

# On the species of *Meloboris* Holmgren from Japan (Hymenoptera, Ichneumonidae)

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In the following pages are given two Japanese species of the genus *Meloboris* Holmgren, of which one is new to science. The holotype of the new species is deposited in the collection of the Entomological Institute, Hokkaido University, Sapporo.

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## Genus *Meloboris* Holmgren

*Meloboris* Holmgren, Öfvers. Svenska Vetensk. Akad. Förh. 15: 326, 1856. [Type-species: *Meloboris gracilis* Holmgren].

*Asinamora* Foerster, Verh. Naturh. Ver. Rheinlande 25: 155, 1868. [Type-species: (*Limneria concinna* Holmgren) = *Ichneumon collector* Thunberg].

*Nepiera* Foerster, Verh. Naturh. Ver. Rheinlande 25: 156, 1868. [Type-species: (*Limneria concinna* Holmgren) = *Ichneumon collector* Thunberg].

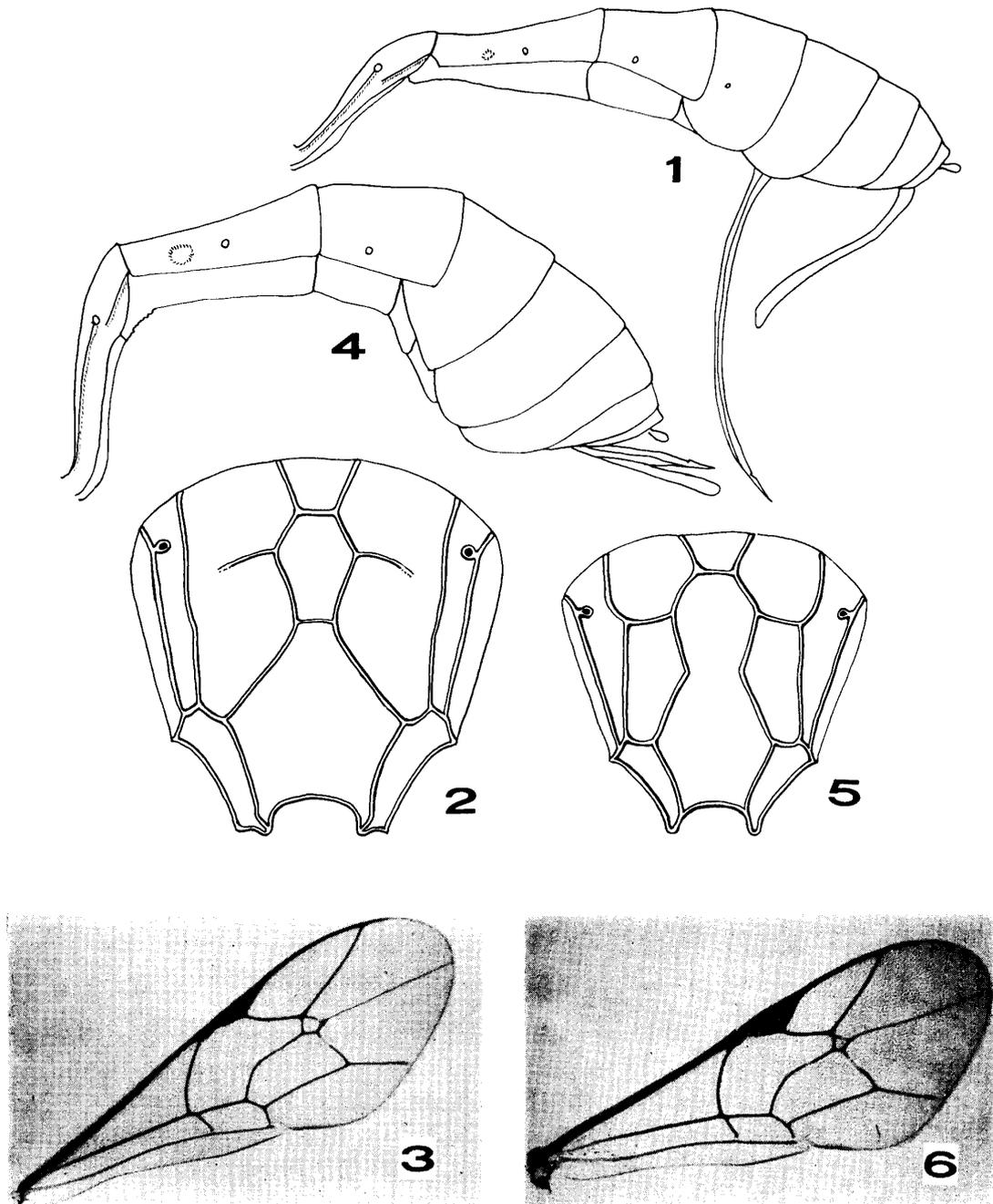
This is a rather small genus of the Porizontinae, being represented by about 20 species in the world. So far as their habits are known, the species of *Meloboris* are solitary internal parasites of the larvae of Lepidoptera belonging to the Gelechidae, Noctuidae, Olethreutidae, Pieridae and Pterophoridae in Europe and North America.

In Japan there are known two species, which are distinguished by the following key: —

### Key to the Japanese species of *Meloboris*

1. Propodeum (Fig. 2) with areola separated from petiolar area by a carina; costula incomplete, obsolete on apical 1/3; 1st abdominal tergite with glymma large, strongly and deeply impressed; ovipositor sheath (Fig. 1) long, about 1.3 times as long as 2nd tergite. Hind coxa black on basal half, yellowish brown on apical half; abdominal tergites black, light yellowish brown laterally, without an apical yellowish-brown band . . . . . 1. *orientalis* Momoi et al.
- Propodeum (Fig. 5) with areola usually confluent with petiolar area; costula usually complete; 1st abdominal tergite with glymma small, weakly impressed; ovipositor sheath (Fig. 4) short, about 4/5 as long as 2nd tergite. Hind coxa black; abdominal tergites blackish; 2nd and following tergites yellowish brown apically and laterally . . . . . 2. *leucaniae*, sp. nov.

1. *Meloboris orientalis* Momoi, Kusigemati and Nakanishi (Figs. 1 - 3)



Figs. 1-3. *Meloboris orientalis* Momoi et al., ♀. 1. abdomen in lateral view; 2. propodeum in dorsal view; 3. forewing.

Figs. 4-6. *Meloboris leucaniae*, sp. nov., ♀. 4. abdomen in lateral view; 5. propodeum in dorsal view; 6. forewing.

*Meloboris orientalis* Momoi, Kusigemati and Nakanishi, Mushi 41: 203, 1968.

Specimens examined: Hokkaido (45 ♂♂ & 37 ♀♀, including holotype of *orientalis*)—Rishiri-to, Yûbari-dake, Sapporo, Soranuma-dake, Jôzankei, Nopporo, Shimamatsu and Toya; Honshu (1 ♂) — Sukayu near Aomori; Kyushu (1 ♂ & 1 ♀) — Sobo-san near Taketa.

Host: Unknown.

Distribution: Japan (Hokkaido; Honshu; Kyushu).

2. *Meloboris leucaniae*, sp. nov. (Figs. 4 - 6)

♀. Face about 1.3 times as wide as high, slightly convex, weakly mat; inner margins of eyes slightly convergent below; clypeus moderately convex, weakly mat, the apical margin being truncate; malar space  $1/2 - 5/8$  as long as basal width of mandible; mandible moderately long, 1.6 - 1.8 times as long as its basal width, the apical teeth being equal in length; temple moderately long, weakly mat, slightly swollen; occipital carina weakly indicated above and laterally, indistinct on lower end, so that the lower end not joined with hypostomal carina; frons weakly mat, rather flat, without a median longitudinal carina; distance between posterior ocelli and eyes slightly shorter than diameter of an ocellus; antennae 29-segmented; 1st flagellar segment 3.4 - 4.2 times as long as wide at apex and about 1.4 times as long as the 2nd. Pronotum rather weakly striate transversely on lower portion, weakly mat on upper portion, with a distinct epomia; collar weakly mat; mesonotum strongly convex, weakly mat; notauli obsolete; scutellum strongly convex, more weakly mat than mesonotum, without lateral carinae; mesopleuron weakly mat, shortly and vertically striate just below speculum; speculum smooth and polished, the upper portion being faintly mat; metapleuron weakly convex, weakly mat; postpectal carina present only laterally and medially. Propodeum (Fig. 5) weakly mat, weakly and completely areolated, but the areola usually confluent with petiolar area; median basal area small, almost triangular; areola long, 1.3 - 1.7 times as long as wide at costula; petiolar area rather flat, confluent with areola, sometimes separated from areola by a weak carina; propodeal spiracle small, short ovate. Forewing (Fig. 6) with nervulus postfurcal by  $2/7 - 1/3$  of its own length; areolet sessile or shortly petiolate above, receiving 2nd recurrent vein at the middle; nervellus intercepted near its lower  $1/3$ ; discoidiella reaching to nervellus. Legs with hind femur 5.1 - 5.8 times as long as wide laterally; hind spur of middle tibia 1.5 - 1.8 times as long as front spur of middle tibia; hind spur of hind tibia 1.3 - 1.5 times as long as front spur of hind tibia; tarsal claws small, weakly pectinate at base. Abdomen (Fig. 4) with 1st tergite 2.7 - 3.3 times as long as wide at apex, with a weak sublateral longitudinal carina, the sublateral longitudinal carina extending to spiracle and being not connected with sublateral longitudinal carina of postpetiole, and with glymma very small and inconspicuous; postpetiole 1.0 - 1.2 times as long as wide at apex, weakly mat except at apex; 2nd tergite weakly mat, 1.3 - 1.5 times as long as wide at apex, 0.8 - 1.0 times as long as the 1st and about 1.4 times as long as the 3rd, with thyridium large, separated from base of 2nd tergite by 1.4 - 1.6 times of its own diameter; ovipositor (Fig. 4) short, almost straight; ovipositor sheath (Fig. 4) about  $4/5$  as long as 2nd tergite.

Black. Mouth parts pale yellow to yellow, the apical teeth of mandible being dark brown; antennae blackish. Humeral angle of pronotum and tegula pale yellow. Front and middle legs with coxae and trochanters pale yellow, the base of coxae being dark brown; femora and tibiae light yellowish brown, the dorsal sides of tibiae being pale yellow; tarsi yellowish

brown to dark brown, darkened towards apex. Hind leg with coxa except at extreme apex black; coxa at extreme apex, 1st trochanter at both ends and 2nd trochanter pale yellow; 1st trochanter except at both ends blackish; femur reddish brown, dark brown at both ends; tibia infusate, pale yellow basally and dorso-medially; tarsus infusate. First abdominal tergite black with a narrow yellowish brown band at apex; 2nd tergite black with an apical yellowish-brown band; 3rd to 7th tergites black, yellowish brown apically and laterally.

Length: Body 5.2 - 5.8 mm., forewing 4.1 - 4.6 mm.

♂. Face about 1.4 times as wide as high; antennae 30-segmented; 1st flagellar segment 2.6 - 2.9 times as long as wide at apex. Propodeum with costula present on basal half, obsolete on apical half; areola completely confluent with petiolar area. Hind leg with femur 4.8 times as long as wide laterally. Hind wing with nervellus intercepted near its lower 2/5.

Black. Similar to the female in colour except that the legs are more or less darkened.

Length: Body 4.7 - 4.9 mm., forewing 3.6 - 3.9 mm.

Cocoon: Elongate-cylindrical, 6.8 mm. in length and 3.0 mm. in diameter; whitish with a few blackish markings.

Holotype (♀): Kotoni, Sapporo, Hokkaido, 26-vi-64, reared from *Leucania separata* by S. Okayama. Paratypes: 1 ♀, Taisetsu-zan, Hokkaido, 24-vii-67, K. Kusigemati leg.; 1 ♀, Sapporo, Hokkaido, 22-ix-65, K. Kusigemati leg.; 1 ♀, Sapporo, Hokkaido, 17-ix-68, H. Takizawa leg.; 2 ♀♀, Shimamatsu, Hokkaido, 8-vii-65 and 12-vi-67, K. Kusigemati leg.; 1 ♀, Gassan, Yamagata, Honshu, 3-ix-66, K. Kusigemati leg.; 2 ♂♂ & 1 ♀, Sadoga-shima, Niigata, Honshu, 5-ix-66, M. Suwa leg.

Host: *Leucania separata* Walker.

Distribution: Japan (Hokkaido; Honshu).

This species is similar to the preceding species, *M. orientalis*, but readily distinguished from the latter by the short ovipositor, by the 2nd abdominal tergite with a large thyridium and by the colour of the abdominal tergites. Furthermore, this species closely resembles the European species, *M. collector* (Thunberg) and *M. proxima* (Perkins), but it may be clearly differentiated from *collector* by the completely areolated propodeum; from *proxima* by the abdominal tergites with a yellowish-brown band at apex.

#### SELECTED LITERATURE

- Hedwig, K. 1963. Ergebnisse der Deutschen Afghanistan-Expedition 1956 der Landessammlungen für Naturkunde Karlsruhe. Ichneumonidae, Braconidae (Hymenoptera). Beitr. naturk. Forsch. SW-Dtschl., Karlsruhe 19 1961: 291-298.
- Hinz, R. 1969. Drei neue Ichneumoniden aus Nordeuropa (Hym., Ichneumonidae). Entomologische Meddelelser 37: 280-284.
- Momoi, S., K. Kusigemati and A. Nakanishi 1968. Ichneumonidae (Hymenoptera) collected in paddy field of the Orient, with descriptions of new species. Mushi 41: 201-214.
- Perkins, J. F. 1942. A note on European *Nepiera* Förster, with the description of a new species (Hym. Ichneumonidae: Ophioninae). Entomologist 75: 64-65.
- Townes, H., S. Momoi and M. Townes 1965. A catalogue and reclassification of the Eastern Palaearctic Ichneumonidae. Mem. Amer. Ent. Inst. 5, 661pp.
- Townes, H. 1965. Nomenclatural notes on European *Ichneumonidae* (Hymenoptera). Polskie Pismo Ent. 35: 409-417.
- 1969. The genera of Ichneumonidae part 3. Mem. Amer. Ent. Inst. 13, 307pp.