Zoodiversity, 59(2): 169–172, 2025

DOI 10.15407/zoo2025.02.169
UDC 595.792.13:591.9

NEW RECORDS OF THE GENUS *PICROSTIGEUS* (HYMENOPTERA, ICHNEUMONIDAE, ORTHOCENTRINAE) FROM THE EASTERN PALAEARCTIC

O. Varga

I. I. Schmalhausen Institute of Zoology NAS of Ukraine,
vul. B. Khmelnytskoho, 15, Kyiv, 01054 Ukraine
E-mail: sancho.varga@gmail.com

O. Varga (https://orcid.org/0000-0002-6285-7830)

urn:lsid:zoobank.org:pub:C43FF1E2-7A83-46D1-971B-22D860382362

New Records of the Genus *Picrostigeus* (Hymenoptera, Ichneumonidae, Orthocentrinae) from the Eastern Palaearctic. Varga, O. — Two orthocentrine species, *Picrostigeus karafutus* **sp. n.** and *P. debilis* (Gravenhorst, 1829) from Sakhalin, are recorded for the first time from the Eastern Palaearctic. *Picrostigeus karafutus* **sp. n.** is similar to *P. brevicauda* Horstmann, 1994 in having a short ovipositor, but differs by the longer first flagellomere, more strongly narrowed temples, and vein 3rs-m in the fore wing present.

Key words: Darwin wasp, Pimpliformes, parasitoids, new species, Eastern Palaearctic.

Introduction

The genus *Picrostigeus* Förster, 1869 is among the smallest groups in Orthocentrinae (Hymenoptera, Ichneumonidae: Pimpliformes) comprising only 8 species with mainly Western Palaearctic distribution (Yu et al., 2016). Of them, *P. antennalis* Roman, 1909 is also recorded from the Nearctic Region (Horstmann, 1994) and *P. recticauda* (Thomson, 1897) — from South Korea (Choi & Lee, 2018). Recently, Mohammadi-Khoramabadi & Talebi (2024) described three additional species from Iran, but due to uninformative descriptions the status of these species remains uncertain.

The genus belongs to *Orthocentrus* group and is characterised by the apically truncate clypeus; untwisted mandibles, with lower tooth clearly visible in frontal view; developed epicnemial and pleural carinae; and straight ovipositor, with its sheath uniformly pubescent.

Nothing is known on the biology of the genus, but its representatives, as well as the other members of the Orthocentrinae, are probably endoparasitoids of Sciaroidea (Yu et al., 2016).

Material and Methods

The specimens used in this study are deposited in the collections of the I. I. Schmalhausen Institute of Zoology, NAS of Ukraine, Kyiv (SIZK) and Zoological Museum, Lund University, Sweden (MZLU). Images were taken using a Leica Z16 APO microscope equipped with Leica DFC FLEXACAM C1 camera and processed by LAS Core software at SIZK. Morphological terminology follows mainly Broad et al. (2018).

Picrostigeus debilis (Gravenhorst, 1829)

Material examined. **Non-type.** Russia, "Сахалин, Александровск, с мертвой древесины" [Sakhalin, Alexandrovsk-Sakhalinsky, ex logs], 03.1989, 2 ♀ (M. Nesterov) (SIZK).

Diagnosis. This species is characterised by the following combination of characters: face weakly granulate; antenna with 26–28 flagellomeres, first flagellomere 2.6 × as long as its apical width; temples strongly narrowed behind eyes in dorsal view; propleuron largely yellow; fore wing with areolet closed, petiolate (vein 3rs-m present), vein 1cu-a weakly antefurcal; hind wing with nervellus not intercepted, vertical; first metasomal tergite 1.2–1.3 × as long as its apical width, granulate, with latero-median carina distinct on proximal 0.8; ovipositor straight, 1.2–1.3 × the length of hind tibia.

Distribution. Europe (Yu et al., 2016); Eastern Palaearctic (Sakhalin) (**first record**).

Picrostigeus karafutus Varga, **sp. n.** (Fig. 1, *a*–*e*)

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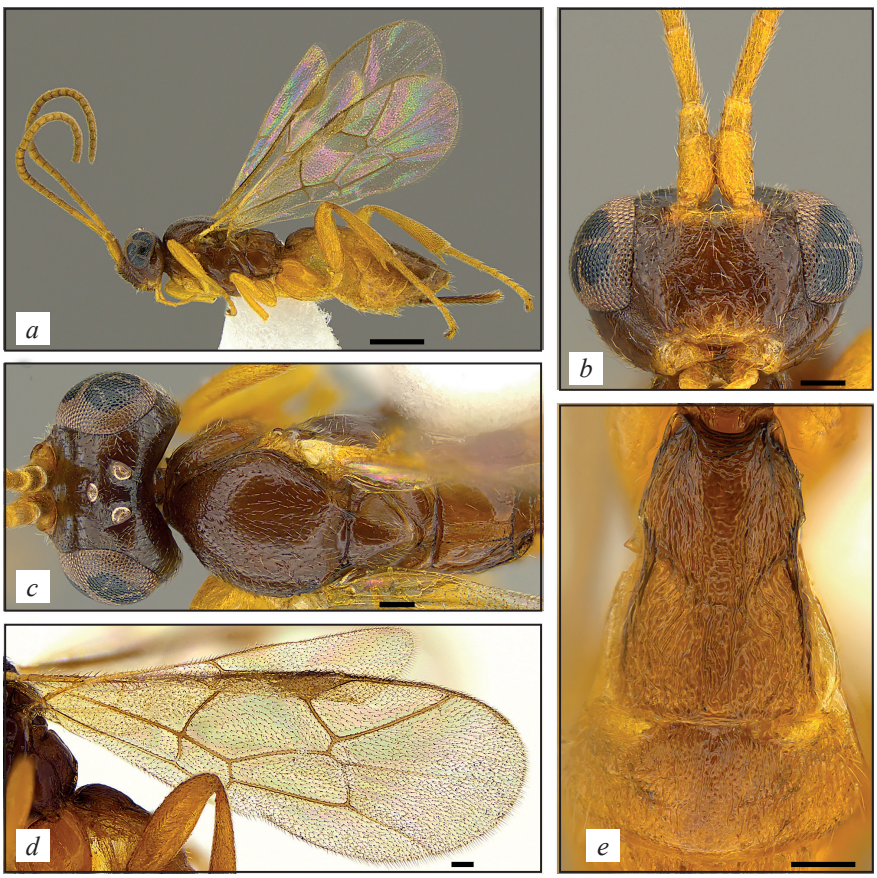
Material examined. **Type.** Holotype ♀: RUSSIA, "Сахалин, Новоалександровск" [Sakhalin, Novo-Aleksandrovsk], 26.07.1988 (A. Kotenko) (SIZK).

Diagnosis. The new species is characterised by the following combination of characters: face indistinctly sculptured centrally; antenna with 26 flagellomeres, first flagellomere 3.3 × as long as its apical width (Fig. 1, *a*, *b*,); temples strongly narrowed behind eyes in dorsal view (Fig. 1, *c*); fore wing with areolet closed, petiolate (vein 3rs-m present, but partly unpigmented), vein 1cu-a weakly antefurcal; hind wing with nervellus not intercepted, weakly reclivous (Fig. 1, *d*); first metasomal tergite 1.6 × as long as its apical width, longitudinally wrinkled on the granulate background, with latero-median carina distinct to the apex (Fig. 1, *e*); ovipositor more-or-less straight, about 1.0 × the length of hind tibia, its sheath weakly widened apically (Fig. 1, *a*).

Picrostigeus karafutus **sp. n.** is similar to *P. brevicauda* Horstmann, 1994 in having a short ovipositor, but differs by the longer first flagellomere which is 3.3 × as long as its apical width (2.1–2.2 × in *P. brevicauda*); more strongly narrowed temples (weakly narrowed in *P. brevicauda*, see fig. 1 in Horstmann, 1994); and vein 3rs-m in the fore wing present (absent in *P. brevicauda*).



Figs 1. *Picrostigeus karafutus* **sp. n.**, holotype female: *a* — lateral view of habitus; *b* — frontal view of head; *c* — dorsal view of head and mesosoma; *d* — lateral view of wings; *e* — dorsal view of metasomal tergites 1–2. Scale bars 0.5 mm (*a*) and 0.1 mm (*b*–*e*)

Description. Holotype. Female (Fig. 1, *a*). Body length 3.1 mm, fore wing 2.5 mm.

Head (Fig. 1, *a*, *b*, *c*) generally shiny, weakly granulate and densely pubescent. Antenna with 26 flagellomeres (one antenna with two last flagellomeres missing), first flagellomere 3.3 × as long as wide. Face about 0.5 × as long as wide, shiny, indistinctly sculptured (with traces of aciculation and granulation). Clypeus flat, about 0.6 × as long as wide, weakly separated from face, weakly granulate; its apical margin truncate. Malar space about 2.2 × as long as the basal width of mandible; subocular sulcus distinct, granulate. Lower tooth of mandible visible in the frontal view, weakly shorter than upper tooth. Vertex with traces of granulation; maximum diameter of lateral ocellus 0.75 × as long as ocellar-ocular distance; occipital carina absent. Temple short and strongly narrowed behind eye.

Mesosoma (Fig. 1, *c*, *d*). Propleuron sparsely pubescent. Pronotum smooth and shiny; epomia present. Mesoscutum and scutellum densely pubescent; notauli absent. Mesopleuron smooth and shiny, densely pubescent along anterior margin and ventrally; epicnemial carina present laterally. Metapleuron smooth and shiny; submetapleural and pleural carinae present. Propodeum smooth and shiny, granulate between lateromedian longitudinal and apical transverse carinae present.

Legs relatively stout; hind femur 3.3 × as long as width, fifth tarsomere about 1.2 × as long as third tarsomere.

Wings (Fig. 1, *d*). Fore wing with areolet closed (vein 3rs-m present, but partly unpigmented); vein 2rs-m about 0.7 × the distance between 2rs-m and 2m-cu; vein 1cu-a weakly basad to M&RS. Hind wing with nervellus not intercepted, weakly reclivous.

Metasoma (Fig. 1, *e*) generally strongly sculptured anteriorly. First tergite about 1.6 × as long as apical width, longitudinally wrinkled on the granulate background; dorso-lateral and latero-median carinae present to apex of the tergite. Second tergite 0.5 × as long as apical width, granulate. Remaining tergites smooth and shiny. Ovipositor more-or-less straight, about 1.0 × the length of hind tibia, its sheath weakly widened apically.

Colouration. Body generally brown with orange legs. Head and mesosoma brown except antenna, face below antennal sockets and clypeus narrowly apically, mandible (except teeth), fore and mid femora, tibiae and tarsi, and hind legs orange; tegula, fore and mid coxae, trochanters and trochantelli yellowish. Metasomal tergites 2–3 weakly paler than the rest of metasoma, orange.

Male. Unknown.

Distribution. Sakhalin.

Etymology. The species name refers to the type locality. "Karafuto" is an English transliteration of "樺太", which is the Japanese name of Sakhalin.

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Received 6 January 2025
Accepted 23 April 2025