

Two New Species of *Glavidorsum* Townes from Japan (Hymenoptera, Ichneumonidae)

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Introduction

Glavidorsum is a moderate-sized genus, distributed mainly in the eastern Palearctic region and Indo-Papuan area. In 1969 Townes described the genus for the reception of *Gambrus stokesii* Cameron, 1912. Townes (1969) studied eleven species of this genus but gave no species names except for *stokesii*, the type-species. In the present investigation have found two species in Japan, both of which are new to science. Information on the host association of the genus is scanty and so far as I am aware, *G. stokesii* (Cameron) from Australia is the only one species, of which the host is known. It has been recorded as a parasite of *Cydia pomonella* and *Grapholitha molesta* of the Olethreutidae, Lepidoptera. It should be noted here that *G. acroclitae*, one of the new species described herein, is also parasitic on olethreutids. The types of the new species are deposited in the collection of the Entomological Institute, Hokkaido University, Sapporo.

Genus *Glavidorsum* Townes

Glavidorsum Townes, Mem. Amer. Ent. Inst. 12: 174, 1969. [Type-species: *Gambrus stokesii* Cameron]

This genus is characterized by the following aspects:—

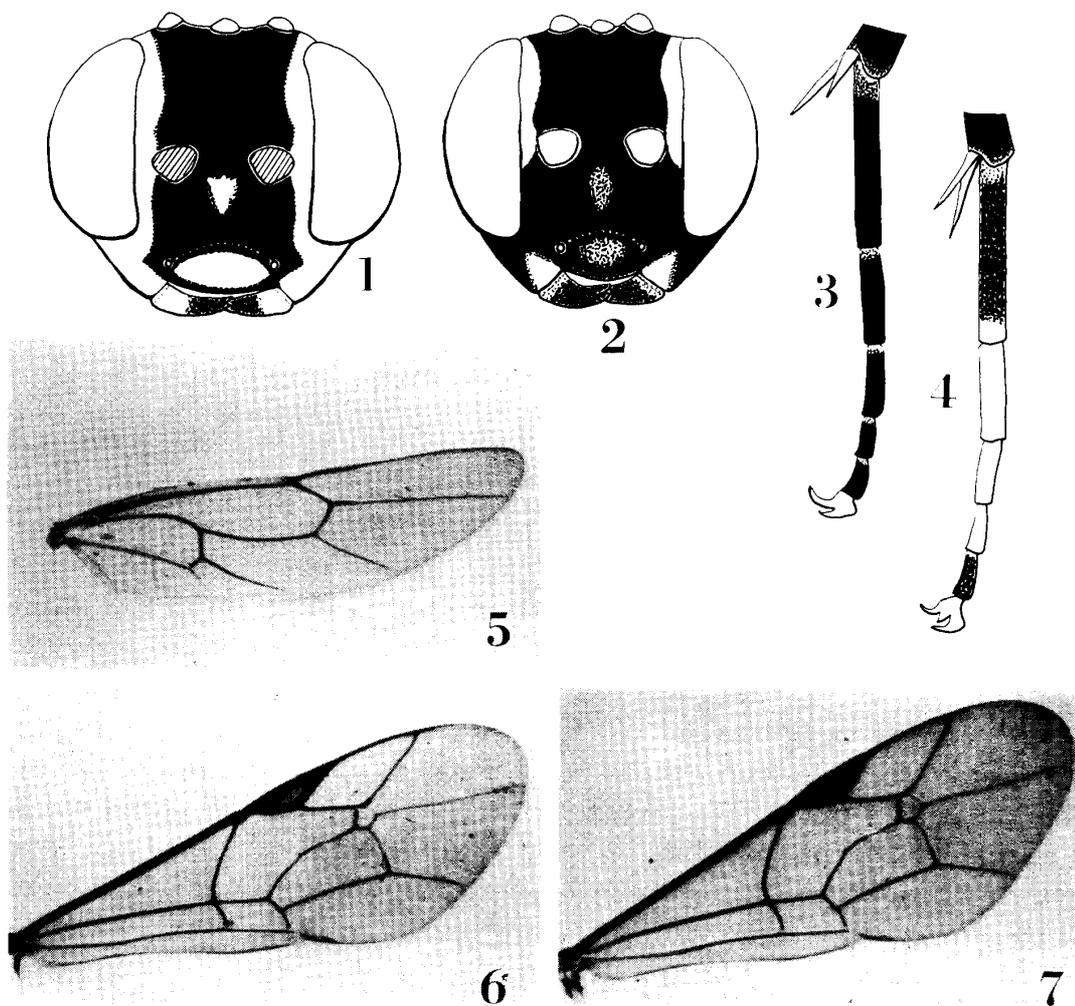
Head with clypeus rather strongly convex, about 1.8 times as wide as high, the apical margin being convex, without apical tooth; mandible rather short, the lower tooth as long as or a little shorter than upper tooth. Mesoscutum polished, with fine setiferous punctures scattered rather densely on basal $1/7$ – $3/8$, elsewhere mostly impunctate and bare; notaulus distinct, reaching far past center of mesoscutum. Propodeum with apical transverse carina strongly sinuate; propodeal spiracle circular. Wings (Figs. 5–7) with areolet rather strongly convergent forward; 2nd recurrent vein subvertical; mediella moderately strongly arched on subapical portion; axillus vein parallel to anal margin of hind wing, the apical part being weakly curved toward the margin. Abdomen with 1st tergite moderately slender, with a weak basolateral tooth, its spiracle situated near the apical $2/5$. Ovipositor moderately stout, rather strongly compressed, its tip sagittate; ovipositor sheath about $2/3$ as long as hind tibia.

The Japanese species may be distinguished by the following key: —

Key to the Japanese species of *Glavidorsum*

1. Female.2

- Male.3
2. Hind femur comparatively slender, 5.1–5.3 times as long as wide in lateral view. Metapleurum almost entirely punctate. Temporal orbit more or less yellow; mesoscutum black, with a subapical yellow spot; propodeum with yellow markings; hind coxa black, with a basodorsal yellow spot.1. *acroclitae*, sp. nov.
- Hind femur comparatively stout, 4.7–5.0 times as long as wide in lateral view. Metapleurum almost entirely striate. Temporal orbit black; mesoscutum black, without subapical yellow spot; propodeum and hind coxa entirely black.2. *simile*, sp. nov.
3. Metapleurum finely punctate. Petiolar area of propodeum longitudinally striate, with yellow spots or a yellow band. Flagellum entirely black; mesoscutum with a subapical yellow spot. Abdominal tergites each with a yellow apical band. Hind tarsus entirely blackish brown (Fig. 3).1. *acroclitae*, sp. nov.
- Metapleurum strongly punctate. Propodeum entirely black; petiolar area of propodeum strongly rugose. Flagellum blackish, the median segments being white. Mesoscutum black,



Figs. 1 and 2. Colour patterns of head in frontal view, females: 1. *Glabridorsum acroclitae*, sp. nov.; 2. *G. simile*, sp. nov.

Figs. 3 and 4. Colour patterns of right hind tarsus, females: 3. *G. acroclitae*, sp. nov.; 4. *G. simile*, sp. nov.

Fig. 5. Right hind wing, male, *G. acroclitae*, sp. nov.

Figs. 6 and 7. Right forewings, females: 6. *G. acroclitae*, sp. nov.; 7. *G. simile*, sp. nov.

without yellow spots. Abdominal tergites entirely black. Hind tarsus blackish, with 2nd to 4th segments being white (Fig. 4).2. *simile*, sp. nov.

1. *Glabridorsum acroclitae*, sp. nov. (Figs. 1, 3, 5 & 6)

Female. Face about 1.3 times as wide as high, weakly convex on the median 1/3, with short and rather sparse hairs; clypeus polished, strongly convex, about 1.8 times as wide as high, with long sparse hairs, the apical margin of clypeus convex, thin, not reflexed, and wanting median tooth; malar space 7/8 as long as basal width of mandible; clypeal fovea small and weakly impressed; mandible short, tapering toward apex, finely and rather sparsely punctate, with upper tooth a little longer than the lower one; temple short, weakly convex, polished, with scattered hairs, the hairs being denser ventrally; occipital carina strong and complete, the lower end of genal carina joining oral carina near base of mandible; frons weakly concave on lower half, weakly convex and sparsely haired on upper half; distance between lateral ocelli and eyes 1.0–1.3 times as long as diameter of an ocellus. Antennae with 25–27 segments; flagellum slightly enlarged; 2nd flagellar segment about 1.2 times as long as 1st segment, and 6/7–8/9 as long as 3rd segment. Pronotum polished, transversely and rather strongly striate, with dorsal part and collar area smooth; epomia weak but distinct, its upper end not reaching dorsal margin of pronotum; dorsolateral margin of pronotum rather strongly swollen; mesoscutum polished, with moderately dense, setiferous punctures on about basal 1/3, elsewhere mostly impunctate and bare; notaulus strong, reaching basal 3/4; scutellum polished, rather strongly convex, with a few short hairs, and without lateral carina; mesopleurum polished, with transverse striae, the striae being weaker ventrally; speculum polished and smooth; prepectus rugulose dorsally, weakly and sparsely punctate ventrally; metapleurum polished, with fine and rather sparse setiferous punctures, with weak and oblique striae posteriorly; juxtacoxal carina weak but complete. Propodeum polished, with weak and rather sparse, setiferous punctures on basal areas, with longitudinal striae on median area; petiolar area weakly rugose medially, obliquely striate laterally; basal transverse carina strong and complete; apical transverse carina strong, forming a weak crest sublaterally; propodeal spiracle small and circular, about as long as wide. Wings (Figs. 5 & 6) with nervulus opposite basal vein; nervellus intercepted at its lower 2/7–3/8 of its own length; brachiella present but very short. Legs slender; hind femur 5.1–5.3 times as long as wide in lateral view. Abdomen subpolished, very weakly mat, with short and very sparse hairs; 1st tergite rather stout, 2.0–2.2 times as long as wide at apex, with a weak basolateral tooth, with spiracle situated near basal 5/8; ventral and dorsolateral carinae complete but weak, and median dorsal carina absent; petiole smooth and flat, sometimes very weakly mat; postpetiole weakly convex, with short and sparse hairs; 2nd tergite about 7/8 as long as wide at apex; 3rd tergite about 5/7 as long as 2nd tergite. Ovipositor rather stout, strongly compressed, sagittate at tip, with 4 or 5 teeth on lower valve; ovipositor sheath 2/3 as long as hind tibia.

Black. Face (Fig. 1) black, with a pale yellow spot on centrodorsally; orbit pale yellow, sometimes lower part of facial orbit, temporal orbit entirely, and sometimes subdorsal part of temporal orbit black; malar space (Fig. 1) pale yellow; clypeus (Fig. 1) mostly pale yellow, blackish on dorsal and ventral margins; mandible (Fig. 1) white on basal 1/2 and black on apical 1/2; palpi pale yellow, 4th segment of labial palpus and apical 2/3 of 3rd segment and 4th and 5th segments of maxillary palpus being infusate; antennae blackish, 6th to 10th flagellar segments except for ventral side white; upper division of metapleurum sometimes with a pale yellow spot; laterodorsal margin of pronotum pale yellow; mesoscutum with a subapical yellow spot, sometimes entirely black; subtegular ridge and tegula pale yellow; scutellum black, with a subapical, rather large yellow spot;

postscutellum pale yellow, sometimes entirely black. Propodeum usually with 3 pale yellow spots on petiolar area along apical transverse carina, sometimes the median spot is absent, or the spots are fused with each other to form wide yellow band along the apical carina. Legs with front and middle coxae and trochanters pale yellow; femora yellowish brown; tarsi fuscous. Hind leg with coxa black except for yellowish brown apex, with a basodorsal yellow spot; 1st trochanter black, plae yellow at apex; 2nd trochanter yellowish brown; femur dark brown, a little darker apically; tibia dark brown to black, paler basally; tarsus fuscous, the extreme base of each segment yellowish brown. Abdomen black, usually each segment with a yellowish or white apical band. Ovipositor sheath blackish. Wings subhyaline.

Length: Body 5.5–6.2 mm., forewing 4.6–5.4 mm.

One specimen from the northern locality (Iwate-ken) is paler, with the propodeum, hind coxa and abdomen fuscous brown, the mesoscutum without a median subapical yellow spot, the temple almost entirely black.

Male. Differs from the female, apart from sexual differences, by the following characters:—

Face about 1.2 times as wide as high, antennae with 27 or 28 segments; flagellum filiform; mesopleurum less strongly striate than in female, weakly and moderately punctate on lower part; metapleurum weakly and moderately densely punctate. Wing with nervellus intercepted at its lower 2/5 of its own length. Abdomen with 1st tergite about 2.5 times as long as wide at apex; 2nd tergite about 1.3 times as long as wide at apex.

Black. Face entirely white; orbit pale yellow, the temporal orbit being mostly black; malar space and lower part of temple pale yellow; clypeus pale yellow, sometimes with a median subapical infusate spot; clypeal fovea infusate; palpi a little paler than in female; scape black, white on ventral side except at base; flagellum entirely blackish. Scutellum mostly yellow. Propodeum sometimes entirely black, without pale yellow spots. Legs with hind coxa more extensively yellow on apical part; hind femur blackish, dark brown basally; hind tibia dark brown, darker apically; hind tarsus entirely blackish brown (Fig. 3).

Length: Body 5.6–7.1 mm., forewing 4.6–5.3 mm.

Holotype (female): Miyanoura-dake, Yaku-shima, Kagoshima-ken, 18-vi-1980, K. Kusigemati leg. *Paratypes:* 1 female, Hiraniwa-dake, Iwate-ken, 27-viii-1966, K. Kusigemati leg.; 1 male Ôdaigahara-san, Mie-ken, 25-v-1972, A. Nagatomi leg.; 1 male, Okujusso, Ôkuchi-shi, Kagoshima-ken, 20-iv-1977, K. Kusigemati leg.; 1 female, Kosugidani, Yaku-shima, Kagoshima-ken, 5-vii-1965, bred from *Acroclita hapalaspis* Meyrick of *Rubus crataegifolius* Bunge by T. Kumata; 1 male and 4 females, Kosugidani, Yaku-shima, Kagoshima-ken, 2- & 3-vi-1969, K. Kusigemati leg.; 2 females, same data as holotype.

Host: *Acroclita hapalaspis* Meyrick (Olethreutidae, Lep.).

Distribution: Japan (Honshu and Kyushu).

This species is similar to the Australian species, *G. stokesii*, but readily distinguished from the latter by the pronotum with a swollen laterodorsal margin, by the mesoscutum with setiferous punctures on basal 1/3, by the strongly compressed ovipositor and by the colouration of body.

2. *Glabridorsum simile*, sp. nov. (Figs. 2, 4 & 7)

Female. Face about 1.4 times as wide as high, strongly convex on its median 1/3, polished, with rather short and sparse hairs; clypeus 1.6–1.8 times as wide as high, strongly convex, polished, impunctate, with a few long hairs, the apical margin of clypeus being convex, thin, not reflexed, and wanting median tooth; malar space weakly mat, rather long, a little shorter than basal width

of mandible; clypeal fovea small and weakly impressed; mandible short, polished, with sparse hairs, with upper tooth a little longer than the lower one; temple short, weakly convex, polished, with a very sparse hairs, the hairs being a little denser ventrally; occipital carina complete, the lower end of genal carina joining oral carina near base of mandible; frons weakly concave and bare on lower half, weakly convex and sparsely haired on upper half; distance between lateral ocelli and eyes a little shorter than diameter of an ocellus. Antennae with 25 or 26 segments; flagellum weakly enlarged; 2nd flagellar segment $7/9$ as long as 1st flagellar segment and 1.1–1.2 times as long as 3rd flagellar segment. Pronotum polished, transversely and weakly striate on lower $2/3$, smooth on upper $1/3$, sometimes entirely striate; epomia weak but distinct, its upper end not reaching dorsal margin of pronotum; dorsolateral margin of pronotum rather strongly swollen; mesoscutum polished, with moderately dense, setiferous punctures on basal $2/5$, elsewhere mostly impunctate and bare; notaulus distinct, reaching $3/4$; scutellum polished, rather strongly convex, with a few hairs and without lateral carinae; mesopleurum polished, transversely and weakly striate; speculum smooth; prepectus finely and densely punctate, sometimes rugulose dorsally; metapleurum polished, obliquely and weakly striate. Propodeum with basal area weak, moderately dense, setiferous punctures; median area of propodeum longitudinally rugulose; apical area of propodeum obliquely striate laterally and weakly rugulose medially; basal transverse carina complete but weak at the median part, forming a weak crest sublaterally; propodeal spiracle small and circular. Wing (Fig. 7) with nervulus opposite basal vein; nervellus intercepted at its lower $2/7$ of its own length; brachiella present but very short. Legs slender; hind femur 4.7–5.0 times as long as wide in lateral view. Abdomen subpolished, very weakly mat, with short and very sparse hairs; 1st tergite rather stout, 2.0–2.1 times as long as wide at apex, with a weak basolateral tooth, its spiracle situated near basal $2/3$; ventrolateral and dorsolateral carinae complete but weak, and median dorsal carina absent; petiole smooth and flat; postpetiole weakly convex, with short, sparse hairs; 2nd tergite $4/5$ as long as wide at apex; 3rd tergite $2/3$ – $8/9$ as long as 2nd tergite. Ovipositor rather stout, strongly compressed, its tip sagittate, with 4 or 5 weak teeth on lower valve; ovipositor sheath $2/3$ as long as hind tibia.

Black. Face (Fig. 2) black, weakly tinged with white medially, sometimes entirely black; malar space (Fig. 2) blackish on upper half, pale yellow on lower half; mandible (Fig. 2) blackish, a little paler basally; clypeus (Fig. 2) blackish, weakly tinged with dirty-yellow medially; labrum white; labial and maxillary palpi light yellowish brown; facial and temporal orbits black; vertical and frontal orbits yellow. Antennae blackish, 5th to 10th flagellar segments except for ventral side white. Dorsolateral margin of pronotum yellow; collar weakly tinged with dark brown; scutellum black, with a subapical yellow spot; tegula pale yellow. Front and middle coxae whitish, dark brown basally and basoventrally; 1st trochanters of front and middle legs dark brown, whitish at apex; 2nd trochanters, femora and tarsi of front and middle legs yellowish brown to dark brown. Hind leg with coxa black, yellowish brown at apex; 1st trochanter black, yellowish brown at apex; 2nd trochanter dark brown, paler apically; femur yellowish brown to dark brown, blackish at apex; tibia dark brown paler basally; tarsus dark brown. Abdomen black, each tergite with an apical whitish band. Ovipositor sheath blackish brown. Wings subhyaline.

Length: Body 5.0–6.2 mm., forewing 4.6–5.2 mm.

Male. Agrees with the female except for the following aspects: —

Face about 1.3 times as wide as high, with hairs a little longer and denser than in female; clypeus 2.2 times as wide as high; malar space short, $2/3$ as long as basal width of mandible; distance between lateral ocelli and eyes about 1.1 times as long as diameter of an ocellus. Antennae long,

30-segmented; flagellum slightly enlarged. Mesopleurum strongly and moderately densely punctate, strongly and transversely striate beneath of subtegular ridge; metapleurum strongly and moderately densely punctate, the punctures being weaker anteriorly. Propodeum with apical area strongly rugose entirely. Leg with hind femur 4.8–5.0 times as long as wide in lateral view. Abdomen rather slender, more strongly mat than in female; 1st tergite 2.5–3.0 times as long as wide at apex; 2nd tergite about 1.1 times as long as wide at apex; 3rd tergite $\frac{3}{4}$ as long as 2nd tergite.

Black. Head black; facial and frontal orbits, face except for black lower part, malar space, large spot of clypeus, sometimes lower $\frac{2}{5}$ of temporal orbit, basal half of mandible, labrum and palpi whitish yellow, sometimes the lower $\frac{1}{2}$ of frontal orbit being black. Antennae blackish brown, 11th to 17th flagellar segments except ventral side, white. Subtegular ridge and large spot of scutellum pale yellow; upper division of metapleurum sometimes with a pale yellow spot. Front and middle legs extensively yellow, all trochanters pale yellow. Hind leg with coxa black, with a basodorsal yellow spot; basitarsus blackish, pale yellow at both ends; 2nd to 4th tarsal segments pale yellow, last segment blackish brown (Fig. 2). Abdomen black, each tergite without apical white band.

Length: Body 6.8–7.0 mm., forewing 5.2–5.3 mm.

Holotype (female): Terayama, Kagoshima-shi, Kyushu, 27-iv-1970, K. Kusigemati leg. *Paratypes:* 1 female, Ontake-san, Gifu-ken, 9-vii-1969, A. Nagatomi leg.; 1 male and 1 female, Kirishima-yama, Kagoshima-ken, 26- & 27-v-1966, K. Kusigemati leg.; 1 male, same data as holotype.

Host: Unknown.

Distribution: Japan (Honshu and Kyushu).

This species is very closely related to the preceding species, *G. acroclitae*, but differs from the latter by the stout hind femur, by the striate metapleurum, by the entirely black mesoscutum and propodeum, by the weakly enlarged flagellum with median white segments in male and by the white 2nd to 4th hind tarsal segments in male.

Summary

Two new species of *Glabridorsum*, viz., *acroclitae* and *simile* are described. This is the first record of the genus from Japan. A key to the species is given.

Acknowledgements

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References

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