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A NEW SPECIES OF THE GENUS *CHILOCYRTUS* (HYMENOPTERA, ICHNEUMONIDAE, ORTHOCENTRINAE) FROM SOUTH AFRICA

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A New Species of the Genus *Chilocyrtus* (Hymenoptera, Ichneumonidae, Orthocentrinae) from South Africa. Varga, O. — *Chilocyrtus propodealis* sp. n. from South Africa is described and illustrated. The newly described species has the carination of the propodeum atypical for representatives of the genus giving the reasons to reconsider the generic borders between this genus and genera allied.

Key words: *Chilocyrtus*, *Stenomacrus*, Pimpliformes, parasitoids, taxonomy, Afrotropical region.

Introduction

Chilocyrtus Townes, 1971 is a small orthocentrine genus containing more than 30 undescribed species distributed in the Afrotropical, Neotropical Regions, as well as Japan and Philippines (Townes, 1971; Yu et al., 2016). The only one species, *C. carinatus* Townes, 1971, from northern Argentina and southern Brazil has been described to serve as the genotype. Later, Townes & Townes (1973) transferred *C. hortorum* (Seyrig, 1934) from Madagascar, the species originally described in the genus *Stenomacrus* Förster, 1869 (Seyrig, 1934).

Accordingly, the genus *Chilocyrtus* was originally separated from *Stenomacrus* based on few main characters: 1) clypeus in profile more strongly convex, the apex of the clypeus strongly impressed and often a median or premedian ridge or carina crossing the clypeus; 2) mandible unidentate, lacking the lower tooth; 3) propodeum lacking the lateromedian longitudinal and apical transverse carinae, without an enclosed area petiolaris. Nevertheless, at least two of these characters can be found in different members of *Stenomacrus*: several European (*S. celer* (Holmgren, 1858), *S. ungula* (Thomson, 1897), etc.) and numerous undescribed Kenyan species have reduced carination of the propodeum, with at most only lateral longitudinal carinae present in apical half, and at least one undescribed Kenyan species has reduced lower mandibular tooth (Varga in prep.). On the other hand, *C. hortorum* has only weakly convex clypeus, lacking any carina or ridge, so its placement in this genus is uncertain and based only on the shape of mandible. And finally, the new *Chilocyrtus* species described here shares the typical strongly projected and carinated clypeus in combination with the atypical development of the propodeal carination (more common in most *Stenomacrus* spp.), and ovipositor position similar to those in *Batakmacrus* Kolarov, 1986.

Summarising the above, it is possible that *Stenomacrus* should be recognized as a large paraphyletic genus including all species with a truncate clypeus of different shape, lower mandibular tooth reduced or not reduced, and different carination of the propodeum, and thus *Chilocyrtus* should be synonymised under *Stenomacrus*. Similar assumption was made by Broad (2010) in his preliminary phylogenetic analysis. Nevertheless, this approach at present cannot be applied until different generic schemes are tested with more specimens from wider geographical areas and with more characters, including molecular markers.

Material and Methods

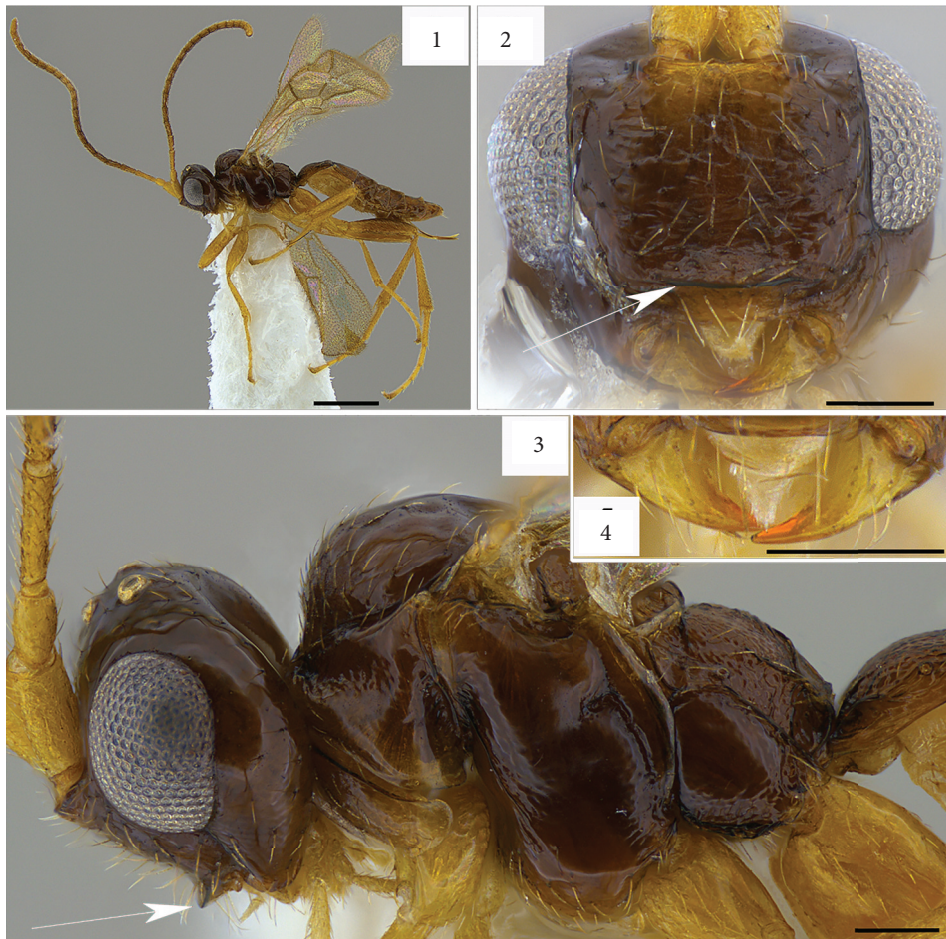
The specimens of the newly described species used in this study are deposited in the collection of the Zoological Museum, Lund University, Sweden (MZLU). The lectotype of *Chilocyrtus hortorum* deposited in the National Museum of Natural History, Paris was studied based on images. Images of *C. propodealis*, **sp. n.** were taken using a Leica Z16 APO microscope equipped with Leica FLEXACAM C1 camera and processed using LAS Core software at the I. I. Schmalhausen Institute of Zoology, NAS of Ukraine, Kyiv. Morphological terminology follows Broad et al. (2018).

Chilocyrtus propodealis Varga, **sp. n.** (figs 1–9)

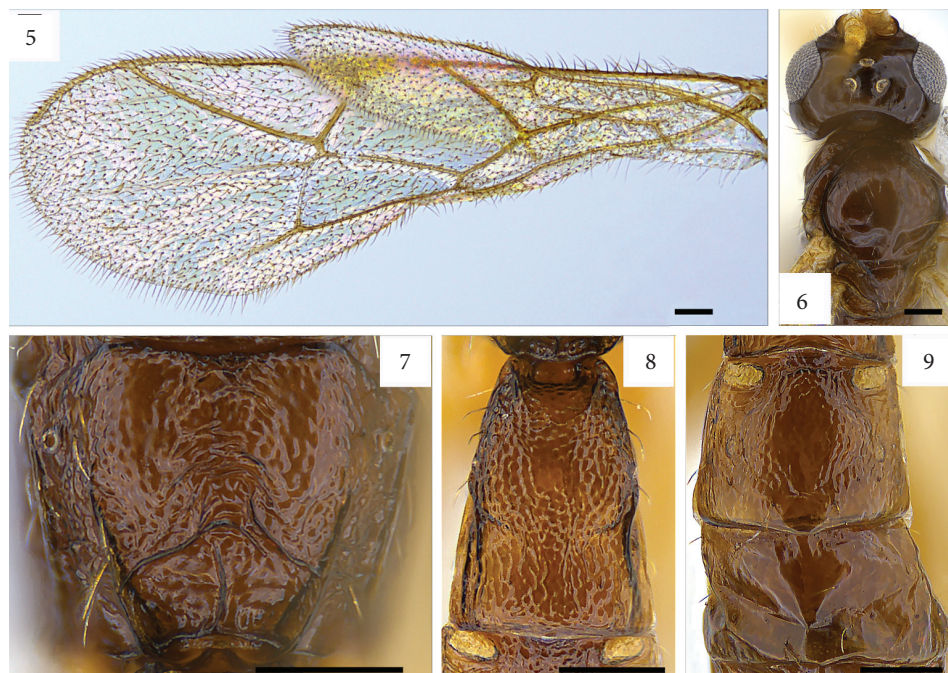
urn:lsid:zoobank.org:act:87A70A54-37F2-4B2E-A9B6-01AD284AE7DE

Material examined. Type. Holotype ♀: SOUTH AFRICA, Cape Prov., Tsitsikamma N.P. 34°02' S, 23°53' E, Malaise trap, Nov–Dec. 1995 (M. Söderlund), MZU00172936 (MZLU). Paratypes: 3 ♀, same label as in holotype, MZU00172914, MZU00172916, MZU00172922 (MZLU).

Diagnosis. The new species is characterised by the following combination of characters: body generally brown with legs yellowish; antenna with 20–21 flagellomeres, first flagellomere 4.2–4.4× as long as wide; malar space 1.7× the basal width of mandible; clypeus 0.4× as long as wide, strongly projected centrally, with a median transverse carina



Figs 1–4. *Chilocyrtus propodealis*, **sp. n.** ♀ (1–3 — holotype, 4 — paratype): 1 — lateral view of habitus; 2 — frontal view of head (carinated clypeal projection arrowed with white); 3 — lateral view of head and mesosoma (carinated clypeal projection arrowed with white); 4 — dorsal view of mandible. Scale bar 0.5 mm (habitus) and 0.1 mm (remaining views).



Figs 5–9. *Chilocyrtus propodealis*, sp. n., holotype ♀; 5 — wings; 6 — dorsal view of head and mesoscutum; 7 — dorsal view of propodeum; 8 — dorsal view of first metasomal tergite; 9 — dorsal view of metasomal tergites 2–3. Scale bar 0.1 mm.

(figs 2–3); mandible unidentate, strongly bent outward, lower tooth reduced (fig. 4); temples relatively long and weakly narrowed behind eyes, gently rounded (dorsal view); mesoscutum smooth, sparsely pubescent anteriorly (fig. 6); propodeum granulate, with area apicalis (and sometimes area superomedia partly) enclosed (fig. 7); fore wing with vein *2rs-m* about 0.8–1.0× the distance between *2rs-m* and *2m-cu*, vein *3rs-m* absent; hind wing with nervellus not intercepted, strongly reclivous (fig. 5); first metasomal tergite 1.4× as long as apical width, granulate; latero-median carina absent (fig. 8); second tergite 0.7× as long as apical width, granulate on basal 0.8 (fig. 9); ovipositor sheaths about 0.6–0.7× as long as hind tibia (fig. 1).

Chilocyrtus propodealis sp. n. differs from the only known Afrotropical species, *C. hortorum*, in having the strongly convex centrally clypeus, with a median transverse carina (weakly swollen and lacking carina in *C. hortorum*); more developed propodeal carination (only lateral longitudinal carina partly present in *C. hortorum*); black vertex (yellow marked in *C. hortorum*), unevenly pubescent mesoscutum (evenly and entirely pubescent in *C. hortorum*), and granulate tergites 1–2 (longitudinally wrinkled in *C. hortorum*).

Description. Holotype. Female (figs 1–3, 5–9). Body length approximately 4 mm, fore wing 2.2 mm.

Head (figs 2–3, 6) generally smooth and sparsely pubescent. Antenna with 21 flagellomeres, first flagellomere 4.3× as long as wide. Face about 0.6× as long as wide, superficially aciculate; eyes parallel. Malar space 1.7× as basal width of mandible; subocular sulcus distinct. Clypeus 0.4× as long as wide, strongly projected centrally, with a median transverse carina; apical margin more-or-less straight. Mandible unidentate, strongly bent outward, lower tooth reduced. Temples relatively long and weakly narrowed behind eyes, gently rounded (dorsal view). Frons and vertex smooth; length of the ocellar-ocular distance about 2.5× maximum diameter of lateral ocellus; occipital carina absent.

Mesosoma (figs 3, 6–7) generally smooth and sparsely pubescent. Propleuron with traces of granulation. Pronotum smooth, weakly rugose centrally. Mesoscutum smooth, sparsely pubescent anteriorly; notauli absent. Scutellum densely pubescent, with carinae present only on basal 0.1. Mesopleuron smooth; epicnemial carina present laterally. Metapleuron smooth; pleural and submetapleural carinae present. Propodeum granulate; lateral longitudinal carina present on the apical half of the propodeum, lateromedian longitudinal carinae developed only in the middle of the propodeum joining the apical transverse carina; area apicalis more or less enclosed, with a longitudinal central carina reaching the apex of the propodeum.

Legs relatively stout; hind femur 4.2× as long as wide, third tarsomere of hind tarsus about as long as fifth tarsomere; tarsal claws simple.

Wings (fig. 5). Fore wing with vein *2rs-m* about 0.8× the distance between *2rs-m* and *2m-cu*; vein *3rs-m* absent; vein *1cu-a* opposite to *M&Rs*; hind wing with nervellus not intercepted, strongly reclivous.

Metasoma (figs 8–9) generally granulate basally and smooth apically. First tergite 1.4× as long as apical width, granulate; latero-median carina absent; subapical lateral oblique grooves present, but weak. Second tergite 0.7× as long as apical width, granulate on basal 0.8 of the tergite, with weak basolateral grooves forming weakly swollen central rhombic area; thyridium present. The remaining part of metasoma smooth. Ovipositor and sheaths at rest originating far anterior of metasomal apex, capable of being hinged outwards (as in *Batakomacrus*); ovipositor sheaths about 0.7× as long as hind tibia, apical part widened and pubescent.

Colour. Body generally brown except antenna from the underside, face narrowly below the antennal sockets, labrum, mandible (except apices), thyridium, and legs yellow; hind femur darker than the remaining parts of the leg.

Male. Unknown.

Variability. Antenna with 20–21 flagellomeres; hind femur varies from darkened to uniformly coloured with rest of the leg; fore wing with vein *2rs-m* from 0.8–1.0× as long as the distance between *2rs-m* and *2m-cu*.

Distribution. South Africa.

Etymology. This species is named after its carination of propodeum unusual for representatives of the genus.

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