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NEW RECORDS OF TWO PLANT BUG GENERA (HETEROPTERA: MIRIDAE: PHYLINAE: PILOPHORINI) FROM JAPAN, WITH DESCRIPTIONS OF TWO NEW SPECIES

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Abstract.—Two genera of the ant-mimetic plant bug tribe Pilophorini, *Druthmarus* Distant and *Hypseloecus* Reuter, are reported from Japan for the first time. A new species in each genus, ***Druthmarus miyamotoi*, n. sp.**, and ***Hypseloecus takahasii*, n. sp.**, is described from the Ryukyu Islands in southwestern Japan.

Key Words: Heteroptera, Miridae, *Druthmarus, Hypseloecus,* new species, Japan

During our continuing investigations in the Ryukyus, or subtropical islands of southwestern Japan, two unique species of the phyline plant bug have been discovered. These bugs were confirmed to be undescribed species of *Druthmarus* Distant and *Hypseloecus* Reuter, or members of ant-mimetic tribe Pilophorini, not previously recorded from Japan. These two new species are described in the present paper.

All measurements in the text are given in millimeters. In the generic synonymic lists, only selected references are cited; see Kerzhner and Josifov (1999) and Schuh (1995) for detailed lists. The type specimens are deposited in Hokkaido University of Education, Sapporo.

Genus *Druthmarus* Distant

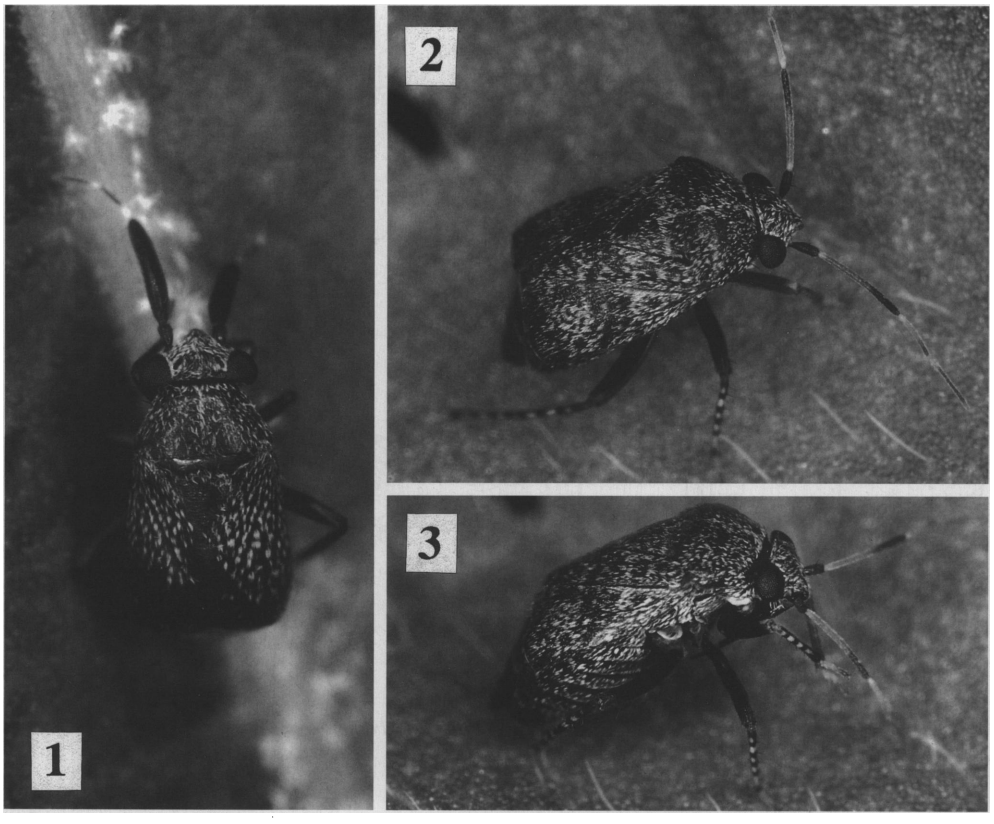
Druthmarus Distant 1909: 452; Schuh 1995: 455; Kerzhner and Josifov 1999: 278. Type species: *D. magnicornis* Distant 1909. Monotypic.

This small genus currently comprises only three species in the Oriental Region and Taiwan, and is easily recognized by the fuscous, oval body with densely distributed, silvery, scale-like setae, and a conspicuous, terete or box-like antennal segment II. Detailed generic diagnosis and redescription, including male genital structure, were provided by Schuh (1984). The present discovery of a member of *Druthmarus* from Okinawa Island represents the northernmost distributional record for the genus.

Druthmarus miyamotoi Yasunaga, new species

(Figs. 1, 4–6)

Description.—Body generally fuscous, suboval, small, with densely distributed, silvery, scale-like setae that are easily rubbed away; dorsal surface subshining, rather shagreened, impunctate. Head somewhat shagreened, with dense, silvery, reclining, scale-like setae; vertex carinate basally; head below eyes, except for tylus, polished. Antenna fuscous; segment II terete but distinctly flattened; basal ⅓–½ of segment III and basal ⅕ of IV yellowish brown; lengths of segments I–IV (♂/♀): 0.17/0.17, 0.89/0.85, 0.31/0.30, 0.34/0.32. Rostrum shiny dark brown, reaching apex of mesocoxa. Thorax unicolorously fuscous, rather shagreened. Hemelytra weakly shining, with uniformly distributed, dark, simple setae



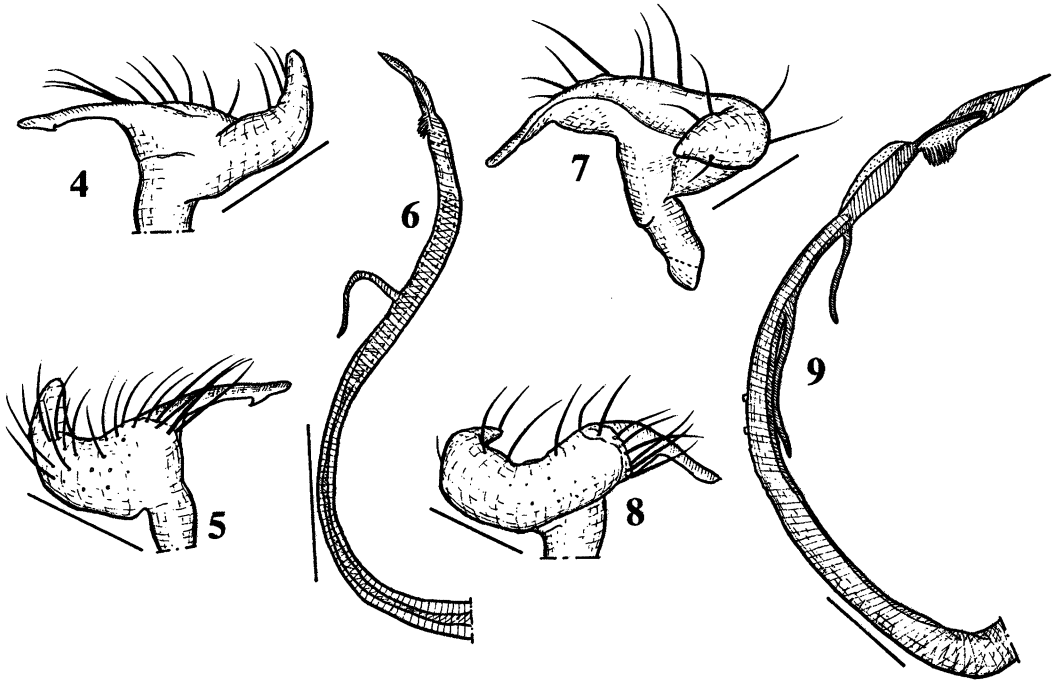
Figs. 1–3. 1, *Druthmarus miyamotoi*, male. 2, *Hypseloecus takahashii*, holotype male. 3, *H. takahashii*, female.

and with patches of silvery, scale-like setae; membrane dark grayish brown. Procoxa creamy yellow, with several, dark spines apically; all femora dark brown; tibiae dark brown, with brown spines; apical half of each tibia yellow except for dark apex; tarsi pale brown excluding dark tarsomeres III; lengths of metafemur, tibia and tarsus (♂/♀): 0.88/0.92, 1.32/1.31, 0.35/0.36. Ventral surface of abdomen with patches of silvery, scale-like setae. Male genitalia as in Figs. 4–6; vesica S-shaped, slender, with a simple median branch and minute, comb-like processes near secondary gonopore.

Dimensions: ♂/♀: Body length 2.45/2.62; length of apex of tylus to cuneal fracture 1.94/2.14; head width 0.84/0.84; basal vertex width 0.35/0.39; rostral length 0.92/1.02; basal pronotal width 0.94/1.00; width across hemelytra 1.16/1.26.

Holotype.—♂, Ban'na Park, Ishigaki Is., Ryukyus, Japan, 4. iii. 1999, T. Yasunaga.

Paratypes.—Okinawa Is.: 1 ♂, Fukuchidam, Kunigami Vil., 1. iv. 1999, M. Takai; 1 ♂, 3 ♀, Yona, Kunigami Vil., 20–25. v. 1993, light trap, T. Yasunaga; 3 ♀, same locality and collector, 11. x. 1998. Ishigaki Is.: 2 ♀, Nosoko, 3. iii. 1999, T. Yasunaga; 1 ♂, 1 ♀, same data as for holotype; 1 ♀, Omoto, 20. i. 1996, M. Takai; 2 ♀, same locality, 25. xi. 1997, T. & M. Yasunaga; 2 ♂, Omoto-Takeda, 7. iii. 1999, T. Yasunaga; 1 ♂, 1 ♀, without further locality, 18. i & 21. ii. 1998, K. Takahashi. Iriomote Is.: 2 ♂, 1 ♀, Funaura, 10. v. 1993, T. Yasunaga; 7 ♂, 1 ♀, same data except for date, 12. v. 1993; 1 ♂, same data except for collector, Y. Nakatani; 1 ♂, Takana, 22. xi. 1997, T. Yasunaga; 1 ♀, Toyohara-Haemida, 6. iii. 1999, T. Yasunaga.



Figs. 4–9. Male genitalia. 4–6, *Druthmarus miyamotoi*. 7–9, *Hypseloecus takahashii*. 4, 5, 7, 8, Left paramere. 6, 9, Vesica. Scale lines = 0.1 mm.

Etymology.—Named after the well-known Japanese heteropterist, Dr. S. Miyamoto, celebrating his 88th birthday (a special age for celebration in Japan).

Remarks.—This new species is easily distinguished from other congeners by the significantly small size, pale apical half of each tibia, and a simple, mesial branch of the S-shaped, slender vesica. Poppius (1915) reported *Druthmarus* sp. from Taiwan, based on a single nymph that may fit the present new species.

Druthmarus miyamotoi has been found on *Pipturus arborescens* (Urticaceae) and *Macaranga tanarius* (Euphorbiaceae), together with numerous typhlocybinid leafhoppers (e.g., *Anufrievia* sp., *Limassolla* sp., *Davmata* (or *Tautoneura*) sp. [Typhlocybinidae, Homoptera]) that may serve as prey.

Genus *Hypseloecus* Reuter

Hypseloecus Reuter 1891: 50; Schuh 1995: 456; Kerzhner and Josifov 1999: 279. Type species: *Sthenarus visci* Puton 1888. Monotypic.

This genus contains thirteen species from the Old World tropics and subtropics, S. Europe, and New Guinea, and is recognized by the short, ovoid body with densely distributed, sericeous, flattened setae. Generic characters were provided by Schuh (1974, 1984) and Wagner (1973).

Hypseloecus takahashii Yasunaga, new species

(Figs. 2–3, 7–9)

Description.—Body fuscous, oval, with densely distributed, reclining, sericeous, flattened setae that are easily rubbed away; dorsal surface weakly shining, somewhat shagreened, impunctate. Head weakly shagreened, below eyes yellow. Antenna dark brown, not incrassate; basal ⅔ of segment II, basal ⅔ of III and extreme base of IV yellowish brown; lengths of segments I–IV (♂/♀): 0.27/0.28, 0.98/0.99, 0.38/0.46,

0.38/0.44. Rostrum shiny dark brown, reaching apex of mesocoxa. Pronotum and scutellum with uniformly distributed, simple, suberect pubescence in addition to sericeous setae; pleura widely shagreened; ventral margin of propleuron and ostiolar peritreme yellowish brown. Hemelytra bearing dark, stiff setae; membrane dark grayish brown, with a few pale spots and partly pale veins. Coxae and legs fuscous; extreme apex of profemur reddish brown; tibiae with dark reddish brown annulations at bases of fuscous spines; tarsi pale brown; apical parts of tarsomeres III widely dark brown; lengths of metafemur, tibia and tarsus (♂/♀): 1.05/1.07, 1.53/1.67, 0.39/0.41. Male genitalia as in Figs. 7–9; vesica C-shaped, pointed at apex, with two mesial notches, two simple, slender, subapical branches, and apical comb-like processes.

Dimensions: ♂/♀: Body length 3.19/3.27; length of apex of tylus to cuneal fracture 2.43/2.55; head width 0.98/1.01; basal vertex width 0.47/0.50; rostral length 1.20/1.23; basal pronotal width 1.37/1.44; width across hemelytra 1.65/1.74.

Holotype.—♂, Nosoko, Ishigaki Is., Ryukyus, Japan, 19. iv. 1999, K. Takahashi.

Paratypes.—1 ♀, Takeda, Ishigaki Is., 9. iv. 1999, K. Takahashi; 1 ♀, Kuura Riv., Iriomote Is., 11. iv. 1998, K. Takahashi.

Etymology.—Named after Dr. K. Takahashi, who collected all type material.

Remarks.—This new species is distinguished from other congeners by the generally fuscous body, and two mesial notches and two subapical branches of the vesica.

No information is available on its biology.

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