

Original Article

Taxonomic and Zoogeographical Notes of Japanese Cryptinae (Hymenoptera, Ichneumonidae), with Description of Five New Species

Kyohei WATANABE ¹⁾

Abstract. Taxonomic and zoogeographical notes of 21 genera of Japanese Cryptinae are reported. Five new species, *Giraudia japonica* **sp. nov.**, *Ischnus splendens* **sp. nov.**, *Nematopodius* (*Nematopodius*) *montanus* **sp. nov.**, *Xoridesopus amamiensis* **sp. nov.** and *X. tokarensis* **sp. nov.** are newly described. *Giraudia japonica* **sp. nov.** resembles *G. gyratoria* (Thunberg, 1822) in the yellow scutellum and the normal shaped wings, but can be distinguished by the following combination of character states: postpetiole covered with fine and distinct sculptures; base of antenna black; hind trochanter and trochantellus blackish brown; metasomal tergites more or less darkened. *Ischnus splendens* **sp. nov.** apparently resembles *I. bimaculatus* Jonathan, 2006 (male unknown) from India in the body with many yellow markings and the frons with a median carina and a few longitudinal striations, but it can be easily distinguished by the following combination of character states: MSL 1.0–1.1 times as long as MSL hind coxa with two yellow markings, one at dorsally and other at anteroventrally. *Nematopodius* (*N.*) *montanus* **sp. nov.** resembles *N. formosus* Gravenhorst, 1829, but it can be distinguished by the nervellus intercepted anterior to midpoint (intercepted posterior to midpoint in *N. formosus*) and the antenna already without a white band (usually with a small white band). *Xoridesopus amamiensis* **sp. nov.** apparently resembles *X. nigritibia* Gupta & Gupta, 1983, from Indonesia, but it can be distinguished by the following combination of character states: epomia weakly present; hind femur reddish brown; T3 densely punctate. *X. tokarensis* **sp. nov.** apparently resembles *X. schuleri* (Dalla Torre, 1902) from India, Burma and Indonesia, but it can be distinguished by the following combination of character states: hind coxa largely black; scutellum densely punctate. Two species, *Apsilops scotinus* (Tosquinet, 1903) and *Nematopodius* (*Nematopodius*) *debilis* (Ratzeburg, 1852) are newly recorded from Japan. Three synonyms are newly recognized, i.e., *Dihelus niger* Gupta & Gupta, 1978 = *D. hylaevorus* (Momoi, 1966) (**syn. nov.**), *Gerdus iriomotensis* Kusigemati, 1986 = *Eurycryptus sakaguchii* (Uchida, 1932) (**syn. nov.**) and *Torbda parallela* Momoi, 1970 = *T. sauteri* Uchida, 1932 (**syn. nov.**). Two new combinations of the generic status of *Cryptus ohshimensis* Uchida, 1930, and *Torbda takachihoensis* Momoi, 1966, are proposed, i.e., the former is transferred to *Hedycryptus* and the latter is to *Pterocryptus* (**comb. nov.**). Some new distribution records in Japanese Cryptinae are also reported.

Key words: Aptesini, Cryptini, distribution, new record, synonym

Introduction

The subfamily Cryptinae s. lat. is the second largest subfamily of family Ichneumonidae, with 403 genera and over 5000 species of worldwide distribution (Yu *et al.*,

2016). This subfamily was previously divided into three tribes, i.e., Cryptini, Hemigasterini and Phygadeuontini (Townes, 1970; Yu *et al.*, 2016), while Santos (2017) reclassified this subfamily into three subfamilies, i.e., Ateleutinae (containing genera *Ateleute* Förster, 1869, and *Tamaulipeca* Kasparyan, 2001, of Cryptini), Cryptinae (containing tribes Cryptini and Hemigasterini, except for *Ateleute* and *Tamaulipeca*), and Phygadeuontinae (containing tribe Phygadeuontini). In this study, I follow the classification proposed by Santos (2017).

¹⁾ Kanagawa Prefectural Museum of Natural History,
499 Iryuda, Odawara, Kanagawa 250-0031, Japan
神奈川県立生命の星・地球博物館
〒250-0031 神奈川県小田原市入生田 499
watanabe-k@nh.kanagawa-museum.jp

In Japan, total of 62 genera and 130 species of Cryptinae have been recorded (Watanabe *et al.*, 2018), while many undescribed and unrecorded species were still recognized. Recently I sorted the ichneumonid collection of Kanagawa Prefectural Museum of Natural History and examined collections of several institutes including types. Then I found some new taxa, new synonymies, new combinations and new distribution records. In this study, I propose the taxonomic and zoogeographical notes of some genera of Japanese Cryptinae.

Materials and methods

In this study, the dried specimens deposited in the following collections were examined:

AEIC, American Entomological Institute, Logan, Utah, USA.

GSFPM, General Station of Forest Pest Management, State Forestry Administration, Shenyang, China.

KPM-NK, Insect collection, Kanagawa Prefectural Museum of Natural History, Odawara, Kanagawa, Japan.

KU, Entomological laboratory, Faculty of Agriculture, Kyushu University, Fukuoka, Japan.

MNHAH, Museum of Nature and Human Activities, Sanda, Hyogo, Japan.

NIAES, National Institute for Agro-Environmental Sciences, Tsukuba, Ibaraki, Japan.

SEHU, Systematic Entomology, Hokkaido University, Sapporo, Japan.

ZSM, Zoologische Staatssammlung München, Germany.

For the Figs. 2I–K, I also examined a specimen of *Cryptus dianae* (Gravenhorst, 1829) (KPM-NK 69930). A stereomicroscope (Nikon SMZ800) was used for observation. Photographs were taken by Canon 7D Mark2 with Canon 100mmL IS (for Figs. 7A, 8A, 9A, B, 11A–C, 12A, 13G) and OLYMPUS TG-4 digital camera joined with the stereo microscope (for the figures except for above photos and line drawings). Digital images were edited using Adobe Photoshop® CS6. Morphological terminology follows that established by Gauld (1991) except for wing venation follows that established by Townes (1969). Eady (1968) is also referred to for the description microsculpture. The following abbreviations are used in description: basal width of mandible (BWM), holotype (HT), length of malar space (MSL), segment of antennal flagellum (FL), diameter of lateral ocellus (OD), ocello-ocular line (OOL), postocellar line (POL), segment

of tarsus (TS) and metasomal tegite (T). The following abbreviations are used for material data: female (F), male (M) and Malaise trap (MsT). The symbol “*” in the distribution indicates a new record. For the new species and newly recorded species from Japan, I propose standard Japanese names.

Results

Subfamily **Cryptinae** Kirby, 1837

This subfamily contains two tribes, 274 genera, and 3152 species (Santos, 2017).

Tribe **Aptesini** Smith & Shenefelt, 1955

Santos (2017) rendered the name “Hemigasterini” as “Aptesini” and transferred *Echthrus* Gravenhorst, 1829, from this tribe to Cryptini. In Japan, 13 genera and 28 species have been recorded (Watanabe *et al.*, 2018).

Genus **Giraudia** Förster, 1869

Giraudia Förster, 1869: 184. Type species: *Cryptus congruens* Gravenhorst, 1829 (= *Ichneumon gyratorius* Thunberg, 1824). Designated by Ashmead (1900).

Calocryptus Thomson, 1873: 521. Type species: *Cryptus congruens* Gravenhorst, 1829 (= *Ichneumon gyratorius* Thunberg, 1824). Monobasic.

Pseudocryptus Kriechbaumer, 1893: 120. Type species: *Cryptus grisescens* Gravenhorst, 1829. Monobasic.

In Japan, two species *G. spinosa* Uchida, 1936, and *G. teranishii* Uchida, 1930, have been recorded. In this study, I describe two new species from Honshu below.

***Giraudia japonica* sp. nov.**

(Standard Japanese name:

Kimon-kuro-chibi-togari-himebachi)

(Figs. 1A, G, 3A, B, 4A–E)

Holotype. KPM-NK 69946, F, JAPAN, Tochigi Pref., Nasushiobara City, Amayu - Shiobara, 12. X. 2009, E. Katayama leg.

Paratype. KPM-NK 69947, F, JAPAN, Nagano Pref., Karuizawa, 8. VIII. 1952, R. Ishikawa leg.

Description. Female (n=2). Body length 9.5–10.5 (HT: 9.5) mm, mat, covered with golden setae.

Head 0.6 times as long as wide. Clypeus transverse (Fig. 1A), 0.3 times as long as wide, punctate dorsal 0.6 and almost smooth ventral 0.4, covered with long setae (Fig. 4B), lower margin flattened. Face 0.3–0.35 (HT: 0.35) times as long as wide, sparsely punctate, convex medially (Fig. 4B). Frons slightly concave, entirely mat except for

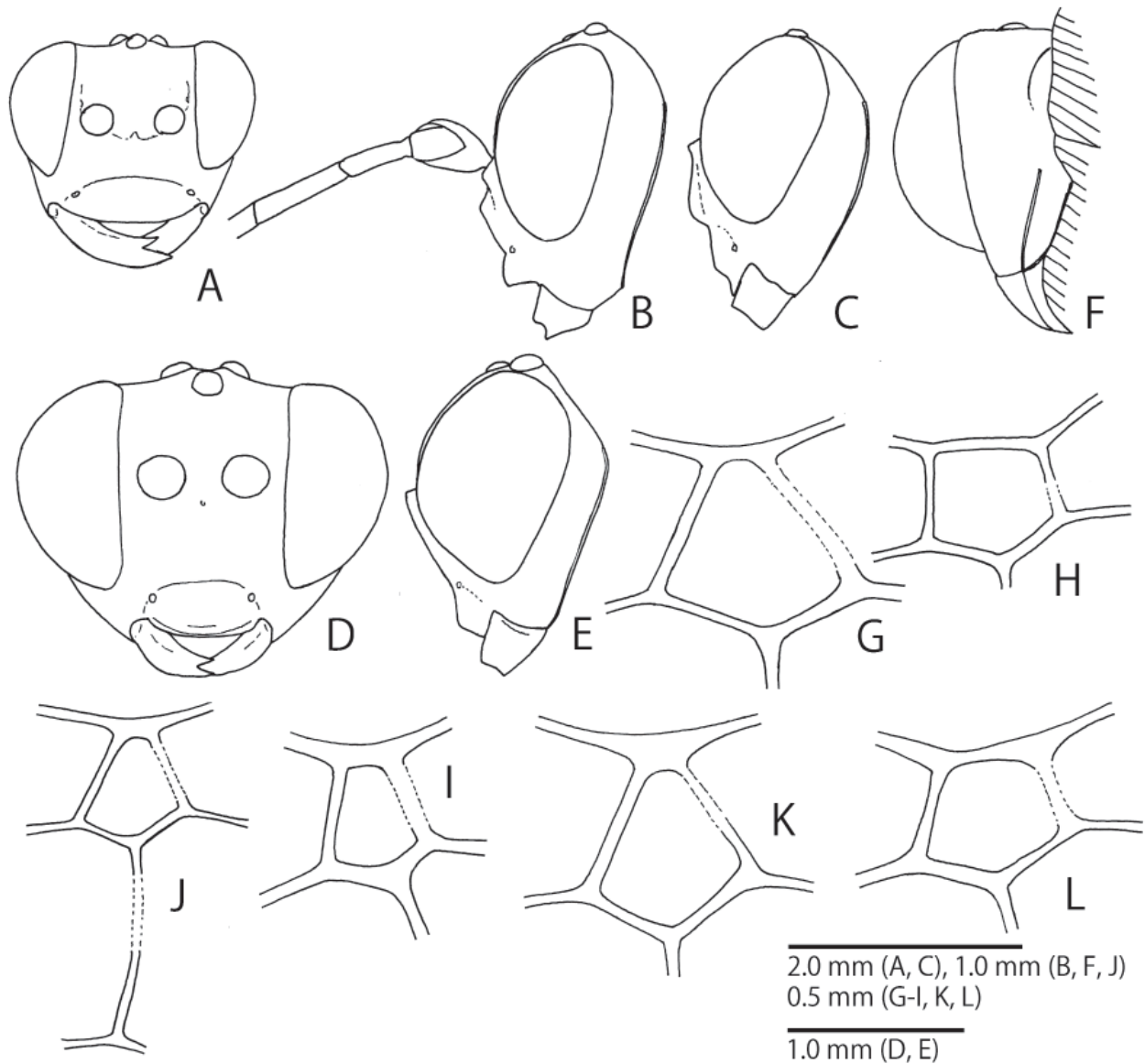


Fig. 1. *Giraudia japonica* sp. nov. (A, KPM-NK 69946; G, KPM-NK 69947), *Apsilops scotinus* (Tosquinet, 1903) (B, H, KPM-NK 69931), *Hedycryptus ohshimensis* (Uchida, 1930) (C, J, NIAES), *Dihelus hylaeavorus* (Momoi, 1966) (D, MNHAH), *Ischnus splendens* sp. nov. (D, E, K, KPM-NK 69406), *Nematopodius (Nematopodius) montanus* sp. nov. (F, KPM-NK 69583) and *Xoridesopus amamiensis* sp. nov. (L, KPM-NK 69529), female — A–F, head, frontal (A, D), lateral (B, C, E) and posterolateral (F) view; G, H, I–L, areolet of right wing; J, areolet and second recurrent vein of right wing.

narrow smooth area above antennal sockets. Occipital carina complete, its lower end joined with hypostomal carina. Lower tooth of mandible distinctly longer than upper tooth (Fig. 1A). MSL 0.7–0.8 (HT: 0.7) times as long as BW. OOL 1.1–1.2 (HT: 1.2) times as long as POL. Antenna with 32–33 (HT: 32) flagellomeres. F1 0.8 times as long as F2. Apical half of flagellum flattened (Fig. 4A), distinctly wider than basal part.

Mesosoma. Epomia present, weak and short. Lateral area of pronotum partly weakly rugose, without longitudinal striation. Notauli distinct on anterior 0.33 of mesoscutum. Scutellum weakly convex. Epicnemial carina distinct, its dorsal end not joined with anterior margin of mesopleuron and subalar prominence. Mesopleuron and metapleuron

finely punctate. Pleural carina of propodeum complete. Lateral longitudinal carina, lateromedian longitudinal carina and posterior transverse carina largely indistinct. Other carinae absent. Area superomedia indistinctly defined (Fig. 4C). Propodeal apophysis obtusely present. Propodeal spiracle elongate. Fore wing length 9.0–9.5 (HT: 9.0) mm. Areolet present, hexagonal, with sides convergent anteriorly (Figs. 1G, 4A). Nervulus opposite to basal vein (Fig. 4A). Nervellus intercepted posterior to midpoint (Fig. 4A). Tibiae with some long setae (Fig. 4D). Hind femur 4.5–4.8 (HT: 4.8) times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 3.7–4.0 (HT: 3.7), 1.4–1.6 (HT: 1.4), 0.8–1.0 (HT: 0.8) and 1.3–1.5 (HT: 1.3).

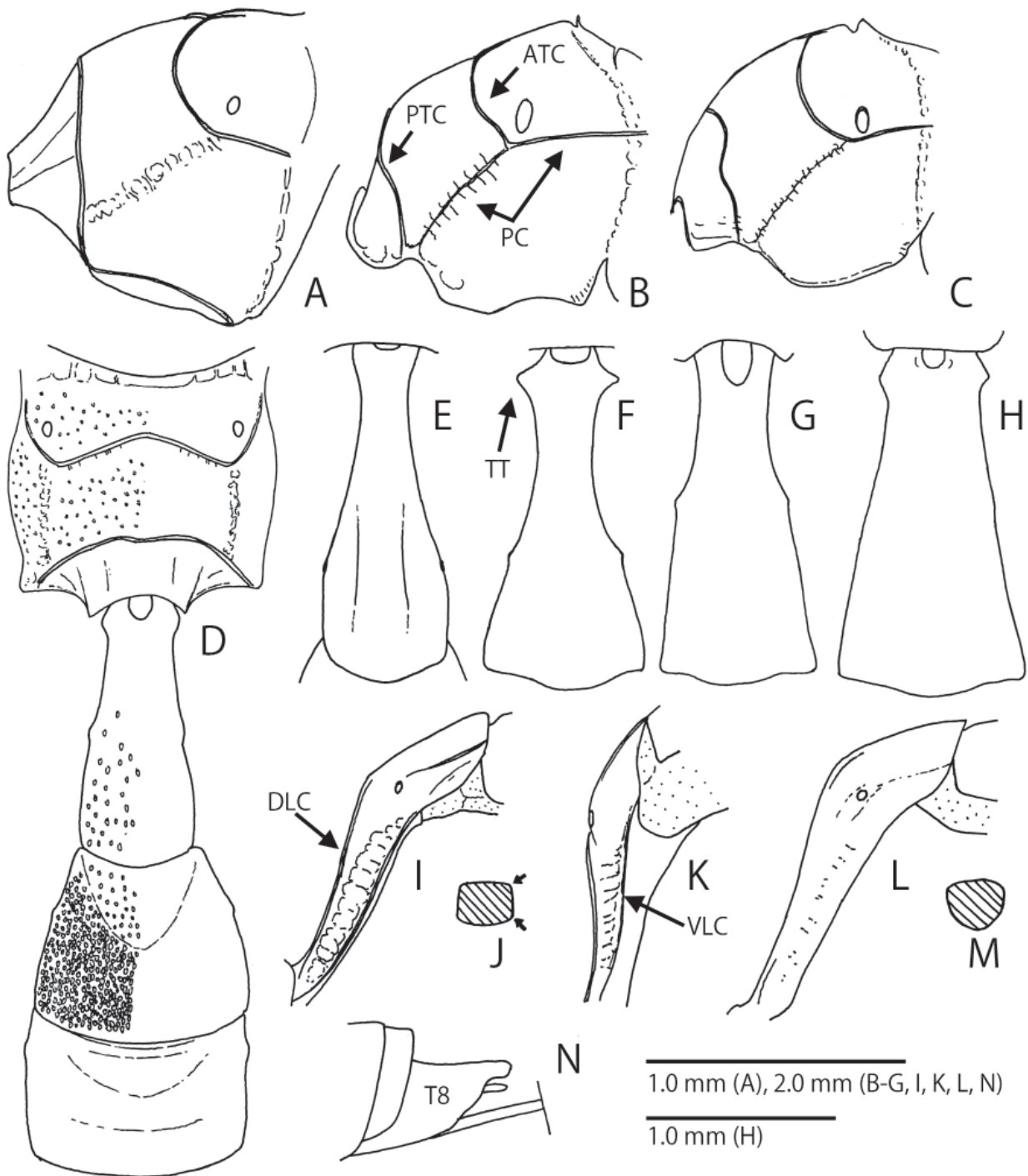


Fig. 2. *Eurycryptus sakaguchii* (Uchida, 1932) (A, D, NIAES), *Pterocryptus takachihoensis* (Momoi, 1966) (B, G, KPM-NK 5000304), *Xoridesopus amamiensis* sp. nov. (C, KPM-NK 69529; H, KPM-NK 69531), *Hedycryptus ohshimensis* (Uchida, 1930) (E, L, M, NIAES), *Ischnus splendens* sp. nov. (F, KPM-NK 69415), *Cryptus diana* (Gravenhorst, 1829) (I-K, KPM-NK 69930) and *Dihelus hylaevorus* (Momoi, 1966) (N, paratype, MNHAH), female. — A–C, propodeum, lateral view; D, propodeum, T1, T2 and T3, dorsal view, punctures on right side and T3 omitted; E–H, T1, dorsal view; I, K, L, T1, lateral (I, L) and ventrolateral (K) view; J, M, cross-section of anterior part of T1, arrows indicate the carinae; N, apex of metasoma, lateral view. ATC, anterior transverse carina; PTC, posterior transverse carina; PC, pleural carina; TT, triangular tooth; DLC, dorsolateral carina; VLC, ventrolateral carina.

Metasoma. T1 2.3–2.7 (HT: 2.3) times as long as maximum width, without dorsolateral and lateromedian longitudinal carinae, its postpetiole covered with fine and distinct sculptures (Fig. 4E). T2 0.65–0.7 (HT: 0.7) times as long as maximum width. Ovipositor sheath 1.25 times

as long as hind tibia. Apex of ovipositor as Figs. 3A and B.

Coloration (Figs. 4A–E). Body (excluding wings and legs) black, except for: dorsal part of facial orbit, frontal orbit, vertical orbit, palpi, median part of anterior margin of collar, median small area of T1 and T2, narrow area

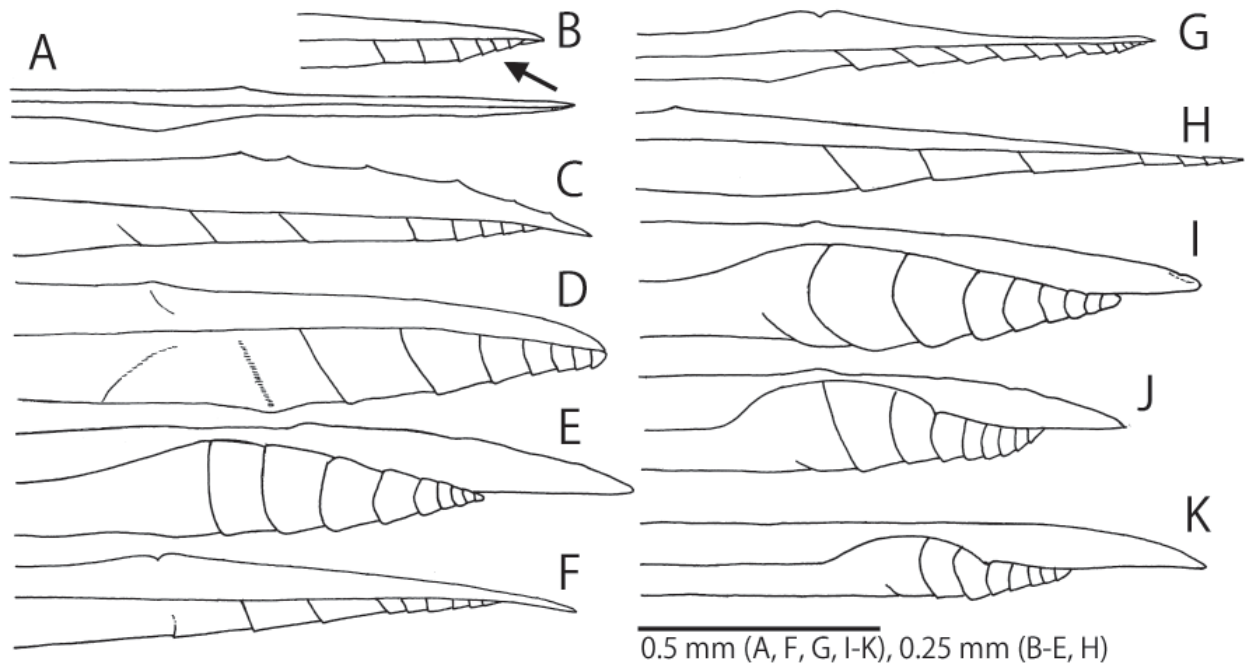


Fig. 3. *Giraudia japonica* sp. nov. (A, B, KPM-NK 69946), *Apsilops scotinus* (Tosquinet, 1903) (C, KPM-NK 69932), *Dihelus hylaeovorus* (Momoi, 1966) (D, paratype, MNHAH), *Eurycryptus sakaguchii* (Uchida, 1932) (E, NIAES), *Hedycryptus ohshimensis* (Uchida, 1930) (F, NIAES), *Ischnus splendens* sp. nov. (G, KPM-NK 69406), *Nematopodius* (*Nematopodius*) *montanus* sp. nov. (H, KPM-NK 69554), *Torbda sauteri* Uchida, 1932 (I, KPM-NK 69501), *Xoridesopus amamiensis* sp. nov. (J, KPM-NK 69529) and *X. tokarensis* sp. nov. (K, KPM-NK 69548), female — A–K, apex of ovipositor, lateral view.

of posterior margin of T2 and T3 and ovipositor reddish brown; F6–F11 (sometimes also F5 and dorsal part of F12), scutellum and postscutellum yellow. Wings hyaline, except for: stigma yellowish brown; veins brown except for yellow wing base. Legs black, except for: apex of femora, tibiae, tibial spurs and tarsi reddish yellow.

Male. Unknown.

Distribution. Japan (Honshu).

Remarks. This species resembles *G. gyratoria* (Thunberg, 1822) in the yellow scutellum and the normal shaped wings, but can be distinguished by the following combination of character states: postpetiole covered with fine and distinct sculptures (Fig. 4E) (smooth and without sculpture in *G. gyratoria*); base of antenna black (Fig. 4A) (with conspicuous reddish brown area in *G. gyratoria*); hind trochanter and trochantellus blackish brown (Fig. 4A) (red in *G. gyratoria*); metasomal tergites more or less darkened (Fig. 4A) (with a conspicuous large red area in *G. gyratoria*). This species can be easily distinguished from other Japanese species, *G. spinosa* Uchida, 1936, and *G. teranishii* Uchida, 1930, by the yellow scutellum (Fig. 4A) (black in other Japanese species).

Genus ***Schenkia*** Förster, 1869

Schenkia Förster, 1869: 184. Type species: *Phygadeuon graminicola* Gravenhorst, 1829. Designated by Ashmead (1900).

Ecpaglus Förster, 1869: 185. Type species: *Cryptus*

brevicornis Gravenhorst, 1829 (= *Phygadeuon graminicola* Gravenhorst, 1829). Designated by Ashmead (1900).

Schenkia Dalla Torre, 1902: 51. Emendation for *Schenkia*.

In Japan, two species, *S. sylvatica* Townes, Momoi & Townes, 1965, and *S. tosaensis* (Uchida, 1936), have been recorded. I recognize a new distribution record of the latter species and record it below.

Schenkia tosaensis (Uchida, 1936)

Microcryptus tosaensis Uchida, 1936a: 17.

Specimen examined. JAPAN: KPM-NK 69500, F, Hyogo Pref., Kami Town, Niiya, Mikata-kogen, 26. VI. – 18. VII. 2011, S. Fujie leg. (MsT).

Distribution. Japan (Honshu* and Shikoku).

Remarks. This is the first record of this species from Honshu.

Tribe **Cryptini** Kirby, 1837

In Japan, 49 genera (including *Echthrus* Gravenhorst, 1829) and 102 species have been recorded (Watanabe *et al.*, 2018).

Genus ***Allophatnus*** Cameron, 1905

Allophatnus Cameron, 1905a: 233. Type species: *Allophatnus fulvipes* Cameron, 1905. Monobasic.



Fig. 4. *Giraudia japonica* sp. nov., KPM-NK 69946, female — A, habitus, dorsolateral view; B, head, frontal view; C, scutellum, postscutellum and propodeum, dorsal view; D, hind tibia, lateral view; E, T1, dorsal view.

Phaedrapsis Cameron, 1906: 196. Type species: *Phaedrapsis rufobalteata* Cameron, 1906 (= *Cryptus fulvitergus* Tosquinet, 1903) Monobasic.

Stictocryptus Cameron, 1907a: 462. Type species: *Stictocryptus testaceus* Cameron, 1907 (= *Cryptus fulvitergus* Tosquinet, 1903). Monobasic.

In Japan, following a single species has been recorded. I recognize two new distribution records and record these data below.

***Allophatnus fulvitergus* (Tosquinet, 1903)**

Cryptus fulvitergus Tosquinet, 1903: 199.

Cryptus lenocinans Tosquinet, 1903: 204.

Phaedrapsis rufobalteata Cameron, 1906: 197.

Stictocryptus testaceus Cameron, 1907a: 462.

Mesostenus takanoi Uchida, 1931: 185.

Specimens examined. JAPAN: KPM-NK 69473, M,

Okinawa Pref., Ishigakijima Is., Nosoko to Itona, 20. X. 1993, H. Suda leg.; KPM-NK 69474, M, Okinawa Pref., Iriomotejima Is., Uehara, 8. VII. 1999, N. Sugiura leg.

Distribution. Japan (Amamioshima Is., Ishigakijima Is.* and Iriomotejima Is.*); widely distributed in Oriental region.

Remarks. This is the first record of this species from Ishigakijima Island and Iriomotejima Island.

Genus *Apsilops* Förster, 1869

Apsilops Förster, 1869: 182. Type species: *Cryptus hirtifrons* Ashmead, 1890. Included by Ashmead (1896).

Dapanus Förster, 1869: 183. Type species: *Ichneumon cinctorius* Fabricius, 1775. Designated by Ashmead (1900).

Heterotypus Förster, 1869: 183. Type species: *Ichneumon cinctorius* Fabricius, 1775. Designated by Townes *et al.* (1961).

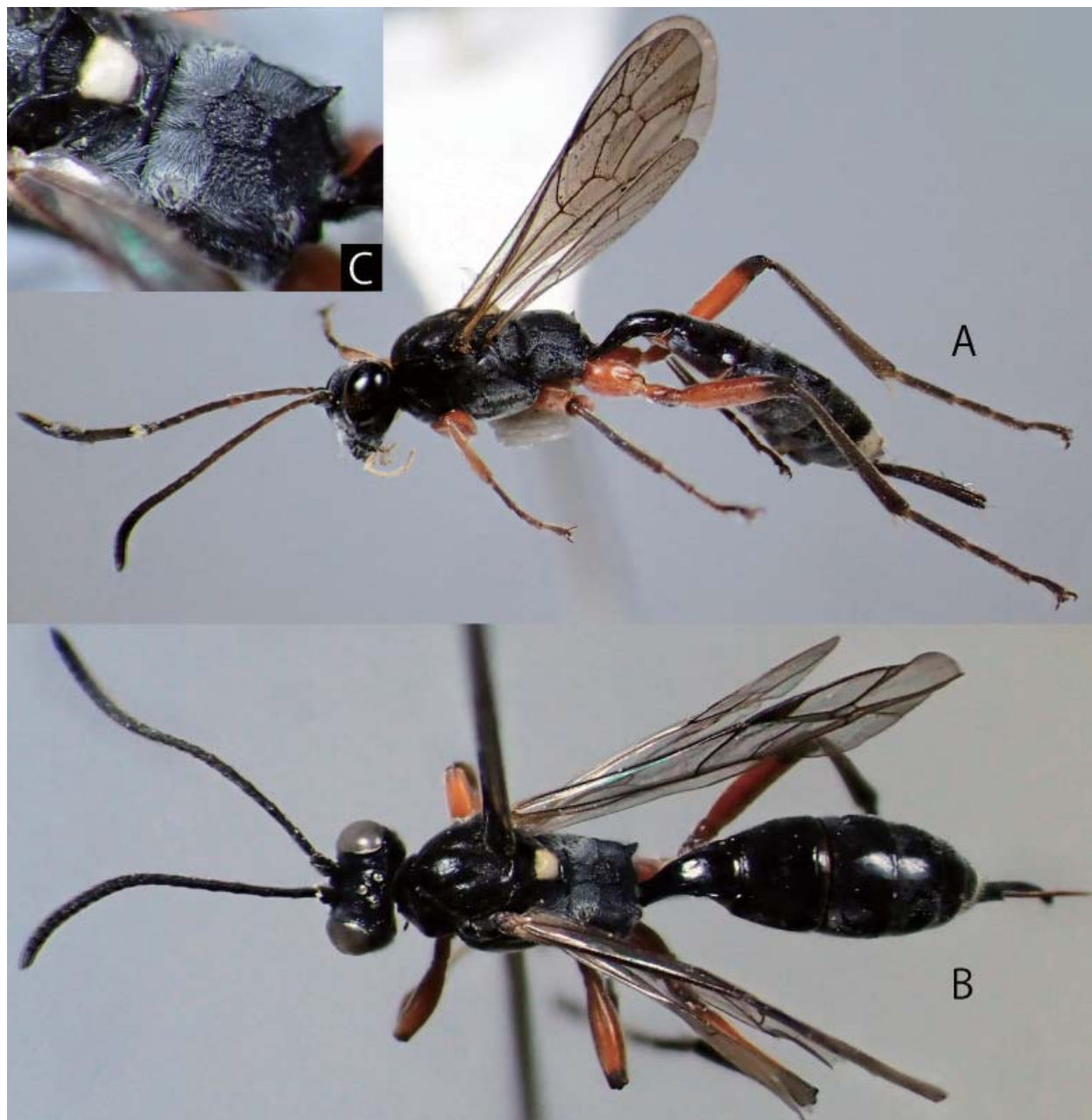


Fig. 5. *Apsilops scotinus* (Tosquinet, 1903), KPM-NK 69931 (A) and 69932 (B, C), female — A, B, habitus, lateral (A) and lateral (B) view; C, scutellum, postscutellum and propodeum, dorsal view.

Sobas Förster, 1869: 187. Type species: *Ichneumon cinctorius* Fabricius, 1775. Included by Schmiedeknecht (1890). Name preoccupied.

Trichocryptus Thomson, 1873: 520. Type species: *Ichneumon cinctorius* Fabricius, 1775. Monobasic.

Neostricklandia Viereck, 1925: 75. Type species: *Neostricklandia sericata* Viereck, 1925. Original designation.

Trichestema Cushman, 1927: 9. Type species: *Trichestema helcostizoides* Cushman, 1927 (= *Neostricklandia sericata* Viereck, 1925). Original designation.

In Japan, a single species, *A. japonicus* Yoshida, Nagasaki & Hirayama, 2011, has been recorded. I newly found an additional species, *A. scotinus* (Tosquinet, 1903),

from Japan. The character states of this species have been poorly described. Thus, I redescribe this species based on Japanese and Taiwanese materials below.

Apsilops scotinus (Tosquinet, 1903)

(Standard Japanese name: Kebuka-togari-himebachi)

(Figs. 1B, 3C, 5A–C)

Cryptus scotinus Tosquinet, 1903: 229.

Description. Female (n=3). Body length 7.0 mm, covered with dense silver setae except for smooth T1 (Figs. 5A–C).

Head 0.5 times as long as wide. Clypeus 0.5 times as long as wide, strongly convex (Fig. 1B), densely punctate except for flattened lower margin. Face 0.4–0.5 times

as long as wide, mat, weakly convex medially (Fig. 1B). Frons slightly concave, with smooth area above antennal sockets. Occipital carina complete, its lower end joined with hypostomal carina. MSL 1.0 times as long as BWM. OOL 1.0 times as long as POL. Antenna with 20 flagellomeres. F1 short, 0.7–0.8 times as long as F2 (Fig. 1B). Apical part of flagellum slightly wider than basal part (Figs. 5A, B).

Mesosoma largely mat. Epomia present, weak and short. Lateral area of pronotum without striation. Notauli distinct and deep on anterior half of mesoscutum. Scuto-scutellar groove deep, with some longitudinal striae. Scutellum weakly convex. Epicnemial carina distinct, its dorsal end not joined with anterior margin of mesopleuron and subalar prominence. Propodeum with well-developed carinae (Fig. 5C). Propodeal spiracle round. Area superomedia longer than wide (Fig. 5C). Propodeal apophysis well developed (Figs. 5A–C). Fore wing length 5.0 mm. Areolet large, hexagonal, with almost parallel sides. Nervulus based on basal vein (Fig. 5A). Nervellus intercepted anterior to midpoint. Hind femur 4.7–4.9 times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 3.8–4.0, 1.2–1.5, 0.8 and 2.0–2.1.

Metasoma densely finely punctate except for T1. T1 1.75–1.8 times as long as maximum width, smooth, with a pair of small triangular teeth at base. Median dorsal carina of T1 complete or sometimes narrowly obsolete behind spiracle. Dorsolateral carina of T1 complete. T2 0.7 times as long as maximum width. Ovipositor sheath 0.75–0.8 times as long as hind tibia. Apex of ovipositor as Fig. 3C.

Coloration (Figs. 5A–C). Body (excluding wings and legs) black, except for: labrum reddish brown; palpi whitish yellow; basal part of flagellum slightly tinged with reddish brown; scutellum yellow; posterior margin of T2 and T3 narrowly and slightly tinged with reddish brown; T7 white; ovipositor reddish brown. Wings hyaline, except for: veins and pterostigma blackish brown to black except for yellowish brown wing base. Legs reddish brown, except for: fore tarsus, apex of mid and hind femora, and mid and hind tibiae and tarsi blackish brown; hind trochantellus partly tinged with blackish brown; hind tibial spur yellowish brown; base of T1–T3 narrowly tinged with yellowish brown.

Male. Unknown.

Specimens examined. JAPAN: KPM-NK 69931, F, Kanagawa Pref., Atsugi city, Funako, 18. X. 2002, A. Koyama leg.; KPM-NK 69932, F, Okinawa Pref., Iriomotejima Is., Urauchi (paddy field), 14. V. 2008, K. Watanabe leg. TAIWAN: KU, F (det. Momoi and Yoshida), Tainan Hsien, Yuching, 17. III. 1966, K. Yano &

H. Kajita leg.

Distribution. Japan* (Honshu and Iriomotejima Is.); Taiwan*, Indonesia.

Remarks. This is the first record of this species from Japan and Taiwan. This species can be easily distinguished from *A. japonicus* by the ovipositor sheath 0.75–0.8 times as long as hind tibia (1.0–1.1 times in *A. japonicus*), the fore and mid coxae reddish brown (Fig. 5A) (black in *A. japonicus*) and the hind femur largely reddish brown (black in *A. japonicus*).

Genus *Baltazaria* Townes, 1961

Baltazaria Townes, 1961 in Townes *et al.*, 1961: 472. Type species: *Cryptus tribax* Tosquinet, 1903. Original designation.

In Japan, following two species have been recorded. I recognize some new distribution records and record these data below.

Baltazaria albomaculata Momoi, 1970

Baltazaria albomaculata Momoi, 1970: 356.

Specimens examined. JAPAN: KPM-NK 69475–69480, 1 F and 5 M, Okinawa Pref., Iriomotejima Is., Komi, Airagawa-rindo, 14. V. 2008, K. Watanabe leg.; KPM-NK 69481, F, Okinawa Pref., Iriomotejima Is., Kanpira-falls, 12. V. 2008, T. Mita leg.

Distribution. Japan (Ishigakijima Is. and Iriomotejima Is.*).

Remarks. This is the first record of this species from Iriomotejima Island.

Baltazaria nigrescens Momoi, 1970

Baltazaria nigrescens Momoi, 1970: 358.

Specimens examined. JAPAN: KPM-NK 69482–69486, 2 F and 3 M, Kagoshima Pref., Tokunoshima Is., Tokunoshima Town, Kedoku, 21. V. 2008, K. Watanabe leg.; KPM-NK 69487, F, Okinawa Pref., Kunigami Vil., Ginama, 23. IV. 2002, H. Irei and H. Makihara leg. (MsT); KPM-NK 69488–69490, 3 M, Okinawa Pref., Kunigami Vil., Yona, 20–23. V. 2007, K. Watanabe leg. (Yellow pan trap).

Distribution. Japan (Yakushima Is., Amamioshima Is., Tokunoshima Is.* and Okinawajima Is.*).

Remarks. This is the first record of this species from Tokunoshima Island and Okinawajima Island.

Genus *Calosphyrum* Townes, 1970

Calosphyrum Townes, 1970: 272. Type species:

Calosphyrum obscurum Townes, 1970. Original designation.

In Japan, following two species have been recorded. I recognize some new distribution records and record these data below.

Calosphyrum alboorbitale Kusigemati, 1987
Calosphyrum alboorbitalis Kusigemati, 1987: 82.

Specimens examined. JAPAN: KPM-NK 69491. F, Kagoshima Pref., Tokunoshima Is., Amagi Town, 30. V. 2007, K. Watanabe leg.

Distribution. Japan (Tokunoshima Is.*, Ishigakijima Is. and Iriomotejima Is.).

Remarks. This is the first record of this species from Tokunoshima Island.

Calosphyrum bimaculatum Kusigemati, 1987
Calosphyrum bimaculatum Kusigemati, 1987: 85.

Specimens examined. JAPAN: KPM-NK 69492, F, Yamagata Pref., Mamurogawa Town, 14. VII. 2012, Y. Matsubara and K. Fukuda leg. (MsT); KPM-NK 69493, F, Niigata Pref., Nagaoka City, Suyoshi Town, Mt. Nokogiriyama, 21. VII. – 21. VIII. 2014, S. Shimizu and R. Shimizu leg. (MsT).

Distribution. Japan (Honshu*, Kyushu and Yakushima Is.).

Remarks. This is the first record of this species from Honshu.

Genus *Cryptus* Fabricius, 1804
Cryptus Fabricius, 1804: 70. Type species: *Cryptus viduatorius* Fabricius, 1804. Designated by Curtis (1837).
Eucryptus Haldeman, 1842: 191. New name for *Cryptus*.
Itamoplex Förster, 1869: 188. Type species: *Cryptus americanus* Cresson, 1864 (= *Ischnus albitarsis* Cresson, 1864). Designated by Viereck (1914).
Plesiocryptus Cameron, 1903a: 299. Type species: *Plesiocryptus carinifrons* Cameron, 1903. Monobasic.

Cryptus spiralis (Fourcroy, 1785)
Ichneumon spiralis Fourcroy, 1785: 407.
Cryptus leucostictus Gravenhorst, 1829b: 538.
Cryptus hispanicus Habermehl, 1918: 147.

Specimens examined. JAPAN: KPM-NK 69933, F, Nagano Pref., Ueda City, Sugadaira-kogen, 26. VII. – 1.

VIII. 2015, S. Shimizu leg. (MsT); KPM-NK 69934, F, Fukui Pref., Ikeda Town, Mizuumi, Mt. Hekosan, 11. VI. 2016, S. Shimizu leg.

Distribution. Japan (Hokkaido and Honshu*); widely distributed in Palearctic region.

Remarks. This is the first record of this species from Honshu.

Genus *Dihelus* Townes, 1970
Dihelus Townes, 1970: 170. Type species: *Dihelus rufipleuris* Townes, 1970. Original designation.

In Japan, two species, *D. hylaevorus* (Momoi, 1966) and *D. niger* Gupta & Gupta (1978) have been recorded. The latter species was described based on a single female (holotype) and a single male (allotype) and Gupta & Gupta (1978) noted that this species can be distinguished from *D. hylaevorus* by the surface sculpture of face, frons and propodeum and the coloration of T1–T4. Among them, the surface sculptures on face and propodeum are subjective and I could not recognize the differences between *D. hylaevorus* and *D. niger*. The surface sculpture of frons is somewhat objective, i.e., frons with (*D. hylaevorus*) or without (*D. niger*) rugae below anterior ocellus, while this character states gradually changed in size (Figs. 1C–F). Momoi (1966) described the coloration of metasomal tergites as “tergites 1 through 4, and an apicomedian large spot on tergite 8, white.” but paratypes and additional materials of *D. hylaevorus* indicate that this sentence may be “posterior margin of tergites 1 through 4...”. Gupta & Gupta (1978) referred this character states of *D. hylaevorus* without correction and thus the differences of T1–T4 between *D. hylaevorus* and *D. niger* are based on incorrect information. By the above reasons, I conclude that both species are same and *D. niger* is newly synonymized under *D. hylaevorus* (**syn. nov.**).

Dihelus hylaevorus (Momoi, 1966)
 (Figs. 1I, 2N, 3D, 6A–E)
Caenocryptus hylaevorus Momoi, 1966: 159.
Dihelus niger Gupta & Gupta, 1978: 561. **Syn. nov.**

Description. The original description of this species and *D. niger* (Momoi, 1966; Gupta & Gupta, 1983) lacks some important character states. Thus, I redescribe this species below.

Female (n=14). Body length 6.0–10.0 mm, covered with silver setae.

Head 0.65 times as long as wide. Clypeus 0.45–0.5 times as long as wide, punctate. Face 1.7–1.8 times as long as

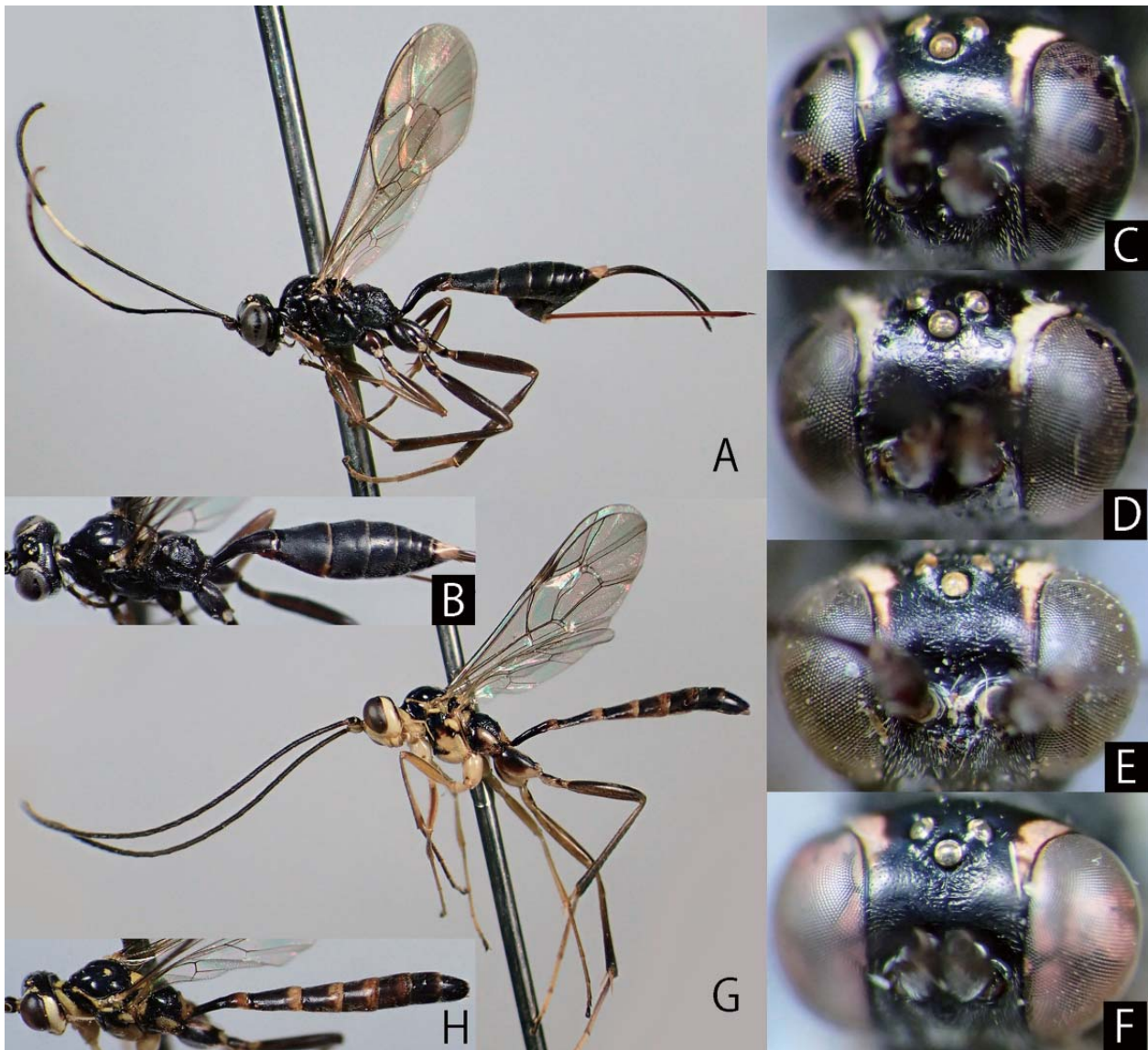


Fig. 6. *Dihelus hylaeovorus* (Momoi, 1966), KPM-NK 69937 (A, B, D), 69945 (C), 69938 (G, H), MNHAH (E, paratype of *D. hylaeovorus*) and NIAES (F), females (A–F) and male (G, H) — A, G, habitus, lateral view; B, H, head, mesosoma and metasoma, dorsolateral view; C–F, frons, frontal view.

wide, mat, partly punctate, slightly convex medially. Frons slightly concave, sparsely punctate except for smooth area above antennal sockets, sometimes covered with weak rugae below anterior ocellus (Figs. 6D–F). Occipital carina complete, its lower end joined with hypostomal carina. Lower tooth of mandible 1.5 times as long as upper tooth. MSL 0.6–0.8 times as long as BWM. OOL 1.6–2.0 times as long as OD. POL 1.0–1.3 times as long as OD. Antenna with 22–24 flagellomeres. F1 1.0–1.05 times as long as F2.

Mesosoma polished. Epomia present. Lateral area of pronotum punctate, with striation posteriorly. Notauli distinct and deep on anterior 0.66 of mesoscutum. Scutellum weakly convex. Epicnemial carina distinct, its dorsal end close to subalar prominence. Mesopleuron with striae along epicnemial carina, subalar prominence and speculum. Metapleuron punctate, partly covered

with somewhat transversely arranged rugae. Propodeum with anterior transverse carina, posterior transverse carina, pleural carina and basal section of lateromedian longitudinal carina. Area anterior to anterior transverse carina punctate. Other area of propodeum covered with irregular rugae. Propodeal apophysis apparently absent. Propodeal spiracle round. Fore wing length 5.0–8.0 mm. Areolet medium-sized, hexagonal, with sides convergent anteriorly (Fig. 1I). Nervulus opposite to basal vein. Nervellus intercepted anterior to midpoint. Fore tibia with a bulge except for basal 0.25. Hind femur 5.5–5.7 times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 4.5–4.8, 1.2, 0.5–0.6 and 1.2.

Metasoma mat. T1 2.5–2.8 (2.1 in a single case) times as long as maximum width, without a pair of small triangular teeth at base. Median dorsal carina of T1 absent.

Dorsolateral carina of T1 complete or partly narrowly indistinct. T2 0.9–0.95 times as long as maximum width. In lateral view, posterior margin of T8 truncate, its dorsal corner almost right angle (Fig. 2N). Ovipositor sheath 1.2–1.25 times as long as hind tibia. Apex of ovipositor as Fig. 3D.

Coloration (Figs. 6A–F). Body (excluding wings and legs) black, except for: clypeus sometimes tinged with reddish brown; mandible tinged with reddish brown medially; palpi blackish brown; F6–F9 (sometimes also F10) with a white band; facial orbit and ventral part of frontal orbit sometimes tinged with reddish brown; dorsal part of frontal orbit and vertical orbit white; median part of collar tinged with yellowish brown; antenna without a white band; scutellum, postscutellum, posterior part of tegula and subalar prominence with a yellow to whitish yellow spot; posterior margin of T1–T7 narrowly white to reddish yellow; posterior part of T8 and carci white to whitish yellow; ovipositor reddish brown. Wings hyaline; veins and pterostigma blackish brown to brown except for yellow wing base. Legs black to blackish brown, except for: fore and mid coxae sometimes with a small yellow area; tibial spurs yellowish brown.

Male (n=10). Similar to female except for coloration of body (excluding wings) and legs. Body sculpture weaker than female. Face 1.6–1.7 times as long as wide. OOL 1.5–1.8 times as long as OD. F1 1.1–1.15 times as long as F2. F13–F15 (usually also F16) with a tyloid. Fore tibia without a bulge. Hind femur 5.8–6.2 times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 3.4–3.8, 1.2–1.3, 0.6–0.7 and 0.8–0.9. T1 4.0–4.7 times as long as maximum width. T2 1.95–2.3 times as long as maximum width. Body (excluding wings and legs) black, except for: face, clypeus, all orbits (sometimes except for dorsal end of temporal orbit), malar space, ventral part of scape and pedicel, collar, posterodorsal corner of pronotum, posterior area of propleuron, median spot of mesoscutum (indistinct in a few cases), scutellum, postscutellum, subalar prominence and posteroventral area of mesopleuron yellow; mesosternum, metapleuron, posterior part of propodeum partly tinged with yellow to reddish brown; posterior margin of T1–T7 tinged with reddish brown (Figs. 1G, H). Fore and mid legs whitish yellow to yellowish brown. Hind leg brown to yellowish brown (Fig. 1G). Ventral area of hind coxa, hind trochanter and hind trochanterillus, and hind TS1–TS4 paler than other area of hind leg.

Specimens examined. JAPAN: NIAES, F, Iwate Pref., Mt. Hayachine, 2–8. VIII. 1989, M. Sharkey and H. Makihara leg. (MsT); MNHAH, F, Niigata Pref.,

Kurokawa, 16. IX. 1960, K. Baba leg.; KPM-NK 69935, F, Niigata Pref., Nagaoka City, Suyoshi Town, Mt. Nokogiriyama, 7. VI. 2014, S. Shimizu leg.; KPM-NK 69936, M, Niigata Pref., Myokou City, Suginosawa, Mt. Sasagamine, 17. VIII. 2013, S. Shimizu leg.; KPM-NK 69937, 69938, 1 F & 1 M, Niigata Pref., Sado Is., Kanaishinpo, Mt. Hakuundai to Mt. Myokenzan, 4. VIII. 2009, K. Watanabe leg.; KPM-NK 69939, F, Tochigi Pref., Kuroiso City, Sugiatado, 2. X. 2000, E. Katayama leg.; KPM-NK 69940–69943, 4 M, Ibaraki Pref., Tsukuba City, Oda, Mt. Hokyosan, 18. V. 2014, S. Shimizu leg.; AEIC, F (holotype of *D. niger*), Nagano Pref., Kamikochi, 22. VII. 1954, Townes family leg.; KPM-NK 69944, M, Nagano Pref., Outaki Vil., Mt. Ontakesan, 5. VIII. 2010, K. Watanabe leg.; MNHAH, M (paratype of *D. hylaevorus*), Hyogo Pref., Sasayama, 10. V. 1951, K. Iwata leg.; MNHAH, F (paratype of *D. hylaevorus*), *ditto*, 29. V. 1951; MNHAH, F, *ditto*, 6. V. 1960; MNHAH, F (paratype of *D. hylaevorus*), Hyogo Pref., Tamba, Ryuzoji, 3. V. 1957, K. Iwata leg.; MNHAH, M (paratype of *D. hylaevorus*), Hyogo Pref., Sasayama, Okano, 10. VI. 1960, K. Iwata leg.; MNHAH, 2 F & 1 M (paratypes of *D. hylaevorus*), *ditto*, 16. VI. 1960; KPM-NK 69945, F, Tottori Pref., Wakasa Town, Mt. Hyonosen, 6. VIII. 2011, K. Watanabe leg.; MNHAH, M, Fukuoka Pref., Mt. Hikosan, 25. V. 1956, S. Momoi leg.

Distribution. Japan (Hokkaido, Rebun Is., Honshu, Sado Is.* and Kyushu).

Remarks. This is the first record of this species from Sado Island. The description about male of *D. niger* (allotype) is largely differed from male of *D. hylaevorus* (body black without yellow stripe and punctures). Gupta & Gupta (1978) did not examine the types of *D. hylaevorus* and did not proposed the description about male of *D. hylaevorus*. Thus, I think that the male of *D. niger* may be other species.

Genus *Eurycryptus* Cameron, 1901

Eurycryptus Cameron, 1901: 231. Type species:

Eurycryptus laticeps Cameron, 1901. Monobasic.

Alriada Cameron, 1911a: 176. Type species: *Alriada spilocephala* Cameron, 1901. Monobasic.

Neotorbda Uchida, 1932a: 153. Type species: *Torbda* (*Neotorbda*) *sakaguchii* Uchida, 1932. Original designation.

Didiaspis Seyrig, 1952: 189. Type species: *Didiaspis fundamentalis* Seyrig, 1952. Original designation.

In Japan, the following two species have been recorded. I recognize some new distribution records and record these data below. In addition, I examined the types of

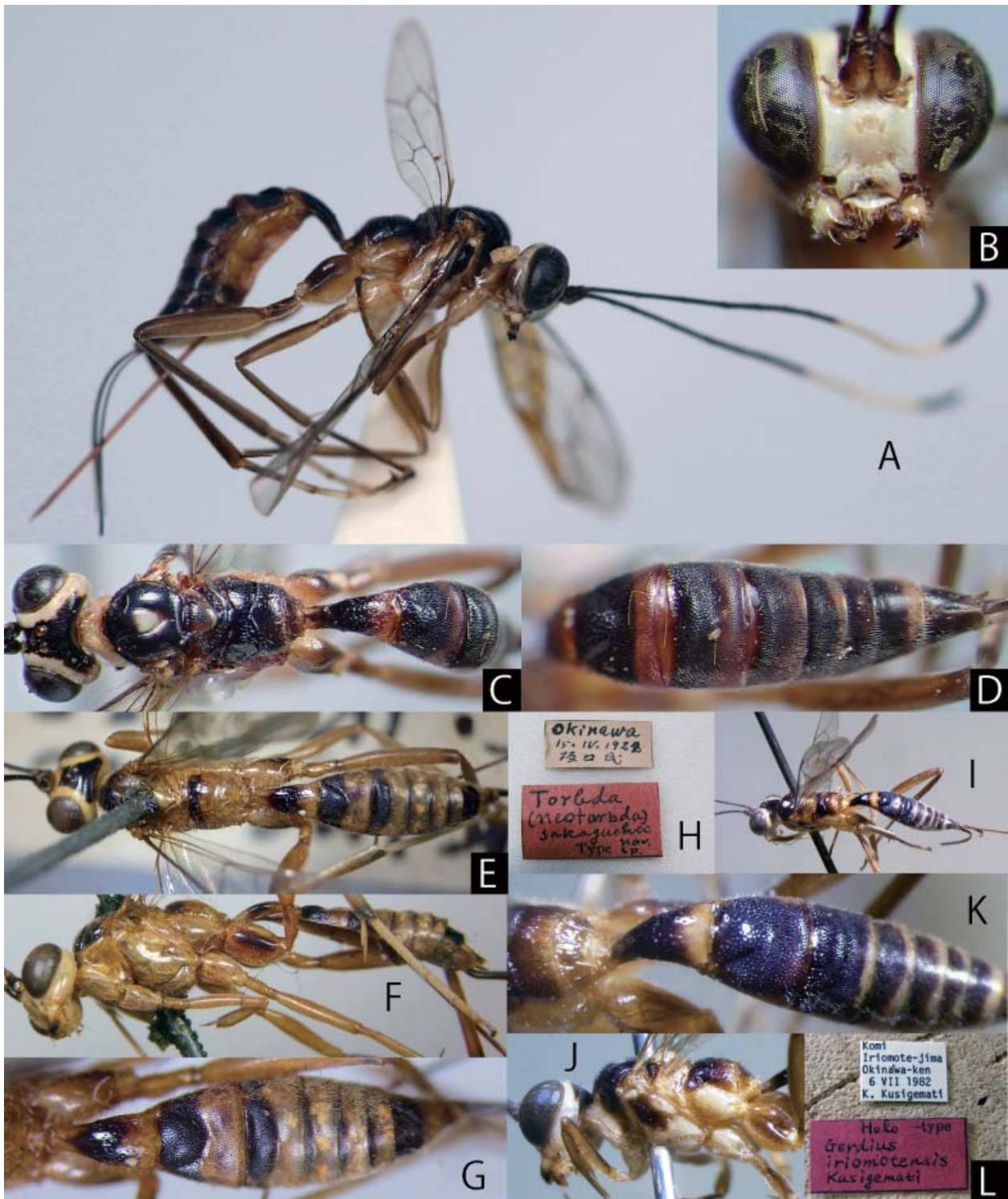


Fig. 7. *Eurycryptus sakaguchii* (Uchida, 1932), NIAES (A–D), SEHU (E–H, holotype of *E. sakaguchii*; I–L, holotype of *Gerdius iriomotensis* Kusigemati, 1986), females — A, habitus, lateral view; B, head, frontal view; C, E, F, I, head, mesosoma and metasoma, dorsal (C, E), lateral (F) and dorsolateral (I) view; D, G, K, metasoma, dorsal view; J, head and mesosoma, lateral view; H, L, labels.

Gerdius iriomotensis Kusigemati, 1986 (Figs. 7I–L), and found misidentification of the generic position. Original description of this species notes that this species with a pleural carina of propodeum present between anterior transverse carina, while this is misregard based on the concavity with refraction of light for pleural carina. The pleural carina of this species absent (Figs. 2A, D) and thus

the generic position should be placed in *Eurycryptus*. Kusigemati (1986) recorded Afrotropic genus, *Gerdius* Townes, 1970, from Oriental region based on this species and no additional species had been recorded from this region. Thus the distribution record of *Gerdius* in Oriental region is deleted here.

Eurycryptus sakaguchii (Uchida, 1932) is one of

rare species in Japanese cryptini and only a single female (holotype) from “Okinawa” collected in 1922 (Figs. 7E–H), had been known from Japan. Recently I found an additional female specimen in NIAES and recognized the intraspecific color variation, i.e., blackish brown area of mesosoma and metasomal tergites varied in size (Figs. 7A, C–G, I–K). In addition, the variation shows that this species and *G. iriomotensis* are same species. The character states of both species are also overlapped. Thus, I conclude that both species are same and *G. iriomotensis* is newly synonymized under *E. sakaguchii* (**syn. nov.**).

Eurycryptus sakaguchii (Uchida, 1932)

(Figs. 2A, D, 3E, 7A–G, I–K)

Torbda (*Neotorbda*) *sakaguchii* Uchida, 1932a: 153.

Gerdius iriomotensis Kusigemati, 1986: 91. **Syn. nov.**

Description. The original description of this species (Uchida, 1932a) lacks some important character states. Thus, I redescribe this species below.

Female (n=3). Body length 8.2–11.0 mm, polished, covered with silver setae.

Head 0.65–0.7 times as long as wide. Clypeus 0.5 times as long as wide, almost flat, largely smooth, its anterior margin concave medially. Face 0.55–0.6 times as long as wide, almost flat, sparsely punctate. Frons slightly concave above antennal socket, smooth except for dorsal part sparsely punctate. Occipital carina complete, its lower end joined with base of mandible. MSL 0.4 times as long as BWM. OOL 1.5 times as long as OD. POL 0.7 times as long as OD. Antenna with 22 flagellomeres. F1 1.1 times as long as F2.

Mesosoma. Epomia present, weak and short. Lateral area of pronotum largely smooth, punctate along dorsal margin. Notauli distinct and deep, each posterior end confluent each other. Mesoscutum covered with fine punctures. Scuto-scutellar groove deep, with some longitudinal striae. Scutellum weakly convex, punctate. Epicnemial carina distinct, its dorsal end not joined with anterior margin of mesopleuron and subalar prominence. Mesopleuron largely smooth. Metapleuron punctate. Anterior transverse carina and posterior transverse carina of propodeum complete (Figs. 2A, D). Pleural carina absent except for anterior section (Figs. 2A, D). Propodeum punctate (Fig. 2D). Propodeal apophysis absent (Figs. 2A, D). Propodeal spiracle round (Figs. 2A, D). Fore wing length 5.8–7.5 mm. Areolet middle-sized, hexagonal, with sides weakly convergent anteriorly. Nervulus based on basal vein. Nervellus intercepted at midpoint. Fore tibia with a bulge except for basal 0.25. Hind femur 5.2–5.6 times as long as

maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 4.8, 1.0, 0.6 and 1.4.

Metasoma densely punctate except for T1 (Fig. 2D). T1 1.9–2.05 times as long as maximum width, sparsely punctate posteriorly, smooth anteriorly, with a pair of small obtuse (not triangular) teeth at base (Fig. 2D). Median dorsal carina of T1 absent. Dorsolateral carina of T1 present basally. T2 0.95 times as long as maximum width, with a basal median triangular convexity (Figs. 2D, 7C, E, G, K). T3 with a transverse convexity (Figs. 2D, 7G, K). Ovipositor sheath 1.15–1.3 times as long as hind tibia. Apex of ovipositor as Fig. 3E.

Coloration (Figs. 7A–G, I–K). Body (excluding wings and legs) black, except for: clypeus, face, all orbits, malar space, gena, mandible except for tip, palpi, collar, median area of pronotum, a median spot of mesoscutum, mesopleuron except for median black area, metapleuron and posterior band of T7 yellow to reddish yellow; ventral area of scape and pedicel, posterodorsal corner of pronotum, scutellum and posterior band of T1–T6 and T8 tinged with reddish brown to yellowish brown; axillae and propodeum more or less tinged with reddish brown; F8–F16 with white band. Blackish area of mesosoma and metasoma sometimes enlarged. Wings hyaline; veins and pterostigma blackish brown to brown except for yellow wing base. Legs yellowish-brown to brown, hind coxa, hind trochanter, hind trochantellus, hind femur and hind tibia partly blackish brown.

Male. Unknown.

Specimens examined. JAPAN: SEHU, F (holotype of *Torbda sakaguchii*), Okinawa, 15. IV. 1922, Sakaguchi leg.; NIAES, F, Okinawa Pref., Ishigakijima Is., 24. X. 1986, M. Yoshida leg.; SEHU, F (holotype of *Gerdius iriomotensis*), Okinawa Pref., Iriomotejima Is., Komi, 6. VII. 1982, K. Kusigemati leg.

Distribution. Japan (Okinawajima Is., Ishigakijima Is.* and Iriomotejima Is.); Taiwan.

Remarks. This is the first record of this species from Ishigakijima Island.

Eurycryptus unicolor (Uchida, 1932)

Torbda (*Neotorbda*) *unicolor* Uchida, 1932b: 193.

Specimens examined. JAPAN: KPM-NK 5006302, F, Kagoshima Pref., Tokunoshima Is., Isen Town, Itokina, 30. V. 2007, K. Watanabe leg.; KPM-NK 5006301, M, Okinawa Pref., Iriomotejima Is., Ootomi, 15. V. 2007, T. Ban leg.; KPM-NK 5006300, M, Okinawa Pref., Yonagunijima Is., 29. V. 2003, T. Mita leg.

Distribution. Japan (Honshu, Shikoku, Yakushima Is.,

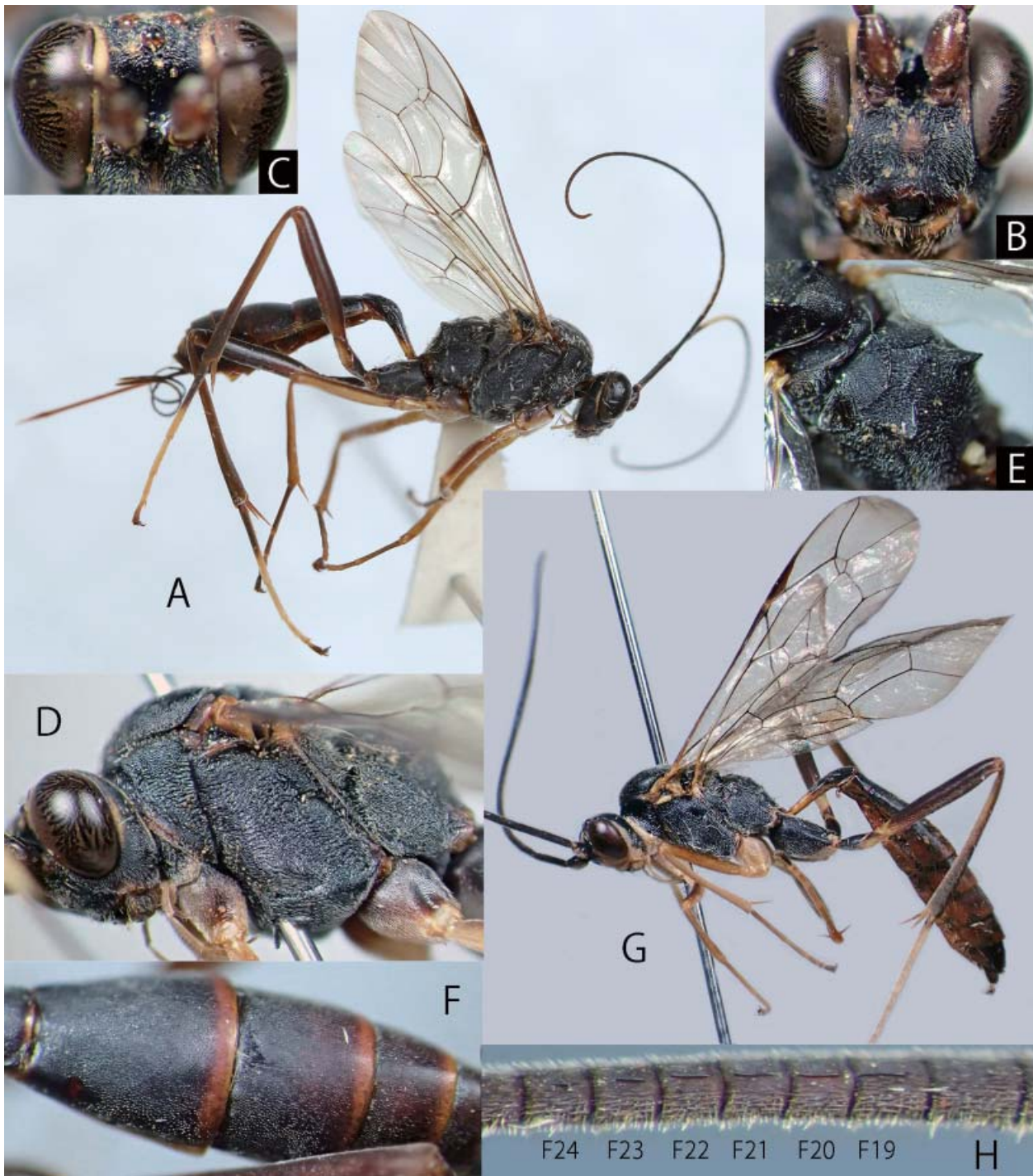


Fig. 8. *Hedycryptus ohshimensis* (Uchida, 1930), NIAES, female (A–F) and male (G, H) — A, G, habitus, lateral view; B, head, frontal view; C, frons, frontal view; D, head and mesosoma, lateral view; E, propodeum, dorsolateral view; H, lateral aspect of flagellum.

Amamioshima Is., Tokunoshima Is.*, Iriomotejima Is.* and Yonagunijima Is.*).

Remarks. This is the first record of this species from Tokunoshima Island, Iriomotejima Island and Yonagunijima Island.

Genus *Friona* Cameron, 1902

Friona Cameron, 1902a: 61. Type species: *Friona striolata* Cameron, 1902. Monobasic.

Lactolus Cameron, 1902a: 62. Type species: *Lactolus albomaculatus* Cameron, 1902. Designated by

Viereck (1914).

In Japan, following a single species has been recorded. I recognize some new distribution records and record these data below.

Friona okinawana Uchida, 1930

Friona okinawana Uchida, 1930a: 319.

Cryptus flavicoxatus Sonan, 1930: 272.

Specimens examined. JAPAN: KPM-NK 69494, F, Kagoshima Pref., Tokunoshima Is., Amagi Town, Mt. Yamatogusukuyama, 31. V. 2007, K. Watanabe leg.; KPM-NK 69495, F, Kagoshima Pref., Tokunoshima Is., Tokunoshima Town, Kedoku, 21. V. 2008, A. Sakai leg.; KPM-NK 69496, F, Okinawa Pref., Ishigakijima Is., Mt. Omotodake, 30. VIII. 1978, K. Hara leg.; KPM-NK 69497, F, Okinawa Pref., Ishigakijima Is., Shiramizu, 15. V. 2008, T. Mita leg.; KPM-NK 69498, F, Okinawa Pref., Iriomotejima Is., Kanbire-taki, 23. VIII. 1978, T. Nambu leg.

Distribution. Japan (Amamioshima Is., Tokunoshima Is.*, Okinawajima Is., Ishigakijima Is.*, and Iriomotejima Is.*); Taiwan, China and Philippines.

Remarks. This is the first record of this species from Tokunoshima Island, Ishigakijima Island and Iriomotejima Island.

Genus *Gyropyga* Townes, 1970

Gyropyga Townes, 1970: 175. Type species: *Gyropyga nigra* Townes, 1970. Original designation.

In Japan, following a single species has been recorded. I recognize some new distribution records and record these data below.

Gyropyga nigra Townes, 1970

Gyropyga(!) *nigra* Townes, 1970: 175. Generic name corrected by its erratum.

Specimens examined. JAPAN: KPM-NK 69450, F, Nagano Pref., Ueda City, Sugadaira-kogen, 3–26. IX. 2014, S. Shimizu leg. (MsT); KPM-NK 69451, F, Nagano Pref., Nagawa Town, Daimon, Utsukushimatsu, 26. VIII. 2011, S. Fujie leg.; KPM-NK 69452, F, Nagano Pref., Outaki Vil., Mt. Ontakesan, 16. IX. 2011, S. Fujie leg.

Distribution. Japan (Hokkaido and Honshu*).

Remarks. This is the first record of this species from Honshu.

Genus *Hedycryptus* Cameron, 1903

Hedycryptus Cameron, 1903a: 298. Type species: *Hedycryptus filicornis* Cameron, 1903 (= *Cryptus orientalis* Cameron, 1897). Monobasic. *Apachia* Townes, 1970: 195. Type species: *Cryptus tenuiabdionalis* Uchida, 1930. Original designation.

In Japan, a single species, *H. tenuiabdionalis* (Uchida, 1930) has been recorded. This genus apparently resembles *Cryptus* and can be separable by the following

combination of character states: petiole of T1 with terete, without longitudinal carina (Figs. 2L, M) (with ventrolateral (and in female also dorsolateral) longitudinal carina(e) in *Cryptus*: Figs. 2I–K); second recurrent vein usually simply arched (Fig. 1J) (usually weakly sinuate in *Cryptus*); front side of areolet quite narrow (moderately wide to narrow in *Cryptus*); T2 covered with rather sparse to rather dense (Fig. 8F) setae in female (covered with rather to very sparse setae in female of *Cryptus*) (Townes, 1970). I examined the holotype and additional specimens of *Cryptus ohshimensis* Uchida, 1930, and recognized that the character states of this species are completely accorded with the generic character states of *Hedycryptus*. Thus, I concluded that this species should be transferred from *Cryptus* to *Hedycryptus*. In this study, I transferred generic position of this species with redescription below.

Hedycryptus ohshimensis (Uchida, 1930) **comb. nov.**

(Figs. 1C, J, 2E, L, M, 3F, 8A–H)

Cryptus ohshimensis Uchida, 1930b: 81.

Description. The original description of this species (Uchida, 1930b) lacks some important character states. In addition, the male of this species undescribed. Thus, I redescribe this species with the data of males below.

Female (n=7). Body length 14.5–16.0 mm, mat, covered with silver setae.

Head 0.6 times as long as wide. Clypeus 0.5 times as long as wide, convex (Fig. 1C), punctate except for anterior 0.3. Face 0.5 times as long as wide, convex medially (Fig. 1C). Frons concave, covered with rugae dorsally (Fig. 8C), smooth ventrally. Occipital carina complete, its lower end joined with hypostomal carina. MSL 0.8–0.9 times as long as BWM. OOL 1.0–1.1 times as long as OD. POL 0.9–1.1 times as long as OD. Antenna with 39–40 flagellomeres. F1 1.5 times as long as F2.

Mesosoma. Epomia present. Lateral area of pronotum covered with minute rugae, with striation posteriorly (Fig. 8D). Notauli shallow but distinct on anterior half of mesoscutum. Scutellum weakly convex (Fig. 8A), densely punctate. Epicnemial carina distinct, its dorsal end not joined with anterior margin of mesopleuron and subalar prominence. Mesopleuron and metapleuron covered with minute rugae (Fig. 8D). Propodeum with anterior transverse carina, posterior transverse carina and basal section of lateromedian longitudinal carina (Fig. 8E). Pleural carina of propodeum absent except for anterior part. Propodeal apophysis well-developed (Fig. 8E). Propodeal spiracle elongate. Fore wing length 11.5–12.5 mm. Areolet present, hexagonal, with sides convergent anteriorly (Figs.

1J, 8A). Second recurrent vein simply arched (Figs. 1J, 8A). Nervulus opposite to basal vein (Fig. 8A). Nervellus intercepted posterior to midpoint (Fig. 8A). Hind femur 6.3–6.4 times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 4.0–4.2, 1.1–1.2, 0.5–0.6 and 0.9–1.1.

Metasoma. T1 2.3–2.6 times as long as maximum width, without a pair of small triangular teeth at base, terete anteriorly (Figs. 2E, L, M). Median dorsal carina of T1 absent except for longitudinal keel of postpetiole (Figs. 2E, L). Dorsolateral carina of T1 absent anteriorly, present posteriorly. T2 1.0–1.1 times as long as maximum width, covered with fine and dense setae (Fig. 8F). Ovipositor sheath 1.05–1.1 times as long as hind tibia. Apex of ovipositor as Fig. 3F.

Coloration (Figs. 8A–F). Body (excluding wings and legs) black, except for: mandible, clypeus, median part of face, scape and pedicel partly tinged with reddish brown to yellow; dorsal part of F4–F8 (sometimes also F3 and F9) white; dorsal part of facial orbit, frontal orbit and vertical orbit yellow; temporal orbit narrowly yellow; median part of anterior margin of collar tinged with yellow; tegula brown; base of T1 and S1 yellowish brown; posterior margin of T2–T7 narrowly tinged with reddish brown; thyridium and ovipositor reddish brown. Wings hyaline; veins and pterostigma blackish brown to brown except for yellow wing base. Legs black to blackish brown, except for: fore and mid legs except blackish brown area of coxae yellowish brown to brown; fore and mid coxa sometimes tinged with brown; ventral part of hind trochanterellus yellowish brown; hind femur, tibia and tibial spurs brown; apical part of hind TS1, TS2–TS4 and base of TS5 white to whitish yellow.

Male (n=2). Similar to female (Fig. 8G). MSL 0.6 times as long as BWM. F1 1.3–1.35 times as long as F2. F19–F23 (sometimes also F24) with a tyloid (Fig. 8H). Hind femur 6.7–7.0 times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 3.6–3.7, 1.3–1.4, 0.6 and 0.9. T1 3.95 times as long as maximum width. T2 2.25–2.4 times as long as maximum width. Body (excluding wings and legs) black, except for: face, clypeus, all orbits except for dorsal end of temporal orbit, malar space, ventral part of scape and pedicel, collar, posterodorsal corner of pronotum, posterior area of propleuron, scutellum, tegula and subalar prominence yellow; mesopleuron and mesosternum sometimes with yellow spot(s); coloration of metasoma similar to female but T4–T7 sometimes largely tinged with reddish brown. Legs paler than female. Hind coxa with yellow area ventrally and sometimes also basodorsally. Hind TS1 white

to whitish yellow except for narrow brown area at base.

Specimens examined. JAPAN: SEHU, F (holotype), Tokyo, Izu-Oshima Is., 25. V. 1924, M. Yamanaka leg.; NIAES, 6 F & 2 M, Tokyo, Izu Islands, Toshima Is., 23. X. 1975 (host collect), II. 1976 (emerged), Y. Umeda leg.

Distribution. Japan (Izu-Oshima Is. and Toshima Is.*).

Bionomics. In NIAES, a label with “*Trachysphyrus* sp. ex. *Descoreba simplex* BUTL. pupa” put on along the above specimens from Toshima Island. If the combination between specimens and this label is true, *Descoreba simplex* Butler, 1878 (Geometridae) is the host of this species.

Remarks. This is the first record of the male of this species. This species resembles *H. tenuiabdominalis* but can be distinguished by the following combination of character states: body large, more than 14.5 mm (usually less than 14.0 mm in *H. tenuiabdominalis*); base of T1 with a conspicuous yellow area (Figs. 8A, G) (completely black in *H. tenuiabdominalis*); F19–F24 with a tyloid in male (Fig. 8H) (from F15 or F16 to F22 or F23 in male of *H. tenuiabdominalis*).

Genus *Ischnus* Gravenhorst, 1829

Ischnus Gravenhorst, 1829a: 638. Type species: *Ichneumon porrectorius* Fabricius, 1787 (= *Ichneumon inquisitorius* Müller, 1776). Designated by Westwood (1840).

Habrocryptus Thomson, 1873: 498. Type species: *Ichneumon porrectorius* Fabricius, 1787 (= *Ichneumon inquisitorius* Müller, 1776). Designated by Viereck (1914).

Aglaocryptus Cameron, 1903b: 31. Type species: *Aglaocryptus curvimaculatus* Cameron, 1903. Designated by Viereck (1914).

Erythrocryptus Cameron, 1905b: 126. Type species: *Erythrocryptus rufus* Cameron, 1905 (= *Cryptus atricollaris* Walsh, 1873). Monobasic.

In Japan, two species, *I. homonae* (Sonan, 1930) and *I. yezoensis* (Uchida, 1936), have been recorded. I found a new species from Japan and newly describe this species below.

Ischnus splendens sp. nov.

(Standard Japanese name: Nishiki-togari-himebachi)

(Figs. 1D, E, K, 2F, 3G, 9A–J)

Holotype. KPM-NK 69406, F, JAPAN, Kagoshima Pref., Tokunoshima Is., Tete, Mt. Amagi-dake, 27. III. 2011, K. Watanabe leg.

Paratypes. JAPAN: KPM-NK 69407, F, Chiba Pref., Kamogawa City, Mt. Kiyosumiyama, 26. VII. 2004, K. Kubo leg.; KPM-NK 69408, F, Chiba Pref., Kamogawa

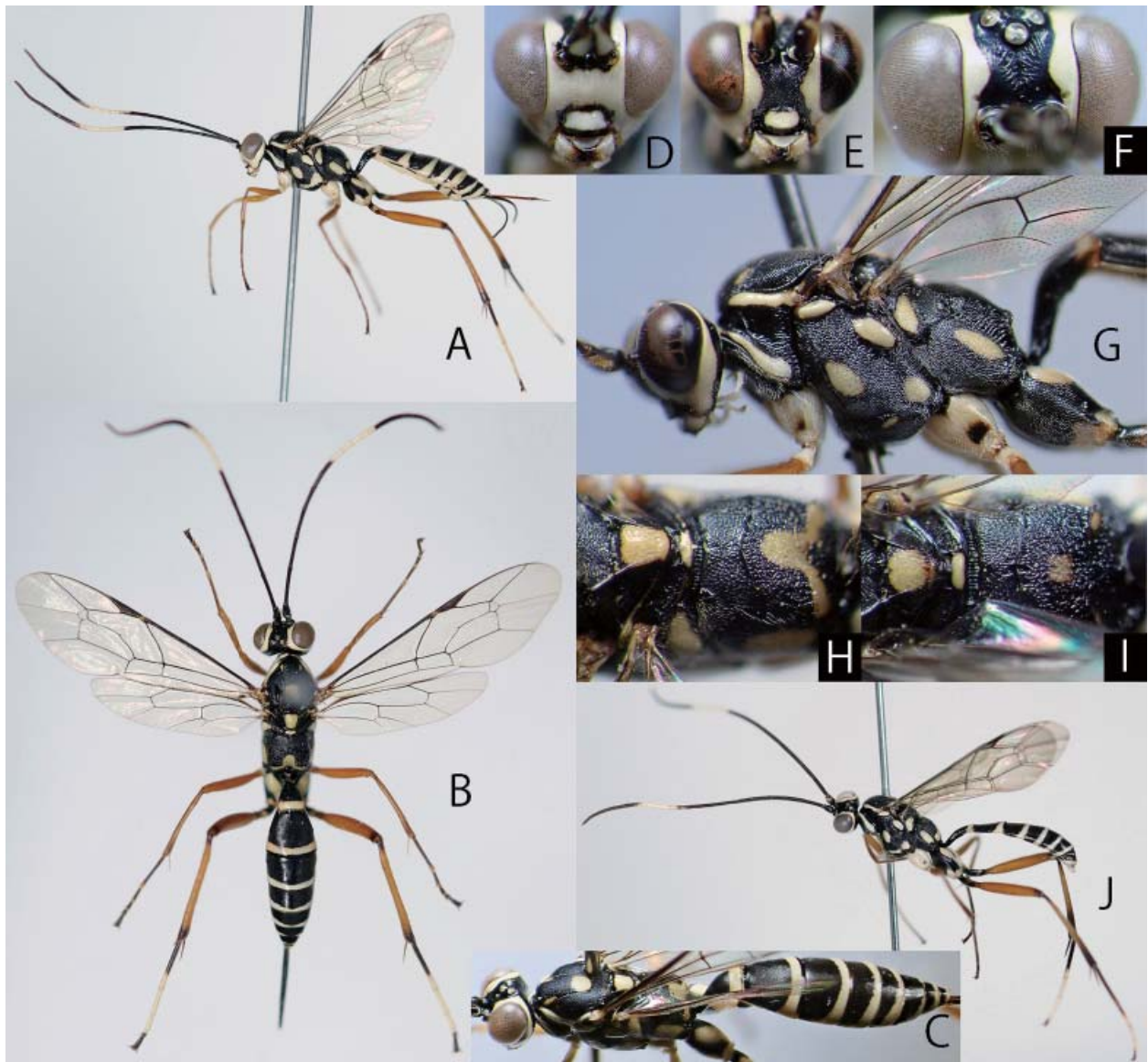


Fig. 9. *Ischnus splendens* sp. nov., KPM-NK 69406 (A, C, D, F), 69408 (B, H), 69409 (E, G, I) and 69434 (J), females (A–I) and male (J)
 — A, B, J, habitus, lateral (A, J) and dorsal (B) view; C, head, mesosoma and metasoma, dorsolateral view; D, E, head, frontal view; F, frons, frontal view; G, head and mesosoma, lateral view; H, I, scutellum, postscutellum and propodeum, dorsal view.

City, Mt. Uchiurayama, 21. V. 2005, K. Kubo leg.; KPM-NK 69409, F, Kanagawa Pref., Odawara City, Hayakawa, Shiroganerindo, 23. V. 2015, R. Kaga leg.; KPM-NK 69410, F, Fukuoka Pref., Mt. Tachibana, 13. V. 1976, Y. Kanamaru leg.; KPM-NK 69411, F, Kagoshima Pref., Miyanojyo Town, Mt. Shibisan, 25. V. 2007, T. Maeda leg.; KPM-NK 69412, F, Kagoshima Pref., Yakushima Is., Aikodake, 27–30. III. 2007, T. Yamauchi leg. (MsT); KPM-NK 69413, F, *ditto*, 2. V. – 10. V. 2007; NIAES, F, Kagoshima Pref., Amamioshima Is., Mt. Yuwandake, 29. IV. 1953, T. Shiraki leg.; NIAES, F, *ditto*, 3. V. 1953; NIAES, F, *ditto*, 4. V. 1953; KPM-NK 69414–69416, 2 F & 1 M, Kagoshima Pref., Amamioshima Is., Mt. Yuidake, 27. VII. 2004, H. Makihara leg. (MsT); KPM-NK 69417, F, *ditto*, 10. VIII. 2004; KPM-NK 69418, 69419, 2 F, *ditto*, 24. VIII. 2004; KPM-NK 69420, F, *ditto*, 19. IX.

2004; KPM-NK 69421, F, *ditto*, 14. X. 2004; KPM-NK 69422–69426, 5 M, Kagoshima Pref., Amamioshima Is., Yamato Vil., Oodana, 3. VI. 2007, K. Watanabe & M. Gunji leg.; KPM-NK 69427, F, *ditto*, 4. VII. 2011, S. Fujie leg.; KPM-NK 69428–69430, 3 F, *ditto*, H. Sawada leg.; KPM-NK 69431, M, same locality of holotype, 25–31. V. 2007, K. Watanabe leg. (MsT); KPM-NK 69432–69441, 10 M, Kagoshima Pref., Tokunoshima Is., Tokunoshima Town, Kedoku, 21. V. 2008, K. Watanabe & A. Sakai leg.; KPM-NK 69442, F, same data of holotype.

Description. Female (n=23). Body length 7.5–11.0 (HT: 10.5) mm, covered with silver setae.

Head 0.6 times as long as wide. Clypeus 0.55 times as long as wide, convex, punctate dorsally, smooth ventrally, anterior margin sharp (Figs. 1D, E). Face 0.5–0.55 (HT: 0.5) times as long as wide, mat, covered with punctures.

Frons almost flat, sparsely punctate laterally, smooth ventrally, with irregular rugae mediodorsally (Fig. 9F). Occipital carina complete, its lower end joined with hypostomal carina. MSL 1.0–1.1 (HT: 1.0) times as long as BWM. OOL 1.1–1.3 (HT: 1.2) times as long as OD. POL 1.1–1.2 (HT: 1.1) times as long as OD. Antenna with 30–33 (HT: 30) flagellomeres. F1 1.2–1.25 (HT: 1.2) times as long as F2.

Mesosoma polished. Epomia present. Lateral area of pronotum largely covered with longitudinal striae (Fig. 9G), punctate dorsally and ventrally. Notauli distinct and shallow on anterior half of mesoscutum. Mesoscutum covered with transverse or irregular rugae medially. Scutellum slightly convex, punctate, with a few longitudinal striae, its lateral margin with carina except for apex (Figs. 9H, I). Epicnemial carina distinct, its dorsal end not joined with anterior margin of mesopleuron and subalar prominence. Mesopleuron largely covered with irregular rugae (Fig. 9G) except for smooth speculum and longitudinal striation behind subalar prominence. Metapleuron punctate, partly covered with somewhat transversely arranged rugae. Propodeum with anterior transverse carina, lateral section of posterior transverse carina and anterior section of pleural carina (Figs. 9G–I), covered with irregular rugae except for area anterior to anterior transverse carina punctate (Figs. 9H, I). Propodeal apophysis obtuse, lobe-like (Fig. 9G). Propodeal spiracle oval. Fore wing length 6.0–8.5 (HT: 7.5) mm. Areolet large, hexagonal, with sides convergent anteriorly (Figs. 1K, 8B). Nervulus opposite to or slightly based on basal vein (Fig. 9B). Nervellus intercepted posterior to midpoint (Figs. 9B, G). Hind femur 5.8–6.5 (HT: 6.4) times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 4.1, 1.2, 0.6–0.7 (HT: 0.6) and 1.0.

Metasoma mat. T1 2.0–2.05 (HT: 2.05) times as long as maximum width, with a pair of small triangular teeth at base (Fig. 1F). Median dorsal carina of T1 absent (Fig. 1F). Dorsolateral carina of T1 absent anteriorly, present behind spiracle. T2 0.85–1.05 (HT: 0.9) times as long as maximum width. Ovipositor sheath 0.8–0.85 (HT: 0.8) times as long as hind tibia. Apex of ovipositor as Fig. 3G.

Coloration (Figs. 9A–I). Body (excluding wings and legs) black, except for: clypeus except for all margins, face, all orbits, malar space, ventral area of scape and pedicel, mandible except for apex, palpi, collar, dorsal margin of pronotum, a pair of small spot and a median spot of mesoscutum, scutellum, postscutellum, tegula, subalar prominence, an anterior spot of mesopleuron, a longitudinal stripe of mesopleuron and mesosternum, two spots of metapleuron, a spot of propodeum and

posterior band of T1–T8 whitish yellow to yellow; F7–F11 (sometimes also F6, F12 and F13) with a white band; ovipositor reddish brown. Wings hyaline; veins and pterostigma brown except for yellow wing base; base of stigma tinged with yellow. Legs reddish brown, except for: fore and mid coxae, trochanters and trochanteli whitish yellow to yellow; fore and mid tarsi partly tinged with brown; fore and mid coxae black at base; hind coxa black with whitish yellow to yellow markings basodorsally and ventrally; hind trochanter black basally, whitish-yellow to yellow apically; hind trochantellus partly tinged with brown; apex of hind femur, base and apex of hind tibia, hind tibial spurs, base of hind TS1 and TS5 blackish brown. In specimens collected in Honshu and Kyushu sometimes show the following variation: face with a median longitudinal black band; whitish yellow to yellow area of mesosternum and propodeum largely reduced in size and often divided into two or three spots; fore and mid coxae with a conspicuous black spot.

Male (n=18). Similar to female (Fig. 9J). Body length 7.0–10.5 mm. Face 0.6 times as long as wide. MSL 0.7–0.9 times as long as BWM. F11–F16 (sometimes also F17) with a tyloid. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 4.0, 1.3–1.4, 0.7–0.8 and 0.9. T1 2.7–2.75 times as long as maximum width. T2 1.2–1.5 times as long as maximum width. Mesoscutum sometimes without a pair of yellow spot anteriorly. F15–F16 (usually also F14, F17 and F18) with a white band.

Distribution. Japan (Honshu, Kyushu, Yakushima Is., Amamioshima Is. and Tokunoshima Is.).

Etymology. The specific name is from the Latin “splendens” (splendid), referring to their beautiful body coloration.

Remarks. This species apparently resembles *I. bimaculatus* Jonathan, 2006 (male unknown), from India in the body with many yellow markings and the frons with a median carina and a few longitudinal striations, but it can be easily distinguished by the following combination of character states: MSL 1.0–1.1 times as long as MSL (0.8 in *I. bimaculatus*); hind coxa with two yellow markings, one at dorsally and other at anteroventrally (with a single yellow marking dorsally). This species can be easily separable from other Japanese species, *I. homonae* and *I. yezoensis*, by the head and mesosoma with many conspicuous yellow markings (no yellow markings in both species).

Ischnus yezoensis (Uchida, 1936)

Habrocryptus assimilis f. *yezoensis* Uchida, 1936b: 41.

Specimens examined. JAPAN: KPM-NK 69443–69449, 7 F, Niigata Pref., Sado Is., Kanaishinpo, Mt. Hakuundai to Mt. Myokenzan, 4. VIII. 2009, K. Watanabe leg.

Distribution. Japan (Hokkaido, Rishiri Is., Kunashiri Is., Etorofu Is., Honshu and Sado Is.*).

Remarks. This is the first record of this species from Sado Island.

Genus *Mesostenus* Gravenhorst, 1829
Mesostenus Gravenhorst, 1829b: 750. Type species:
Mesostenus transfuga Gravenhorst, 1829. Designated
 by Westwood (1840).
Stenaraeus Thomson, 1896: 2380. Type species:
Mesostenus transfuga Gravenhorst, 1829. Designated
 by Viereck (1914).
Umlima Cameron, 1902b: 208. Type species: *Umlima*
penetrans Cameron, 1902. Monobasic.
Derocentrus Cushman, 1919: 113. Type species:
Coleocentrus texanus Ashmead, 1890 (= *Mesostenus*
longicaudis Cresson, 1872). Original designation.

In Japan, two species, *M. funebris* Gravenhorst, 1829, and *M. obtusus* Momoi, 1966, have been recorded. I recognize a new distribution record of the latter species and record its data below.

Mesostenus obtusus Momoi, 1966
Mesostenus obtusus Momoi, 1966: 165.

Specimen examined. JAPAN: KPM-NK 69453, F, Kumamoto Pref., Aso City, 21. VII. 2013, R. Murao leg.

Distribution. Japan (Hokkaido, Honshu and Kyushu*).

Remarks. This is the first record of this species from Kyushu. This species resembles *M. suigensis* Uchida, 1930, from Korea in the black body, the sculptured frons and the ovipositor with an obtuse apex, but it can be distinguished by the antenna with a white band (without a white band in *M. suigensis*). Male of this species is unknown.

Genus *Necolio* Cheesman, 1936
Necolio Cheesman, 1936: 373. Type species: *Necolio*
jugosus Cheesman, 1936. Original designation.
Afrocryptus Seyrig, 1952: 162. Type species:
Afrocryptus imperialis Seyrig, 1952. Original
 designation.

In Japan, following three species have been recorded. I recognize some new distribution records and record these data below.

Necolio aethiops Townes, Momoi & Townes, 1965
Mesostenus (Mesostenus) discoidalis Uchida, 1936a:
 12. Name preoccupied.
Necolio aethiops Townes, Momoi & Townes, 1965:
 190. New name.

Specimens examined. JAPAN: KPM-NK 69455–69459, 4 F and 1 M, Niigata Pref., Sado Is., Kanaishinpo, Mt. Hakuundai to Mt. Myokenzan, 4. VIII. 2009, K. Watanabe leg.

Distribution. Japan (Honshu, Sado Is.* and Shikoku).

Remarks. This is the first record of this species from Sado Island.

Necolio sidereus Momoi, 1970
Necolio sidereus Momoi, 1970: 359.

Specimens examined. JAPAN: KPM-NK 69460, F, Kagoshima Pref., Tokunoshima Is., Amagi Town, Amagi, 25. V. 2007, K. Watanabe leg.; KPM-NK 69461, F, Kagoshima Pref., Tokunoshima Is., Isen Town, Itogina, 30. V. 2007, K. Watanabe leg.; KPM-NK 69462, F, Kagoshima Pref., Tokunoshima Is., Tokunoshima Town, Kedoku, 20. V. 2008, K. Watanabe leg.; KPM-NK 69463, M, same locality, 21. V. 2008, A. Sakai leg.; KPM-NK 69464–69466, 3 M, Okinawa Pref., Yonagunijima Is., Mt. Kuburadake, 22. VI. 2013, M. Ito leg.; KPM-NK 69467–69472, 3 F and 3 M, same locality and collector, 25. VI. 2013.

Distribution. Japan (Amamioshima Is., Tokunoshima Is.*, Ishigakijima Is., Iriomotejima Is. and Yonagunijima Is.*).

Remarks. This is the first record of this species from Tokunoshima Island and Yonagunijima Island.

Necolio sugiharai (Uchida, 1932)
Mesostenus (Mesostenus) sugiharai Uchida, 1932a: 149.

Specimens examined. JAPAN: KPM-NK 69454, F, Kagoshima Pref., Yakushima Is., Okonotaki, 10. VI. 2007, T. Maeda leg.

Distribution. Japan (Honshu, Shikoku, Yakushima Is.*, and Amamioshima Is.).

Remarks. This is the first record of this species from Yakushima Island.

Genus *Nematopodius* Gravenhorst, 1829
 In Japan, subgenus *Nematopodius* Gravenhorst, 1829 has been recorded.

Subgenus *Nematopodius* Gravenhorst, 1829
Nematopodius Gravenhorst, 1829b: 955. Type species:

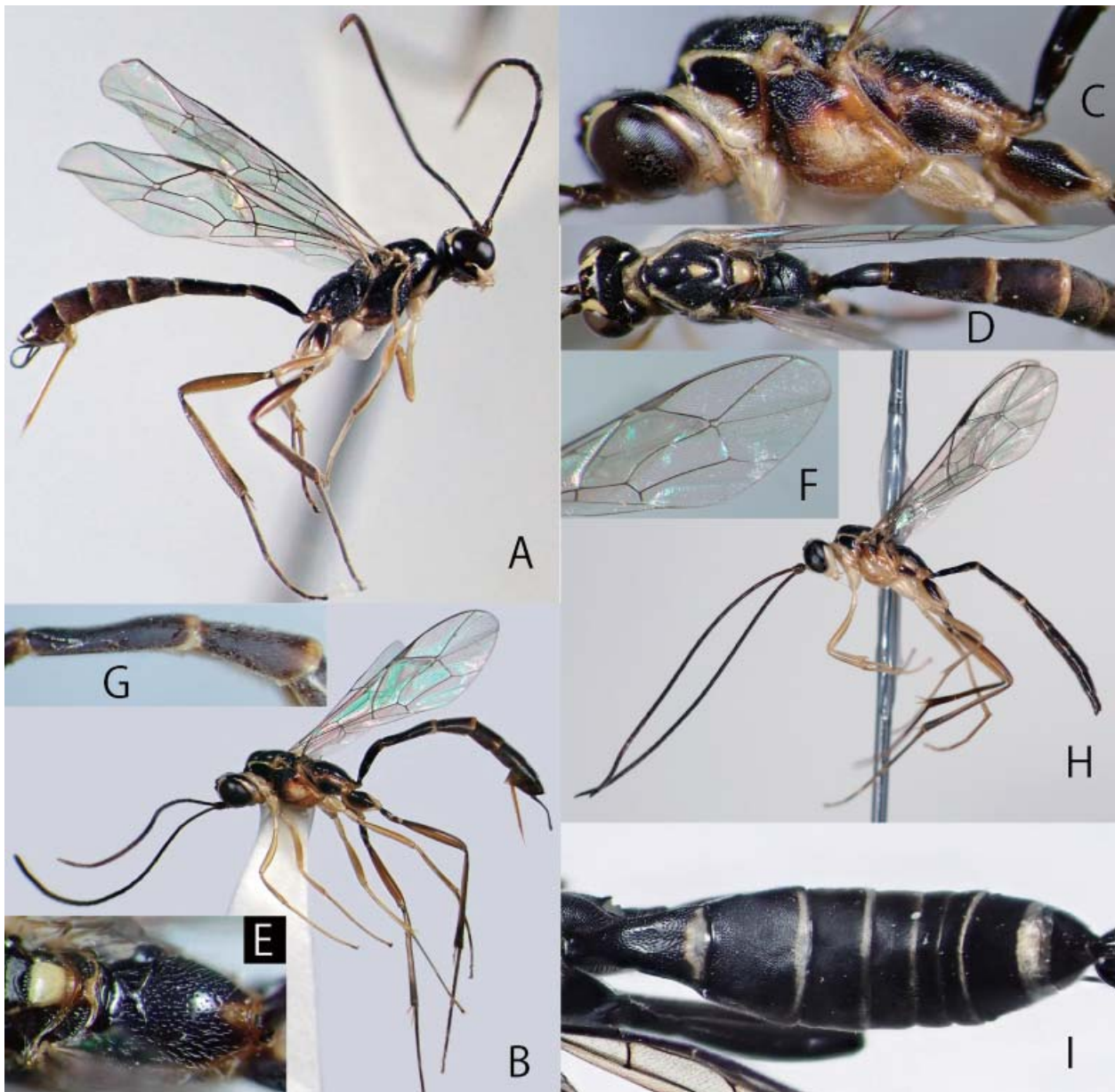


Fig. 10. *Nematopodius* (*Nematopodius*) *debilis* (Ratzeburg, 1852) (A, KPM-NK 69550), *Nematopodius* (*Nematopodius*) *montanus* sp. nov. (B–G, KPM-NK 69554; H, KPM-NK 69929) and *Pterocryptus takachihoensis* (Momoi, 1966) (I, KPM-NK 5000333), females (A–G, I) and male (H) — A, B, H, habitus, lateral view; C, head and mesosoma, lateral view; D, head, mesosoma and anterior part of metasoma, dorsal view; E, scutellum, postscutellum and propodeum, dorsal view; F, apical part of right fore wing; G, T2 and T3, lateral view; I, metasomal tergites, dorsal view.

Nematopodius formosus Gravenhorst, 1829.
Designated by Viereck (1914).

Leptocryptus Cameron, 1903b: 14. Name preoccupied by Thomson, 1873. Type species: *Leptocryptus longiventris* Cameron, 1903. Monobasic.

Hemiphatnus Cameron, 1911b: 63. Type species: *Hemiphatnus nigripalpis* Cameron, 1911. Designated by Viereck (1914).

Pseudopimpla Fahringer, 1935 in Schmitschek, 1935: 147. Type species: *Pseudopimpla anisandri* Fahringer, 1935 (= *Nematopodius formosus* Gravenhorst, 1829). Monobasic. Name preoccupied.

In Japan, three species, *N. flavoguttatus* Uchida, 1930,

N. kusigematii Momoi, 1970, and *N. oblongs* Momoi, 1966, have been recorded. I found a new species and a newly recorded species from Japan. I newly describe and record them below.

Nematopodius* (*Nematopodius*) *debilis
(Ratzeburg, 1852)

(Standard Japanese name: Hime-hoso-togari-himebachi)
(Fig. 10A)

Mesostenus debilis Ratzeburg, 1852: 143.

Mesostenus tricolor Haupt, 1954: 115.

Mesostenus homonymator Aubert, 1959: 146.

Specimens examined. JAPAN: KPM-NK 69550, F, Yamanashi Pref., Hokuto City, Masutomi, Biwakubosawa, 28. VII. – 7. VIII. 2007, K. Watanabe leg. (MsT); KPM-NK 69551, F, Yamanashi Pref., Koushu City, Hikawa, 15. VII. 2010, K. Watanabe leg.; KPM-NK 69552, M, Nagano Pref., Outaki Vil., Mt. Ontakesan, 9. VIII. 2007, K. Watanabe leg.; KPM-NK 69553, F, Fukui Pref., Tsuruga City, Kinome-toge, 9. VII. 1981, H. Kurokawa leg. GERMANY: ZSM, F (det. by Horstmann), Germany, Kiel, 6. X. 1962; ZSM, M (det. by Horstmann), Germany, Wurzburg, 1. VI. 1971.

Distribution. Japan* (Honshu); Europe.

Remarks. This is the first record of this species from Japan and Eastern Palearctic region. The Japanese specimens well shared with the character states of European specimens of *N. debilis* proposed by Horstmann (1990) except for two variations. i.e., the white band of antenna is absent (Fig. 10A) (usually present a small white band in European specimens) and the mesopleuron black dorsally (Fig. 10A) (usually largely reddish brown in European specimens). In this study, I conclude that these variations are intraspecific variation of this species, however further studies are needed to revise the taxonomic status of Japanese population.

***Nematopodius (Nematopodius) montanus* sp. nov.**

(Standard Japanese name: Miyama-hoso-togari-himebachi)
(Figs. 1F, 3H, 10B–H)

Holotype. KPM-NK 69554, F, JAPAN, Gunma Pref., Katashina Vil., Mt. Hotakasan, 2. VIII. 2007, K. Watanabe leg.

Paratypes. JAPAN: KPM-NK 69581, F, Hokkaido, Sapporo City, Mt. Maruyama, 28. VII. 2009, K. Watanabe leg.; KPM-NK 69582, F, Kanagawa Pref., Yamakita Town, Mt. Komotsurushiyama, 20. VIII. 2014, T. Taniwaki leg.; KPM-NK 69583, F, Yamanashi Pref., Hokuto City, Masutomi, Biwakubosawa, 28. VII. – 7. VIII. 2007, K. Watanabe leg. (MsT); KPM-NK 69584, F, Yamanashi Pref., Katsunuma Town, Ootakifudo, 4. VIII. 2008, K. Watanabe leg.; KPM-NK 69585, F, Tochigi Pref., Nasushiobara City, Ookawa-rindo, 28. VII. – 11. VIII. 2010, T. Nakayama leg. (MsT); KPM-NK 69928, F, *ditto*, 25. VIII. – 13. IX. 2010; KPM-NK 69929, M, Nagano Pref., Outaki Vil., Mt. Ontakesan, 8–9. VIII. 2014, S. Shimizu leg. (MsT).

Description. Female (n=7). Body length 7.5–9.5 (HT: 9.0) mm, polished, covered with silver setae.

Head 0.65–0.7 (HT: 0.65) times as long as wide. Clypeus 0.45–0.5 (HT: 0.5) times as long as wide, weakly convex, its lower margin subtruncate and margined. Face

0.65–0.7 (HT: 0.65) times as long as wide, almost flat, with a pair of longitudinal shallow depression below antennal socket. Frons slightly concave ventrally, largely smooth except for sparsely punctate dorsally. Occipital carina largely absent laterally, its lower end joined with base of mandible (Fig. 1F). MSL 0.4–0.5 (HT: 0.45) times as long as BWL. OOL 0.6–0.7 (HT: 0.6) times as long as OD. POL 1.3–1.4 (HT: 1.3) times as long as OD. Antenna with 28–29 (HT: 28) flagellomeres. F1 1.2–1.25 (HT: 1.2) times as long as F2.

Mesosoma punctate. Epomia present. Lateral area of pronotum striated ventrally (Fig. 10C), with a smooth area dorsally. Notauli distinct and deep, each posterior end confluent each other. Scutellum weakly convex. Epicnemial carina distinct, its dorsal end close to subalar prominence. Mesopleuron with striae along epicnemial carina, subalar prominence and speculum. Speculum smooth. Propodeum without carinae except for complete anterior transverse carina and anterior section of pleural carina. Propodeal apophysis absent (Fig. 10E). Propodeal spiracle oval. Fore wing length 5.0–7.0 (HT: 6.5) mm. Areolet present, small, hexagonal, with sides nearly parallel, outer side indistinct (Fig. 10F). Nervulus opposite to or slightly based on basal vein. Nervellus intercepted anterior to midpoint. Hind femur 6.3–6.7 (HT: 6.3) times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 3.8, 1.2, 0.6 and 0.6–0.7 (HT: 0.6).

Metasoma. T1 3.75–3.9 (HT: 3.75) times as long as maximum width, finely and sparsely punctate posteriorly, smooth anteriorly, with a pair of small triangular teeth at base. Median dorsal carina and dorsolateral carina of T1 absent. T2 2.25–2.4 (HT: 2.3) times as long as maximum width. Ovipositor sheath 0.4 times as long as hind tibia. Apex of ovipositor as Fig. 3H.

Coloration (Figs. 10B–F). Body (excluding wings and legs) black, except for: face, clypeus, mandible except for apex, all orbits except for dorsal end of temporal orbit, malar space, collar, lower par and dorsal margin of pronotum, posterior area of propleuron, median spot of mesoscutum, scutellum, postscutellum, tegula and subalar prominence yellow; speculum, lower part of mesopleuron, mesosternum, dorsal margin of metapleuron, and posterior margin of T1–T7 tinged with yellow to reddish brown; posterior part of propodeum partly tinged with reddish brown; ovipositor reddish brown. Wings hyaline; veins and pterostigma brown except for yellow wing base. Fore and mid legs yellow to yellowish brown. Hind leg blackish brown, partly tinged with brown to yellowish in coxa, trochanter, trochantellus, femur and tibia.

Male (n=1). Similar to female. OOL 0.5 times as long as OD. Antenna with 30 flagellomeres. F18–F20 with a tyloid. Hind femur 7.1 times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 3.6, 1.3, 0.6 and 0.5. T1 4.85 times as long as maximum width. T2 2.0 times as long as maximum width. Coloration similar to female (Fig. 10H) except mesopleuron and metapleuron largely yellow to reddish yellow.

Distribution. Japan (Hokkaido and Honshu).

Etymology. The specific name is from the Latin “montanus” (mountain), referring to their habitat.

Remarks. This species resembles *N. formosus* Gravenhorst, 1829, in the pronotum with a dorsolateral white margin and the antenna without a white band (in *N. formosus* usually with a small white band), but it can be distinguished by the nervellus intercepted anterior to midpoint (intercepted posterior to midpoint in *N. formosus*) and the antenna already without a white band (Fig. 10B) (usually with a small white band in *N. formosus*). This species can easily be separated from other Japanese species by the absence of a white band of antenna (with a wide white band in *N. flavoguttatus* and *N. oblongs*) and the pronotum with a dorsolateral white margin (Figs. 10 B, C, H) (without a white margin in *N. debilis* and *N. kusigematii*).

Genus *Palmerella* Cameron, 1908

Palmerella Cameron, 1908: 290. Type species:

Palmerella nigra Cameron, 1908. Monobasic.

Townstenus Momoi, 1966: 162. Type species:

Townstenus albocristatus Momoi, 1966. Original designation.

In Japan, following a single species has been recorded. I recognize a new distribution record and record the data below.

Palmerella albocristata (Momoi, 1966)

Townstenus albocristatus Momoi, 1966: 163.

Specimens examined. JAPAN: KPM-NK 69499, F, Kagoshima Pref., Yakushima Is., Kankake, 30. X. – 2. XI. 2007, T. Yamauchi leg. (MsT).

Distribution. Japan (Honshu, Kyushu and Yakushima Is.*).

Remarks. This is the first record of this species from Yakushima Island.

Genus *Pterocryptus* Szépligeti, 1916

Pterocryptus Szépligeti, 1916: 250. Type species:

Pterocryptus niger Szépligeti, 1916. Monobasic.

In Japan, a single species, *P. uchidai* (Momoi, 1963) has been recorded. I examined the holotype and additional specimens of *Torbda takachihoensis* Momoi, 1966, and concluded that this species should be transferred from *Torbda* to *Pterocryptus*. The character states of this species are completely accorded with the generic character states of *Pterocryptus* proposed by Townes (1970) and Gupta & Gupta (1983), e.g., pleural carina of propodeum present between anterior transverse carina and hind coxa (Fig. 2B) (absent in *Torbda*) and T1 without a pair of triangular teeth at base (Fig. 2G). In this study, I transferred generic position of this species below.

Pterocryptus takachihoensis (Momoi, 1966) **comb. nov.**

(Figs. 2B, G, 10I)

Torbda takachihoensis Momoi, 1966: 166.

Specimens examined. JAPAN: MNHAH, F (holotype), Kagoshima Is., Tanegashima Is., 13. VI. 1965, T. Kumata leg.; KPM-NK 5000299, F, Kagoshima Pref., Yakushima Is., Aikodake, 22. VII. – 22. VIII. 2006, T. Yamauchi leg. (MsT); KPM-NK 5000314–5000316, 2 F & 1 M, *ditto*, 27–30. III. 2007; KPM-NK 5000319, F, *ditto*, 29. IV. – 2. V. 2007; KPM-NK 5000301, 5000302, 2 F, *ditto*, 8–28. VI. 2007; KPM-NK 5000332, 5000334, 2 F, *ditto*, 2. V. – 5. VI. 2007; KPM-NK 5000328–5000331, 2 F & 2 M, *ditto*, 5–8. VI. 2007; KPM-NK 5000333, F, *ditto*, 28. VI. – 29. VII. 2007; KPM-NK 5000338, F, *ditto*, 28. IX. – 2. XI. 2007; KPM-NK 5000303, F, Kagoshima Pref., Yakushima Is., Kankake, 19–22. VII. 2006, T. Yamauchi leg. (MsT); KPM-NK 5000304–5000307, 4 F, *ditto*, 22. VII. – 22. VIII. 2006; KPM-NK 5000308, F, *ditto*, 5–8. VI. 2007; KPM-NK 5000309, 5000310, 2 F, *ditto*, 8–28. VI. 2007; KPM-NK 5000311, F, *ditto*, 25. VIII. – 28. IX. 2007; KPM-NK 5000339, F, Yakushima Is., Han-yama, 23–26. IX. 2006, T. Yamauchi leg. (MsT); KPM-NK 5000342–5000346, 5 F, *ditto*, 1. V. – 5. VI. 2007; KPM-NK 5000349, F, *ditto*, 25. VIII. – 28. IX. 2007; KPM-NK 5000350, 5000351, 2 F, Yakushima Is., Arakawa, 29. VII. – 25. VIII. 2007, T. Yamauchi leg. (MsT).

Distribution. Japan (Kyushu, Tanegashima Is. and Yakushima Is.).

Remarks. Momoi (1966) used the length of postpetiole for the separation of this species from *P. uchidai*, while this character state shows intraspecific variation. This species resembles *P. uchidai* and can be distinguished by the following combination of character states in female: posterior margin of T2–T7 with white band (Fig. 10I) (without white band in *P. uchidai*); T1 2.1–2.2 times as

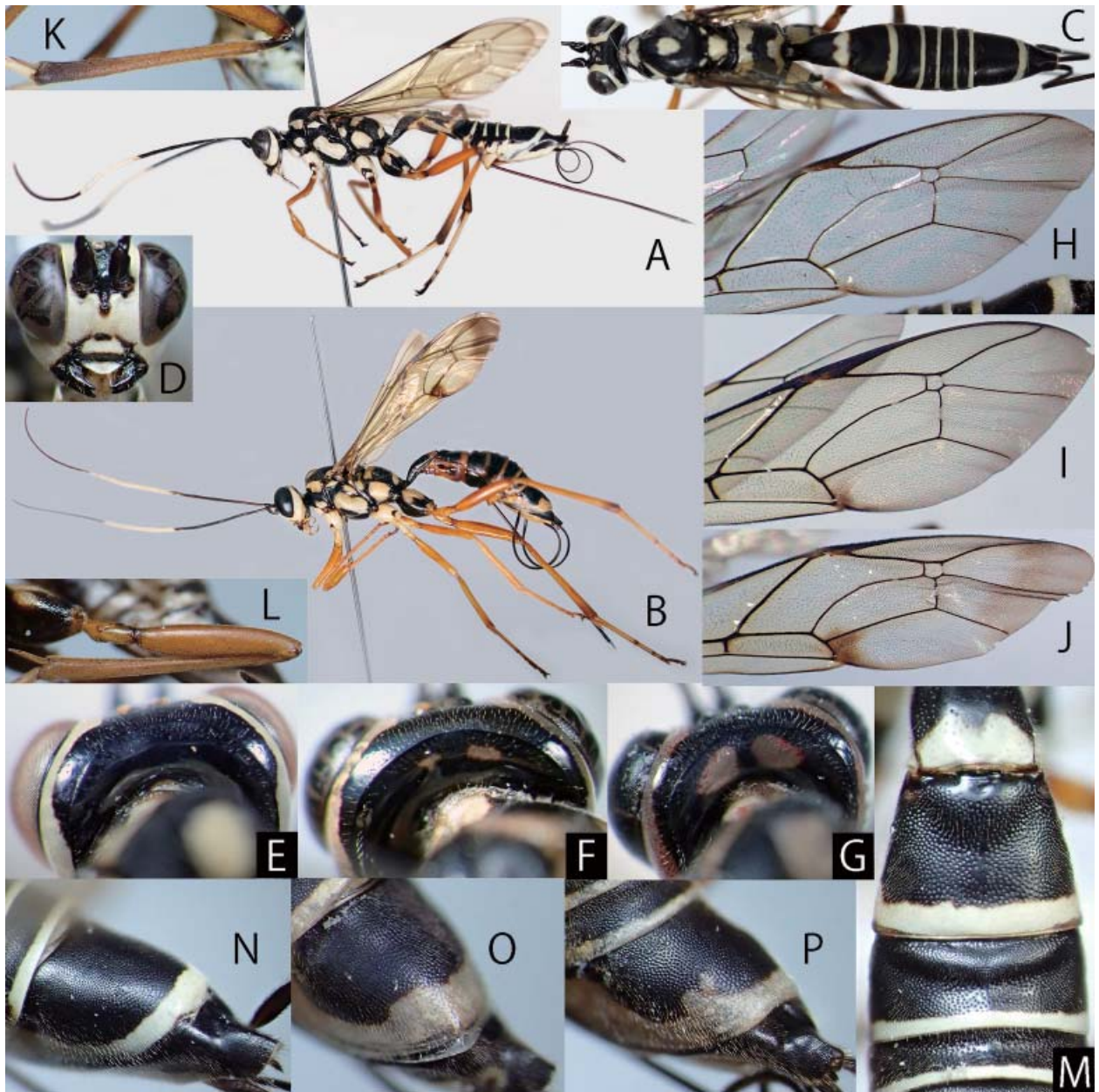


Fig. 11. *Torbda sauteri* Uchida, 1932, KPM-NK 69501 (A, C, D, K, M, N), 69502 (E, I), 69508 (H), 69516 (F), 69518 (J), 69521 (P), 69523 (B), 69527 (O) and 69528 (L, P), females — A, B, habitus, lateral view; C, head, mesosoma and metasoma, dorsal view; D, head, frontal view; E–G, occiput, posterodorsal view; H–J, apical part of right fore wing; K, L, hind tibia, lateral view; M, T2 and T3, dorsal view; N–P, T7, dorsolateral view.

long as maximum width (1.9–2.0 times in *P. uchidai*); hind TS1 2.1 times as long as TS2 (2.3 times in *P. uchidai*). On the other hand, no difference between the males of *P. takachihoensis* and *P. uchidai* is recognizable and thus further comparison with molecular data of them are necessary.

Genus *Schreineria* Schreiner, 1905

Schreineria Schreiner, 1905: 15. Type species: *Schreineria zeuzerae* Schreiner, 1905. Monobasic.

Sycophrurus Picard, 1919: 77. Type species: *Sycophrurus hesperophanis* Picard, 1919. Monobasic.

Pseudotorbda Uchida, 1932: 195. Type species: *Pseudotorbda geniculata* Uchida, 1932. Original designation.

Pygidites Seyrig, 1952: 190. Type species: *Pygidites regulator* Seyrig, 1952. Original designation.

Schreineria hashimotoi Kusigemati, 1985

Schreineria hashimotoi Kusigemati, 1985: 200.

Specimen examined. JAPAN: KPM-NK 69549, F, Tokyo, Hachioji City, Minamiosawa, 4–15. VII. 2014, N. Kikuchi leg.

Distribution. Japan (Honshu* and Kyushu).

Remarks. This is the first record of this species from Honshu.

Genus *Torbda* Cameron, 1902

Torbda Cameron, 1902c: 18. Type species: *Torbda geniculata* Cameron, 1902. Designated by Morley (1913).

Miophatnus Cameron, 1907b: 105. Type species: *Miophatnus nigromaculatus* Cameron, 1907. Monobasic.

In Japan, two species *T. parallela* Momoi, 1970, and *T. sauteri* Uchida, 1932, have been recorded. Momoi (1970) and Gupta & Gupta (1983) provided the character states for both species by descriptions and/or keys, while many additional specimens (including a Chinese specimen) of *T. sauteri* indicate that this species with a large intraspecific variation in the body coloration and sculptures. Table 1 shows the variation of body coloration of *T. sauteri* and *T. parallela*, the character states of Figs. 11H–J (fore wing), 11K and L (hind tibia), and 11N–P (T7) are previously used for the separation of both species and of Figs. 11E–G (occiput) are newly found in this study. The character states of Figs. 11I and 11O are intermediate condition of *T. sauteri* and *T. parallela*. In addition, these characters varied individually and more or less overlapped each other and are not reflect the species concept. Thus, I conclude that both species are same species. In this study, I synonymize *T. parallela* under *T. sauteri* (**syn. nov.**)

Torbda sauteri Uchida, 1932

(Figs. 3I, 11A–M)

Torbda sauteri Uchida, 1932b: 191.

Torbda parallela Momoi, 1970: 365. **Syn. nov.**

Description. The original description and redescription of this species (Uchida, 1932b; Gupta & Gupta, 1983) lacks some important character states. Thus, I redescribe the female of this species below.

Female (n=28). Body length 12.5–23.0 mm, covered with silver setae.

Head 0.6–0.65 times as long as wide. Clypeus 0.45–0.5 times as long as wide, weakly convex, the apex of convexity partly ridge-like, punctate except for smooth anterior margin, anterior margin with a minute and obtuse median tooth. Face 0.55–0.6 times as long as wide. Frons slightly concave, covered with punctures and rugae dorsally, smooth ventrally. Occipital carina complete, its lower end joined with hypostomal carina. MSL 0.7–0.8 times as long as BWM. OOL 1.5–1.8 times as long as OD. POL 0.9–1.2 times as long as OD. Antenna with 25–26 flagellomeres. F1 0.95 times as long as F2.

Mesosoma polished. Epomia present. Lateral area of pronotum largely smooth, punctate along dorsal and posterior margins. Notauli distinct on anterior half of mesoscutum. Mesoscutum punctate. Scutellum weakly convex, punctate. Epicnemial carina distinct, its dorsal end not joined with anterior margin of mesopleuron and subalar prominence. Mesopleuron sparsely punctate, with some irregular rugae dorsally. Metapleuron punctate. Pleural carina of propodeum present, partly united with rugae. Anterior transverse carina of propodeum complete. Posterior transverse carina present, partly united with transverse striae. Propodeum covered with irregular and transverse rugae except for area anterior to anterior transverse carina punctate. Propodeal apophysis absent. Propodeal spiracle elongate. Fore wing length 10.5–17.0 mm. Areolet large, hexagonal, with almost parallel sides (Figs. 11H–J). Nervulus based on basal vein (Figs. 11H–J).

Table 1. Character states of *Torbda parallela* and *T. sauteri*

Character	Character states	Species concept by previous literatures	Distribution		
			Amami	Okinawa	Yaeyama
Occiput	Fig. 11E	?	○	○	○
	Fig. 11F	?		○	
	Fig. 11G	?		○	
Fore wing	Fig. 11H	<i>T. parallela</i>	○	○	○
	Fig. 11I	intermediate condition	○	○	○
	Fig. 11J	<i>T. sauteri</i>		○	
Hind tibia	Fig. 11K	<i>T. parallela</i>	○	○	○
	Fig. 11L	<i>T. sauteri</i>		○	
T7	Fig. 11N	<i>T. parallela</i>	○	○	○
	Fig. 11O	intermediate condition	○	○	○
	Fig. 11P	<i>T. sauteri</i>		○	

Nervellus intercepted anterior to midpoint. Fore tibia with a bulge except for basal 0.25. Hind femur 5.2–5.7 times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 4.6–5.0, 0.9–1.0, 0.5–0.7 and 1.3–1.6.

Metasoma polish and punctate. T1 1.85–2.0 times as long as maximum width, sparsely punctate posteriorly, smooth anteriorly, with a pair of small obtuse (not triangular) teeth at base. Median dorsal carina of T1 present, indistinct posteriorly. Dorsolateral carina of T1 complete. T2 0.75–0.85 times as long as maximum width, with a basal median triangular convexity (Fig. 11M). T3–T5 usually with a weak, transverse convexity (Fig. 11M). Ovipositor sheath 1.25–1.4 times as long as hind tibia. Apex of ovipositor as Fig. 3I.

Coloration (Figs. 11A–M). Body (excluding wings and legs) black, except for: clypeus except for dorsal and ventral (sometimes also lateral) margins, palpi, face except for median longitudinal short black stripe, all orbits, gena, malar space, ventral spot of scape, median spot and a pair of posterior spots (sometimes absent) of collar, dorsal margin of pronotum, posterior spot of propleuron, a median spot and a pair of posterior spots of mesoscutum, scutellum, postscutellum (sometimes in part), tegula, subalar prominence, speculum, a large spot of mesopleuron, a longitudinal stripe along sternaulus (sometimes absent), two spots of metapleuron, an anterior transverse band and a posterior spot of propodeum, posterior band of T1–T7 and lateral side of T7 and T8 whitish yellow to yellow; F6–F10 (sometimes also F5, F11 and F12) with a white band; mandible more or less tinged with reddish brown; ovipositor reddish brown. Occiput sometimes with a pair of yellow spots. Whitish yellow to yellow band of T7 sometimes with enlarged area dorsolaterally. Wings hyaline, slightly tinged with yellow, sometimes with clouded area on apex of fore wing, small area along 3rd section of discoideus and small area along base of nervulus; veins and pterostigma blackish brown to brown except for yellow wing base. Legs reddish brown, except for: fore and mid coxae and trochanters whitish yellow to yellow; fore and mid TS5 partly tinged with brown; fore and mid coxae black at base and apex; hind coxa black with whitish yellow to yellow markings dorsally; apex of hind tibia and TS5 tinged with brown to blackish brown; base of hind tibia sometimes blackish brown tinged with brown to blackish brown; hind TS1–4 whitish yellow to reddish brown except for darkened apex. Trochanters sometimes tinged with blackish brown.

Male. No additional specimen available in this study.

Specimens examined. JAPAN: KPM-NK 69504,

69505, 2 F, Kagoshima Pref., Amamioshima Is., Mt. Yuidake, 15. VII. 2004, H. Makiyama leg. (MsT); KPM-NK 69506, 69507, 2 F, *ditto*, 27. VII. 2004; KPM-NK 69508, 69509, 2 F, *ditto*, 10. VIII. 2004; KPM-NK 69510–69512, 3 F, *ditto*, 14. X. 2004; KPM-NK 69513, F, Kagoshima Pref., Amamioshima Is., Yamato Vil., Oodana, 2–9. VI. 2007, K. Watanabe leg. (MsT); KPM-NK 69514, F, Okinawa Pref., Okinawajima Is., Nago City, 29. VIII. 2001, H. Irei & H. Makiyama leg. (MsT); KPM-NK 69515, F, *ditto*, 16. IV. 2002; KPM-NK 69516, 69517, 2 F, *ditto*, 13. V. 2002; KPM-NK 69518, F, *ditto*, 23. IX. 2002; KPM-NK 69519, F, *ditto*, 21. X. 2002; KPM-NK 69520, F, *ditto*, 26. V. 2003; KPM-NK 69521, F, *ditto*, 7. VII. 2003; KPM-NK 69522, F, *ditto*, 12–16. IX. 2004; KPM-NK 69523, F, Okinawa Pref., Okinawajima Is., Nago City, Sedake, 25. VI. 2013, S. Yoshizawa leg.; KPM-NK 69524, F, Okinawa Pref., Okinawajima Is., Kunigami Vil., Uka, 30. IV. 2001, H. Irei & H. Makiyama leg. (MsT); KPM-NK 69525–69527, 3 F, Okinawa Pref., Okinawajima Is., Kunigami Vil., Ginama, 23. IV. 2002, H. Irei & H. Makiyama leg. (MsT); KPM-NK 69528, F, Okinawa Pref., Okinawajima Is., Kunigami Vil., Oku, 16. VIII. 2001, H. Irei & H. Makiyama leg. (MsT); MNHAH, F (holotype of *T. parallela*), Okinawa Pref., Ishigakijima Is., Karayama, 14–18. III. 1964, C. M. Yoshimoto & J. Harrell (MsT); KPM-NK 69501, F, Okinawa Pref., Iriomotejima Is., Riverside of Urauchigawa, 13. V. 2008, K. Watanabe leg.; KPM-NK 69502, F, Okinawa Pref., Ishigakijima Is., Mt. Omotodake, 14. V. 2008, T. Mita leg.; KPM-NK 69503, F, *ditto*, 15. V. 2008, S. Yoshizawa leg. CHINA: GSFP, F (det. Sheng), Fujian Prov., Shangyan, 10. V. 2011.

Distribution. Japan (Amamioshima Is.*; Okinawajima Is., Ishigakijima Is. and Iriomotejima Is.*); China and Taiwan

Remarks. This is the first record of this species from Amamioshima Island and Iriomotejima Island.

Genus *Xoridesopus* Cameron, 1907

Xoridesopus Cameron, 1907c: 18. Type species: *Xoridesopus annulicornis* Cameron, 1907. Monobasic.

In Japan, three species, *X. infuscatus* Gupta & Gupta, 1983, *X. nigrispeculum* Momoi, 1970, and *X. taihokensis* (Uchida, 1932), have been recorded. In this study, I describe two new species from Ryukyus below. I could not the voucher specimen of *X. taihokensis* recorded from Japan by Uchida (1956) and Momoi (1970). By the result of my field and institution investigations, the distribution of *Xoridesopus* species in Japan shows

allopatric pattern, i.e., *X. tokarensis* **sp. nov.** from Tokara Isls. (Nakanoshima Is.), *X. amamiensis* **sp. nov.** from Amami Isls. (Amamioshima Is. and Tokunoshima Is.), *X. infuscatus* from Okinawajima Is. and *X. nigrispeculum* from Yaeyama Isls. (Ishigakijima Is. and Iriomotejima Is.).

Momoi (1970) recorded *X. taihokensis* from Amami Isls. and Okinawajima Is. and these records may be based on misidentification of *X. amamiensis* and *X. infuscatus*. Thus, further studies of *X. taihokuensis* are necessary. Japanese species of *Xoridesopus* can be distinguished by the following key.

Key to Japanese species of the genus *Xoridesopus*

(Male of *X. tokarensis* **sp. nov.** unknown)

1. Nervellus intercepted at or anterior to the middle. Hind coxa largely reddish brown (sometimes with a black marking).....*X. taihokuensis* (Uchida, 1932)
- . Nervellus intercepted posterior to the middle (Fig. 12E). Hind coxa black, usually with a large dorsal yellow or white marking (Figs. 12A, B, D, 13A, B, D).....2
2. Speculum without a yellow marking. Female with an entirely yellow face.....*X. nigrispeculum* Momoi, 1970
- . Speculum with a yellow marking (Figs. 12A, D, F, 13A, D, E, G, J). Face of female entirely yellow (Fig. 13C) or yellow with a pair of longitudinal black stripes (Figs. 12C, 13I).....3
3. Females.....4
- . Males.....6
4. Face entirely yellow (Fig. 13C). Mesosternum with a conspicuous yellow marking (Figs. 13A, D).....*X. infuscatus* Gupta & Gupta, 1983
- . Face yellow with a pair of longitudinal black stripes (Figs. 12C, 13I). Mesosternum black (Figs. 12A, D, 13G, J).....5
5. Yellow marking on speculum, lower hind corner of mesopleuron, metapleuron, hind coxa and T7 large (Figs. 12A, D). Lateral part of posterior transverse carina of propodeum clearly defined (Fig. 2C). Scutellum entirely yellow.....*X. amamiensis* **sp. nov.**
- . Yellow marking on speculum, lower hind corner of mesopleuron, metapleuron, hind coxa and T7 small (Figs. 13G, J). Lateral part of posterior transverse carina of propodeum indistinct. Scutellum yellow except for black posterior margin (Fig. 13K).....*X. tokarensis* **sp. nov.**
6. Hind tarsus entirely blackish brown (Fig. 12F). Sternaulus at least partly tinged with black (Fig. 12F).....*X. amamiensis* **sp. nov.**
- . Hind tarsus with a conspicuous yellow or white area (Fig. 13E). Sternaulus without black pigmentation (Fig. 13E).....*X. infuscatus* Gupta & Gupta, 1983

Xoridesopus amamiensis **sp. nov.**

(Standard Japanese name: Amami-shima-togari-himebachi)
(Figs. 1L, 2C, H, 3J, 12A–G)

Holotype. KPM-NK 69529, F, JAPAN, Kagoshima Pref., Amamioshima Is., Mt. Yuidake, 27. VII. 2004, H. Makihara leg. (MsT).

Paratypes. JAPAN: KPM-NK 69530–69532, 3 F, same data of holotype; KPM-NK 69533, 69534, 2 F, *ditto*, 2. VII. 2004; KPM-NK 69535, F, *ditto*, 24. VIII. 2004; KPM-NK 69536–69539, 4 F, *ditto*, 19. IX. 2004; KPM-NK 69540, 69541, 2 F, *ditto*, 14. X. 2004; KPM-NK 69542, F, Kagoshima Pref., Amamioshima Is., Nase, Chuo-rindo, 4. VI. 2007, K. Watanabe leg.; KPM-NK 69525–69527, 3 M, Kagoshima Pref., Tokunoshima Is., Kedoku, 21. V. 2008, A. Sakai leg.; KPM-NK 69546, 69547, 2 F, Kagoshima Pref., Tokunoshima Is., Tete, Mt. Amamigake, 27. III. 2011, K. Watanabe leg. (KPMNH).

Description. Female (n=16). Body length 8.5–13.5 (HT: 13.5) mm, mat, covered with silver setae.

Head 0.65 times as long as wide. Clypeus 0.5 times as

long as wide, slightly convex, sparsely punctate dorsally, its anterior margin with a minute median tooth. Face 0.5–0.55 (HT: 0.5) times as long as wide, slightly convex medially. Frons slightly concave above antennal socket, sparsely punctate laterally, smooth ventrally, with irregular rugae mediodorsally. Occipital carina complete, its lower end joined with hypostomal carina. MSL 0.6–0.7 (HT: 0.7) times as long as BWM. OOL 1.2–1.5 (HT: 1.2) times as long as OD. POL 0.8–0.9 (HT: 0.8) times as long as OD. Antenna with 23–24 (HT: 23) flagellomeres. F1 1.05–1.2 (HT: 1.1) times as long as F2.

Mesosoma. Epomia present, weak and short. Lateral area of pronotum largely covered with longitudinal striae (Fig. 12D), punctate dorsally and ventrally. Notauli distinct and deep on anterior 0.6 of mesoscutum. Mesoscutum densely punctate except for a median area with irregular rugae. Scutellum slightly convex, punctate. Epicnemial carina distinct, its dorsal end close to subalar prominence. Mesopleuron with striae along epicnemial carina, subalar prominence and speculum. Speculum smooth.

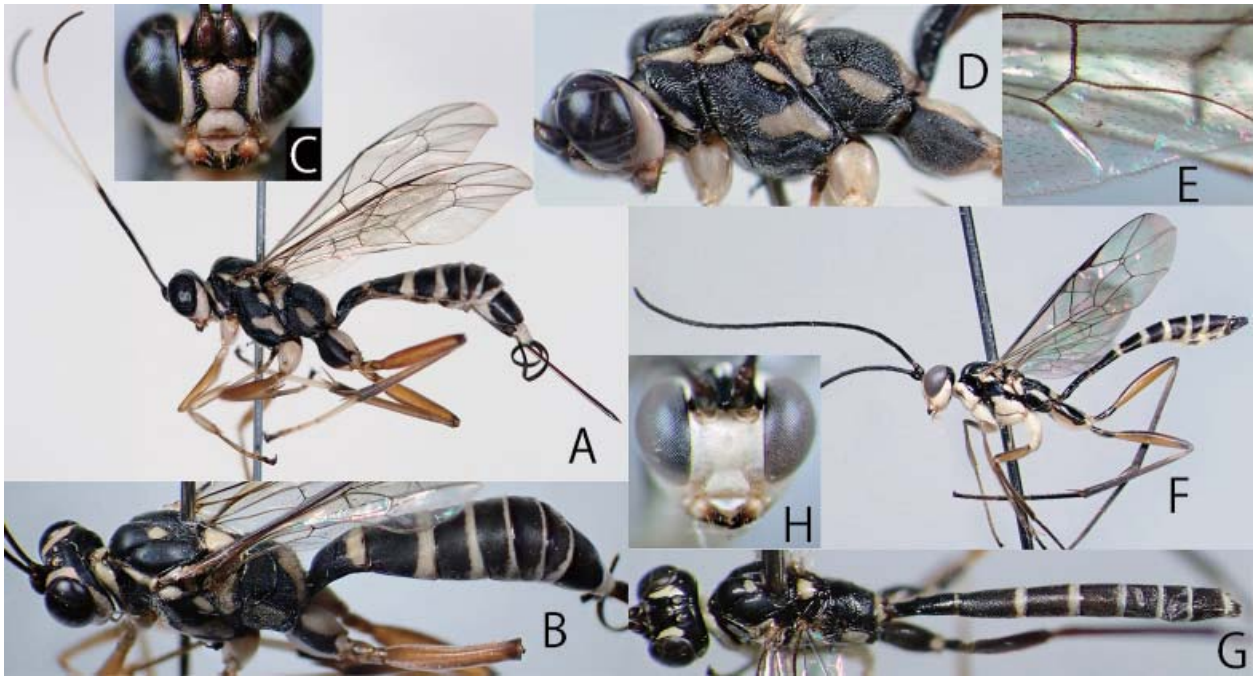


Fig. 12. *Xoridesopus amamiensis* sp. nov., KPM-NK 69529 (A–E) and 69545 (F–H), female (A–E) and male (F–H) — A, F, habitus, lateral view; B, G, head, mesosoma and metasoma, dorsolateral view; C, H, head, frontal view; D, head and mesosoma, lateral view; E, nervellus of hind wing.

Metapleuron covered with irregular rugae. Propodeum with anterior transverse carina, posterior transverse carina and pleural carina (Fig. 2C), covered with irregular rugae except for area anterior to anterior transverse carina densely punctate. Posterior transverse carina of propodeum sometimes indistinct dorsolaterally. Propodeal apophysis absent (Fig. 2C). Propodeal spiracle oval (Fig. 2C). Fore wing length 6.5–10.5 (HT: 10.5) mm. Areolet medium-sized, hexagonal, with sides convergent anteriorly (Fig. 1L). Nervulus based on basal vein. Nervellus intercepted posterior to midpoint (Fig. 12E). Fore tibia with a bulge except for basal 0.25. Hind femur 5.0–5.9 (HT: 5.0) times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 5.0–5.5 (HT: 5.3), 1.1, 0.8–0.9 (HT: 0.8) and 1.8–2.0 (HT: 1.9).

Metasoma densely punctate. T1 1.5–1.85 (HT: 1.5) times as long as maximum width, with a pair of small triangular teeth at base (Fig. 2H). Median dorsal carina and dorsolateral carina of T1 complete. T2 0.8–0.9 (HT: 0.85) times as long as maximum width. Posterior margin of T8 truncate, its dorsal corner almost right angle in lateral view. Ovipositor sheath 1.0 times as long as hind tibia. Apex of ovipositor as Fig. 3J.

Coloration (Figs. 12A–E). Body (excluding wings and legs) black, except for: clypeus except for dorsal margin and small median spot of anterior margin, face except for a pair of longitudinal black stripes, mandible except for apex, all orbits except for dorsal end of temporal orbit and black area along antennal socket, gena, malar space, palpi, collar

(sometimes only anteriorly), dorsal margin of pronotum, a median spot of mesoscutum, scutellum, postscutellum, tegula, subalar prominence, speculum, a posterior spot of mesopleuron, two spots of metapleuron, a spot of propodeum, posterior band of T1–T6 and lateral side of T5–T8 whitish yellow to yellow; F6–F13 (sometimes also F5, F14 and F15) with a white band; apical part of antenna slightly tinged with reddish brown; ovipositor reddish brown. Wings hyaline; veins and pterostigma blackish brown to brown except for yellow wing base. Fore and mid legs whitish yellow to reddish yellow except for TS4 and TS5 tinged with blackish brown. Hind leg whitish yellow, except for: coxa largely black, trochanter and trochantellus tinged with blackish brown; hind femur reddish brown except for brown apex; hind tibia reddish brown to blackish brown; TS4 and TS5 blackish brown.

Male (n=3). Similar to female (Figs. 12F–H). Body length 7.5–8.0 mm. Face 0.6 times as long as wide. POL 0.9–1.0 times as long as OD. F1 1.05–1.0 times as long as F2. F13 and F14 with a tyloid. Fore wing length 5.5–6.0 mm. Fore tibia without a bulge. Hind femur 6.0–6.6 times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 3.3–3.4, 1.3–1.4, 0.8 and 0.8–0.9. T1 2.95–3.0 times as long as maximum width, sparsely punctate (smooth basally) and without a pair of conspicuous teeth at base. T2 1.85–2.05 times as long as maximum width. Face entirely whitish yellow. Antenna without a white band. Mesosternum largely whitish yellow. Posterior margin of T1–T7 with a white band. Hind tarsus



Fig. 13. *Xoridesopus infuscatus* Gupta & Gupta, 1983 (A–F) and *X. tokarensis* sp. nov. (G–K), KPM-NK 5006283 (A–D), 5006289 (E, F) and 69548 (G–K), females (A–D, G–K) and male (E, F) — A, F, habitus, lateral view; B, G, head, mesosoma and metasoma, dorsolateral view; C, H, head, frontal view; D, head and mesosoma, lateral view; E, nervellus of hind wing.

blackish brown.

Distribution. Japan (Amamioshima Is. and Tokunoshima Is.).

Etymology. The specific name is from the type locality, Amamioshima Island.

Remarks. This species apparently resembles *X. nigriritibia* Gupta & Gupta, 1983, from Indonesia, but it can be distinguished by the following combination of character states: epomia weakly present (absent in *X. nigriritibia*); hind femur reddish brown (black in *X. nigriritibia*); T3 densely punctate (mat in *X. nigriritibia*).

Xoridesopus infuscatus Gupta & Gupta, 1983
(Figs. 13A–F)

Xoridesopus infuscatus Gupta & Gupta, 1983: 121.

Description. The original description of this species

(Gupta & Gupta, 1983) lacks some important character states. In addition, the male of this species undescribed. Thus, I redescribe this species with the character states of males below.

Female (n=5). Body length 8.5–13.5 mm, mat, covered with silver setae.

Head 0.6–0.65 times as long as wide. Clypeus 0.5 times as long as wide, slightly convex, sparsely punctate dorsally, its anterior margin with a minute median tooth. Face 0.5–0.6 times as long as wide, slightly convex medially. Frons slightly concave above antennal socket, sparsely punctate laterally, smooth ventrally, with irregular rugae mediodorsally. Occipital carina complete, its lower end joined with hypostomal carina. MSL 0.5–0.7 times as long as BWM. OOL 1.3–1.5 times as long as OD. POL 0.9 times as long as OD. Antenna with 23 flagellomeres. F1 1.05 times as long as F2.

Epomia present, weak and short. Lateral area of pronotum largely covered with longitudinal striae (Fig. 13A), punctate dorsally and ventrally. Notauli distinct and deep on anterior 0.6 of mesoscutum. Mesoscutum densely punctate except for a median area with irregular rugae. Scutellum slightly convex, punctate. Epicnemial carina distinct, its dorsal end close to subalar prominence. Mesopleuron with striae along epicnemial carina, subalar prominence and speculum. Speculum smooth. Metapleuron covered with irregular rugae. Propodeum with anterior transverse carina, posterior transverse carina and pleural carina, covered with irregular rugae except for area anterior to anterior transverse carina densely punctate. Propodeal apophysis absent. Propodeal spiracle oval. Fore wing length 6.5–11.0 mm. Areolet medium-sized, hexagonal, with sides convergent anteriorly. Nervulus based on basal vein. Nervellus intercepted posterior to midpoint. Fore tibia with a bulge except for basal 0.25. Hind femur 5.2–5.3 times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 5.0–5.4, 1.1–1.2, 0.8–0.9 and 1.9–2.0.

Metasoma densely punctate. T1 1.65–1.85 times as long as maximum width, with a pair of small triangular teeth at base. Median dorsal carina and dorsolateral carina of T1 complete. T2 0.85–0.9 times as long as maximum width. Posterior margin of T8 truncate, its dorsal corner almost right angle in lateral view. Ovipositor sheath 0.9–1.0 times as long as hind tibia. Apex of ovipositor similar to *X. amamiensis* and *X. tokarensis*.

Coloration (Figs. 13A–D). Body (excluding wings and legs) black, except for: clypeus, face, mandible except for apex, all orbits (sometimes except for dorsal end of temporal orbit), gena, malar space, palpi, collar, dorsal margin of pronotum, a median spot of mesoscutum, scutellum, postscutellum, tegula, subalar prominence, speculum, a large ventral spot of mesopleuron, a large spot of mesosternum, two spots of metapleuron, a spot of propodeum, posterior band of T1–T6 and T8, lateral side of T3–T8 whitish yellow to yellow; F6–F16 (sometimes also F17 and F18) with a white band; apical part of antenna slightly tinged with reddish brown; ovipositor reddish brown. Wings hyaline; veins and pterostigma blackish brown to brown except for yellow wing base. Fore and mid legs whitish yellow to reddish yellow except for TS4 and TS5 tinged with blackish brown. Hind leg whitish yellow, except for: coxa largely black, trochanter and trochantellus tinged with blackish brown; hind femur reddish brown except for brown apex; hind tibia reddish brown to blackish brown; TS4 and TS5 blackish brown.

Male (n=3). Similar to female (Figs. 13E, F). Body

length 9.0 mm. Face 0.6–0.7 times as long as wide. OOL 1.2–1.3 times as long as OD. POL 0.8–0.9 times as long as OD. Antenna with 26 flagellomeres. F1 1.05–1.1 times as long as F2. F13 and F14 (sometimes also F15) with a tyloid. Fore wing length 6.5 mm. Fore tibia without a bulge. Hind femur 5.4–5.8 times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 3.4–3.6, 1.3–1.5, 0.7–0.8 and 0.8–0.9. T1 2.85–3.0 times as long as maximum width. T2 2.0–2.15 times as long as maximum width. Antenna without a white band. Yellow area of mesopleuron and mesosternum partly united into a single large area. Base of T1 narrowly yellow to whitish yellow. Posterior margin of T1–T6 with a white band.

Specimens examined. JAPAN: AEIC, F (holotype), Okinawa Pref., Okinawa Is., Chizuka, July–September, Bohart & Harnage leg.; KPM-NK 5006288, F, Okinawa Pref., Okinawajima Is., Nago City, Mt. Nagodake, 13. V. 2002, H. Irei & H. Makihara leg. (MsT); KPM-NK 5006284, 5006289, 1 F & 1 M, *ditto*, 12–16. IX. 2004; KPM-NK 5006290, M, *ditto*, 18. IX. 2002; KPM-NK 5006286, M, Okinawa Pref., Kunigami Vil., Uka, 16. VIII. 2001, H. Irei & H. Makihara leg. (MsT); KPM-NK 5006287, F, Okinawa Pref., Kunigami Vil., Ginama, 16. VIII. 2001, H. Irei & H. Makihara leg. (MsT); KPM-NK 5006283, F, Okinawa Pref., Kunigami Vil., Oku, 16. VIII. 2001, H. Irei & H. Makihara leg. (MsT).

Distribution. Japan (Okinawajima Is.).

Remarks. This is the first record of the male of this species.

Xoridesopus tokarensis sp. nov.

(Standard Japanese name: Tokara-shima-togari-himebachi)

(Figs. 3K, 13G–K)

Holotype. KPM-NK 69548, F, Kagoshima Pref., Tokara Isls., Nakanoshima Is., Satomura, 5–8. VI. 2005, T. Mita leg. (Yellow pan trap).

Description. Female (n=1). Body length 11.5 mm, mat, covered with silver setae.

Head 0.65 times as long as wide. Clypeus 0.55 times as long as wide, slightly convex, sparsely punctate dorsally, its anterior margin with a minute median tooth. Face 0.5 times as long as wide, slightly convex medially. Frons slightly concave above antennal socket, sparsely punctate laterally, smooth ventrally, with irregular rugae mediodorsally. Occipital carina complete, its lower end joined with hypostomal carina. MSL 0.7 times as long as BWL. OOL 1.4 times as long as OD. POL 0.8 times as long as OD. Antenna with 23 flagellomeres. F1 1.05 times as long as F2.

Mesosoma. Epomia present, weak and short. Lateral area of pronotum covered with longitudinal striae medially (Fig. 13J), punctate dorsally and ventrally. Notauli distinct and deep on anterior 0.6 of mesoscutum. Mesoscutum densely punctate except for a median area with irregular rugae. Scutellum slightly convex, punctate. Epicnemial carina distinct, its dorsal end close to subalar prominence. Mesopleuron with striae along epicnemial carina, subalar prominence and speculum. Speculum smooth. Metapleuron covered with irregular rugae. Propodeum with anterior transverse carina, posterior transverse carina (weak laterally) and pleural carina, covered with irregular rugae except for area anterior to anterior transverse carina densely punctate. Propodeal apophysis absent. Propodeal spiracle oval. Fore wing length 8.0 mm. Areolet medium-sized, hexagonal, with sides convergent anteriorly. Nervulus based on basal vein. Nervellus intercepted posterior to midpoint. Fore tibia with a bulge except for basal 0.25. Hind femur 6.0 times as long as maximum depth in lateral view. Hind TS2: TS1, TS3, TS4 and TS5 = 2.0: 4.9, 1.1, 0.9 and 1.5.

Metasoma densely punctate. T1 1.75 times as long as maximum width, with a pair of small triangular teeth at base. Median dorsal carina and dorsolateral carina of T1 complete. T2 0.8 times as long as maximum width. Posterior margin of T8 truncate, its dorsal corner almost right angle in lateral view. Ovipositor sheath 1.0 times as long as hind tibia. Apex of ovipositor as Fig. 3K.

Coloration (Figs. 13G–K). Body (excluding wings and legs) black, except for: clypeus except for dorsal margin, face except for a pair of longitudinal black stripes, all orbits except for dorsal end of temporal orbit, malar space and black area along antennal socket, gena except for posterior margin, palpi, median spot of collar, posterodorsal corner of pronotum, a median spot of mesoscutum, scutellum, postscutellum, anterior small spot of tegula, subalar prominence, small spot of speculum, a posterior small spot of mesopleuron, two spots of metapleuron, a spot of propodeum, posterior band of T1–T3 and T6, lateral small spot of T7 and T8 whitish yellow to yellow; F7–F12 with a white band; apical part of antenna and posterior margin of T4 and T5 slightly tinged with reddish brown; ovipositor reddish brown. Wings hyaline; veins and pterostigma blackish brown to brown except for yellow wing base. Legs reddish brown, except for: coxae black with a whitish yellow marking apically; trochanters and trochanteli yellowish brown with blackish brown marking; apex of hind femur blackish brown; hind tibia blackish brown except for a subbasal small yellow area; hind tibial spurs blackish brown; hind tarsus whitish yellow except for base

of TS1, dorsal part of TS4 and TS5 blackish brown.

Distribution. Japan (Nakanoshima Is. of Tokara Is.).

Etymology. The specific name is from the type locality, Tokara Islands.

Remarks. This species apparently resembles *X. schuleri* (Dalla Torre, 1902) from India, Burma and Indonesia, but it can be distinguished by the following combination of character states: hind coxa largely black (Figs. 13G, J) (largely yellow or yellowish brown in *X. schuleri*); scutellum densely punctate (not densely punctate in *X. schuleri*).

Acknowledgements

The author would like to express his cordial thanks to David Wahl (AEIC), Toshiya Hirowatari and Satoshi Kamitani (KU), Takeo Yamauchi (MNHAH), Shin-ichi Yoshimatsu and Hiraku Yoshitake (NIAES), Masahiro Ohara (SEHU) and Stefan Schmidt and Olga Schmidt (ZSM) for their kind support in the institutes, and to Ryosuke Ishikawa, Hiroshi Makihara, Eisuke Katayama, Toshiaki Nambu, Hirohisa Suda, Tooru Taniwaki, Tsunetomo Nakayama, Toshiharu Mita, Ryuki Murao, Masato Ito, Shumpei Fujie, Satoshi Yoshizawa, Namiki Kikuchi and So Shimizu for kindly offering valuable materials. This study was partly supported by the Grant-in-Aid for JSPS KAKENHI Grant number 26840134 and 17K15185 for the author.

References

- Ashmead, W. H., 1896. Descriptions of new parasitic Hymenoptera. Transactions of the American Entomological Society, **23**: 179–234.
- Ashmead, W. H. 1900. Classification of the Ichneumon flies, or the superfamily Ichneumonoidea. Proceedings of the United States National Museum, **23**(1206): 1–220.
- Aubert, J. F., 1959. Les Ichneumonides du rivage méditerranéen français (Côte d'Azur) (Hym.). Annales de la Société Entomologique de France, **127**: 133–166.
- Cameron, P., 1901. On Hymenoptera collected in New Britain by Dr. Arthur Willey. Proceedings of the Zoological Society of London, **1901**(1): 224–248.
- Cameron, P., 1902a. On the Hymenoptera collected by Mr. Robert Shelford in Sarawak, and on the Hymenoptera of the Sarawak Museum. Journal of the Straits Branch of the Royal Asiatic Society, **37**: 29–131.
- Cameron, P., 1902b. Descriptions of new genera and species of Hymenoptera from the Oriental zoological region (Ichneumonidae, Fossores, and Anthophila). Annals and Magazine of Natural History, **9**: 145–155, 204–215, 245–255.

- Cameron, P., 1902c. Description of two new genera and thirteen new species of Ichneumonidae from India. *Entomologist*, **35**: 18–22.
- Cameron, P., 1903a. Descriptions of new genera and species of Hymenoptera from India. *Zeitschrift für Systematische Hymenopterologie und Dipterologie*, **3**: 298–304, 337–344.
- Cameron, P., 1903b. Hymenoptera Orientalia, or Contributions to the knowledge of the Hymenoptera of the Oriental zoological region. Part IX. The Hymenoptera of the Khasia Hills. Part II. Section 2. *Memoirs and Proceedings of the Manchester Literary and Philosophical Society*, **47**(14): 1–50.
- Cameron, P., 1905a. On the Hymenoptera of the Albany Museum, Grahamstown, South Africa (Second paper). *Record of the Albany Museum*, **1**: 185–244.
- Cameron, P., 1905b. On some Hymenoptera (chiefly undescribed) collected by Prof. C. F. Baker in Nevada and southern California. *Invertebrata Pacifica*, **1**: 120–132.
- Cameron, P., 1906. A new genus of Cryptinae (Ichneumonidae) from Sumatra. *Entomologist*, **39**: 196–197.
- Cameron, P., 1907a. Descriptions of two new genera and four new species of Indian parasitic Hymenoptera. *Zeitschrift für Systematische Hymenopterologie und Dipterologie*, **7**: 462–466.
- Cameron, P., 1907b. On some new genera and species of parasitic Hymenoptera from the Sikkim Himalaya. *Tijdschrift voor Entomologie*, **50**: 71–114.
- Cameron, P., 1907. Description of new species of Hymenoptera from Borneo. *Journal of the Straits Branch of the Royal Asiatic Society*, **48**: 1–26.
- Cameron, P., 1908. Description of a new genus and species of Cryptinae (Ichneumonidae) from Borneo. *Entomologist*, **41**: 290–291.
- Cameron, P., 1911a. On the parasitic Hymenoptera collected by Mr. A. J. T. Janse, Transvaal. *Annals of the Transvaal Museum*, **2**: 173–217.
- Cameron, P., 1911b. On two undescribed genera and three new species of Ichneumonidae from Borneo. *Entomologist*, **44**: 63–65.
- Cheesman, L. E., 1936. The Mesostenini of New Guinea. *Nova Guinea*, **17**: 353–388.
- Curtis, J., 1837. *British Entomology; being illustrations and descriptions of the genera of insects found in Great Britain and Ireland*. **14**: 644, 660, 668.
- Cushman, R. A., 1919. New genera and species of Ichneumon flies (Hym.). *Proceedings of the Entomological Society of Washington*, **21**: 112–120.
- Cushman, R. A., 1927. Miscellaneous notes and description of Ichneumon-flies. *Proceedings of the United States National Museum*, **72**(2709): 1–22.
- Dalla Torre, C. G. de, 1902. *Catalogus Hymenopterorum*. Volumen III. 1141pp. Guilelmi Engelmann, Lipsiae.
- Eady, R. D., 1968. Some illustrations of microsculpture in the Hymenoptera. *Proceedings of the Royal Entomological Society of London*, **43**: 66–72.
- Fabricius, J. C., 1804. *Systema Piezatorum: secundum ordines, genera, species, adjectis synonymis, locis, observationibus, descriptionibus*. 439+32pp. Carolum Reichard, Brunsvigae.
- Förster, A., 1869. Synopsis der Familien und Gattungen der Ichneumoniden. *Verhandlungen des Naturhistorischen Vereins der Preussischen Rheinlande und Westfalens*, **25**: 135–221.
- Fourcroy, A. F., 1785. *Entomologia Parisiensis, sive catalogus Insectorum quae in Agro Parisiensi reperiuntur*. 544pp. Via et Aedibus Serpentineis, Paris.
- Gauld, I. D., 1991. The Ichneumonidae of Costa Rica, 1. *Memoirs of the American Entomological Institute*, **47**: 1–589.
- Gravenhorst, J. L. C., 1829a. *Ichneumonologia Europaea*. Pars I. 827pp. Sumtibus Auctoris, Vratislaviae.
- Gravenhorst, J. L. C., 1829b. *Ichneumonologia Europaea*. Pars II. 989pp. Sumtibus Auctoris, Vratislaviae.
- Gupta, V. K. & S. Gupta, 1978. Studies on the genus *Dihelus* from the oriental and eastern Palaearctic regions (Hymenoptera: Ichneumonidae). *Oriental Insects*, **12**: 557–574.
- Habermehl, H., 1918. Beiträge zur Kenntnis der palaearktischen Ichneumonidenfauna. *Zeitschrift für Wissenschaftliche Insektenbiologie*, **14**: 48–55, 118–119, 145–152.
- Haldeman, S. S., 1842. Remarks on cahnges of nomenclature in natural history. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **1**: 191.
- Haupt, H., 1954. Fensterfaenge bemerkenswerter Ichneumoniden (Hym.), darunter 10 neuer Arten. *Deutsche Entomologische Zeitschrift*, **1**: 99–116.
- Horstmann, K., 1990. Die westpaläarktischen Arten einiger Gattungen der Cryptini (Hymenoptera, Ichneumonidae). *Mitteilungen Münchener Entomologischen Gesellschaft*, **79**: 65–89.
- Kiss, von Zilah A., 1924. Beitrag zur Kenntnis der ungarischen und siebenbürgischen Ichneumoniden-(Schlupfwespen-) Fauna. *Verhandlungen und Mitteilungen des Siebenbürgischen Vereins für Naturwissenschaften in Hermannstadt*, **72/74**: 32–146.
- Kriechbaumer, J., 1893. Cryptiden-Studien. *Entomologische Nachrichten*, **19**(8): 119–127.
- Kusigemati, K., 1986. A new species of *Gerdus* Townes from Japan (Hymenoptera: Ichneumonidae). *Memoirs of the Faculty of Agriculture, Kagoshima University*, **22**: 91–93.
- Kusigemati, K., 1987. Descriptions of two new species of the genus *Calosphyrum* Townes from Japan (Hymenoptera: Ichneumonidae). *Memoirs of the Faculty of Agriculture, Kagoshima University*. **23**: 81–87.
- Momoi, S., 1966. Descriptions of seven new species and a new genus of Mesostenini from Japan (Hymenoptera: Ichneumonidae). *Kontyu, Tokyo*, **34**: 158–167.
- Momoi, S., 1970. Ichneumonidae (Hymenoptera) of the Ryukyu Archipelago. *Pacific Insects*, **12**: 327–399.
- Ratzeburg, J. T. C., 1852. *Die Ichneumoniden der Forstinsecten in forstlicher und entomologischer Beziehung (Dritter Band)*. 272pp. Nicolai, Berlin.
- Santos, B.F. 2017. Phylogeny and reclassification of Cryptini (Hymenoptera, Ichneumonidae, Cryptinae), with

- implications for ichneumonid higher-level classification. *Systematic Entomology*, DOI 10.1111/syen.12238.
- Schmiedeknecht, O., 1890. Die Gattungen und Arten der Cryptinen revidirt und tabellarisch zusammengestellt. *Entomologische Nachrichten*, **16**(6): 81–88.
- Schimitschek, E., 1935. Forstschädlingaufreten in Österreich 1927 bis 1933. *Centralblatt für das Gesamte Forstwesen*, **61**(5/6): 134–150.
- Seyrig, A., 1952. Les Ichneumonides de Madagascar. IV Ichneumonidae Cryptinae. *Mémoires de l'Académie Malgache. Fascicule XIX*, 213pp. Académie Malgache, Antananarivo.
- Sonan, J., 1930. A few host known Ichneumonidae found in Japan and Formosa. *Transactions of the Natural History Society of Formosa, Taihoku*, **20**: 268–273.
- Szépligeti, G., 1916. Ichneumoniden aus der Sammlung des ungarischen National-Museums. II. *Annales Musei Nationalis Hungarici*, **14**: 225–380.
- Thomson, C. G., 1873. XXI. Försök till gruppering och beskrifning af Crypti. *Opuscula Entomologica*, Lund. **V**: 455–527.
- Thomson, C. G., 1896. LIII. Nya bidrag till kännedom om Crypti. *Opuscula Entomologica*, Lund. **XXI**: 2343–2388.
- Thunberg, C. P., 1822. Ichneumonidea, *Insecta Hymenoptera illustrata. Mémoires de l'Académie Imperiale des Sciences de Saint Petersburg*, **8**: 249–281.
- Tosquinet, J., 1903. Ichneumonides nouveaux. (Travail posthume). *Mémoires de la Société Entomologique de Belgique*, **10**: 1–403.
- Townes, H., 1969. The genera of Ichneumonidae, part 1. *Memoirs of the American Entomological Institute*, **11**: 1–300.
- Townes, H., 1970. The genera of Ichneumonidae, Part 2. *Memoirs of the American Entomological Institute*, **12**: 1–537.
- Townes, H., S. Momoi & M. Townes, 1965. A catalogue and reclassification of the eastern Palearctic Ichneumonidae. *Memoirs of the American Entomological Institute*, **5**: 1–661.
- Townes, H., M. Townes & V. K. Gupta, 1961. A catalogue and reclassification of the Indo-Australian Ichneumonidae. *Memoirs of the American Entomological Institute*, **1**: 1–522.
- Uchida, T., 1930a. Fuenfter Beitrag zur Ichneumoniden-Fauna Japans. *Journal of the Faculty of Agriculture, Hokkaido University*, **25**: 299–347.
- Uchida, T., 1930b. Beitrag zur Kenntnis der Ichneumonidenfauna der Insel Izu-Oshima. *Transactions of the Sapporo Natural History Society*, **11**(2): 78–88.
- Uchida, T., 1931. Beitrag zur Kenntnis der Cryptinenfauna Formosas. *Journal of the Faculty of Agriculture, Hokkaido University*, **30**: 163–193.
- Uchida, T., 1932a. Beiträge zur Kenntnis der japanischen Ichneumoniden. *Insecta Matsumurana*, **6**: 145–168.
- Uchida, T., 1932b. H. Sauter's Formosa-Ausbeute. Ichneumonidae (Hym.). *Journal of the Faculty of Agriculture, Hokkaido University*, **33**: 133–222.
- Uchida, T., 1936a. Zur Ichneumonidenfauna von Tosa (II.) Subfam. Cryptinae. *Insecta Matsumurana*, **11**: 1–20.
- Uchida, T., 1936b. Erster Nachtrag zur Ichneumonidenfauna der Kurilen. (Subfam. Cryptinae und Pimplinae). *Insecta Matsumurana*, **11**: 39–55.
- Uchida, T., 1956. Die Ichneumoniden aus der Amami Inselgruppe. *Insecta Matsumurana*, **19**: 82–100.
- Viereck, H. L., 1914. Type species of the genera of Ichneumon flies. *United States National Museum Bulletin*, **83**: 1–186.
- Viereck, H. L., 1925. New genera and species of Ichneumonoidea in the Canadian National Collection. *Canadian Entomologist*, **57**: 71–78.
- Watanabe K., M. Ito, S. Fujie & S. Shimizu, 2018. Cryptinae. Information station of Parasitoid wasps (<http://himebati.jimdo.com/>) (26. September 2018 update).
- Westwood, J. O., 1840. Introduction to the modern classification of insects. Vol. II. Synopsis of the genera of British insects, 587+158pp. Longman, Orme, Brown, Green & Longmans, London.
- Yoshida, T., O. Nagasaki & T. Hirayama, 2011. A new species of the genus *Apsilops* Förster (Hymenoptera: Ichneumonidae: Cryptinae) from Japan; parasitoid of an aquatic crambid moth. *Zootaxa*, **2916**: 41–50.
- Yu, D. S., K. van Achterberg & K. Horstmann, 2016. World Ichneumonoidea 2015. Taxonomy, biology, morphology and distribution. [Flash drive]. Taxapad®, Vancouver, Canada.

摘 要

渡辺恭平, 2019. 日本産トガリヒメバチ亜科 (ハチ目、ヒメバチ科) の 5 新種の記載を伴う分類学および動物地理学的記録. 神奈川県立博物館研究報告 (自然科学), (48): 81–113. [Watanabe, K., 2019. Taxonomic and Zoogeographical Notes of Japanese Cryptinae (Hymenoptera, Ichneumonidae), with Description of Five New Species. *Bull. Kanagawa prefect. Mus. (Nat. Sci.)*, (48): 81–113.]

日本産トガリヒメバチ亜科の 21 属について、分類学および動物地理学的記録を報告した。5 新種、キモンクロチビトガリヒメバチ *Giraudia japonica* **sp. nov.**、ニシキトガリヒメバチ *Ischnus splendens* **sp. nov.**、ミヤマホソトガリヒメバチ *Nematopodius (Nematopodius) montanus* **sp. nov.**、アマミシマトガリヒメバチ *Xoridesopus amamiensis* **sp. nov.**、トカラシマトガリヒメバチ *X. tokarensis* **sp. nov.** を記載し、学名と標準和名を命名した。キモンクロチビトガリヒメバチ *Giraudia japonica* **sp. nov.** は *G. gyratoria* (Thunberg, 1822) に似るが、後体節第一背板の後方が細かく明瞭な彫刻に覆われること、触角の基部が黒色であること、後脚転節および第二転節が黒褐色であること、後体節背板がより暗色であることで区別できる。ニシキトガリヒメバチ *Ischnus splendens* **sp. nov.** は *I. bimaculatus* Jonathan, 2006 に似るが、マーラスペースの長さは大腿基部幅の長さの 1.0 ~ 1.1 倍であること、後脚基節は黄色紋を二つ有することから区別できる。ミヤマホソトガリヒメバチ *Nematopodius (Nematopodius) montanus* **sp. nov.** は *N. formosus* Gravenhorst, 1829 に似るが、翅脈 Nervellus が中央よりも前方で翅脈を分岐することと、触角が白帯を欠くことで区別できる。アマミシマトガリヒメバチ *Xoridesopus amamiensis* **sp. nov.** は *X. nigritibia* Gupta & Gupta, 1983 に似るが、Epomia が弱く存在すること、後脚腿節が赤褐色であること、後体節第三背板が密に点刻されることで区別できる。トカラシマトガリヒメバチ *X. tokarensis* **sp. nov.** は *X. schuleri* (Dalla Torre, 1902) に似るが、後脚基節が一様に黒色であることと、小盾板が密に点刻されることで区別できる。ケブカトガリヒメバチ *Apsilops scotinus* (Tosquinet, 1903) とヒメホソトガリヒメバチ *Nematopodius (Nematopodius) debilis* (Ratzeburg, 1852) を新たに日本から記録し、標準和名を命名した。ミヤマクロトガリヒメバチ *Dihelus niger* Gupta & Gupta, 1978 をムカシハナバチトガリヒメバチ *D. hylaevorus* (Momoi, 1966) の、ミイロトガリヒメバチ *Gerdus iriomotensis* Kusigemati, 1986 をサカグチキイロトガリヒメバチ *Eurycryptus sakaguchii* (Uchida, 1932) の、イシガキオオトガリヒメバチ *Torbda parallela* Momoi, 1970 をザウテルオオトガリヒメバチ *T. sauteri* Uchida, 1932 の、それぞれ異名とした。オオシマトガリヒメバチ *Cryptus ohshimensis* Uchida, 1930 とタカチホトガリヒメバチ *Torbda takachihoensis* Momoi, 1966 の所属をそれぞれ *Hedycryptus* と *Pterocryptus* に移動した。上記の他、複数の種について国内新分布記録を報告した。

(受付 2018 年 10 月 31 日; 受理 2018 年 12 月 13 日)