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A NEW SYNONYM OF THE GROUND BEETLE *PTEROSTICHUS BANDOTARO* TANAKA, 1958 (COLEOPTERA: CARABIDAE)

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Summary. The endophallus structure of *Pterostichus neglectoides* Budilov, 2022, which was described from the Jewish Autonomous Region (Russia), is completely identical to that of *P. bandotaro* Tanaka, 1958, which was described from Honshu (Japan). The external morphology of the two is also identical in terms of body size, overall shape, surface punctures, and chaetotaxy. Therefore, a new synonymy is proposed: *Pterostichus bandotaro* Tanaka, 1958 = *Pterostichus neglectoides* Budilov, 2022, **syn. n.** This taxonomic treatment led to the first record of *P. bandotaro* from the Asian continent.

Key words: ground beetles, *Pterostichus*, male genitalia, taxonomy, new synonymy, Russian Far East, Japan, East Asia.

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Резюме. Структура эндофаллуса описанного из Еврейской автономной области (Россия) *Pterostichus neglectoides* Budilov, 2022 полностью идентична таковой *P. bandotaro* Tanaka, 1958, известному с Хонсю (Япония). Форма, размеры, пунктировка и хетотаксия тела у обоих также идентичны. Поэтому установлена новая синонимия: *Pterostichus bandotaro* Tanaka, 1958 = *Pterostichus neglectoides* Budilov, 2022, **syn. n.** Вследствие этого *P. bandotaro* впервые указывается из континентальной части Азии.

INTRODUCTION

The genus *Pterostichus* Bonelli, 1810 is a group within the beetle family Carabidae that has diversified mainly in the holarctic region. Taxonomic studies for *Pterostichus* are ongoing at both the species and subgenus level. Recently, Budilov (2022) described a new species of this genus, *Pterostichus neglectoides*, from the Jewish Autonomous Region, Russia. He considered *P. neglectoides* to be a new species based on comparisons with related species from the Russian Far East, especially *P. neglectus* Morawitz, 1862, which is markedly similar in external appearance. However, his comparisons did not include some related and potentially-related species distributed in the Far East outside of Russia. After examination of the original description, I noticed that *P. neglectoides* Budilov, 2022 is conspecific with *P. bandotaro* Tanaka, 1958, described from Japan. In this short report, I treat the former as a synonym of the latter and discuss the importance of the results of Budilov (2022).

TAXONOMY

Pterostichus (Badistrinus) bandotaro Tanaka, 1958

Figs 1–4

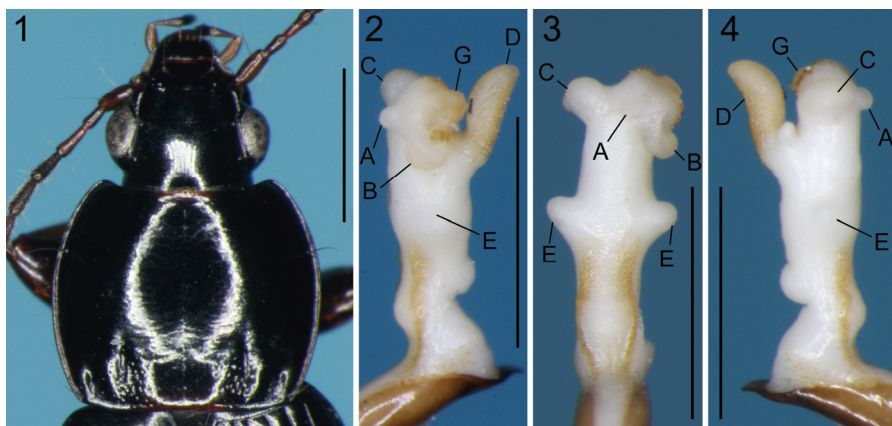
Pterostichus (Badistrinus) bandotaro Tanaka, 1958: 78 (type locality: “Lake Wadanuma in the river-bed of the Toné, Chiba Pref., Honshu, Japan” [Bentenshita, Kashiwa-shi, Chiba Prefecture, Japan; the Wadanuma Lake disappeared due to land reclamation and no longer exists.]; Bousquet, 2017: 71.

Pterostichus (Phonias) neglectoides Budilov, 2022: 25 (type locality: the protected zone of ‘Bastak’ Reserve, the Jewish Autonomous Region, Russia). **Syn. n.**

MATERIAL EXAMINED. **Japan:** Honshu, Tochigi Prefecture, the Watarase Wetland, 26–28.IV 2006, 1♂; the same locality, 26–28.IV 2013, 1♂, 4♀; the same locality, 6–8.V 2013, 4♀; in the collection of KS.

DISTRIBUTION. Japan (Honshu, Hokkaido), Russia (Jewish Autonomous Region).

NOTES. The endophallus structure of *P. neglectoides* illustrated by Budilov (2022) is completely identical to that of *P. bandotaro* in its overall shape, as well as the position, shape and chitinization of lobes on the endophallus surface. The external morphology of the two is also identical in terms of body size, overall shape, surface punctures, and chaetotaxy. Based on these results, I conclude that *P. neglectoides* should be synonymized with *P. bandotaro*.



Figs 1–4. *Pterostichus bandotaro*, male from the Watarase Wetland, Japan. 1 – head and pronotum, dorsal view; 2 – endophallus, left lateral view; 3 – endophallus, dorsal view; 4 – endophallus, right lateral view. Terminology used for the endophallus structures (A–G) follows that of Budilov (2022). Scales: 1.0 mm.

DISCUSSION

Although the species described in his study has become a synonym, the results of Budilov (2022) are important from at least two perspectives. First, his results, together with those of the present study, constitute the first record from continental Asia of *P. bandotaro*, a species

thought to be endemic to the Japanese Archipelago (Bousquet, 2017). His specimens were collected from an inland area along the Amur River. Considering the continuity of the habitat, it is assumed that *P. bandotaro* is also distributed in the continental area located between Budilov's (2022) collection sites and the Japanese Archipelago, and further distribution surveys are expected. In that case, the endophallus morphology described in his and my studies serves as a reliable diagnostic character. Second, and more importantly, his results showed that endophallus structures are diversified even in small-sized (< 10 mm) groups of *Pterostichus*, whose endophalli have been rarely studied. In some medium- and large-sized groups of Carabidae, species redefinition and phylogenetic analysis have been performed based on endophallus diversity (Janovska *et al.*, 2013, and references therein). In the future, it will be necessary to conduct research using the endophallus structure for small groups as well.

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