

Rediscovery of a Malaysian Endemic Woodwasp, *Eriotremex purpureipennis* (Hymenoptera, Siricidae)

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Abstract Based on a newly acquired specimen, which is probably the third specimen ever recorded, *Eriotremex purpureipennis* (Westwood, 1874) is briefly redescribed and illustrated. The convex and medially longitudinally carinate precornal basin and the short and robust apical sheath are useful to distinguish *E. purpureipennis* from the closely resembling *E. insignis* (Smith, 1859).

Key words: Symphyta, new collection record, diagnostic characters.

Introduction

Eriotremex purpureipennis (Westwood, 1874) is a large and conspicuous woodwasp known only from Malaysia, characterized by its entirely black body and wings with slight bluish or purplish metallic reflections. It was described as *Tremex purpureipennis* based on a single female from “Malacca (Lorquin)” (Westwood, 1874). Forsius (1933) recorded a female specimen of “*Tremex insignis* F. Sm.” from North Borneo, but Benson (1943), who established a new genus *Eriotremex* and placed *T. purpureipennis* in it, regarded this specimen as *E. purpureipennis*, not *E. insignis* (Smith, 1859). No additional collection records have been published since then and all subsequent authors referring to *E. purpureipennis* (Maa, 1949, 1956; Smith, 2010; Shinohara, 2022) interpreted this species based on the description and notes by Westwood (1874), Forsius (1933) and Benson (1943).

In the course of my revision of the Japanese species of *Eriotremex* (Shinohara, 2022), one Malaysian female horntail identifiable with *E. purpureipennis* came to my attention. The specimen generally agrees with Westwood’s (1874)

old and concise description and safely keys to *E. purpureipennis* in Benson (1943), Maa (1949, 1956) and Smith (2010). Here I report on the discovery of this specimen, which is the third specimen ever recorded, summarize the diagnostic characters, shortly discuss a large intraspecific variation in the number of antennomeres, and give new characters to separate *E. purpureipennis* from the closely resembling *E. insignis*.

Material and Methods

The material studied in this work is kept in the National Museum of Nature and Science, Tsukuba. For morphological terminology, I followed Viitasaari (2002) and Shinohara (2022, 2023). Examination of anatomy was made with Olympus SZX7 stereo binocular microscope. Photographs were taken with a digital camera, Olympus Stylus TG-4 Tough with Olympus SZX7 stereo binocular microscope. The digital images were processed and arranged with Adobe Photoshop Elements® 15 software.

Results and Discussion

Eriotremex purpureipennis (Westwood, 1874)

(Fig. 1)

Tremex purpureipennis Westwood, 1874: 117.

Tremex insignis: Forsius 1933: 172. Not Smith (1859).

Eriotremex purpureipennis: Benson, 1943: 44; Maa, 1949: 127; Maa, 1956: 92; Smith, 1978: 91; Smith, 2010: 434; Shinohara, 2022: 171.

See Smith (1978) for more references.

Diagnostic characters. *Female* (based on one specimen examined). Length without ovipositor about 32 mm. Black with very faint bluish or purplish luster, shiny; antennal groove and apical part of apical ovipositor tinted with dark brown. Wings (Fig. 1C) black, iridescent with bluish or purplish luster. Head mostly covered with dense, well-separated punctures with smooth interspaces; most of gena nearly impunctate. Antenna (Fig. 1B) with 19 antennomeres; scape and pedicel punctate with smooth interspaces, flagellomeres impunctate and mat. Pronotum (Fig. 1A) with MPL about 0.65 times as long as OOCL, dorsal surface nearly smooth and glabrous, anterior margin and median part with sparse coarse warts and posterior margin densely microsculptured, mat and pilose. Forewing 1.42 times as long as ovipositor sheath. Abdomen (Fig. 1D) with tergum 1 finely coriaceous and mat, terga 2 and 3 shallowly coriaceous and weakly shiny, terga 4–7 smooth, shiny, with posterior half covered with minute, indistinct punctures, pilose; terga 8 and 9 smooth, shiny and, except for anterior margin, covered with minute, indistinct punctures, pilose. Precornal basin (Fig. 1E) about 0.82 times as long as wide, widest at slightly after middle; large median part fairly strongly convex, with distinct median longitudinal carina, surface punctate and pilose, and broad depressed lateral and anterior margins fairly smooth and impunctate. Ovipositor sheath about 3.42 times as long as apical sheath. *Male* Unknown.

Distribution. Malaysia: Malacca, North Borneo.

Material examined. MALAYSIA: 1 ♀,

“Keningau, Sabah, N. Borneo, E. Malaysia, 25. IV. 1992” (NSMT).

Host plant. Unknown.

Remarks. *Eriotremex purpureipennis* is a rare siricid with only two old published records, Westwood (1874) and Forsius (1933) (see Benson, 1943). Westwood (1874) did not give the number of specimens he had and simply noted “Malacca (Lorquin). In Mus. Jard. des Plantes, Paris (olim Coll. Sichel)”. Maa (1949) noted that the type was “lost (?)” without any comments. Smith (2010) noted “(type ♀, Hope Museum, Oxford University, U.K.)”, but this depository is not likely because Benson (1943) did not see the type of this species (“not seen”) whereas he examined the type of *Tremex insignis* Smith, 1858, deposited in the Oxford collection. Forsius (1933) noted the depository of the types of the new species he was describing but did not specify the depository of the non-typical material including the specimen of *E. purpureipennis* (his “*Tremex insignis* F. Sm.”) from North Borneo. I was not able to examine the material treated by Westwood (1874) and Forsius (1933).

Although Westwood (1874) did not give the number of specimens he examined, the specimen from North Borneo treated in this paper is probably the third specimen of this species ever recorded. Forsius’ (1933) specimen was obtained in “Bettotan, near Sandakan” also in North Borneo. My specimen is from Keningau, which is about 200 km west of Sandakan.

The Keningau specimen runs to *E. purpureipennis* in the keys by Benson (1943), Maa (1949, 1956), Smith (2010) and Shinohara (2022) and agrees generally with the description by Westwood (1874). One disagreement is the number of antennomeres, which is 16 (“antennis 16-articulatis”) in Westwood’s material and 19 in my specimen. This is a large difference considering the ranges of intraspecific variations of four Japanese species of *Eriotremex* studied by Shinohara (2022); *E. formosanus* (Matsumura, 1912) has 19–21 antennomeres (female, n=14), *E. makiharai* Togashi, 2005, has 17–19 antennomeres (female, n=6), *E. quadricinctus* Shinohara,

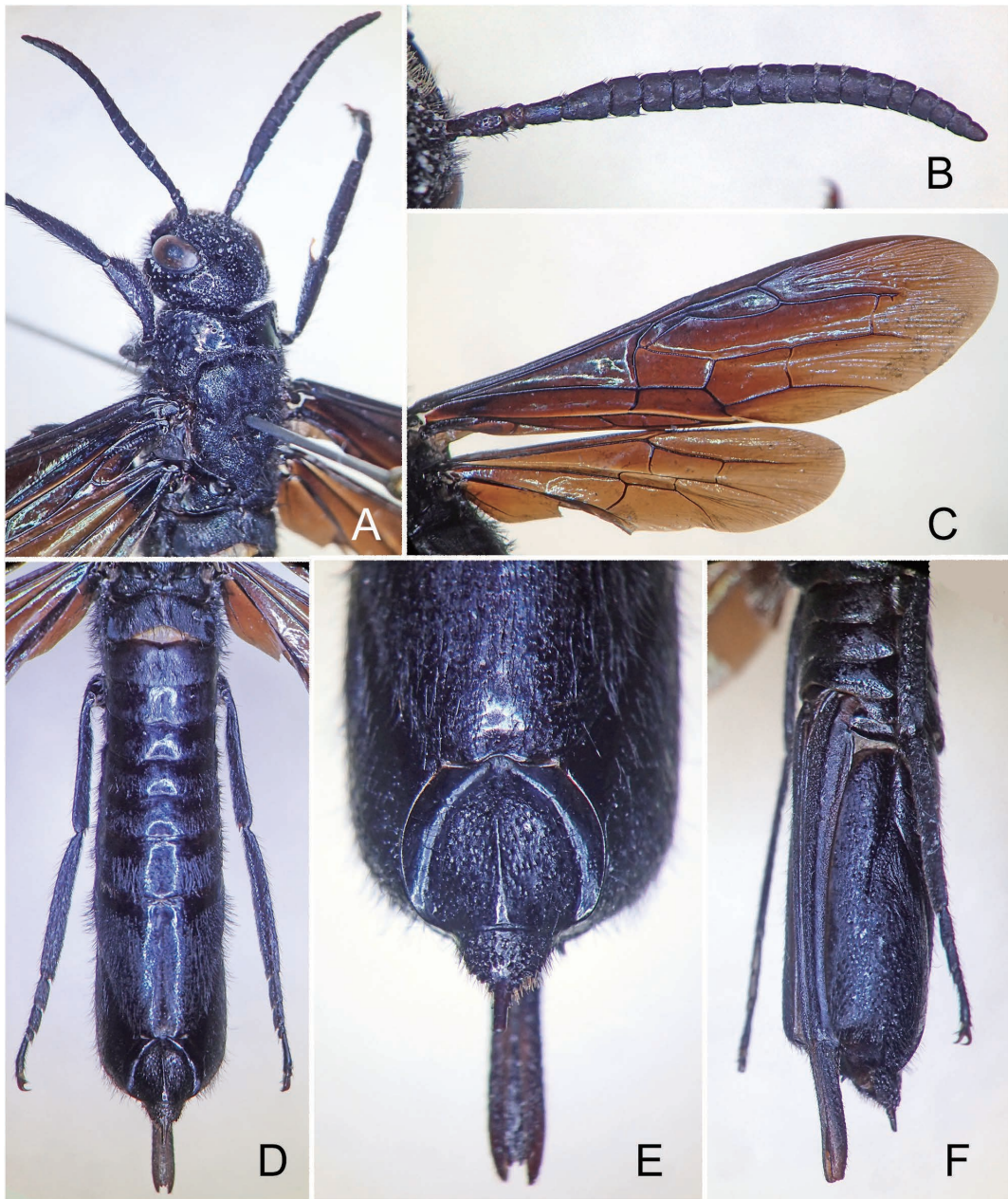


Fig. 1. *Eriotremex purpureipennis*, female. A, Head and thorax, dorsolateral view; B, antenna; C, wings; D, abdomen, dorsal view; E, apical part of abdomen, dorsal view; F, abdomen ventrolateral view.

2022, has 13 or 14 antennomeres (female, $n=4$) and *E. ruficollis* Shinohara, 2022, has 10 or 11 antennomeres (male, $n=3$). Eight Japanese species of the genus *Tremex* Jurine, 1807, have the similar ranges of variations, namely the largest intraspecific differences of three antennomeres

(Shinohara, 2023). The variation range of this character in *E. purpureipennis* should be examined when more material becomes available.

Eriotremex purpureipennis closely resembles *E. insignis* but differs from it in the lack of paired yellow or whitish spots at the base of tergum 2

(Benson, 1943; Maa, 1949, 1956; Smith, 2010). The specimen of *E. purpureipennis* examined (Fig. 1) is different from the specimen of *E. insignis* shown in figs. 12–15 in Smith (2010) also in the convex and medially longitudinally carinate precornal basin (Fig. 1E) and the short and robust apical sheath (Fig. 1F); in *E. insignis*, the precornal basin is rather flattened and without a median carina (fig. 15 in Smith, 2010) and the apical sheath is long and slender (fig. 12 in Smith, 2010).

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