Pronkia, a new genus of the Meteorideinae (Hymenoptera: Braconidae) from New Zealand

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A new genus of the subfamily Meteorideinae Čapek, 1970 (type-species: *Pronkia antefurcalis* spec. nov.) is described from New Zealand. The genus is included into the Pronkiini trib. nov. A key to separate the two known genera of Meteorideinae is added.

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Introduction

The small subfamily Meteorideinae Čapek, 1970 (Hymenoptera: Braconidae) has contained up to now only one genus, *Meteoridea* Ashmead, 1900 (with *Benama* Nixon, 1946 as its only synonym). *Meteoridea* is a small genus and is known from the Nearctic (two species), Neotropical (at least one unnamed species (RMNH)), East Palaearctic (one species), Oriental (one species: figs. 13-24), and Afrotropical (two species, and one unnamed species (RMNH, Paris Museum)) regions (Shenefelt, 1970). From the Australian region Meteorideinae remained unknown, until I found a specimen of an aberrant species from New Zealand, which can only be fitted in the Meteorideinae of the known subfamilies, although it is far less derived in many respects. E.g., it lacks the enlarged third metasomal sternite and the highly derived genitalia of the female. The new genus shows interesting features, which link it with the Agathidinae Nees, 1814 and Sigalphinae Blanchard, 1845. With the Agathidinae it shares the presence of the vein 2-CU of hind wing, the vein m-cu of the fore wing is slightly diverging posteriorly (fig. 1), the dorsope is absent, the vein 1-SR of the fore wing is subvertical, the pronope and subpronope are present (figs. 6, 11), and the vein M+CU1 of the fore wing is largely unsclerotized. It shares with the Sigalphinae the presence of vein 2-CU of hind wing, the absence of dorsope, and the presence of the posterior depression of the scutellum (fig. 6).

The new genus differs from the Agathidinae by the normal elongated marginal cell of the fore wing, the comparatively large submarginal cell of the fore wing (fig. 1), the presence of the vein CU1b of the fore wing, and the hind tibia without pegs apically. From the Pselaphaninae van Achterberg, 1985 (sister group of the Agathidinae: Quicke & van Achterberg, 1990) it differs by the normal shape of the second submarginal and first subdiscal cells of the fore wing, the straight vein SR1 of the fore wing, the slender and long ovipositor sheath, the frons without carinae, the absence of dorsal carinae of the first metasomal tergite, the presence of the transverse depression of scutellum, the convex ventral margin of the clypeus, the presence of the prepectal carina, the slender hind tibial spurs, and the obsolescent second metasomal suture. The new genus differs from the Sigalphinae by having the fourth-sev-

enth tergites not retracted below the third tergite, the marginal cell of the fore wing less retracted, the vein M+CU1 of the fore wing not sclerotized, the ovipositor sheath long and slender, vein 1-SR of the fore wing vertical, the first discal cell of the fore wing comparatively small, and the absence of dorsal carinae of the first metasomal tergite. The new genus differs from both the Sigalphinae and Agathidinae lineages by the submedially situated valvillus of the ovipositor.

The new genus is included in the subfamily Meteorideinae because the subpronope is shallow (absent in *Meteoridea*; fig. 22); the marginal cell of the fore wing is comparatively long (figs. 1, 13); the dorsal carinae of the first metasomal tergite are absent or indistinct (figs. 7, 21); and the vein 1-SR of the fore wing is subvertical (fig. 1) or absent (fig. 13). On these characters the new genus fits better in the Meteorideinae than in any of the other subfamilies mentioned above, despite its lack of both an enlarged third metasomal sternite (fig. 16) and highly specialized female genitalia. Unfortunately only the reduced dorsal carinae seem to be a synapomorphy of the new genus with the Meteorideinae. The comparatively long and subvertical vein 1-SR of the fore wing is also present in the early Cretaceous Eoichneumonidae, the fossil sister group of the Braconidae (Rasnitsyn & Sharkey, 1988). The single and submedially situated valvillus on the lower ovipositor valve links the new genus (and, if it is considered a less derived member of the Meteorideinae also the subfamily) to the Blacinae and the Euphorinae (as suggested by van Achterberg, 1984 & 1988).

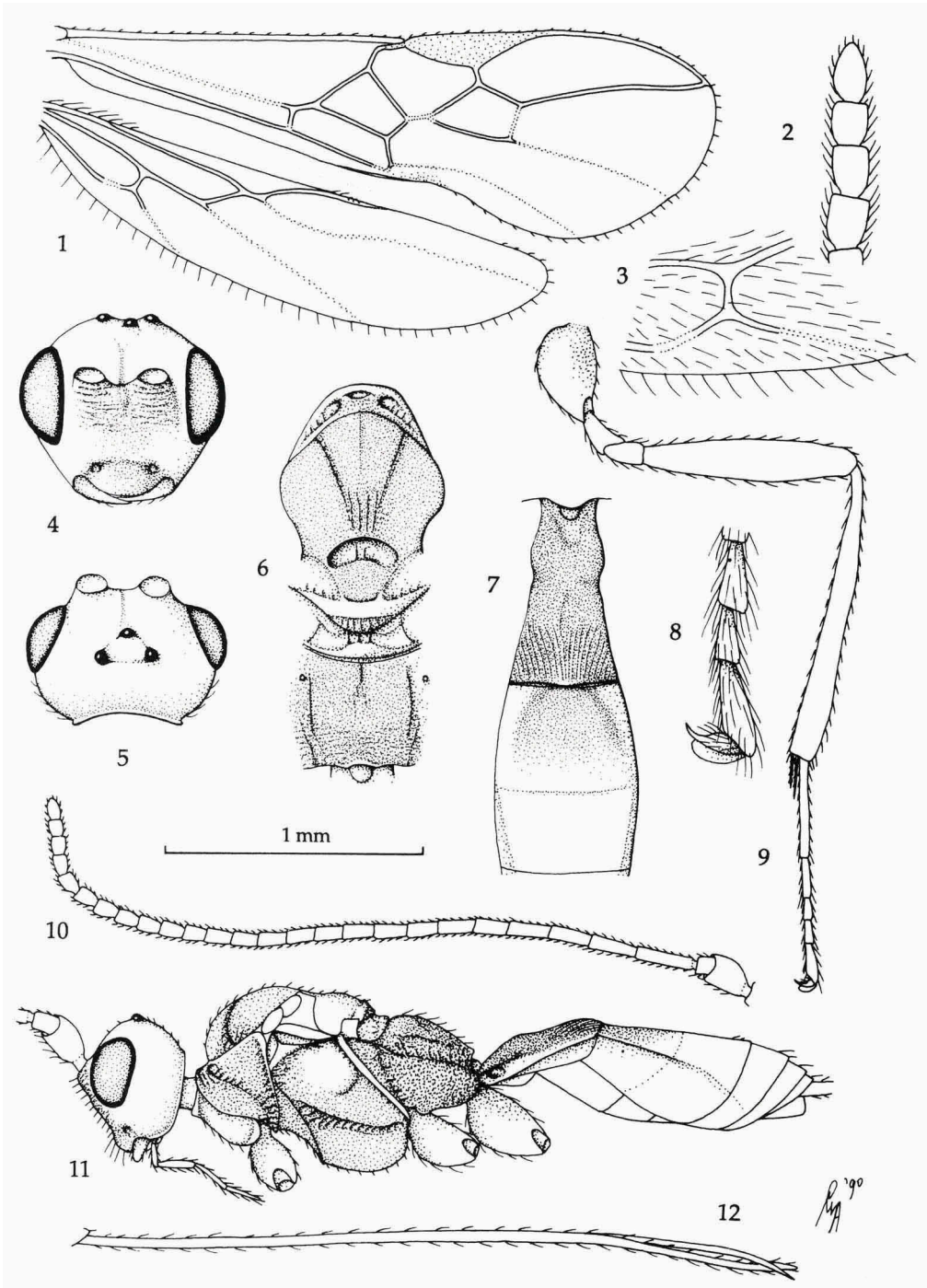
The presence of the vein 2-CU of the hind wing and having lepidopterous hosts may link the Meteorideinae with the Agathidinae. The supposed relationship with the Trachypetinae and Cercobarconinae is highly uncertain, because the supposed synapomorphies are largely unknown for the Trachypetinae and Cercobarconinae (Quicke & van Achterberg, 1990). In other words, the relationships of the Meteorideinae are still uncertain and, for reasons given in van Achterberg, 1984 & 1988, corroborated by the submedial position of the single valvillus, it seems at least as likely that the Meteorideinae are related to the Blacinae. This is also suggested in fig. 3 in Quicke & van Achterberg, 1990.

The host of the new genus is unknown, but the Meteorideinae are gregarious endoparasites of Gelechiidae, Tortricidae and Pyralidae (Shenefelt, 1970), with their final development in the pupal stage of the host. The genus *Meteoridea* may be facultative hyperparasitic, ovipositing into the larvae of Microgastrinae (Braconidae) between the short time they leave their host and making their cocoons. They develop as endoparasites in the microgastrine pupae and cocoons (Gosh & Abdirahiman, 1984; Shaw & Huddleston, in press).

For the terminology used in this paper, see van Achterberg, 1988 (p. 5-11). The abbreviation RMNH stands for the Nationaal Natuurhistorisch Museum, Leiden.

Key to the genera of the subfamily Meteorideinae

1. Vein 1-SR of fore wing long and subvertical (fig. 1), resulting in a petiolate first discal cell; vein r of fore wing short (fig. 1); vein M+CU1 of fore wing largely unsclerotized; scutellum with transverse subposterior depression and its medioposterior depression wide (fig. 6); third metasomal sternite medium-sized (fig. 11); fourth metasomal tergite of ♀ largely depressed (fig. 11); dorsope absent (fig.



Figs. 1-12, *Pronkia antefurcalis* gen. nov. & spec. nov., ♀, holotype. 1, wings; 2, apex of antenna; 3, detail of vein 2-CU of hind wing; 4, head, frontal aspect; 5, head, dorsal aspect; 6, mesosoma, dorsal aspect; 7, first-third metasomal tergites, dorsal aspect; 8, inner hind claw; 9, hind leg; 10, antenna; 11, habitus, lateral aspect; 12, ovipositor. 1, 9, 10-12: 1 × scale-line; 2, 3, 8: 2.5 ×; 4-7: 1.4 ×.

7); scapus large, ovoid and much wider than pedicellus (figs. 10, 11); vein m-cu of fore wing slightly diverging from vein 1-M posteriorly (fig. 1); marginal cell of hind wing slender (fig. 1); ovipositor sheath slender, long, and ovipositor normal (fig. 12); Australian region; (tribe Pronkiini nov.) ..... ***Pronkia*** gen. nov.

- Vein 1-SR of fore wing absent (fig, 13), resulting in a sessile first discal cell; vein r of fore wing long (fig. 13); vein M+CU1 of fore wing sclerotized; scutellum without (transverse) subposterior depression and its medio-posterior depression narrow (fig. 22); third metasomal sternite of ♀ enlarged (fig. 15); fourth metasomal tergite of ♀ strongly compressed (fig. 15); dorsope present (fig. 24); scapus comparatively small, cylindrical and slightly wider than pedicellus (fig. 16); vein m-cu of fore wing distinctly converging to vein 1-M posteriorly (fig. 13); marginal cell of hind wing comparatively robust (fig. 13); ovipositor sheath very wide and short, and ovipositor very specialized (fig. 15); cosmopolitan, except Australian region and W. Palaearctic subregion; (tribe Meteorideini Capek) ..... ***Meteoridea*** Ashmead

Descriptions

Pronkiini trib. nov.

Diagnosis.— Antennal segments about 27; apical segment without spine (fig. 2); scapus large, ovoid and much wider than pedicellus (figs. 10, 11); ventral margin of clypeus convex (fig. 4); eyes medium-sized (figs. 4, 5); malar suture absent; pronope and subpronope present (figs. 6, 11); anterior subalar depression with carina (fig. 11); scutellum with transverse subposterior depression and its medio-posterior depression wide (fig. 6); propodeal spiracle small, round, and situated in front of middle of propodeum; vein 1-SR of fore wing long and subvertical (fig. 1); vein r of fore wing short (fig. 1); vein M+CU1 of fore wing largely unsclerotized; tarsal claws without lobe (fig. 8); dorsope and dorsal carinae of first metasomal tergite absent (fig. 7); first tergite slightly constricted behind spiracles (fig. 7); second metasomal suture obsolescent (fig. 7); metasomal sternites normal (fig. 11); metasoma of ♀ rather depressed (fig. 11); ovipositor sheath slender and long (fig. 12); ovipositor normal with one valvillus submedially situated on the lower valve.

Distribution.— Australian region: one genus, *Pronkia* gen. nov.

Pronkia gen. nov.

Type-species: *Pronkia antefurcalis* spec. nov.

Etymology: named in honour of the ardent collector of Hymenoptera in the West Palaearctic and Indo-Australian regions, Mr Ph. Pronk (Leiden). Gender: feminine.

Diagnosis.— See diagnosis of the tribus Pronkiini nov.

Distribution.— Australian regions: New Zealand, and only the type-species known.

Pronkia antefurcalis spec. nov.
(figs. 1-12)

Material.— Holotype, ♀ (RMNH), "Museum Leiden, New Zealand, S. Island (Canterbury), Christchurch, 43°33'S-172°38'E", "betw. Thorington Road & Heathcote River, 6.ii.1976, Ph. Pronk (76 031)".

Holotype, ♀, length of body 2.7 mm, of fore wing 2.6 mm.

Head.— Antennal segments 27, length of third segment 1.3 times fourth segment, length of third, fourth and penultimate segments 4.5, 3.2 and 1.2 times their width, respectively (figs. 2, 10); length of maxillary palp about equal to height of head; length of eye in dorsal view 1.3 times temple (fig. 5); OOL:diameter of ocellus:POL = 11:5:13; frons smooth, slightly convex and with shallow median groove; vertex smooth; face dorsally rugulose, and remainder indistinctly granulate (fig. 5); length of malar space twice basal width of mandible.

Mesosoma.— Length of mesosoma 1.5 times its height; subpronope shallow (fig. 6); side of pronotum granulate, but anteriorly and posteriorly crenulate; mesosternal sulcus narrow and finely crenulate; precoxal sulcus complete, rugose and posteriorly narrow (fig. 11); remainder of mesopleuron granulate, except dorso-posteriorly; metapleuron rugose-granulate; metapleural flange small and carina-like (fig. 11); scutellar sulcus deep and curved, with two indistinct carinae; mesoscutal lobes and scutellum largely granulate and sparsely setose; median carina of metanotum short (fig. 6); surface of propodeum granulate anteriorly, and rugose laterally and posteriorly, its median carina short, without a distinct areola (figs. 6, 11).

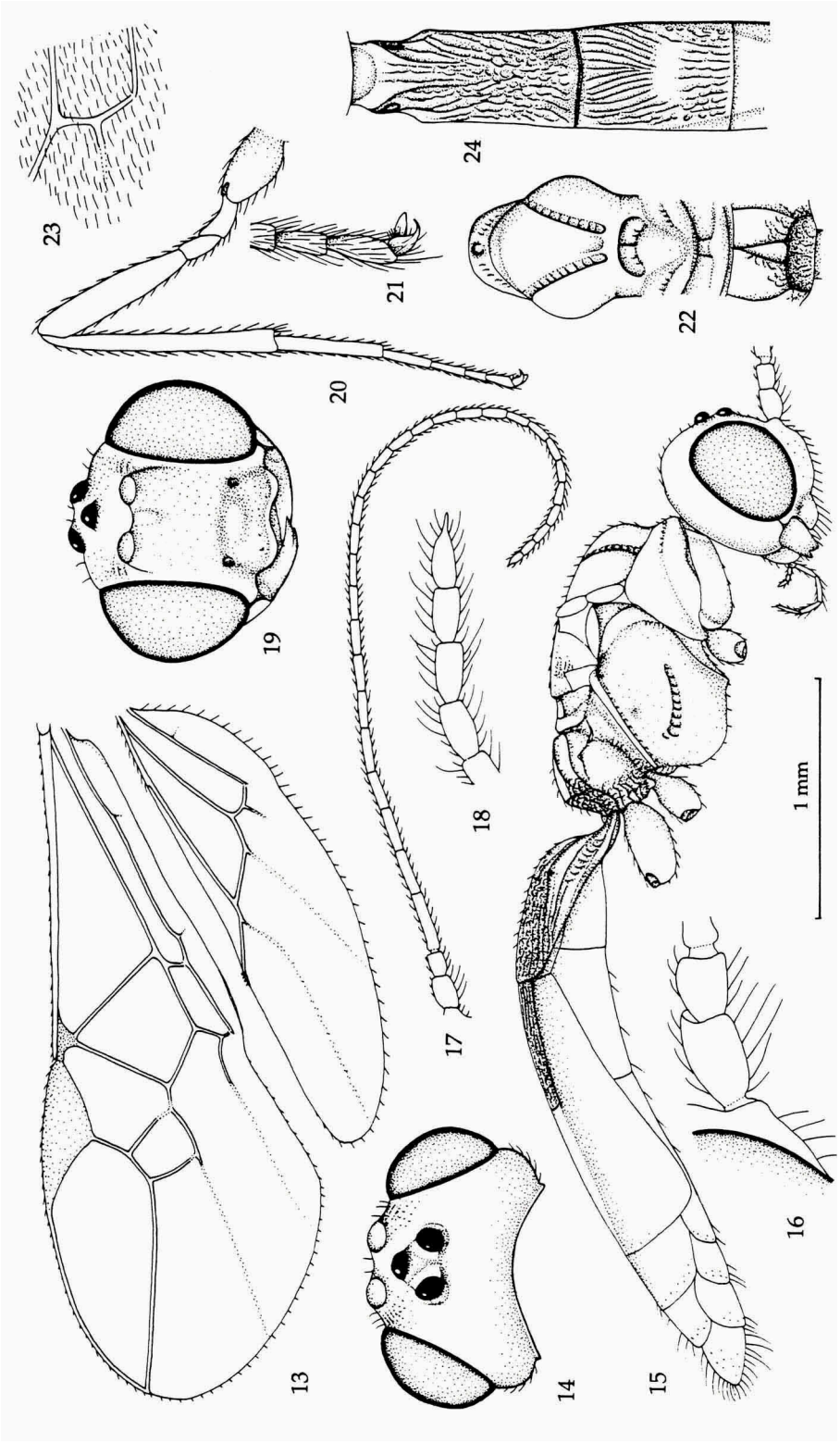
Wings.— Fore wing: r:3-SR:SR1 = 3:8:33; cu-a far antefurcal (fig. 1); 2-M+CU1: 1+2-CU1 = 1:4; CU1b short; 2-SR:3-SR:r-m = 9:8:6.

Legs.— Hind coxa granulate dorsally and remainder smooth; length of femur, tibia and basitarsus of hind leg 4.8, 9.4, and 6 times their width, respectively; hind femur granulate; hind tibia rather compressed; length of hind tibial spurs 0.3 (outer) and 0.4 (inner) times hind basitarsus.

Metasoma.— Length of first tergite 1.5 times its apical width, its surface coarsely granulate and posteriorly densely and regularly striate (fig. 7), and concave basally; second tergite largely superficially granulate (fig. 7); third and following tergites smooth; second segment with sharp lateral crease (fig. 11); length of ovipositor sheath 1.09 times fore wing and normally setose (fig. 12).

Colour.— Dark brown; clypeus, scapus, pedicellus, palpi, tegulae and legs, pale yellowish-brown; mesoscutum, prothorax, mesopleuron dorsally, metasoma (except first, third and fourth tergites largely), pterostigma and veins brown; wing membrane slightly infuscated.

Note.— The new genus resembles superficially the genus *Vadum* Mason, 1987 described from southern U.S.A. (Missouri, Texas), and included in the Helconinae-Diospilini. However, *Vadum* has no vein 1-SR of fore wing, the vein 1r-m of hind wing is subvertical, the vein 2-CU of hind wing absent (Mason, 1987: 326, fig. 1), the clypeus has a pair of ventral teeth, the antennal sockets are more medially situated (l. c., fig. 3), and the shape of the pronope is different (l. c., fig. 2).



Figs. 13-24, *Meteoridea huisoni* (Nixon), ♀, holotype. 13, wings; 14, head, dorsal aspect; 15, habitus, lateral aspect; 16, detail of scapus and pedicellus, outer lateral aspect; 17, antenna; 18, apex of antenna; 19, head, frontal aspect; 20, hind leg; 21, inner hind claw; 22, mesosoma, dorsal aspect; 23, detail of vein 2-CU of hind wing; 24, first and second metasomal tergites, dorsal aspect. 13, 15, 17, 20, 22: 1 × scale-line; 14, 19, 24: 1.3 ×; 16, 18, 21, 23: 2.5 ×.

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