

## Occurrence of *Neoblemus zetteli* (Coleoptera, Trechinae) in Sabah, Borneo

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**Abstract** *Neoblemus zetteli* DONABAUER, a perileptine trechid beetle, is recorded from Sabah, Borneo, about 840 km to the northeast of the type locality. Some supplementary accounts of the species is given on the basis of the Sabah specimens, and the subgenus *Elliblemus* DONABAUER is synonymized with *Neoblemus* s. str.

*Neoblemus zetteli* was described by DONABAUER (1995, pp. 170, 174, figs. 1–2, 4, 7) from Gunung Serapi in Sarawak, Borneo, on the basis of a single female. Its discovery was most unexpected, since no *Neoblemus* had previously been known from the Malay Peninsula and Archipelago including the Philippines, though a representative of this genus (*N. bedoci* JEANNEL) is widely distributed in the northern part of the Indochinese Peninsula and southern China (cf. UÉNO & YIN, 1993, pp. 74–75). I have seen a large number of specimens of *Perileptus* from Southeast Asia including *P. boettcheri* (JEDLIČKA) (1935, p. 197), which was originally described as a member of *Neoblemus*, but have never come across a true member of the genus other than *N. bedoci*.

Through the courtesy of Mr. Noboru ITO, I was recently given an opportunity to examine a series of specimens of a perileptine trechid collected at the western part of Sabah, and found it to agree with DONABAUER's description of *N. zetteli*. Accuracy of this identification was confirmed by a direct comparison with the type specimen, which was made possible at Vienna through the kindness of Dr. Heinrich SCHÖNMANN.

In this short paper, I am going to record the new locality of the species, to give some supplementary accounts mainly on the basis of the new material, and to make some comment on DONABAUER's division of the *Neoblemus* species. The abbreviations used herein are the same as those explained elsewhere.

I am deeply indebted to Mr. Noboru ITO for giving me the opportunity to study invaluable specimens, to Dr. Heinrich SCHÖNMANN for permitting me to reexamine the type of *N. zetteli*, to Mr. Martin DONABAUER for supplying further information about Indonesian perileptines, and to Mr. Artur GITZEN for quickly informing me of JEANNE's description of another new species of the genus.

*Neoblemus zetteli* DONABAUER, 1995

(Fig. 1)

*Neoblemus* (s. str.) *zetteli* DONABAUER, 1995, Annln. naturh. Mus. Wien, **97 B**, pp. 170, 174, figs. 1–2, 4, 7; type locality: Gunung Serapi in Sarawak.

Length: 2.95–3.45 mm (from apical margin of clypeus to apices of elytra).

Carefully described by DONABAUER in the original description, but since it was prepared on a single female specimen, some supplementary accounts seem needed, especially for showing range of individual variation and morphometric data.

Colour as in the original description, but the neck is usually reddish like the basal area of pronotum. Head large though usually somewhat narrower than pronotum, with large convex eyes; genae only 1/5–1/3 as long as eyes; antennae rather variable in length, usually reaching the middle of elytra though sometimes extending a little beyond the middle and rarely only reaching basal three-sevenths. Pronotum rather small and transverse, usually widest at about three-fourths from base, and strongly contracted posteriad; PW/HW 1.01–1.06 (M 1.03), PW/PL 1.32–1.42 (M 1.35), PW/PA 1.18–1.24 (M 1.22), PW/PB 1.36–1.55 (M 1.44), PA/PB 1.12–1.26 (M 1.18); sides moderately arcuate in front, less so behind the widest part, and more or less distinctly sinuate at a level between basal sixth and fifth; basal area usually dilated posteriad, rarely subparallel-sided, and always transversely rugulose; hind angles usually sharp or acute, and more or less produced laterad, rarely rectangular. Elytra fairly broad, widest at about or a little before the middle, and depressed on the disc, with the sides very

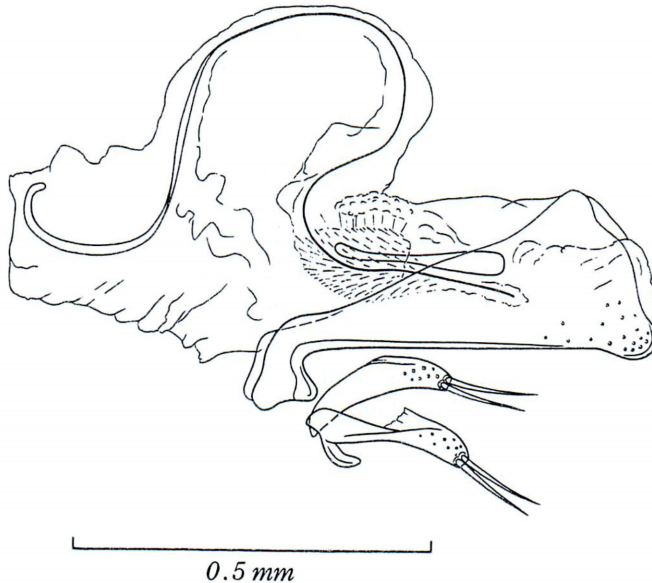


Fig. 1. Male genitalia of *Neoblemus zetteli* DONABAUER, from near Gunung Alab in Sabah; left lateral view.



feebly arcuate at middle; EW/PW 1.41–1.46 (M 1.43), EL/PL 3.02–3.33 (M 3.15), EL/EW 1.59–1.66 (M 1.63). Ventral surface and legs as in the other species of the genus.

Male genital organ small and lightly sclerotized. Aedeagus three-tenths as long as elytra, dilated towards apical orifice, becoming membraneous dorsally except for basal lobes, which are small and abruptly bent ventrad; apex slightly curved ventrad and widely rounded; ventral margin nearly straight in profile. Inner sac largely exposed, armed with a narrow copulatory piece and a very long filament, both of which are enveloped with a compact patch of minute scales near the apical ends; copulatory piece slender and hyaline, about three-sevenths as long as aedeagus, very narrow in proximal half but gradually dilated towards subtruncated apex in apical half, forming a spatulate shape as a whole; filament exceedingly long, more than twice as long as aedeagus, windingly extending antieriad outside aedeagus. Styles very small, left style longer than the right and provided with a rather large ventral apophysis, each bearing two short setae at the apex.

*Specimens examined.* 1 ♀ (holotype), “MALAYSIA: Sarawak 1993/Kubah NP, 20 km W/Kuching, Gunung Serapi/6.3., leg. H. Zettel (15)//Holotypus/*Neoblemus* (s. str.)/*zetteli* sp. n./des. M. Donabauer 1995” (Naturh. Mus. Wien); 2 ♂♂, 3 ♀♀, “MALAYSIA: Sarawak/25 km E Kapit/III. 1994/leg. Kodada//*Neoblemus* (s. str.)/*zetteli* Donabauer, 1995/det. M. Donabauer” (Naturh. Mus. Wien); 3 ♂♂, 10 ♀♀, “MALAYSIA – Sabah prov./Banjaran Crocker Mts./16 km SW Gunung Alab/4–9. V. 1996 alt. 790–850 m/M. Štrba & R. Hergovits leg.” (Natn. Sci. Mus., Tokyo, and coll. N. ITO).

*Range.* Probably widespread in northern Borneo, from Sarawak in the southwest to Sabah in the northeast.

*Notes.* As was adequately pointed out by its original author (pp. 174–175), *N. zetteli* is an isolated species within the genus. It is not only peculiar in external features but also in the conformation of the male genitalia. Generally speaking, male genitalia do not prove useful in classifying perileptine trechids, mainly because they are only poorly sclerotized in the dorsal part and lacking in differentiated inner armature. They are subject to considerable individual variation, both in the shape of aedeagus and in the number of parameral setae. In *N. zetteli*, the aedeagus itself is ordinarily mal-sclerotized, but the large inner sac bears a differentiated copulatory piece and an unusually developed filament. Though possessed by most species of perileptines, the filament is usually small and not so strikingly winding as that of *N. zetteli*.

I have seen five out of the seven described species of *Neoblemus*, and have compared *N. zetteli* with the other four. The Bornean species is probably closest to *N. bedoci* JEANNEL (1923, pp. 410, 412, fig. 8; 1926, pp. 434, 436, figs. 217–221), though distinguished at first sight from it by the features given in DONABAUER’s key (p. 170). These two species may have been derived from a common ancestor once spread in the mainland part of Southeast Asia. Its immigration into the northwestern side of Borneo may have been effected through aerial dispersal, since the extant members of *Neoble-*

*mus* are, so far as I know, good fliers living at the immediate proximities of flowing waters, which are subject to frequent floods. Isolation of the immigrant must have taken place prior to further speciation of the mainland stock, since *N. bedoci* is no doubt closer to *N. championi* JEANNEL (1923, pp. 410, 411; 1926, p. 434) of the Himalayas than to *N. zetteli* of Borneo. Incidentally, melanism is not so rare among insular forms of perileptines as was considered by DONABAUER (1995, p. 174).

Recently, a seventh species of *Neoblemus* was described by JEANNE (1996, p. 102, fig. 2) from Turkey under the name of *N. gillerforsii*. Judging from the description and the illustration of its habitus, this species seems to be related to *N. glazunovi* JEANNEL (1935, p. 273), but is evidently different from it in the glabrous dorsum of the pronotum, a feature that was regarded by DONABAUER (1995, pp. 170, 175) as one of the diagnostic characters for separating *Neoblemus* s. str. from his new subgenus, *Elliblemus*. Variability of all the other character states pointed out by the Austrian author is shown by the members of *Perileptus*, which is closely allied to *Neoblemus* but is much more diverse than the latter. I therefore propose herewith to regard *Elliblemus* DONABAUER as a junior synonym of *Neoblemus* JEANNEL.

## 要 約

上野俊一：サバにおけるホソチビゴミムシの一種の記録。——ホソチビゴミムシ類の一種 *Neoblemus zetteli* DONABAUER は、ちょうど2年前に、ただ1点の雌標本に基づいて、ボルネオ・サラワク州の南西部から記載されたものである。その基準産地から北東へ約840 km離れたサバ州内で、昨年春に採集されたホソチビゴミムシを調べた結果、サラワクのものと同一種であることが確かめられたので、新産地を記録するとともに、変異のようすなどを補足的に記載した。また、この種と同時に記載された亜属 *Elliblemus* DONABAUER を、*Neoblemus* JEANNEL の下位同物異名として整理した。

## References

- DONABAUER, M., 1995. Zwei neue Arten der Gattung *Neoblemus* JEANNEL (Insecta: Coleoptera: Carabidae). *Annln. naturh. Mus. Wien*, **97B**: 169–176.
- JEANNE, C., 1996. Carabiques nouveaux de Turquie (Coleoptera, Caraboidea). *Nouv. Revue Ent.*, (N. S.), **13**: 99–109.
- JEANNEL, R., 1923. Les Trechinae [Coleoptera, Carabidae] de la Région Orientale. *Ann. Mag. nat. Hist.*, (9), **12**: 393–435.
- 1926. Monographie des Trechinae. Morphologie comparée et distribution géographique d'un groupe de Coléoptères. (Première livraison). *Abeille, Paris*, **32**: 221–550.
- 1935. Sur quelques Trechinae de l'Asie Centrale. *Revue fr. Ent.*, **1**: 273–282.
- JEDLIČKA, A., 1935. Eine neue philippinische *Neoblemus* Art. *Čas. čs. Spol. ent.*, **32**: 197.
- UÉNO, S.-I., & YIN, W.-y., 1993. Records of perileptines (Coleoptera, Trechinae) from Xishuangbanna in southern China. *Bull. natn. Sci. Mus., Tokyo*, (A), **19**: 69–75.