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Discovery of the Genus *Coridromius* Signoret (Heteroptera: Miridae) from Japan, with Descriptions of Two New Species

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Abstract. The genus *Coridromius* Signoret is reported from Japan for the first time, diagnosed and discussed. Two species, *C. bufo* and *C. declivipennis*, are described as new.

Key words: Heteroptera, Miridae, *Coridromius*, new species, Japan.

The genus *Coridromius* Signoret of the subfamily Orthotylinae currently comprises 6 species from New Guinea, New Caledonia, Australia, New Zealand and Ivory Coast (Carvalho, 1987; Linnavuori, 1994). This genus is characteristic in having the peculiarly rounded, tumid body with considerably broadened metafemora.

In the present paper, the genus is reported from Japan for the first time, diagnosed and discussed, and two species, *C. bufo* from southern Japan and *C. declivipennis* from the Ryukyu Islands, are described.

All measurements in the text are given in mm. Depositories of the type material are abbreviated as follows: HUES: Hokkaido University of Education, Sapporo; NIAS: National Institute of Agro-Environmental Sciences, Tsukuba, Ibaraki; USNM: U. S. National Museum of Natural History, Washington, D. C.

Genus *Coridromius* Signoret

Ocypus Montrouzier, 1861: 67, homonym of *Ocypus* Kirby, 1819 (Coleoptera), type species: *Ocypus variegatus* Montrouzier, 1861, by monotypy.

Coridromius Signoret, 1862: 5, replacement name for *Ocypus* Montrouzier, 1861; Carvalho, 1987: 61; Linnavuori, 1994: 15; Schuh, 1995: 46; Cassis & Gross, 1995: 185.

This peculiar genus is easily recognized by the tumid and rounded body, wide head much wider than long or height, very strong and thickened metafemur and shortened tibiae. The thickened metafemora enable the mirids to jump considerably. Male genital structure is also unique to the genus. Only 6 species have hitherto been known from Africa, Papua New Guinea, Australia, New Zealand and New Caledonia. The two additional species of Japan has the northernmost distribution within the congeners.

Coridromius has been included in the tribe Halticini of the subfamily Orthotylinae since Cassis and Gross (1995). Some structures (*e. g.*, pretarsal structure) actually fit diagnostic characters of the Halticini, but the tribal level placement of the genus is still unsatisfactory, judging from the strange external appearance and peculiar male genital structure. Further comprehensive work is required to ascertain the correct systematic position of this unique genus.

Coridromius bufo sp. n.

(Figs 1, A-C; 2, A & B)

Body variable in coloration, pale brown to

fuscous, rounded, tumid; dorsal surface variably maculate, clothed with silvery, recumbent pubescence. Head pale brown, partly and irregularly darkened, flattened in front, widened, with sparse, sericeous pubescence; vertex wide, distinctly carinate basally, roughly punctate, somewhat arched posteromesally and concaved posterolaterally; frons shallowly striolate, distinctly excavated along eyes; jugum and lorum usually darkened. Antenna short; segment I pale brown, with a median dark ring; segment II pale brown, with infuscate and incrassate apical 1/4; segments III and IV dark brown, with yellow bases, broader than basal part of segment II; lengths of segments I-IV (♂/♀): 0.16/ 0.16, 0.77/ 0.82, 0.32/ 0.33, 0.23/ 0.23. Rostrum pale brown, slightly exceeding metacoxa; segments I and IV dark brown. Pronotum pale brown to fuscous, irregularly speckled, tumid, densely and deeply punctate, carinate laterally, uniformly clothed with silky, recumbent pubescence; calli pale brown, with a pair of dark, anterior spots, or sometimes widely darkened; collar shagreened, margined by a row of punctures; mesoscutum brown to dark brown, shagreened, bearing silvery recumbent pubescence; scutellum pale brown to fuscous, with yellow apex, coarsely and deeply punctate, uniformly clothed with silky, recumbent pubescence; propleuron pale brown, partly darkened, punctate, bearing silvery pubescence; other parts of thoracic pleurites widely dark chestnut brown, shagreened; epimeron and episternum with silvery pubescence; ostiolar peritreme yellowish brown, narrow. Hemelytra pale brown, with several dark markings and/or spots, or sometimes widely darkened, shagreened, almost impunctate, strongly declivous at cuneal fracture, uniformly clothed with silvery, recumbent pubescence. Legs yellowish brown; pro- and mesofemora each with a dark median band; metafemur noticeably thickened, ventrally with 5-7 dark, oblique stripes and subapical depression, and dorsally with excavated or concaved median part; tibiae arranging dark spots; tibial spines brown, short; tarsomeres II very short; apical parts of tarsomeres III darkened; lengths of metafemur, tibia and tarsus (♂/♀): 1.07/ 1.08, 0.98/ 1.04, 0.37/ 0.36. Abdomen pale brown, sometimes speckled with dark portions.

Male genitalia: Genital segment (Fig. 2, A & B), distinctly narrowed laterad, widely excavated dorsally, with a ventral apical process (VAP) and mesal longitudinal suture (MS). Left paramere strongly curved subbasally, tapered apically; right paramere straight, short, with an apical pointed process.

Dimensions. ♂/♀: Body length 2.4/ 2.5; head width including eyes 0.84/ 0.87; head height (in frontal view) 0.60/ 0.64; vertex width 0.48/ 0.52; mesal pronotal length 0.72/ 0.78; basal pronotal width 1.38/ 1.47; maximum width across hemelytra 1.48/ 1.63.

Holotype ♂, Yamada Park, Kitakyushu City, Fukuoka Pref., Kyushu, Japan, 17. vi. 1990, S. Miyamoto (HUES), with 192 paratypes from the following localities: Honshu: Ichie, Hikigawa T., Wakayama Pref. (HUES); Nakaminato, Koza T., Wakayama Pref. (NIAS); Yamate, Kozagawa T., Wakayama Pref. (NIAS); Minamihizue, Shingu C., Wakayama Pref. (NIAS); Komori & Yasukawa Valley, Ohtoh Vil., Wakayama Pref. (HUES); Baba, Kaizuka C., Osaka Pref. (NIAS); Kitamata & Ohsako, Kawakami Vil., Nara Pref. (NIAS); Minamiyashiro, Tan'nan T., Hyogo Pref. (NIAS); Mt Takakura, Sanyo T., Okayama Pref. (HUES). Shikoku: Nishikuma Valley & Sasa, Monobe Vil., Kochi Pref. (HUES); Hongawa Vil., Kochi Pref. (HUES). Kyushu: same as holotype (HUES); Okawachi, Shiiba Vil., Miyazaki Pref. (USNM); Mt Tatera & Kechi, Tsushima Is., Nagasaki Pref. (HUES). The Ryukyus: Akaoki, Amami-Oshima Is. (HUES); Benoki, Kunigami Vil., Okinawa Is. (HUES); On'na Vil., Okinawa Is. (HUES); Ban'na Park, Omoto, Takeda & Itona, Ishigaki Is. (HUES); Shirahama, Iriomote Is. (HUES).

Distribution. Japan (southwestern Honshu, Shikoku, Kyushu, and Tsushima, Amami-Oshima, Okinawa, Ishigaki and Iriomote Isls); the warm temperate and subtropical areas grown with *Mallotus* spp. (Euphorbiaceae).

Remarks. This new species is related to *C. punctatus* Carvalho from Papua New Guinea, but is easily distinguished from the latter by the smaller

size, different color pattern on dorsum, pale apex of the antennal segment I, longer pronotum, and different male genital structure.

C. bufo is associated with *Mallotus* spp. (Euphorbiaceae), on which many specimens including nymphs have been collected. The final instar nymph (Fig. 1, C) is easily recognized by the unique coloration and shape that resemble those exhibited in the adult.

Coridromius declivipennis sp. n.

(Figs 1, D; 2, C & D)

Body variable in coloration, pale brown to widely dark, oval; dorsal surface finely and shallowly punctate, uniformly clothed with silky, recumbent pubescence. Head pale brown, much wider than long, with silky, recumbent pubescence; vertex carinate basally, slightly depressed near eyes; frons with 3 dark spots at anteromedian part and near base of each antenna; buccula and apex of tylus infuscate. Antenna pale brown; segment I almost entirely darkened except for yellowish extreme base and apex; apical 1/5-1/4 of segment II dark brown, incrassate; segments III and IV dark brown, with yellow bases, broader than basal part of segment II; lengths of segments I-IV (♂/♀): 0.15/ 0.15, 1.00/ 0.86, 0.33/ 0.32, 0.22/ 0.22. Rostrum pale brown, exceeding metacoxa; apical half of segment IV infuscate. Pronotum pale brown, sometimes widely darkened except along midline, finely and shallowly punctate, carinate laterally, uniformly clothed with silky, recumbent pubescence; calli almost impunctate; scutellum sometimes darkened anteriorly and/or laterally, finely and shallowly punctate, bearing silky, recumbent pubescence; thoracic pleurites widely pale brown or brown, clothed with silvery pubescence; punctures on propleuron fine and sparse. Hemelyta pale brown, partly darkened, strongly declivous (nearly at right angle) at cuneal fracture, finely and shallowly punctate, uniformly clothed with silvery, recumbent pubescence; median parts of corium and

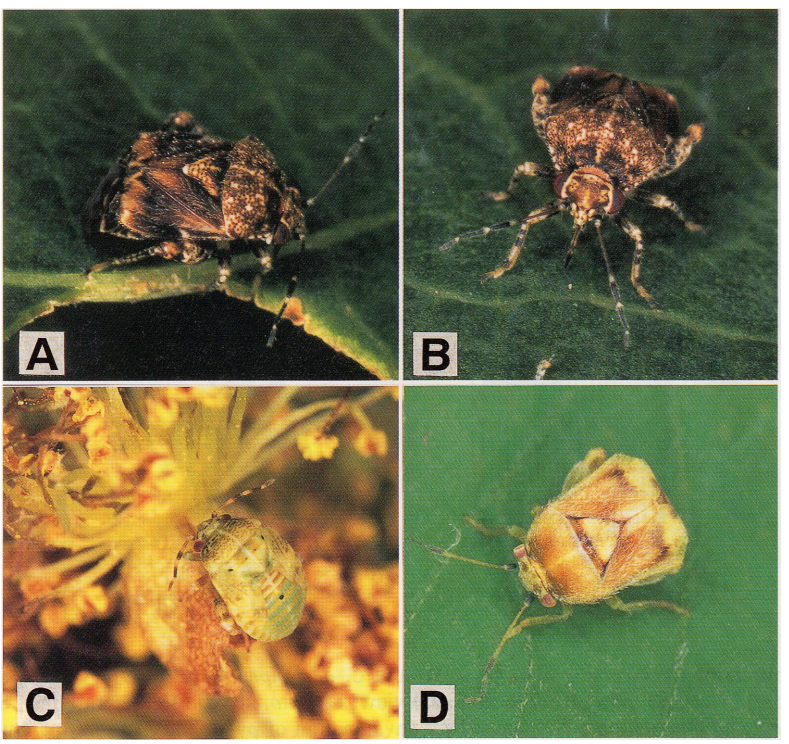

Fig. 1. Adult (A, B & D) and last-instar nymph (C) of *Coridromius bufo* (A-C) and *C. declivipennis* (D).

clavus sometimes darkened; embolium roundly projected laterally near apex; cuneus sparsely punctate; membrane pale grayish brown. Leg pale brown; pro- and mesofemora each with an obscure, subapical band; metafemur very tumid, compressed subapically, ventrally with 8-10 dark, oblique stripes, medianly excavated dorsally; tibiae with pale brown, short spines; lengths of metafemur, tibia and tarsus (♂/♀): 1.10/ 1.09, 1.07/ 1.06, 0.38/ 0.37. Abdomen almost unicolorously pale brown.

Male genitalia: Genital segment (Fig. 2, C) wider than long, not narrowed, with a mesal longitudinal suture (MS), lacking distinct apical process. Left paramere elongate, curved and somewhat twisted subbasally, gradually tapered toward apex; right paramere broad, rounded. Vesica (phallus = PH) simple in form, flagellate, slender, apically connected to inner part of left paramere; phallotheca cylindrical (Fig. 2, D).

Dimensions. ♂/♀: Body length 2.2/ 2.2; head width including eyes 0.92/ 0.93; head height (in frontal view) 0.64/ 0.65; vertex width 0.55/ 0.58; mesal pronotal length 0.70/ 0.70; basal pronotal width 1.42/ 1.44; maximum width across hemelytra 1.65/ 1.60.

Holotype ♂, Mt Ban'na, Ishigaki Is., Okinawa Pref., the Ryukyus, Japan, 8. v. 1993, T. Yasunaga (HUES), with 120 paratypes from the following localities: Yona, Okinawa Is.; same locality as holotype (HUES & USNM); Monbanare, Funaura & Mt Uehara, Iriomote Is., the Ryukyus (HUES).

Distribution. Japan (the Ryukyus: Okinawa, Ishigaki and Iriomote Isls).

Remarks. This new species resembles the preceding one from which it is easily distinguished by the wider head and vertex, fine and shallow punctures on the pronotum and scutellum, punctate hemelytra that are more strongly declivous at cuneal fracture, and laterally projected apical part of the embolium.

Several specimens of *C. declivipennis* have been collected on flowers of ulmaceous *Trema orientalis*, and other broad-leaved trees, but the breeding host

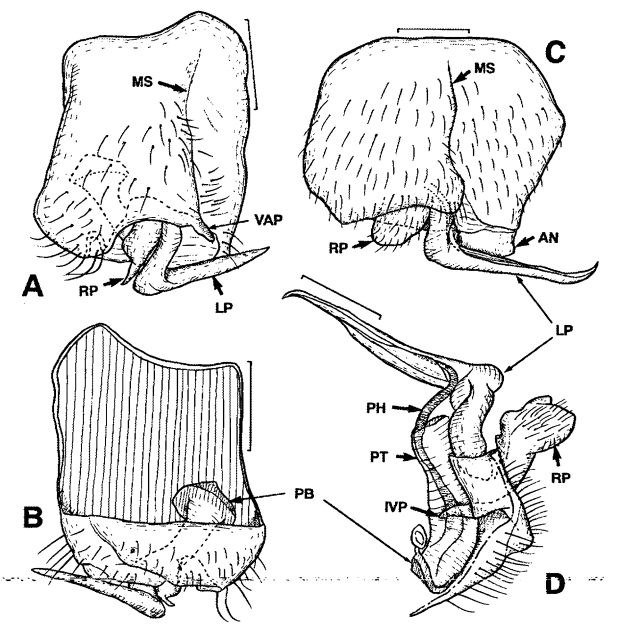

Fig. 2. Male genitalia of *Coridromius bufo* (A & B) and *C. declivipennis* (C & D). A & C, Genital segment (pygophore) in ventral view; B, *ditto* in dorsal view; D, *ditto*, apex in left lateral view. Scales: 0.2 mm. Morphological abbreviations: AN, anus; IVP, invagination of pygophore; LP, left paramere; MS, mesal longitudinal suture (of genital segment); PB, phallobase; PH, phallus (= vesica); PT, phallotheca; RP, right paramere; VAP, ventral apical process.

plants remain unknown.

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