

A description of *Parachilocoris minutus japonicus* nov. subspec., and some changes in the nomenclature of East Palaearctic burrower bugs (Heteroptera: Cydnidae)

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Abstract: *Parachilocoris minutus japonicus* nov. subsp. from Japan, the first Palaearctic representative of the genus is described.

Previous East Palaearctic records of *Garsauria aradoides* are shown to pertain to *G. laosana*, and those of *Geotomus palliditarsus* to *G. convexus*. The holotype of *G. palliditarsus* is conspecific with the lectotype of *G. pygmaeus*, and thus the name *G. palliditarsus* Scott, 1880 should be treated as a junior synonym of *G. pygmaeus* (Dallas, 1851). *G. pygmaeus* is shown to occur in Japan.

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Introduction

The cydnid genus *Parachilocoris* Horváth was represented in the World fauna by three species, so far, i.e. *P. dispar* Horváth, *P. minutus* (Distant) and *P. semialbidus* (Walker). All these species are distributed only in the Oriental Region, and thus the genus was regarded as a typical Oriental representative of the family (Walker, 1867; Distant, 1901; Horváth, 1919; Lis, 1991). Nevertheless, among specimens in the collection of Palaearctic Cydnidae in the Natural History Museum in London, I have found one male from Japan belonging to the genus *Parachilocoris*. Detailed studies have shown that this male belongs to *P. minutus*, but differs from the Oriental specimens in the shape of the paramere. All the other characters are the same and therefore I decided to treat this male as a representative of a Palaearctic subspecies of *P. minutus*.

Besides, I have had an opportunity to study the type material of two East Palaearctic species of the genus *Geotomus* Mulsant & Rey, namely *G. convexus* Hsiao and *G. palliditarsus* Scott, and also the specimens of the genus *Garsauria* Walker from Japan. The results of

these studies are presented below. Abbreviations used are: BMNH – the Natural History Museum, London, England; DBNU – Department of Biology, Nankai University, Tianjin, China; JAL – the author's collection; MNHN – Muséum National d'Histoire Naturelle, Paris, France; NSMT – the National Science Museum, Department of Zoology, Tokyo, Japan; ZIZM – Zoologisches Institut und Zoologisches Museum, Universität Hamburg, Germany.

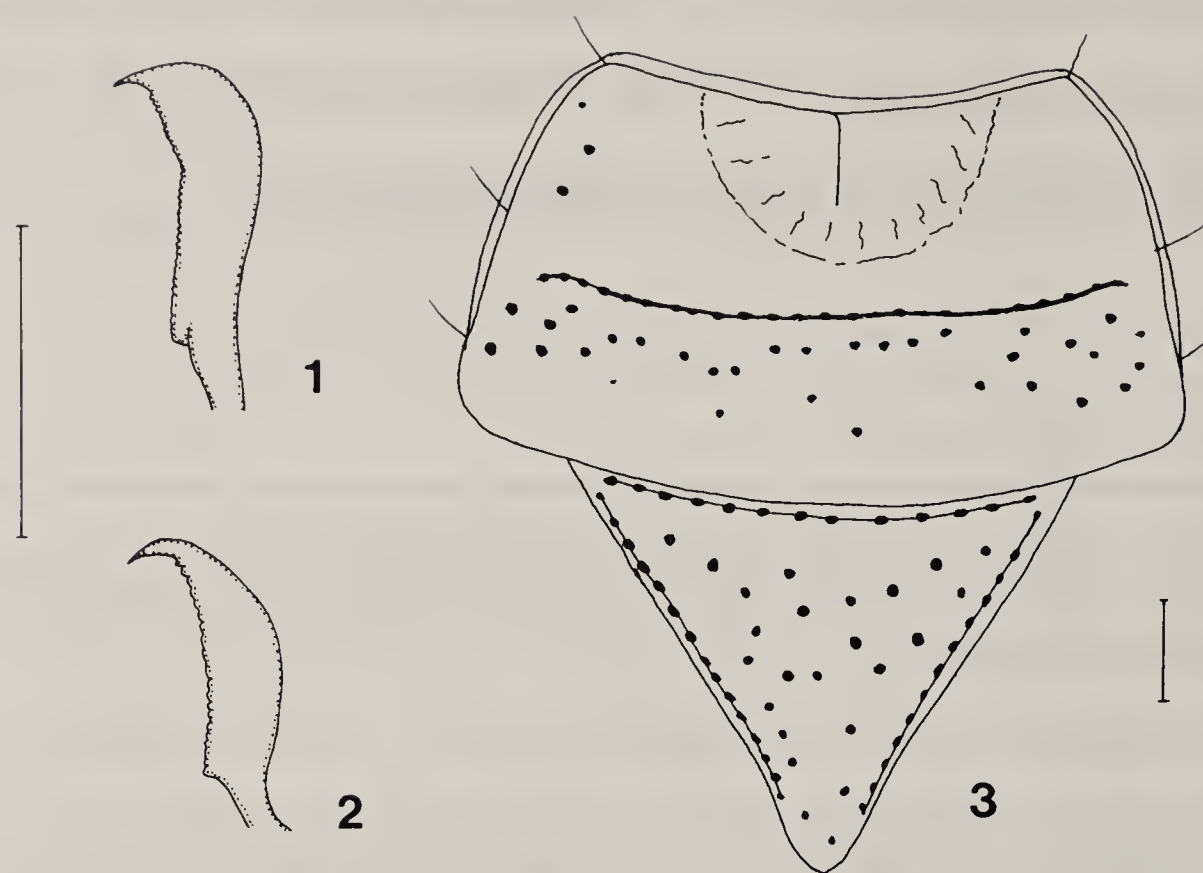
Parachilocoris minutus japonicus nov. subsp.

Type material

Holotype, ♂: Japan, G. Lewis, B.M. 1926-369, Chiuzenji (BMNH).

Diagnosis

The new subspecies differs from the nominate form of *P. minutus* in the shape of the paramere (figs. 1-2).



Figs. 1-3. 1, *Parachilocoris minutus minutus*; 2-3, *Parachilocoris minutus japonicus*. 1-2, paramere; 3, pronotum and scutellum (scale 0.25 mm).

Description

Head: Dark brown, lateral margins blackish brown; entire dorsal surface slightly wrinkled with several punctures between eyes; clypeus free, as long as paraclypei and with two short hair-like setae subapically; each paraclypeus with a submarginal row of 3 setigerous punctures bearing hair-like setae; eyes brownish black, ocular index 2.07; ocelli reddish brown, interocellar distance about 5.3 times the distance of ocellus from eye; antennae brown (1st segment yellowish brown, 2nd and 3rd dark brown, 4th and 5th missing); rostrum yellowish brown, reaching anterior margin of midcoxae.

Thorax: Pronotum (fig. 3) castaneous, with distinct transverse postmedian impressed line not reaching lateral margins, but bearing several punctures laterally; anterior lobe with broad, shallow, median subapical impression and with two or three punctures on sides; posterior lobe distinctly punctured, but punctures not reaching the posterior margin; umbone well developed and covering posterolateral angles; each lateral margin with a submarginal row of 3 hair-like setae. Scutellum of the same colour as pronotum with base and lateral margins somewhat darker in shade; disc evenly punctured with punctures slightly larger than those on pronotum. Corium brown, somewhat lighter in shade than pronotum and

scutellum, almost evenly punctured; distal part of mesocorium with punctures smaller and less visible than those in the basal part; clavus with one row of punctures; mesocorium with two rows of punctures paralleling claval suture; costa without setigerous punctures. Membrane yellowish brown, semihyaline, surpassing the tip of abdomen. Propleuron yellowish brown with several punctures close to coxae; mesosternum also with several punctures between fore and middle coxae; evaporatoria as in other members of the genus *Parachilocoris*. Legs brown, tibial spines reddish brown, tarsi yellowish brown.

Abdomen: Castaneous, smooth; lateral parts wrinkled, with single punctures and numerous shiny hair-like bristles; segmental sutures aligned by several punctures.

Genitalia: Paramere as in fig. 2.

Measurements (in mm): body length 3.44, body width 1.78, head length 0.56, head width 0.83, pronotum length 1.08, pronotum width 1.72, scutellum length 0.92, scutellum width 1.08, antennal segments 0.14 : 0.10 : 0.31 : 4th and 5th missing.

Remark: The nominate subspecies is distributed in Burma and India.

Garsauria laosana Lis

Garsauria aradoides Walker: Tomokuni, 1982: 414,

1989: 186; Takakura, 1985: 518.

Garsauria laosana Lis, 1991: 166, 1992: 148.

Material examined

Japan, Hatsuno, Amami-Oshima, 1 ♂, 1 ♀, 12.iv.1971, M. Sakai leg. (NSMT).

The species was described from Laos (Lis, 1991), and it was recorded also from Vietnam and South China (Lis, 1992). Describing the species I had no material from Japan, where the second species of the genus, *G. aradoides*, was recorded. At present it is clear that previous records of *G. aradoides* from this country (Tomokuni, 1982, 1989; Takakura, 1985) pertained to *G. laosana*. *Garsauria aradoides* is known to occur in New Guinea and Moluccas (Lis, 1992).

Paramere and genital capsule of both *G. laosana* and *G. aradoides* were figured by Lis (1992).

Geotomus convexus Hsiao

Geotomus convexus Hsiao in Hsiao et. al., 1977: 47 & 296.

Geotomus palliditarsis [sic!] non Scott, 1880: Josifov & Kerzhner, 1978: 189; Kanyukova, 1988: 916.

Material examined

Paratype, ♂, China, Tientsin [= Tianjin], 1953.iv.22 (DBNU); Moundchourie, 9 ♂, Region du Lac Chanka, Bohnhof, 1900, Muséum Paris (MNHN, JAL).

When Josifov & Kerzhner (1978) studied the material of the genus *Geotomus* from Korea, they noticed that East Palaearctic specimens regarded then as belonging to *G. pygmaeus* actually represented a quite different species. They (op. cit.) selected the name *G. palliditarsus* Scott (described from Japan) for the East Palaearctic species of *Geotomus*, removed it from the synonymy of *G. pygmaeus* and treated it as a separate species. Unfortunately they neither studied the type material of *G. palliditarsus* Scott nor knew *G. convexus* Hsiao (described from China in 1977).

The present study of types of both these species shows that the proper name for the

East Palaearctic representative of the genus *Geotomus* was *G. convexus* Hsiao (= *G. palliditarsus*, sensu Josifov & Kerzhner, 1978), and on the other hand *G. palliditarsus* Scott should be treated as a junior synonym of *G. pygmaeus*, as was already proposed by Signoret (1881).

Geotomus convexus was recorded hitherto from Korea, China and the Far East territory of Russia. Paramere and genital capsule of the male were figured by Josifov & Kerzhner (1978) and Kanyukova (1988).

I cannot account for the discrepancy between the three female paratypes from Tientsin specified by Hsiao (Hsiao et al., 1977) and the male paratype I examined. Nevertheless the specimen is really the paratype; the holotype has not been traced (L. Y. Zheng, in litt. 1993).

Geotomus pygmaeus (Dallas)

Aethus pygmaeus Dallas, 1851: 120.

Geotomus pygmaeus (Dallas): Signoret, 1881: 51.

Aethus palliditarsus Scott, 1880: 309.

Material examined

Japan: Holotype, ♂, *Aethus palliditarsus* Scott, Type Scott Coll., 88-11, Brit. Mus. Type No. Hem. 334 (BMNH); Hozuyama, Kuwadagori, Tamba, 1 ♂, 7 ♀, vi.97, Mus. em. 24.ix.1898 (ZIZM); Nanatadake, Satsuma, 5 ♂, 6 ♀, v.98, Mus. em. 24.ix.1898 (ZIZM).

Aethus palliditarsus Scott was described from Japan (Scott, 1880). It was synonymized with *Geotomus pygmaeus* Dallas by Signoret (1881), but Josifov & Kerzhner (1978) removed it from the synonymy of *G. pygmaeus* and treated it as a separate species. The present study of the type material of *G. palliditarsus* proved the synonymization proposed by Signoret (1881), and confirmed the occurrence of *G. pygmaeus* in Japan.

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