longer; first tergite comparatively elongate, with its carinae farther separated from each other and scarcely developed (fig. 52); metasoma largely rugulose and granulate (fig. 52) 22
- Apical 0.2 of hind tibia infusate, or less; ovipositor sheath never longer than fore wing; first tergite rather robust, its dorsal carinae somewhat closer to each other and stronger (fig. 49); metasoma regularly and densely striate (fig. 49)
..... *B. rufipes* (Nees)

22. Fifth (and most of fourth) metasomal tergite smooth or nearly so; hind tibia with a dark brown subbasal patch; fore coxa usually yellowish-brown; hind femur usually reddish-brown, exceptionally partly or largely infusate; prepectal carina slightly developed; mesosternal sulcus weakly crenulate; propodeum partly smooth latero-posteriorly *B. rugulosus* (Nees)
- Fourth and fifth tergites completely (superficially) granulate; hind tibia without a dark brown subbasal patch; fore coxa and hind femur black(ish); prepectal carina moderately developed; mesosternal sulcus distinctly crenulate; propodeum completely sculptured (granulate or rugose) latero-posteriorly .. *B. sculptilis* (Tobias)
23. Vein SR1 of fore wing distinctly curved (fig. 93); vein 1-M of fore wing distinctly bent (fig. 98), light brown and its surroundings sparsely setose; hind femur largely infusate; hind tibia infusate only apically *B. graecus* spec. nov.
- Vein SR1 of fore wing straight (fig. 64); vein 1-M of fore wing evenly curved (fig. 64), dark brown and its surroundings normally setose; hind femur yellowish, if infusate, then apical third of hind tibia dark brown 24
24. At most apical 0.2 of hind tibia infusate; length of ovipositor sheath about 0.6 times fore wing; metasoma robust and comparatively short (figs 33, 34); first tergite about as long as wide apically and partly granulate (fig. 33); combined length of second and third tergites about equal to their maximum width (figs 33, 34); dorsal carinae of first tergite very strong and comparatively close to each other (fig. 33) *B. fortipes* (Reinhard)
- At least apical half of hind tibia infusate; ovipositor sheath about as long as fore wing; metasoma slender (figs 29, 30); first tergite longer than its width apically and largely striate (figs 29, 30); combined length of second and third tergites longer than their maximum width (figs 29, 30); dorsal carinae of first tergite far separated from each other (figs 29, 30) *B. dimidiator* (Nees)

Key to West Palaearctic species of the genus *Bassus* Fabricius, with less emphasis on sculpture

1. Clypeus distinctly convex (fig. 99); ovipositor short, its sheath 0.3-0.8 times fore wing and 0.7-1.7 times metasoma, if ovipositor sheath 0.7-0.8 times fore wing and about 1.7 times metasoma then head distinctly elongate and frons with pair of distinct depressions (figs 99, 115); marginal cell of fore wing comparatively wide basally (figs 42, 47, 92, 111-113); second submarginal cell of fore wing sessile and usually quadrangular (figs 42, 92); vein M+CU of hind wing longer than vein 1-M or subequal; parasites of Coleophoridae; (*Agathis mediator* group) 2
- Clypeus at least partly flattened (figs 72, 79); ovipositor usually long, its sheath longer than 0.5 times fore wing and at least as long as metasoma, if ovipositor sheath less than 0.9 times fore wing then is head less elongate (fig. 65) and frons has no pair of distinct depressions (fig. 65); marginal cell of fore wing usually narrow basally (figs 48, 80, 88, 91); second submarginal cell of fore wing usually petiolate and triangular (figs 48, 88, 91), or vein r-m absent (fig. 116); length of vein M+CU of hind wing variable; parasites of other groups, exceptionally of Coleophoridae; (*Bassus sensu stricto*)* 5

* If notauli are absent, cf. species of *Earinus* Wesmael, 1837, with reduced vein 1-SR+M of fore wing.

2. Second metasomal tergite largely granulate or rug(ul)ose and rather mat (fig. 43); hind tibia largely yellowish; subbasal ring of hind tibia faint; length of fore wing 2.5-3.0 mm; mesosternal sulcus distinctly sculptured; parasite of Coleophoridae on deciduous trees and herbs 3
- Second tergite smooth and strongly shiny; hind tibia extensively dark brown; dark subbasal ring of hind tibia distinct; length of fore wing 2.0-2.5 mm; mesosternal sulcus at most slightly sculptured; parasites of Coleophoridae on coniferous trees *Agathis pumila* (Ratzeburg)
3. Head in frontal view distinctly elongate and narrowed ventrally (fig. 99); length of ovipositor sheath 0.4-0.5 times fore wing; frons with weak median crest and no distinct triangular depression in front of anterior ocellus (figs 100, 101); second metasomal tergite sculptured medio-basally; tarsal claws with distinct more or less acute lobe 4
- Head less elongate and less narrowed ventrally (figs 100, 101); length of ovipositor sheath 0.7-0.8 times fore wing; frons with distinct median crest and with a triangular depression in front of anterior ocellus (fig. 115); medio-basal elevation of second tergite smooth; tarsal claws without distinct acute lobe *A. lugubris* (Foerster)
4. Notauli complete; wing membrane slightly infusate; at least basal half of outer side of hind femur dark brown; face comparatively flat (fig. 103); second tergite transversely aciculate medio-basally *A. brevicaudis* (Reinhard)
- Notauli reduced on mesoscutal disc; wing membrane strongly infusate; hind femur usually nearly completely yellowish-brown; face more convex (fig. 104); second tergite granulate medio-basally *A. mediator* (Nees)
5. Mesoscutum and scutellum entirely or partly yellowish- or reddish-brown 6
- Mesoscutum and scutellum entirely black, or partly dark (reddish-)brown 9
6. Tarsal claws without basal lobe; hind femur dark brown or blackish; first metasomal tergite (partly) coarsely (rugose-)striate; scutellum finely rugulose medio-posteriorly *B. calculator* (Fabricius)
- Tarsal claws with basal lobe (fig. 97); hind femur yellowish-brown or infusate; first tergite finely sculptured; scutellum largely smooth medio-posteriorly, except for its subposterior depression 7
7. Vein r-m of fore wing absent; length of first tergite about twice its apical width, and nearly completely granulate *B. armenicus* (Telenga)
- Vein r-m of fore wing present (fig. 17); length of first metasomal tergite 1.0-1.2 times its apical width and its surface sparsely and finely striate 8
8. Area between antennal sockets triangular (figs 15, 16); second and third metasomal tergite finely striate; vein SR1 of fore wing curved towards pterostigma, resulting in a narrow marginal cell basally (fig. 17); first tergite black; (Spain; N Africa) *B. barbieri* spec. nov.
- Area between antennal sockets divided by a median groove (figs 48, 49); second and third tergite smooth; vein SR1 of fore wing straight and marginal cell wider basally (figs 50, 51); first tergite black or yellowish-brown (fig. 54) 23
9. Apical third of hind tibia mainly or completely dark brown, strongly contrasting with mainly whitish(-yellow) basal half of tibia and area between antennal sockets more or less triangular in frontal view (figs 51, 87) or nearly flat, and at most with shallow narrow groove (figs 18, 28); ovipositor sheath 1.1 times as long as fore wing or shorter 10

- Apical third of hind tibia largely or completely yellowish and its basal half usually (largely) yellowish, if apical third of hind tibia is dark brown and contrasting with its surroundings then area between antennal sockets not triangular, and with a (shallow) median groove (in frontal view; figs 72, 73) and/or ovipositor sheath much longer than fore wing 17
- 10. Precoxal sulcus about half as long as mesopleuron and sculptured; mesosternal sulcus smooth or nearly so; hind femur very robust, 2.5-2.8 times its width (fig. 87); vein SR1 of fore wing strongly curved towards pterostigma (figs 19, 20); second metasomal tergite completely smooth; hind femur black(ish) or infusate; wing membrane infusate and its basal half moderately setose 11
- Precoxal sulcus superficially impressed, smooth or sculptured, and longer than half length of mesopleuron (except in *B. niger* which has the mesosternal sulcus coarsely crenulate); hind femur comparatively slender, 3.2-4.3 times its width, if about 3 times then second tergite distinctly sculptured or basal half of fore wing sparsely setose; vein SR1 of fore wing straight or nearly so, exceptionally distinctly curved; second tergite at least partly somewhat sculptured (figs 29-31, 52), if smooth then wing membrane hyaline, or and hind femur largely yellowish- or reddish-brown, at most with a dark brown dorso-apical patch 12
- 11. Vein r-m of fore wing absent (fig. 116); marginal cell of fore wing somewhat wider (fig. 117); prepectal carina strongly developed ventrally (nearly as strong as in *B. tumidulus*: fig. 89); lobe of hind claws comparatively small (fig. 118); dark hind telotarsus contrasting with preceding segments; area between antennal sockets with a shallow groove (fig. 120); first tergite more slender (fig. 121); length of ovipositor sheath about 0.8 times fore wing; parasite of Tortricidae on coniferous trees *B. epinotiae* spec. nov.
- Vein r-m of fore wing present (fig. 20); marginal cell of fore wing narrow (figs 19, 20); prepectal carina rather weakly developed ventrally; lobe of hind claws comparatively large (fig. 119); hind telotarsus similarly coloured to the preceding tarsal segment; area between antennal sockets without a distinct groove (fig. 18); first tergite less slender; length of ovipositor sheath about equal to fore wing; parasite of Coleophoridae and Gelechiidae on herbs *B. cingulipes* (Nees)
- 12. Vein r-m of fore wing absent (cf. fig. 116); precoxal sulcus about half as long as mesopleuron and sculptured or superficially impressed and smooth; first metasomal tergite granulate and distinctly widened apically 13
- Vein r-m of fore wing present (fig. 128); precoxal sulcus longer than half length of mesopleuron and sculptured; first tergite variable, if granulate (*B. eriphyle*) then hardly widened apically (fig. 32) 14
- 13. Prepectal carina normal, thick and not upcurved; inner orbits of eyes yellowish; precoxal sulcus crenulate; vein SR1 of fore wing about equal to length of pterostigma; mesosternal sulcus coarsely crenulate *B. niger* (Telenga)
- Prepectal carina strongly enlarged, thin and upcurved (similar to *B. tumidulus*; cf. fig. 89); inner orbits of eyes largely black; precoxal sulcus smooth; vein SR1 of fore wing distinctly longer than length of pterostigma; mesosternal sulcus largely smooth *B. canariensis* (Szépligeti)
- 14. First metasomal tergite comparatively slender and less widened apically, with superficial granulate sculpture in which longitudinal elements are absent (fig. 32); notauli smooth; precoxal sulcus (nearly) complete; fore and middle femora usually dark brown basally and yellowish apically; clypeus distinctly concave ventrally (fig. 129); tarsal claws with cleft narrow and deep (fig. 130) *B. eriphyle* (Nixon)

- First tergite comparatively robust, distinctly widened apically and with longitudinal striae of variable intensity, sometimes nearly completely smooth (figs 21, 23, 33, 42, 45); precoxal sulcus absent anteriorly; notauli more or less micro-crenulate; fore and middle femora unicoloured; clypeus at most slightly concave ventrally (fig. 28); cleft of tarsal claws shallower and wider (cf. figs 118, 145, but narrow in *B. dimidiator*) 15
- 15. Anterior half of third metasomal tergite (partly) (granulate-)rugulose and submedially with a (shallow) transverse groove (fig. 52); postero-dorsal corner of pronotal sides distinctly punctate (figs 84, 85); second submarginal cell of fore wing (sub)sessile (fig. 67); prepectal carina variable; length of hind femur less than 3.5 times its width 16
- Anterior half of third tergite completely smooth and submedially without a transverse groove (figs 29, 30); postero-dorsal corner of pronotal sides largely smooth, at most superficially punctate; second submarginal cell of fore wing long petiolate; prepectal carina distinctly developed; length of hind femur 3.6-4.3 times its width *B. dimidiator* (Nees)
- 16. Fifth (and most of fourth) metasomal tergite smooth or nearly so; hind tibia with a dark brown subbasal patch; fore coxa usually yellowish-brown; hind femur usually reddish-brown, exceptionally partly or largely infuscate; prepectal carina slightly developed and completely below fore coxae in ventral view; mesosternal sulcus weakly crenulate; propodeum partly smooth latero-posteriorly *B. rugulosus* (Nees)
- Fourth and fifth tergites completely (superficially) granulate; hind tibia without a dark brown subbasal patch; fore coxa and hind femur black(ish); prepectal carina moderately developed and extending distinctly beyond fore coxae in ventral view; mesosternal sulcus distinctly crenulate; propodeum completely sculptured (granulate or rugose) latero-posteriorly *B. sculptilis* (Tobias)
- 17. Area between antennal sockets distinctly triangular in frontal view and without a distinct groove (fig. 65); third metasomal tergite with a (sometimes indistinct) submedial transverse groove (figs 39, 49), but absent in *B. graecus* (fig. 94); second tergite distinctly sculptured (figs 49, 94); hind tibia robust (fig. 66); second submarginal cell of fore wing distinctly petiolate (figs 48, 93); length of ovipositor sheath 0.6-0.9 times fore wing 18
- Area between antennal sockets not triangular in frontal view and with a (shallow) groove or nearly flat (figs 62, 63, 72); third tergite without a submedial transverse groove or groove obsolescent (fig. 77); second tergite usually (largely) smooth, if sculptured then hind tibia comparatively slender (fig. 23) and second submarginal cell of fore wing (sub)sessile (fig. 21); length of ovipositor sheath variable 20
- 18. Vein SR1 of fore wing distinctly curved (fig. 93); basal half of fore wing sparsely setose, less setose than distal half of wing (fig. 98); vein 1-M of fore wing distinctly bent (fig. 98); hind femur infuscate; hind tibia whitish and infuscate only near its apex; mesosternal sulcus narrow and nearly smooth *B. graecus* spec. nov.
- Vein SR1 of fore wing straight or nearly so (figs 48, 64); basal half of fore wing normally setose, as setose as distal half of wing; vein 1-M of fore wing at most evenly curved (figs 48, 64); hind femur yellowish, if infuscate then apical third of hind tibia dark brown; mesosternal sulcus wider and distinctly crenulate 19

19. Basal half of third metasomal tergite longitudinally striate (fig. 49); length of ovipositor sheath 0.7-1.0 times fore wing; first and second tergites less robust (fig. 49); middle lobe of mesoscutum comparatively sparsely punctate *B. rufipes* (Nees)
- Basal half of third tergite largely smooth (fig. 34); length of ovipositor sheath 0.6-0.7 times fore wing; first and second tergites robust (figs 33, 34); middle lobe of mesoscutum distinctly punctate *B. fortipes* (Reinhard)
20. In oblique view from above with a pair of crests on area between antennal sockets acute, and medially separated by a nearly flat area with only a wide and shallow depression (figs 38-40, 62, 63, 75) which may be connected to a blunt keel directed to anterior ocellus (fig. 38); if crests are intermediate then clypeus comparatively long (fig. 37); hind tibia infusate or yellowish-brown apically; vein SR1 of fore wing straight or slightly curved (figs 35, 44, 46, 61, 74); vein M+CU of hind wing longer than vein 1-M (figs 46, 76) 21
- In oblique view from above with a pair of crests on area between antennal sockets at most obtusely protruding, and medially with an (often rather) narrow groove (figs 25, 54, 57, 72, 73) without a distinct keel directed to anterior ocellus (figs 57, 73); clypeus usually comparatively short (fig. 22); colour of hind tibia and shape of vein SR1 variable; vein M+CU of hind wing usually about as long as vein 1-M or shorter (figs 21, 27) 22
21. Prepectal carina wide and upcurved (cf. fig. 89); ovipositor sheath longer than body and 1.3-1.6 times fore wing; length of fore wing 3.4-4.5 mm; length of body usually more than 5 mm; length of mesosoma 1.4-1.5 times its height; clypeus in frontal view comparatively long and head distinctly elongate (fig. 37) *B. linguarius* (Nees)
- Prepectal carina normal, narrow and not upcurved; ovipositor sheath as long as body and 0.8-1.1 times fore wing; length of fore wing 2.0-3.7 mm; length of body 2.8-3.5 mm; length of mesosoma about 1.7 times its height; clypeus in frontal view comparatively short and head less elongate (fig. 62) *B. nugax* (Reinhard)
22. Head in frontal view more elongate (fig. 79); ventral part of temple wide compared to its dorsal part (fig. 78); hind margin of head in lateral view distinctly concave near lower level of eyes (fig. 78); mesosternal sulcus smooth; clypeus comparatively convex (fig. 82); prepectal carina weakly developed medio-ventrally and shallowly emarginate (fig. 82); wing membrane distinctly infusate (fig. 80) *B. zaykovi* (Nixon)
- Head in frontal view transverse (fig. 72); hind margin of head in lateral view slightly concave near lower level of eyes (fig. 108), if exceptionally distinctly concave (fig. 107) then dorsal part of temple about as wide as its ventral part (fig. 107); mesosternal sulcus usually distinctly crenulate; clypeus less convex; prepectal carina strongly developed medio-ventrally and deeply emarginate (figs 89, 90); wing membrane usually only slightly infusate or subhyaline 23
23. Prepectal carina comparatively thick, not upcurved, and partly situated behind level of apices of fore coxae (fig. 90); vein SR1 of fore wing more or less bent (figs 27, 91), but sometimes straight; medio-posterior depression of scutellum deep and divided into two parts (fig. 26); median groove in front of anterior ocellus present; second metasomal tergite yellowish-brown; vein M+CU of hind wing about as long as vein 1-M or longer (fig. 27) *B. conspicuus* (Wesmael)
- Prepectal carina thin, more or less upcurved, and not extending beyond level of apices of fore coxae (fig. 89); vein SR1 of fore wing straight (figs 11, 21, 53, 59, 88);

- medio-posterior depression of scutellum comparatively shallow and undivided (fig. 55); frons usually without median groove in front of anterior ocellus; second tergite usually black, but may be yellowish or orange; vein M+CU of hind wing shorter than vein 1-M (fig. 21) 24
24. Area above occipital flange distinctly concave (figs 107, 109); anterior ocellus at level of depressions behind antennal sockets (fig. 105); frons conspicuously setose laterally; hind tibia pale yellowish or whitish, except its dark brown apex and subbasally with a dark brown or infusate patch; eyes somewhat larger; antennal segments of ♀ about 38 and length of ovipositor sheath 0.8-1.1 times fore wing *B. arcuatus* (Reinhard)
- Area above occipital flange not or only slightly concave (figs 108, 110); anterior ocellus distinctly above level of depressions behind antennal sockets (fig. 106); frons moderately setose laterally; hind tibia more or less brownish-yellow, if exceptionally pale yellowish (*B. tumidulus* var. *annae*) then without subbasal infuscation; eyes comparatively small; antennal segments of ♀ 27-39, if about 38 then length of ovipositor sheath 1.6-1.9 times fore wing..... 25
25. Length of ovipositor sheath 1.6-1.9 times fore wing; antennal segments of ♀ 36-39; mesosternal sulcus narrow and largely smooth *B. clausethalianus* (Ratzeburg)
- Length of ovipositor sheath 0.8-1.4 times fore wing; antennal segments of ♀ 27-35, exceptionally 36; mesosternal sulcus variable 26
26. Area between antennal sockets wide V-shaped, inner surface of its sides flat anteriorly and more or less sculptured (fig. 122); scapus comparatively slender and more or less narrowed apically (fig. 127); tarsal claws slightly more slender (fig. 124); second metasomal tergite may be pale yellowish-orange (British specimens), but fourth tergite is black; tegulae dark brown; body somewhat more slender *B. tegularis* (Thomson)
- Area between antennal sockets nearly flat, shallowly grooved or with narrow V-shaped groove, its inner surface convex (if distinctly grooved) and largely smooth, at most punctate or with some rugulae (fig. 123); scapus comparatively robust and usually not or hardly narrowed apically (fig. 125); tarsal claws slightly more robust (fig. 126); second metasomal tergite usually black, if pale then usually comparatively dark yellowish(-brown) and fourth tergite may be yellowish; tegulae blackish, dark brown or yellowish; body somewhat more robust *B. tumidulus* (Nees)

Descriptions

***Bassus arcuatus* (Reinhard, 1867) re-instated & comb. nov.**
(figs 11-14, 69-73, 105, 107, 109)

Microdus arcuatus Reinhard, 1867: 353. Lectotype, ♀ (ZMB), probably from Germany, designated below. *Agathis arcuata*; Shenefelt, 1970: 318; Tobias, 1986: 288; Nixon, 1986: 225 (as synonym of *Microdus conspicuus* Wesmael, 1837).

Microdus clausethalianus p.p.; Nixon, 1986: 224.

Material.— Lectotype, ♀ (ZMB), "Coll. H. Rhd.", "Type"; paralectotypes: 2 ♀♀ (ZMB), same labels; 1 ♀ (RMNH) "Nederland, Wijster (Dr.), opposite Biol. Stat., 29.vi.-5.vii.1973, C. van Achterberg" (identified by G.E.J. Nixon as *M. clausethalianus*);

Lectotype, ♀, length of fore wing 6.1 mm, of body 7.3 mm.

Head.— Antennal segments 38 (as in both paralectotypes and ♀ from Wijster), long setose; length of third segment 1.3 times fourth segment; length of third, fourth and penultimate segment 3.7, 3.4 and 1.6 times their width, respectively; length of maxillary palp 0.8 times height of head; length of eye 2.2 times temple in dorsal view; POL:diameter of ocellus:OOL = 9:5:10; face punctate and conspicuously pilose; frons distinctly sculptured; vertex punctate; anterior ocellus near level of depressions behind antennal sockets (fig. 105); area between antennal sockets rather wide, with a median shallow groove, and only slightly convex towards inner socket (fig. 73); area behind antennal sockets only scarcely depressed and rather narrow, (i. e. distance between antennal sockets and anterior ocellus rather small; fig. 105); malar space long setose (fig. 72); temple distinctly depressed above occipital flange (figs 107, 109); eye somewhat larger than in *B. tumidulus*.

Mesosoma.— Length of mesosoma 1.4 times its height; side of pronotum smooth and polished medially, pilose and somewhat rugulose anteriorly and posteriorly; epomia double and lateral pronope rather shallow; prepectal carina thin and up-curved, not reaching beyond fore coxae; mesosternal sulcus narrow and smooth or nearly so; area above precoxal sulcus smooth or punctulate; precoxal sulcus long and thin, with distinct micro-crenulation; mesoscutum finely punctate and pilose; notauli moderately impressed and almost obscured by pilosity; scutellum moderately convex, punctate, with a low and thin crest posteriorly; metapleuron pilose, punctate; propodeum with rugosity and strong areolation.

Wings.— Fore wing: second submarginal cell subtriangular (fig. 11), usually with a short stalk; SR1 straight; vein 2A present; vein cu-a inclivous; $r:3\text{-SR}+\text{SR1} = 3:61$. Hind wing: $M+\text{CU}:1\text{-M} = 34:35$.

Legs.— Hind femur moderately robust; claws as in *tumidulus*; length of hind femur, tibia and basitarsus 3.4, 7.2, and 9 times their width, respectively; length of inner and outer spur of middle tibia 0.6 and 0.45 times middle basitarsus; length of inner and outer spur of hind tibia 0.4 and 0.35 times hind basitarsus, respectively.

Metasoma.— Length of first tergite 1.1 its apical width, its surface distinctly striate, with pair of dorsal carinae in its basal half; length of combined second and third tergites 1.5 times their maximum width (but 1.2 times in ♀ from Wijster); remainder of metasoma smooth, polished; ovipositor sheath rather pilose (fig. 14), length of ovipositor sheath 1.07 times length of fore wing and about equal to length of mesosoma plus metasoma.

Colour.— Black; legs yellowish-brown, but hind tarsus and apical quarter of hind tibia dark brown; hind tibia infusate subbasally, and remainder pale yellow; tegulae yellowish.

Diagnostic characters.— The pale colour of the hind tibia combined with the comparatively short ovipositor (length of sheath 0.8-1.1 times fore wing), the position of the anterior ocellus, and the depression above the occipital flange allows recognition. Some specimens are more easily recognizable because of a very pilose ovipositor sheath, but the lectotype and some other specimens have a less pilose and more normal ovipositor sheath.

Distribution.— Germany, *Netherlands.

Biology.— Unknown.

Bassus armenicus (Telenga, 1955) comb. nov.

Baeognatha armenica Telenga, 1955: 300; Shenefelt, 1970: 367; Tobias, 1986: 289; Nixon, 1986: 229-230, fig. 60. Holotype, ♀ (ZIP), from Armenia.

Interpretation based on the redescription by Nixon (1986).

Diagnostic characters.— The lack of the vein r-m of fore wing, the presence of a sculptured precoxal sulcus, the narrow marginal cell of fore wing, the ovipositor about as long as body and the yellowish hind femur allow an easy identification.

Distribution.— Armenia, Austria, Turkey.

Biology.— Parasite of Gelechiidae (*Anarsia eleagnella* Kuznetsov and *Recurvaria nanella* (Denis & Schiffermüller), and of Tortricidae (*Cydia funebrana* Treitschke).

Bassus barbieri spec. nov.

(figs 15-17)

Material.— Holotype, ♀ (MNHN), "D 18 Ould Sassel, Oran [Algeria], 15.vii.1961, J. Barbier ", " 6545 ". Paratype: 1 ♀ (ITZ), "Islas Baleares, Mallorca, Ciudad de los Lagos, 17.viii.1969, A.C. & W.N. Ellis".

Holotype, ♀, length of fore wing 3 mm (2.9 mm in paratype), of body about 4 mm (in paratype 3.5 mm).

Head.— Antennal segments 30 (as in paratype); length of third segment 1.2 times fourth segment; length of third, fourth and penultimate segments 3.6, 3.0 and 2.0 times their width, respectively; length of maxillary palp about 0.7 times height of head; length of eye about twice temple in dorsal view; POL:diameter of ocellus:OOL = 5:3:7; face minutely punctate and moderately transverse in frontal view (fig. 15); area between antennal sockets triangular, with inner rims of antennal sockets converging to form a blunt, median keel (fig. 15); area in front of anterior ocellus with a small elongate depression (fig. 16); depressions behind antennal sockets rather shallow; vertex punctulate.

Mesosoma.— Length of mesosoma 1.4 times its height; side of pronotum smooth, somewhat punctulate only posteriorly; epomia single and lateral pronope small; prepectal carina normal; mesosternal sulcus rather deep and crenulate; mesopleuron largely smooth above precoxal sulcus, with sparse punctulation medio-posteriorly; area below precoxal sulcus entirely punctulate; mesoscutum minutely punctate, notauli narrow, distinctly impressed and micro-crenulated; scutellum somewhat squarish, rather flat, sparsely punctate and without crest; metapleuron minutely punctate; propodeum with rather regular and rather weak areolation.

Wings.— Fore wing: marginal cell very narrow, especially its basal half (fig. 17, but far less so in paratype); SR1 curved; second submarginal cell triangular and very small; 2A absent; basal cell sparsely setose; cu-a inclivous; r:3-SR+SR1 = 2:41. Hind wing: M+CU:1-M = 16:23.

Legs.— Length of hind femur, tibia and basitarsus 3.0, 5.7 and 6.2 times their width, respectively; length of inner and outer spur of middle tibia 0.6 and 0.45 times middle basitarsus; length of inner and outer spur of hind tibia 0.4 and 0.35 times hind basitarsus, respectively.

Metasoma.— Length of first tergite 1.2 times its apical width, its surface sparsely

and finely striate, and pair of dorsal carinae absent; length of combined second and third tergites 1.4 times their maximum width; basal half of second tergite densely (striate-)rugulose, apical half somewhat more irregularly so; second suture distinctly rugulose; apical part of metasoma beyond second suture entirely smooth but partly sculptured in paratype; length of ovipositor sheath equal to fore wing and somewhat shorter than body.

Colour.— Dark brown; mesoscutum, tegulae, palpi (but basally somewhat darkened), scutellum, side of pronotum and all legs, except hind tarsi, yellowish-brown; mesopleuron and metapleuron largely brownish; propodeum and metasoma largely blackish; second metasomal tergite somewhat reddish-brown; apical sixth of hind tibia infusate. Paratype has scutellum black, coxae and hind femur infusate; hind tibia apically and subbasally dark brown and remaining part pale yellowish.

Diagnostic characters.— The most distinctive character for this species is the triangular shape of the area between the antennal sockets, combined with the sculptured second tergite and the curved vein SR1 of the fore wing. *B. cingulipes* also has the triangular area between the antennal sockets and curved SR1 in the fore wing; however, *B. cingulipes* has the second tergite smooth and the mesoscutum always entirely black. *B. graecus* also has a sculptured second tergite, the area between the antennal sockets rather triangular and vein SR1 of the fore wing curved, but this species is easily separated from *B. barbieri* because of the peculiar shape of vein 1-M of its fore wing and its entirely black mesoscutum.

Distribution.— *Algeria, *Spain.

Biology.— Unknown.

Bassus calculator (Fabricius, 1798)

Ichneumon calculator Fabricius, 1798: 225; van Achterberg, 1982: 133 (lectotype designation). Lectotype, ♀ (ZMC), from Italy examined.

Bassus calculator; Fabricius, 1804: 98.

Microdus calculator; Nees, 1834: 144; Tobias, 1971: 260 & 1986: 286; Nixon, 1986: 217.

Agathis calculator; Shenefelt, 1970: 323.

Microdus abscissus Ratzeburg, 1844b: 58. Holotype, ♂, from Germany is lost. Synonymised by Ratzeburg, 1852: 45.

Material.— 1 ♀ (RMNH), "Nederland, Delden, 16.viii.1978, B. v.Aartsen", "compared & conspecific with lectotype of *Ichneumon calculator* F., van Achterberg, 1980"; 1 ♂ (RMNH), "[Netherlands], Westwolde, 2.vii.1975, B. v.Aartsen"; 1 ♂ (RMNH), "[Netherlands], Museum Leiden, Dr. E.A.M. Speijer, "De Schaffelaar", Barneveld, 17-29.vi.1943"; 2 ♀♀ + 1 ♂ (RMNH), "[Denmark], Drewsen, Copenh."; 1 ♂ (RMNH), "Türnitz (N. Österreich), 28.vi-18.vii.1968, G. den Hoed"; 1 ♀ (RMS), "[England], Berks., Windsor Gt Pk., Paddock Wood, em. x.1980, P.J. Chandler, coll. 31.viii.1980, ex *Bjerkandera adusta*"; 5 ♀♀ + 5 ♂♂ (MNHN), France: Hyeres, Dijon, Gevrolle, Fontainebleau, Rennes, Hyeres; 9 ♀♀ (MNHN), locality unknown; 1 ♂ (MNHN), de Gaulle, France (Vannes); 1 ♀ (ZSBS), Haeselbarth, Germany (Süd-Baden).

Redescribed from ♀ from The Netherlands compared with lectotype, length of fore wing 6.0 mm, of body 6.8 mm.

Head.— Antennal segments 34 (in other specimens 32-35); length of third segment 1.3 times fourth segment; length of third, fourth and penultimate segments 3.8, 3.0 and 1.1 times their width, respectively; length of maxillary palp 0.8 times height

of head; length of eye 3 times temple, POL:diameter of ocellus:OOL = 6:5:12; face rather punctate, clypeus moderately transverse and largely smooth; area between antennal sockets triangular, with median keel; area behind antennal sockets distinctly depressed; vertex sparsely punctulate; temples somewhat concave posteriorly; length of malar space 2.3 times basal width of mandible

Mesosoma.— Length of mesosoma 1.5 times its height; lateral pronope small and shallow; epomia double; side of pronotum finely punctulate posteriorly, smooth medially, and crenulate-rugose medio-anteriorly; mesosternal sulcus distinctly crenulate and rather deep; prepectal carina strong ventrally, normal and not emarginate; mesoscutum and scutellum sparsely punctate, but middle lobe of mesoscutum more densely so than lateral lobes; notauli distinct, finely and narrowly micro-crenulate; scutellum triangular, moderately convex and with weak posterior crest; mesopleuron smooth above precoxal sulcus, somewhat punctulate below it; precoxal sulcus nearly complete, rather wide and strongly crenulate; metapleuron coarsely punctate dorsally and coarsely rugose ventrally; propodeum very coarsely rugose.

Wings.— Fore wing: second submarginal cell (sub)triangular, with or without a short stalk; SR1 straight; r:3-SR+SR1 = 7:60; cu-a inclivous. Hind wing: M+CU:1-M = 7:8.

Legs.— Hind femur densely punctate and robust; claws robust and without a basal lobe; length of hind femur, tibia and basitarsus 3.8, 7.0 and 9 times their width, respectively; length of inner and outer spur of middle tibia 0.5 and 0.4 times their basitarsus; length of inner and outer spur of hind tibia 0.4 and 0.3 times hind basitarsus, respectively.

Metasoma.— Length of first tergite 1.4 times its apical width, its surface strongly striate, with pair of robust dorsal carinae basally; length of combined second and third tergite 1.1 times their maximum width; basal third of second tergite superficially rugose (but may be strongly striate in other specimens), remainder of metasoma smooth; length of ovipositor sheath 1.04 times fore wing (in other specimens 0.9 times) and about equal to combined length of meta- and mesosoma.

Colour.— Black; mesoscutum, scutellum, side of pronotum, mesopleuron and mesosternum (but both partly black) orange-brown; head, antenna, propodeum, metapleuron and metasoma black; palpi, fore and middle leg (but middle coxa, trochanter and trochantellus, and base of femur black, and middle tibia whitish basally) yellowish-brown; middle coxa and hind leg black, except tibia with a small basal whitish band; wings subhyaline, with veins and pterostigma dark brown.

Diagnostic characters.— This species is one of the most easily recognizable *Bassus* species, due to the lack of a basal lobe on the hind claws and the colour of the mesosoma and hind tibia.

Distribution.— France, Great Britain, Italy, *Netherlands.

Biology.— According to Nixon (1986) a parasite of Tineidae in (bracket) fungi or dead wood: *Morophaga boleti* (Fabricius) and probably also *Triaxomera parasitella* (Hübner).

***Bassus canariensis* (Szépligeti, 1908) comb. nov.**

Baeognatha canariensis Szépligeti, 1908: 411; Shenefelt, 1970: 367. Holotype, ♀ (TMA), from Canary Islands (Tenerife) examined.

Material.— 1 ♀ (RMNH), “[Canary Islands], Tenerife, B. del Infierno, 30.iv.1971, Teunissen”; 1 ♀ (RMNH), “[Canary Islands], El Charco (Fuerteventura), 12-16.ii.[19]85, Canarias (España), leg. H. Teunissen”; 1 ♂ (RMNH), “[Canary Islands], El Cotillo (Fuerteventura), 17.ii.[19]85, leg. H. Teunissen”; 1 ♂ (RMNH), “Islas Canarias, Tenerife, Las Galletas, 24.ii.1951, J.M. Fernandez”; 1 ♀ (RMNH), “Tenerife, Santa Cruz, 15.xii.1943, R. Arozarena” [compared with holotype]; 1 ♂ (RMNH), “Fuerteventura, Tiudaya, 16.ii.[19]77, M. Báez”.

Diagnostic characters.— The lack of the vein r-m of fore wing, the absence of a sculptured precoxal sulcus, the strongly developed and upcurved prepectal carina, the narrow marginal cell of the fore wing, the ovipositor about 0.8 times fore wing and the yellowish hind femur allow an easy identification.

Distribution.— Canary Islands.

Biology.— Unknown.

***Bassus cingulipes* (Nees, 1814)**

(figs 18-20, 87, 119)

Microdus cingulipes Nees, 1814: 189; Tobias, 1986: 288; Nixon, 1986: 221-222. Syntypes from Germany are lost; neotype, ♀ (MNHN), from France designated below.

Bassus cingulipes; Thompson, 1953: 94, 96.

Agathis cingulipes; Shenefelt, 1970: 325-326

Material.— 1 ♀ (neotype here designated, MNHN), “Museum Paris, France, Le Vernet, Seine et Oise, coll. O. Sichel, 1867”; 1 ♀ (MNHN), “Museum Paris, France, Le Vernet, Seine et Oise, coll. O. Sichel, 1867”, “Ves, 1.ix.[18]60”; 1 ♀ (MNHN), “Lucerne, 25.vi.[19]22”, “Museum Paris, coll. de Gaulle, 1919”; 1 ♀ (MNHN), “Museum Paris, coll. J. de Gaulle 1919”, handwritten label illegible; 1 ♀ (MNHN), “Museum Paris, 1906 coll. Leon Fairmaire”, “Portsaone, 1899”; 1 ♀ (MNHN), “Museum Paris, coll. Giraud 1877”; 1 ♀ (RMNH), “Nederland, Waarder (Z.-H.), Oosteinde 33, 2-5.vii.1973, C.v.Achterberg”; 1 ♂ (RMNH), id., but 6-8.vii.1973; 1 ♀ (RMNH), id., but 21-23.vii.1973; 1 ♂ (RMNH), id. but 14-20.vii.1975; 2 ♀♀ (RMNH), “Nederland, Hulshorst (Gld.), 31.vii.1975, J.v.d.Vecht, Malaise-trap”; 1 ♀ (RMNH), “Bulgaria, ex coll. Zaykov, RMNH Leiden 1991”, “Borovez, 23.vii.1982, leg. Zaykov”; 1 ♀ (ITZ), “[Netherlands], Putten (G.), 1.viii.1885, J.Th. Oudemans”.

Neotype, ♀, length of fore wing 4.5 mm, of body about 5 mm.

Head.— Antennal segments 29; length of third segment 1.2 times fourth segment; length of third, fourth and penultimate segments 3.0, 2.5 and 1.0 times their width, respectively; length of maxillary palp 0.7 times height of head; length of eye about 3 times temple in dorsal view; POL:diameter of ocellus:OOL = 8:4:7; face transverse in frontal view and punctate, with frons somewhat finely rugulose; area between antennal sockets triangular (fig. 9), and area behind antennal sockets rather depressed.

Mesosoma.— Length of mesosoma 1.4 times its height; side of pronotum largely smooth, with some rugulosity anteriorly and punctuation posteriorly; lateral pronope small and deep; prepectal carina rather weak; mesosternal sulcus smooth; mesoscutum punctate; notauli distinctly impressed, with fine micro-crenulation; scutellum somewhat triangularly shaped, rather flat and punctulate, with smooth rims; mesopleuron largely punctulate; precoxal sulcus distinct, long and narrow, with fine micro-crenulation; metapleuron punctate, with lower part rugose; propodeum strongly rugose.

Wings.— Fore wing: marginal cell very narrow especially basally, its width about

twice width of vein SR1 (fig. 19), or even narrower (fig. 20); r-m present; SR1 strongly curved towards pterostigma (figs 19, 20); cu-a inclivous; 2A absent; r:3-SR:SR1 = 3:1:33. Hind wing: M+CU:1-M = 23:21.

Legs.— Basal lobe of tarsal claws comparatively large (fig. 119); length of hind femur, tibia and basitarsus 2.6, 5.3 and 6.2 times their width, respectively (fig. 87); length of inner and outer spur of middle tibia 0.5 and 0.45 times middle basitarsus; length of inner and outer spur of hind tibia 0.5 and 0.4 times hind basitarsus, respectively.

Metasoma.— Length of first tergite equal to its apical width, its surface completely minutely striate, its pair of dorsal carinae fine basally; length of combined second and third tergites 1.3 times their maximum width; remainder of metasoma usually smooth; length of ovipositor sheath about equal to fore wing or body.

Colour.— Black; middle and fore legs yellowish-brown, coxae and femur somewhat infusate; apical half of hind tibia infusate and with distinct, infusate sub-basal ring; remainder of hind tibia rather whitish; hind femur entirely infusate; hind tarsi dark brown; apex of first tergite and basal part of second tergite somewhat reddish-brown, or entirely black.

Diagnostic characters.— Distinctive for *B. cingulipes* is the curved vein SR1 of fore wing: it may be similarly shaped in *B. conspicuus* and *B. zaykovi*, but these species have the hind tibia largely brown or yellowish.

Distribution.— *Bulgaria, France, Germany, Great Britain, Hungary, Ireland, Italy, *Netherlands.

Biology.— According to Nixon (1986) parasite of Coleophoridae and Gelechiidae on herbs (*Coleophora frischella* (Linnaeus) on *Trifolium* spp. and *Caryocolum fraternella* Douglas, respectively).

***Bassus clausethalianus* (Ratzeburg, 1844)**

(figs 21-24)

Ichneumon (*Microdus*) *clausethalianus* Ratzeburg, 1844a:25. Holotype, ♀, from Germany is lost; neotype, ♀ (RMNH), from The Netherlands designated below.

Microdus clausethalianus; Ratzeburg, 1844b: 58; Tobias, 1971: 260 & 1986: 288; Nixon, 1986: 224.

Agathis clausethaliana; Kloet & Hincks, 1945: 234; Shenefelt, 1970: 326.

Bassus clausethalianus; Thompson, 1953: 94; Koponen, 1992: 196.

Material.— 1 ♀ (here designated neotype; RMNH), "Netherlands, [?Bergen op Zoom], coll. J.A. Snijder, RMNH/20.iii.1931", "*Microdus fortipes* Reinh." [handwritten label by O. Schmiedeknecht], "*Microdus clausethalianus* Ratz., det. G.E.J. Nixon, 1984"; 1 ♀ (RMNH), "Holland, Schayk, 2.vii.1912 [error for 1952], H. Teunissen"; 2 ♀♀ (RMNH), "Holland, Cromvoirt, 6.vii.1912 [1952], H. Teunissen"; 1 ♀ (RMNH), "Austria, Slzbg, Filzmoos, 1250 m, 9.viii.1986, C.J. Zwakhals"; 1 ♀ (RMNH), "Austria, NO, Litschau, 17.vii.1982, C.J. Zwakhals"; 1 ♀ (RMS), "[England], Santon Downham, Norfolk, TL 818883, Malaise trap, heath with birch and pine, 6-20.vii.[19]85, J. Field, MK, RMSNH 1986.021"; 1 ♀ (RMS), id., but "20-30.vii.1985"; 1 ♀ (MNHN), "Jura Suisse, Le Crif, vii.[19]35, A. Seyrig".

Neotype, ♀, length of fore wing 6 mm, of body about 7 mm.

Head.— Antenna of neotype incomplete (29 segments), antennal segments of other females 36-38; length of third segment 1.3 times fourth segment; length of third, fourth and penultimate segment 4.0, 2.4 and 1.6 times their width, respectively; length of maxillary palp 0.9 times height of head; length of eye 2.2 times temple in dorsal view; POL:diameter of ocellus:OOL = 10:5:9; face transverse, superficially

punctulate; area between antennal sockets with shallow groove (fig. 21), running to anterior ocellus; area behind antennal sockets rather flat; crests between antennal sockets slightly (convexly) protruding (fig. 21); vertex smooth; space between antennal socket and anterior ocellus medium-sized.

Mesosoma.— Length of mesosoma 1.5 times its height; side of pronotum smooth medially with some coarse rugae anteriorly and punctate posteriorly; epomia single; lateral pronope medium-sized and deep; prepectal carina upcurved and wide as in *B. tumidulus*; mesosternal sulcus nearly smooth; mesoscutum punctate, with notauli distinctly impressed and micro-crenulate; scutellum triangular, flat, punctulate, with a small crest posteriorly; mesopleuron punctate below precoxal sulcus, punctulate above it; precoxal sulcus distinct, long, with medium-sized crenulae; metapleuron largely punctate, but rugulose antero-ventrally; propodeum rugulose, with a pair of strong, longitudinal crests.

Wings.— Fore wing: SR1 straight; second submarginal cell subtriangular, subsessile (fig. 23), (in other specimens also usually without a stalk); 2A present as a pigmented stripe; cu-a inclivous; r:3-SR:SR1 = 5:3:48. Hind wing (fig. 22): M+CU:1-M = 28:35.

Legs.— Length of hind femur, tibia and basitarsus 3.7, 5.7 and 7.1 times their width, respectively; apical quarter of hind tibia infusate; length of inner and outer spur of middle tibia 0.5 and 0.4 times middle basitarsus; length of inner and outer spur of hind tibia 0.5 and 0.4 times hind basitarsus, respectively; tarsal claws as in *B. tumidulus*.

Metasoma.— Comparatively slender; length of first tergite 1.4 times its apical width, its surface distinctly striate, with a pair of dorsal carinae basally; length of combined second and third tergites 1.5 times their maximum width; second tergite usually smooth, or rather superficially striate in groove itself (neotype) or near it (other specimens); remainder of metasoma smooth, polished; ovipositor sheath moderately pilose, with medium-sized setae (fig. 25); length of ovipositor sheath of neotype 1.9 times (in others 1.7-1.9 times, 1.8 times in Ratzeburg's figure of the type) fore wing, and distinctly longer than body.

Colour.— Black; legs yellowish-brown; coxae dark brown; apical quarter of hind tibia infusate; hind tarsus dark brown.

Diagnostic characters.— Recognizable because of its very long ovipositor combined with the absence of distinct crests between the antennal sockets: the other species with a very long ovipositor, i.e. *B. linguarius*, has distinct acute crests between the antennal sockets.

Distribution.— *France, Germany, Great Britain, Ireland, Netherlands, *Switzerland.

Biology.— According to Nixon (1986) a parasite of Tortricidae in stems of thistles: *Epiblema scutellana* (Denis & Schiffermüller).

Bassus conspicuus (Wesmael, 1837) (figs 25-27, 90, 91)

Microdus conspicuus Wesmael, 1837: 17; Tobias, 1976b: 98 & 1986: 288; Nixon, 1986: 225-226. Lectotype, ♀ (KBIN), from Belgium examined; designated by Nixon (1986).

Bassus conspicuus; Britton, 1938: 123; Fischer, 196: 15.

Agathis conspicua; Shenefelt, 1970: 327-328.

Earinus zonatus Marshall, 1885: 268. Syntypes from Great Britain are lost. Synonymised by Lyle, 1920: 184.

Material.— 1 ♀ (KBIN), "Lectotype", "1958", "*Microdus conspicuus* mihi, dét. C. Wesmael", "*Microdus conspicuus* Wesm., Lectotype, ♀, 1984, det. G.E.J. Nixon, 1984"; 1 ♂ (KBIN), same labels except for the labels added by Nixon, probably a paralectotype; 1 ♀ (KBIN), non-type specimens, "1er 7le [1.vii.]1838, B. du V-d'Oie", "Environs de Bruxelles; 1 ♀ (RMNH), "Nederland (Gld.), 't Harde, 3.ix.1989, C.J. Zwakhals"; 1 ♀ (RMNH), "Nederland (Gld.), Tongeren, 28.viii.1989, C.J. Zwakhals"; 1 ♀ (RMNH), "Museum Leiden, Holland (Z.-H.), Goedereede, "Kwade Hoek", 51°50'N.3°59'E, 29.vi.1969, P. Vroegindewij"; 3 ♂♂ (RMNH), "Museum Leiden, Holland (Z.-H.), Melissant, 14-17.vii.1968, K.J. Huisman; 2 ♂♂ (RMNH), "[Netherlands], Wageningen, IPO, vangbanden boomg[aard] = on glue-band traps in orchard], 1969/70, uitgeknippt op 25.iii.1970, imago: 19.vi.1970", "H.J.V. 153-22", "Gastheer [host]: *Laspeyresia pomonella*, Braconidae, Agathidinae, *Microdus conspicuus* Wesm."; 1 ♀ (MNHN), "Bozen, 54", "Museum Paris, coll. O. Sichel"; 1 ♀ (MNHN), "Cetnay, 15.ix.[19]21", "Museum Paris, coll. J. de Gaulle"; 1 ♀ (MNHN), "Ves, 5.ix.[19]60", "Museum Paris, France, Le Vernet, Seine et Oise, coll. O. Sichel 1867"; 1 ♂ (MNHN), "Esbarres, 26.viii.[19]59, C. d'Or, J. Barbier", "4753".

Lectotype, ♀, length of fore wing 4.3 mm, of body about 5 mm.

Head.— Remaining antennal segments 20 (in other females 31-33); length of third segment 1.2 times fourth segment; length of third, fourth and penultimate segments 4.3, 3.6 and 1.5 times their width, respectively; length of maxillary palp 0.8 times height of head; length of eye about twice temple in dorsal view; POL:diameter of ocellus:OOL = 10:4:9; face punctulate, distinctly transverse in frontal view; crests near antennal sockets moderately separated and convexly protruding, space between them reduced to a shallow, fine groove (fig. 25); vertex smooth.

Mesosoma.— Length of mesosoma 1.4 times its height; side of pronotum smooth, with just some rugulosity near its anterior corner; lateral pronope very small; prepectal carina comparatively thick, its posterior margin near apex of fore coxae, deeply emarginate and not upcurved medially (fig. 90); mesosternal sulcus sculptured; mesoscutum finely punctate; notauli distinct with fine micro-crenulation; scutellum triangular, rather flat, with fine punctulation and without crest; medio-posterior depression of scutellum distinctly divided into two parts (fig. 26); precoxal sulcus distinctly impressed, narrow and with distinct, fine crenulae; mesopleuron punctulate; metapleuron punctate and rather pilose; propodeum coarsely rugose, and with some areolation.

Wings.— Fore wing: marginal cell rather narrow especially in its basal half; SR1 strongly curved (fig. 27), occasionally somewhat less so or (nearly) straight (fig. 91, especially in males); second submarginal cell triangular, usually with a long stalk; $r:3-SR+SR1 = 4:45$; 2A absent; cu-a inclivous. Hind wing (fig. 27): $M+CU:1-M = 27:25$.

Legs.— Length of hind femur, tibia and basitarsus 3.1, 5.0 and 6.4 times their width, respectively; length of inner and outer spur of middle tibia 0.45 and 0.4 times middle basitarsus; length of inner and outer spur of hind tibia 0.5 and 0.4 times hind basitarsus, respectively; tarsal claws as in *B. tumidulus*.

Metasoma.— Moderately slender; length of first tergite 1.1 times its width, its surface distinctly striate, without pair of dorsal carinae basally; length of combined second and third tergites 1.1 times their maximum width; remainder of metasoma smooth and polished; length of ovipositor sheath equal to fore wing, and to length of mesosoma and metasoma combined.

Colour.— Black; head (around eyes), all legs (except infusate apex of hind tibia and hind tarsus) and second tergite yellowish (or orange)-brown. Males usually have the second and third tergites yellowish-brown, but occasionally the orange or yellowish colouration can be more extensive both in males and in females, comprising

the whole metasoma, but frequently the whole of the first tergite is black.

Diagnostic characters.— The majority of females can be recognized by the curved vein SR1 of the fore wing in conjunction with the narrow space between the antennal sockets, as compared to the other species with convexly protruding crests between the antennal sockets. Some females and most males of *B. conspicuus* are not easily recognizable because the vein SR1 is sparsely curved or, occasionally, even straight. However, the normal prepectal carina combined with the colour of the metasoma allows a reliable separation from *B. tumidulus* and related species. The hind femur and tibia, and the first tergite, may be quite slender in some specimens.

Distribution.— Belgium, Finland, France, Great Britain, Hungary, Ireland, Italy, Netherlands, Sweden, Switzerland.

Biology.— According to Nixon (1986) a parasite of Tortricidae: *Cydia pomonella* (Linnaeus), *Pammene regiana* (Zeller), and *Rhopobota ustomaculana* (Curtis).

Bassus dimidiator (Nees, 1834)

(figs 28-31)

Microdus dimidiator Nees, 1834: 146; Tobias, 1971: 260 & 1986: 288; Evenhuis & Vlug, 1983: 122; Nixon, 1986: 219; Zettel & Beyarslan, 1992: 126. Holotype, ♀, from Poland is lost; neotype, ♀ (MNHN), from France is designated below.

Bassus dimidiator; Thompson, 1953: 94.

Agathis dimidiator; Shenefelt, 1970: 329-330

Microdus cingulator Ratzeburg, 1852: 46; Reinhard, 1867: 355 (synonymized with *B. dimidiator*).

Material.— ♀ (neotype here designated; MNHN), "[France], St. M. Vesubie, 29.vii.[19]50, (A.M.) Granger"; 1 ♀ (MNHN), no label; 3 ♀♀ (MNHN), "Museum Paris, 1867, coll. O. Sichel"; 1 ♀ (MNHN), "Museum Paris, Maisons Laffitte, Seine et Oise, coll. J. de Gaulle 1919"; 1 ♀ (MNHN), locality illegible, "Museum Paris, 2.viii.[19]20, A. Seyrig"; 1 ♀ (MNHN), "Museum Paris, coll. J. de Gaulle, 1919"; 1 ♀ (MNHN), "Cannes (tallou), *Salix meana*, *Tortrix* ou *Gelechide*", "Museum Paris, coll. J. de Gaulle, 1919; 1 ♂ (MNHN), "20.vii.[18]77, Pins Syh. Sémoud", "Museum Paris, coll. Leon Fairmaire"; 1 ♂ (MNHN), "Museum Paris, coll. de Gaulle, 1919"; 1 ♀ (MNHN), "Baschi, 30.vii.[19]20., Museum Paris, Seyrig"; 1 ♂, 1 ♀ (MNHN), "Ardeche, Museum Paris, coll. Giraud, 1877"; 1 ♀ + 3 ♂♂ (RMNH), "[Netherlands], Schuilenburg, Lienden, 16-30.vii.1982", "uit [ex] *Spilonota ocellana*, *Agathis dimidiator*"; 1 ♀ (RMNH), "Holland, coll. Betrem"; 1 ♀ (RMNH), "[Netherlands], Lienden, Schuilenburg, Vak 14, H.J.V[lug] 478.255", "Rups [caterpillar]: 4.vi.1973, par. cocon: 9.vii.1973; imago: 30.vii.1973", "Gastheer [host]: *Spilonota ocellana* (F.), det. H.J. Vlug, 1973"; 1 ♂ (RMNH), id., but "478.181"; "host: 4.vi.1973; cocon: 1.vii.1973; adult: 16.vii.1973"; "host: *Spilonota ocellana* (F.), on apple, det. H.J. Vlug, 1974", "*Microdus fortipes* Reinh., det. H.J. Vlug, 1974"; 1 ♂ (RMNH), id., but coll. 30.v.1972, J. de Jong; 1 ♂ (RMNH), id. but "vak 3, 463.12"; "rups: 25.v.1975, par. larve: 23.vii.1973; imago: 13.viii.1973"; 1 ♀ (RMNH), "[Netherlands], Wageningen], IPO, 29.x.[19]51, n. 25"; 1 ♀ (RMNH), "96", "Reinh., Saxon"; 1 ♀ (RMNH), "v. Voll., Holl.", "*Agathis rufipalpis* Nees"; 1 ♀ (RMNH), "Bulgaria, ex coll. Zaykov, RMNH Leiden 1991", "Rhodopi, Mandrisa, 17.vi.1976, leg. A. Zaykov"; 1 ♀ (RMNH), id., but "Ivailovgrad, 14.v.1977".

Neotype, ♀, length of fore wing 4.2 mm, of body about 5.0 mm.

Head.— Antennal segments 32-35; length of third segment 1.2 times fourth segment; length of third, fourth and penultimate antennal segment 3.5, 3.0 and 2.0 times their width, respectively; length of maxillary palp 0.8 times height of head; length of eye about 2.5 times temple in dorsal view; POL:diameter of ocellus:OOL = 10:4.8; face finely punctate, transverse in frontal view; area between antennal sockets triangular (fig. 28), with a median keel which (usually) ends in a shallow depression in

front of anterior ocellus; depression behind antennal sockets rather shallow; vertex largely smooth.

Mesosoma.— Length of mesosoma 1.4 times its height; lateral pronope very small; side of pronotum largely smooth, vaguely rugulose and pilose anteriorly, with some punctation posteriorly; prepectal carina normal, not emarginate; mesosternal sulcus sculptured; mesoscutum distinctly punctate; notauli distinctly impressed, Y-shaped posteriorly, and with distinct micro-crenulation; scutellum triangular, rather flat, punctulate, entirely smooth laterally; mesopleuron largely punctulate above precoxal sulcus and with shallow punctation ventrally; precoxal sulcus deep, narrow, with distinct crenulation; metapleuron finely punctate, with some rugulosity ventrally; propodeum coarsely rugose.

Wings.— Fore wing: second submarginal cell triangular, with long stalk (but may be short in some specimens); SR1 straight; $r:3-SR+SR1 = 3:41$; 2A absent; cu-a inclivous. Hind wing: $M+CU:1-M = 27:26$.

Legs.— Hind leg rather slender; length of hind femur, tibia and basitarsus 3.7, 6.2 and 10.5 times their width, respectively; length of inner and outer spur of middle tibia 0.6 and 0.4 times middle basitarsus, respectively; length of inner and outer spur of hind tibia 0.5 and 0.4 times hind basitarsus.

Metasoma.— Slender; length of first tergite 1.5 times its apical width, its surface striate (figs 29, 30) and the pair of dorsal carinae fine, distinctly spaced (distance between carinae 0.8 times basal width of tergite, distance of each carina from the tergite's closest rim: 0.1 times basal width of tergite); length of combined second and third tergite 1.4 times their maximum width; second tergite sculptured, sculpture ending abruptly at the second suture and mostly consisting of fine striae (fig. 30). Occasionally, sculpture on second tergite may consist of striae and fine rugulae only around the typical, curved groove (fig. 29), or only in the rounded area delimited by such a groove (fig. 31); third and remaining tergites usually smooth; length of ovipositor sheath 1.2 times fore wing and about equal to length of mesosoma and metasoma combined.

Colour.— Black; head, antenna, pronotum, mesonotum, propodeum, first tergite and hind coxae dark brown to black; second tergite variable: entirely black (neotype) or yellowish-brown (= "*cingulator*"); remainder of metasoma black; palpi and femora yellowish-brown (but hind femur often with darkened apex); about apical half of hind tibia infusate, remainder whitish or pale yellowish-brown, with (faintly) infusate subbasal ring; hind tarsus brownish.

Variation.— One female from France ("Ardeche, coll. Giraud", MNHN) has the middle femur bicoloured (its basal half is infusate, remainder yellowish-brown), middle coxa and middle tarsus infusate, and the sculpture extending beyond the second suture. Length of hind femur 3.7-4.3 times its width; base of hind femur may be infusate; first tergite may be largely and second tergite completely smooth. The female from Ivailovgrad has the first and second metasomal tergites smooth or nearly so and runs in existing keys (as in the first key in this paper) to *B. cingulipes*, but from the shape of the hind femur (slender) and of the marginal cell of the fore wing it is obvious that it is not *cingulipes* but an aberrant *B. dimidiator*.

Distribution.— France, Germany, Greece, Netherlands, Poland, Yugoslavia.

Biology.— Parasite of Tortricidae: *Tortrix viridana* Linnaeus, and *Spilonota ocellana* (Denis & Schiffermüller).

***Bassus epinotiae* spec. nov.**
(figs 116-118, 120, 121)

Material.— Holotype, ♀ (RMS), "[England], Havant Thicket, Hants, [ex] *Epinotia fraternana* on *Abies grandis*, coll. 10.xi.[19]77, em. iii.[19]78, J.R. Langmaid", "*Microdus cingulipes* Ns, det. G.E.J. Nixon, 1984".

Holotype, ♀, length both of fore wing and body 3.1 mm.

Head.— Antennal segments 30, length of third segment 1.3 times fourth segment, length of third, fourth and penultimate segments 3.3, 2.5 and 1.2 times their width, respectively; length of maxillary palp 0.6 times height of head; length of eye 3.6 times temple in dorsal view; scapus robust; POL:diameter of ocellus:OOL = 11:8:14; face sparsely finely punctate and transverse; area between antennal sockets triangular, but with shallow groove (fig. 120); length of malar space 1.8 times basal width of mandible.

Mesosoma.— Length of mesosoma 1.4 times its height; side of pronotum rugose ventrally, punctate near dorsal margin and remainder largely smooth; lateral pronope obsolescent; prepectal carina strong, near level of apex of fore coxae and not upcurved; mesosternal sulcus smooth anteriorly and distinctly crenulate posteriorly; mesoscutum largely smooth; notauli complete, distinctly and narrowly crenulate, ending in an elongate depression posteriorly, and with some rugae; scutellar sulcus with 2 carinae; scutellum largely smooth, with submedial transverse groove (connected to lateral depressed area of scutellum), and with pair of minute depressions medio-posteriorly; mesopleuron largely smooth; precoxal sulcus distinctly developed only in posterior half of mesopleuron, narrowly crenulate; metapleuron sparsely punctate dorsally, coarsely reticulate-rugose ventrally; propodeum rugose.

Wings.— Fore wing: marginal cell somewhat wider than in *B. cingulipes* (fig. 117); SR1 strongly bent towards pterostigma (fig. 116); r-m completely absent; cu-a somewhat inclivous; 1-CU1 oblique (fig. 116); r:3-SR+SR1 = 3:24. Hind wing: M+CU:1-M = 18:12.

Legs.— Lobe of tarsal claws comparatively small (fig. 118); length of femur, tibia and basitarsus of hind leg 2.8, 5.4, and 5 times their width, respectively; length of inner and outer spurs of middle tibia both 0.4 times middle basitarsus; length of inner and outer spurs of hind tibia 0.4 and 0.35 times hind basitarsus, respectively.

Metasoma.— Length of first tergite 1.2 times its apical width, its surface completely finely striate (fig. 121), rather flat, pair of dorsal carinae indistinct (similar to striae); length of combined second and third tergites equal to their maximum width; second and following tergites smooth, only second tergite with transverse depression; length of ovipositor sheath 0.77 times fore wing and about 0.8 times body.

Colour.— Black (including coxae); tegulae, veins, pterostigma, trochanters, trochantelli, femora largely, subbasal ring and apical 0.4 of hind tibia, and telotarsi dark brown; remainder of hind tibia whitish; fore and middle tibiae and remainder of tarsi (yellowish-)brown, contrasting with telotarsi; wing membrane distinctly infusate.

Diagnostic characters.— Immediately recognizable by the absence of vein r-m of fore wing combined with the shape of the marginal cell of the fore wing and of the prepectal carina.

Distribution.— *Great Britain.

Biology.— Parasite of *Epinotia fraternana* (Haworth) (Tortricidae) on *Abies grandis* (D. Don.). The cocoon is white and of a delicate silken construction. Its sister-species, *B. cingulipes* (Nees) goes for hosts on low herbs instead of trees.

Note.— Related to *B. canariensis* (Szépligeti, 1908) comb. nov. from the Canary Islands. However, that species has the marginal cell of the fore wing narrow, the precoxal sulcus absent (the area only somewhat impressed), the hind femur yellowish, the whole hind tarsus dark brown, and the wing membrane subhyaline.

Bassus eriphyle (Nixon, 1986) comb. nov.
(figs 32, 128-130)

Microdus eriphyle Nixon, 1986: 222, figs 56, 62, 64.

Material.— 1 ♀-paratype (BMNH), "B.M., 1979 - 312, M.C. Day, G.R. Else, D. Morgan", "Greece: Ilia Olympia, 4-11.vii.1979"; 1 ♀ (MNHN), [Algeria], "La Stidia, Oran, 17.iv.[19]60, J. Barbier", "4293"; 1 ♀ (MNHN), "Maroc, ex Musaeo H. Vaucher, 1908, vi.[18]95, Tanger"; 2 ♀♀ (MNHN, RMNH), "*Butalis ericivorellae*, col. 31.v.[19]00", "[France], St. Pons, Hérault, coll. Chretien".

Paratype, ♀, length of fore wing 3.8 mm, of body 4.2 mm.

Head.— Antennal segments 35-36; length of third antennal segment 1.3 times fourth segment; length of third, fourth and penultimate segments 4.0, 3.7 and 1.0 times their width, respectively; length of maxillary palp 0.8 times height of head; clypeus distinctly concave ventrally (fig. 128); length of eye about twice as long as temple in dorsal view; POL:diameter of ocellus:OOL = 12:5:10; face transverse in frontal view and distinctly punctate; area behind antennal sockets deep and inner margins of antennal sockets rather separated; area between antennal sockets slightly concave, smooth, with crests obtuse and continued anteriorly in a thin crest in front of antennal sockets.

Mesosoma.— Length of mesosoma 1.5 times its height; side of pronotum smooth, only anteriorly punctulate; lateral pronope small and epomia single; prepectal carina normal, wide and not upcurved; mesosternal sulcus deep and crenulate; mesoscutum punctulate; notauli deep, smooth, usually Y-shaped converging posteriorly; scutellum punctulate, triangular, without crests; mesopleuron superficially punctulate; precoxal sulcus complete, but anteriorly punctate; metapleuron punctulate; propodeum ruguloso-punctate.

Wings.— Fore wing: marginal cell moderately wide basally and rather short (fig. 128); second submarginal cell triangular and stalked; SR1 nearly straight; r:3-SR+SR1 = 2:22. Hind wing: M+CU:1-M = 15:21.

Legs.— Hind leg rather slender; tarsal claws with comparatively narrow and deep cleft (fig. 130); length of hind femur, tibia and basitarsus 4.1, 6.4 and 7.0 times their width, respectively; length of inner and outer spur of hind tibia 0.45 and 0.40 times hind basitarsus, respectively.

Metasoma.— Slender; length of first tergite 1.8 times its apical width, hardly widened apically, its surface shagreened, granulate (fig. 32); length of combined second and third tergites 1.3 times their maximum width; remainder of metasoma smooth (but in other specimens second tergite may be superficially granulate); length of ovipositor sheath 1.1 times fore wing.

Colour.— Black; second and third tergites dark reddish-brown, coxae and hind

femur dark brown; basal half of fore and middle femora dark brown, remainder yellowish-brown; about apical two-fifths of hind tibia infusate and remainder yellowish, with infusate subbasal ring.

Diagnostic characters.— The sculpture and length of first tergite is distinctive for this species.

Note.— The female from Algeria (La Stidia, Oran), has the antenna with 28 segments, the notauli micro-crenulate, the propodeum very sparsely sculptured, and the shanegreened sculpture in the metasoma extends (although vaguely) all over the second and third tergites. The specimen may be not a variety of *B. eryphile*, but a new species.

Distribution.— ?Algeria, *France, Greece, *Morocco.

Biology.— Parasite of Scythrididae: *Scythris ericivorellae* (Ragonot).

Bassus fortipes (Reinhard, 1867) comb. nov.

(figs 33, 34, 64-66)

Microdus fortipes Reinhard, 1867: 356; Tobias, 1986: 286; Nixon, 1986: 220-221, fig. 65. Lectotype, ♀ (ZMB), from France is designated below.

Agathis fortipes; Shenefelt, 1970: 333-334.

Material.— Lectotype (here designated), ♀ (ZMB), "Gallia [= France]", "Coll. H. Rhd.", "Type", "30201", "*fortipes* Rhd"; 1 paralectotype (ZMB) with metasoma missing; 1 ♂ (RMNH), "France, Haute Marne, 13 km North of Langreve, 2.ix.1962, J.v.d.Vecht", "*Microdus fortipes* Reinh., det. G.E.J. Nixon, 1984"; 1 ♂ (MNHN), "Chartrettes, 30.viii.1942"; 4 ♀♀ + 6 ♂♂ (MNHN), from same locality, all collected between 29.viii. and 12.ix.; 1 ♀ + 1 ♂ (MNHN), "Dieppe", "Museum Paris, coll. J. de Gaulle, 1919"; 1 ♂ (MNHN), "Mend, 28.viii.1913", "Museum Paris, coll. O. Sichel"; 1 ♂ (ITZ), "Luxembourg, Wiltz, 315 m, 31.vii.1964, Ent. Exc. Zoöl. Mus."

Lectotype, ♀, length of fore wing 3.6 mm, of body 4.1 mm.

Head.— Antennal segments 23; length of third antennal segment 1.3 times fourth segment; length of third, fourth and penultimate segment 3.2, 2.4 and 1.4 times their width, respectively; length of maxillary palp 0.6 times height of head; length of eye 2.4 times times temple in dorsal view; POL:diameter of ocellus:OOL = 13:5:12; face minutely punctate and transverse in frontal view; area between antennal sockets triangular, with a median, blunt keel (fig. 65); area behind antennal sockets moderately depressed, shiny and smooth; vertex smooth.

Mesosoma.— Length of mesosoma 1.4 times its height; lateral pronope minute and moderately deep; side of pronotum punctate, anteriorly with some rugae; prepectal carina normal, not emarginate; mesosternal sulcus crenulate; mesoscutum distinctly punctate; notauli deep and strongly micro-crenulate; scutellum flat, punctulate, triangular and without crest; mesopleuron punctate dorsally, remainder punctulate; precoxal sulcus long, distinctly crenulate; metapleuron rugulose; propodeum coarsely rugose and somewhat areolate.

Wings.— Fore wing: second submarginal cell triangular, with stalk (fig. 64); SR1 straight; r:3-SR+SR1 = 2:33; cu-a inclivous; 2A absent. Hind wing: M+CU:1-M = 19:17.

Legs.— Hind leg stout (fig. 66); length of hind femur, tibia and basitarsus 2.7, 4.6 and 6 times their width, respectively; length of inner and outer spur of middle tibia

both 0.6 times middle basitarsus; length of inner and outer spur of hind tibia 0.5 and 0.4 times hind basitarsus, respectively.

Metasoma.— Very short and stout; length of first tergite 0.9 times its apical width, its surface striate-rugose (fig. 33), with rugosity somewhat stronger apically and pair of robust dorsal carinae running closely to each other (distance between carinae about 0.6 times basal width of tergite), distance between carina and rim of tergite equal to about 0.3 times basal width of tergite (fig. 33); length of combined second and third tergites about equal to their maximum width; second tergite sculptured, consisting mainly of longitudinal, robust striae, and ending usually at second suture (fig. 33), sometimes basal part of second tergite with transverse striation (fig. 34); third tergite of lectotype smooth, but occasionally some superficial striation, or granulation, may be present basally, with a shallow transverse depression submedially; remainder of metasoma smooth; length of ovipositor sheath 0.67 times fore wing.

Colour.— Black; apical seventh of hind tibia infusate; hind coxa and tarsus dark brown; remainder of legs yellowish-brown.

Diagnostic characters.— The robust appearance and the short metasoma and ovipositor, together with the distinct sculpturing of the second metasomal tergite, are characteristic for this species although it may be confused with the other species (e.g. *Agathis mediator*) with similarly short ovipositor and sculptured second tergite. However, *A. mediator* has the fore wing second submarginal cell quadrangular, the clypeus is more convex, the body is smaller and the sculpture of the second metasomal tergite is less developed and lacks distinct striae; but males (e.g. the one from Haute Marne) of *B. fortipes* may also lack most of the striae. It is surprising that Nixon (1986) considered *B. fortipes* to be perhaps closely related to "*lugubrador*" (= *Agathis mediator*), since according to us they are not even congeneric. The shape of the head of *fortipes* is different (head trapezoid in frontal view, not triangular, and more transverse and narrow in dorsal view), the anterior tentorial pits are above the lower level of the eyes, the clypeus is normal for *Bassus* (distinctly convex in *mediator*), the second submarginal cell of the fore wing is distinctly petiolate, the first tergite is more robust and the middle lobe of the mesoscutum is distinctly punctate.

Distribution.— France, Germany, *Luxemburg.

Biology.— Parasite of Tortricidae: *Spilonota ocellana* (Denis & Schiffermüller).

***Bassus graecus* spec. nov.**

(figs 93-98)

Material.— Holotype, ♀ (ITZ), "[Greece], Ellas, Epirus, 10 km, 0. v. [= East from] Joannina, 470 m, 11.x.1962, Ent. Exc. Zool. Mus."

Holotype, ♀, length of fore wing 3.0 mm, of body 3.7 mm.

Head.— Antennal segments 25; length of third antennal segment 1.2 times fourth segment; length of third, fourth and penultimate segment 4.3, 3.6 and 1.5 times their width, respectively; length of maxillary palp 0.8 times height of head; length of eye 3.2 times temple in dorsal view; POL:diameter of ocellus:OOL = 10:4:9; face and clypeus superficially punctulate, largely smooth and transverse; clypeus partly flattened, medium-sized; frons distinctly concave behind antennal sockets; area in front of anterior ocellus triangular, connected to a weak ridge (fig. 96); vertex smooth; area

between antennal sockets triangular (fig. 96); depressions behind antennal sockets rather deep; length of malar space twice basal width of mandible.

Mesosoma.— Length of mesosoma 1.4 times its height; side of pronotum largely smooth (including posterior corner and groove), with fine rugulosity anteriorly; propleuron normally convex and largely smooth; lateral pronope obsolescent; prepectal carina medium-sized and not distinctly emarginate ventrally; mesosternal sulcus deep and indistinctly crenulate; mesoscutum minutely punctate; notauli deep, narrow, with indistinct micro-crenulation; scutellum smooth, pilose, without crest; mesopleuron largely punctulate with precoxal sulcus long and narrow, regularly crenulate; precoxal sulcus absent anteriorly; metapleuron largely, and propodeum completely coarsely rugose.

Wings.— Fore wing (fig. 93): marginal cell very narrow; basal cell sparsely setose (fig. 98); SR1 strongly curved; second submarginal cell minute, triangular and distinctly petiolate; 2A short; 1-M angularly bent (fig. 98); cu-a inclivous; $r:3-SR+SR1 = 4:45$. Hind wing: $M+CU:1-M = 27:25$.

Legs.— Length of hind femur, tibia and basitarsus 2.7, 5.8 and 7.6 times their width, respectively (fig. 95); length of inner and outer spur of middle tibia 0.45 and 0.40 times their basitarsus; length of inner and outer spur of hind tibia 0.5 and 0.4 times hind basitarsus, respectively; hind tarsal claws comparatively slender and the lobes small (fig. 97).

Metasoma.— Length of first tergite 1.1 times its apical width, its surface largely striate and with some rugulosity apically; length of combined second and third tergites equal to their maximum width; second tergite sculptured only beyond the curved groove, its sculpture consisting of weak striae and granulation (fig. 94); remainder of metasoma smooth and shiny; length of ovipositor sheath 0.83 times fore wing, and about equal to combined length of metasoma and half of mesosoma.

Colour.— Black; antenna (except scapus and pedicellus) dark brown; second tergite reddish-brown; fore and middle coxae dark brown; hind coxa (except apically) black; fore leg and middle tibia yellowish-brown; middle femur with a brown oblong spot ventrally, and remainder yellowish-brown; hind femur largely dark brown, but apically and somewhat basally yellowish; hind tibia whitish, with its apex infusate; hind and middle tarsi largely dark brown; wings hyaline.

Diagnostic characters.— Unmistakable by the aberrant shape of vein 1-M of the fore wing, combined with the sculpture of the metasoma and the sparse setosity of the basal half of the fore wing, the bent vein SR1 of the fore wing and the slender tarsal claws. This species is similar to *B. barbieri* (e.g. the less setose basal cell of the fore wing), but *B. graecus* has a different colour pattern, the third metasomal tergite is smooth and has no transverse depression (at least slightly impressed in *B. barbieri*) and vein 1-M of fore wing is distinctly bent (evenly curved in *B. barbieri*).

Distribution.— *Greece.

Biology.— Unknown.

***Bassus linguarius* (Nees, 1814)**
(figs 35–41)

Microdus linguarius Nees, 1814: 190; Tobias, 1971: 260 & 1986: 288 (as possible synonym of *M. tumidulus*); Nixon, 1986: 223–224, figs 32, 61. Syntypes from Germany are lost, neotype, ♀ (MNHN), from France is designated below.

Bassus linguarius; Fischer, 1965: 15.

Agathis linguaria; Shenefelt, 1970: 340.

Material.— 1 ♀ (here designated neotype; MNHN), "[France], Gevrolles, 30.vii.[19]59, C. d'Or, J. Barbier"; 1 ♀ (MNHN), "Nogent-s-Marne"; 1 ♀ (MNHN), "Museum Paris, coll. J. de Gaulle, 1919"; 1 ♀ (MNHN), "Museum Paris, 1906, coll. Fairmaire"; 1 ♀ (MNHN), "Gevrolles, 3.ix.[19]57, C. d'Or, J. Barbier", "3613"; 1 ♀ (MNHN), "Esbarres, C. d'Or, 17.vii.[19]52, J. Barbier"; 1 ♀ (MNHN), "Gevrolles, C. d'Or, 1.ix.[19]55, J. Barbier", "2008"; 1 ♂ (MNHN), "Gevrolles, 10.ix.[19]60, C. d'Or, J. Barbier", "5692"; 1 ♀ (MNHN), "Chartrettes, 5.ix.[19]48"; 1 ♀ (MNHN), "Museum Paris, coll. J. de Gaulle", "Degor, 24.viii.[19]58, Le Blanc"; 2 ♀♀ (MNHN), "Museum Paris, coll. J. de Gaulle, 1919"; 1 ♀ (MNHN), "Issy, 18.vii.[18]80", "Museum Paris, coll. de Gaulle, 1919"; 1 ♀ (MNHN), "Museum Paris, coll. J. de Gaulle", "France"; 1 ♀ (MNHN), "Rouen", "Museum Paris, coll. J. de Gaulle, 1919"; 1 ♀ (MNHN), "juill.", "Callian (var.)", "Museum Paris, 1938, coll. L. Berland"; 1 ♀ (MNHN), "Montbré, 15.viii.[19]51, coll. Carnel"; 1 ♂ (MNHN), "Museum Paris, coll. Giraud, 1867"; 1 ♂ (MNHN), "Museum Paris, Callian (Var), L. Berland, 1924", "Septembre"; 1 ♀ (RMNH), "Netherlands: L., St. Pietersberg, c. 150 m, 21-28.viii.1989, Mal. trap, B. van Aartsen, RMNH'90"; 1 ♀ (RMNH), id., but "20.viii.1989, C.J. Zwakhals"; 3 ♀♀ (RMNH), "Bulgaria, ex coll. Zaykov, RMNH Leiden 1991", "Bulgaria, Sr. gora, h. Bratan, 1982, 15.viii., leg. Zaykov"; 1 ♂ (RMNH), id., but "D. Lukovo, 20.iv.1977"; 1 ♀ (MZR), "Roma, 29.vi.[18]42, XX, Settecami"; 1 ♀ (MZR), same locality, but 28.viii.[18]42; 1 ♂ (MZR), "[Italy], Roma, 21.ix.[18]41, XIX, Portonaccio"; 1 ♂ (MZR), same locality, but 26.ix.[18]41; 1 ♂ (MZR), "[Italy], Lago di Garda, S. Vigilio, 24-31.viii.[18]41, Hartig legit"; 1 ♂ (MZR), "[Italy], Puglie, Santa Maria di Leuca, 6.vi.[18]41, Castellani"; 1 ♂ (MZR), "Roma, 27.viii.[18]42, XX, Ponte Mammolo".

Neotype, ♀, length of fore wing 5.5 mm, of body about 6 mm.

Head.— Antennal segments of examined specimens 28-32; length of third antennal segment 1.2 times fourth segment; length of third, fourth and penultimate segment 3.5, 3.0 and 1.3 times their width, respectively; length of maxillary palp 0.8 times height of head; length of eye about 3 times temple in dorsal view; POL:diameter of ocellus:OOL = 8:4:8; face punctulate, and elongate (fig. 37); inner rims of antennal sockets each with a distinct acute crest if viewed obliquely from above (figs 38-40); space between antennal sockets flat medially and with a blunt, median keel ending at a small triangular depression in front of anterior ocellus (fig. 38); vertex punctulate.

Mesosoma.— Length of mesosoma 1.5 times its height; lateral pronope very small and rather shallow; side of pronotum largely smooth, anteriorly with a band of fine rugulosity; prepectal carina normal, not emarginate or upcurved; mesosternal sulcus sculptured; mesoscutum punctate; notauli deep, with distinct micro-crenulation, and Y-shaped posteriorly; scutellum punctate, flat, and smooth laterally; mesopleuron largely smooth and somewhat pilose apically; precoxal sulcus distinct, with micro-crenulation, and often rather short; metapleuron punctate and pilose; propodeum strongly rugose.

Wings.— Fore wing: second submarginal cell triangular, with (fig. 35) or without (fig. 36) stalk; SR1 slightly curved to almost straight; r:3-SR:SR1 = 5:2:44; cu-a inclivous; marginal cell rather wide basally (figs 35, 36). Hind wing (fig. 41): M+CU: 1-M = 40:23.

Legs.— Length of hind femur, tibia and basitarsus 2.8, 5.3 and 6.7 times their width, respectively; length of inner and outer spur of middle tibia 0.4 times (both) middle basitarsus; length of inner and outer spur of hind tibia 0.5 and 0.4 times their basitarsus, respectively.

Metasoma.— Length of first tergite 1.1 times its apical width, its surface finely striate, without pair of dorsal carinae; length of combined second and third tergites equal to their maximum width; remainder of metasoma smooth; hypopygium widely

and moderately deeply emarginate at apex and truncate in lateral view; ovipositor sheath about 1.5 times as long as fore wing and much longer than body.

Colour.— Black, but second tergite may be dark reddish-brown; coxae black; remainder of legs, except hind tarsus, yellowish-brown; hind tibia narrowly infusate apically, and sometimes with vaguely infusate subbasal ring; apical eighth of hind tibia infusate.

Diagnostic characters.— Most specimens are very distinctive by the presence of acute crests on the inner rims of the antennal sockets, together with the extremely long ovipositor and the comparatively long face. Males from southern Europe (Italy) may have the crests on the inner rims of the antennal sockets somewhat less developed, but these can be recognized by the elongation of the head. *Bassus nugax*, the only other species having acute crests (however, comparatively less developed), and a (somewhat less) elongate face can be separated from *B. linguarius* by its much shorter ovipositor and distinctly smaller sized body.

Variation.— Length of fore wing 3.4-4.5 mm, and of body usually more than 5 mm; length of mesosoma 1.4-1.5 times its height; length of ovipositor sheath 1.3-1.6 times fore wing.

Distribution.— *Bulgaria, France, Italy, *Netherlands, also Great Britain and Hungary according to Nixon (1986).

Biology.— Unknown.

***Bassus niger* (Telenga, 1955) comb. nov.**

Baeognatha nigra Telenga, 1955: 300; Shenefelt, 1970: 368; Tobias, 1986: 289; Nixon, 1986: 230. Syntypes, ♀♀ (ZIP), from Azerbaidzhan.

Material.— 1 ♀ (RMNH), "[Slovakia], Nitra, v.[19]76/ ex *Coleophora lutipennella*, [M. Capek]".

For a redescription, see Nixon (1986).

Diagnostic characters.— The lack of vein r-m of the fore wing, the presence of a sculptured precoxal sulcus, the narrow marginal cell of the fore wing, the prepectal carina normal and not upcurved, the ovipositor about as long as the metasoma and the hind femur largely dark brown or black allow an easy identification.

Distribution.— Azerbaidzhan, Czecho-Slovakia, France, Kazakhstan.

Biology.— Parasite of Coleophoridae: *Coleophora lutipennella* (Zeller) on *Quercus*.

***Bassus nugax* (Reinhard, 1867) comb. nov.**

(figs 44, 46, 61-63, 74-77)

Microdus nugax Reinhard, 1867: 354; Tobias, 1971: 260; Nixon, 1986: 222, fig. 54. Lectotype ♀ (ZMB) from Germany designated below.

Agathis nugax; Shenefelt, 1970: 347; Tobias, 1986: 285

Microdus rufiventris Abdinbekova, 1975: 201; Tobias, 1986: 286. Holotype, ♀ (ZIP), from Azerbaidzhan.

Syn. nov.

Material.— Lectotype of *nugax* (here designated), ♀ (ZMB), [Germany, Frankfurt am Main], "Coll. Rhd.", "Type"; holotype of *rufiventris*, ♀ (ZIL), "Azerb. ser Kharmos, Abdinbekova, 26.vii.[19]60", "Holotypus *Microdus ruficentris* Abdinbekova, sp. nov." [collected in orchard]; 1 ♀, 1 ♂ (MNHN), "Museum Paris, coll. Giraud, 1877"; 1 ♀ (MNHN), "Museum Paris, coll. O. Sichel, 1867"; 1 ♀ (MZR),

"Roma, 22.vi.[18]42.XX, Ponte Mammolo"; 1 ♀ (MZR), "Roma, 26.vii.[18]42.XX, Portonaccio"; 1 ♂ (MNHN), "[France], Le Lioron, 28.vii.[19]51"; 2 ♀♀ (RMNH), "Bulgaria, ex coll. Zaykov, RMNH Leiden 1991", "Plovdiv, 8.vii.1979, Trakia, leg. A. Zaykov", "*Microdus conspicuus* Wesm., det. G.E.J. Nixon, 1984"; 1 ♀ (RMNH), id., but "Chrabrino, 8.vii.1978"; 1 ♂ (RMNH), id., but "Dobrostan, 24.vi.1978"; 1 ♀ (RMNH), id., but "M. Gradiste, 27.viii.1975, leg. J. Kolarov"; 1 ♀ (RMNH), id., but "Dospat, 22.vii.1969, leg. A. Germanov", "*Microdus nugax* Reinh., det. G.E.J. Nixon, 1984"; 1 ♂ (RMNH), id., but "n. Brianovshtisa, 25.vii.1978, leg. A. Zaykov", "*Microdus conspicuus* Wesm., det. G.E.J. Nixon, 1984"; 1 ♀ (RMNH), id., but "n R. partizan, 25.vi.1978"; 1 ♀ (RMNH), "jz. Beglica, 9.viii.1978"; 3 ♂♂ (RMNH), id., but "Selishte, 26.vi.1978"; 1 ♀ (RMNH), id., but "Velingrad, 25.vi.1978"; 1 ♀ (ITZ), "CSSR, Slovensko ent, exc. Zoöl. Mus."; "Pohranice, 6 km NO v. Nitra, 23.vii.1968"; 1 ♀ (RMNH by exchange), "Hungary: Baranya-megya, Nagyarsany, 22.vii.1963, L. Zom-bori, B.M. 1965-533" (identified by Nixon (1984) as *B. linguarius*).

Lectotype, ♀, length of fore wing 3.0 mm, of body 2.8 mm.

Head.— Antennal segments 24; length of third antennal segment 1.4 times fourth segment; length of third, fourth and penultimate segment 5.0, 5.7 and 1.1 times their width, respectively; length of maxillary palp 0.7 times height of head; length of eye 2.4 times temple in dorsal view; POL:diameter of ocellus:OOL = 8:4:7; face moderately elongate in frontal view (fig. 62), punctate; area between antennal sockets slightly concave, moderately wide; pair of crests between antennal sockets acutely protruding (figs 63, 75), but usually less than in *B. linguarius*.

Mesosoma.— Length of mesosoma 1.7 times its height; antescutal depression distinct; side of pronotum smooth medially, punctate posteriorly and somewhat finely rugulose anteriorly; lateral pronope present only as an extremely small and shallow depression; prepectal carina normal and slightly emarginate, not upcurved; mesosternal sulcus sculptured; mesoscutum punctate and rather flat; notauli obsolescent and largely smooth (but in other specimens distinct and micro-crenulate); scutellum smooth, flat, its apex less acute than in other species of the genus; mesopleuron punctate; precoxal sulcus fine, comparatively long and crenulate; metapleuron punctate and pilose; propodeum rugose.

Wings.— Fore wing: marginal cell wide (lectotype of *nugax*, fig. 61) to comparatively narrow (holotype of "*rufiventris*", figs 46, 74); second submarginal cell triangular, small, and with a long stalk (figs 44, 46, 61); SR1 indistinctly curved (fig. 16); 2A absent; cu-a straight. Hind wing (figs 46, 76): M+CU:1-M = 20:14.

Legs.— Length of hind femur, tibia and basitarsus 3.1, 6.5 and 7 times their width, respectively; length of inner and outer spur of middle tibia 0.5 and 0.4 times middle basitarsus; length of inner and outer spur 0.5 and 0.35 times hind basitarsus, respectively.

Metasoma.— Length of first tergite 1.1 times its apical width, its surface weakly striate, sculpture fading out near apex of tergite; length of combined second and third tergites 1.1 times their maximum width; third tergite without transverse groove; remainder of metasoma smooth, polished; length of ovipositor sheath 0.80 times fore wing and about equal to metasoma plus mesosoma.

Colour.— Blackish; coxae and trochanters dark brown to blackish; fore and middle legs largely yellowish-brown; hind tarsus dark brown; apical third of hind tibia infusate, remainder yellowish-brown and without infusate subbasal ring; tegulae brown; wing membrane rather infusate.

Diagnostic characters.— Easily to recognize by the acute crests between the antennal sockets combined with the moderate length of the ovipositor.

Variation.— Antennal segments 23-28; length of fore wing 2-3.8 mm, of body 2.8-

3.5 mm; anterior crests on area between antennal sockets comparatively weak to strongly developed; length of ovipositor sheath 0.8-1.1 times fore wing; especially specimens from the mediterranean area may have vein SR1 of the fore wing straight (fig. 44), but also the lectotype of *nugax* from Germany (fig. 61); vein r-m of fore wing and notauli may be absent (e.g., male from Bulgaria; RMNH); the second metasomal tergite, or apex of first to fourth tergites sometimes reddish-brown; hind femur yellowish-brown to entirely infusate; apical 0.3-0.5 of hind tibia infusate, but sometimes (e.g. holotype of *rufiventris*) only slightly infusate apically; coxae may be partly reddish-brown and trochanters completely reddish.

Distribution.— Azerbaidzhan, *Bulgaria, *France, Germany, *Hungary, Italy.

Biology.— Unknown.

Bassus rufipes (Nees, 1814) comb. nov.

(figs 45, 48, 49)

Microdus rufipes Nees, 1814: 189; Tobias, 1971: 260; Abdinbekova, 1975: 200; Tobias, 1986: 286; Nixon, 1986: 218-219. Syntypes from Germany are lost; neotype, ♀ (MNH), from Germany is designated below.

Braunsia rufipes; Telenga, 1955: 277; Shenefelt, 1970: 375; Evenhuis, 1974: 57.

Agathis rufipes; Evenhuis & Vlug, 1983: 122.

Bassus rufipes; Koponen, 1992: 196.

Braunsia germanica Enderlein, 1904: 436. Type, ♀ (DEI), from Germany (Rügen), not examined.

Synonymised by Enderlein, 1908.

Material.— 1 ♀ (here designated neotype; MNHN), "*Microdus rufipes* Nees, ♀, [Germany], Blankenburg i.Th. [in Thüringen], 4.ix.1885", "Museum Paris, 1905, coll. Leon Fairmaire"; 26 ♀♀, 18 ♂♂ (MNHN), France, Maisons Laffitte, environ de Paris; 1 ♀ (RMNH), [Netherlands], "Middelaar (L.), 14.vii.1982, J.C. Burg"; 1 ♀ (RMNH), "[Netherlands], Gorinchem, SBB camping Lingebos, leg. P. Ramakers, H.J.V[lug] 350.3", "Rups [caterpillar]: 15.v.1972. par. cocon 26.vi.1972, imago: 17.vii.1972"; "Host: *Spilonota ocellana* (F.) [= D. & S.], det. H.J. Vlug, 1973"; 3 ♀♀ + 1 ♂ (RMNH), "[Netherlands], Schuilenburg, Lienden, 6-20.vii.[19]82", "uit [ex] *Spilonota ocellana*, *Agathis rufipes*"; 1 ♀ (RMNH), "[Netherlands], Middelaar (L.), 14.vii.1982, J.C. Burg"; 1 ♀ (RMNH), "Museum Leiden, Nederland, Noordwijk (Z.H.), 15.vii.1964, Ph. Pronk"; 1 ♀ (RMNH), "Nederland, ex *Y. padella* L., Hoogerheide, 13.vii.1985, J.E.F. Asselbergs, *Crataegus*"; 1 ♂ (RMNH), "[Netherlands], v.d.Wulp, Laren, viii."; 1 ♀ (RMNH), "Hungaria, Zalaegerszeg, 1972 24.vii., leg. Deseö"; 1 ♀ (RMNH), "Hungary, Velence, 26.vii.1972, leg. Deseö", "ex *Laspeyresia pomonella* L."; 2 ♀♀ (RMNH), "Bulgaria, ex coll. Zaykov, RMNH Leiden 1991", "Kostinbrod, 4.vi.1980 (& 20.vii.1980), leg. Zaykov"; 1 ♀ (RMNH), id., but "Popsco, 15.vi.1976"; 9 ♀♀ + 6 ♂♂ (RMNH), id., but "i.vi.[19]76, Plovdiv", öt *Laspeyresia pomonella*"; 1 ♀ (RMS), "Richmond Park, Surrey, 18.viii.1983, 19.00 hr, mature oak canopy, fogged 17 m with Resilin, N.E. Stork, RSMNH 1984.020, Tree 3"; 1 ♀ + 1 ♂ (RMS), "Suckley, Worcs., VC37, [ex] *Acrobasis consociella* [on] *Quercus robur*, coll. vi.[19]81, em.1981, A.N.B. Simpson"; 1 ♀ (RMS), "Wickham, Hants., ex *Oleuthreutes lacunana*, *Epiblema rosaecolana* or *E. rob-orana* [on] *Rosa*, 23.v.[19]87, em. v.[19]87, J.R. Langmaid".

Neotype, ♀, length of fore wing of all specimens examined 3.9 - 4.2 mm, of body of specimens examined 4.0-5.0 mm.

Head.— Antennal segments of specimens examined 31-33; length of third antennal segment 1.3 times fourth segment; length of third, fourth and penultimate segment 3.2, 2.5 and 2.0 times their width, respectively; length of maxillary palp about 0.6 times height of head; length of eye about 2.5 times temple in dorsal view; POL:diameter of ocellus:OOL = 9:3:6; face transverse in frontal view, and distinctly punctate; area between antennal sockets triangular, with a median keel ending at a

small pit in front of anterior ocellus; vertex largely punctulate.

Mesosoma.— Length of mesosoma 1.5 times its height; side of pronotum smooth medially, anteriorly somewhat rugulose and posteriorly largely punctate, pilose; lateral pronope small, but deep; prepectal carina normal and slightly emarginate ventrally; mesosternal sulcus sculptured; mesoscutum punctate; notauli distinct and micro-crenulate; scutellum smooth, polished, rather flat and without posterior crest; mesopleuron largely punctulate and pilose, more densely punctate in anterior part and below precoxal sulcus; precoxal sulcus narrowly impressed, distinct, regularly crenulate (fig. 45; but sometimes the precoxal sulcus is very short, only medially impressed); metapleuron coarsely punctate anteriorly and remainder rugulose; propodeum rugose.

Wings.— Fore wing: second submarginal cell triangular, shortly petiolate (fig. 48); SR1 straight; 2A absent; cu-a inclivous; $r:3-SR+SR1 = 3:46$. Hind wing: $M+CU:1-M = 24:29$.

Legs.— Length of hind femur, tibia and basitarsus 2.6, 6.0 and 7.0 times their width, respectively; length of inner and outer spur of middle tibia 0.5 and 0.4 times their basitarsus; length of inner and outer spur of hind tibia 0.4 and 0.3 times hind basitarsus, respectively.

Metasoma.— Moderately slender (fig. 49); length of first tergite 1.2 times its apical width, its surface distinct sculptured, consisting of strong striation dorsally and posteriorly, and mainly rugulose and granulate anteriorly and its pair of dorsal carinae rather strong, relatively close to each other (distance between the carinae: 0.6 times basal width of first tergite; distance between carina and rim of tergite: 0.4 times basal width of tergite); length of combined second and third tergites 1.3 times their maximum width; second and third tergites sculptured similarly to first tergite, entire second tergite, second suture and more than the basal half of third tergite sculptured (fig. 49); apical part of third tergite usually somewhat granulate and finely rugulose; remainder of metasoma smooth; length of ovipositor sheath somewhat shorter than fore wing, and about equal to combined length of metasoma and mesosoma.

Colour.— Black; palpi and legs usually yellowish-brown; apical eighth of hind tibia infusate, but sometimes very slightly so; second and third tergites sometimes reddish-brown. Sometimes a red patch is present on the mesoscutum medio-posteriorly.

Diagnostic characters.— Recognizable by the shape of the area between the antennal sockets and the colour of the hind leg.

Distribution.— Bulgaria, Finland, *France, Great Britain, Hungary, Sweden, Turkey, Yugoslavia.

Biology.— Parasite of Tortricidae: *Cydia pomonella* (Linnaeus), *Spilonota ocellana* (Denis & Schiffermüller), and Pyralidae: *Acrobasis consociella* (Hübner). According to Nixon (1986) also the Tortricids *Hedya nubiferana* (Haworth), *Gypsonoma dealbana* (Frölich), and *Rhyacionia buoliana* (Denis & Schiffermüller); the record of *Yponomeuta padella* Linnaeus (Yponomeutidae) is questionable.

Bassus rugulosus (Nees, 1834)

(figs 50-52, 84)

Microdus rugulosus Nees, 1834: 148; Nixon, 1986: 217-218. Holotype ♀ from Germany lost, neotype, ♀ (MNHN), from France is designated below.

Braunsia rugulosa; Telenga, 1955: 278; Shenefelt, 1970: 376-377

Bassus rugulosus; Thompson, 1953: 96.

Microdus punctatus Abdinbekova, 1975: 199-200; Tobias, 1986: 286. Holotype, ♀ (ZIP), from Azerbaijan. *Syn. nov.*

Material.— ♀ (here designated neotype; MNHN), "[France], Chartrettes, 6.vii.[19]52, Ch. Granger"; holotype of *M. punctatus*, ♀ (ZIL), "Azerb., Kusar, 7.vii.[19]60, Abdinbekova", "Holotypus *Microdus punctatus* Abdinbekova, sp. nov." [collected in orchard]; 11 ♀♀, 2 ♂♂ (MNHN), France: Maisons Laffitte, Mesnil le Roy, Chartrettes, La Bonde, Brout Vernet; 1 ♀ (RMNH), "Nederland, Wijster (Dr.), opposite Biol. Stat., 23-30.ix.1977, C.v.Achterberg"; 2 ♀♀ (RMNH), "Netherlands, Meyendel, nr. The Hague, Bierlap, outer dunes, 8-15.viii.1974, A.P.M. van der Zon"; 1 ♀ (RMNH), "Netherlands, Nunspeet, 6.viii.1976, C.J. Zwakhals"; 1 ♀ (RMNH), "Andorra, St. Julia, 17.vii.[19]82, P.J.L. Roche", "CH 7604, 920 m"; 1 ♀ (RMNH), "[Netherlands], Putten (Geld.), viii.1926, C. de Jong"; 1 ♀ (RMNH), "Netherlands, Gld, Tongeren, 13.ix.1989, C.J. Zwakhals"; 1 ♀ (RMNH), "Netherlands: Flevoland, Lelystad, FU 6314m Oostvaardersplassen], 15-21.vii.1990, Mal. tr.: *Sambucus/Salix*-wood, D. v.d.Hout & J. de Rond, RMNH"; 1 ♀ (RMNH), "Bulgaria, ex coll. Zaykov, RMNH Leiden 1991", "1.vii.1983, Strandja, Primorsko, leg. J. Kolarov"; 1 ♀ (RMS), "[England], Richmond Park, Surrey, 18.viii.1983 (19.00 hr), mature oak canopy, fogged 17 m with Resilin, N.E. Stork, RSMNH 1984 020, tree 4"; 1 ♀ (RMS), "[England], Southsea, Hants., ex *Blastobasis lignea*, dead *Ilex* twigs, coll. 19.iii.[19]83, em.vi.[19]83, J.R. Langmaid"; 1 ♀ (RMS), "[England], Childs Forstal, East Blean, Kent, 31.vii.1989, E.S. Bladford, ex dead wood"; 10 ♀♀ (ITZ, RMNH), "[Netherlands], Venlo" (2 ♀♀ labelled "10.vii.1876").

Neotype, ♀, length of fore wing 3.7 mm, of body 4.3 mm.

Head.— Antennal segments of examined specimens 30-32; length of third antennal segment 1.3 times fourth segment; length of third, fourth and penultimate segment 4.5, 3.5 and 2.0 times their width, respectively; length of maxillary palp 0.8 times height of head; length of eye about 2.5 times temple in dorsal view; POL:diameter of ocellus:OOL = 7:3:6; face punctulate, transverse in frontal view; area between antennal sockets triangular, with median keel; depression behind antennal sockets rather shallow; vertex smooth.

Mesosoma.— Length of mesosoma 1.7 times its height; side of pronotum largely smooth, with some fine rugulosity anteriorly, and posterior corners distinctly punctate (fig. 84); lateral pronope obsolescent; prepectal carina weak and straight; mesosternal sulcus weakly crenulate; mesoscutum punctulate; notauli distinct and micro-crenulate, more or less Y-shaped (fig. 50); scutellum flat, smooth, and without crest; mesopleuron sparsely punctate, pilose at the extremities; precoxal sulcus narrow, long, with regular micro-crenulation; metapleuron finely punctate; propodeum largely rugulose, with some coarse punctuation.

Wings.— Fore wing: second submarginal cell triangular, petiolate (but sometimes subsessile); SR1 straight; cu-a inclivous; r:3-SR+SR1 = 4:2:35. Hind wing: M+CU:1-M = 25:22.

Legs.— Hind leg slender; length of hind femur, tibia and basitarsus 3.0, 6.0 and 7.5 times their width, respectively; length of inner and outer spur of middle tibia 0.4 and 0.3 times middle basitarsus; length of inner and outer spur of hind tibia 0.5 and 0.3 times hind basitarsus, respectively.

Metasoma.— Length of first tergite 1.4 times its apical width, its surface completely striate mixed with fine rugulosity (fig. 52), sculpture always distinct, and finer than sculpture of first tergite of species with similarly shaped metasoma (*B. rufipes*); basal two-thirds of first tergite with pair of dorsal carinae distinctly separated from each other (distance between carinae: 0.7 times the basal width of first tergite; distance of

carina from rim of tergite: 0.5 times basal width of tergite); length of combined second and third tergites 1.5 times their maximum width; second tergite and basal half of third tergite entirely striate, but striae more mixed with granulation and rugulosity; apical half of third tergite only granulate; remainder of metasoma smooth; length of ovipositor sheath 0.9 times fore wing, and about equal to length of metasoma plus mesosoma.

Colour.— Black; including antenna, pronotum, mesonotum, propodeum and first metasomal tergite; fore and middle leg yellowish-brown; apical half of hind tibia dark brown; remainder whitish and with distinct subbasal infuscate ring (fig. 51); colour of second and third tergites, hind femur and coxae variable: if second and third tergites are black, then hind femur blackish or yellowish-brown and hind coxa always black; if second and third tergites are largely whitish or yellowish-brown, then hind femur always yellowish-brown and hind coxa black or yellowish-brown; metasoma (except second and third tergites) black and shiny.

Diagnostic characters.— Recognizable by the shape of the area between the antennal sockets and the colour of the hind leg.

Distribution.— *Andorra, Azerbaidzhan, Belgium, *Bulgaria, Great Britain, Greece, Ireland, Netherlands, Switzerland.

Biology.— Parasite of Blastobasidae: *Blastobasis lignea* Walsingham. Adults occur comparatively late in season, August and September in The Netherlands.

***Bassus sculptilis* (Tobias, 1986) comb. nov.**
(figs 67, 68, 85, 86)

Microdus sculptilis Tobias, 1986: 288. Holotype, ♀ (ZIP), from Russia.

Material.— Holotype, ♀ (ZIP), [Russia], "Krasnod. Kr., St. Severskaja, kotsenie na lutserne + (sorijaki), 8.vi.1973, V. Vorontsova", "*Microdus punctatus* Abdinb.", "Holotypus *Microdus sculptilis* Tobias"; 1 ♀ (RMNH), "Bulgaria, ex coll. Zaykov, RMNH Leiden 1991", "Woden, Rasgradsko, 25.viii.1969, leg. A. Germanov"; 1 ♀ (MNHN), id., but "Isperich, 20.vii.1968, leg. R. Todorov"; 1 ♀ (RMNH), id., but "Velikovo Dobrudja, 11.viii.1969, leg. P. Sperav", "*Microdus* sp. cf. *rugulosus* Nees, det. G.E.J. Nixon, 1984"; 2 ♀♀ (RMNH), id., but "Plovdiv, 24.v.1969, A. Germanov", with same identification label by G.E.J. Nixon; 1 ♂ + 2 ♀♀ (RMNH), id., but "2.ix.1968"; 1 ♂ (RMNH), id., but "Petelovo, 15.vi.1977"; 1 ♀ (RMNH), id., but "3.ix.1973".

Holotype, ♀, length of fore wing 3.4 mm, of body 4.4 mm.

Head.— Antennal segments 34, length of third antennal segment 1.4 times fourth segment, length of third, fourth and penultimate segments 3.8, 2.8, and 1.5 times their width, respectively; length of maxillary palp 0.7 times height of head; length of eye 3 times temple in dorsal view; POL:diameter of ocellus:OOL = 8:5:12; face sparsely punctulate; clypeus punctulate and distinctly transverse, moderately convex, partly flattened; vertex smooth; frons distinctly concave behind antennal sockets; area between antennal sockets slightly concave and with distinct, obtuse crests (fig. 68); length of malar space 1.5 times basal width of mandible.

Mesosoma.— Length of mesosoma 1.4 times its height; propleuron normal, evenly convex and largely smooth; lateral pronope medium-sized; side of pronotum coarsely crenulate medio-anteriorly, some distinct punctures and sparse setae posteriorly, including postero-dorsal corner (fig. 85), remainder largely smooth; prepectal

carina moderately developed near apex of fore coxae and slightly emarginate medio-ventrally; mesosternal sulcus distinctly crenulate; mesoscutum sparsely punctate; notauli deep and crenulate; scutellum smooth and weakly convex; mesopleuron smooth, except for apical 0.6 of narrowly crenulated precoxal sulcus; metapleuron coarsely rugose ventrally, sparsely punctate dorsally and remainder largely smooth; propodeum completely coarsely rugose.

Wings.— Fore wing: marginal cell narrow basally (fig. 67); SR1 straight; second submarginal cell medium-sized and triangular, subsessile (fig. 67); 2A absent; 1-M curved; cu-a inclivous; $r:3\text{-SR:SR1} = 3:1:46$. Hind wing: $M+CU:1-M = 20:23$.

Legs.— Length of femur, tibia and basitarsus of hind leg 3.4, 5.6 and 8 times their width, respectively; length of inner and outer spurs of hind tibia 0.5 and 0.45 times hind basitarsus, respectively; (inner and outer spurs of middle tibia of holotype) covered by glue).

Metasoma.— Length of first tergite 1.3 times its apical width, its surface granulate with some rugulae, a pair of dorsal carinae medium-sized and confined to basal half of tergite; length of combined second and third tergites 1.3 times their maximum width; second and third tergites granulate and both with transverse depressions; second suture medium-sized and with several rugulae; fourth to sixth tergites largely granulate; length of ovipositor sheath 1.10 times fore wing and about equal to combined length of metasoma and mesosoma.

Colour.— Black; labial palp, tegulae, trochanters and trochantelli, hind femur, apical third of hind tibia and hind tarsus largely, dark brown; maxillary palp largely, fore and middle femora and tibiae, fore and middle tarsi more or less infuscate; remainder of hind tibia brownish-yellow, paler basally than medially; antenna (yellowish-)brown, most segments with a dark brown median band (fig. 86); but antenna completely blackish in other specimens; scapus dark brown dorsally; pterostigma and veins brown; wing membrane subhyaline.

Diagnostic characters.— Recognizable by the granulate sculpture of the fourth and fifth metasomal tergites and the colour of the hind leg.

Distribution.— *Bulgaria; Russia (Krasnodar district).

Biology.— Unknown.

***Bassus tegularis* (Thomson, 1895) re-instated** (figs 122, 124, 127)

Agathis (Microdus) tegularis Thomson, 1895: 2231-2232. Lectotype, ♀ (ZIL), from Sweden is designated below.

Microdus tegularis; Nixon, 1986: 224 (as synonym of *M. tumidulus*; for the invalid "lectotype designation", see below).

Bassus tegularis; Thompson, 1953: 96.

Agathis tegularis; Shenefelt, 1970: 359.

Material.— Lectotype (here designated), ♀ (ZIL), "Pål [= Pålshö, Scania, Sweden]", "1982, 108 [= borrowed by G.E.J. Nixon in 1982]", "1992, 380". Paralectotypes (all with "Pål." label) 2 ♀♀ + 3 ♂♂ (ZIL): 1 ♂ conspecific with lectotype, with area between antennal sockets distinctly sculptured, 1 ♂ + 1 ♀ conspecific, with area between antennal sockets largely smooth, and 1 ♂ + 1 ♀ of the paralectotypes belonging to *B. tumidulus*; 1 ♀ (ZIL), "O", not belonging to type series; 2 ♀♀ (RMNH), "Netherlands: L.,

Colmont: Vrakelberg, 20.v.1990, B. van Aartsen, RMNH'90"; 1 ♀ + 2 ♂♂ (RMNH), "Netherlands (L.), St. Pietersberg, 5.viii.1986, B. van Aartsen, RMNH"; 1 ♀ (RMNH), id., but "c. 150 m, 5-11.viii.1988, Mal. tr., RMNH'89"; 1 ♀ (RMNH), id., but 11-16.viii.1988"; 1 ♀ (RMNH), "Netherlands, Nunspeet, 6.viii.1976, C.J. Zwakhals"; 1 ♂ (RMNH), "Holland, Schelluinen, 5.vi.1976, C.J. Zwakhals"; 1 ♀ (RMNH), "Netherlands: N.-B., Udenhout, "de Brand", 25.viii-1.ix.1990, UTM FT 476 225, Mal. trap, Ins. W. G. [= Insect Work Group] KNNV-Tilburg"; 1 ♀ (RMNH), "[Netherlands], Wageningen, ruderaal terrein, 12.ix.1969, leg. van Achterberg", "*Microdus tumidulus* Ns, det. G.E.J. Nixon, 1984"; 1 ♂ (RMNH), "France, Hte. Sav., 22.vii.[19]88, Gaillard, friche arborée, bord arve, 400 m, petite ombellif. blanche, J. Hamon rec."; 1 ♀ + 1 ♂ (RMNH) "België-Lb., St. Pietersb[erg], 9.vi.1980, V. Lefeber"; 1 ♀ (RMNH), "Yugoslavia, Makedonija, ca. 800 m, Gorica, 5 km S Ohrid, 9.ix.1979, C. v.Achterberg"; 1 ♀ (RMNH), "[Germany], Tischb[lein], Birkenf."; 3 ♀♀ (RMNH), "[Germany], Reinh.[ard], Saxon[y]"; 1 ♂ (RMNH), "[Poland], Brisch[ke], Danzig"; 1 ♀ (RMNH), "Italia (Bolzano), Sarntal, 1250 m, 29.vi.1976, C.J. Zwakhals"; 1 ♀ (RMNH), "Bulgaria, ex coll. Zaykov, RMNH Leiden 1991", "29.vi.1977, Rhodopi, Chrabrino, leg. A. Zaykov"; 1 ♀ (RMNH), id., but "Nikolovo, 14.viii.1978"; 1 ♂ (RMNH), id., but "Markovo, 17.vii.1977"; 1 ♀ (RMNH), id., but "Konush, 6.x.1975"; 1 ♂ (RMNH), id., but "Avren, 18.v.1978"; 1 ♂ (RMNH), id., but "Petelovo, 26.v.1976"; 1 ♀ (RMNH), "Ivrailevgrad, 14.vii.1976"; 1 ♀ (RMNH), id., but "Gornoslav, 15.v.1978", "*Microdus tumidulus* Ns, det. G.E.J. Nixon, 1984"; 1 ♀ (RMNH), id., but "Karamansi, 23.viii.1975"; 1 ♀ (RMNH), id., but "Costinbrod, 4.vi.1980", "*Microdus tumidulus* Ns, det. G.E.J. Nixon, 1984"; 1 ♀ (RMNH), id., but "Galabovo, 30.vii.1978, leg. J. Kolarov"; 1 ♀ (RMNH), id., but "Plovdiv, 24.v.1969, leg. A. Germanov"; 1 ♂ (MNHN), "*Microdus fortipes*, Hte Ivy-8 [France]"; 1 ♂ (MNHN), "*Orgilus tumidulus* Nees", "Museum Paris, Coll. J. De Gaulle, 1919"; 1 ♂ (MNHN), "[France], St. Cloud, 17.vi.[18]83", "Museum Paris, Coll. J. De Gaulle, 1919"; 1 ♂ (MNHN), "Museum Paris, 1877, Coll. Giraud"; 1 ♂ (MNHN), "[France], Esbarres, 8.vii.[19]64, C.d'Or, J. Barbier", 1 ♀, id., but 5.viii.[19]55; 1 ♀ (MNHN), "Ves, [19]27.vii.6", "Museum Paris, France, Le Vésinet, (Seine & Oise), coll. O. Sichel, 1867"; 1 ♀ (MNHN), no locality label (coll. Fairmaire, 1906); 5 ♀♀ (MNHN), id. (coll. Giraud, 1877); 1 ♂ (MNHN), id. (coll. Hémon); 1 ♂ (MNHN), "[France], Sèvres, 16.vi.[18]91, "Museum Paris, Coll. J. De Gaulle, 1919"; 1 ♀ (MNHN), "[France], Villers-Allerand, 17.vi.1951, coll. Garuel"; 1 ♀ (MNHN), "[France], Nyons"; 1 ♀ (MNHN), "[France], Sartrouville 6"; 1 ♀ (MNHN), "[France], St. M. Vesubie, 29.vii.[19]50, (A.M.) Granger"; 1 ♀, id., but 26.vii.[19]50; 2 ♀♀, id., but 27.vii.[19]50; 1 ♀ (MNHN), "[France], Aiguines, Var, 12.vi.[19]53, P. Veyret"; 2 ♀♀ (MNHN), "[France], Sollies-Pont, 18.viii.[19]50, (Var), Granger"; 1 ♀, id., but 20.vii.[19]51; 2 ♀♀, id., but 22.vii.[19]50; 1 ♀, id., but 16.vii.[19]45; ♀, id., but 23.vii.[19]50; 1 ♀, id., but 6.vi.[19]45; 1 ♀ (MNHN), "[France], Chartrettes, 10.viii.[19]43, [Granger]"; 1 ♀, id., but 14.viii.[19]62, Ch. Granger"; 1 ♀ (MNHN), "Tigne, vi.[19]03", "Museum Paris, coll. J. de Gaulle, 1919"; 1 ♀ (MNHN), "[Germany], *Microdus tumidulus* Nees, ♀, Gumperda [Thüringen, Schmiedeknecht]"; 4 ♀♀ + 1 ♂ (RMS, RMNH), "[England], Chippenham Fen, Cambs., TL 650 693, Malaise trap; carr at reedbed edge, MA, 16-24.vi.[19]83, J. Field, RSMNH 1986.021"; 7 ♀♀ (RMS, RMNH), [England], "Catfield, Norfolk, TG 372901, Malaise trap, abandoned wet meadow, R.T.J. Jarvis, 10-19.viii.[19]84 (2 ♀♀), 24.vii-1.viii.[19]83 (2 ♀♀), 19-26.viii.[19]84 (1 ♀), 17-24.vii.[19]83 (2 ♀♀), RSMNH 1983 (or 1984); 1 ♀ (RMS), "[England], Wicken Fen, Cambridge, viii.[19]42".

Lectotype, ♀, length of fore wing 3.9 mm, of body 4.8 mm (paralectotypes are also more than 4 mm, despite Thomson's noted "1½ lin" for its length).

Head.— Antennal segments 30, length of third antennal segment 1.4 times fourth segment, length of third, fourth and penultimate segments 3.8, 2.8, and 1.5 times their width, respectively; scapus comparatively slender apically (fig. 127) compared to *B. tumidulus* (fig. 125); length of maxillary palp 0.7 times height of head; length of eye 2.2 times temple in dorsal view; POL:diameter of ocellus:OOL = 10:5:9; face sparsely punctate laterally and more densely so submedially; clypeus punctulate and distinctly transverse, rather flat; vertex sparsely punctate; area between antennal sockets wide V-shaped, densely and coarsely punctate, and with a distinct median groove (fig. 122), without acute crests laterally; anterior ocellus distinctly removed from deep

depressions behind antennal sockets; length of malar space 2.4 times basal width of mandible; occipital flange large and area above it rather concave.

Mesosoma.— Length of mesosoma 1.4 times its height; propleuron densely coarsely punctate, medio-ventrally finely rugose and rather concave; lateral pronope medium-sized and rather deep; side of pronotum distinctly punctate postero-dorsally, medially crenulate and ventrally rugose; prepectal carina strong, situated below fore coxae, upcurved ventrally and deeply V-shaped emarginate medio-ventrally; mesosternal sulcus deep and finely crenulate; mesoscutum sparsely punctulate; notauli deep and micro-crenulate, united and distinctly impressed posteriorly; scutellum sparsely punctate, rather convex, and with a weak crest subposteriorly, and medio-posterior depression distinct and single; mesopleuron largely punctulate; posterior half of mesopleuron with a deeply impressed, narrow and micro-crenulated precoxal sulcus; metapleuron coarsely rugose ventrally, remainder punctulate; propodeum largely coarsely rugose, with an elongate, rather narrow median areola.

Wings.— Fore wing: marginal cell narrow basally (cf. fig. 88); SR1 straight; second submarginal cell triangular, petiolate (cf. fig. 88); 2A sclerotized basally; 1-M slightly curved; cu-a vertical; $r:3-SR+SR1 = 1:16$. Hind wing: $M+CU:1-M = 15:21$.

Legs.— Length of femur, tibia and basitarsus of hind leg 2.8, 6.0 and 7.5 times their width, respectively; length of inner and outer spurs of middle tibia 0.45 and 0.4 times middle basitarsus; length of inner and outer spurs of hind tibia 0.45 and 0.35 times hind basitarsus; tarsal claws slightly more slender than in *B. tumidulus* (fig. 124 versus fig. 126).

Metasoma.— Length of first tergite equal to its apical width, its surface longitudinally striate, but smooth medio-basally, its pair of dorsal carinae medium-sized and confined to the basal half of tergite; length of combined second and third tergites 1.1 times their maximum width; second and following tergites smooth; second tergite with a distinct, curved and smooth transverse depression; second suture distinct, smooth; length of ovipositor sheath 1.2 times fore wing and slightly shorter than body; setae of ovipositor sheath medium-sized.

Colour.— Black; tegulae, veins, pterostigma, second tergite, metasoma ventrally, coxae, trochanters, a weakly defined patch near base of hind tibia, apical quarter of hind tibia, telotarsi, and hind tarsus dark brown; palpi (but basally dark brown), and remainder of legs brownish-yellow; base of hind tibia pale yellowish; wing membrane somewhat infusate; labrum and a patch behind eye (orange-)brown.

Diagnostic characters.— Recognizable by the sculpture and only weakly curved area between the antennal sockets and the shape of the scapus. One female from England (Catfield) has vein r-m of left fore wing absent.

Distribution.— *Belgium, *Bulgaria, *France, *Germany, *Great Britain, *Italy, *Netherlands, *Poland, Sweden, *Yugoslavia (Macedonia).

Biology.— Unknown.

Note.— The lectotype designation in this paper is necessary because Nixon's (1986) "designation" is invalid. He neither indicated which specimen he selected from the type series as lectotype, nor did he label one of the specimens from the type locality borrowed by him in 1982.

Bassus tumidulus (Nees, 1814)
(figs 53-60, 88, 89, 106, 108, 110, 123, 125, 126)

Microdus tumidulus Nees, 1814: 189; Tobias, 1971: 260; Abdinbekova, 1975: 201-202; Zettel & Beyarslan, 1992: 126. Syntypes from Germany are lost; neotype, ♀ (RMNH), from The Netherlands is designated below.

Bassus tumidulus; Thompson, 1953: 96.

Agathis tumidula; Shenefelt, 1970: 362-363.

Microdus annae Enderlein, 1908: 223. Syntypes from Germany probably lost (not found in ZMB). **Syn. nov.**

Agathis annae; Shenefelt, 1970: 316.

Microdus tumidulus var. *ruficoxis* Fahringer, 1937: 509.

Agathis tumidula var. *ruficoxis*; Shenefelt, 1970: 363.

Microdus victoris Telenga, 1955: 288; Tobias, 1986: 288. Holotype, ♀ (ZIP), from Russia, examined. **Syn. nov.**

Agathis victoris; Shenefelt, 1970: 366.

Microdus anuphrievi Tobias, 1986: 288. Holotype, ♀ (ZIP), from Russia (Krasnodar), examined. **Syn. nov.**

Material.— 1 ♀ (here designated neotype; RMNH), "Nederland-Dr., Uffelte, 25.vi.1982, B. v.Aartsen"; 1 ♀ (RMNH), "Nederland, Dr., Wijster, opposite Biol. Stat., 12-19.viii.1977, C.v.Achterberg" (typical "*annae*"); 1 ♀ (RMNH), "Nederland, Rockanje (Z.H.), Stekelhoekduin", "wet *Salix*-dunes, 23.vi-15.vii.1976, C.v.Achterberg"; 1 ♂ + 1 ♀ (RMNH), "[Netherlands], Uffelte, 1.vii.1975, B.v.Aartsen"; 2 ♀♀ + 2 ♂♂ (RMNH), id., but 25.vi.1982; 1 ♀ (RMNH), "[Netherlands], Terlet, 25.viii.1982, B.v.Aartsen"; 1 ♀ (RMNH), "[Netherlands], Westervelde, 2.vii.1975, B.v.Aartsen"; 1 ♂ (RMNH), "Museum Leiden, Neth., dept. Limburg, Kerkrade, nabij Nulland, U.T.M., 32UK893, 28.vi-3.vii.1983, leg. P. Thomas"; 1 ♀ (RMNH), "Nederland, Losser, 26.viii.1983, B.v.Aartsen"; 1 ♀ (RMNH), "Nederland, Meinweg, 5.vii.1983, B.v.Aartsen"; 1 ♀ (RMNH), "[Netherlands], Cadier, L., 23.viii.1990, B.van Aartsen"; 1 ♀ (RMNH), "Holland, Bemelen, 6.vii.1975, C.J. Zwakhals"; 1 ♀ (RMNH), id., but 21.viii.1989; 1 ♂ (RMNH), id., but 5.ix.1977; 2 ♀♀ (RMNH), "Netherlands: L., St. Pietersberg, c. 150 m, 1-5.viii.1988, Mal. tr., B.v.Aartsen, RMNH'89"; 1 ♂ (RMNH), id., but 11-16.viii.1988; 1 ♀ + 2 ♂♂ (RMNH), "Museum Leiden, 't Harde, 16.viii.1982, B.v.Aartsen"; 1 ♂ + 1 ♀ (RMNH), "Museum Leiden, Nederland (Z.L.), Venlo, 7.vii.1982, B.v.Aartsen"; 2 ♀♀ (RMNH), id., but 15.ix.1982 and 18.vii.1983; 1 ♂ (RMNH), "[Netherlands], Rockanje, 28-29.v.1949, Dr. C.de Jong"; 1 ♀ (RMNH), "[Netherlands], Bergentheim, 9.vii.1975, B.v.Aartsen"; 1 ♀ (RMNH), "Nederland, Putten (Gld.), Krachtighuizen, 3-6.vii.1975, J.v.d.Vecht, Malaise-trap"; 1 ♀ (RMNH), id., but 15.ix.1977, Putten; 1 ♀ (RMNH), "Holland, Best, 24.viii.1950, H. Teunissen"; 1 ♀ (RMNH), "[Netherlands], Drunen, 8.viii.1967, C.J. Zwakhals"; 1 ♂ (RMNH), id., but 12.viii.1968; 1 ♀ (RMNH), "Holland, Oisterwijk, 27.viii.[19]50, H. Teunissen"; 1 ♀ (RMNH), "[Netherlands], Arkel, 12.viii.1966, C.J. Zwakhals"; 1 ♀ (RMNH), "Holland, 29.v.1976, C.J. Zwakhals"; 1 ♂ (RMNH), id., but 3.vi.1968; 1 ♀ (RMNH), "Museum Leiden, Nederland, Noordwijk (Z.H.), 15.vii.1964, Ph. Pronk"; 1 ♀ (RMNH), "[Netherlands], Vogelenzang, N.H., duinen, 13.vii.1982, B. van Aartsen"; 1 ♀ (RMNH), "Netherlands, Venlo, 12.vii.1986, B.v.Aartsen"; 1 ♀ (RMNH), "Netherlands: Z., Westerschouwen, 10-15.vi.1989, Mal. trap, C.J. Zwakhals, RMNH'90"; 2 ♀♀ (RMNH), "Museum Leiden, Holland, Exc. Zeeuws Vlaanderen, Clinge, nr Hulst, 6.ix.1968, Ph. Pronk"; 1 ♀ (RMNH), "Museum Leiden, Holland, Exc. Zeeuws Vlaanderen, nr Lamswaarde, (Gem. Hontenisse), 10.ix.1968, C. van Heijningen"; 3 ♂♂ (RMNH), "Museum Leiden, Holland, Exc. Zeeuws Vlaanderen, Camping Braakman, (Gem. Hoek), 4.ix.1968, N. de Haas"; 1 ♀ (RMNH), "Museum Leiden, Nederland, Meijendel (Bierlap), 16.vii.1959, J.v.d.Vecht c.s."; 1 ♀ (RMNH), "[Netherlands], Schoonebeek, 5.ix.1974, B.v.Aartsen"; 1 ♀ (RMNH), "Netherlands, nr The Hague, Bierlap, inner dunes, 28.vi-4.vii.1974, A.P.M.v.d.Zon"; 1 ♀ (RMNH), "Nederland (NBr.), Vlijmen, 8.vii.1987, A. Teunissen"; 2 ♀♀ (RMNH), "[Netherlands], Wageningen, ruderaal terrein, 12.ix.1969, leg. van Achterberg"; 2 ♀♀ + 1 ♂ (RMNH), id., but 6.ix.1969; 1 ♀ (RMNH), "Netherlands, Udenhout, 16.vi.1984, C.J. Zwakhals"; 1 ♀ (RMNH), "[Netherlands], Drunen, 9.vii.1967, C.J. Zwakhals"; 1 ♀ (RMNH), "Holland, Schelluinen, 5.vi.1976, C.J. Zwakhals"; 1 ♀ (RMNH), "Nederland, Asperen, 19.vi-3.vii.1973, C.J. Zwakhals"; 1 ♀ (RMNH), "[Belgium], Florenville, 13.vii.1970, Ardennen, Belg., leg. van Achterberg"; 1 ♀ (RMNH), "Norge, AK: Hurdal", "Hurdal, 16.vii.1977, J.A.W. Lucas"; 1 ♀ (RMNH), "Germania, Thuringia"; 1 ♀ (RMNH), "Exc. Duitsland, Mariawald, Eifel, 3.viii.1961, C. de Jong"; 1 ♂ (RMNH), "[Poland], Stettin, Zeller", "ex *Euphorbiana*, 27.ix.[18]50"; 1 ♀ (RMNH), "[France], Porto Bollo, Kors[ika], 2.vii.[19]81, W. Perraudin"; 1 ♀ (RMNH), "France, Haute Marne, 13 km North of Langres, 2.ix.1962, J.v.d.Vecht"; 1 ♀

(RMNH), "France, St. Marty, 5.vii.1951, H. Teunissen"; 1 ♀ (RMNH), "Museum Leiden, France, (Pyr. Or.), Ancien font de Salses, 25.ix.1957, Exc. Leidse Biol."; 1 ♀ (RMNH), "Italia: (Bolzano) Sarntal, 1250 m, 29.vi.1976, C.J. Zwakhals"; 1 ♂ (RMNH), "Museum Leiden, SE Spain, dept. Málaga, Exc. Univ. Leiden", "Churiana, nr airport Málaga, wasteland, 17.iv.1983, E.I.S. UF 65"; 1 ♀ (RMNH), "Esp., Alicante, Moraira, 90 m, 28.x-3.xi.1989, garrigue, rec. R. Wahis, Mal. trap."; 1 ♀ (RMNH), "Spanje, Damiel, 15.ix.1952, Bär, Blöte, de Jong & Osse, Museum Leiden"; 1 ♂ (RMNH), "Islas Baleares, Menorca, W.H. Gravestien et S.J. van Ooststroom", "Ciudadela, 18.ix.1973"; 2 ♀♀ (RMNH), "P [Portugal], Tareja, Algarve, 8-28.iv.1991, leg. Joh. C[ostanje] T[eunissen]"; 1 ♀ (RMNH), "[Spain], Esp.-Alicante, Moraira, 90 m, 28.x-3.xi.1989, garrigue, réc. R. Wahis, Mal. trap."; 1 ♂ (RMNH), "Bulgaria, ex coll. Zaykov, RMNH Leiden 1991", "18.viii.1975, Rhodopi, Petelovo, leg. A. Zaykov"; 1 ♂ + 1 ♀ (RMNH), id., but "Nikolovo, 19.vii.1976" (♂) and id. "30.ix.1975" (♀); 1 ♂ (RMNH), id., but "Tvailovgrad, 18.vii.1976"; 1 ♂ (RMNH), id., but "Belitebrovo, 29.vi.1975"; 2 ♀♀ (RMNH), id., but "20.viii.1976" and "17.vi.1975"; 2 ♂♂ (RMNH), id., but "Konush, 6.x.1975"; 1 ♂ (RMNH), id., but "Sh. poljana, 22.ix.1976, leg. J. Kolarov"; 1 ♀ (RMNH), id., but "Velingrad, 26.vi.1981"; 3 ♂♂ (RMNH), id., but "Dospat, (20 or) 21.vi.1981"; 1 ♂ (RMNH), id., but "Plovdiv, 24.v.1969, A. Germanov"; 2 ♀♀ (RMNH), id., but "Borovez, 23.vii.1982, leg. Zaykov"; 1 ♀ (RMNH), id., but "Sk. poljanov, 18.v.1976"; 1 ♀ (RMNH), id., but "Belastitsha, 28.viii.1977"; 1 ♀ (RMNH), id., but n. Ergupria, 2.viii.1978"; 1 ♀ (ITZ), "[Netherlands], Zwammerdam, viii.1896, de M[eijere]"; 1 ♀ (ITZ), "[Netherlands], Venlo, 8.viii.[18]75; 1 ♂ (ITZ), "[?Netherlands], 12.viii.1897, uit *Grapholitha hypericana* Snellen", "Coll. Dr. J. Th. Oudemans"; 1 ♂ (ITZ), "España, Malaga, 6 km O v. Torre del Mar, 24.v.1967, M.J. & J.P. Duffels"; 1 ♀ (ITZ), "Hungary, Gödöllő (NO v. Budapest), 3-15.vii.1962, J. Lemfest"; 1 ♀ (ITZ), "Oesterreich, Burgenland, Neusiedl. a. S., 3.ix.1961, Jeckel & Wiering"; 1 ♀ (ITZ), "ČSSR, Slovensko ent. exc. Zoöl. Mus."; "Pohranice, 6 km NO v. Nitra, 23.vii.1968"; 1 ♀ (RMS), "Malta, ex larva in mines *Capparis spinosa* (prob. *Cydia capparidana*) coll. 30.xi.[19]83, J.L. Gregory"; 5 ♀♀ (RMS), "Loch Sindin, Barra, 6.vii.[19]35", "[I]sle of Barra, Outer Hebrides, 1-14.vii.1935, Ed. Un. Biol. Soc. Coll. 1936.11"; 1 ♂ (RMS), "[England], Orpington, Kent, ex *Lathronympha strigana* [on] *Hypericum perforatum*, em. viii.[19]76, P.A. Sokoloff"; 1 ♀ (RMS), "[England], East Didsbury, Mcr. [= Manchester] on *Heracleum* flws, 3.vii.[19]77, M.R. Shaw"; 1 ♀ (RMS), "[England], Univ. Reading, ex indet. micro spun [on] *Hypericum* shoot, 17.iv.[19]79, em. 29.vi.[19]79, M.R. Shaw"; 1 ♀ (RMS), "no data (SE England), em. ex *Hypericum*, ex ? *Lathronympha strigana*, E.S. Bradford (c. 1985)"; 1 ♀ (RMS), "[England], Surrey, Thursley Common, P.J. Chandler, 28.viii.1967, dry heath"; 1 ♂ (RMS), "[England], Epping Forest, Essex, [ex] *Epiblema scutellana* [in] *Cirsium* stem, em. 17.iv.[19]79, P.A. Sokoloff"; "*Microdus clausalianus* Ratz., det. G.E.J. Nixon, 1984"; 1 ♂ (RMS), "France, Hérault, Capetang, 16.viii.[19]82, M.R. Shaw"; "*Microdus ?conspicuus* Wesm., det. G.E.J. Nixon, 1984"; 1 ♂ (RMS), "[Scotland], Upper Side, Midlothian, NT 2955, em. 1989, ex dead flowerheads [of] *Centaurea nigra*, coll. 18.ii.1989, K.P. Bland 3417"; 1 ♂ (RMS), "[Scotland], Middleton, Midlothian, NT 3557, [ex] *Epiblema cirsiana* in stem of *Centaurea nigra*, coll. 10.ii.[19]90, em. vi.[19]90, K.P. Bland, 3845"; 1 ♂ (RMS), "[Scotland], ex *Epiblema scutellana* in thistle, Ettrick, Selkirk, coll. 9.iv.[19]83, em. 24.iv.[19]83, K. Bland"; 1 ♂ (RMS), "[England], emerged 20.v.[19]79, 943", "ex stems of thistles, Headshaw Burn, Oxtou, Berwicks, coll. 10.iii.[19]79, K. Bland, 943"; 1 ♂ (RMS), "[England], Blairgowrie, Perth., ex wet meadow, 3.vii.[19]89, M.R. Shaw"; 1 ♂ (RMS), "France: Couhé, Vienne, 26.vii.[19]90, M.R. Shaw"; 1 ♂ (RMS), "[England, Somerset], 30.vi.[19]83, Gordano 27, C.M. Drake"; 1 ♀ (RMS), "[England], Farington, Oxon., ex *Dichrorampha acuminatana* [on] *Leucanthemum vulgare* flowers/seeds, 18.vii.[19]91, em. 16.viii.[19]91, M.F.V. Corley"; 1 ♀ (RMS), "France: Bedoin, Vaucluse, 22.vii.[19]84, M.R. Shaw"; 1 ♀ (RMS), "France: Valras-Plage, Hérault, 7-16.viii.1982, M.R. Shaw"; 1 ♀ (RMS), "[Scotland], Cairngorms, Inv., immobilised on snow, NH 983003, 58, 1.vi.[19]82, N.P. Ashmole"; 2 ♀♀ (RMS), "[England], Santon Downham, Norfolk, TL 818883, Malaise trap: heath with birch and pine, 25.vii-5.viii.[19]83 (and 20-30.vii.1985), J. Field, MJ, RSMNH 1986.021"; 1 ♀ (RMS), "Portugal, Algarve, nr Loules, ex indet. ?Tortricid on *Santalina* (semi-greg., in frass covered silken tubes), coll. 17.iii.[19]89, em. 12.iv.[19]89, M.F.V. Corley"; 1 ♂ + 2 ♀♀ (RMS), "[England], Petit Tor Point, Torquay, Devon, [ex] *Cydia tenebrosana* [on] *Rosa* hips, coll. 10 (and 11).ix.[19]83, R.J. Heckford"; 2 ♂♂ + 7 ♀♀ (RMS), "[England], Iping Common, Midhurst, W. Sussex, SU 845225, Mal. trap, 27.viii-10.ix.[19]84, M. Edwards, NMSZ 1990.071"; 5 ♀♀ (MNHN), "End. *Cineraria*, Leucate, 28.viii.[19]06", "Leucate, Aude, coll. Chretien"; 1 ♂ (MNHN), "Ollioules, Var, 8.x.[19]55, Barbier", "4894"; 1 ♂ (MNHN), "La Garde (Var), 10.ix.[19]64, J. Barbier", "6548"; 1 ♂ (MNHN), "[France], Palavas, Hrlt., 27.ix.[19]43, Jean Lichtestein", "coll. F. Picard (coll. Lichtestein), Museum Paris, 1939"; 1 ♀ (MNHN), "Maroc, ex musaeo H. Vaucher, 1908"; 1 ♂ (MNHN), "Ollioules (Var) 22.vii.[19]56, J. Barbier", "5412"; 1 ♀

(MNHN), "Ollioules (var.), 5.viii.[19]56, J. Barbier", "5476"; 1 ♀ (MNHN), "Toulon var. 4.754, J. Barbier"; 1 ♀ (MNHN), "Museum Paris, Manosque (Basses-Alpes), L. Berland, 1975"; 1 ♂ (MNHN), "Cousson, B. Alp., coll. Chretien"; 1 ♂ (MNHN), "[France], Ollioules, var. 8.x.[19]55, Barbier", "4893"; 1 ♀ + 2 ♂♂ (ZSBS), "Ex parasite ♀ Cedar caterpillar", "emerged in lab., 22.v.[19]74, Balogh, S. H.", Coll. Haeselbarth"; 6 ♀♀ + 1 ♂ (MNHN), France, Giraud; 11 ♂♂ and 9 ♀♀ (MNHN), France, J. de Gaulle; 15 ♂♂ + 30 ♀♀ (MNHN), France: Esbarres, Chatrettes, Gevrolles, Ft. du Pochon, Toulon, Ollioules; 7 ♂♂ + 8 ♀♀ (MNHN), France; 1 ♂ + 1 ♀ (MNHN), France, "Landes", Lafaury; 1 ♀ (MNHN), "Angleterre", "coll. Ernest André, 1914, Museum Paris"; 1 ♀ (MNHN), "Belgique, J. Leclercq", "Lasne, 25.viii.[19]43"; 4 ♂♂ + 2 ♀♀ (MZR), Italy: Lazio, Puglia, Trentino, Garda lake.

Neotype, ♀, length of fore wing 4.5 mm, of body 5.0 mm.

Head.— Antennal segments 30, length of third antennal segment 1.2 times fourth segment; length of third, fourth and penultimate antennal segment 4.0, 3.4 and 1.5 times their width, respectively; length of maxillary palp 0.9 times height of head; length of eye 2.5 times temple in dorsal view; POL:diameter of ocellus:OOL = 11:5:10; face finely punctate and rather transverse (fig. 54); clypeus rather flat; area between antennal sockets in frontal view rather flat, with medial groove, and oblique parts rather convex and rather remotely punctate (figs 57, 123); area between antennal sockets with convexly protruding ridges (fig. 57); anterior ocellus distinctly removed from depression near inner side of antennal sockets (fig. 106); vertex punctulate; length of malar space 2.3 times basal width of mandible.

Mesosoma.— Length of mesosoma 1.4 times its height; propleuron coarsely reticulate-punctate laterally and deeply concave medio-ventrally; side of pronotum smooth medially, punctate posteriorly, and with rugulosity anteriorly; lateral pronope moderately wide and deep; prepectal carina strong, thin, upcurved, situated just below fore coxae, deeply and rather narrowly V-shaped emarginate medio-ventrally (fig. 89); mesosternal sulcus crenulate (but in other specimens it may be nearly smooth); mesoscutum distinctly punctate; notauli deep, micro-crenulate, united submedially and indistinct posteriorly; scutellum sparsely punctate, slightly convex, subposteriorly with weak crest, without distinct medio-posterior depression; precoxal sulcus deeply impressed, long (but absent anteriorly), narrowly crenulate; mesopleuron punctulate above precoxal sulcus, and more densely punctate below it; metapleuron coarsely rugose ventrally, with some punctures dorso-medially; propodeum rugose, with an elongate and long areola medially.

Wings.— Fore wing (fig. 88): marginal cell rather narrow basally (figs 59, 88); second submarginal cell triangular, with a short stalk (fig. 88; in other specimens a stalk may be absent; fig. 53); SR1 straight; 2A present; cu-a inclivous; r:3-SR+SR1 = 3:53. Hind wing: M+CU:1-M = 26:31.

Legs.— Hind leg rather stout (fig. 58); length of hind femur, tibia and basitarsus of hind leg 3.0, 6.2 and 8 times their width, respectively; length of inner and outer spur of middle tibia 0.55 and 0.5 times middle basitarsus; length of inner and outer spur of hind tibia 0.5 and 0.4 times hind basitarsus, respectively.

Metasoma.— Length of first tergite equal to its apical width, its surface striate; length of combined second and third tergites equal to their maximum width; second tergite smooth, but in other specimens some vague elements of sculpture around the curved groove may be present, sometimes in the groove itself; remainder of metasoma smooth; length of ovipositor sheath equal to length of fore wing, and usually about equal to combined length of mesosoma and metasoma; setae of ovipositor sheath medium-sized (fig. 56).

Colour.— Black; palpi yellowish, but basally blackish; coxae, fore and middle trochanters blackish; remainder of legs (except tarsi) yellowish-brown; apex of hind tibia slightly infusate; temple with an orange-brownish patch; wing membrane slightly infusate; apical 0.1 of hind tibia infusate.

Diagnostic characters.— Recognizable by the combination of the strong and upcurved prepectal carina, the number of antennal segments and the length of the ovipositor.

Variation.— Length of fore wing 3.2–4.8 mm, of body 3.5–6.0 mm; antennal segments 28–36; length of ovipositor sheath 0.8–1.4 times fore wing. This species shows an extreme variability in size, length of ovipositor sheath, sculpture of first and second tergites, venation of fore wing (vein SR1 sometimes very slightly curved, second submarginal cell triangular or subtriangular, petiolate or (sub)sessile), but especially in body-colour. The encountered variation in colour of the body is depicted in fig. 60, except for the holotype of *B. victoris*, which has the whole metasoma (except apex), coxae (except base of the hind coxae), and tegulae yellowish. The holotype of *B. anuphrievi* is similar, but it has the metasoma dark brown with the first tergite and apex of metasoma blackish, and base of hind coxae yellowish. In addition about half of the examined specimens has yellowish-brown coxae. The extend of infuscation of the hind tibia is variable, as is the presence of the orange-brown patch behind each eye. The first tergite is sometimes smooth (1 ♂ (MNHN), "Ollioules, Var, 8.x.[19]55, J. Barbier"; 1 ♀ + 2 ♂♂ (ZSBS) from Baloe). A specimen from Morocco (♀ (RMNH), "Marocco, nr Taounata, Middle Atlas Mts, D. Quicke, ix.1978", "Flying around *Pinus* sp., 5000 ft.") is aberrant because of its comparatively long ovipositor (about 1.5 times fore wing) and narrow fore wing marginal cell, and partly yellowish mesonotum. It was identified by Nixon (in 1984) as "?var. *claushtalianus*" but it lacks the long ovipositor of that species and it has only 33 antennal segments.

Distribution.— France, Germany, Great Britain, Ireland, Italy, *Malta, *Morocco, Netherlands, *Portugal, Russia, *Spain, Yugoslavia.

Biology.— Parasite of Tortricidae: *Dichrorhampha acuminatana* (Lienig & Zeller) on *Chrysanthemum leucanthemum* Linnaeus, *Lathronympha strigana* (Fabricius) on *Hyperricum*, *Epiblema scutellana* (Denis & Schiffermüller) on *Cirsium*, *E. cirsiana* (Zeller) on *Centaurea nigra* Linnaeus, and *Cydia tenebrosana* (Duponchel) on *Rosa*.

***Bassus zaykovi* (Nixon, 1986) comb. nov.**
(figs 78–83)

Microdus zaykovi Nixon, 1986: 226. Holotype, ♀ (RMNH), from Bulgaria, examined.

Material.— Holotype, ♀ (RMNH), "Holotype", "Bulgaria, ex coll. Zaykov, RMNH, Leiden 1991", "19.viii.1976, Rhodopi [Mountains], Nikolovo, leg. A. Zaykov", "*Microdus zaykovi* Nixon, Holotype, ♀, det. G.E.J. Nixon, 1984"; 1 ♀ + 1 ♂ (RMNH), paratypes, "h. "Ruen", Rodopi, 29.vii.1969, leg. A. Germanov" (♀), and "Bojno, Rhodopi, 24.vii.1975, leg. A. Zaykov" (♂); 1 ♀ (RMNH), "Bulgaria, ex coll. Zaykov, RMNH Leiden 1991", "h. "Ruen", 29.vii.1969, leg. A. Germanov"; 2 ♂♂ (RMNH), id., but Komuniga, 5.vii.1975, leg. A. Zaykov"; 1 ♂ + 1 ♀ (RMNH), id., but 5.viii.1975; 3 ♂♂ (RMNH), id., but "Sh. poljana, 10.vi.1977"; 3 ♂♂ (RMNH), id., but 18.vi.1976; 1 ♀ (RMNH), id., but 18.vii.1977; 1 ♀ (RMNH), id., but 24.vi.1975; 1 ♂ (RMNH), id., but 21.vi.1976; 1 ♂ + 2 ♀♀ (RMNH), id., but "Nikolovo, 14.viii.1976"; 1 ♀ (RMNH), id., but 19.viii.1976; 1 ♀ (RMNH), id., but 20.viii.1976; 1 ♂ (RMNH), id., but

15.viii.1976; 1 ♂ (RMNH), id., but "Bojno, 24.vii.1975"; 1 ♂ (RMNH), id., but 6.vii.1976; 1 ♂ (RMNH), id., but "Popovo, 25.vii.1976"; 1 ♂ (RMNH), id., but "Shiboka poljana, 16.vii.1976"; 1 ♂ (RMNH), id., but "18.vi.1976", "*Microdus linguarius* Nees, det. Papp, 1976"; 1 ♀ (RMNH), id., but "18.viii.1975, leg. J. Kolarov"; 1 ♂ (RMNH), id., but "H. Arda, 13.vii.1976".

Holotype, ♀, length of fore wing 4.5 mm, of body 4.8 mm.

Head.— Antennal segments 29, long setose, length of third segment 1.4 times fourth segment, length of third, fourth and penultimate segments 3.4, 2.4 and 1.2 times their width, respectively; length of maxillary palp 0.7 times height of head; length of eye 3.4 times temple in dorsal view; POL:diameter of ocellus:OOL = 8:5:7; face punctulate and rather densely setose; clypeus subquadrate (fig. 79), rather convex; temple concave posteriorly near lower level of eyes (fig. 78); vertex smooth, except for some punctures; area behind stemmaticum declivous; frons smooth, slightly concave and with an indistinct median ridge, no depression in front of anterior ocellus; area between antennal sockets nearly flat (fig. 79); labio-maxillary complex somewhat protruding (fig. 78); temple (behind malar space) comparatively wide (fig. 78); length of malar space twice basal width of mandible.

Mesosoma.— Length of mesosoma 1.6 times its height; propleuron deeply concave and rugulose medially, but only finely punctate laterally; lateral pronope medium-sized; side of pronotum densely and finely punctulate and setose dorso-posteriorly, ventrally densely punctate and remainder smooth; prepectal carina normal, medium-sized and shallowly emarginate ventrally (fig. 82); mesosternal sulcus shallow and smooth; mesoscutum smooth (but punctulate in paratype female), and setose; notauli completely and narrowly crenulate; scutellum smooth; mesopleuron punctulate, but smooth around speculum; precoxal sulcus absent anteriorly, remainder sparsely sculptured; mesosternal sulcus shallow and smooth; mesosternum tuberculate medio-posteriorly; metapleuron punctate-rugose ventrally, remainder sparsely punctate; propodeum completely coarsely reticulate-rugose.

Wings.— Fore wing: marginal cell medium-sized (fig. 80); SR1 slightly bent; 1-M straight (left wing) or somewhat curved (right wing); cu-a vertical; $r:3\text{-SR}+\text{SR1} = 3:41$. Hind wing: $M+\text{CU}:1\text{-M} = 23:17$.

Legs.— Length of femur, tibia and basitarsus of hind leg 3.0, 5.7, and 6.8 times their width, respectively; length of inner and outer middle tibial spurs 0.4 and 0.35 times middle basitarsus; length of inner and outer hind tibial spurs 0.35 and 0.3 times hind basitarsus, respectively; tarsal claws slender, with a small lobe, and somewhat longer than arolium.

Metasoma.— First tergite as long as its apical width, its pair of dorsal carinae indistinct (fig. 81), its surface largely smooth, finely striate only near its basal third (fig. 81); length of combined second and third tergites equal to their maximum width; second and following tergites smooth; second tergite narrow (fig. 81, wider in paratypes); second suture shallow; third tergite without transverse depression; length of ovipositor sheath 0.81 times fore wing and slightly longer than metasoma and half of mesosoma.

Colour.— Black; palpi, tegulae, pterostigma, veins, apex of hind tibia narrowly, and tarsi (except basally) dark brown; coxae black(ish); femora, trochanters, and trochantelli orange-brown; tibiae rather pale yellowish-brown; metasoma (except first tergite) mainly orange-brown, but the male paratype has only the apices of first,

second and third tergites orange-brown; wing membrane distinctly infusate.

Diagnostic characters.— Distinctive for this species is the shape of the head (figs 78, 79), the width of the temples ventrally (fig. 78), the convexity of the clypeus, and the distinctly infusate wings.

Distribution.— Bulgaria.

Biology.— Unknown.

Excluded species

Orgilus abbreviator (Ratzeburg, 1852) comb. nov.

Microdus abbreviator Ratzeburg, 1852: 45; Nixon, 1986: 230 (under species inquirenda). The male syntypes from Germany are lost.

Agathis abbreviator; Shenefelt, 1970: 314.

According to Ratzeburg (1852) reared from *Recurvaria leucatella* (Clerck), belonging to the Gelechiidae. *Bassus* species are unknown from this host and the original description does not fit any of the known species. Its dark legs also disagree with the *Bassus* species reared from other Gelechiidae. Possibly Ratzeburg overlooked (because of the infusate wing membrane) the absence of the vein r-m of the fore wing; if this is correct then the description fits a species of the genus *Orgilus* Haliday, 1833 (Orgilinae). It may be a senior synonym of *O. nanellae* Tobias, 1986, which has been reared from the same host.

Agathis brevicaudis (Reinhard, 1867)

(figs 101, 103, 113, 114)

Microdus brevicaudis Reinhard, 1867: 356; Nixon, 1986: 230 (under species inquirenda). Lectotype, ♀ (ZMB), from Germany is designated below.

Agathis brevicaudis; Shenefelt, 1970: 320.

Material.— Lectotype (here designated), ♀ (ZMB), "[Germany], Gastein", "Col. H. Rhd.", "30205", "Type", "*brevicaudis* Rhd.".

Lectotype, ♀, length of fore wing 2.8 mm, of body 3.1 mm.

Head.— Head rather elongate (fig. 101); antenna with 28 segments, length of third segment 1.5 times fourth segment, length of third, fourth, and penultimate segments 5.0, 3.3, 1.6 times their width, respectively; length of maxillary palp 0.7 times height of head; length of eye 1.6 times temple in dorsal view; POL:diameter of ocellus:OOL = 5:4:6; face smooth; vertex smooth and convex, but depressed near ocelli; clypeus strongly convex and somewhat wider than high (fig. 101); frons smooth, with a pair of depressions, a medial crest and triangular depression in front of anterior ocellus weakly developed (fig. 101); the area between antennal sockets slightly triangular; temple straight posteriorly; labio-maxillary complex slightly protruding (fig. 103); length of malar space 1.8 times basal width of mandible.

Mesosoma.— Length of mesosoma 1.6 times its height; propleuron distinctly convex; lateral pronope absent; side of pronotum smooth, but rugulose anteriorly

and crenulate posteriorly; prepectal carina medium-sized and normal; mesosternal sulcus deep and distinctly crenulate; mesoscutum smooth, except for some superficial sculpture on middle lobe of mesoscutum; notauli complete and indistinctly crenulate; scutellum smooth, but partly rugulose posteriorly; mesopleuron sparsely punctulate; precoxal sulcus only medially impressed, finely crenulate; metapleuron rugose ventrally and rugulose dorsally, rather mat; propodeum coarsely more or less vermiculate rugose.

Wings.— Fore wing: marginal cell rather wide (fig. 113); SR1 slightly sinuate; 1-M curved; second submarginal cell broadly sessile, quadrangular (fig. 113); 2A absent; cu-a vertical and straight; r:3-SR:SR1 = 2:2:29. Hind wing: M+CU:1-M = 10:9.

Legs.— Length of femur, tibia and basitarsus of hind leg 3.1, 6.8, and 7 times their width, respectively; length of inner and outer middle tibial spurs 0.55 and 0.45 times middle basitarsus; length of inner and outer hind tibial spurs 0.40 and 0.35 times hind basitarsus, respectively; tarsal claws with an acute lobe medially.

Metasoma.— Length of first tergite about equal to its apical width, concave basally, longitudinally rugose and with a pair of weak dorsal carinae in basal half of tergite; medio-anterior elevation of second tergite transversely aciculate, its surroundings (obliquely) rugulose and remainder smooth (fig. 114); third and following tergites smooth; second suture smooth and shallow; second and third tergites with a shallow transverse depression; length of ovipositor sheath 0.40 times fore wing and 0.8 times metasoma, and normally setose.

Colour.— Black or dark brown; tegula dark brown; humeral plate, palpi, fore femur (except base), tibia, and tarsus (except telotarsus), apical half of middle femur, middle tibia (except apex) yellowish-brown; hind tibia (like its spurs and base of basitarsus) pale yellowish, with its apical third dark brown and subbasally infusate; coxae blackish; remainder of legs dark brown; wing membrane slightly infusate; pterostigma dark brown; veins brown.

Distribution.— Germany.

Biology.— Reported to be a parasite of *Coleophora troglodytella* Duponchel (Shenefelt, 1970); the other host, *Bucculatrix thoracella* Thunberg, feeds on trees instead of herbs and may therefore be based on an incorrect identification of the parasite.

Note.— Belongs to the genus *Agathis* because of the convex clypeus; the shape of the head is intermediate between those of *Bassus* and typical *Agathis*. Very similar to *A. mediator* (Nees), which differs e.g., by the more convex face (fig. 104) and the ventrally less narrowed head (fig. 100).

***Agathis lugubris* (Foerster, 1862)**

(figs 99, 102, 111, 112, 115)

Cenostomus lugubris Foerster, 1862: 246. Lectotype, ♀ (ZMB), from Germany is designated below.

Agathis lugubris; Shenefelt, 1970: 341.

Agathis minuta Niezabitowski, 1910: 81; Shenefelt, 1970: 344; Nixon, 1986: 208-209, fig. 29. Probably the syntypes from Poland are lost. *Syn. nov.*

Material.— Lectotype (here designated), ♀ (ZMB), "*Cenostomus m. lugubris* m. ♂♀", "[?Germany], coll. Förster"; 1 ♀ (RMNH), "[Netherlands], Terschelling, Grie, 3-6.vii.1937, Geijskes en Doeksen leg."; 1 ♂ (RMNH), "Norway, Hedm, fylke, Hamar-swamp, swept: 22.vi.1977, leg. H.J. Vlugg".

Lectotype, ♀, length of both fore wing and body 2.8 mm.

Head.— Head distinctly elongate and narrowed ventrally (fig. 99); antenna incomplete, remaining antennal segments 22 (one antenna), short setose; length of third segment 1.3 times fourth segment, length of third and fourth segments 4.3 and 3.3 times their width, respectively; length of maxillary palp 0.6 times height of head; length of eye 1.8 times temple in dorsal view; POL:diameter of ocellus:OOL = 12:4:10; face smooth; clypeus strongly convex and subquadrate (fig. 99); vertex smooth and convex (but concave between posterior ocelli); frons smooth, with a pair of elongate depressions separated by a distinct median crest (fig. 115); in front of median ocellus a distinct triangular depression; area between antennal sockets flat (except for the medial crest; fig. 99); temple without an excavation posteriorly (fig. 102); labio-maxillary complex slightly protruding (fig. 102); length of malar space twice basal width of mandible.

Mesosoma.— Length of mesosoma 1.5 times its height; propleuron strongly convex; pronope absent; side of pronotum largely smooth medially, crenulate posteriorly and rugulose-crenulate anteriorly and largely glabrous; prepectal carina normal, moderately developed; mesosternal sulcus deep and distinctly crenulate; mesosternum without tubercles posteriorly; mesoscutum smooth; notauli complete and narrowly crenulate; scutellum smooth; mesopleuron sparsely punctulate; precoxal sulcus impressed and crenulate only medially; metapleuron rugose but medio-dorsally smooth; propodeum coarsely rugose medially and posteriorly, and remainder sparsely sculptured.

Wings.— Fore wing: marginal cell comparatively wide (figs 111, 112); SR1 straight; 1-M curved; second submarginal cell sessile, quadrangular (fig. 111) or (sub)triangular (fig. 112); cu-a vertical anteriorly and curved basad posteriorly; r:3-SR:SR1 = 5:1:36. Hind wing: M+CU:1-M = 10:9.

Legs.— Length of femur, tibia and basitarsus of hind leg 3.0, 6.0 and 6.5 times their width, respectively; length of inner and outer middle tibial spurs 0.5 and 0.45 times middle basitarsus; length of inner and outer hind tibial spurs 0.4 and 0.35 times hind basitarsus, respectively; tarsal claws distinctly widened medially and without a distinct acute lobe.

Metasoma.— Length of first tergite 0.9 times its apical width, distinctly concave medio-basally, finely longitudinally rugose and microsculptured, only the basal third of tergite with pair of weak dorsal carinae; second tergite with a weak transverse depression, the medio-basal elevation smooth and its surroundings rugulose; third and following tergites smooth; second suture shallow and smooth; length of ovipositor sheath 0.80 times fore wing, and 1.7 times metasoma, and moderately setose.

Colour.— Blackish or dark brown; tegula dark brown; humeral plate, palpi, tarsi, tibiae, and apical half of femora yellowish-brown; remainder of legs dark brown; wing membrane slightly infusate; pterostigma dark brown; veins brown.

Diagnostic characters.— Differs from other members of the *Agathis mediator* group because the frontal depressions are deeper and separated by a strong crest, the length of the ovipositor sheath is 0.7-0.8 times fore wing, the second submarginal cell of the fore wing is (sub)triangular (but this is quite variable!), vein SR1 of the fore wing straight or nearly so, the second tergite is less sculptured and the hind tibia is largely yellowish apically (and in males infusate).

Distribution.— Germany, Netherlands, *Norway, Poland. According to Nixon (1986) also Great Britain, Ireland and Sweden.

Biology.— Parasite of Coleophoridae: *Coleophora glaucicolella* Wood on *Juncus inflexus* Linnaeus.

Variation.— Length of fore wing 2.4(♂)-2.8 mm, number of antennal segments 23 (♂) or 24 (♀), length of ovipositor sheath 0.7-0.8 times fore wing; second submarginal cell of fore wing may be distinctly petiolate; basal third of hind femur may be dark brown; first metasomal tergite may be only microsculptured.

***Agathis mediator* (Nees, 1814)**

(figs 42, 43, 100, 104)

Microdus mediator Nees, 1814: 188; Abdinbekova, 1975: 200. Holotype from Germany has been destroyed, neotype, ♀ (RMNH), from Germany is designated below.

Bracon mediator Curtis, 1837: 115.

Orgilus mediator Dours, 1874: 80.

Bassus mediator Thompson, 1953: 95.

Braunsia mediator Fahringer, 1937: 484; Shenefelt, 1970: 374.

Agathis mediator Kloet & Hinks, 1945: 234; Tobias, 1986: 286.

Microdus lugubator Ratzeburg, 1852: 45; Shenefelt, 1970: 341; Nixon, 1986: 219-220, figs 57, 59, 63. Syntypes from Germany are lost. **Syn. nov.**

Material.— 1 ♀ (here designated neotype; RMNH), "Germany: Rheinland, St. Goarshausen [= Stadt Loreley], *Coleophora* spec., op *Corylus avellana*, 14.vii.1984, C. Gielis, RMNH'85"; small series of specimens in ZMB identified by Reinhard (who was the first revisor) as *M. lugubator* Ratzeburg; 4 ♀♀ (RMNH), "Nederland, Lienden (Gld.), Schuylenburg, no. 60, 15.vi.1975", "Reared from *Coleophora* sp., A.v.Frankenhuyzen", "Smooth var. of *mediator* = *lugubator* Ratz. [C.v.Achterberg, 1975]"; 1 ♀ (RMNH), "[Netherlands], Baarland, em. 8.vii. ex *Coleophora* sp. on *Malus*, Dekker, IPO"; 12 ♀♀ + 3 ♂♂ (RMS, RMNH), "[England], Richmond Park, Surrey, 18.viii.1983 (19.00 hr), mature oak canopy, fogged 17 m with Resilin, N.E. Stork, RSMNH 1984 020, tree 1 (3, 6, or 7)"; 1 ♂ (RMS), "[England], Pamber. For., Hants., H.: *Coleophora lutipennella*/flavipennella [on] *Quercus*, HLC: 16.vii.19[85], PIE: 3.viii.19[85], M.R. Shaw"; 1 ♂ (RMS), "[England], Thrift Wood, Crawle, Worcs, VC 37, *Coleophora gracipennella* [on] *Prunus spinosa*, coll. x.19[82], em. vi.19[83], A.N.B. Simpson"; 1 ♂ (RMS), "[England], *Coleophora* sp. on *Populus tremula*, coll. 9.vi.19[78], em. 1978, M.R. Wilson, Stoke Common"; 2 ♀♀ (RMS), "[England], Botley Wood, Hants., ex *Coleophora flavipennella*/lutipennella on oak, 2.vi.19[77], em. 6.vii.19[77], J.R. Langmaid"; 1 ♀ (RMS), "[England], Skipwith, N. Yorks., ex *Coleophora serratella* [on] *Betula*, 8.vii.19[87], em. 7.viii.19[87], B.A. Hawkins"; 2 ♀♀ (RMS), "[England], New Forest, Hants., ex *Coleophora lutipennella* or *flavipennella* [on] oak, coll. 28.v.19[83], em. [19]83, P.H. Sterling"; 1 ♀ (RMS), "[England], Epping For., Essex, ex *Coleophora* case on oak bark, coll. 3.vii.19[83], em. 25.vii.19[83], P.J. Johnson"; 1 ♀ (RMS), "[England], Trench Wood, Worcs., ex *Coleophora flavipennella* [on] oak, coll. vi.19[83], A.N.B. Simpson"; 1 ♂ (RMS), "[England], Cambridge, em. 5.vii.1949, E.C. Pelham-Clinton, no. 3524", "Host *Coleophora* ?*flavipennella* Zeller, collected vi.1949 as case, food plant *Quercus*", "Agathis *lugubator* Ratz., Nixon det. 1950"; 1 ♂ (RMS), "France: Bernac, Lot-et-Garonne, 28.viii.19[90], M.R. Shaw"; 1 ♂ (MNHN), "11, I, U, de *Coleophora* sac étroit, cylindrique, (*nigricella*)", "Museum Paris, Collection Giraud, 1867"; 1 ♀ (MNHN), "Chartrettes, 7.viii.19[62], Ch. Granger"; 1 ♀ (MNHN), "de *Coleop. nigricella*, 22.J.11", "Museum Paris, coll. Giraud, 1877"; 1 ♀ (MNHN), "Museum Paris, coll. Giraud, 1877"; 1 ♀ (MNHN), "15.83.v., Museum Paris, coll. O. Sichel"; 1 ♂ (MNHN), "Museum Paris, Landes, coll. Lafauy, parasite de *Coleophora flavipennella*"; 1 ♀, (MNHN), "*P. roboricorella*", "Museum Paris, coll. Giraud 1877".

Neotype, ♀, length of fore wing 2.7 mm, of body about 3.0 mm.

Head.— Antennal segments 30 (in examined specimens 28-31); length of third segment 1.3 times fourth segment; length of third, fourth and penultimate segments 4.3, 3.3 and 1.5 times their width, respectively; length of maxillary palp 0.9 times height of head, length of eye 2.7 times temple in dorsal view; POL:diameter of ocellus:OOL = 5:3:6; face largely smooth, somewhat punctulate and distinctly convex

(fig. 104); clypeus evenly convex; head moderately transverse in frontal view; area between antennal sockets triangular, with a median keel, and area behind antennal sockets rather depressed (fig. 100); vertex smooth.

Mesosoma.— Length of mesosoma 1.7 times its height; side of pronotum largely smooth; lateral pronope obsolescent; prepectal carina rather weak and not emarginate; mesosternal sulcus distinctly crenulate; mesoscutum punctulate, rather flat; notauli reduced, but may be either completely present, micro-crenulate or shallow, or even absent anteriorly; scutellum flat, punctulate, and without a posterior crest; mesopleuron largely smooth, somewhat granulate near precoxal sulcus; precoxal sulcus only medially developed, micro-crenulate; metapleuron and propodeum distinctly rugose.

Wings.— Fore wing: marginal cell comparatively wide (fig. 42); $r:3-SR:SR1 = 4:4:33$; $SR1$ straight; second submarginal cell quadrangular (fig. 42); $2A$ hardly visible; $cu-a$ inclivous. Hind wing (fig. 42): $M+CU:1-M = 23:18$.

Legs.— Length of hind femur, tibia and basitarsus 2.8, 5.2 and 8.3 times their width, respectively; length of inner and outer spur of middle tibia 0.5 and 0.4 times their basitarsus; length of inner and outer spur of hind tibia 0.4 and 0.3 times hind basitarsus, respectively; tarsal claws with distinct lobe.

Metasoma.— Rather short and stout; length of first tergite 0.9 times its apical width; first tergite strongly sculptured, with striae and rugulae, and with its pair of dorsal carinae fine, converging medially (fig. 43); length of combined second and third tergites equal to their maximum width; second tergite with distinct granulation all over its surface; weak granulation sometimes also present in basal part of third tergite; remainder of metasoma smooth, shiny; ovipositor sheath very short, its length 0.5 times fore wing, and usually about equal to length of metasoma; apex of ovipositor sheath rather wide.

Colour.— Black; second metasomal tergite sometimes reddish-brown; wings distinctly infusate; apical third of hind tibia infusate; coxae and trochanters entirely black or brownish; basal quarter of middle and hind femora black, and the remainder yellowish-brown, but may be completely yellowish-brown; fore and middle tibiae yellowish-brown; hind tibia with infusate subbasal ring; tarsi largely dark brown.

Diagnostic characters.— This species is characterized by its short ovipositor; only shared with *A. pumila*. It differs from *A. pumila* e.g., by the sculpture of the second metasomal tergite and presence of lobes of the tarsal claws.

Note.— Specimens in ZMB identified by Reinhard (1867) as *Microdus lugubator* Ratzeburg belong to *Agathis mediator*.

Distribution.— France, Germany, Great Britain, Hungary, Netherlands.

Biology.— Parasite of various species of the genus *Coleophora* (Coleophoridae).

Agathis pumila (Ratzeburg, 1844) (figs 47, 92)

Microdus pumilus Ratzeburg, 1844b: 57; Tobias, 1971: 260 & 1986: 285; Nixon, 1986: 221. Syntypes from Germany are lost, neotype, ♀ (RMNH) from The Netherlands is designated below.
Bassus pumilus; Thompson, 1953: 95.
Agathis pumila; Shenefelt, 1970: 350.

Material.— 1 ♀ (here designated neotype; RMNH), "[Netherlands], Bergentheim, 9.vii.1975, B. v. Aartsen", "*Agathis (Bassus) pumilus* (Ratz.), det. C.v.Achterberg, 1975", "*Microdus pumilus* Ratz., det. G.E.J. Nixon, 1984"; 1 ♂ (RMNH), [Germany, Rheinland, Saxony], "98", "Museum Leiden, *Earinus gloriatorius* Pz."; 2 ♂♂ (RMNH), "[Germany], Rhein. Saxon", "Museum Leiden, *Microdus pumilus* Ratzeburg"; 1 ♀ (RMNH), "Netherlands: Gld., Grolloo, in cones of *Larix kaempferi*, coll. 6.vii.1990, P. Grijpma, RMNH'91"; 1 ♂ (RMNH), "Netherlands: Dr., Leenerzand, ex cones of *Abies grandis*, coll. 30.viii.1990, em. 18.iv.1991, P. Grijpma, RMNH'91.

Neotype, ♀, length of fore wing 2.3 mm, of body 2.8 mm.

Head.— Antenna incomplete (in other specimens 26-28), remaining antennal segments 17, length of third antennal segment 1.4 times fourth segment, length of third and fourth segments 3.8 and 2.8 times their width, respectively; length of maxillary palp 0.6 times height of head; length of eye 1.8 times temple in dorsal view; POL: diameter of ocellus:OOL = 8:5:8; face and clypeus rather convex; face punctulate; area between antennal sockets triangular, connected to a median keel that is somewhat more rounded than in other species; length of malar space 1.3 times as long as basal width of mandible.

Mesosoma.— Length of mesosoma 1.6 times its height; side of pronotum largely smooth, and lateral pronope present just as a shallow, small depression; prepectal carina normal and straight medio-ventrally; mesosternal sulcus slightly sculptured; mesoscutum punctulate, and notauli distinct, finely crenulate, united submedially and absent posteriorly; scutellum flat, punctulate; mesopleuron largely punctulate, somewhat more strongly so below precoxal sulcus; precoxal sulcus narrow, and present only medially, with some crenulae; metapleuron rugose ventrally, and the remainder largely smooth; propodeum densely rugulose, with parallel longitudinal rugae medially.

Wings.— Fore wing (figs 47, 92): marginal cell rather wide and SR1 slightly sinuate; second submarginal cell quadrangular; 2A faintly pigmented; cu-a inclivous. Hind wing (fig. 47): M+CU:1-M = 10:9.

Legs.— Length of hind femur, tibia and basitarsus 3.2, 5.6 and 7 times their width, respectively; length of inner and outer spur of middle tibia both 0.6 times middle basitarsus; length of inner and outer spur of hind tibia 0.45 and 0.40 times hind basitarsus, respectively.

Metasoma.— First tergite as long as its apical width, its surface largely finely rugose; length of combined second and third tergites equal to their maximum width; remainder of metasoma smooth; length of ovipositor sheath 0.33 times fore wing, and somewhat shorter than metasoma.

Colour.— Black; palpi and tegulae dark brown; coxae black; hind femur strongly infusate; basal half of hind tibia whitish with a distinct infusate subbasal ring, and its apical half infusate; remainder of fore and middle legs (except tarsi) largely yellowish-brown.

Diagnostic characters.— This species is recognizable by the short ovipositor and its small size. *A. mediator* is very similar, but has its second tergite sculptured.

Distribution.— Germany, Netherlands.

Biology.— According to Quednau (1970) a parasite of *Coleophora laricella* (Hübner) on *Larix* spp.; it has been used for biological control in N America. Also reared from cones of *Abies grandis* (O. Don.).

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BMNH = The Natural History Museum, London; DEI = Deutsches Entomologisches Institute, Eberswalde; ITZ = Instituut voor Taxonomische Zoölogie, Zoölogisch Museum, Amsterdam; KBIN = Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels; MNHN = Muséum National d'Histoire Naturelle, Paris; MZR = Museo del Istituito di Zoologia, Rome; RMNH = Nationaal Natuurhistorisch Museum, Leiden; RMS = Royal Museum of Scotland, Edinburgh; TMA = Természettudományi Múzeum Allattára, Budapest; ZIL = Zoological Institute, Lund; ZIP = Zoological Institute, St. Petersburg; ZMB = Zoologisches Museum der Humboldt-Universität, Berlin; ZMC = Zoologisk Museum, Copenhagen; ZSBS = Zoologische Sammlung des Bayerischen Staates, Munich.

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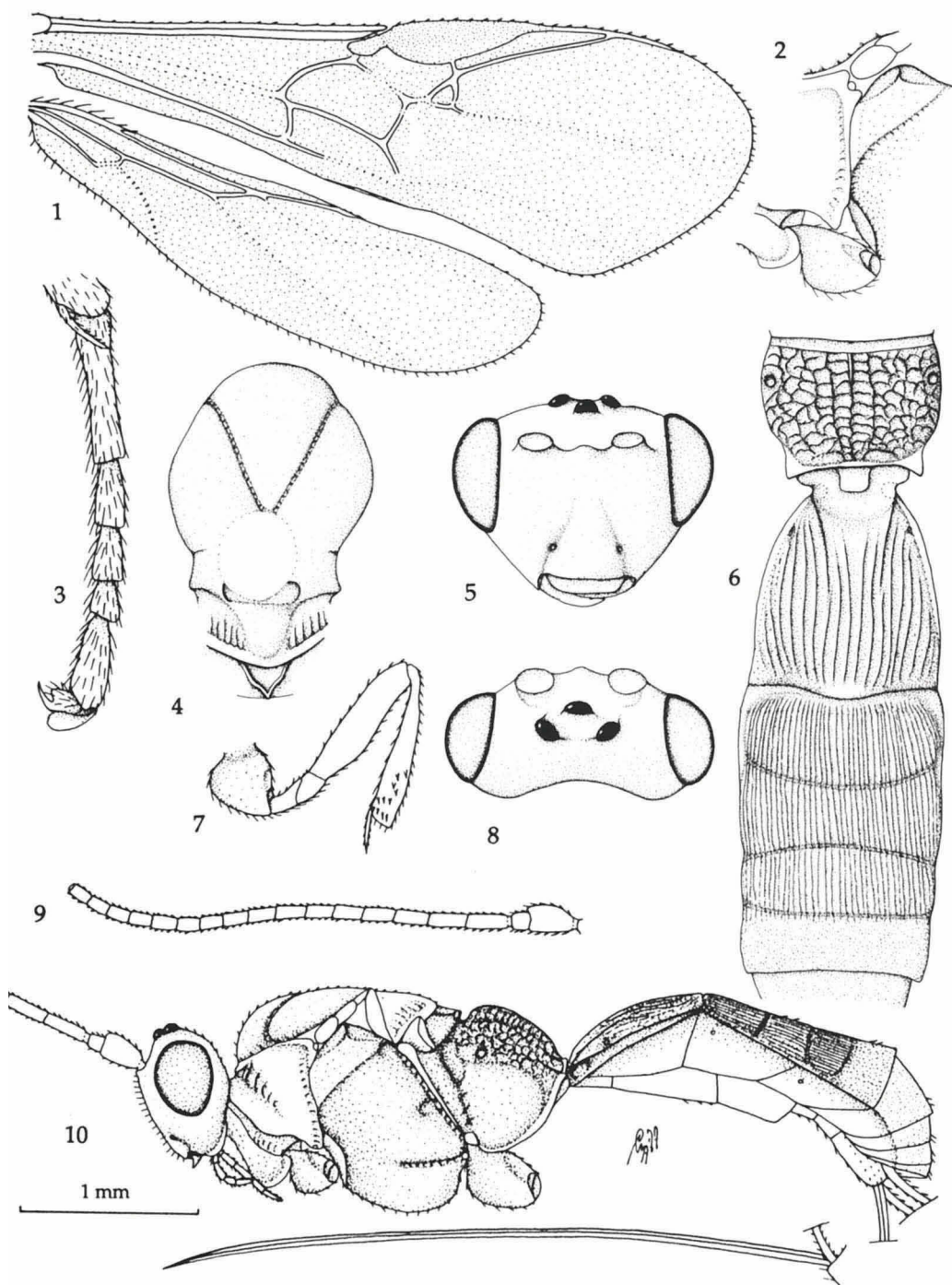
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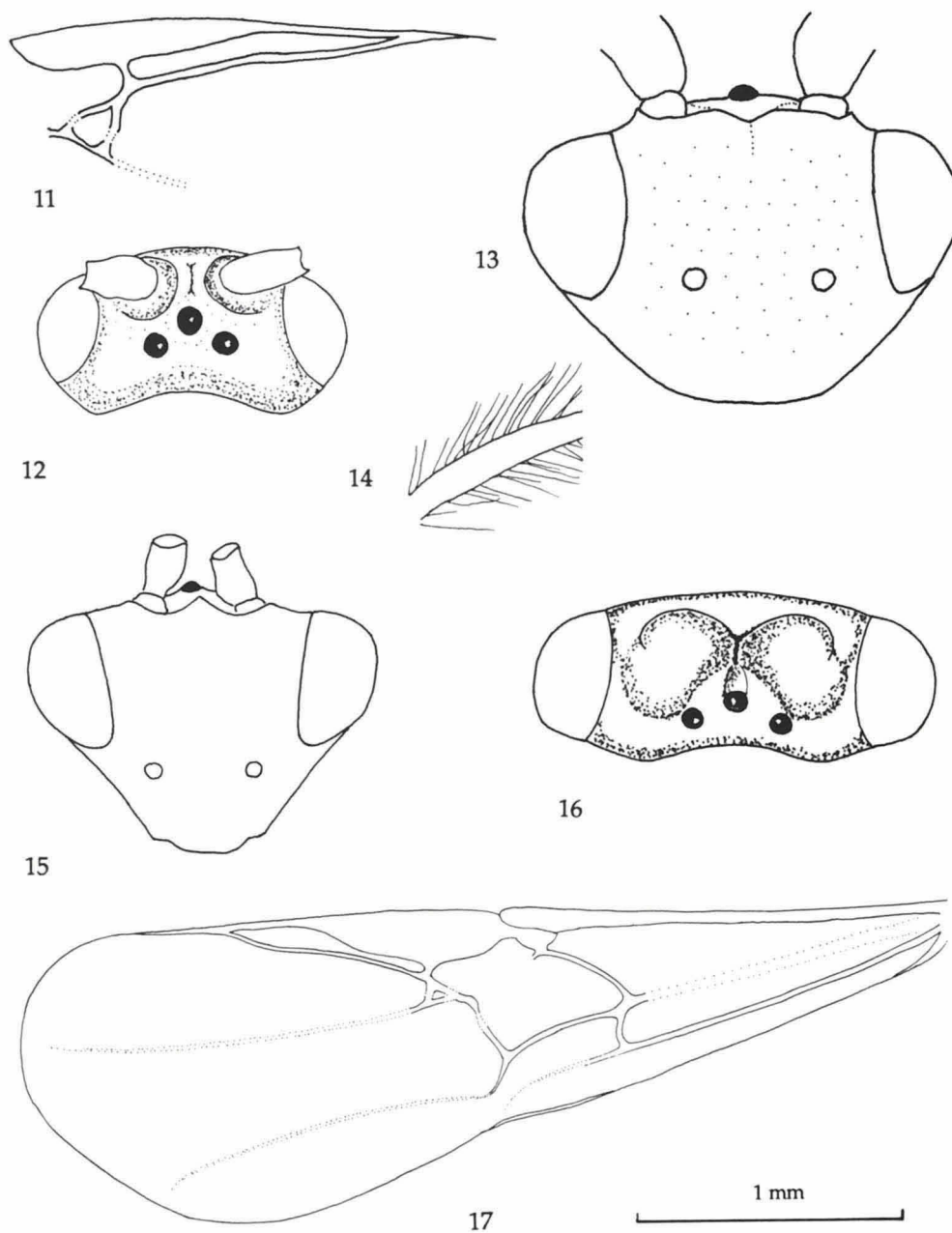
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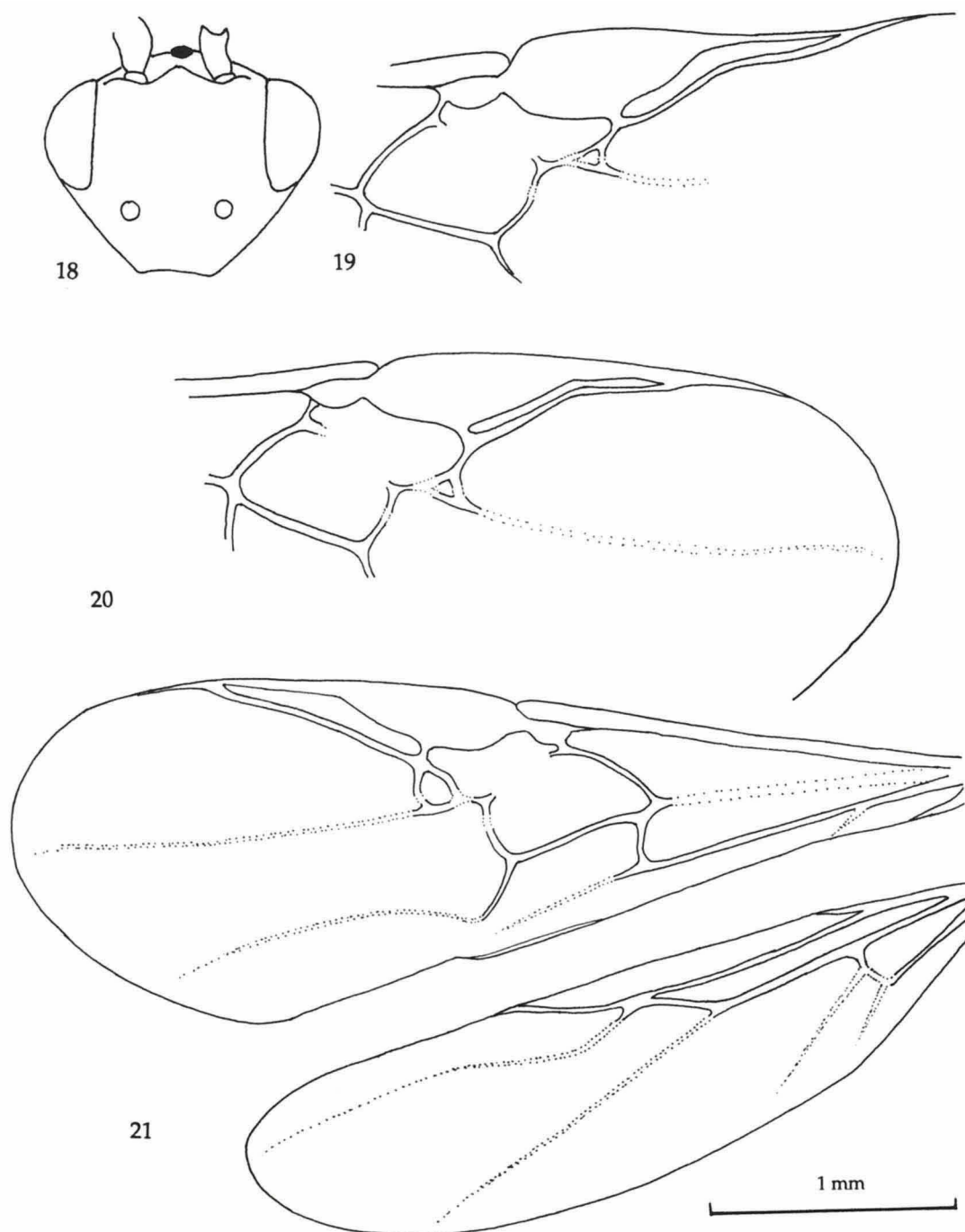
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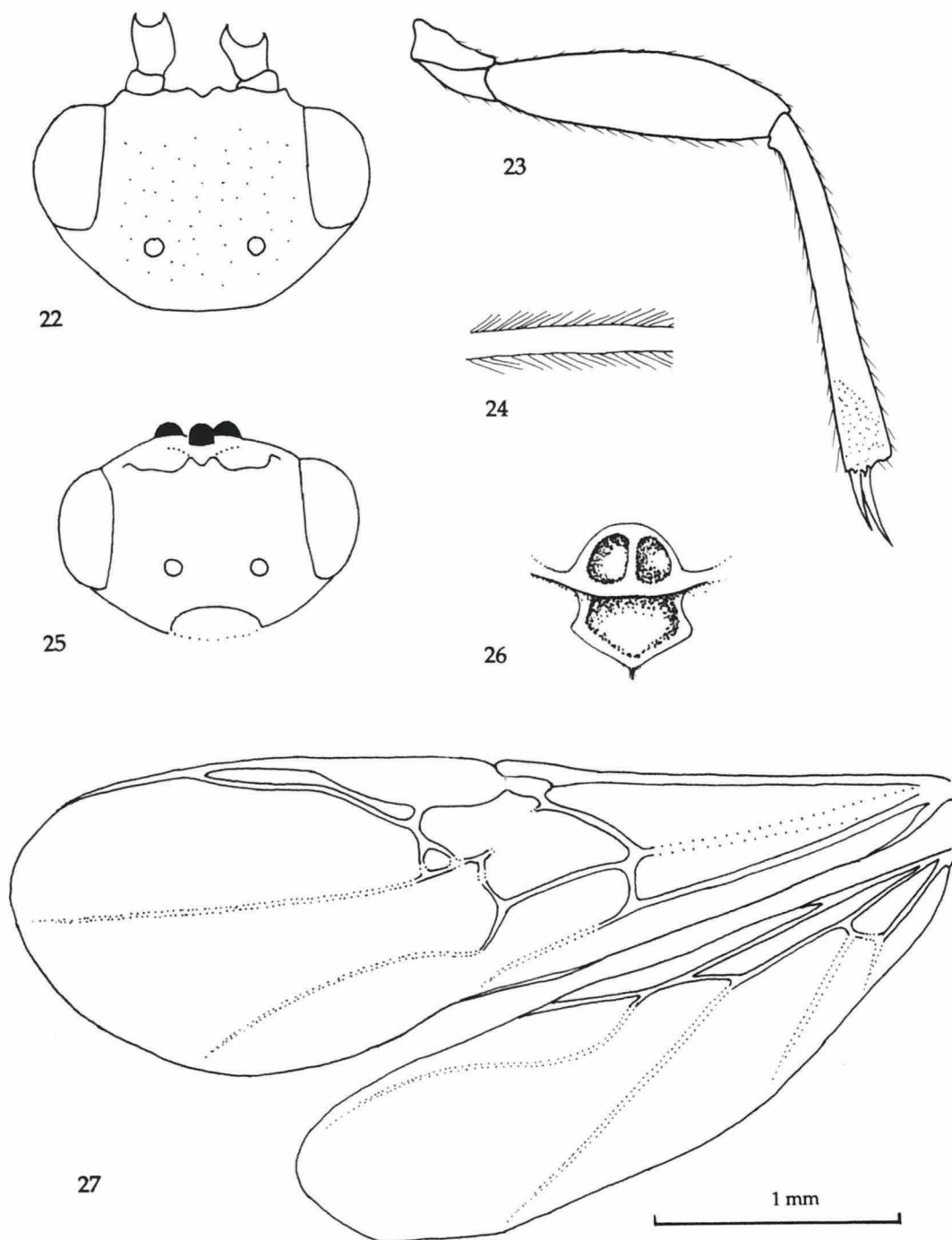
Figs 1-10, *Bassus melleus* (Brues) comb. nov., ♀, holotype of *Hormagathis mellea* Brues. 1, wings; 2, detail of posterior part of pronotal side, lateral aspect; 3, fore tarsus; 4, thorax, dorsal aspect; 5, head, frontal aspect; 6, propodeum and first-third metasomal tergites, dorsal aspect; 7, middle leg; 8, head, dorsal aspect; 9, antenna; 10, habitus, lateral aspect. 1, 7, 9, 10: 1 × scale-line; 3: 2.5 ×; 2, 4, 5, 6, 8: 1.3 ×.



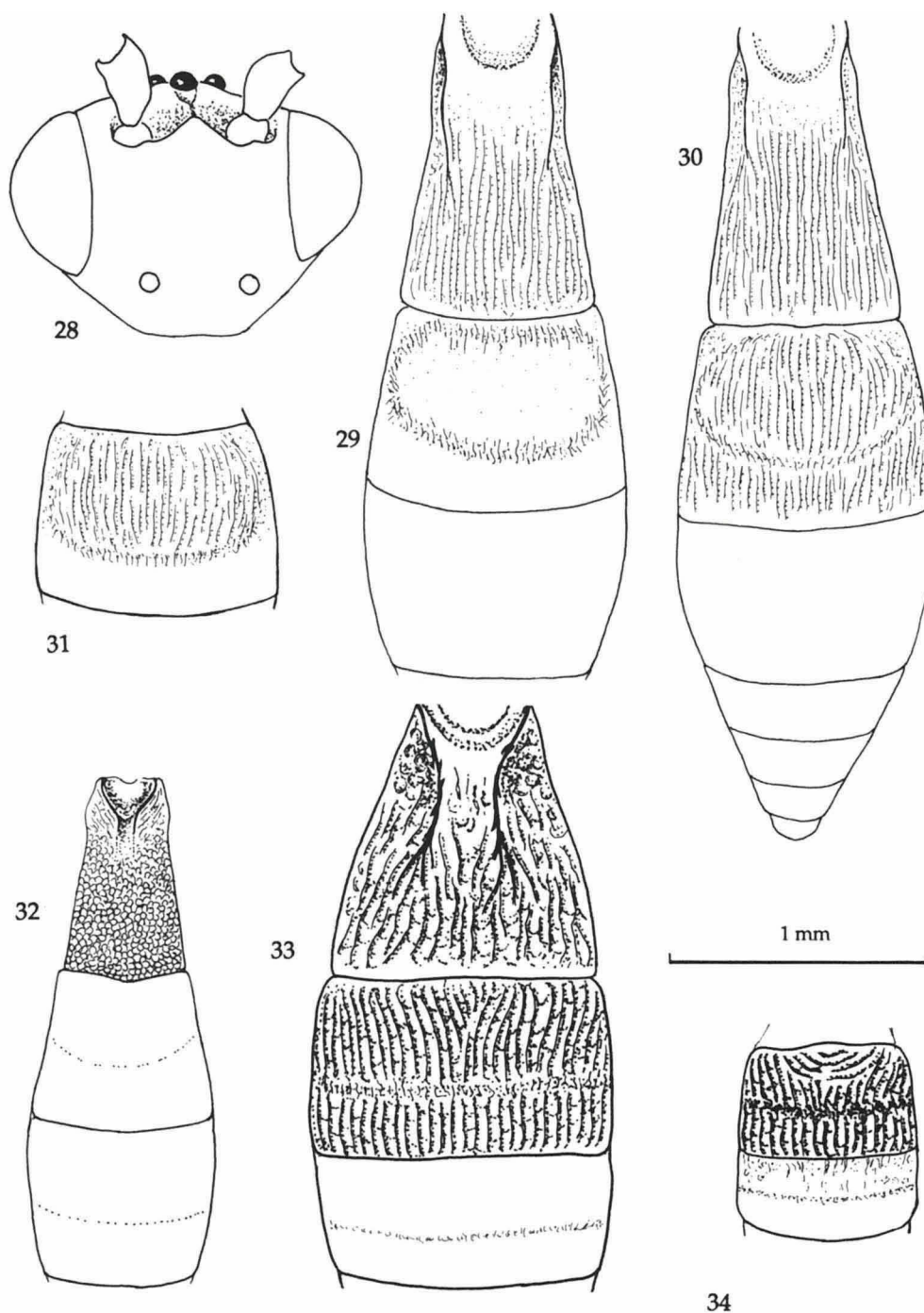
Figs 11-14, *Bassus arcuatus* (Reinhard), ♀, Netherlands, Wijster; figs 15-17, *B. barbieri* spec. nov., ♀, holotype. 11, detail of marginal and second submarginal cells of fore wing; 12, 16, head, dorsal aspect; 13, 15, head, frontal aspect; 14, subbasal part of ovipositor sheath; 17, fore wing. 11, 12, 15, 16: 1 × scale-line; 13: 1.4 ×; 14: 2.2 ×; 17: 0.7 ×.



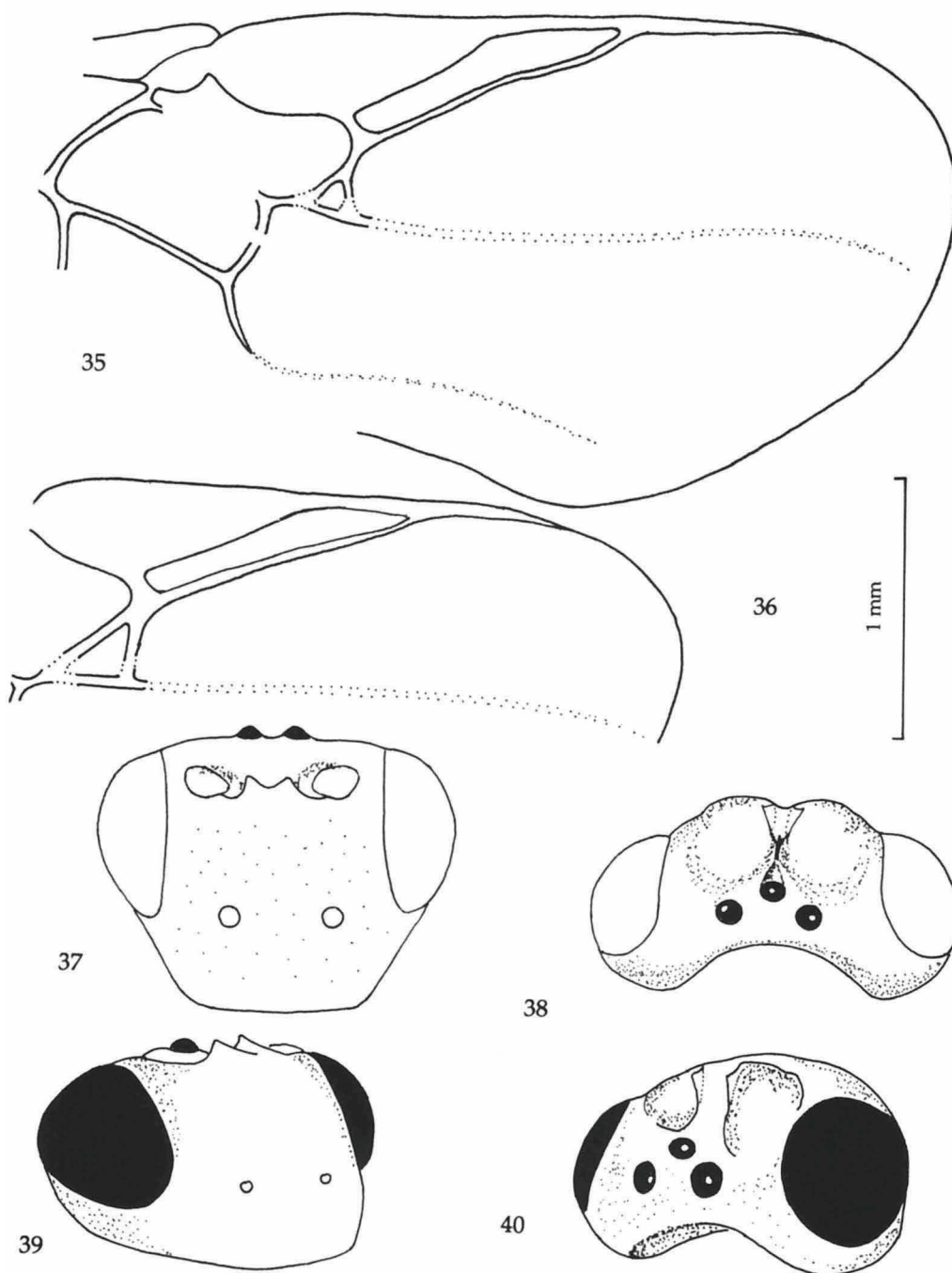
Figs 18-20, *Bassus cingulipes* (Nees), ♀, 18, 19 of neotype and 20 from France, Le Vernet; fig. 21, *B. clausthalianus* (Ratzeburg), ♀, neotype. 18, head, frontal aspect; 19, 20, detail of marginal and second submarginal cells of fore wing; 21, wings. 18, 19, 21: 1 × scale-line; 20: 1.3 ×.



Figs 22-24, *Bassus clausethalianus* (Ratzeburg), ♀, 22 and 23 of neotype, and 24 from Austria, Litschau; figs 25-27, *B. conspicuus* (Wesmael), ♀, lectotype. 22, 25, head, frontal aspect; 23, hind femur and tibia, lateral aspect; 24, basal part of ovipositor sheath; 26, medio-posterior depression of scutellum, dorsal aspect; 27, wings. 22, 23, 25, 27: 1 × scale-line; 24: 2.2 ×; 26: 3.3 ×.



Figs 28-31, *Bassus dimidiator* (Nees), ♀, 28 and 30 of neotype, and 29, 31 from France, Paris (two different specimens); fig. 32, *B. eriphyle* (Nixon), ♀, paratype; figs 33, 34, *B. fortipes* (Reinhard), 33, ♀, France, Chartrettes and 34, ♂, France, no locality. 28, head, frontal aspect; 29, 30, 32, 33, first-third metasomal tergites, dorsal aspect; 31, second metasomal tergite; 34, second and third metasomal tergites, dorsal aspect. 28: 1 × scale-line; 29-33: 1.3 ×; 34: 0.8 ×.



Figs 35-40, *Bassus linguarius* (Nees), ♀, 35 and 37 of neotype, 36 from France, Nogents-Marne, and 38-40 from France, no locality. 35, 36, detail of marginal and second submarginal cells of fore wing; 37, head, frontal aspect; 38, head, dorsal aspect; 39, head, latero-frontal aspect; 40, head, latero-dorsal aspect. 35-40: 1 × scale-line.

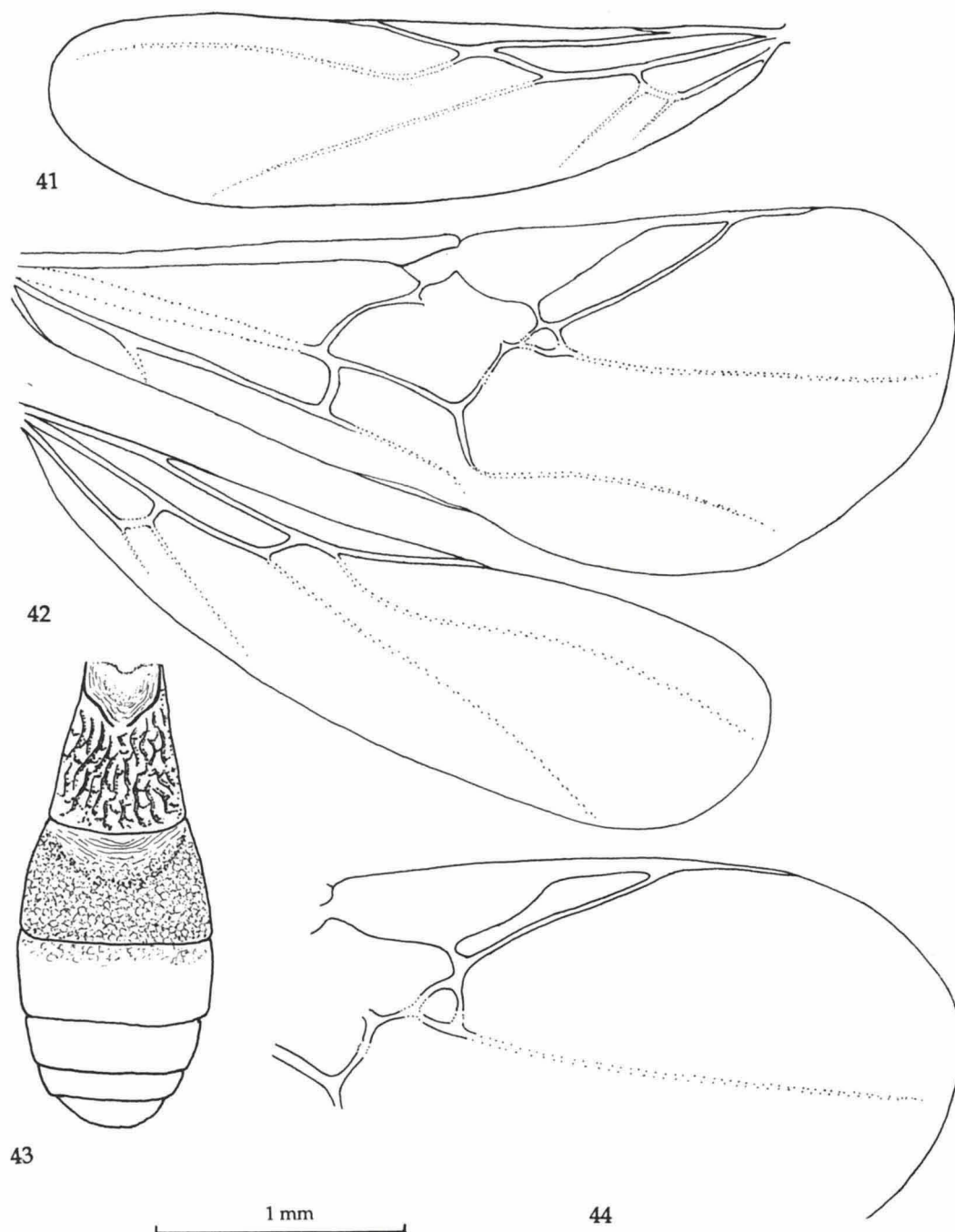


Fig. 41, *Bassus linguarius* (Nees), ♀, neotype; figs 42, 43, *B. mediator* (Nees), ♀, neotype; fig. 44, *B. nugax* (Reinhard), ♀, Italy, Rome. 41, hind wing; 42, wings; 43, metasoma, dorsal aspect; 44, detail of marginal and second submarginal cells of fore wing. 41-44: 1 × scale-line.

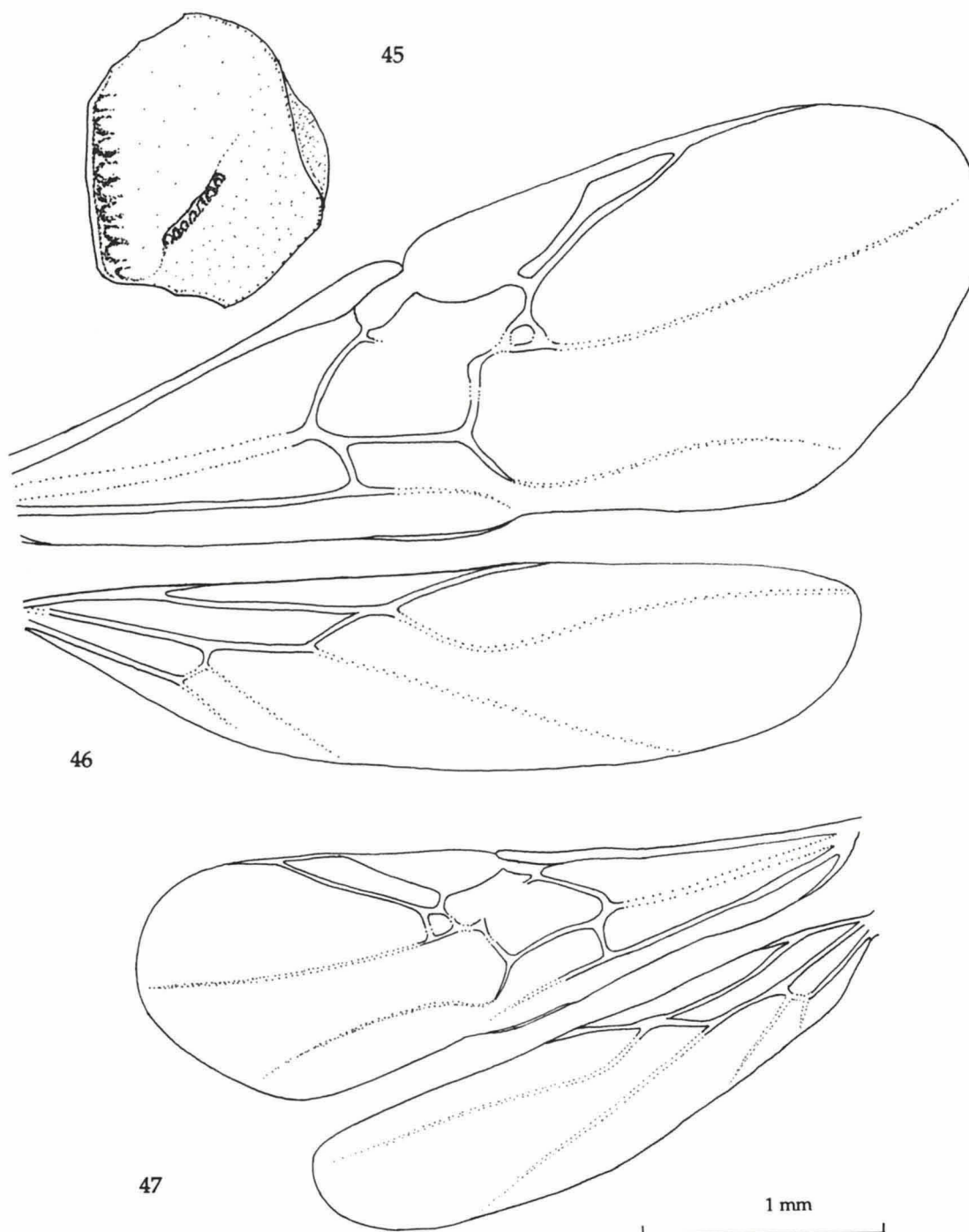
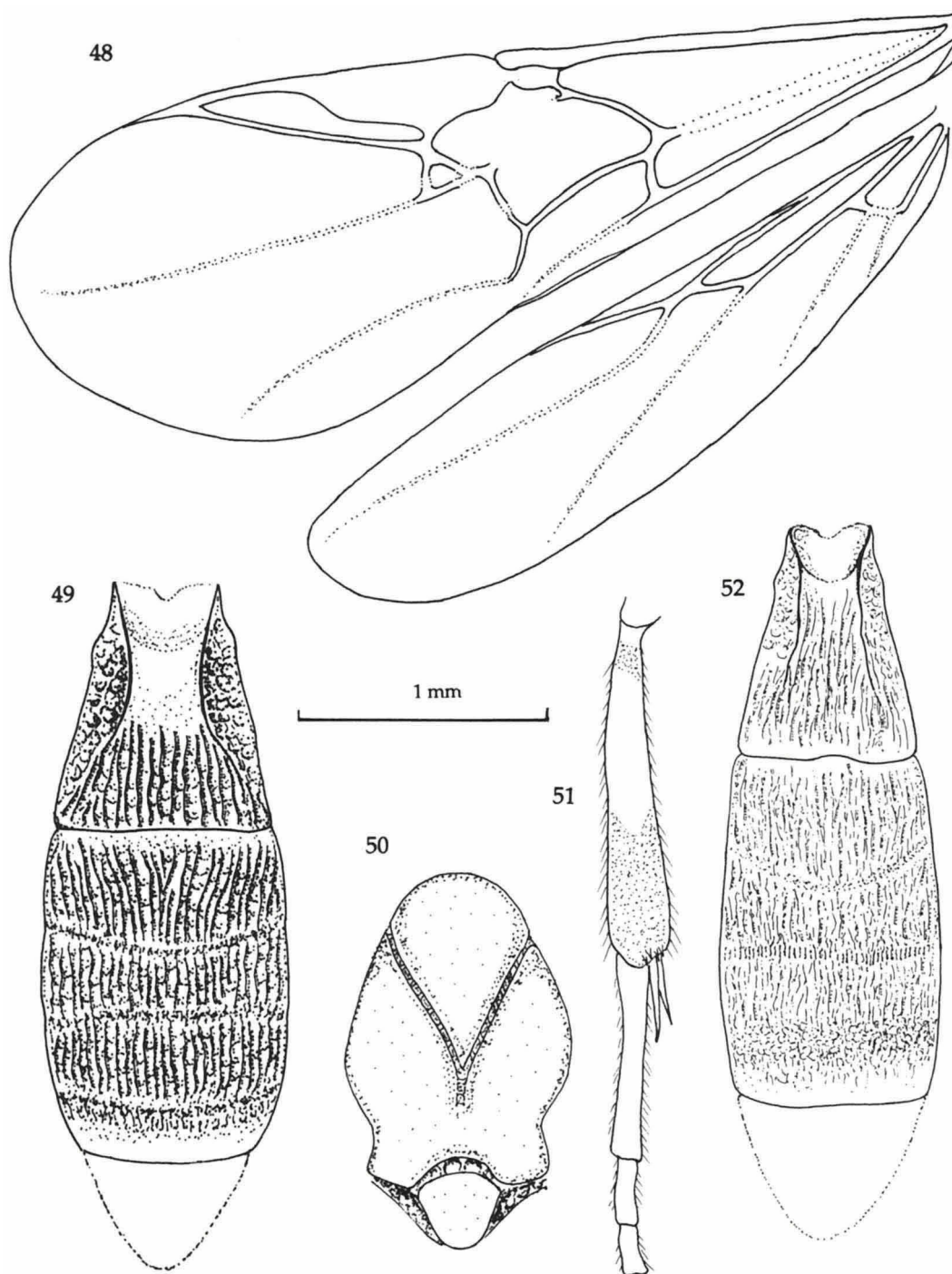
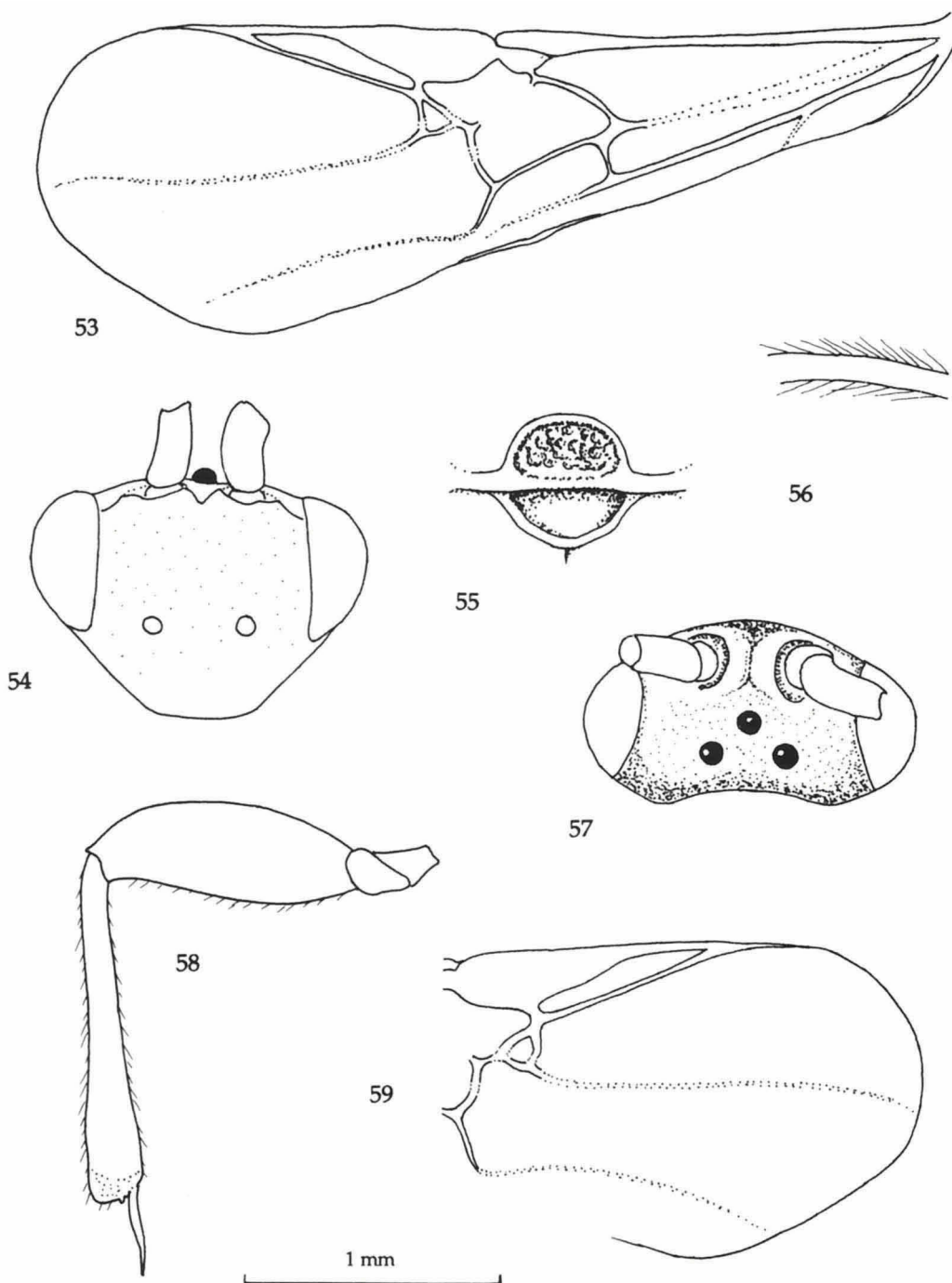


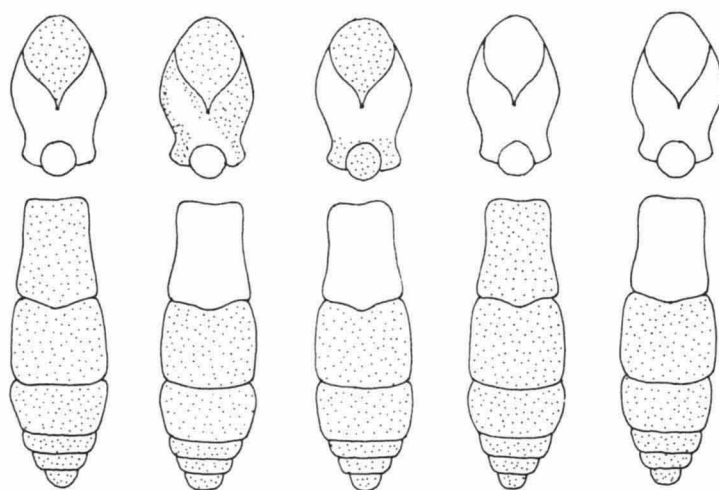
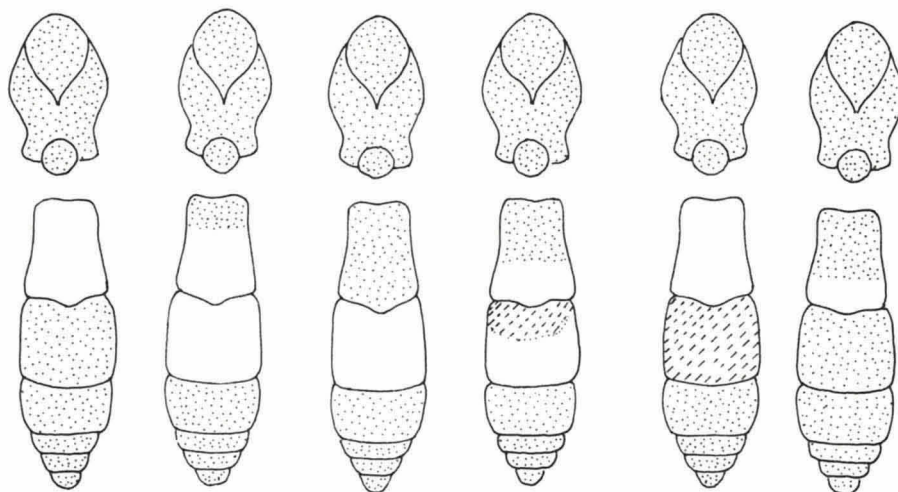
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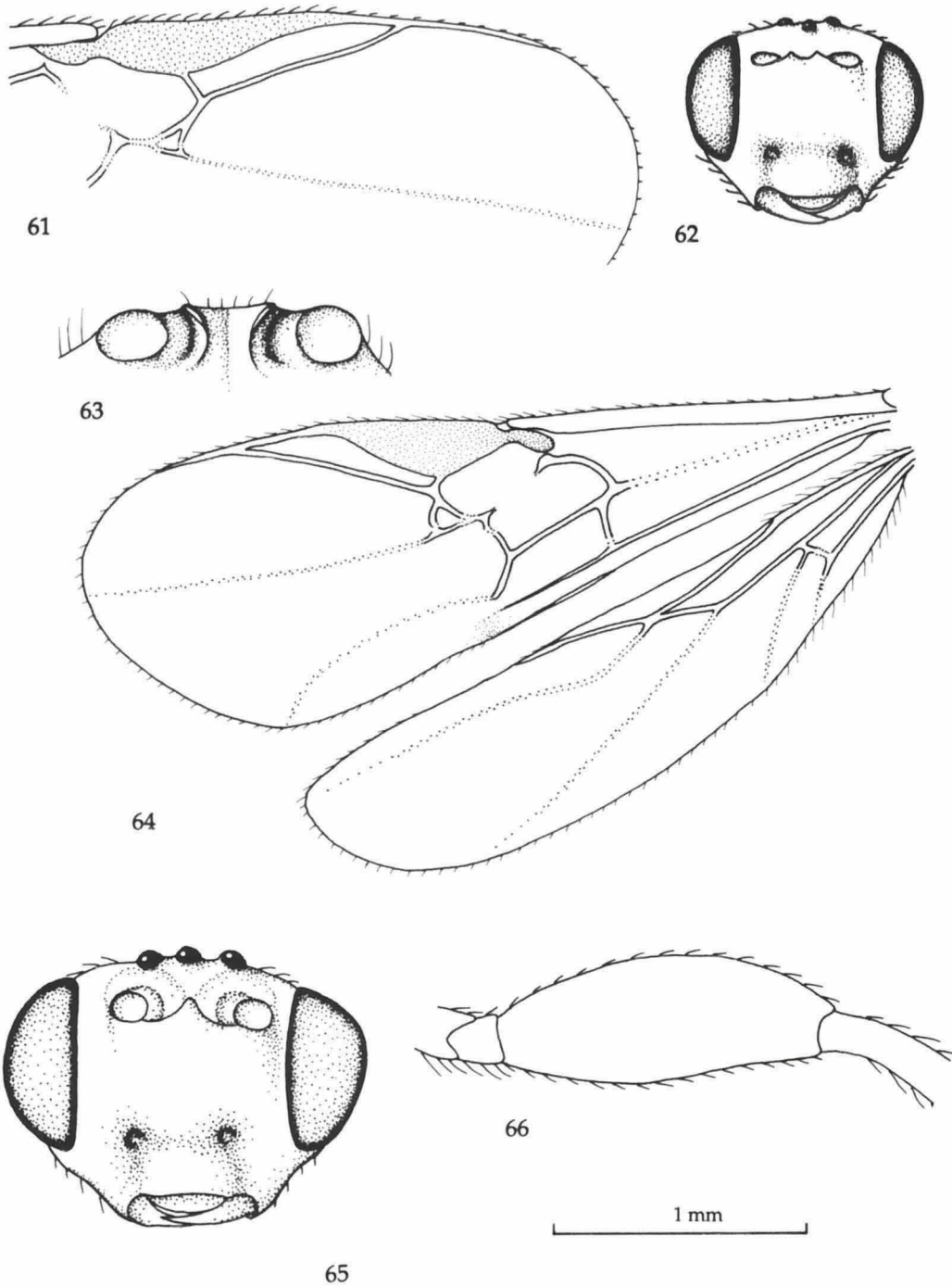


 black

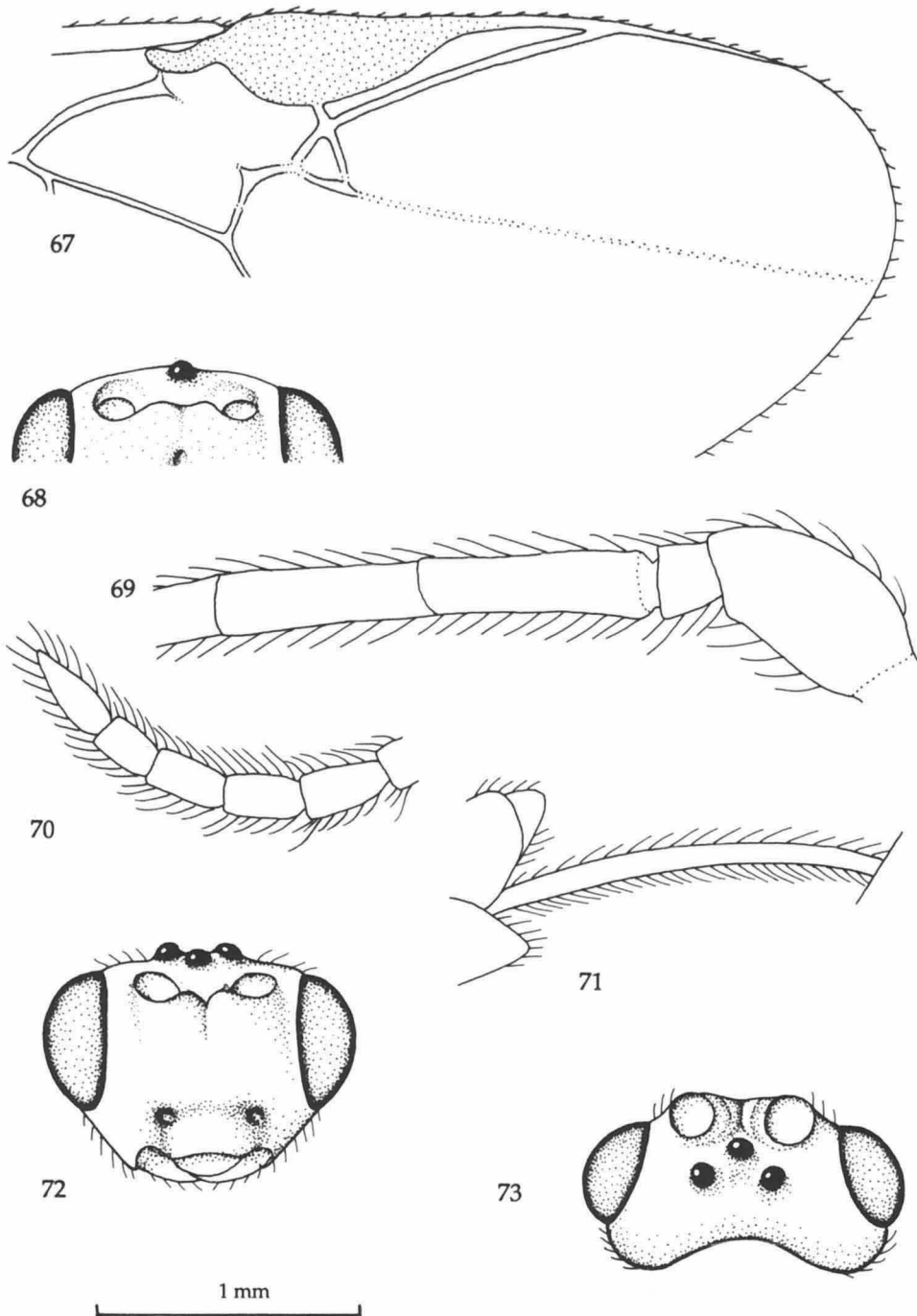
 yellow

 reddish-brown

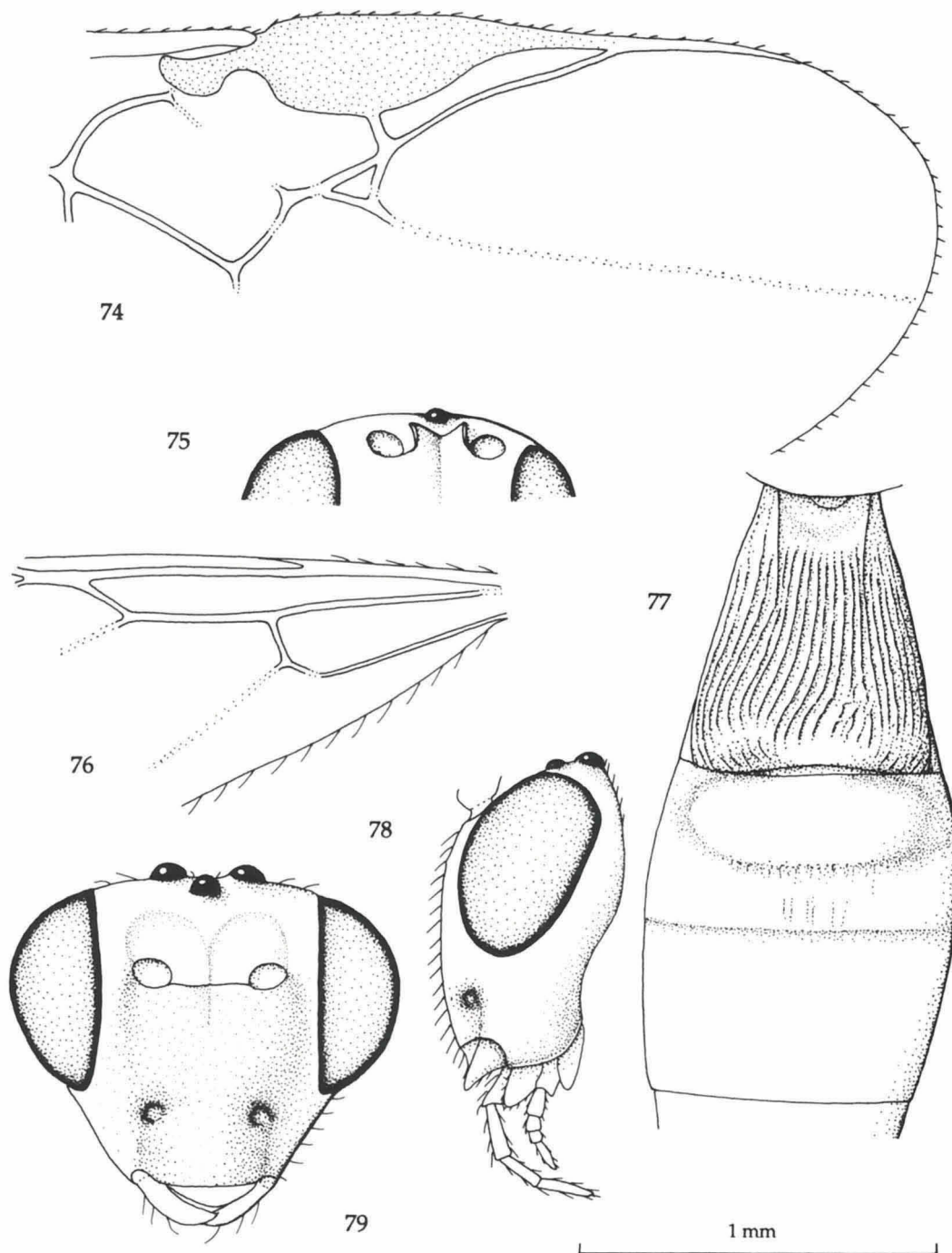
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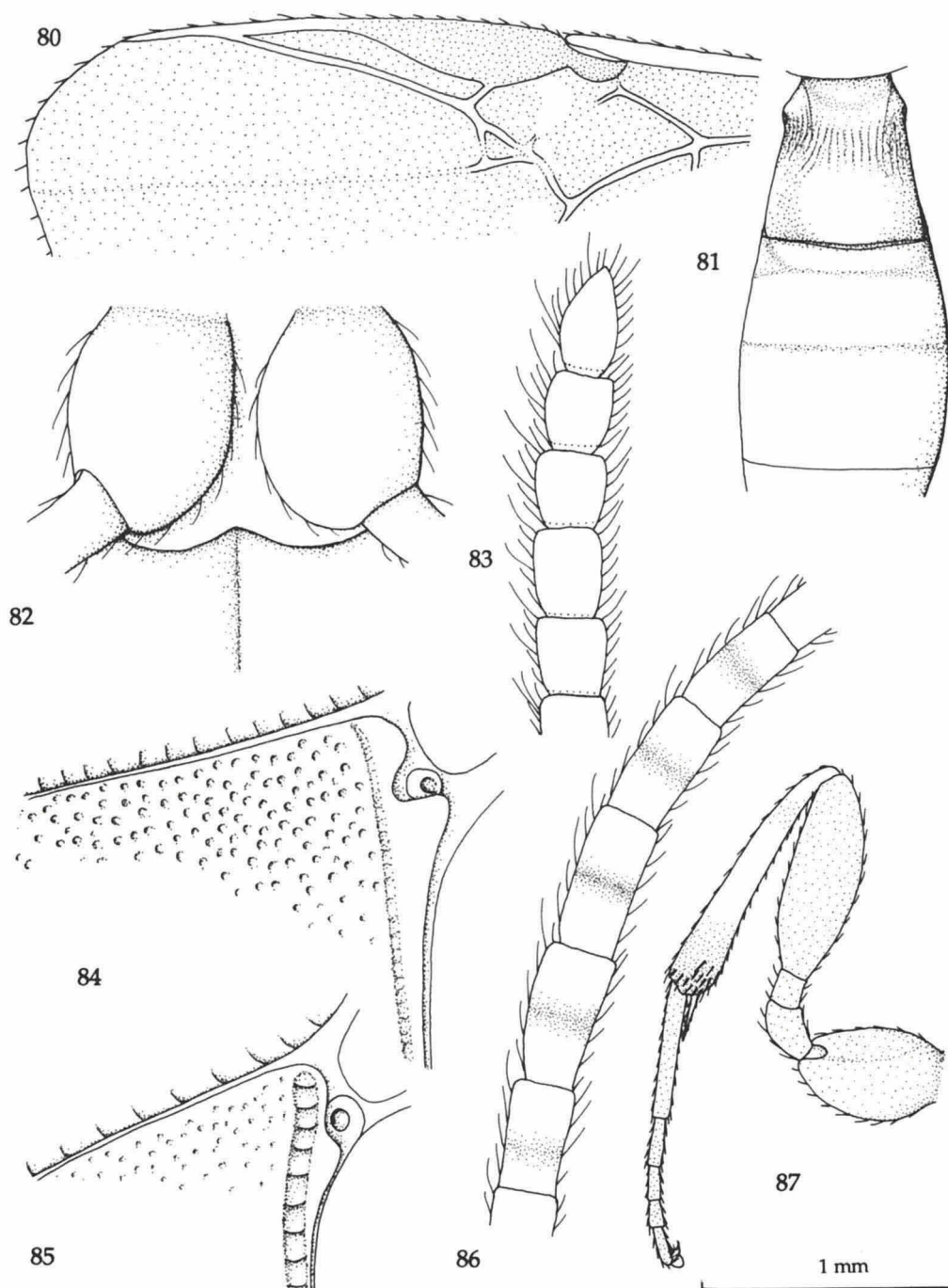
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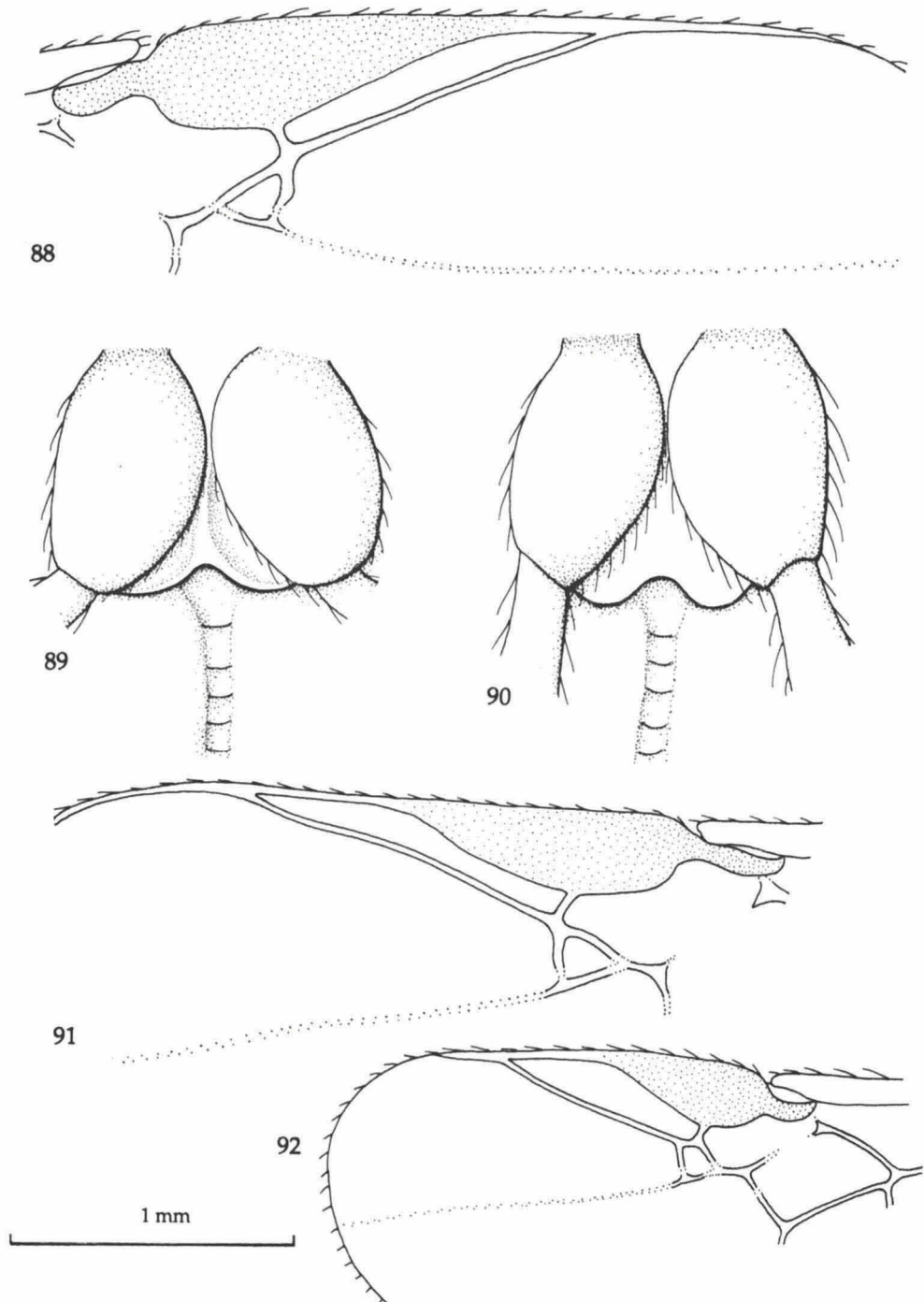
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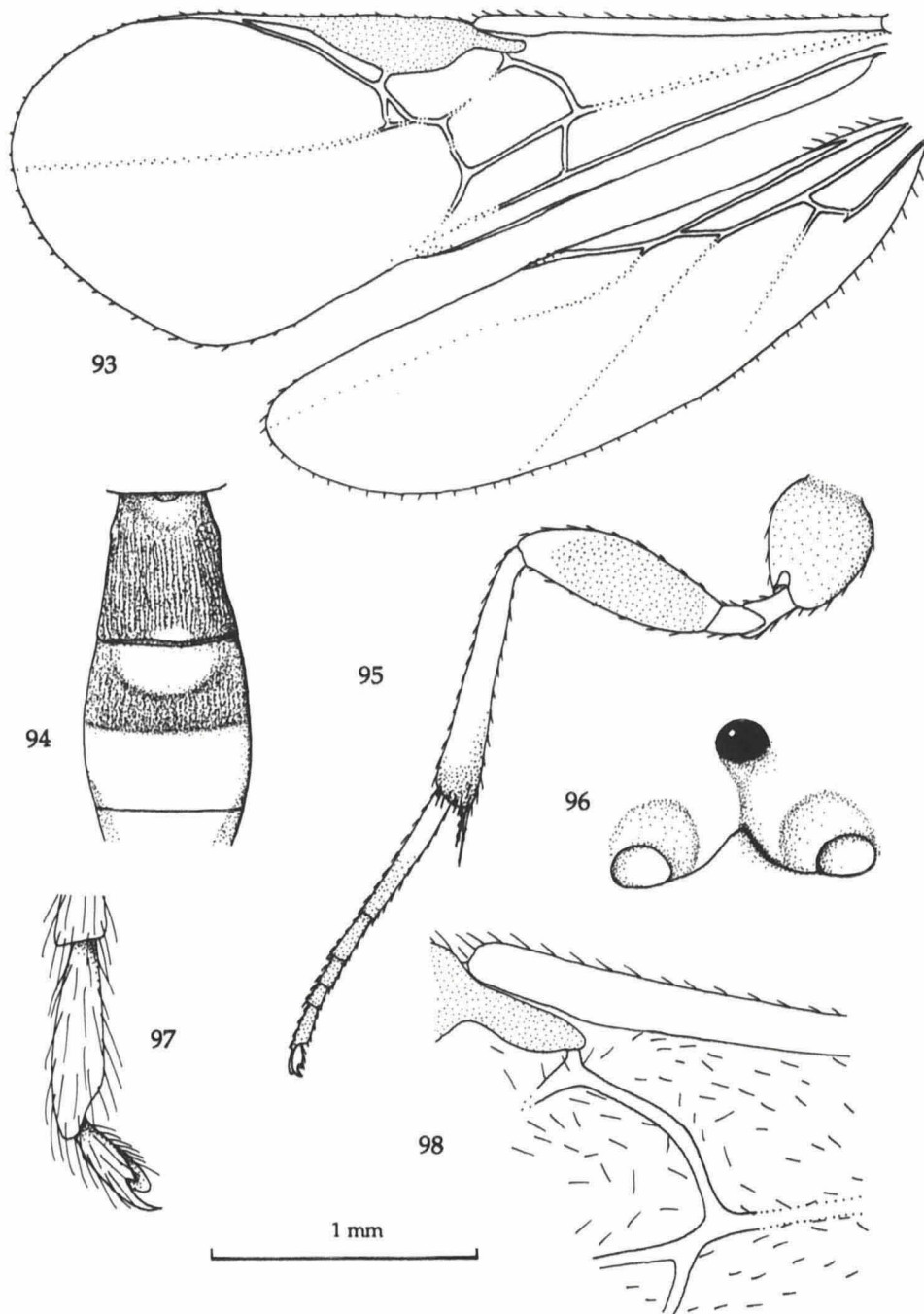
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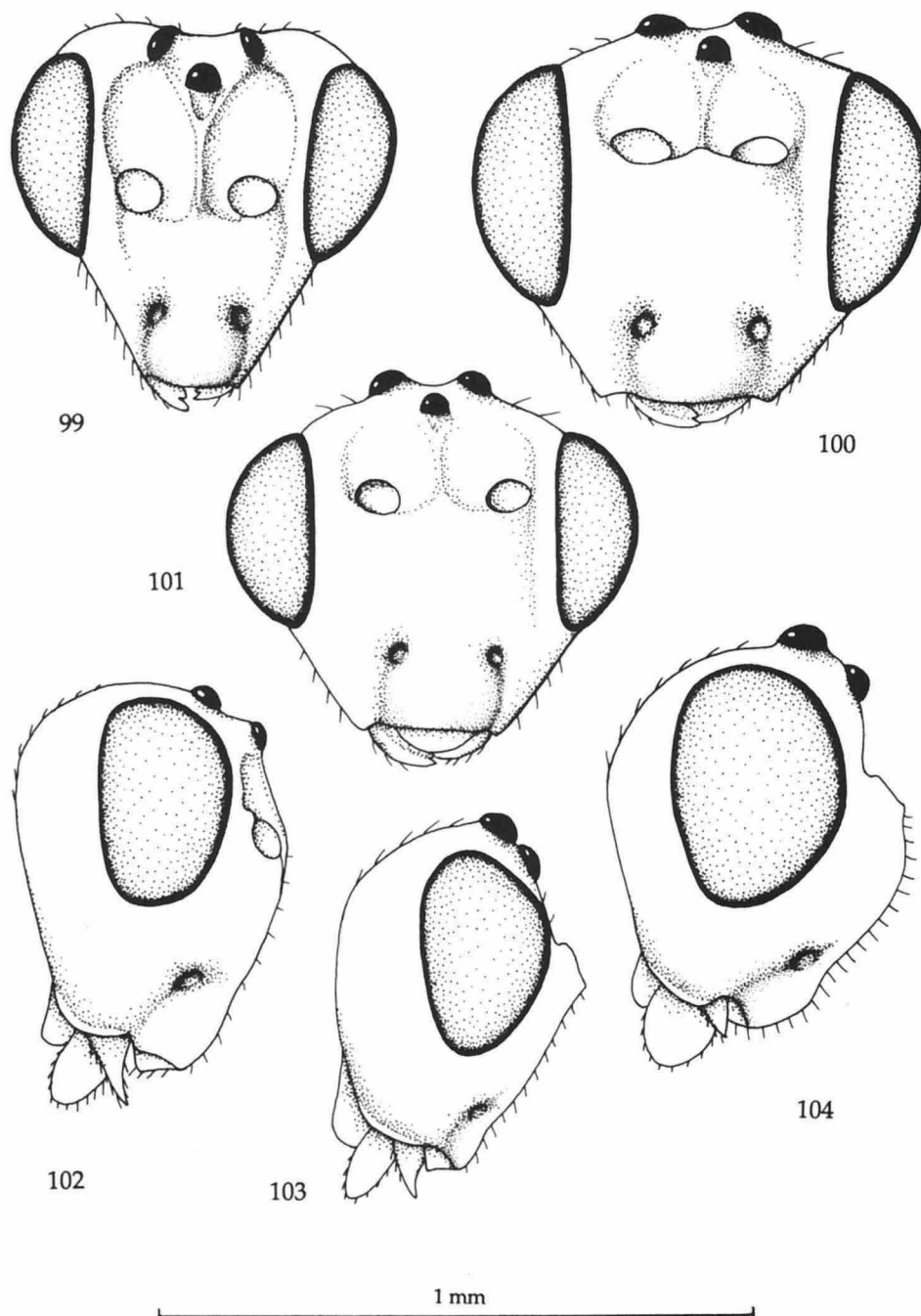
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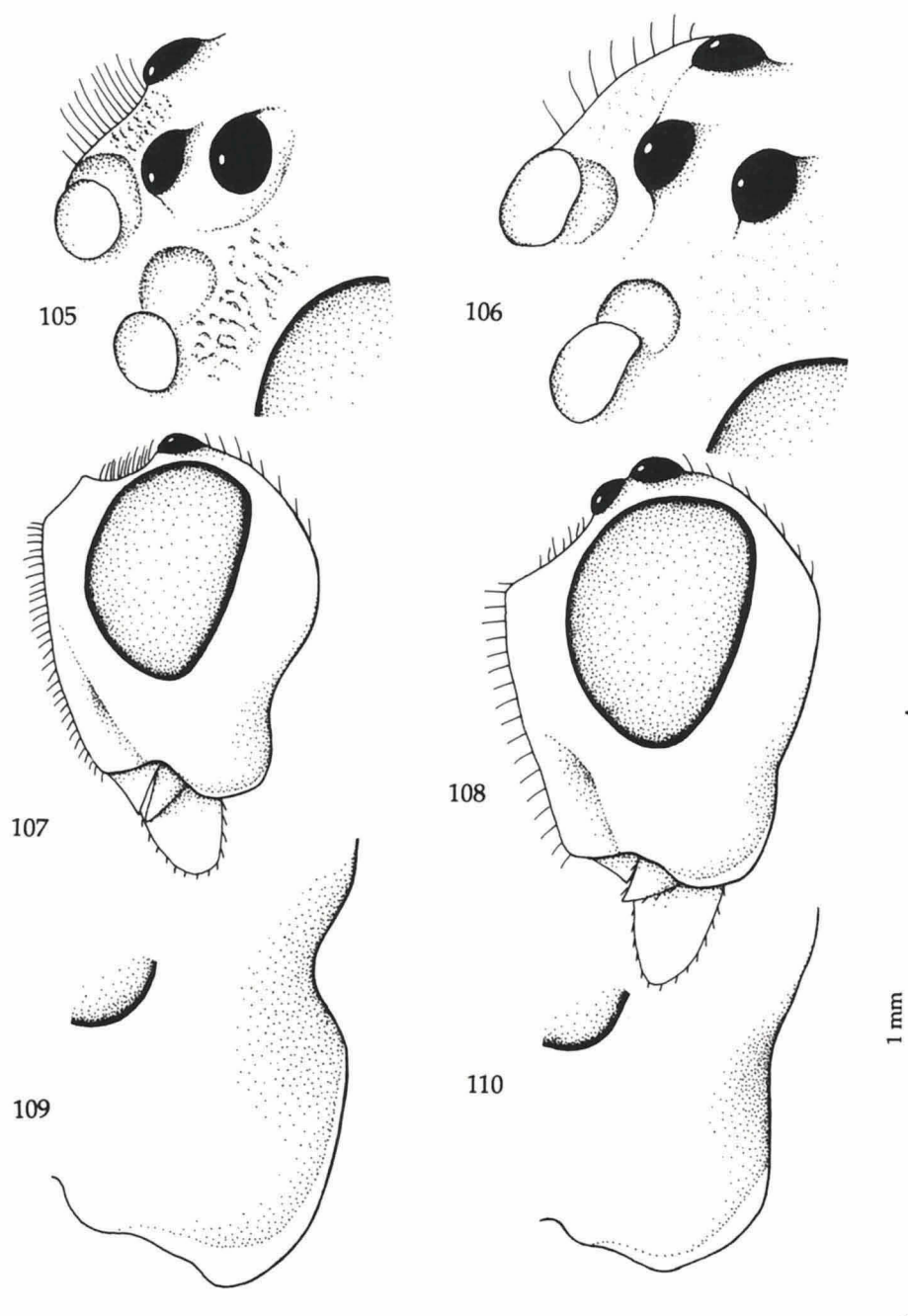
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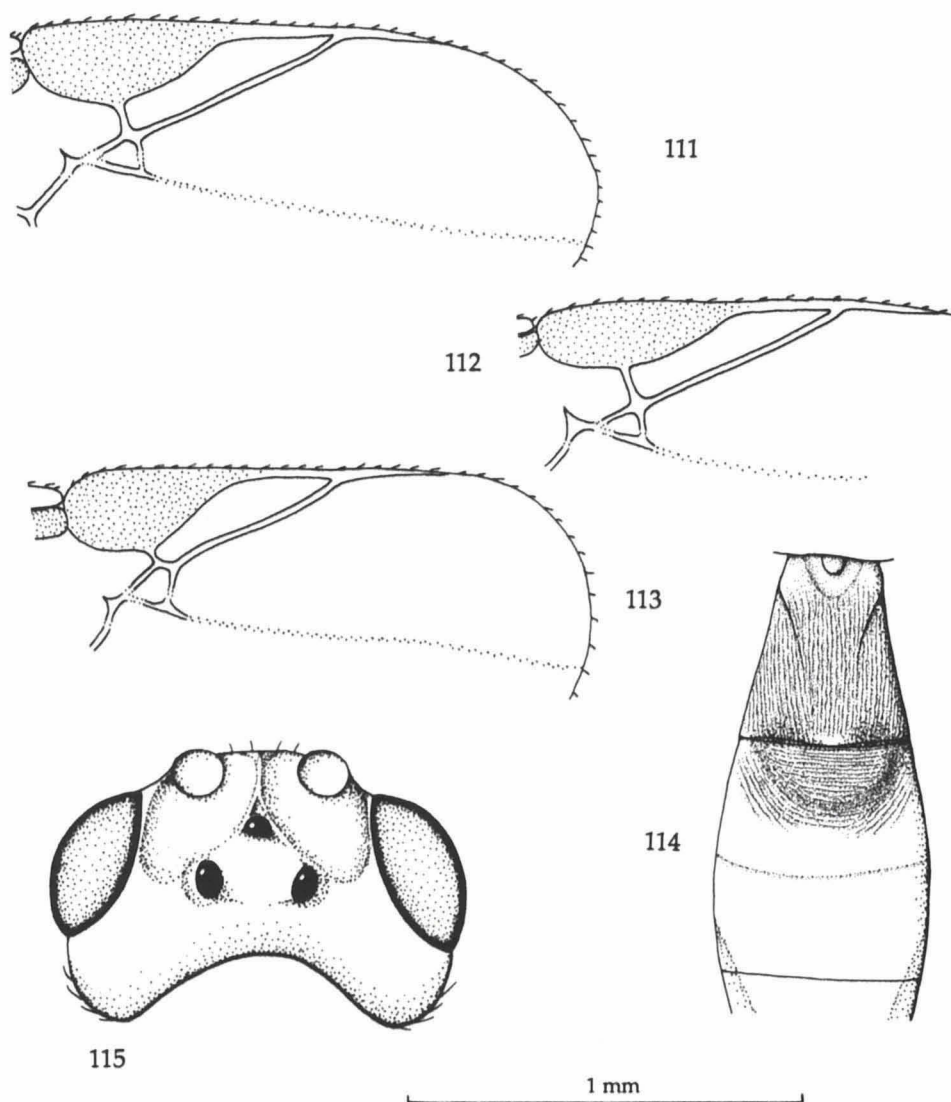
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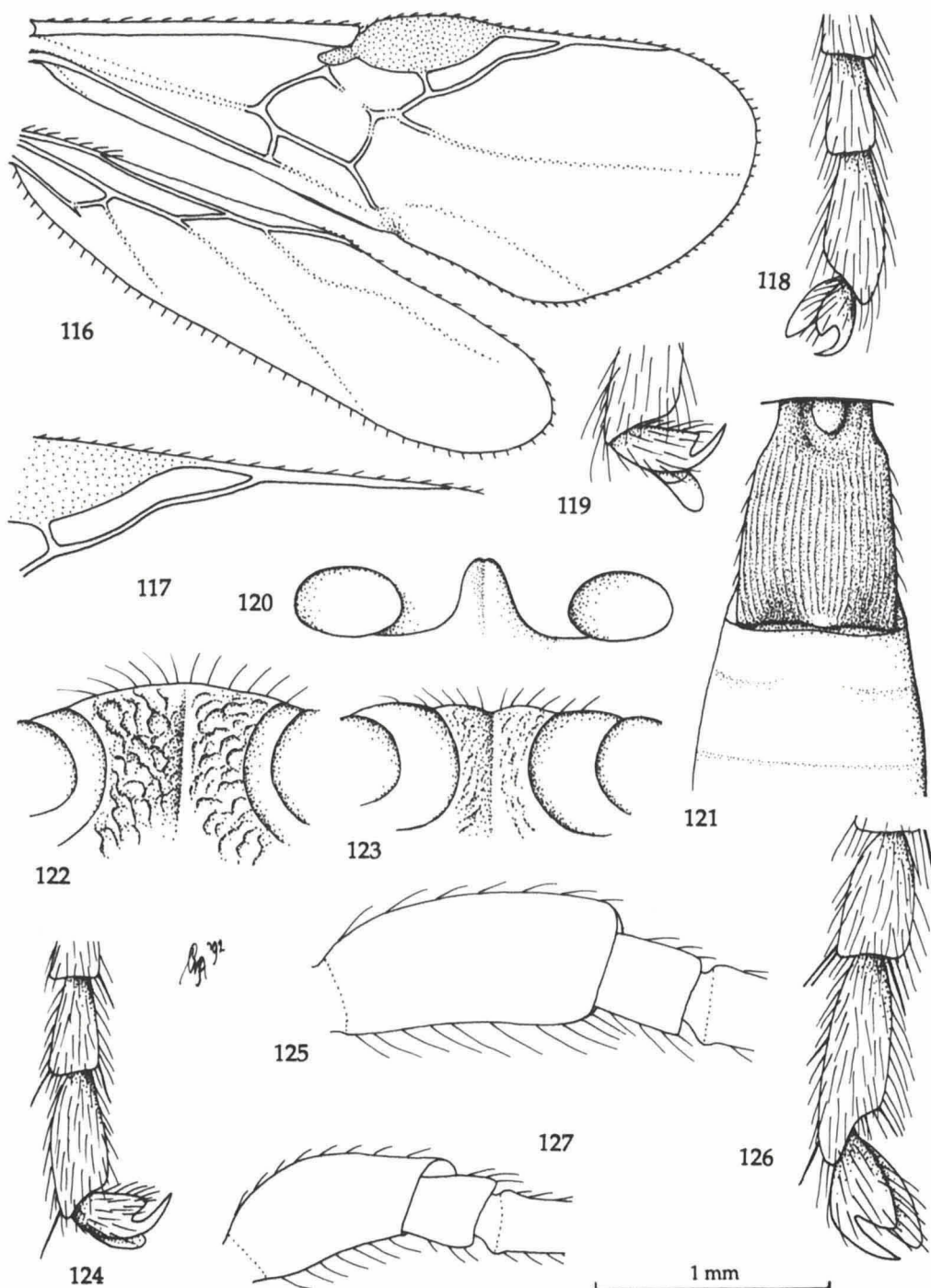
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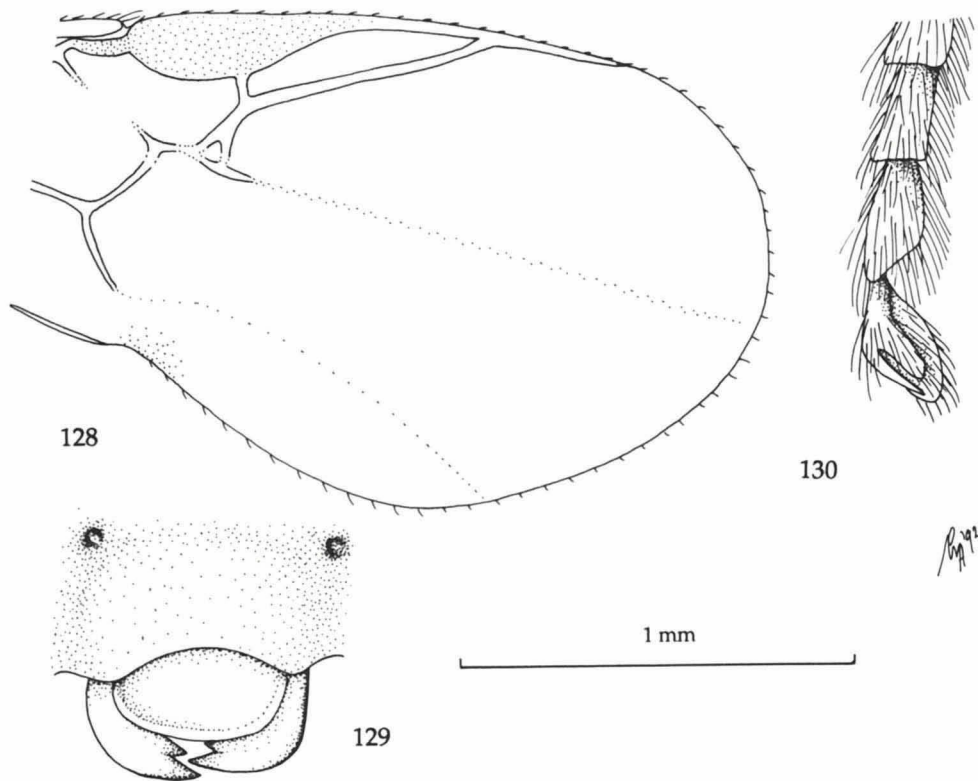
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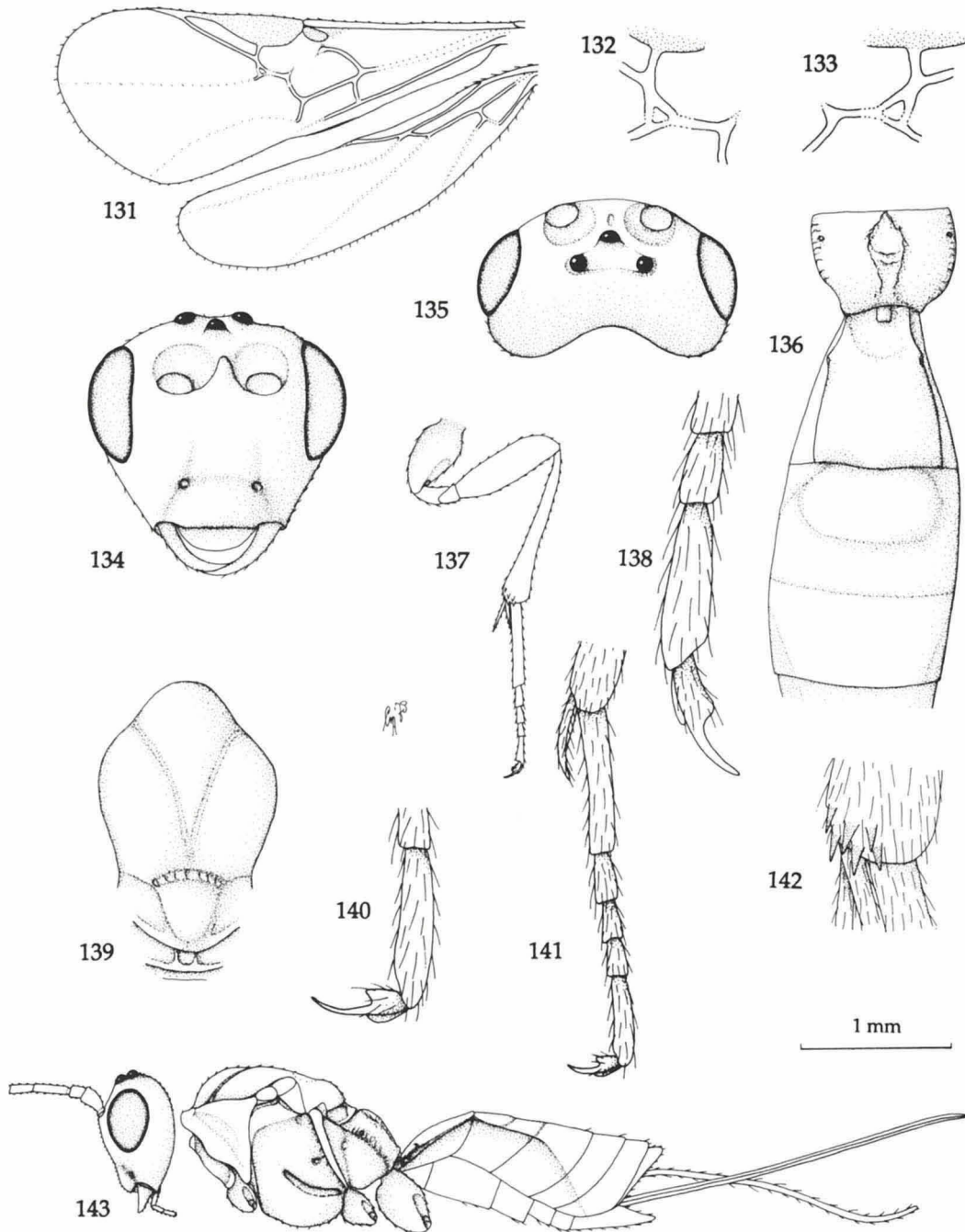
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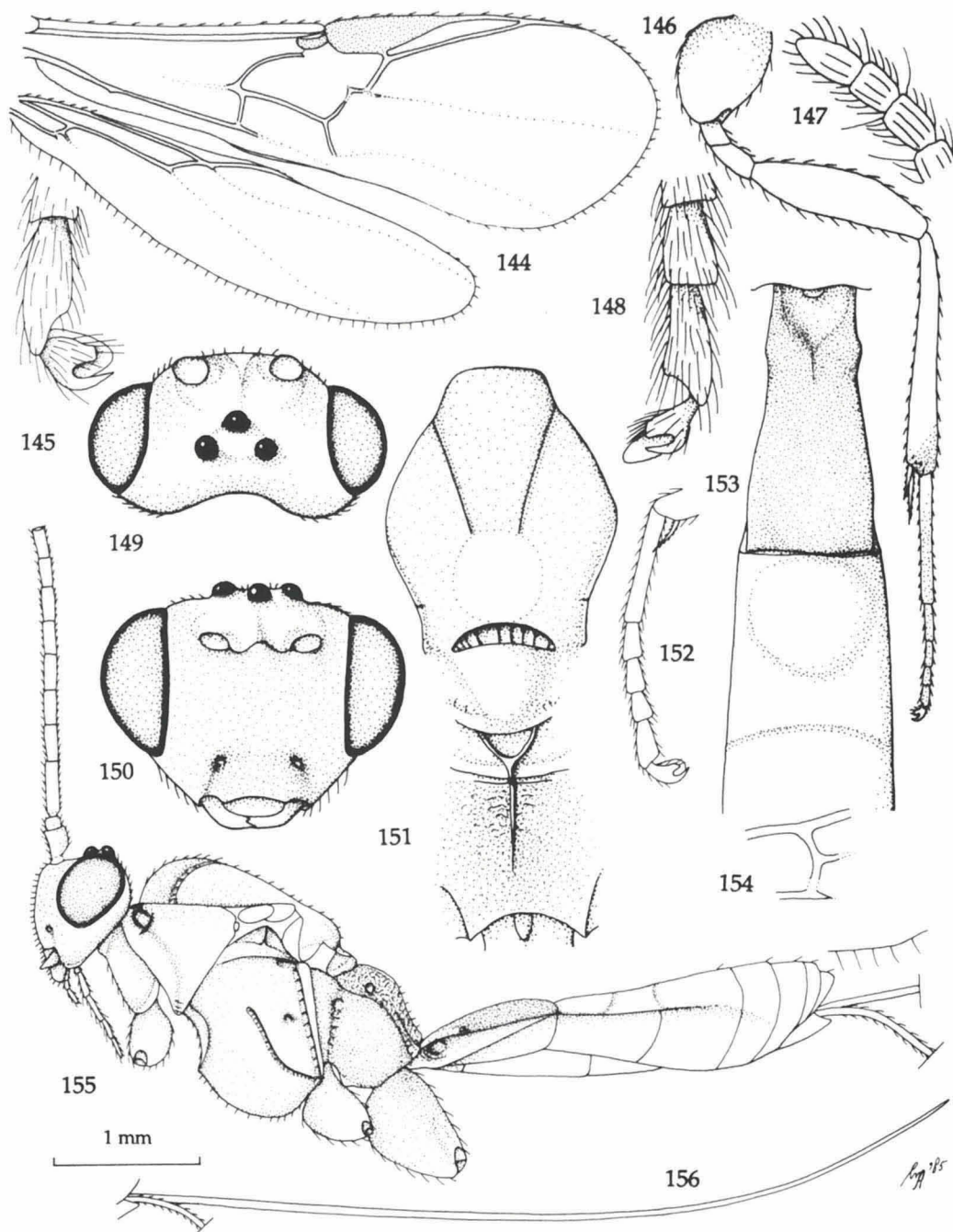
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