

Discovery of the Genus *Gampsocera* Schiner from Hawaii, with a Description of a New Species (Diptera: Chloropidae)

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ABSTRACT

Gampsocera hardyi sp. nov. is described. This is the first species of this genus discovered in Hawaii. The species shows a considerable sexual dimorphism on the markings of thoracic dorsum, legs and wing, and shape of arista. The species was reared from rotting stems of banana, papaya and *Wikstroemia* sp.

The genus *Gampsocera* Schiner consists of 30 species in the world (Sabrosky 1977, and his unpublished data in 1985), most of which (26 species) have been known from the Oriental Region, including 2 Japanese species (Kanmiya 1983), both from Ryukyu Islands, and 2 Palearctic and 2 Australasian species. The representatives from the Australasian region are from New Guinea and Fiji Islands.

In this occasion, through the courtesy of Professor Emeritus D. Elmo Hardy, I have had the opportunity to examine Hawaiian specimens of the genus, which were reared from the rotting stems of banana, papaya and *Wikstroemia* sp., and found it to be a new species exhibiting a considerable sexual dimorphism.

The holotype will be deposited in the collection of the B. P. Bishop Museum, Honolulu, Hawaii. The paratypes will be kept in the collection of the Department of Entomology, University of Hawaii at Manoa and in the Biological Laboratory, Kurume University, Fukuoka.

Gampsocera hardyi Kanmiya, sp. nov. (Figs. 1-4)

Male. Head broad, $1.6-1.7 \times$ as wide as long, in profile slightly broader than long; frons broad, entirely orange yellow, at vertex slightly wider than long and $0.53-0.55 \times$ of head width; pubescences on frons appear silvery-white viewed from a certain angle; frontal triangle entirely reddish yellow, at vertex about $\frac{7}{10}$ as wide as head, its anterior apex ending at anterior $\frac{3}{5}$ length of frons; face, gena and occiput also entirely orange yellow. Antenna mostly yellow, with 3rd segment about $2.5 \times$ as broad as long and weakly infuscated around insertion of arista; arista black, thickened on basal 2 segments, the 3rd segment also thickened basally, then gradually tapered toward apex as a subulate form; palpus yellow. Vertical setae strong, *vtl* about $1.25 \times$ as long as *vti*; 3-4 reclinate *orb*.

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Mesonotum as long as wide, laterally yellow with a median broad black stripe occupying acrostical and dorsocentral lines, with its anterior end reaching neck base, its posterior margin ending before prescutellar setae; mesonotal stripe laterally with a constriction at notopleural suture; scutellum 1.3-1.4 \times as wide as long, yellow with a blackish brown macula on median dorsum; hairs on scutellum brownish, longer than those on mesonotum; 2 pairs of scutellar setae black, *ap sc* longer than scutellum, *la sc* located more inside than *ap sc*. Humerus, notopleural, postalar and prescutellar areas yellow. Thoracic pleura also entirely yellow.

Wing hyaline, narrowly elongate, about 2.9 \times as long as wide, with its distal apex rounded; costal cell broadened anteriorly; veins dark brown; R_{2+3} very weakly concave anteriorly; R_{4+5} gently concave anteriorly, then suddenly convex anteriorly at its distal $\frac{3}{4}$; ultimate sector of M_{1+2} more gently concave anteriorly than R_{1+3} ; relative lengths of costal sectors 2nd:3rd:4th = 10:4:3; *r-m* crossvein at basal $\frac{1}{3}$ of discal cell; a large brownish reniform macula present near wing tip between R_{4+5} and M_{1+2} , its anterobasal part very slightly extending beyond vein R_{4+5} , its posteromedian margin incised and its distal portion more darkened with a small white spot at anterodistal corner.

Legs slender, mostly yellow except basal 2 segments of fore tarsus which are infuscated with dark brown.

Abdomen narrowly elongate, with 3rd-4th tergites polished black and haired; 5th abdominal segment followed by a long intersegmental membrane, extremely narrowed, about $\frac{1}{2}$ \times as wide as and about 1.2 \times as long as the 4th segment, with tergal surface unsclerotized; abdominal sternites vestigial, largely membranous, with 3rd and 4th each being left as a narrowly elongate plate with hairs; 6th and 7th sternites on dorsum each separated as a small but distinct plate, the 6th separated into 2 brown elliptical plates with thick aculeate surface in lateral view, the 7th forming a single pale plate with bare surface, basally produced narrowly and distally divergent.

δ genitalia: Epandrium weakly developed, without any defined dorsodistal incision, and densely covered with brownish tubercles with fine setae except bare basal and lateral margins; epandrium at each laterodistal margin with a strange, elongate, and incurved tubercle bearing a seta at tip; anal plate with 2 pairs of setae; surstylus directed posterad and incurved, with denticulate apical margin; hypandrium closed, pale, and very narrow entirely; pregonite indistinct; postgonite clavate, both being parallel-sided distally; phallapodeme narrowly elongate beyond basal margin of hypandrium; aedeagus short.

Female. Quite different from δ in following features: Frontal triangle entirely blackish brown; arista evenly thickened distally, parallel, sword shaped with an acute apex, its marginal hairs indistinct. Mesonotal dorsum sometimes with broader black macula besides brownish areas on notopleuron and postalars; scutellum brownish in basic color with a median black macula; mesopleuron largely polished black. Wing about 2.4 \times as long as wide, with a broad anal region, veins R_{4+5} and M_{1+2} nearly straight,

both somewhat divergent distally; relative lengths of costal sectors 2nd:3rd:4th = 4:2:1; *r-m* at basal $\frac{2}{3}$ of discal cell. Legs mostly darkened, with all femora blackened except yellow basal $\frac{2}{3}$ and apices; tibiae blackened except yellow basally; fore tarsus entirely blackened except for yellowish last tarsomere; mid and hind tarsi entirely yellow. Wing tinged with pale brown, without any maculae, veins without any prominent curvature.

Length: Body 1.8-2.3 mm (σ , φ); wing 1.85-2.3 mm (σ , φ); mesonotum + scutellum 0.7-0.8 mm (σ), 0.8-1.0 mm (φ).

Holotype: σ , Kaau Crater Trail, el 1,500 feet, Oahu I., Hawaii, 29•VI•1987, reared from rotting bark/stem of *Wikstroemia* sp., by W. D. Perreira and A. T. Ohta.

Paratypes: Same data as holotype, 5 σ σ 9 φ φ ; 1 σ , Makiki Stream, el 320 ft, 15•IV•1984, from rotting banana stem, by W. D. Perreira; 1 σ , Mt. Tantalus, el 600 ft, 2•IV•1986, from rotting papaya stem, by W. D. Perreira and A. T. Ohta.

Distribution. Oahu Island in Hawaii.

Remarks. This new species shows a peculiar sexual dimorphism in the shape of the arista and in the markings of wing and legs, as often observed in the genus. The association of the sexes is highly credible because the most specimens were reared on the same rotting host plants at the same time. The wing marking observed in the male is unique and shows no relationship to other species known in this genus.

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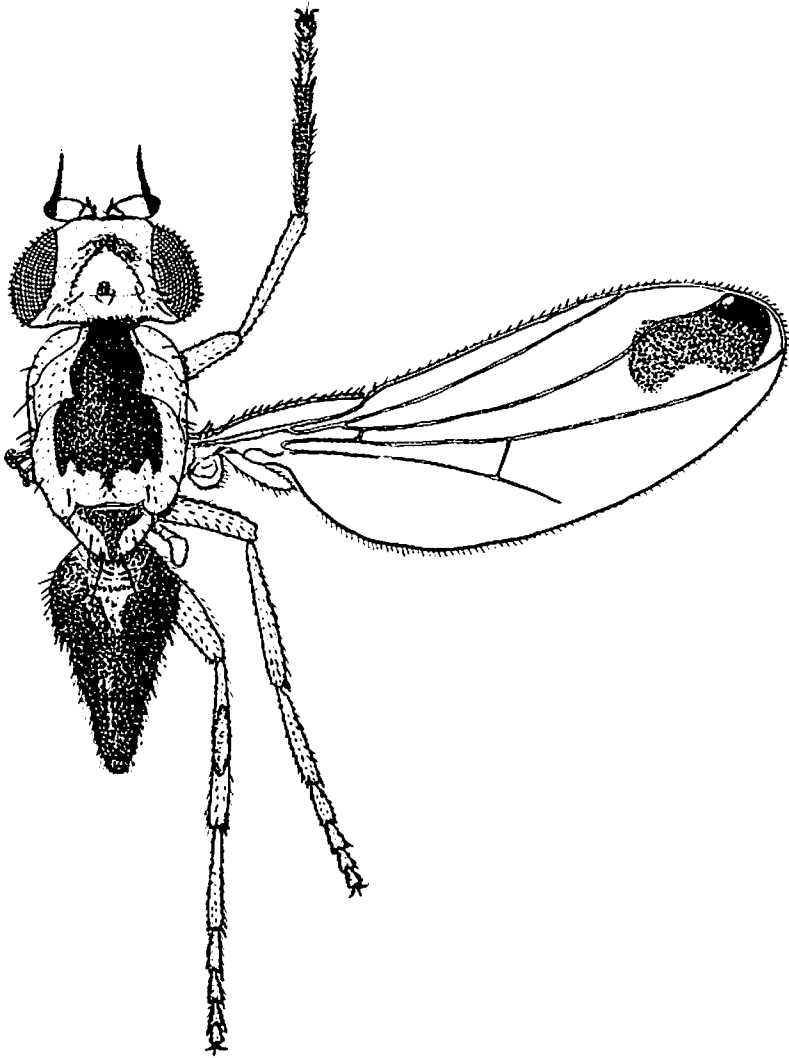
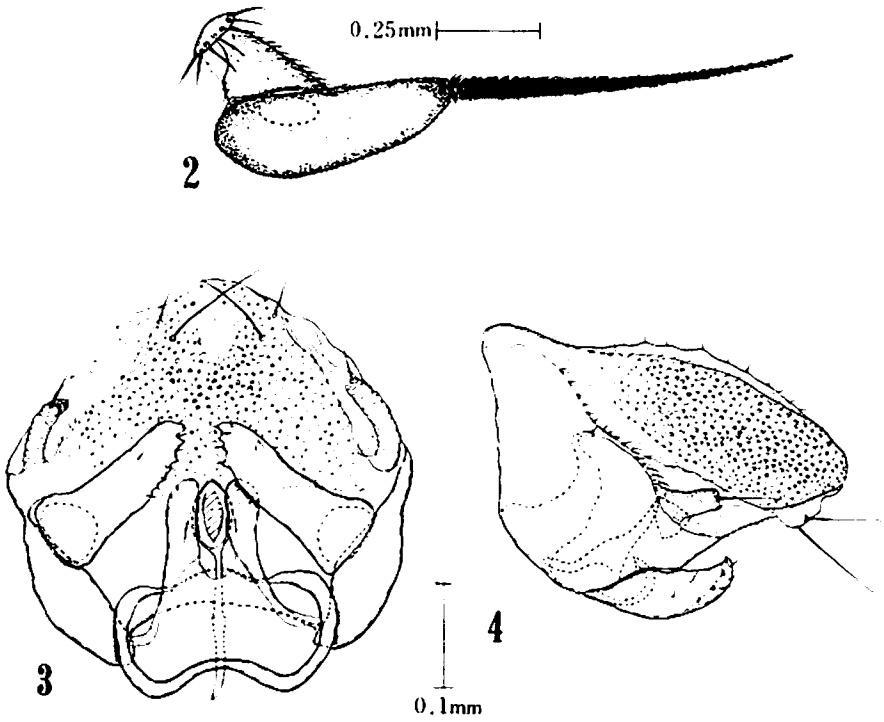


FIGURE 1. *Campocera hardyi* n. sp. (♂). Whole body in dorsal view.



FIGURES 2-4. *G. hardyi* n. sp. (♂). 2. Antenna and arista in lateral view; 3. epandrium, hypandrium and phallic organs in ventral view; 4. epandrium and surstylus in lateral view.

