
Original Article

Discovery of the Genus *Neurateles* Ratzeburg, 1848 (Hymenoptera, Ichneumonidae, Orthocentrinae), from the Eastern Palearctic Region, with Description of a New Species from Japan

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Abstract. The genus *Neurateles* Ratzeburg, 1848, is newly recorded from the Eastern Palaearctic region based on a new species, *N. asiaticus* **sp. nov.** from Honshu, Japan. This species resembles *N. falcatus* and *N. papyraceus* in the character states of antenna, epicnemial carina and ovipositor, but it can be distinguished by the antenna with 25–26 flagellomeres (less than 23 flagellomeres in *N. falcatus* and *N. papyraceus*), the epicnemial carina completely absent (present laterally in *N. falcatus*), the lateromedian longitudinal carina of propodeum partly present (absent in *N. papyraceus*) and T11.7 times as long as maximum width (2.0 times in *N. falcatus*).

Key words: Honshu, *Neurateles asiaticus* **sp. nov.**, parasitoid wasp, taxonomy

Introduction

The genus *Neurateles* Ratzeburg, 1848, is a small-sized taxon of ichneumonid wasps of the subfamily Orthocentrinae, which contains six described species, i.e., *N. compressus* (Thomson, 1897), *N. crassicornis* (Thomson, 1897), *N. falcatus* (Thomson, 1897) and *N. papyraceus* Ratzeburg, 1848, are from the Western Palaearctic region, and *N. alaskensis* (Ashmead, 1902) and *N. leucopsis* (Ashmead, 1890) are from the Nearctic region (Yu *et al.*, 2012). The host of this genus is poorly known in *N. papyraceus*, i.e., Curculionidae (Coleoptera) and Sciaridae (Diptera), which are related with dead tree. The hosts of Orthocentrinae are mostly Diptera (Townes, 1971; Wahl, 1993) and thus the records of Curculionidae may be based on misidentification.

Recently I found three specimens of *Neurateles* in the Honshu, Japan. Then I identified these specimens and concluded that these specimens are a single undescribed species. It is also the first discovery of this genus from the Eastern Palaearctic region.

In this paper, I report this genus from the Eastern Palaearctic region for the first time with a description of a new species from Japan.

Materials and methods

Materials used were from the Kanagawa Prefectural Museum of Natural History, Odawara, Japan (KPMNH).

A stereo microscope (Nikon S800) was used for observations. Photographs were taken by RICOH CX-6 digital camera joined with the stereo microscope. Digital images were edited using Adobe Photoshop® CS5. Morphological terminology mainly follows that established by Gauld (1991) and Gauld *et al.* (2002). Two abbreviations, metasomal tergite (T) and holotype (HT), are used in descriptions. Measurements follows Townes (1969) except for: length of ovipositor sheath is measured by the minimum length between apex and base.

Result and discussion

Subfamily Orthocentrinae Förster, 1869

Genus *Neurateles* Ratzeburg, 1848

Neurateles Ratzeburg, 1848: 86. Type species: *Neurateles papyraceus* Ratzeburg, 1848. Monobasic.

Diagnosis. Lower edge of clypeus straight or slightly concave (Fig. 5). Labrum narrowly exposed (Fig. 5). Face and clypeus not divided by supraclypeal suture (Fig. 5). Face convex in lateral view. Upper edge of face without a projection over or between the antennal sockets (Fig.

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5). Apex of both mandibular teeth overlapping each other (Fig. 5). Lower tooth of mandible obvious, distinctly shorter than upper tooth. Scape long and subcylindric, more than 1.8 times as long as wide. Epicnemial carina absent (Fig. 9) or present laterally by some weak wrinkles. Propodeum without pleural carina and area postero (Figs. 9, 10). Fore wing without an areolet (Fig. 2). Metasoma weakly sculptured and elongate, its posterior part strongly compressed and its shape is blade-like in female (Figs. 1, 3, 4). Spiracle of T1 definitely placed in front of the midlength (Fig. 9). Ovipositor fairly long, longer than apical depth of metasoma, weakly upcurved (Fig. 3) or straight. Ovipositor sheath covered with sparse hairs its entire length.

Distribution. Holarctic region. Although Townes (1971) referred that this genus occurs in the Neotropical region, no species has been described from this region.

***Neurateles asiaticus* sp. nov.**

[Japanese name: Haraboso-hae-himebachi]

(Figs. 1–9)

Type series. Holotype. Female, Tochigi Pref., Nasushiobara City, Shiobara, Oonuma, 6–15, VI, 2008, Takeshi Matsumura leg. (Malaise trap) (KPM-NK 5002134). **Paratypes.** 1 female, same data of holotype (KPM-NK 5002135); 1 female, Tochigi Pref., Nasushiobara City, Shiobara, Kotaki, 24–30, VII, 2008, Takeshi Matsumura leg. (Malaise trap) (KPM-NK 5002136).

Description. Female (n=3). Body length 4.6–5.1 (HT: 5.0) mm. Body polished, smooth and punctate, covered with silver setae.

Head 0.7–0.8 (HT: 0.8) times as long as wide. Clypeus united with face, length of this combined area 0.8 times as long as width below each antennal socket, transversely striated, convex in lateral view, without anterior tentorial pits (Fig. 5). Frons weakly concave above each antennal socket. Malar space 1.2–1.3 (HT: 1.2) times as long as basal width of mandible. Eye bare (Figs. 5, 6). Inner eye margin not convergent ventrally (Fig. 5). Minimum length between lateral ocellus and eye 1.2–1.4 (HT: 1.4) times as long as minimum length between each lateral ocellus. Occipital carina absent (Fig. 6). Occiput weakly concave medially. Antenna with 25–26 (HT: 26) flagellomeres (Fig. 7). First flagellomere 2.6–3.0 (HT: 2.6) times as long as depth and 1.2–1.3 (HT: 1.3) times as long as second flagellomere.

Mesosoma. Lateral aspect of pronotum covered with shallow punctures anteriorly (Fig. 8), smooth posteriorly. Epomia, notauli and epicnemial carina absent (Fig. 8).

Mesoscutum and scutellum finely and sparsely punctate (Fig. 8), without large hairless area. Mesopleuron smooth except for irregular rugae below subalar prominence. Lower division of metapleuron covered with longitudinal striae (Fig. 8). Propodeum granulate with a few transverse striae, without carinae except for with lateromedian longitudinal carinae posteriorly (Figs. 8, 9). Fore wing 3.4–3.7 (HT: 3.7) mm. Vein *cu-a* of fore wing inclivous, its anterior end opposite to posterior end of vein *Rs+M* (Fig. 2). Vein 1-*cu* of hind wing longer than vein *cu-a* of hind wing (Fig. 2). Hind femur 3.4 times as long as maximum width in lateral view. First tarsomere of hind tatus 1.9–2.0 (HT: 1.9) times as long as second tarsomere.

Metasoma. T1 1.7 times as long as maximum width, its basal half convex, covered with irregular rugae (Fig. 9). Median dorsal carina of T1 absent (Fig. 9). Glymma present (Fig. 8). T2 1.1 times as long as maximum width. Apex of cercus with long setae. Ovipositor sheath 0.5 times as long as hind tibia. Ovipositor upcurved, its apex needle-like (Fig. 3).

Colouration (Fig. 1–4). Black to blackish-brown, except for: scape, pedicel basal part of flagellum, clypeus, labrum, mandible except for apex, tegula, and posterodorsal angle of pronotum and thyridium yellowish-brown. Legs yellowish-brown. Wings hyaline, with brown veins except for wing base with whitish-yellow veins.

Male. Unknown.

Distribution. Japan (Honshu).

Etymology. The specific name is from “Asia”.

Bionomics. Host is unknown. Adult wasps were collected from June to July.

Remarks. Although Townes (1971) and Broad (2010) referred that mesoscutum of *Neurateles* usually partly hairless areas, this character is absent in *N. asiatica*. This species resembles *N. falcatus* and *N. papyraceus* in the antenna with 23 or more flagellomeres (shared with *N. falcatus*), the epicnemial carina absent (shared with *N. papyraceus*), and the ovipositor upcurved (shared with *N. falcatus* and *N. papyraceus*), but it can be distinguished by the antenna with 25–26 flagellomeres (less than 23 flagellomeres in *N. falcatus* and *N. papyraceus*), the epicnemial carina completely absent (present laterally in *N. falcatus*), the lateromedian longitudinal carina of propodeum partly present (absent in *N. papyraceus*) and T1 1.7 times as long as maximum width (2.0 times in *N. falcatus*).

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摘 要

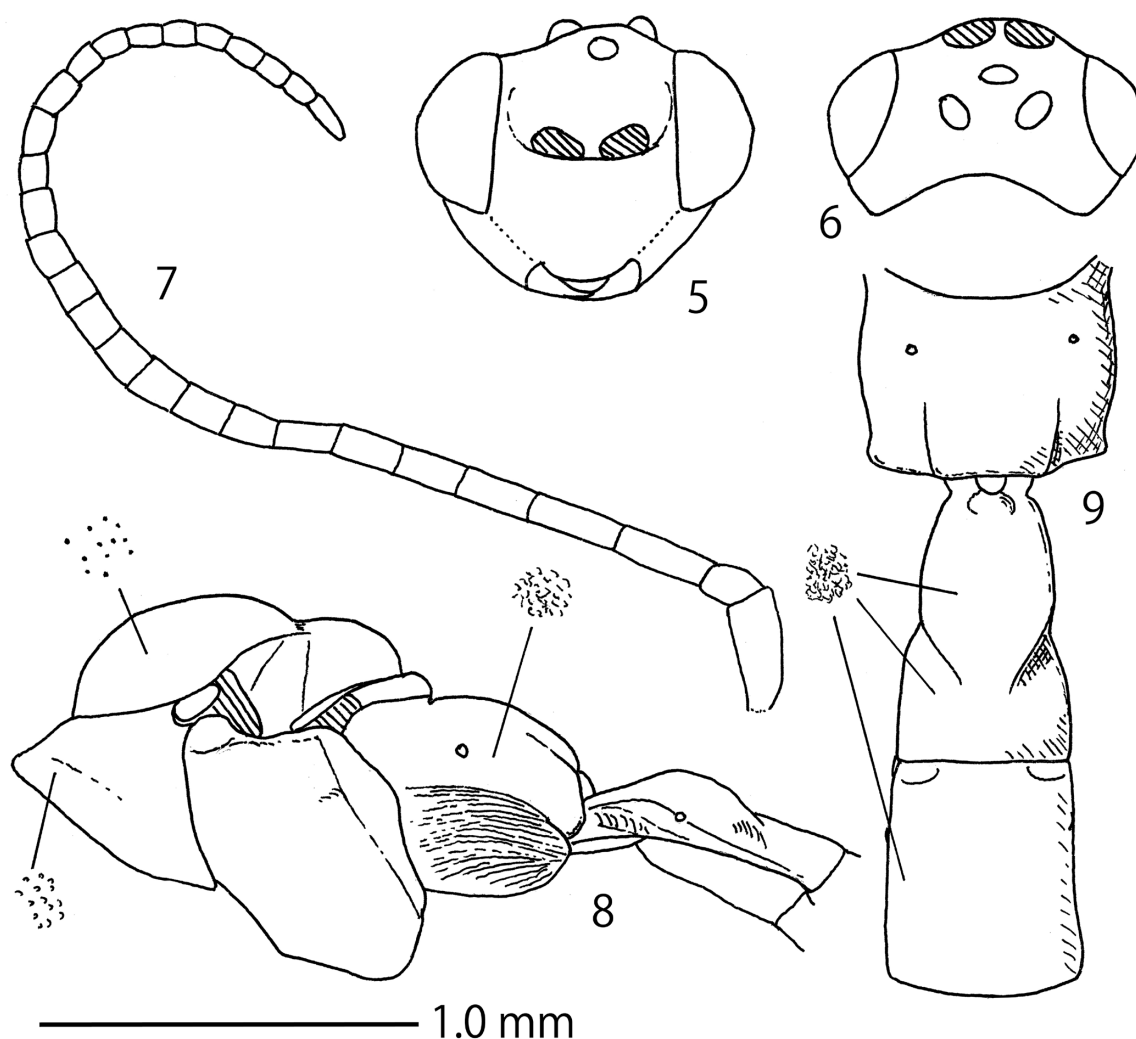
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旧北区東部から未知であった *Neurateles* 属のハエヒメバチ (ハチ目ヒメバチ科) を日本から発見し、*Neurateles asiaticus* と命名し、記載を行った。本種は栃木県那須塩原市で得られた 3 個体のメスの標本(資料番号 KPM-NK 5002134 ~ 5002136) により記載され、触角、前腹板隆起線、産卵管の形質状態により、全ての既知種の中では旧北区西部に分布する *N. falcatus* と *N. papyraceus* に近い形質状態を有するが、触角の鞭節が 25 節 ~ 26 節である点で容易に識別でき (近似の 2 種は 23 節以下)、前腹板隆起線が完全に消失することや、産卵管が背方にカーブする点、後体節の長さは幅の 1.7 倍程度であることの組み合わせによっても、これら 2 種から区別できる。本種の標準和名として、顕著な後体節の伸長に基づき、ハラボソハエヒメバチ (新称) を提唱した。

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Figs 1–4. *Neurateles asiaticus* **sp. nov.**, paratype (KPM-NK 5002135) — 1, lateral habitus; 2, fore and hind wings; 3 posterior part of metasoma, lateral view; 4, metasoma, dorsal view. Scale bar: 1.0 mm.



Figs 5–9. *Neurateles asiaticus* **sp. nov.**, holotype (KPM-NK 5002134) (7, 9) and paratype (KPM-NK 5002135) (5, 6, 8) — 5, 6, head, anterior (5) and dorsal (6) view; 7, left antenna, outer aspect; 8, mesosoma and T1, lateral view, its surface sculptures omitted except for metapleuron; 9, propodeum, T1 and T2, dorsal view, its oblique lines in right half indicate convexo-concave.