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NOTES ON THE *ODONTOSCAPUS VARISTIGMA*-GROUP (HYMENOPTERA: BRACONIDAE)

by

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Key words; Braconidae; Braconinae; *Odontoscapus*; key; Afrotropical.

The type-species of the genus *Odontoscapus* Kriechbaumer, 1894 (Braconidae: Braconinae) from Mozambique, *O. calviniae* (Cameron, 1906) from South Africa, and two closely related new species are described and illustrated: *O. similistigma* spec. nov. and *O. brevifacialis* spec. nov., both from Tanzania.

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INTRODUCTION

The genus *Odontoscapus* sensu stricto is a rather small genus with about ten described species from the Afrotropical and South Palaearctic regions. The related species from the Indo-Australian region included in the genus *Diamblomerina* Enderlein, 1920 lack the enclosed depressed area of the face (Quicke, 1987: 124), which is more (fig. 29) or less (fig. 36) distinct in *Odontoscapus*. Therefore *Diamblomerina* may be treated as a genus separate from *Odontoscapus*. The other two very closely related genera (both Indo-Australian) with similarly shaped body are *Blastomorpha* Szépligeti, 1900 (stat. nov.) and *Chaoilta* Cameron, 1899, but both have a facial protuberance.

Odontoscapus Kriechbaumer, 1894 s.s. (with two synonyms: *Doryctocephalus* Cameron, 1909 (vein 1-M of fore wing slightly curved to wing base) and *Antiolcia* Enderlein, 1920 (with medio-basal area of second metasomal tergite present) may be characterized as follows: Body more or less

depressed (figs. 1, 17), with scutellum (nearly) at same level as propodeum (fig. 17). Scapus angularly protruding subbasally (fig. 4), its apical ledge composed of two distinct regions, a large ventral to lateral crescent (fig. 4) and a smaller one sited at apex of the medial prominence (fig. 19), ventrally longer than dorsally; pedicellus petiolate with specialized flattened area subapically (fig. 4); face without lamella, only protruding dorsally and area below it depressed (figs. 1, 8, 17, 29). Antescutal depression absent (fig. 1) or present (fig. 17); notauli absent or obsolescent (figs. 12, 33); posterior margin of mesopleuron sinuate (fig. 17). Vein cu-a of fore wing interstitial with vein 1-M; vein 1-SR + M of fore wing straight or nearly so, at most slightly curved posteriorly and not parallel to vein 1 + 2-CU1; maximum width of pterostigma about twice length of vein r of fore wing (figs. 3, 22); vein CU1b of fore wing slender; angle between veins 1-SR and C + SC + R 40°-60° (figs. 11, 21) and 1-SR not continuous with vein 1-M; hind wing with one renal seta (= erect bristle on vein C + SC + R); vein 1 r-m of hind wing shorter than vein SC + R1. Fourth segment of hind tarsus with very long bristles, (almost) reaching apex of telotarsus ventrally, at least up to basal 0.75 of telotarsus (figs. 9, 31); apex of fore tibia with transverse row of thickened bristles; middle femur with distinct lobe apico-laterally; length of fore tarsus 1.7-2.0 times fore tibia. Lateral flattened areas of first metasomal tergite very wide (fig. 16), and dorso-lateral carinae at about same level as middle part of tergite (fig. 17), or absent; second tergite often produced into a tooth postero-laterally; ovipositor normal, with pre-apical nodus dorsally and with small teeth ventrally. The biology of *Odontoscapus* spp. is unknown; species of related genera are known to be ectoparasites of Coleopterous larvae boring in dead trees (especially, Cerambycidae and Buprestidae).

The recent discovery of the type of *Odontoscapus varistigma* Kriechbaumer, 1894, the type-species of the genus *Odontoscapus* Kriechbaumer, 1894, revealed that the series of three females of *O. varistigma* in the Berlin Museum (det. G. Szépligeti) consisted of two species different from the real *varistigma*. All three species key out in Fahringer's key (1928: 103-105) to *O. varistigma* and are treated as a species-group. The group may be recognized with the following combination of characters: second metasomal tergite more or less protruding postero-laterally, meso- and metasoma completely yellowish-brown, hind leg partly dark brown or blackish, length of fore wing 10-12 mm, pronotum curved under ventro-posteriorly, hind tibia normally cylindrical basally, second metasomal tergite without medio-basal area, and length of ovipositor sheath about 0.9 times length of fore wing (about as long as body; figs. 1, 7).

For the terminology used in this paper, see Van Achterberg (1979: 242-249).

Key to species of the *Odontoscapus varistigma*-group

1. Antescutal depression absent (figs. 1, 13); membrane of hind wing with large subhyaline patch basally (fig. 3); dorso-lateral carinae of first tergite indistinct (fig. 1); angle between veins 1-SR and C + SC + R of fore wing about 45°-60° (fig. 11) 2
- Antescutal depression present (figs. 17, 26, 37); membrane of hind wing largely brown(ish) basally (fig. 22); dorso-lateral carinae of first tergite distinct posteriorly (fig. 17); angle between veins 1-SR and C + SC + R of fore wing about 55°-75° (figs. 21, 27, 38) 3
2. Vein 1r-m of hind wing straight or nearly so (fig. 3); scutellum at same level as propodeum (fig. 1); postero-lateral corners of first metasomal tergite smooth (fig. 16); medio-posterior area of propodeum smooth (fig. 12); angle between veins 1-SR and C + SC + R of fore wing about 45° (fig. 11) *varistigma* Kriechbaumer
- Vein 1r-m of hind wing distinctly curved (fig. 42); scutellum protruding above propodeum (fig. 41); postero-lateral corners of first tergite largely rugose; propodeum striate medio-posteriorly; angle between veins 1-SR and C + SC + R of fore wing about 60° (fig. 40) .. *calviniae* (Cameron)
3. Face deeply impressed and comparatively transverse (fig. 36); anteriorly mesonotum higher than pronotum at same level (fig. 37); notauli absent; scutellum elevated above level of propodeum (fig. 39); temples of ♀ somewhat shorter (fig. 35) *brevifacialis* spec. nov.
- Face shallowly impressed and less transverse (fig. 29); anteriorly mesonotum low, about as high as pronotum at same level (fig. 17); notauli shallowly impressed (figs. 17, 33); scutellum at same level as propodeum in profile (fig. 17); temples of ♀ somewhat longer (fig. 30) *similistigma* spec. nov.

DESCRIPTIONS

***Odontoscapus varistigma* Kriechbaumer**
(figs. 1-16)

Odontoscapus varistigma Kriechbaumer, 1894: 154.

Odontoscapus varistigma; Fahringer, 1928: 105, 109-110.

Material. — Holotype, ♀, (Gribodo Collection, Bologna): “16/47”, “Ex Inhambane Mozambici misit (?) Eq. Formaginis (?) 1850”, “*Odontoscapus varistigma* Kriechb., ♀, Typus”.

Holotype, ♀, length of body 13.1 mm, of fore wing 10.3 mm.

Head. — Antennal segments 51, length of third segment 1.1 times fourth segment, length of third, fourth and penultimate segments 1.6, 1.5, and 0.7 times their width (figs. 1, 2, 4); scapus deeply emarginate (figs. 4, 5); length of maxillary palp 0.7 times height of head; length of eye in dorsal view 1.2 times length of temple (fig. 15); frons smooth; POL : diameter of ocellus : POL = 5 : 2 : 10; face depressed and finely rugulose-striate medially, laterally weakly convex and sparsely punctate, somewhat porching over facial depression dorsally (figs. 1, 8); clypeus flat, with weak submedial transverse carina (fig. 8); length of malar space 0.8 times base of mandible.

Mesosoma. — Length of mesosoma 3 times its height; antescutal depression absent (fig. 13); mesonotum low (fig. 1); scutellum at same level as propodeum (fig. 1); pleural sulcus largely absent (fig. 1); metapleuron and propodeum with long setae (figs. 1, 12); notauli completely absent (fig. 12), only with indistinct depression medially and some setae; propodeal setae pale.

Wings. — Fore wing: angle between 1-SR and C + SC + R 44° (fig. 11); r : 3-SR : SR1 = 3 : 20 : 27; 2-SR : 3-SR : r-m = 9 : 20 : 8. Hind wing: largely glabrous basally (fig. 14); 1r-m straight or nearly so (fig. 3).

Legs. — Setae very long (fig. 10); length of femur, tibia and basitarsus of hind leg 3.4, 8.6 and 6 times their width, respectively; length of hind tibial spurs both 0.3 times hind basitarsus; length of fore tarsus 1.7 times fore tibia.

Metasoma. — Length of first tergite 0.7 times its apical width, strongly flattened, its surface smooth except the medial striated area; medial area not elevated above lateral part of tergite, and dorso-lateral carinae indistinct (figs. 1, 16); second tergite with small smooth antero-lateral areas, with obsolescent oblique depression below it, with pair of diverging antero-lateral grooves, and area between coarsely longitudinally costate (fig. 16); second suture crenulate; third-fifth tergites costate, with shallow, incomplete antero-lateral grooves, smooth posteriorly and with rather shallow transverse crenulate groove subposteriorly (fig. 1); second-fifth segments with sharp lateral crease; length of ovipositor 0.93 times fore wing.

Colour. — Brownish-yellow; antenna, frons, and vertex (including stemmaticum) with triangular patch pointed posteriorly, ovipositor sheath, middle telotarsus, hind tibia (except narrow basal part) and hind tarsus black(ish); apex of parastigma and basal 0.6 of pterostigma yellow; remainder of pterostigma dark brown; wing membrane dark brown but subhyaline near vein r-m, below pterostigma and large patch near base of hind wing subhyaline (fig. 3).

Odontoscapus similistigma spec. nov.
(figs. 17-34)

Material. — Holotype, ♀, (Zoologisches Museum Berlin): “Nyassa-See [= Tanzania], Langenburg, 1-26.VII.98, Fülleborn S.”, “Odontoscap. varistigma Kr.” (in Szépligeti’s handwriting). Paratype, 1 ♀, (Rijksmuseum van Natuurlijke Historie, Leiden): “D.O. Afrika [= Tanzania], Digital, 15.12.05, Schröder S.”.

Holotype, ♀, length of body 11.0 mm, of fore wing 10.1 mm.

Head. — Antennal segments 51, length of third segment 1.3 times fourth segment, length of third, fourth and penultimate segments 2.0, 1.6 and 0.7 times their width, respectively (figs. 18, 19, 24); scapus deeply emarginate (figs. 19, 28); length of maxillary palp 0.7 times height of head; length of eye in dorsal view 1.1 times length of temple (fig. 30); frons smooth, except a row of punctures laterally (fig. 30); POL : diameter of ocellus : OOL = 8 : 5 : 18; face largely flat, but dorsal quarter distinctly porching over flat part (figs. 17, 29); clypeus flat and smooth (fig. 29); length of malar space 0.5 times basal width of mandible.

Mesosoma. — Length of mesosoma 2.6 times its height; antescutal depression deep (figs. 17, 26); anteriorly mesonotum low, about as high as height of pronotum at same level (fig. 17); pleural sulcus narrow, smooth (fig. 17); notauli shallowly impressed (figs. 17, 33).

Wings. — Fore wing: angle between 1-SR and C + SC + R 74° (fig. 27); r : 3-SR : SR1 = 4 : 22 : 30; 2-SR : 3-SR : r-m = 10 : 22 : 11. Hind wing: near cu-a with glabrous patch; 1r-m straight.

Legs. — Setae long (fig. 32); length of femur, tibia and basitarsus of hind leg 3.6, 8.0 and 5.1 times their width, respectively; length of hind tibial spurs 0.30 and 0.35 times hind basitarusus; length of fore tarsus 1.7 times fore tibia.

Metasoma. — Length of first tergite 0.8 times its apical width, flattened, but medial part slightly above lateral parts in lateral view, medial area coarsely rugose-striate, and dorso-lateral carinae distinct (fig. 17); second-fifth tergites similar to *varistigma* (figs. 17, 34); length of ovipositor sheath 0.86 times fore wing.

Colour. — Yellowish-brown; antenna, frons, stemmaticum, medial triangular area of vertex and ovipositor sheath black; hind tibia and tarsus, telotarsi, apical 0.4 of pterostigma and veins dark brown; remnant of pterostigma and apex of parastigma yellow; wing membrane dark brown, except for a subhyaline patch below base of pterostigma and near vein r-m of fore wing (fig. 22).

Variation. — Paratype: length of body 10.2 mm, of fore wing 9.2 mm; antennal segments 49; angle between veins 1-SR and C + SC + R 57° (fig. 21); length of mesosoma 3 times its height; marginal cell of hind wing more strongly narrowed apically than figured. Further as holotype.

Odontoscapus brevifacialis spec. nov.
(figs. 35-39)

Material. — Holotype, ♀, (Zoologisches Museum Berlin): “N.O. Nyassa See [= Tanzania], Tarumbira, Dr. Buneillar S., 22.10.93”.

Holotype, ♀, length of body 13.3 mm, of fore wing 12.1 mm.

Very similar to *O. similistigma* but differs as follows: head more robust (fig. 35); antennal segments 55, length of third segment 1.2 times fourth segment, third and fourth segments 3.2 and 2.6 times their width, respectively; length of eye in dorsal view 1.2 times temple (fig. 35), somewhat shorter than *similistigma*; clypeus indistinct (fig. 36); face wider, comparatively transverse and deeply impressed (fig. 36); maximum height of mesoscutum anteriorly more than that of pronotum at same level (fig. 37); antescutal depression narrow (fig. 37); scutellum elevated above level of propodeum (fig. 39); angle between veins 1-SR and C + SC + R 57° (fig. 38); dorso-lateral carinae of first metasomal tergite moderately developed; length of ovipositor sheath 0.91 times fore wing.

Odontoscapus calviniae (Cameron)
(figs. 40-42)

Iphiaulax calviniae Cameron, 1906: 53.
Platybracon calviniae; Fahringer, 1928: 112-113.
Odontoscapus calviniae; Brues, 1926: 354.

Material. — Holotype, ♀, (South African Museum, Cape Town): “Calvinia” [Cape Province, South Africa], “Iphiaulax calviniae Cam., Type, Calvinia” (in Cameron’s handwriting).

Holotype, ♀, length of body 10.0 mm, of fore wing 9.7 mm.

Very similar to *O. varistigma* from Mozambique, but the holotype of *calviniae* has the notauli shallowly impressed, scutellum protruding above propodeum (fig. 41), postero-lateral corners of first metasomal tergite largely rugose, vein 1r-m of hind wing distinctly curved (fig. 42), angle between veins 1-SR and C + SC + R of fore wing 62° (fig. 40); propodeum striate medio-

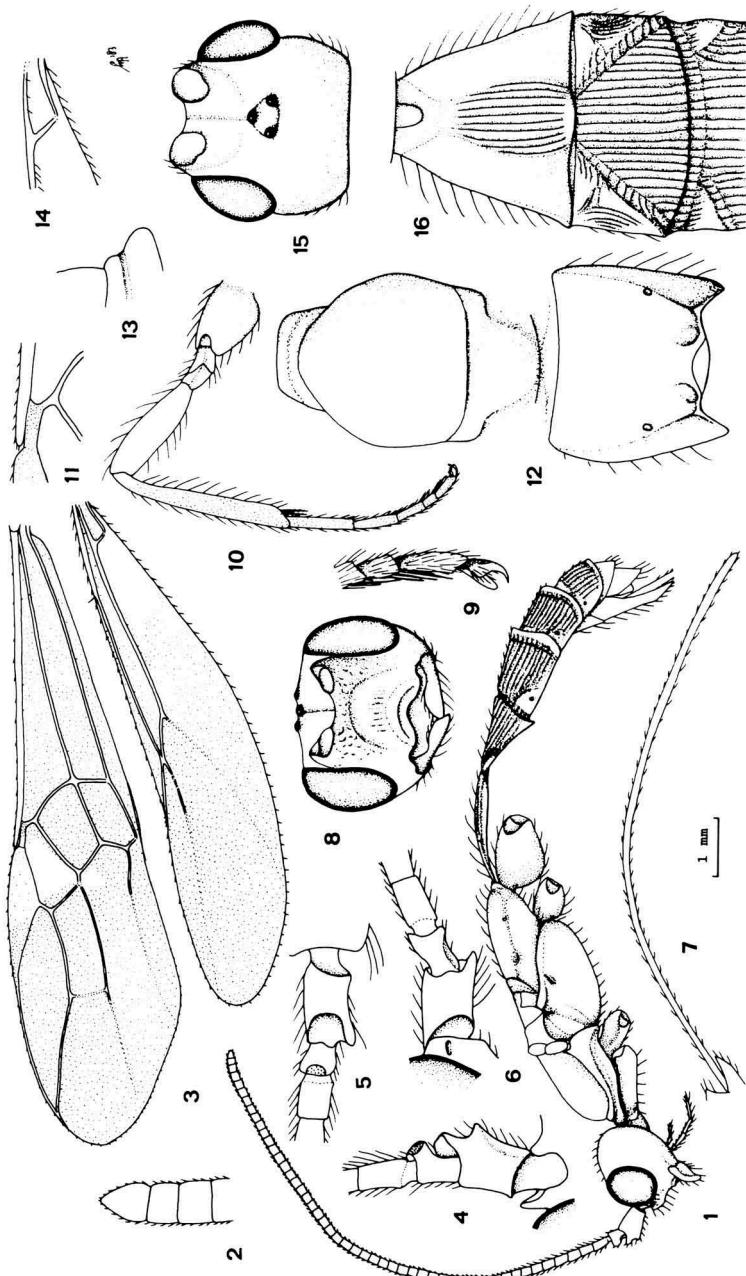
posteriorly, length of fore tarsus 1.6 times fore tibia and second tergite not distinctly protruding postero-laterally (but difficult to observe because of deformation of metasoma). Length of ovipositor sheath 0.90 times fore wing, length of eye in dorsal view 1.1 times temple and antennal segments 51.

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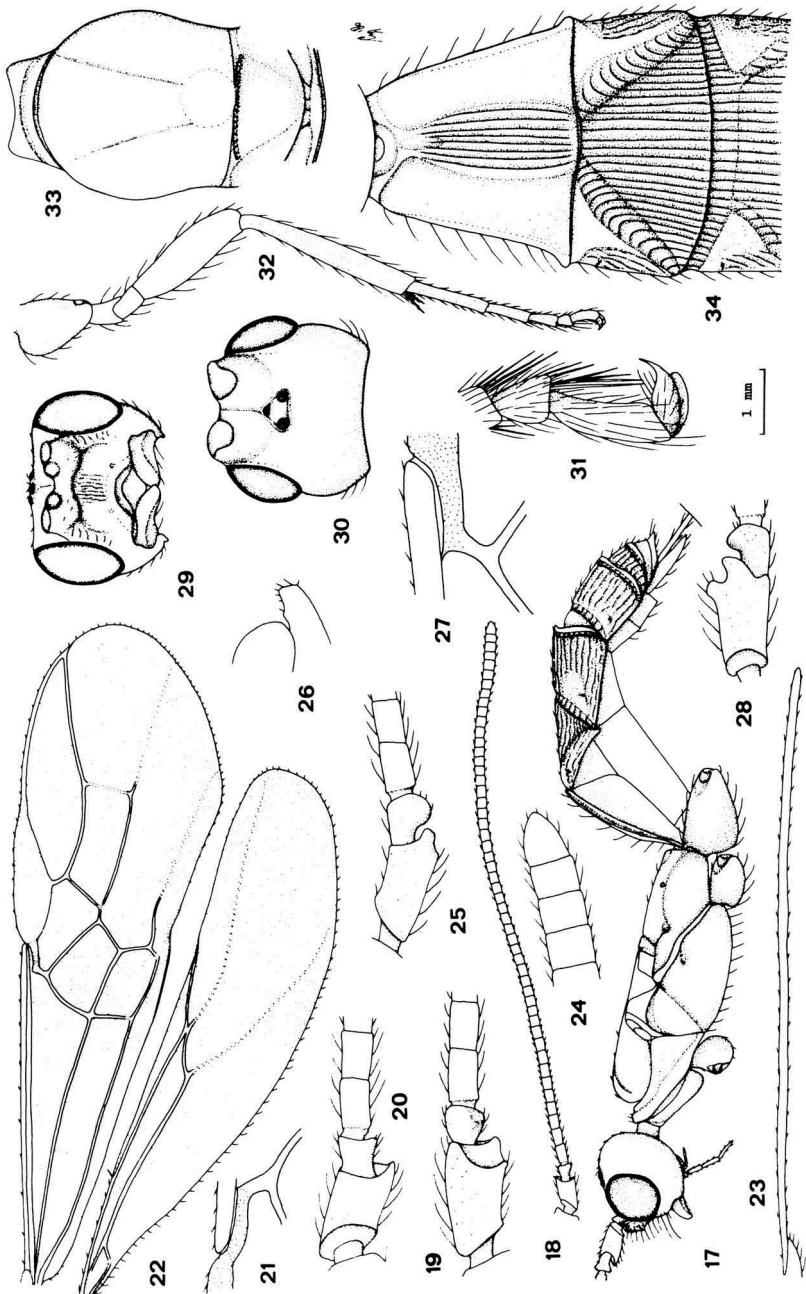
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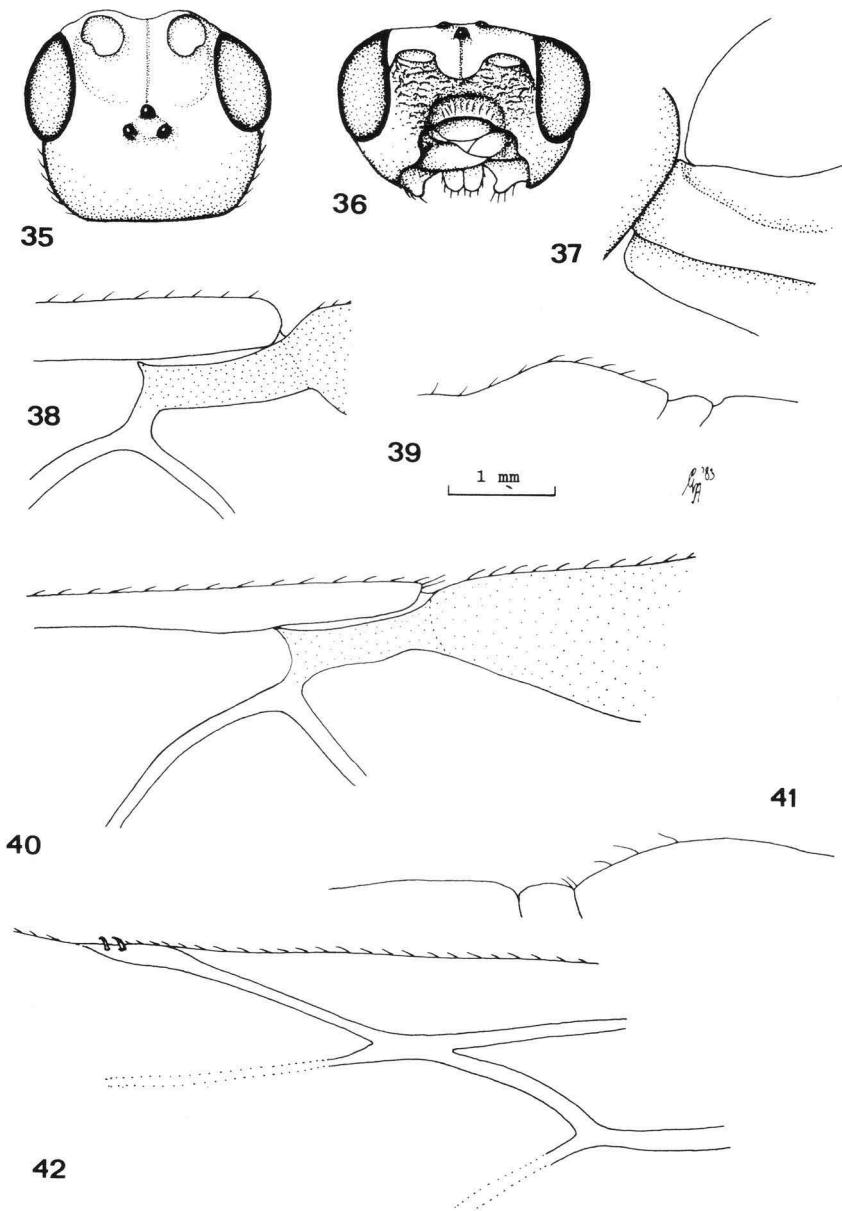
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Figs. 1-16, *Odontoscapus varistigma* Kriechbaumer, ♀, holotype. 1, habitus, lateral aspect; 2, apex of antenna; 3, wings; 4, left scapus and pedicellus, anterior aspect; 5, id., inner aspect; 6, id., outer aspect; 7, ovipositor; 8, head, frontal aspect; 9, hind claw; 10, hind leg; 11, detail of vein 1-SR of fore wing; 12, mesosoma, dorsal aspect; 13, anterior part of pronotum, lateral aspect; 14, base of hind wing; 15, head, dorsal aspect; 16, first and second metasomal tergites, dorsal aspect. 1, 3, 7, 10: scale-line (= 1×); 2: 5×; 4-6, 9, 13: 3×; 8, 15: 1.9×; 12, 16: 1.4×; 11, 14: 2×.



Figs. 17-34, *Odontoscapus similistigma* spec. nov., ♀, holotype, but 21 of paratype. 17, habitus, lateral aspect; 18, antenna; 19, left scapus and pedicellus, inner aspect; 20, id., outer aspect; 21, 27, detail of vein 1-SR of fore wing; 22, wings; 23, ovipositor; 24, apex of antenna; 25, scapus and pedicellus, dorsal aspect; 26, anterior part of pronotum, lateral aspect; 28, scapus and pedicellus, ventro-lateral aspect; 29, head, frontal aspect; 30, head, dorsal aspect; 31, hind claw; 32, hind leg; 33, thorax, dorsal aspect; 34, first and second metasomal tergites, dorsal aspect. 17, 18, 22, 23, 32: scale-line (= 1×); 19, 20, 25, 28: 3.2×; 21: 3.3×; 24, 31: 5×; 26, 29, 30, 33, 34: 2×; 27: 4.3×.



Figs. 35-39, *Odontoscapus brevifacialis* spec. nov., ♀, holotype. Figs. 40-42, *Odontoscapus calviniae* (Cameron), ♀, holotype. 35, head, dorsal aspect; 36, head, frontal aspect; 37, anterior part of pronotum, lateral aspect; 38-40, detail of vein 1-SR of fore wing; 39, 41, scutellum, lateral aspect; 42, detail of vein 1-r-m of hind wing. 35, 36: scale-line (= 1×); 37, 39: 2.5×; 38: 3×; 40-42: 3.3×.