

**New Host Records of Ichneumonidae (Hymenoptera),
with Description of a New *Eriborus*
Species from Japan (VIII)**

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Introduction

In the course of our investigation we have had an opportunity to examine a lot of ichneumonid specimens which have been bred from economically important pests of rice, tall fescue, perilla, welsh onion, pumpkin, and from other various host insects. In this paper are given new host records of 11 ichneumonflies occurring in Japan. On this occasion, description of a new *Eriborus* species from Japan, which has been considered to be one of the principal parasites of the larva of *Pleuroptya derogata* Fabricius, and an additional description of the female *Ulesta agitata* (Matsumura & Uchida), which has been considered to be one of the principal parasites of the pupa of *Parnara guttata guttata* (Bremer et Grey), are given.

The type of new species will be preserved in the collection of the Entomological Institute, Hokkaido University, Sapporo, Japan.

1. *Campoletis chlorideae* (Uchida)

Campoletis chlorideae Uchida, Mushi, 30: 29, 1957.

Specimens examined. 8 ♂♂, 31-vii-1991, 1-, 2-, & 3-viii-1991, Shimota, Kagoshima-shi, Kyushu, bred from 2nd or 3rd instar larvae of *Adadevidia peponis* (Fabricius) (Noctuidae, Lepidoptera) on *Cucurbita moschata* (Duch.) Poir. var. *mokonaeformis* (Carr.) Makino by K. Kusigemati.

Distribution. Japan (Honshu, Kyushu), China, Taiwan, Nepal and India.

2. *Charops bicolor* (Szépligeti)

Agrypon bicolor Szépligeti, Ann. Mus. Natl. Hungarici, 4: 124, 1906.

Specimen examined. 1 ♂, 3-vii-1991, Nojiri, Sakurajima, Kagoshima-ken, bred from larva of *Spodoptera exigus* Hübner (Noctuidae, Lepidoptera) on *Allium fistulosum* L. by H. Yokoyama *et al.*

Distribution: Japan (Hokkaido, Honshu, Shikoku, Kyushu, Ryukyus), China, Korea, Oriental Region, and Australia.

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3. *Enicospilus signativentris* (Tosquinet)

Ophion (Enicospilus) signativentris Tosquinet, Mem. Sic. Ent. Belgique, 10: 37, 1903.

Specimen examined. 1 ♀, Shimota, Kagoshima-shi, Kyushu, 23-viii-1991, bred from last instar larva of *Adadevidia peponis* (Fabricius) (Noctuidae, Lepidoptera) on *Cucurbita moschata* (Duch.) Poir. var. *mokonaeformis* (Carr.) Makino by K. Kusigemati.

Distribution. Japan (Honshu, Shikoku, Kyushu, Ryukyus). Oriental Region. Widespread from India to China to Moluccas.

4. *Ephialtes rapae* (Uchida)

Pimpla rapae Uchida, J. Sapporo Soc. Agr. & Forest., 16: 503, 508, 1925.

Specimens examined. 2 ♂♂ & 1 ♀, 12-, 14- & 24-iv-1990, Nakatomatsuri, Utsunomiya, Tochigi-ken, bred from pupae of *Pieris melete* Ménétrières (Pieridae, Lepidoptera) by J. Hasegawa.

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

5. *Eriborus pleuroptyae* sp. nov.

(Figs. 1–4)

♀. Body rather slender, covered with rather dense, short and silvery hairs. Face rugoso-punctate vertically with dense but shallow punctures, about 1.3 times as wide as high at level of lower margin of antennal socket; clypeus densely and shallowly punctate, but sparser than those in face, its apical margin not impressed and reflexed, evenly arcuate; malar space $\frac{3}{8}$ as long as basal width of mandible; mandible stout, weakly tapering towards apex, about $\frac{1}{4}$ times as long as its basal width, with a low lamella along lower margin, the apical teeth equal in length; frons mat, moderately strongly rugose; vertex and ocellar area strongly mat; temple almost flat, finely rugulose; lower corner of postocciput with a few hairs; occipital carina distinct, and complete, its lower end connected with oral carina near base of mandible. Flagellum 33-segmented; 1st flagellar segment about $\frac{1}{6}$ times as long as the 3rd one. Pronotum with about 13 transverse striae on median area, rather strongly and densely punctate on postero-dorsal area; mesoscutum mat with strong and dense punctures, weakly rugulose postero-medially; scutellum strongly and densely punctate; shortly striate on lateral and posterior portions; mesopleurum weakly mat with strong and dense punctures, with transversely striate just before speculum; speculum polished, granulate or finely rugulose almost entirely; metapleurum strongly and rather densely punctate, the punctures sparser ventrally and posteriorly. Propodeum (Fig. 1) strongly areolated, the areola completely confluent with petiolar area; 1st lateral and 1st and 2nd pleural areas weakly mat, weakly and rather sparsely punctate; areola weakly mat, with several large punctures, and about as long as wide at costula; petiolar area trans-striate medially, densely and rather strongly rugoso-punctate laterally; propodeal spiracle elliptic. Hind femur slender, about 4.9 times as long as wide in lateral view; tarsal claws with 2 or 3 strong teeth (Fig. 2); 1st and 2nd hind tarsal segments with a conspicuous, straight, midventral row of closely spaced small hairs. Wings (Figs. 3 and 4) with nervulus subvertical, postfurcal by $\frac{1}{5}$ of its own length; portion of cubitus between intercubitus and 2nd recurrent vein $\frac{5}{7}$ as long as intercutibus, nervellus vertical, not intercepted; discoidiella absent. Abdomen with 1st tergite with distinct glymma, shortly and very sparsely haired, about 3.7 times as long as wide at apex; postpetiole stout, very sparsely haired laterally,

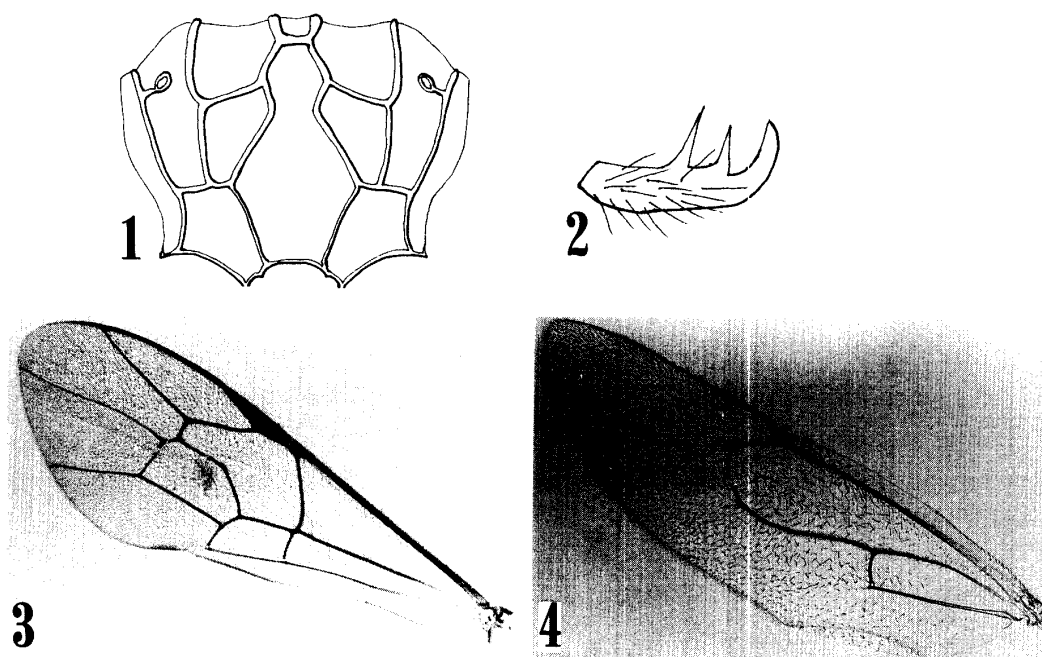


Fig. 1. Areolation of propodeum in dorsal view.
 Fig. 2. Hind outer tarsal claw.
 Fig. 3. Left fore wing.
 Fig. 4. Left hind wing.

bare medially, about 1.1 times as long as wide at apex; 2nd tergite weakly mat, about 1.5 times as long as wide at apex and about 1.7 times as long as the 3rd; thyridium elliptic, separated from base of 2nd tergite by its own length; 2nd and subsequent tergites covered with short and rather sparse hairs; ovipositor moderately strongly upcurved, comparatively long, about 1.9 times as long as 1st tergite; ovipositor sheath about 1.3 times as long as hind tibia.

Black. Palpi and tegula pale yellow; mandible light yellowish brown, dark brown at base and its apical teeth. Scape and pedicel light yellowish brown laterally and ventrally, blackish dorsally; flagellum infusate, a little paler basoventrally. Front and middle legs with coxa yellowish, weakly tinged with yellowish brown on basoventral portion and at extreme base; trochanters pale yellow; femora, tibiae and tarsi except dark brown claws, light yellowish brown; middle coxa yellowish, dark brown to blackish on about basodorsal half, and with a large dark brown markings on basodorsal portion. Hind leg with coxa black, yellowish at extreme apex and on about apical half of dorsal side; trochanter yellowish, dark brown on about basal half; femur yellowish brown to light ferruginous, dark brown on basolateral 2/5; tibia yellowish brown, infusate on about basal and apical 1/4; tarsus yellowish brown to fuscous, darker apically. Abdomen with 1st tergite black, the apical margin tinged with yellow to dark brown; 2nd tergite dark brown to black, with a subapical reddish brown band; 3rd tergite dark brown, with a wide band, the band expanded lateroventrally; 4th and subsequent tergites dark brown dorsally, reddish brown laterally and ventrally; ovipositor yellowish brown, dark brown along ventral margin of upper valve and dorsal margins of lower valve; ovipositor sheath infusate. Wings hyaline; stigma and vein infusate.

Length: Body 9.3 mm, forewing 5.3 mm.

Cocoon. Long elliptic, 8.3 mm in length, and 3.0 mm in diameter; whitish grey.

♂. Unknown.

Holotype (♀): Shimogamo, Kyoto, Honshu, 20-xi-1989, bred from the last instar larva of *Pleuroptya derogata* Fabricius on *Firmiana simplex* (L.) W. F. Wight by T. Iwamoto. (Left hind leg except coxa lacking).

Host. *Pleuroptya derogata* Fabricius (Pyralidae, Lepidoptera).

Distribution. Japan (Honshu).

This species is very closely related to the Oriental *E. vulgaris* (Morley, 1912)³⁾, but it differs from the latter by the strongly areolated propodeum with areola which is completely confluent with petiolar area, by the vertical nervellus, by the comparatively long ovipositor, by the colorations of the abdominal tergite and middle and hind coxae. Furthermore, this species is similar to the Japanese *E. ryukyuensis* Momoi, 1970²⁾, from which it is easily distinguished by the propodeum with strong median longitudinal carina and costula, by the entirely rugulose speculum, by the mandible with equal apical teeth in length and size, and by the coloration of the middle coxa, hind femur and abdominal tergite.

6. *Gravenhorstia yezonis* (Uchida)

Labrorychus yezonis Uchida, J. Fac. Agr. Hokkaido Imp. Univ., 21: 249.

Specimens examined. 2♂♂, 27- & 28-iv-1990, Nakatomatsuri, Utsunomiya, Tochigi-ken, bred from pupae of *Anthocaris scolymus* Butler (Pieridae, Lepidoptera) by J. Hasegawa.

Distribution. Japan (Hokkaido, Honshu, Kyushu).

7. *Mesochorus discitergus* (Say)

Cryptus disciterugus Say, Boston J. Nat. Hist., 1: 231, 1836.

Specimens examined. 2♂♂ & 16♀♀, 13-v-1970, 13♀♀, 8-vi-1970, Kotobuki, Kanoya-shi Kyushu, bred from *Apanteles kariyai* Watanabe (Braconidae, Hymenoptera) on *Pseudaletia separata* (Walker) (Noctuidae, Lepidoptera) feeds on *Festuca elatior* L. var. *arundinacea* (Schreb.) Wimm. by A. Tanaka; 2♂♂, 22-v-1991, Nojiri, Sakurajima, Kagoshima-ken, bred from cocoons of *Campoletis chlorideae* Uchida (Ichneumonidae, Hymenoptera) on *Spodoptera exigua* Hübner) (Noctuidae, Lepidoptera) feeds on *Allium fistulosum* L. by K. Kawazoe *et al.*; 1♂, 7-viii-1991, Nojiri, Sakurajima, Kagoshima-ken, bred from cocoon of *Microplitis* sp. (Braconidae, Hymenoptera) on *Spodoptera exigua* (Hübner) (Noctuidae, Lepidoptera) feeds on *Allium fistulosum* L. by H. Yokoyama *et al.*

Distribution. Worldwide.

8. *Neotypus taiwanus* Uchida

Neotypus taiwanus Uchida, Ins. Matsum., 3: 174, 1929.

Specimen examined. 1♀, 19-xii-1988, Banna-dake, Ishigaki-jima, Okinawa-ken, bred from pupa of *Lampides boeticus* (L.) (Lycaenidae, Lepidoptera) by Y. Koji.

Distribution. Japan (Ryukyus) and Taiwan.

9. *Pristmerus erythrothoracis* Uchida

Pristmerus vulnerator f. *erythrothoracis* Uchida, Ins. matsum., 7: 162, 1933.

Specimens examined. 1 ♂, 29-vii-1991, 1 ♀, 3-viii-1991, 1 ♂, 26-viii-1991, 1 ♀, 30-viii-1991, 2 ♂ & 1 ♀, 2-ix-1991, 2 ♀ ♀, 3-ix-1991, 1 ♂ & 1 ♀, 5-ix-1991, and 2 ♂ ♂, 7-ix-1991, Shimota, Kagoshima-shi, Kyushu, bred from larvae of *Endothenia remigera* Falkovitsh (Tortricidae, Lepidoptera) on *Perilla frutescens* (L.) by K. Kusigemati; 1 ♀, 7-ix-1991, Chiran, Kagoshima-ken, Kyushu, bred from larva of *Endothenia remigera* Falkovitsh (Tortricidae, Lepidoptera) on *Perilla frutescens* (L.) by K. Kusigemati.

Distribution. Japan (Honshu, Shikoku, Kyushu) and Korea.

10. *Trathala flavo-orbitalis* (Cameron)

Tarytia flavo-orbitalis Cameron, J. Bombay Nat. Hist. Soc., 17: 589, 1907.

Specimen examined. 1 ♀, 17-iv-1988, Shimogamo, Kyoto, Honshu, bred from larva of *Sclerocona acutella* Eversmann (Pyralidae, Lepidoptera) on *Zizania latifolia* Turcz. by Y. Yoshiyasu; 1 ♀, 22-viii-1991, Nojiri, Sakurajima, Kagoshima-ken, bred from the 2nd or 3rd instar larva of *Spodoptera exigua* (Hübner) (Noctuidae, Lepidoptera) on *Allium fistulosum* L. by T. Noda *et al.*

Distribution. Widely distributed throughout the Orient, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Ryukyus), Micronesia, and Hawaii. Introduced in U.S.A.

11. *Ulesta agitata* (Matsumura & Uchida)

Chasmias agitatus Matsumura & Uchida, Jour. Col. Agr. Hokkaido Imp. Univ. 16: 72, 1926.

Specimen examined. 1 ♀, 30-viii-1989, Kamifukumoto, Kagoshima-shi, Kyushu, bred from pupa of *Parnara guttata guttata* (Bremer et Grey) (Hesperiidae, Lepidoptera) on *Oryza sativa* L. by M. Shimooki.

Distribution. Japan (Hokkaido, Honshu, Shikoku, Kyushu) and Korea.

This species agrees well with the original description of *agitata* (Matsumura & Uchida, 1926)^{1,4)}, except the following colour variations:—

♀. Dark brown to reddish brown with 4th and subsequent tergites black. Head with face, clypeus, mandible, malar space, and temple dark brown; frons, vertex, occiput and postocciput blackish, slightly tinged with dark brown; antennae yellowish brown to dark brown, darker apicodorsally. Thorax dark to reddish brown; antero-dorsal half and postero-dorsal corner of pronotum, tegula, subtegular ridge, and scutellum pale yellow to yellow. Legs yellowish brown to dark brown; coxae, trochanters and femora dark brown. Abdomen with 1st to 3rd tergites ferruginous; 4th tergite with a pair of small reddish brown spots. Wings with veins and stigma light yellowish brown.

Summary

Fourteen parasite-host records for eleven Japanese Ichneumonidae are given. *Eriborus pleuroptyae* sp. nov. from Japan and an additional description of female *Ulesta agitata* (Matsumura and Uchida) are given.

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