

New Host Records of Ichneumonidae (Hymenoptera), with Description of a New Species and Notes on Some Known Species from Japan and Korea (VII)

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Abstract

Seven new parasite-host records for six Japanese and one Korean species of Ichneumonidae are given. *Hoplismenus infulatus* sp. nov. from Korea and the female of *Pterocormus brenthise* (UCHIDA), which was previously unknown from Japan, are described, and notes on some known species are given.

Key words: Insecta, Hymenoptera, Ichneumonidae, Butterfly parasites.

In the courses of my studies, I have the opportunity to examine a lot of ichneumonid specimens which have been reared from various hosts of butterflies belonging to Lycaenidae and Nymphalidae. In this paper, new host records of seven ichneumonflies found in Japan and Korea are reported. On this occasion, description of a new *Hoplismenus* species from Korea, which is considered to be one of the principal parasites of the pupa of *Hestina persimilis subviridis* LEECH and a description of the female *Pterocormus brenthise* UCHIDA, which was previously unknown from Japan and is considered to be one of the principal parasites of the pupae of *Aglais urticae* LINNAEUS, *Brenthis ino* ROTTEMBURG, and *Melitaea scotoia* BUTLER, are given.

1. *Anisobas artopoetese* UCHIDA

Anisobas artopoetese UCHIDA, 1956, Ins. Matsum., 20: 48.

Specimen examined. 1 ♀, Masutomi-shi, Nagano-ken, Honshu (16-vi-1979, A. MIYANO), emerged from the pupa of *Favonius yuasai* SHIRÔZU (Lycaenidae, Lep.) on *Quercus acutissima* CARR.

Distribution: Japan (Honshu; Kyushu).

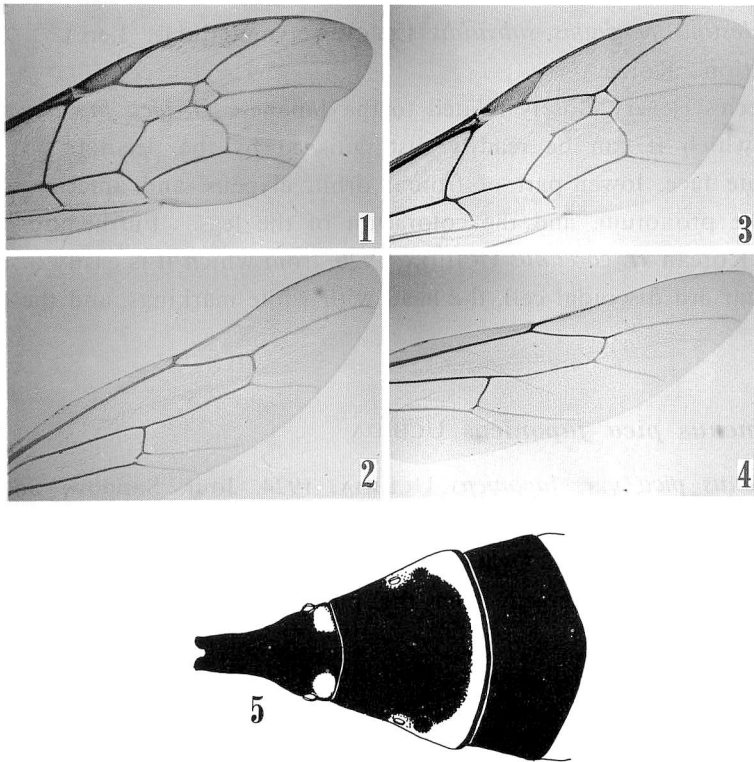
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2. *Hoplismenus infulatus* sp. nov. (Figs. 1, 2 & 5)

♂. Face subpolished, weakly convex medially, mat, with rather weak and dense punctures, about 1.6 times as wide as high at level of lower margin of antennal socket; clypeus moderately strongly convex, shallowly and rather densely punctate, the punctures becoming a little denser and weaker dorsally, about 1.6 times as wide as high, its apical margin almost truncate; inner margins of eyes slightly convergent ventrally; malar space mat, about as long as basal width of mandible; frons mat, with sparse, shallow punctures and a few longitudinal lugulae; occiput subpolished, weakly and densely punctate; distance between lateral ocelli and eyes as long as diameter of an ocellus; 2nd segment of maxillary palpus weakly swollen, about 2.8 times as long as wide, and $5/7$ as long as the 3rd. Flagellum 40-segmented; 1st flagellar segment about 2.8 times as long as wide at apex and about 1.1 times as long as the 2nd; 8th-21th flagellar segments with a tyloid, respectively. Pronotum strongly punctate, with vertical striae on midventral area; mesoscutum mat, strongly and densely punctate, with longitudinal striae on apical area, its lateral carina present on basal $1/3$; mesopleurum strongly and densely punctate, horizontally striae on lower $1/2$; speculum polished, bare on lower $1/2$, with strong and rather sparse punctures on upper $1/2$; metapleurum striate-punctate, the juxtacoxal carina strong and complete. Propodeum coarsely trans-rugose or reticulate-rugose, its carination complete, but the costula very weak, with a pair of tooth-like apophyses on subapical portion; areola about as long as wide at costula, its lateral sides parallel-sided; propodeal spiracle elliptic, 2.8 times as long as wide. Venation of wings as in Figs. 1 and 2; areolet pentagonal, receiving 2nd recurrent vein at basal $4/9$; hind margin of 3rd discoidal cell rather strongly curved inwards on dorsal portion. Leg with hind femur rather slender, 5.1 times as long as wide in lateral view; hind basitarsus 2.4 times as long as the 2nd. Abdomen with 1st tergite polished, with median longitudinal carina distinct wholly; postpetiole with a few trans-striae, but without longitudinal striae; 2nd tergite strongly and densely punctate, rugose on basal area, $7/9$ as long as wide at apex and 1.5 times as long as the 3rd; 3rd tergite strongly and densely punctate, the punctures a little weaker than that of the 2nd; thyridium wide, the space between thyridia $6/7$ as long as a thyridium; 3rd sternite with a median membranous area.

Black. Face white, with a small fuscous spot on median dorsal portion; lower $2/3$ of frontal orbit white; clypeus white, with a small dark brown spot on dorsocentral portion; clypeal fovea dark brown; labrum white; mandible white, its apical tooth dark brown to blackish; palpi white to light yellowish brown, the 1st maxillary and labial palpi fuscous; malar space whitish, the lower margin tinged with dark brown. Antennae blackish, a little paler ventrally; inner ventral side of scape white; 9th-13th flagellar segments white; tyloids whitish. Subtegular



Figs. 1-4. Fore (1 & 2) and hind (3 & 4) wings: 1 and 2, *Hoplismenus infulatus* sp. nov., ♂; 3 and 4, *Pterocormus brentise* (UCHIDA) ♀.

Fig. 5. Colouration of 1st to 3rd abdominal tergites, *H. infulatus* sp. nov., ♂.

ridge and antero- and posterodorsal margins white; tegula white, fuscous basally; scutellum except for both ends white; posterior corner of metapleurum tinged with dark reddish brown; propodeal apophyses white. Front and middle legs with coxae white, dark brown at extreme base and on dorsal sides; trochanter, femora except at apex and tibiae whitish yellow on inner sides, fuscous to infuscate on outer side; tarsi light yellowish brown, the last segment a little darker. Hind leg with coxa black basally, white apically; trochanter blackish, whitish on basodorsal portion and lateroventral 1/2 of posterior portion; tibia infuscate, the inner side yellowish brown; tarsus infuscate; tibial spurs yellowish brown. Abdomen (Fig. 5) with postpetiole with a pair of white spots on posterior area; 2nd tergite whitish yellow to white on posterolateral 1/3, with a subapical white band, the band becoming wider laterally. Wings subhyaline, a little darker apically; stigma yellowish brown, infuscate on basal outer portion.

Length: Body 14.4 mm, forewing 11.0 mm.

♀. Unkown.

Holotype: ♂, Korea: Kwang Nung (ix-1987, Y. KUDO), emerged from pupa

of *Hestina persimilis subviridis* LEECH.

Host: *Hestina persimilis subviridis* LEECH (Nymphalidae, Lep.).

Distribution: Korea.

This species is very closely related to the Japanese *H. pica japonicus* UCHIDA, 1924, from which it can be readily distinguished by the peculiar 3rd discoidal cell, the white face, lower part of frontal orbit, clypeus, and anterior and dorsal margin of the pronotum, and the coloration of the legs. Furthermore, it is also allied to the Korean *H. coreanus* UCHIDA, 1926, from which it is easily distinguished by the peculiar 3rd discoidal cell, the head with white markings, and the coloration of the legs.

3. *Hoplismenus pica japonicus* UCHIDA

Hoplismenus pica var. *japonicus* UCHIDA, 1924, Jour. Sapporo Soc. Agr. & Forest., 16: 20.

Specimen examined. 1 ♀, Oyatani, Fujihashi, Ibi-gun, Gifu-ken, Honshu (23-vi-1985, A. MIYANO), emerged from the pupa of *Argyronome laodice* PALLAS (Lycaenidae, Lep.).

Distribution: Japan (Hokkaido; Honshu), China and Kuriles.

4. *Melalophacharops everese* UCHIDA

Horogenes everese UCHIDA, 1957, Ins. Matsum., 21: 60.

Specimens examined. 2 ♂♂, Oogawara, Neo, Motosu-gun, Gifu-ken, Honshu (vi-1985, A. MIYANO), emerged from the prepupa of *Celastrina sugitanii* SHIRÔZU (Lycaenidae, Lep.) fed on flowers of *Aesculus tubinata* BLUME.

Distribution: Japan (Kyushu).

5. *Phobocampe takeuchii* KUSIGEMATI

Phobocampe takeuchii KUSIGEMATI, 1988, Kontyû, 56: 578.

As a supplement to the original description the following features may be added: —

♀. Face 1.3-1.4 times as wide as high at level of lower margin of antennal socket; malar space 3/8-3/7 as long as basal width of mandible; distance between lateral ocelli and eyes 4/5-6/7 as long as diameter of an ocellus. Forewing with nervulus postfurcal by 1/3-3/8 of its own length. Hind femur 4.0-4.4 times as long as wide in lateral view. Abdomen with 1st tergite 2.2-2.4 times as long as wide at apex; postpetiole 3/4-4/5 as long as wide at apex; 2nd tergite 3/4-4/5 as long as wide at apex and 1.2-1.3 times as long as the 3rd.

Hind leg with coxa sometimes infusate basally; femur light ferruginous, a little darker apically, infusate at apex; reddish brown apical band of 2nd tergite variable in width.

Length: Body 5.1-6.1 mm, forewing 4.6-4.8 mm.

Cocoon: Elliptic, 5.3-5.6 mm in length and 3.0-3.2 mm in diameter.

Specimens examined. 1 ♀, Nishimatani, Kashimo, Ena-gun, Gifu-ken, Honshu (1-vi-1986, A. MIYANO), reared from the 4th instar larva of *Celastrina sugitanii* SHIRÔZU (Lycaenidae, Lep.) fed on flowers of *Aesculus turbinata* BLUME; 2 ♀ ♀, Oogawara, Motosu-gun, Gifu-ken, Honshu (7-vi- & vi-1985, A. MIYANO), reared from the 3rd or last instar larvae of *Celastrina sugitanii* SHIRÔZU (Lycaenidae, Lep.) fed on flowers of *Aesculus turbinata* BULUM.

Distribution: Japan (Honshu).

6. *Pterocormus brentise* (UCHIDA) (Figs. 3 & 4)

Pterocormus brentise UCHIDA, 1957. Ins. Matsum., 21: 59.

The female of this species was previously unknown. On the basis of the present specimens a description of the female is given:—

♀. Face polished, 1.7-1.8 times as wide as high at level of lower margin of antennal socket, strongly and rather sparsely punctate, the punctures becoming denser medially, more or less transversely striate dorsally; clypeus almost flat, about 2.4 times as wide as high, with a few large punctures; malar space sparsely punctate, 1.3-1.5 times as long as basal width of mandible; inner margins of eyes slightly divergent ventrally; frons very closely and strongly punctate, its bottom polished and bare; occiput finely and rather sparsely punctate; 2nd segment of maxillary palpus swollen, 2.0-2.1 times as long as wide and $7/9$ - $8/9$ as long as the 3rd. Flagellum with 41 or 42 segments; 1st flagellar segment 3.0-3.1 times as long as wide at apex and 1.1-1.2 times as long as the 2nd. Pronotum vertically striate-punctate, densely and distinctly punctate dorsally; mesoscutum weakly and densely punctate; notauli short, weakly impressed at base; scutellum moderately strongly convex, sparsely and rather weakly punctate, its lateral carina absent; mesopleurum strongly and rather sparsely punctate, sometimes weakly and partly striate; metapleurum very strongly and rather sparsely punctate; juxtacoxal carina strong and complete. Propodeum with costula absent; median longitudinal carina on petiolar area weak and fading out on the basal portion; confused areola and petiolar area more or less longitudinally striate, the striae of petiolar area stronger than those of areola; lateral side of areola almost parallel-sided; confused 1st and 2nd lateral areas more or less longitudinally striate, distinctly punctate on basolateral area; 3rd lateral area strongly rugoso-punctate; propodeal spiracle elliptic, 4.0-4.5 times as long as wide. Venation of wings as in Figs. 3 and 4; nervulus postfurcal by $3/8$ - $1/2$ of its own length; areola pentagonal, receiving

2nd recurrent vein at basal $3/5$; nervellus strongly reclivous, intercepted at lower $1/6-2/9$. Leg with hind femur rather slender, 4.5-4.7 times as long as wide in lateral view; basitarsus of hind leg 2.0-2.2 times as long as the 2nd. Abdomen with postpetiole $3/7$ as long as wide at apex, distinctly and entirely striate longitudinally; 2nd tergite $7/9-5/6$ as long as wide at apex and 1.5 times as long as the 3rd, longitudinally striate basally, the striae stronger basally, densely and weakly punctate apically; 3rd tergite weakly and densely punctate; thyridium wide, the space between thyridia as long as a thyridium; ovipositor short, $3/8$ as long as hind tibia.

Black. Mandible black basally, dark reddish brown apically; palpi fuscous to infusate, the 2nd segment of maxillary palpus with an indistinct white spot on dorsal side. Apical margin of scape and pedicel narrowly tinged with dark reddish brown; flagellum dark reddish brown to infusate, paler basally, the 8th or 9th-13th segments except for ventral side white. Scutellum yellow. Front leg black; 2nd trochanter, extreme base and apex of femur reddish brown; tibia and tarsus reddish brown to fuscous, the tibia with a large yellowish brown subbasal band. Middle and hind legs black; 2nd trochanter, both ends of femur dark reddish brown; tibia light yellowish brown on about basal $3/5$, blackish on about apical $2/5$; tarsus dark reddish brown. Abdomen black; 2nd tergite reddish to dark reddish brown; apical margin of 3rd tergite narrowly tinged with dark reddish brown; 5th-8th tergites yellow dorsally. Wings hyaline; stigma yellowish brown.

Length: Body 13.9-16.3 mm, forewing 9.1-10.3 mm.

Specimens examined. 1♀, Minamiteshikaga, Teshikaga, Kushiro, Hokkaido (11-vii-1984, A. MIYANO), emerged from the pupa of *Aglais urticae* LINNAEUS (Nymphalidae, Lep.) on *Urtica platyphylla* WEDD.; 1♀, Gifu-ken, Honshu (vii-1986, Y. KOJI), emerged from the pupa of *Mellicta ambigua* MÉNÉTRIÈS (Nymphalidae, Lep.).

Distribution: Japan (Hokkaido; Honshu).

7. *Theronia (Theronia) atalantae gestator* (THUNBERG)

Ichneumon gestator THUNBERG, 1822, Mem. Acad. Imp. Sci. St. Petersb., 8: 262.

Specimen examined. 1♀, Hirano, Hino, Nagano-ken, Honshu (27-vi-1987, K. NISHIHARA), emerged from the pupa of *Neptis pryori* BUTLER (Nymphalidae, Lep.) on *Spiraea thunbergii* SIED.

Distribution: Japan (Hokkaido; Honshu; Shikoku; Kyushu), Kuriles, China, Korea, Russia, and Europe.

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