Notes on the tribe Mimagathidini Enderlein, with the description of a new genus (Hymenoptera: Braconidae: Orgilinae)

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Key words: Braconidae; Orgilinae; Mimagathidini; Mesocoelini; *Eleonoria*; *Orgilonia*; *Orgilus*; phylogeny; biology; keys; Oriental; Palaearctical; Afrotropical.
Eleonoria gen. nov. (type species: *E. mesembria* spec. nov. from Malaysia; five additional species from Japan, China (including Taiwan), Philippines, and Indonesia (Halmahera) are included), *Orgilonia pasohensis* spec. nov. from Malaysia, *Orgilus reclinatus* spec. nov. from Congo, *O. alboannulatus* spec. nov., and *O. brevicaudatus* spec. nov., both from Uganda, are described and partly illustrated. Keys to the species of *Eleonoria* gen. nov. and the genus *Orgilonia* van Achterberg are included. *Eleonoria chuchiensis* (Chou, 1995) is a new combination. The tribe Mesoscoelini Viereck, 1918 (= Aneurobraconinae Fahringer, 1936) is removed from the subfamily Agathidinae and included in the Orgilinae and synonymised with the tribe Mimagathidini (syn. nov.).

Introduction

The discovery by the first author of an undescribed Oriental and East Palaearctical genus obviously belonging to the subfamily Orgilinae Ashmead (tribe Mimagathidini Enderlein) posed a problem. It turned out to possess combs on the trochantelli, considered to be the autapomorphy of the subfamily Macrocentrinae Foerster, 1862. At first sight it may indicate a (distant) relationship with the Macrocentrinae and the Orgilinae, as shown in the consensus tree given by Quicke & van Achterberg (1990, fig. 1). However, the new genus lacks the synapomorphy of the Macrocentrinae plus Charmontinae, the longitudinally ridged ovipositor (Quicke & van Achterberg, 1990). Also the shape of the body (especially head and first metasomal tergite) and venation are typical for members of Orgilinae and not of Macrocentrinae or Charmontinae. Van Achterberg (1984) suggested a position of the Orgilinae near the base of the Microgastroid subfamilies, which was also found by Belshaw et al. (1998, fig. 2) after analyzing the D2 variable region of the 28s ribosomal RNA.

The new genus and five new species belonging to the genus are described, and one new Oriental species of the related genus *Orgilonia* van Achterberg, 1987, and three somewhat similar Afrotropical species of the genus *Orgilus* Haliday, 1833, are included. The three species form (together with *Orgilus westermanni* (Enderlein, 1912)) an Afrotropical group of species with strongly reclivous vein cu-a of hind wing. For the identification of the subfamilies of Braconidae, see van Achterberg (1990a, 1993, 1997) and for the terminology used in this paper, see van Achterberg (1988, 1994a).

Subfamily Orgilinae Ashmead, 1900

Orgilini Ashmead, 1900: 590.

Diagnosis.— See van Achterberg (1987). For the identification of the genera, see van Achterberg (1987, 1994b).

Biology.— The Orgilinae species are koinobiont endoparasitoids of weakly concealed lepidopterous larvae (e.g. leaf-rollers or larvae in grasses).

Tribe Mimagathidini Enderlein, 1905

Mimagathidinae Enderlein, 1905: 450.
Mesocoelini Viereck, 1918: 69. **Syn. nov.**
Stantoninae Viereck, 1919: 198.
Aneurobraconinae Fahringer, 1936: 587. **Syn. nov.**

Diagnosis.— See van Achterberg (1987); the character of the posterior margin of the hind wing should be amended, it is concave or straight. Members of Mimagathidini are commonly collected with Malaise traps and sometimes with yellow pan traps. No Mimagathidini have been found in (semi-)desert areas. Most are found in open spots in or near tropical rainforests and marshlands.

Biology.— Largely unknown, but *Stantonia lamprosemae* Muesebeck, 1938, *S. carpocapsae* Muesebeck, 1938, and *S. agroterae* Nixon, 1950, have been reared from *Lamprosema indica* (Fabricius), *Carpocapsa pomonella* (Linnaeus) and *Agrotera basinotata* Hampson, respectively, and belonging to the Pyralidae, Crambidae and Tortricidae, respectively.

Note.— Males of Hymenoptera have tergal glands probably for their defence (Buckingham & Sharkey, 1988), and considering its distribution, it is most likely a plesiomorphic character-state. Buckingham & Sharkey (1988) found specialised setal brushes between both glands on the seventh and eighth terga both in Agathidinae and the genus *Mesocoelus* Schulz. Unfortunately, no member of Orgilinae s. s. was included in this study. The conclusion "Van Achterberg's hypothesis (1984) that *Mesocoelus* belong to the Orgilinae is therefore falsified by yet another character" (Buckingham & Sharkey, 1988) is not based on any evidence in their paper.

Systematic part

Eleonoria Braet & van Achterberg, gen. nov.

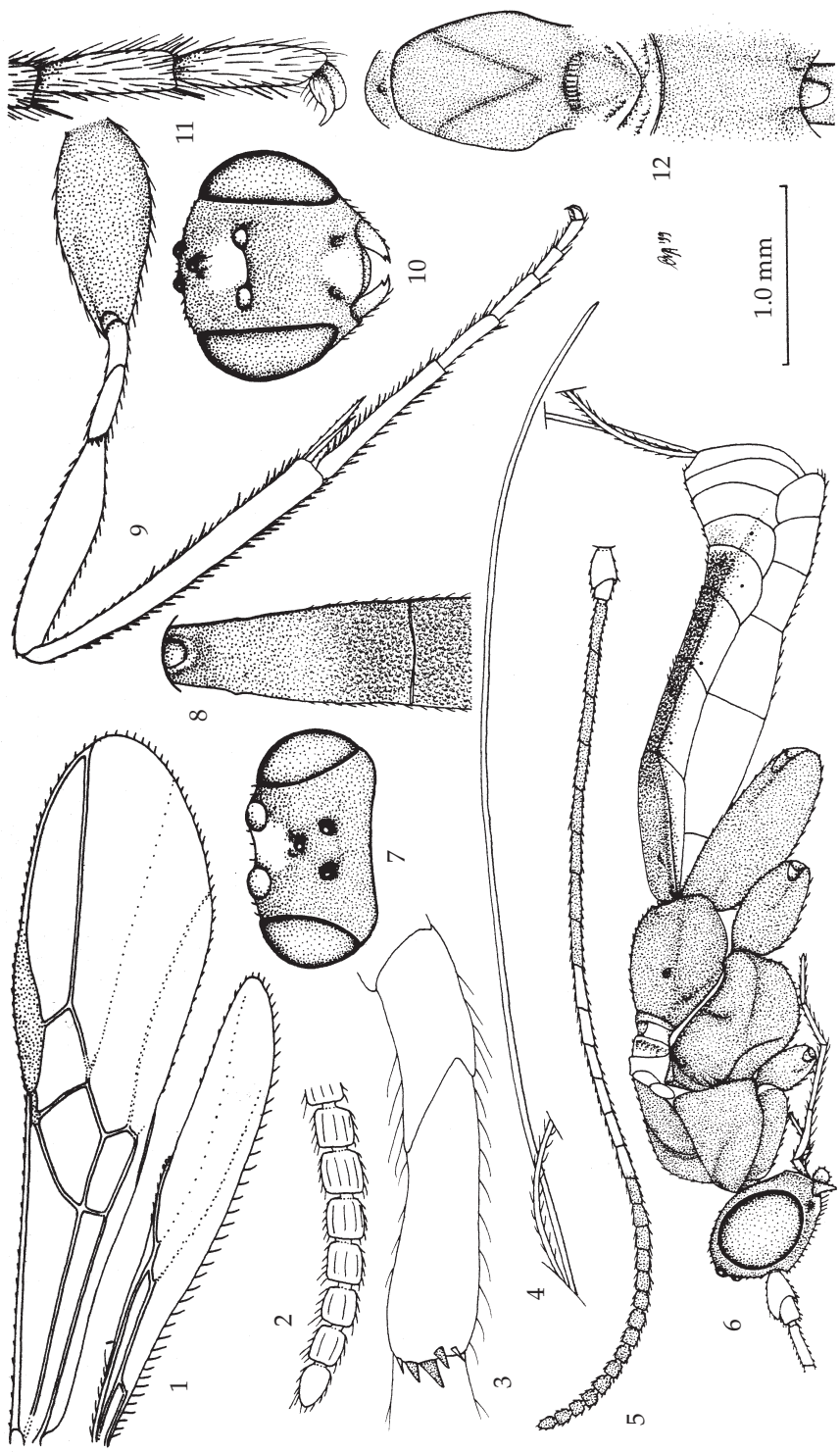
(figs 1-17)

Orgilonia p.p.; Chou, 1995: 179.

Type species: *Eleonoria mesembria* Braet & van Achterberg, spec. nov.

Etymology.— From the name "Eleonore", in honour of a pretty amateur entomologist from French Guyana and a friend of the first author. Gender: feminine.

Diagnosis.— Number of antennal segments 27-36; scapus oblique to strongly oblique apically; length of maxillary palp 1.5 times height of head; ultimate segment of labial palp medially attached to the penultimate segment; eyes glabrous; in dorsal



Figs 1-12, *Eleonoria mesembria* gen. nov. & spec. nov., ♀, holotype. 1, wings; 2, apex of antenna; 3, trochanter and trochantellus of hind leg, lateral aspect; 4, ovipositor; 5, antenna; 6, habitus, lateral aspect; 7, head, dorsal aspect; 8, first metasomal tergite, dorsal aspect; 9, hind leg; 10, head, frontal aspect; 11, inner hind claw; 12, mesosoma, dorsal aspect. 1, 4-6, 9: scale-line (= 1.0 ×); 2: 2.5 ×; 3, 11: 4.0 ×; 7, 8, 10, 12: 1.8 ×.

view length of eye 3.5-5 times temple; head finely punctate to coriaceous; vertex convex, but flattened near stemmaticum; face and clypeus flattened in lateral view; ventral border of clypeus straight; length of malar space 0.8-1 times basal width of mandible; malar and epistomal sutures absent; occipital flange and occipital carina absent; length of mesosoma 1.4-1.5 times its maximal height; pronope absent; side of pronotum crenulate medially and anteriorly, remainder coriaceous; scutelar sulcus narrow, shallow and micro-crenulate; precoxal sulcus punctate, but sometimes absent anteriorly; prepectal carina present dorsally but absent ventrally; notauli punctate and meeting near middle of mesoscutum, not reaching scutellar sulcus; propodeum medially convex in lateral view (fig. 6); its surface coriaceous and shiny; medio-longitudinal carina of propodeum absent; ventral border of metapleuron straight, with comparatively fine ventral carina, sometimes with a small to medium-sized flange anteriorly; wings completely setose; vein 1-SR+M of fore wing straight to weakly sinuate; first discal cell of fore wing widely truncate anteriorly; vein 2-SR+M of fore wing completely absent or nearly so (figs 1, 13); second submarginal cell of fore wing absent; vein 3-CU1 of fore wing 3-4 times longer than vein CU1b; posterior margin of hind wing straight or slightly concave (fig. 1); vein 1-M of hind wing distinctly longer than vein M+CU; hind leg strongly enlarged, with hind tibia with many strong bristles (fig. 9); hind coxa about twice as long as middle coxa, without rugae and its surface weakly coriaceous-granulate to aciculate; hind trochantellus 1.0-2.1 times as long as ventral length of hind trochanter (figs 3, 14-16); trochantelli with 1-5 teeth apically; hind tibia without apical teeth (fig. 9; but teeth present on middle and fore tibiae); tarsal claws without lobe, only somewhat widened basally (fig. 11); length of the first tergite 1.9-2.3 times its apical width; its surface coriaceous-granulate and shiny, or posteriorly reticulate-punctate; spiracles not or only weakly protruding; third metasomal tergite sometimes with sharp lateral carina; second suture straight or curved and crenulate; length of ovipositor sheath 1.1-1.8 times fore wing; valvilli and apical notch of ovipositor absent; antenna of ♀ with pale submedial band (but short and brownish band in *E. japonica* spec. nov. and absent in *E. infuscata* spec. nov.); remainder of antenna (except scapus and pedicellus) usually dark-brown or blackish.

Distribution.— East Palaearctic (Japan), and Oriental (Taiwan, Indonesia, Malaysia, Philippines): five species.

Biology.— Unknown, but according to Chou (1995) associated with lac sticks (*Kerria lacca* (Kerr); Lacciferidae, Coccina). The related genera *Aneurobracon* Brues, 1930 and *Mesoscoelus* Schulz, 1911, are endoparasitoids of Gracillariidae (Lepidoptera) (van Achterberg, 1990b).

Remarks.— The new genus is similar ot *Orgilonia* van Achterberg. The key by van Achterberg (1987) should be changed as follows: delete from couplet 3 the part "and fourth" [metasomal tergite] and it should run to the new couplet 3a.

3a. Trochantelli with 1-5 apical teeth (figs 3, 14-16); first discal cell of fore wing widely truncate anteriorly (figs 1, 13); posterior margin of hind wing straight or nearly so subbasally (fig. 1); prepectal carina reduced ventrally (fig. 6); vein 2-SR of fore wing continuous with vein m-cu or nearly so (fig 1, 13); posterior half of fourth metasomal tergite without sharp lateral crease (fig. 6); length of ovipositor sheath 1.0-1.8 times fore wing; metapleuron with comparatively fine carina ventrally..... ..... ***Eleonoria*** Braet & van Achterberg, gen. nov.

- Trochantelli without teeth; first discal cell of fore wing narrowly truncate anteriorly (figs 3, 12, 15,18 in van Achterberg, 1987); posterior margin of hind wing distinctly concave subbasally (figs 3, 12, 15, 18 in van Achterberg, 1987); prepectal carina complete ventrally; vein 2-SR of fore wing discontinuous with vein m-cu (figs 3, 12, 15,18 in van Achterberg, 1987); posterior half of fourth metasomal tergite with sharp lateral crease; length of ovipositor sheath 0.5-1.1 times fore wing; metapleuron with lamelliform carina ventrally .... ***Orgilonia*** van Achterberg, 1987

The new genus is similar to the tribe Mesocoelini Viereck, 1918, considering the many synapomorphies; e.g. the hind leg strongly enlarged, the hind tibia with many strong dark bristles, the subbasal cell of hind wing minute, the posterior margin of hind wing straight subbasally, the trochantelli elongate, the metapleuron with fine ventral carina, and the occipital carina completely absent. Therefore, this group is removed from the subfamily Agathidinae Haliday, 1833 (Sharkey, 1986; van Achterberg, 1990b) and it is included in the Mimagathidini. It restores the inclusion in the Orgilinae by van Achterberg (1984); being unfamiliar with the genus *Eleonoria* nov. van Achterberg (1987) considered it impossible to include the Mesocoelinae in an existing subfamily and treated it as a separate subfamily.

Key to species of the genus *Eleonoria* nov.

1. Head and mesosoma completely brownish-yellow; middle lobe of mesoscutum shiny and largely smooth; precoxal sulcus complete anteriorly, distinctly impressed and crenulate; pronope absent; 17th-19th antennal segments of ♀ white; hind trochantellus yellow; Philippines ..... ***E. philippinica*** Braet & van Achterberg, spec. nov.
- Head and mesosoma black or dark brown dorsally; middle lobe of mesoscutum mat and densely finely granulate; precoxal sulcus reduced anteriorly, obsolescent or absent anteriorly; pronope present, small; 17th-19th antennal segments of ♀ (at least partly dark) brown; hind trochantellus brownish 2
2. Antenna of ♀ largely black, at most 13th-15th segments largely brownish; hind trochantellus similarly coloured as hind trochanter; face and ventral parts of mesosoma black 3
- Antenna of ♀ with conspicuous white or ivory band (viz., 9th or 11th to 15th or 16th segments; fig. 5); hind trochantellus darker than hind trochanter; face and ventral parts of mesosoma more or less reddish or brownish 5
3. Antenna of ♀ with 13th-15th or 11th-14th segments largely brownish; hind trochantellus comparatively long and slender (fig. 14); legs yellowish-brown (but apices of tarsi dark brown and hind coxa brown); anterior half of precoxal sulcus narrowly crenulate; wing membrane subhyaline 4
- Antenna of ♀ without brownish band, completely blackish medially; hind trochantellus comparatively short and more robust (fig. 16); legs completely dark brown or black; anterior half of precoxal sulcus widely crenulate; wing membrane distinctly infuscate; Indonesia (Halmahera) ..... ***E. infuscata*** van Achterberg, spec. nov.
4. Vein r of fore wing long (fig. 13), length of vein SR1+3-SR about 6 times vein r;

13th-15th antennal segments of ♀ brownish; second metasomal tergite dark brown laterally and apically; length of malar space 0.9 times basal width of mandible; Japan ..... ***E. japonica*** Braet & van Achterberg, spec. nov.
Vein r of fore wing comparatively short (fig. 7 in Chou, 1995), length of vein SR1+3-SR about 9 times vein r; 11th-14th antennal segments of ♀ brownish-yellow; second tergite yellowish laterally and apically; length of malar space 1.1 times basal width of mandible; China (Taiwan) ..... ***E. chuchiensis*** (Chou, 1995)

5. Spines on outer side of hind tibia blackish; hind tibia largely dark brown and less slender (fig. 9); hind tarsus largely whitish; hind trochanter largely infuscate or dark brown; length of ovipositor sheath 1.3-1.5 times fore wing; antennal segments of ♀ 27-31; Malaysia (West Malaysia) ..... ***E. mesembria*** Braet & van Achterberg, spec. nov.
- Spines on outer side of hind tibia brownish-yellow; hind tibia largely yellowish-brown and more slender; hind tarsus and hind trochanter brownish-yellow or brown; length of ovipositor sheath 1.8-2.0 times fore wing; antennal segments of ♀ 37-39, of ♂ 35-37; China (Zhejiang) .... ***E. hei*** van Achterberg & Chen, spec. nov.

Eleonoria chuchiensis (Chou, 1995) comb. nov.

Orgilonia chuchiensis Chou, 1995: 179-180, fig. 7.

Distribution.— China: Taiwan.

Remarks.— Very similar to *E. japonica* spec. nov., but differs as indicated in the key.

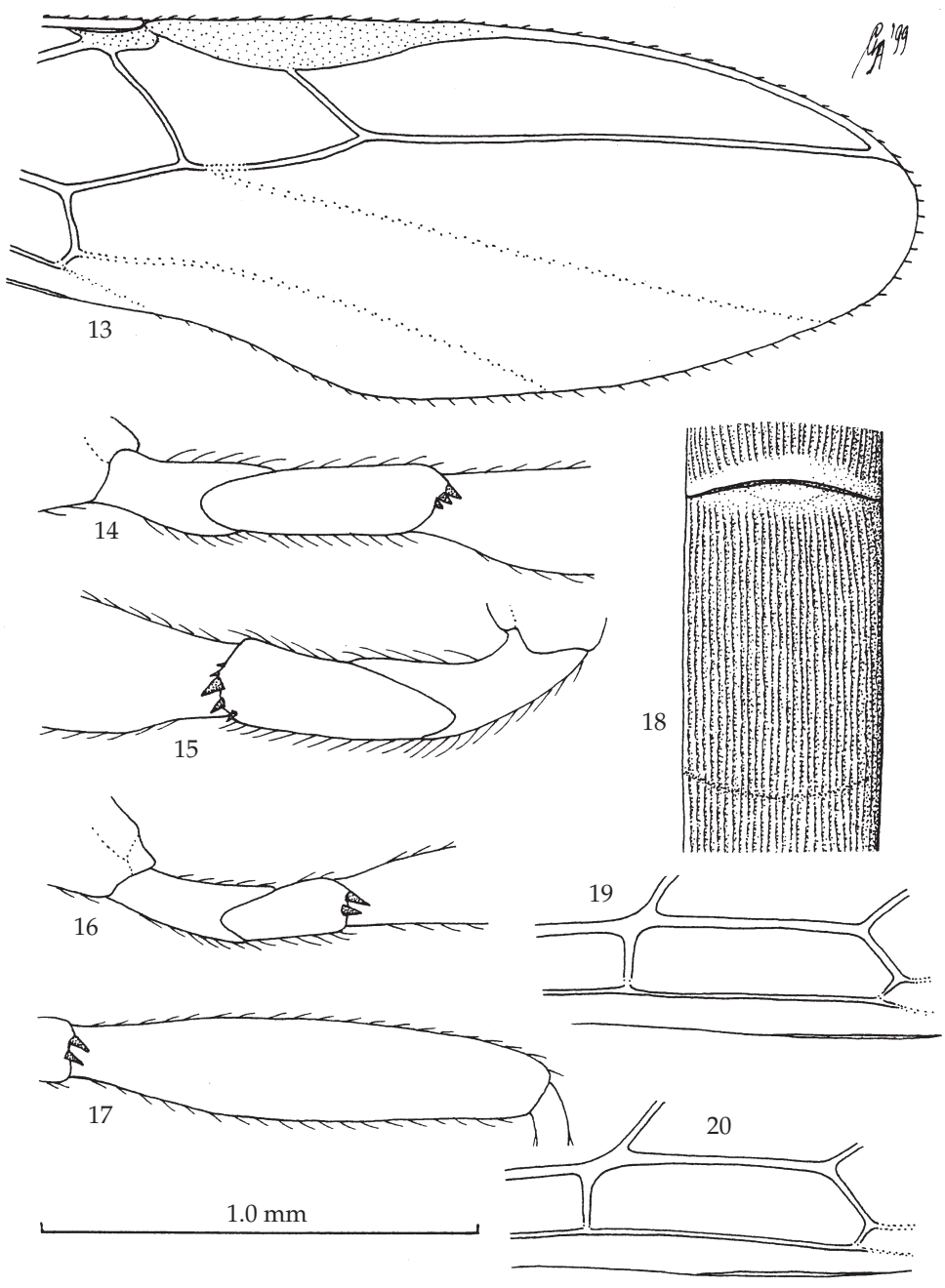
Eleonoria hei van Achterberg & Chen, spec. nov.
(figs 21-24)

Material.— Holotype, ♀ (ZUH), "China: Zhejiang, Yuhang, 18.viii.1986, Chu Jimin, no. 863812". Paratypes (ZUH, RMNH; 5 ♀♀ + 4 ♂♂): 2 ♀♀, "China [: Zhejiang], Hangchow [= Hangzhou], 2.vii.1936", "Chu Jootso, ex *Apriona germari* (Hope) [Cerambycidae]"; 1 ♂, "China: Jiangsu, Zhenjiang, 5.vii.1972, He Junhua, no. 73014.10"; 1 ♂, "China: Jiangsu, Yangzhou, 19.ix.1980, Yang Lianmin, no. 820139"; 1 ♀, id., but 1981, no. 820101"; 1 ♂, "China: Zhejiang, Hangzhou, 18.vi.1963, Jin Dendi, no. 63017.5"; 1 ♂, but vi.1986, He Junhua, no. 861619; 1 ♀, id., but viii.1984, no. 845967; 1 ♀, id., but 9.ix.1983, no. 833271.

Holotype, ♀, length of body 6.0 mm, of fore wing 4.1 mm.

Head.— Antennal segments 38, scapus distinctly oblique, third segment 1.3 times fourth segment, length of third, fourth, and penultimate segments 5.2, 4.0, and 1.3 times their maximum width, respectively (figs 22, 24); length of maxillary palp 1.5 times height of head; in dorsal view length of eye 7.5 times temple; temple directly narrowed posteriorly, shiny, finely punctate-coriaceous; OOL:diameter of ocellus:POL = 10:6:6; frons smooth medially, punctate-coriaceous laterally; vertex convex, punctate- coriaceous; face rather flat, densely punctate and superficially coriaceous; clypeus smooth (except some punctulation dorsally), its ventral border straight; length of malar space 0.9 times basal width of mandible.

Mesosoma.— Length of mesosoma 1.6 times its maximum height; pronope shal-



Figs 13, 14, *Eleonoria japonica* gen. nov. & spec. nov., ♀, holotype; fig. 15, *E. philippinica* gen. nov. & spec. nov., ♀, holotype; figs 16, 17, *E. infuscata* gen. nov. & spec. nov., ♀, holotype; figs 18-20, *Orgilonia pasohensis* spec. nov., ♀, holotype. 13, apical half of fore wing; 14-16, hind trochanter and trochantellus, lateral aspect; 17, hind femur; 18, second metasomal tergite, dorsal aspect; 19 (right wing), 20 (left wing), vein cu-a of fore wing. 13-17, 19, 20: scale-line (= 1.0 ×); 18: 0.9 ×.

low, transverse; mesopleuron, mesosternum, metapleuron, mesoscutum, scutellum finely punctate-coriaceous and shiny; precoxal sulcus obsolescent anteriorly, remainder distinctly impressed and finely crenulate; notauli finely crenulate; propodeum finely granulate, laterally also punctate, shiny; ventral border of metapleuron straight ventrally, curved anteriorly and forming a medium-sized flange .

Wings.— Fore wing (fig. 21): r:SR1+3-SR:2-SR = 10:72:19; cu-a interstitial; 3-CU1 4 times longer than vein CU1b; CU1a sclerotized basally. Hind wing: M+CU:1-M = 28:33; 2-M unpigmented; membrane setose basally.

Legs.— Hind coxa granulate-coriaceous; fore femur distinctly curved, largely parallel-sided; hind basitarsus narrowed apicad; length of femur, tibia and basitarsus of hind leg 5.1, 11.3 and 8.8 times their width, respectively; length of hind trochantellus 1.5 times ventral length of hind trochanter (fig. 23); hind trochantellus with 2 large and 2 small teeth apically (fig. 23); length of tibial spurs 0.45 and 0.30 times basitarsus.

Metasoma.— Length of the first tergite 1.9 times its apical width, its surface granulate and rather shiny, posterior third sculpture reticulate-punctate, weakly convex; spiracles not protruding; second-third tergites reticulate-punctate; fourth tergite finely punctate; fifth-seventh tergites punctate-coriaceous; second, third, and base of fourth tergites with sharp lateral crease; length of second tergite 1.3 times median length of third tergite; second suture weakly curved; ovipositor sheath 1.83 times fore wing.

Colour.— Black; 10th-18th antennal segments ivory; palpi, basal ring of hind and middle tibiae, basal third of first, basal half of second and basal third of third tergite, and humeral plate pale yellowish; tegula brown; clypeus, scapus and pedicellus ventrally, third-ninth antennal segments partly, fore and middle legs (but telotarsi and trochantelli rather dark brown) yellowish-brown; remainder of antenna dark brown; mesosoma in front of tegulae, mesosternum posteriorly faintly, and face (but paler near antennal sockets) dark reddish-brown; hind leg rather brownish, but trochanter slightly paler and telotarsus dark brown); veins and pterostigma dark brown; wing membrane slightly infuscate; bristly spines of hind tibia brownish-yellow.

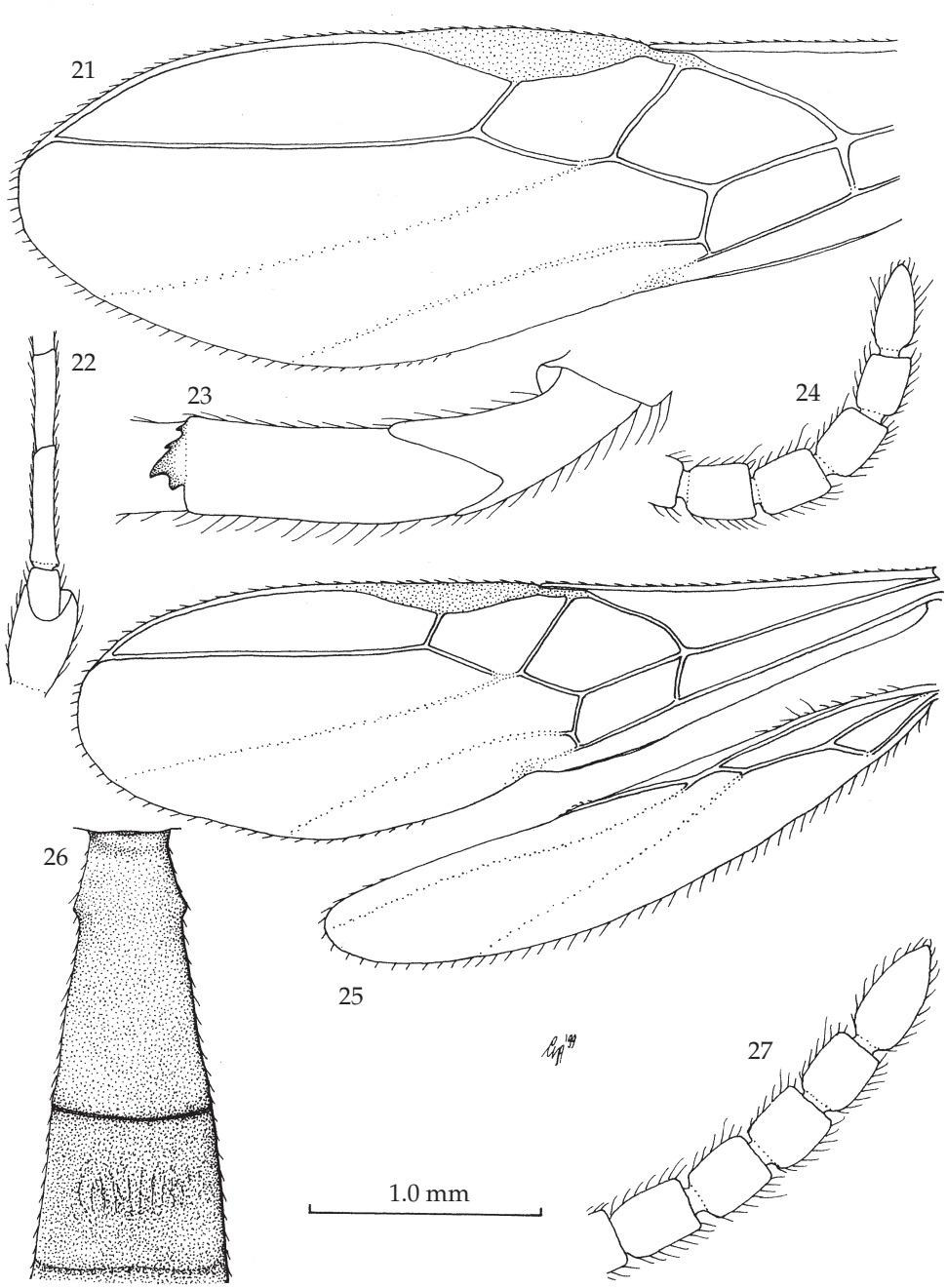
Variation.— Length of fore wing (3.3-)3.8-4.4 mm, of body (4.7-)5.3-6.9 mm; antenna of ♀ 37(1), 38(2), 39(1) segments, of ♂ 35(1), 36(1), 37(1) segments; length of ovipositor sheath 1.76-1.97 times fore wing; 10th or 11th-17th or 18th antennal segments of ♀ whitish or ivory, antenna of ♂ completley dark brown, or largely yellowish-brown and darkened apicad, and slender apically.

Notes.— The listed cerambycid host (*Apriona germari* (Hope)) is probably erroneous; related genera are parasitoids of small lepidopterous larvae. Probably a small catterpillar pupated in the tunnel of the cerambycid.

It is great pleasure to us (C. van Achterberg and X. Chen) to name this species after the well known hymenopterist Prof. Dr J. He (Hangzhou) who collected part of the type series.

Eleonoria infuscata van Achterberg, spec. nov.
(figs 16, 17)

Material.— Holotype, ♀ (RMNH), "Indonesia: S Halmahera, 20 km S [of] Payahe, Sagutora, Mal. trap 11, c 125 m, 18.ii-18.iii.1995, C. v. Achterberg, R. de Vries & Y. Yasir, RMNH'95".



Figs 21-24, *Eleonoria hei* gen. nov. & spec. nov., ♀, holotype; figs 25-27, *Orgilus brevicaudatus* spec. nov., ♀, holotype. 21, apical half of fore wing; 22, base of antenna; 23, hind trochanter and trochantellus, lateral aspect; 24, 27, apex of antenna; 25, wings; 26, first and second metasomal tergites, dorsal aspect. 21: 1.4 ×; 22, 26: 1.5 ×; 23, 27: 2.2 ×; 24: 3.3 ×; 25: scale-line (= 1.0 ×).

Holotype, ♀, length of body 4.4 mm, of fore wing 3.2 mm.

Head.— Antennal segments 30, scapus moderately oblique, length of third segment 1.2 times fourth segment, length of third, fourth and penultimate segments 5.3, 4.3 and 1.1 times their maximal width, respectively, distal segments moniliform, apical segment 1.3 times its maximal width; length of maxillary palp 1.8 times height of head; in dorsal view length of eyes 8 times temple; temple narrowed posteriorly, shiny, coriaceous; OOL:diameter of ocellus:POL = 16:10:7; frons smooth and uneven medially, coriaceous laterally; vertex densely punctulate; face densely punctulate-coriaceous; clypeus largely smooth, with some punctulation, its ventral margin straight; length of malar space equal to basal width of mandible.

Mesosoma.— Length of mesosoma 1.4 times its maximum height; pronope present, small; whole mesosoma punctulate-coriaceous and weakly shiny; precoxal sulcus complete, widely crenulate anteriorly, rather narrowly so posteriorly; notauli distinct, narrowly crenulate; scutellar sulcus deep and moderately crenulate; ventral border of metapleuron straight with a wide medium-sized flange anteriorly.

Wings.— Fore wing: r :SR1+3-SR :2-SR = 6:64:14; 1-SR+M nearly straight; cu-a interstitial (right wing) or just antefurcal (left wing); 3-CU1 twice vein CU1b; CU1a pigmented. Hind wing: M+CU:1-M = 10:17; 2-M pigmented, membrane densely setose basally.

Legs.— Hind coxa (as middle coxa) distinctly and densely punctulate-coriaceous; length of femur, tibia and basitarsus of hind leg 4.8, 10.3 and 9.4 times their width, respectively; trochantellus as long as hind trochanter (fig. 16); hind trochantellus with 2 teeth apically (figs 16, 17); length of tibial spurs 0.4 and 0.3 times basitarsus.

Metasoma.— Length of the first tergite 2.3 times its apical width, its surface reticulate-punctate and shiny, moderately convex in lateral view; spiracles weakly protruding; second and third tergite reticulate-punctate, fourth tergite shallowly so, and fifth tergite largely smooth, except for some punctures; second and base of third tergite with sharp lateral crease; length of second tergite 1.4 times median length of third tergite; second suture distinctly curved and nearly smooth; length of ovipositor sheath 1.52 times fore wing.

Colour.— Black. Antenna dark brown, but scapus and pedicellus ventrally, minute patch of mesoscutum postero-laterally, metasoma ventrally and apically, apex of fore femur, fore and middle tarsi, and tegulae largely, brown; palpi ivory; fore coxa partly dark reddish brown; hypopygium desclerotised and pale yellowish medially; wing membrane distinctly infuscate; pterostigma and veins blackish.

Eleonoria japonica Braet & van Achterberg, spec. nov.
(figs 13, 14)

Material.— Holotype, ♀ (AEI), "Japan: Ibaraki, Tsukuba, (Expo site), 5-11.ix.1989, Sharkey".

Holotype, ♀, length of body 5.9 mm, of fore wing 3.9 mm.

Head.— Antennal segments 36, scapus strongly oblique, length of third segment 1.1 times fourth segment, length of third, fourth and penultimate segments 4.5, 4.2 and 2.0 times their maximum width, respectively, apical segment 3 times its maximal width; length of maxillary palp 1.5 times height of head; in dorsal view length of eye

5 times temple; temple narrowed posteriorly, shiny, coriaceous; OOL:diameter of ocellus:POL = 8:4:5; frons smooth medially, coriaceous laterally; vertex finely coriaceous; face punctate-coriaceous; clypeus smooth with sparse punctation, its ventral border straight; length of malar space 0.9 times basal width of mandible.

Mesosoma.— Length of mesosoma 1.7 times its maximum height; pronope absent; mesopleuron, mesosternum, metapleuron, mesoscutum, scutellum coriaceous and shiny; precoxal sulcus punctate posteriorly and medially, absent anteriorly; notauli punctate; propodeum coriaceous and shiny with sparse long setae; ventral border of metapleuron straight with a small flange anteriorly.

Wings.— Fore wing: r :SR1+3-SR :2-SR = 6:37:10 (fig. 13); 1-SR+M weakly sinuate; cu-a interstitial; 3-CU1 4 times longer than vein CU1b; CU1a pigmented. Hind wing: M+CU:1-M = 10:12; 2-M pigmented, membrane setose basally.

Legs.— Hind coxa weakly coriaceous-granulate; length of femur, tibia and basitarsus of hind leg 5.3, 11.2 and 9.2 times their width, respectively; length of hind trochantellus 1.8 times hind trochanter; hind trochantellus with 3 teeth apically (fig. 14); length of tibial spurs 0.4 and 0.3 times basitarsus;.

Metasoma.— Length of the first tergite 2.3 times its apical width, its surface coriaceous-granulate and shiny, weakly convex in lateral view; spiracles weakly protruding; second-fourth tergites coriaceous-granulous medially, finely coriaceous laterally, with sharp lateral crease (except posterior half of fourth tergite); length of second tergite 1.2 times median length of third tergite; second suture straight and indistinctly crenulate; length of ovipositor sheath 1.75 times fore wing.

Colour.— Black. Scapus, pedicellus, clypeus, palpi, fore and middle legs (except telotarsi) brownish-yellow; telotarsi brownish; 13th-15th antennal segments infuscate brownish; remainder of antenna dark brown or blackish; first-third metasomal tergites ivory basally; hind leg largely brown (with hind coxa comparatively dark) and base of hind tibia ivory; wing membrane subhyaline.

Eleonoria mesembria Braet & van Achterberg, spec. nov.
(figs 1-12)

Material.— Holotype, ♀ (AEI), "Malaysia: Pasoh Forest Res., Negri S., 5.vii.1979, for[est] gap, P. & M. Becker". Paratypes (AEI, RMNH): 7 ♀♀ (one female has apex of metasoma missing), topotypic, but 10.iv.1978, 7.ix.1978, 4.x.1978, primary forest, 24.xii.1979, secondary forest, 13.iii.1979, 14.vii.1979, primary forest, 31.iii.1979, respectively.

Holotype, ♀, length of body 3.9 mm, of fore wing 3.2 mm.

Head.— Antennal segments 31, scapus distinctly oblique, third segment as long as fourth segment, length of third, fourth, penultimate and ultimate segments 3.9, 3.9, 1.3 and 1.7 times their maximum width, respectively (figs 2, 5); length of maxillary palp 1.7 times height of head; in dorsal view length of eye 6.5 times temple; temple narrowed posteriorly, shiny, finely punctulate-coriaceous dorsally and ventrally; OOL:diameter of ocellus:POL = 8:3:6; frons smooth medially, with pair of small pits posteriorly (fig. 7), punctulate coriaceous laterally; vertex convex, finely punctulate coriaceous; face rather flat, punctulate coriaceous (fig. 10); clypeus smooth, its ventral border straight; length of malar space 0.8 times basal width of mandible.

Mesosoma.— Length of mesosoma 1.6 times its maximum height; pronope shallow but distinct; mesopleuron, mesosternum, metapleuron, mesoscutum (but coarser), scutellum finely punctulate coriaceous and shiny; precoxal sulcus absent anteriorly, only coriaceous, (fig. 6); notauli only coriaceous; propodeum finely punctulate coriaceous and shiny; ventral border of metapleuron straight, without anterior flange (fig. 6).

Wings (fig. 1).— Fore wing: r:SR1+3-SR:2-SR = 6:51:12; cu-a interstitial; 3-CU1 3 times longer than vein CU1b; CU1a only distinctly pigmented. Hind wing: M+CU:1-M = 7:11; 2-M pigmented; membrane normally setose basally.

Legs.— Hind coxa distinctly coriaceous; fore femur distinctly curved, parallel-sided; length of femur, tibia and basitarsus of hind leg 4.8, 9.9 and 8.8 times their width, respectively; length of hind trochantellus 2.1 times ventral length of hind trochanter (figs 3, 9); hind trochantellus with 3 large and 2 small teeth apically (fig. 3); length of tibial spurs 0.55 and 0.40 times basitarsus.

Metasoma.— Length of the first tergite 2.1 times its apical width, its surface densely scaly coriaceous and rather shiny, posteriorly sculpture becoming reticulate-punctate (fig. 8), weakly convex; spiracles not protruding; second-fourth tergites reticulate-punctate, with some large punctures, second and third (except apically) tergites with sharp lateral crease; length of second tergite 1.4 times median length of third tergite; second suture weakly curved; ovipositor sheath 1.4 times fore wing.

Colour.— Dark brown; 11th-16th antennal segments white; maxillary palp (except basally), basal half of first-third tergites, basal fifth of hind tibia, second-fourth segments of tarsi, hind tarsus ventrally and basal 0.6 of metasoma ventrally more or less ivory; scapus, pedicellus, fore and middel legs (but telotarsi and trochantelli dark brown) yellowish-brown; remainder of antenna, and of hind tibia, and hind basitarsus dark brown; mesosoma dark reddish-brown ventrally; labial palp rather dark brown; coxae and hind femur brownish, but apically infuscate; veins and pterostigma dark brown; wing membrane subhyaline.

Variation.— Length of fore wing 2.8-3.5 mm, of body 3.2-4.1 mm; antenna of ♀ 27(1), 28(1), 29(3), 30(1), 31(2) segments; length of ovipositor sheath 1.31-1.50 times fore wing; first-third tergites may be largely ivory (except brown patch of first tergite and pair of patches of second and third tergites apically), 9th, 10th or 11th-15th or 16th segments of antenna of ♀ ivory or white, third, part of 4th-6th, 16th, and 17th segments may be yellowish; tibial spurs and basitarsi may be completely ivory; hind femur may be largely dark brown and humeral plate yellowish; mesopleuron (except dorsally) and metapleuron may be yellowish; maxillary and labial palpi vary from largely dark brown to completley ivory; face may be rather dark yellowish-brown.

Eleonoria philippinica Braet & van Achterberg, spec. nov.
(fig. 15)

Material.— Holotype, ♀ (AEI), ´P[hilippine] I[sles], Los Banos, Lag., 7.iii.1953, Townes family".

Holotype, ♀, length of body 5.7 mm, of fore wing 4.4 mm.

Head.— Remaining antennal segments 33, scapus strongly oblique, length of third segment 1.3 times the fourth, length of third and fourth segments 4.5 and 3.5

times their maximal width, respectively; length of maxillary palp 1.7 times height of head; in dorsal view length of eyes 5.5 times temple; temple narrowed posteriorly, shiny, coriaceous; OOL:diameter of ocellus:POL = 5:2:2; frons smooth medially, coriaceous laterally; vertex finely coriaceous; face punctate-coriaceous; clypeus smooth with sparse punctation, its ventral border straight; length of malar space 0.8 times basal width of mandible.

Mesosoma.— Length of mesosoma 1.5 times its maximum height; pronope absent; mesopleuron, mesosternum, metapleuron, mesoscutum, scutellum finely punctate and shiny precoxal sulcus crenulate, distinct anteriorly; notauli crenulate anteriorly, punctate posteriorly; propodeum finelly coriaceous-punctate and shiny with sparse long setae; ventral border of metapleuron straight with a flange anteriorly.

Wings.— Fore wing: r:SR1+3-SR:2-SR = 6:41:15; 1-SR+M weakly sinuate; second submarginal cell absent; cu-a interstitial; m-cu:1-M = 9:15; 3-CU1 2.5 times longer than vein CU1b; CU1a pigmented. Hind wing: M+CU:1-M = 10:12; 2-M pigmented, membrane setose basally.

Legs.— Hind coxa aciculate and sparsely punctate; length of femur, tibia and basitarsus of hind leg 4.4, 10.0 and 9.3 times their width, respectively; length of hind trochantellus 1.3 times hind trochanter; hind trochantellus with 3 teeth (and 2 minute ones, fig. 15) apically; length of tibial spurs 0.4 and 0.2 times basitarsus.

Metasoma.— Length of the first tergite 1.9 times its apical width, its surface coriaceous-granulate and shiny, weakly convex in lateral view; spiracles weakly protruding; second-fourth tergites coriaceous-granulate medially, second-third tergites with sharp lateral crease; length of second tergite 1.5 times length of third tergite; second suture straight and crenulate; ovipositor sheath 1.6 times fore wing.

Colour.— Brownish-yellow. Scapus, pedicellus brownish; 11th-19th antennal segments ivory-white; remainder of antenna blackish; wing membrane slightly infuscate.

Orgilonia van Achterberg, 1987

Orgilonia van Achterberg, 1987: 14; Chou, 1995: 179 (p.p.); Braet, 1997: 460 (Afrotropical species). Type-species: *Orgilonia fuscistigma* van Achterberg, 1987 [examined].

Key to species of the genus *Orgilonia* van Achterberg
(modified after the keys given by van Achterberg (1987) and Braet (1997))

1. Second-fourth metasomal tergites longitudinally (costate-)striate (fig. 20 in van Achterberg, 1987); pterostigma, base of hind tibia and hind tarsus yellowish; length of ovipositor sheath 0.5-0.6 times fore wing; temples directly narrowed behind eyes (fig. 23, l.c.); first tergite 2.1-2.5 times its apical width (fig. 20, l.c.); (Afrotropical: Ivory Coast, Sao Tomé, Gambia, Benin, Ghana, Nigeria, Congo, Burundi, Somalia (type), Madagascar) ..... ***O. striata*** van Achterberg, 1987
- Second-fourth tergites granulate-coriaceous, densely reticulate-punctate, longitudinally rugulose or rugose (fig. 18; figs 11, 14, l.c.); base of hind tibia, and usually pterostigma and hind tarsus infuscate or dark brown; length of ovipositor sheath 0.7-1.1 times (but 0.5 times in *O. kiliwa*) fore wing; temples less strongly narrowed

behind eyes (figs 9, 13, 16, l.c.); first tergite 1.6-2.4 times its apical width (figs 11, 14, 17, l.c.) 2

2. Occipital carina present ventrally; vein 1-SC+R of hind wing ends near level of vein SR of hind wing (fig. 12, 18, l.c.); prepectal carina strong, close to anterior margin of mesopleuron; precoxal sulcus narrowly impressed; head more directly narrowed behind eyes (figs 13, 16, l.c.); dorsal carinae of first tergite more or less developed (fig. 14, l.c.); colour of hind leg variable; first metasomal tergite 2.0-2.2 times its apical width; (Oriental) 3
- Occipital carina completely absent; vein 1-SC+R of hind wing ends far below level of vein SR of hind wing (fig. 11, l.c.); prepectal carina weak and not reaching anterior margin of mesopleuron; precoxal sulcus absent or nearly so; head roundly narrowed behind eyes (fig. 9, l.c.); dorsal carinae of first tergite absent (fig. 11, l.c.); trochantellus, apex of hind femur and tiba (except basally) of hind leg yellowish-brown; length of first tergite 1.6-2.4 times its apical width; (Afrotropical) 5
3. Vein cu-a of fore wing distinctly antefurcal (figs 19, 20); length of second metasomal tergite about 1.5 times its basal width (fig. 18); second-fifth tergites densely longitudinally rugulose; maxillary palp about twice as long as height of head; second metasomal suture obsolescent; Malaysia (type) .... ***O. pasohensis*** Braet & van Achterberg, spec. nov.
- Vein cu-a of fore wing interstitial, or just postfurcal; length of second metasomal tergite equal to its basal width or slightly less; second-fifth tergites distinctly reticulate-punctate, more or less mixed with rugulae; length of maxillary palp 1.1-1.2 times height of head; scecond metasomal suture distinct 4
4. Third and fourth metasomal tergites (except apically), apex of hind femur and usually of hind tibia dark brown; Philippines (type), Thailand (specimens in Bishop Museum, Honolulu, Hawaii and RMNH), India (RMNH) .... ***O. ashmeadi*** (Viereck, 1911)
- Third and fourth tergites, apex of hind femur and of hind tibia brownish-yellow; Java (type), Borneo (Sarawak: Bishop Museum, Honolulu; RMNH), Sulawesi (RMNH); China (Zhejiang; ZUH; RMNH) ..... ***O. vechti*** van Achterberg, 1987
5. Clypeus clearly convex in lateral view (fig. 3 in Braet, 1997); length of ovipositor sheath about 0.5 times fore wing; length of first metasomal tergite about 2.4 times its apical width, and more than combined length of second and third tergites; hind tibia curved in dorsal view; Congo (type) ..... ***O. kiliwa*** Braet, 1997
- Clypeus nearly flat in lateral view (fig. 2, l.c.); length of first tergite 1.6-1.8 times its apical width, and about equal or less than combined length of second and third tergites; hind tibia straight in dorsal view 6
6. Vein cu-a of fore wing antefurcal (fig. 6, l.c.); first tergite shorter than combined length of second and third tergites; fifth tergite with sharp lateral crease; propodeum rather flat, granulate-coriaceous; Congo (type), Ivory Coast, Madagascar ..... ***O. antefurcale*** Braet, 1997
- Vein cu-a of fore wing interstitial (fig. 3 in van Achterberg, 1987); first tergite about equal to combined length of second and third tergites; fifth tergite without sharp lateral crease; propodeum rather convex, very finely transversely granulate-rugulose; Sierra Leone (type) ..... ***O. fuscistigma*** van Achterberg, 1987

Orgilonia pasohensis Braet & van Achterberg, spec. nov.
(figs 18-20)

Material.— Holotype, ♀ (AEI): "Malaysia: Pasoh Forest Res., Negri S., 21.ii.1980, for[est] gap, P. & M. Becker".

Holotype, ♀, length of body 6.0 mm, of fore wing 4.4 mm.

Head.— Antennal segments 37, length of third segment 1.3 times fourth segment, length of third, fourth, penultimate and ultimate segments 3.0, 4.0, 1.8 and 1.8 times their maximum width, respectively; length of maxillary palp twice height of head, reaching middle coxa; in dorsal view length of eye 4 times temple; temple narrowed posteriorly, shiny, finely punctate dorsally; OOL:diameter of ocellus:POL = 3:2:2; frons smooth; vertex finely punctate; face punctate; clypeus punctate, its ventral border straight; length of malar space 1.5 times the basal width of mandible; malar suture weakly present; occipital flange very reduced; occipital carina present.

Mesosoma.— Length of mesosoma 1.56 times its maximum height; pronope small but present; side of pronotum crenulate medially and anteriorly, remainder finely punctate-coriaceous; middle lobe of mesoscutum weakly protruding in lateral view; mesopleuron, mesosternum, metapleuron, mesoscutum, scutellum finelly punctate-coriaceous and shiny; scutelar sulcus narrow with several carinae; precoxal sulcus sparsely and weakly punctate; notauli punctate; propodeum medially convex in lateral view, its surface finely coriaceous-punctate; ventral border of metapleuron straight; metapleural flange short.

Wings.— Fore wing: r:SR1+3-SR:2-SR = 5:35:13; vein 1-SR+M straigth; second submarginal cell absent; m-cu:1-M = 9:16; cu-a distinctly antefurcal; wing completely setose; 3-CU1 4 times longer than vein CU1b; CU1a pigmented. Hind wing: M+CU:1-M = 7:13; 2-M pigmented; membrane setose basally.

Legs.— Hind coxa without rugae, its surface finely punctate; length of femur, tibia and basitarsus of hind leg 5.3, 9.4 and 10.0 times their width, respectively; length of hind trochantellus 1.6 times ventral length of hind trochanter; hind tibia with 3-4 apical teeth and several bristles between setae; length of tibial spurs 0.5 and 0.4 times basitarsus.

Metasoma.— Length of first tergite 2.1 times its apical width, its surface striate-coriaceous, weakly convex in lateral view; spiracles not protruding; second-fifth tergites densely longitudinally rugulose, second-fourth tergites with a complete lateral crease; fifth tergite with a sharp lateral crease basally; length of second tergite 1.6 times its basal width (fig. 18) and 1.4 times length of third tergite; second suture curved and obsolescent; ovipositor broken, remaining part of ovipositor sheath about 0.9 times fore wing.

Colour.—Brownish-yellow. Vertex, antenna (except pedicellus, and lateral band on scapus), median patch on propodeum, telotarsi, base of hind tibia, first-sixth tergites (except narrow band laterally and apically), and ovipositor sheath more or less dark brownish.

Remarks.— Only two other very closely related Oriental species are known: *O. ashmeadi* (Viereck, 1911) and *O. vechti* van Achterberg, 1987. These two differ from the Afrotropical species as indicated in the key by van Achterberg (1987), to which could

be added that the Oriental species (but unknown of *O. pasohensis* spec. nov.) have a distinct subapical notch of the ovipositor, which is indistinct in the type species, the Afrotropical *O. fuscistigma* van Achterberg, 1987, but distinct in the also Afrotropical *O. striata* van Achterberg, 1987.

Orgilus Haliday, 1833

Orgilus Haliday, 1833: 262; for full references see van Achterberg, 1987: 55. Type-species: *Microdus obscurator* Nees, 1814, by monotypy.

Orgilus (*Orgilus*) *alboannulatus* van Achterberg, spec. nov. (figs 28-30)

Material.— Holotype, ♀ (RMNH), "S. Uganda, Kibale Forest (border), Kanyawara, Mal. trap, 10.viii-10.ix.1996, J.J.M. van Alphen, RMNH'96". Paratypes, 2 ♀♀ (RMNH), topotypic, and same period.

Holotype, ♀, length of body 7.5 mm, of fore wing 5.8 mm.

Head.— Antennal segments 46, antenna 1.45 times fore wing, length of third segment 1.2 times fourth, length of third, fourth and penultimate segments 4.8, 3.9 and 1.5 times their maximum width, respectively (fig. 29); length of maxillary palp 2.5 times height of head, reaching base of hind coxa; eyes glabrous; in dorsal view length of eyes 5.1 times temple; temple roundly narrowed posteriorly, punctate-coriaceous; OOL:diameter of ocellus:POL = 7:3:2; frons and vertex coarsely punctate-coriaceous, distance between punctures less than width of punctures; face weakly convex in lateral view, punctate-coriaceous; clypeus rather flat in lateral view, distinctly punctate, shiny; length of malar space 0.8 times basal width of mandible; malar suture largely absent, only near eye present; occipital carina present up to level of dorsal 0.8 of eye; occipital flange medium-sized, thin.

Mesosoma.— Length of mesosoma 1.6 times its maximum height; side of pronotum punctulate-coriaceous, with a convexity antero-sublaterally and some crenulae antero-dorsally; prepectal carina largely absent laterally (only short part near precoxal sulcus distinct), very weak ventrally and partly absent; pronope deep, small, and round; surface of mesopleuron, and mesosternum punctulate-coriaceous; mesoscutum rather strongly punctate-coriaceous; metapleuron rather coarsely granulate and flattened; scutellum only finely punctate; area lateral of scutellar sulcus flattened and distinctly punctate; precoxal sulcus shallowly impressed, mainly smooth, with some obsolescent crenulae; notauli meeting posteriorly, narrow and finely crenulate; scutellar sulcus finely crenulate; propodeum rather convex, its surface finely granulate-rugulose, antero-laterally narrowly smooth; medio-longitudinal carina of propodeum absent; metapleural flange rather narrow anteriorly, thin and rounded.

Wings (fig. 28).— Fore wing: r:SR1+3-SR:2-SR = 10:83:18; subbasal cell evenly setose; no sclerotized 2-M; cu-a interstitial, vertical. Hind wing: largely sparsely setose basally; M+CU:1-M = 30:27; posterior margin of wing rather concave (fig. 28); 1r-m slightly longer than 2-SC+R.

Legs.— Hind coxa finely punctulate-granulate, with some transverse striae apically; length of femur, tibia and basitarsus of hind leg 4.6, 10.4, 9.8 times their maximal width, respectively; length of tibial spurs 0.3 and 0.5 times basitarsus; hind tibia with

about 16 (sub)apical teeth; middle tarsus very slender, 0.85 times as long as hind tarsus; middle basitarsus 11.6 times as long as wide basally.

Metasoma.—- Length of the first tergite 2.4 times its maximal width, its surface granulate, with fine striae medially and distinctly costate medio-apically (fig. 30); second tergite 1.5 times as long as its basal width; second and third tergites coarsely longitudinally rugose, and rather convex; second suture, slightly curved, strongly crenulate and distinct; fourth tergite rugulose; fifth tergite coriaceous, sixth-eighth tergites largely smooth; ovipositor sheath 1.59 times fore wing and 1.2 times body.

Colour.— Yellowish-brown; stemmaticum, lateral lobes of mesoscutum, temple dorsally, hind basitarsus dorsally (except apically), and hind telotarsus dorsally black(ish); bases of tibiae, apices of tibiae dorsally, fore and middle tarsi, teeth on outer side of hind tibia, and vein C+SC+R of fore wing dark brown; remainder of hind tarsus whitish; apex of 14th, 15th-23rd antennal segments whitish, remainder of antenna blackish (but scapus and pedicellus, 3rd-7th segments dark brown or yellowish ventrally); wing membrane slightly and evenly infuscate; veins largely brown; tegulae yellowish; outer side of maxillary palp, body dorsally and hind trochantellus somewhat darkened; pterostigma yellowish-brown with its borders infuscate.

Variation.— Antennal segments 46(3); length of fore wing 5.6-6.0 mm, of body 7.0-7.7mm, 15th-22nd or -23rd antennal segments whitish; length of first tergite 2.2-2.4 times its apical width; length of ovipositor sheath 1.59-1.62 times fore wing.

Remarks.— This species has an interesting combination of characters: the posterior margin of the hind wing is concave and vein cu-a of hind wing is strongly reclivous, which fits with the genus *Orgilonia* van Achterberg. However, vein M+CU of hind wing and the palpi are much longer and the prepectal carina is reduced. It is close to the type species of the subgenus *Afrorgilus* van Achterberg, 1987 of the genus *Orgilus* Haliday in several aspects: the long vein M+CU of the hind wing combined with the strongly reclivous vein cu-a of hind wing, and the reduced prepectal carina. It is not included in the latter subgenus because of the distinctly developed occipital carina, the long maxillary palp and the comparatively long vein 1r-m of the hind wing.

It is closely related to *Orgilus westermanni* (Enderlein, 1912) from Guinea (for the redescription see, van Achterberg, 1987). However, this species has the 12th-16th segments of the antenna whitish, vein C+SC+R of fore wing yellowish, the fifth and sixth tergites with fine striae, prepectal carina present laterally, and length of ovipositor sheath about 1.4 times fore wing. *O. reclinatus* is very similar to *O. alboannulatus*, but differs mainly by the absence of dark brown parts of the body and hind leg, and by the less coarsely punctate vertex.

Orgilus (*Orgilus*) *brevicaudatus* van Achterberg, spec. nov.
(figs 25-27)

Material.— Holotype, ♀ (RMNH), "S. Uganda, Kibale Forest (border), Kanyawara, Mal. trap, 10.viii-10.ix.1996, J.J.M. van Alphen, RMNH'96". Paratypes, 2 ♀♀ (RMNH), topotypic, and same period.

Holotype, ♀, length of body 4.3 mm, of fore wing 3.9 mm.

Head.— Antennal segments 40, length of antenna 1.5 times fore wing, length of third segment 1.3 times fourth, length of third, fourth and penultimate segments 4.6,

3.6 and 1.3 times their maximum width, respectively (fig. 27); length of maxillary palp 2.1 times height of head, reaching base of hind coxa; eyes glabrous; in dorsal view length of eyes 6.0 times temple; temple directly narrowed posteriorly, finely coriaceous; OOL:diameter of ocellus:POL = 10:5:6; frons and vertex finely punctulate-coriaceous; face weakly convex in lateral view, punctate-coriaceous; clypeus rather convex in lateral view, sparsely punctate, shiny; length of malar space 0.9 times basal width of mandible; malar suture absent; occipital carina present up to level of dorsal half of eye; occipital flange narrow, thin.

Mesosoma.— Length of mesosoma 1.5 times its maximum height; side of pronotum granulate, but punctulate-granulate dorsally, without convexity antero-sublaterally; prepectal carina complete, comparatively strong; pronope shallow, small and round; surface of mesopleuron, and mesosternum granulate; mesoscutum punctulate-coriaceous; metapleuron convex, granulate; scutellum finely punctate-coriaceous; precoxal sulcus shallowly impressed, only with some obsolescent crenulae; notauli indistinct posteriorly, ending in a slightly concave area, narrow and finely crenulate; area beside scutellar sulcus distinctly convex and only coriaceous; scutellar sulcus finely crenulate; propodeum rather convex in lateral view, with weak protuberance behind spiracle, its surface finely granulate; medio-longitudinal carina of propodeum absent, but area somewhat longitudinally protruding anteriorly; metapleural flange rather wide, thin and rounded.

Wings (fig. 25).— Fore wing: r:SR1+3-SR:2-SR = 10:101:24; subbasal cell normally setose; cu-a shortly postfurcal, inclivous, parallel to 3-CU1; 2-M absent. Hind wing: normally setose basally; M+CU:1-M = 20:15; 1r-m shorter than 2-SC+R (fig. 25).

Legs.— Hind coxa finely granulate, with some transverse striae apically; hind tibia strongly narrowed basally; length of femur, tibia and basitarsus of hind leg 5.1, 8.3, 7.5 times their maximal width, respectively; length of tibial spurs 0.2 and 0.3 times basitarsus; hind tibia with about 5 dark subapical teeth; middle tarsus very slender.

Metasoma.—- Length of the first tergite 1.7 times its maximal width, its surface coarsely granulate (fig. 26); second tergite 0.8 times as long as its basal width; second and third tergites coarsely punctate-rugose, and rather flat; second suture nearly straight, indistinctly crenulate; fourth tergite granulate; fifth tergite indistinctly granulate; sixth and seventh tergites largely smooth; ovipositor sheath 0.68 times fore wing and 0.6 times body; ovipositor weakly curved ventrad.

Colour.— Yellowish-brown dorsally, brownish-yellow laterally and ventrally; stemmaticum black; propodeum apically, first tergite medio-basally and medio-apically, second-fourth tergites largely, base of middle tibia, apex of hinf femur, hind tibia (except yellowish ventral stripe), hind tarsus, and veins (including C+SC+R) of fore wing more or less dark brown; apex of 12th, 13th-19th antennal segments whitish, remainder of antenna dark brown or blackish (but scapus and pedicellus yellow, except dar brown stripe on outer side); hind coxa apically and middle tarsus infuscate; tegulae yellowish; wing membrane evenly slightly infuscate; pterostigma largely brown, its borders infuscate.

Variation.— Antennal segments 40(1) or 43(1); length of fore wing 3.9-4.0 mm, of body 4.1-4.8 mm, tegulae may be darker brown than pale yellowish humeral plate; hind tibia and tarsus largely dark brown or brown; 13th-19th or 14th-20th antennal segments white.

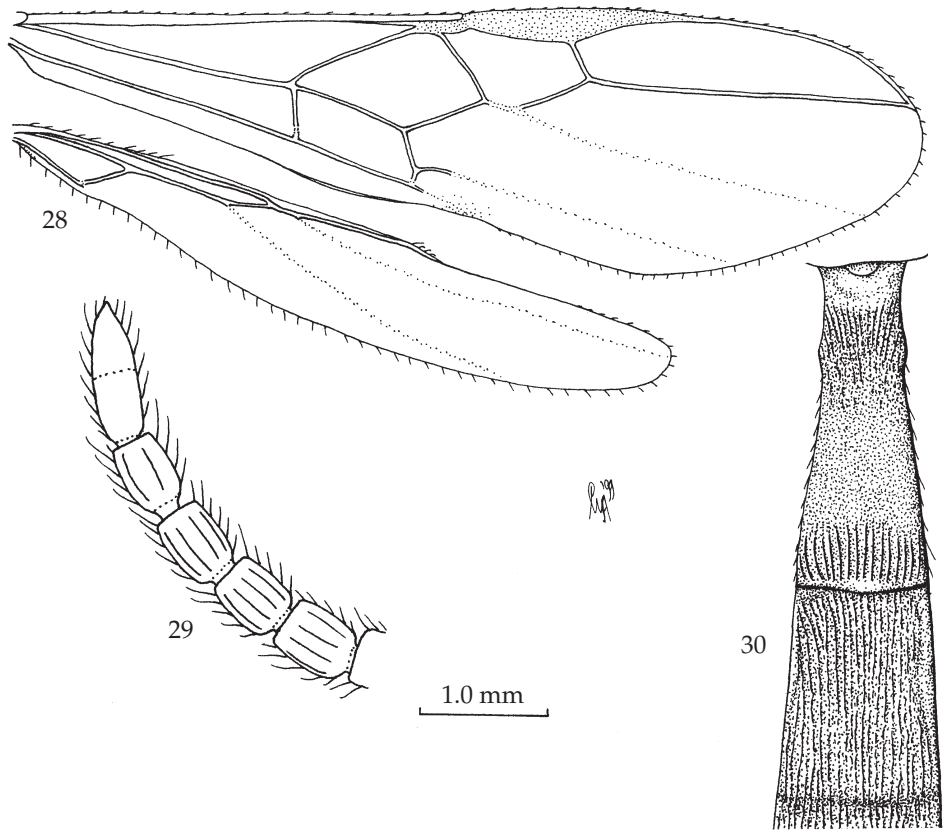
Remarks.— This species resembles *Orgilus cincticornis* Granger, 1949, and *O. infumatus* Granger, 1949, from Madagascar, but these species have the ovipositor sheath distinctly longer than the fore wing or body, and the mesoscutum, scutellum and mesopleuron black.

Orgilus (*Orgilus*) *reclinatus* Braet & van Achterberg, spec. nov.

Material.— Holotype, ♀ (MRAC), "Congo belge: Kivu, Rutshuru, 1285 m, 8.vii.1935, G.F. de Witte: 1613". Paratype, ♂ (MRAC), topotypic, but 2.ii.1935, no. 1685.

Holotype, ♀, length of body 6.6 mm, of fore wing 5.5 mm.

Head.— Antennal segments 47, length of third segment 1.3 times fourth, length of third, fourth and penultimate segments 5.0, 3.8 and 1.7 times their maximum width, respectively; length of maxillary palp 2.4 times height of head; eyes glabrous; in dorsal view length of eyes 4.2 times temple; temple directly narrowed posteriorly, punctate-coriaceous; OOL:diameter of ocellus:POL = 11:5:5; frons and vertex punctate-coriaceous; face weakly convex in lateral view, punctate-coriaceous; clypeus convex



Figs 28-30, *Orgilus alboannulatus* spec. nov., ♀, holotype. 28, wings; 29, apex of antenna; 30, first and second metasomal tergites, dorsal aspect. 28: scale-line (= 1.0 ×); 29: 5.4 ×; 30: 1.8 ×.

in lateral view, sparsely punctate, shiny; length of malar space 0.8 times basal width of mandible; malar suture absent; occipital carina present up to level of dorsal third of eye; occipital flange medium-sized, rounded posteriorly.

Mesosoma.— Length of mesosoma 1.7 times its maximum height; side of pronotum coriaceous, witha convexity antero-laterally; prepectal carina largely absent laterally, weak ventrally; pronope present but small and round; surface of mesopleuron, mesosternum, and mesoscutum punctate-coriaceous; metapleuron finely granulate; scutellum only finely punctate; precoxal sulcus shallowly impressed, only with some obsolescent crenulae; notauli narrow and finely crenulate; scutelar sulcus finely crenulate; propodeum rather convex in lateral view, its surface finely granulate; medio-longitudinal carina of propodeum absent; metapleural flange narrow, thin and rounded.

Wings.— Fore wing: r:SR1+3-SR:2-SR = 10:85:23; subbasal cell setose anteriorly; cu-a interstitial, inclivous, parallel to 3-CU1. Hind wing: largely sparsely setose basally; M+CU:1-M = 30:24.

Legs.— Hind coxa finely granulate; length of femur, tibia and basitarsus of hind leg 4.3, 10.7, 8.8 times their maximal width, respectively; length of tibial spurs 0.30 and 0.45 times basitarsus; hind tibia with about 20 apical teeth; middle tarsus very slender.

Metasoma.—- Length of the first tergite 2.3 times its maximal width, its surface granulate, with fine striae medially and some costulae medio-apically; second tergite 1.3 times as long as its basal width; second and third tergites coarsely longitudinally rugose, and rather convex (only apex of third tergite narrowly smooth); second suture, straight, strongly crenulate and distinct; fourth tergite rugulose; fifth tergite indistinctly rugulose, sixth and seventh tergites largely smooth; ovipositor sheath 1.60 times fore wing and 1.3 times body.

Colour.— Yellowish-brown. Stemmaticum black; outer stripe of scapus, outer side of pedicellus, and vein C+SC+R of fore wing dark brown; bases of tibiae, apex of hind tibia, and middle tarsus slightly infuscate; hind tarsus pale yellowish, but base of basitarsus brownish and telotarsus largely dark brown dorsally; 15th-23rd antennal segments whitish, remainder of antenna dark brown (but rather pale brown basally); wing membrane subhyaline; veins and pterostigma largely brown.

Male.— Similar to the female; length of fore wing 4.5 mm, of body 4.8 mm, 14th-21st antennal segments whitish, 13th and 22nd segments brown; vein cu-a of fore wing distinctly antefurcal.

Remarks.— This species is closely related to *O. alboannulatus*, it differs mainly by the absence of dark brown parts of the body and hind leg, and by the less coarsely punctate vertex. *O. reclinatus* is similar to *Orgilus westermanni* (Enderlein, 1912) from Guinea (for the redescription see, van Achterberg, 1987). However, this species has the 12th-16th segments of the antenna whitish, vein C+SC+R of fore wing yellowish, apex of hind tibia, and base and apex of hind basitarsus more or less infuscate, the apical half of fourth tergite, fifth and sixth tergites with fine striae, prepectal carina present laterally, and length of ovipositor sheath about 1.4 times fore wing.

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The following abbreviations are used for the depositories: AEI: American Entomological Institute, Gainesville, Florida, USA; MRAC: Musée Royal de l'Afrique Centrale, Tervuren, Belgium, RMNH: Nationaal Natuurhistorisch Museum, Leiden, Netherlands; and ZUH: Zhejiang University, Hangzhou, China.

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