Elytra, *Tokyo*, **29** (1): 227–231, June 15, 2001

A New Species of the Genus *Minypatrobus* (Coleoptera, Carabidae) from North Japan

Alexander ZAMOTAJLOV

Entomology Department, Kuban State Agrarian University,
ul. Kalinina 13, Krasnodar 350044, Russia

and

Seiji MORITA

Higashi-gotanda 5–19–7, Shinagawa-ku, Tokyo, 141–0022 Japan

Abstract A new species of patrobine carabid, *Minypatrobus hidakanus* sp. nov., is described from Hokkaido, North Japan. It is related to *M. darlingtoni* S. UÉNO.

The generic status of *Minypatrobus* S. UÉNO (1955, p. 51) was resurrected by ZAMOTAJLOV (1992, p. 278), and the genus in question is known to comprise two species from Hokkaido, namely, *M. darlingtoni* S. UÉNO (1955, p. 54) and *M. uenoi* (HABU) (1972, p. 30). They are easily distinguishable from the other Japanese patrobine species, usually referred to the tribe Deltomerini, by peculiar structure of the male genitalia: apical lamella of aedeagus flattened laterally, endophallus without distinct copulatory pieces, and parameres small, reduced, and partly membranous subapically. Several authors surmised close relationships of *Minypatrobus* with Asian *Platidiolus* CHAUDOIR and American *Patroboidea* VAN DYKE, though this viewpoint was disaffirmed by ZAMOTAJLOV and LAFER (2001, p. 414). In this paper, we are going to describe a further species, doubtless related to *M. darlingtoni* and showing all characteristic features.

The abbreviations used herein are as follows: HW – greatest width of head; HL – length of head, measured between apex of clypeus and neck constriction; PW – greatest width of pronotum; PL – length of pronotum, measured along mid-line; EW – greatest width of elytra; EL – greatest length of elytra; NSMT – National Science Museum (Natural History), Tokyo; ZISP – Zoological Institute of the Russian Academy of Sciences, St.-Petersburg; AZ – A. ZAMOTAJLOV's collection; SM – S. MORITA's collection.

Minypatrobus hidakanus sp. nov.

[Japanese name: Hidaka-nurechi-gomimushi]

(Figs. 1–6)

Minypatrobus darlingtoni: HABU, 1972, p. 33 [partim].

Type series. Holotype: ♂, allotype: ♀, Mt. Poroshiri-dake, Hidaka District, 1,700 m alt., 25–VII–1971, Y. WATANABE leg. (NSMT). Paratypes: 1♂, 4♀♀, Mt. Poroshiri-dake, 25–VII–1971, Y. WATANABE leg. (NSMT & AZ); 1♂, 1♀, Mt. Petegari-dake, 25–VII–1971, S. UÉNO leg. (ZISP); 3♂♂, 2♀♀, Mt. Petegari-dake, 27–VII–1971, S. UÉNO leg.; 2♀♀, Mt. Petegari-dake, 28–VII–1970, S. UÉNO leg. (NSMT); 3♂♂, 3♀♀, Mt. Chiroro-dake, 24–VII–1993, K. HAGA leg. (SM & AZ); 6♂♂, 11♀♀, Mt. Chiroro-dake, 15–VII–2000, S. HORI, H. MATSUMOTO & K. OOYAMA leg. (SM).

Description. Body robust, moderately elongate, fairly convex, appendages stout. Habitus as in Fig. 1. Reddish brown, shiny; mandibles, labrum, antennae and legs reddish, palpi yellowish; ventral side reddish brown. Total length 5.4–5.9 mm.

Head large, wide and convex, HW/PW 0.70–0.83 (M 0.77) in 10♂♂, 20♀♀; HW/HL 1.23–1.45 (M 1.35) in 12♂♂, 19♀♀; eyes small and almost flat, rather finely faceted; neck constriction distinct though shallow; temples faintly tumid, hardly longer than eye diameter; front margin of clypeus widely and shallowly emarginate, that of labrum moderately emarginate; frontal furrows rather deep, very wide, reaching clypeal setae in front and strongly approaching vertex, diverging behind and extending beyond the level of front supraorbital pore; dorsal surface smooth, almost impunctate, except for some punctures in neck constriction; microsculpture faint, partly smoothed, generally isodiametric, somewhat transverse at neck; 2 supraorbital setae, anterior one at mid-eye level and posterior one variable in its location, closer to neck constriction to somewhat equidistant between eyes and neck constriction; mentum (Fig. 2) with 2 rather deep foveae basally, tooth of mentum bifid, rather narrow and long; submentum with 2 setae on each side and numerous minute pores in the middle, gula rather broad; antennae short and stout, nearly reaching basal quarter of elytra.

Antennomere I with 1 macroseta anteriorly, antenomere II with 6 setae subapically; relative lengths of antennomeres III and IV 1 : 1.20–1.69 (M 1.44) in 10♂♂, 20♀♀; antenomere IV nearly as long as V.

Pronotum transverse subcordate, distinctly contracted both anteriorly and posteriorly, convex (almost flat on disc), PW/PL 1.29–1.42 (M 1.35) in 10♂♂, 20♀♀, widest at apical third; lateral sides rather widely but strongly rounded in front, hardly sinuate just before hind angles, with lateral seta inserted a little before the widest part, margins completely narrowly bordered; apex moderately emarginate, a little wider than base, which is a little oblique on either side and slightly sinuate inside; front angles moderately protruding, angularly rounded, hind angles somewhat obtuse; surface smooth, indistinctly rugose, with rather large punctures in basal area and sparse punctures along front margin; surface impressed near median line, the latter deep, obliterated before apex, nearly reaching base; anterior transverse impression almost indistinct, vaguely

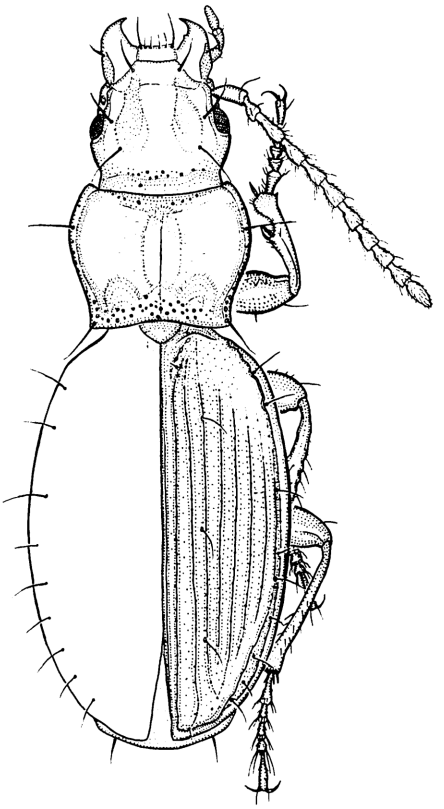


Fig. 1. *Minypatrobus hidakanus* sp. nov., general view.

wrinkled; basal foveae rather large and deep; outside areas of basal foveae slightly convex, with obscure and smoothed carina near basal angles; microsculpture rather distinct, of transverse meshes.

Lateral sides of prosternum, prepisterna, mesosternum, mesepisterna and lateral sides of metasternum with rather coarse but sparse puncturation; metepisterna and sternite 1 somewhat wrinkled.

Legs short and stout; hind coxa with 1 seta; femora robust; tibiae slightly arcuate; protarsal segments 1 and 2 widely dilated in ♂, each with apical angles distinctly produced; meso- and metatarsal segment 5 glabrous ventrally, tarsal upper surface glabrous.

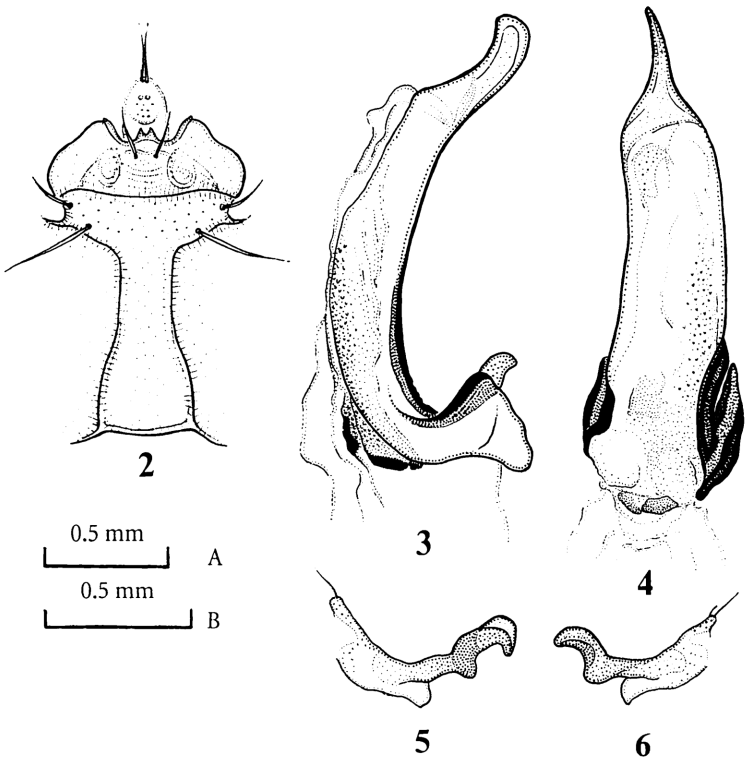
Elytra oblong-ovate, moderately convex, somewhat depressed on disc, EW/PW 1.29–1.46 (M 1.37) in 9♂♂, 19♀♀; EL/EW 1.46–1.64 (M 1.57) in 9♂♂, 20♀♀; shoulder rounded, with indistinct tooth; lateral sides narrowly and evenly reflexed, widely and rather strongly rounded, lateral border prominently tapering behind; striae rather shallow, finely punctate, outer striae much shallower than inner ones and partly almost disappearing (striae 6 and 7 obliterated both basally and apically), striae 1 and 2 reach-

ing apical stria, striae 3 and 5 confluent apically, stria 4 with loose apex; scutellar striole fine but distinct, smoothly punctate with large pores; scutellar pore present, scutellar seta very fine, almost invisible, intervals slightly convex on disc but flat on lateral sides; interval 3 with three discal pores adjoining stria 3, located at about one-fourth, middle and three-fourths from base, respectively; marginal series composed of 9 pores; microsculpture rather distinct, nearly isodiametric.

Wings degenerated, represented as small scales.

Anal sternite usually with 1 seta on each side apically, sometimes with additional seta on one side, rarely with 2 setae on each side (in both sexes).

Aedeagus (Figs. 3, 4) rather slender, strongly bent basally, moderately arcuate, faintly twisted to right side; apical lamella rather wide, lightly bent ventrad, subangulate dorsally (viewed laterally), strongly flattened laterally and seemingly very narrow (viewed dorsally). Endophallus with generally faintly sclerotized folded structures, bearing fine minute spinules, somewhat more strongly sclerotized basad but never showing sharply outlined proximal copulatory piece. Left paramere (Fig. 5) larger than right one (Fig. 6), both somewhat reduced in comparison with that in the bulk of pa-



Figs. 2–6. *Minypatrobus hidakanus* sp. nov., details. —— 2, Mentum and submentum; 3, aedeagus, left lateral view; 4, aedeagus, dorsal view; 5, left paramere, left lateral view; 6, right paramere, right lateral view. Scale bars: A for fig. 2; B for figs. 3–6.

trobine species, their apical parts with a large membranous area and several small pores, left paramere with one long seta apically, right one with two setae, longer one apically, and shorter and finer seta subapically.

Spermatheca with ovate sclerotized ring; stylus with 1 minute seta subapically.

Notes. This new species is closely allied to *M. darlingtoni* S. UÉNO, but is distinguished from it by the following points: 1) body more robust; 2) genae less tumid; 3) pronotum distinctly contracted apicad; 4) front angles strongly produced; 5) apical margin of pronotum more deeply emarginate; 6) elytra with rounded sides and indistinct shoulders; 7) anal sternites usually with one pair of setae in ♂ and ♀; and 8) apical part of aedeagus simple, tooth-shaped protuberance dorsally missing.

Etymology. The specific epithet refers to the localities of this species, the Hidaka Mountains.

Acknowledgements

The authors are greatly indebted to Dr. Shun-Ichi UÉNO for loan of important material. The first author is also indebted to Mr. Noboru ITO (Kawanishi City) for entrusting comparative material for this study. The second author thanks Messrs. Kaoru HAGA, Shigehisa HORI, Hideaki MATSUMOTO and Katsuo OOYAMA for supplying material.

要　　約

Alexander ZAMOTAJLOV・森田誠司：北日本産ダイセツヌレチゴミムシ属の1新種．—— 北海道日高山脈から採集されたダイセツヌレチゴミムシ属 *Minypatrobus* の1新種，ヒダカヌレチゴミムシ *M. hidakanus* を記載した．この新種は，基準種の *M. darlingtoni* S. UÉNO によく似ていて土生（1972）により同一種と考えられたが，外部形態にも雄交尾器にも明らかな差異が認められる．

References

HABU, A., 1972. On some Carabidae found by Dr. S.-I. UÉNO in Hokkaido, North Japan (Coleoptera, Carabidae). *Mushi, Fukuoka*, **46**: 29–38.

UÉNO, S.-I., 1955. *Minypatrobus darlingtoni* (new genus and new species), a notable addition to the carabid-fauna of Japan. *Mem. Coll. Sci. Univ. Kyoto*, (B), **22**: 51–56.

ZAMOTAJLOV, A. S., 1992. Notes on classification of the subfamily Patrobinae (Coleoptera, Carabidae) of the Palaearctic Region with description of new taxa. *Mitt. schweiz. ent. Ges.*, **65**: 251–281.

——— & G. Sh. LAFER, 2001. Contribution to the knowledge of the carabid genus *Platidiolus* CHAUDOIR, 1878 (Coleoptera, Carabidae) from the Continental Asia. *Ent. Obozr.*, **80**: 411–435. (In Russian.)