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A new species and new records of longhorn beetles (Coleoptera: Cerambycidae) from Southeast Asia

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Rostov Branch of the Federal State Budgetary Institution All-Russian Plant Quarantine Centre ("VNIKR"), 20th line, 43/16, Rostov-on-Don 344037 Russia. E-mail: dorcadion@yandex.ru

Abstract. A new species, *Dembickya lobanovi* sp. n. (Tillomorphini) is described from Sumatra, Indonesia and is a new record of the genus for Indonesia. Differences between the new species and *D. pacholatkoii* Miroshnikov, 2013 are provided. *Mimapatophysis gressitti* Miroshnikov, 2014 is recorded for Thailand for the first time and morphological differences between it and other allied Apatophyseinae are discussed. A representative of the genus *Anexodus* Pascoe, 1886 (Morimopsini) is recorded for the Philippines (Palawan) for the first time, and it is provisionally identified as *Anexodus* cf. *aquilus* Pascoe, 1886. The species position of this specimen is discussed.

Key words: new species, new records, endophallus, *Dembickya*, Morimopsini, *Mimapatophysis*, Sumatra, Thailand.

Новый вид и новые находки жуков-усачей (Coleoptera: Cerambycidae) из Юго-Восточной Азии

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Ростовский филиал ФГБУ «ВНИИКР», 20-я линия, 43/16, Ростов-на-Дону 344037 Россия. E-mail: dorcadion@yandex.ru

Резюме. Описан новый вид *Dembickya lobanovi* sp. n. с Суматры. Приведены диагностические признаки и отличия от *D. pacholatkoii* Miroshnikov, 2013. *Mimapatophysis gressitti* Miroshnikov, 2014 впервые указан для Таиланда. Изучено и проиллюстрировано строение его эндофаллуса, обсуждено его строение у некоторых других представителей подсемейства в сравнении с этим видом. Впервые для Филиппин указан представитель трибы Morimopsini и рода *Anexodus* Pascoe, 1886, предварительно определенный как *Anexodus* cf. *aquilus* Pascoe, 1886. Обсуждается видовая принадлежность данного экземпляра.

Ключевые слова: новый вид, новые находки, эндофаллус, *Dembickya*, Morimopsini, *Mimapatophysis*, Суматра, Таиланд.

Introduction

The longhorn beetle fauna of the Indomalayan region has been intensively studied during recent years with many new taxa and records added. This work continues with contributions to the subfamilies Cerambycinae, Lamiinae and Apatophyseinae from Southeast Asia, describing a new species of the previously monotypical genus *Dembickya* Miroshnikov, 2013, and adding new records of tribes, genera and species from different countries in the region and analyzing the structure of the endophallus.

Material and methods

Material from the following collections is cited:

MNHD – Museum Natural History of Denmark (Copenhagen, Denmark);

PCDK – private collection of D.G. Kasatkin (Rostov-on-Don, Russia).

Specimens were examined with Olympus SZ61 stereomicroscopes. The photographs were taken with a Canon MP-E 65mm/2.8 and Canon EF 200mm f/2.8L USM with Mitutoyo MY10X-803 on bellows attached to a Canon EOS 5D Mark III camera. Partially focused images were stacked using the Zerene Stacker software.

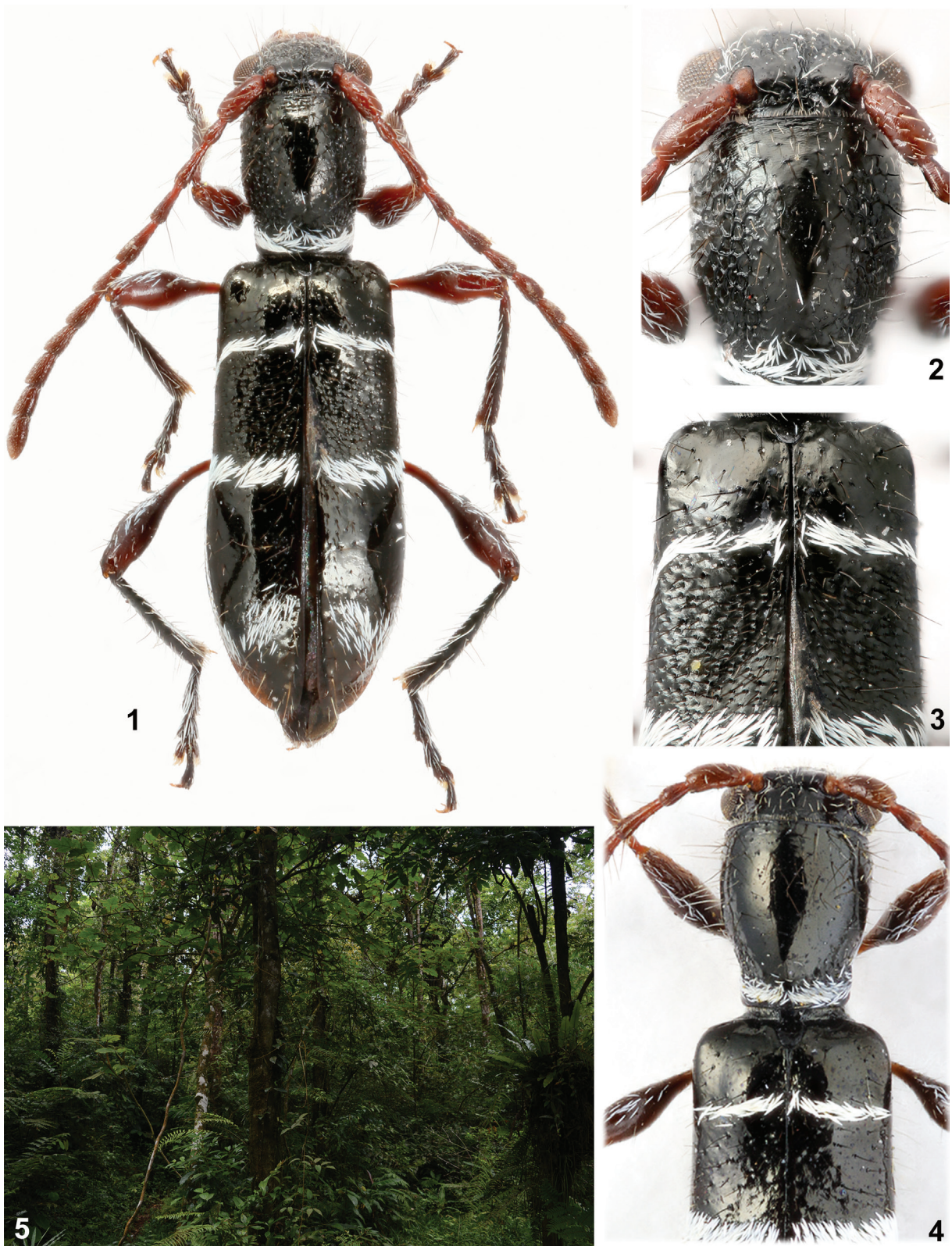
Dembickya lobanovi sp. n. (Figs 1–3)

Material. Holotype, ♀ (PCDK): "Indonesia, Sumatra Is., North Sumatra Prov., Karo Regency, Berastagi Distr., ca 3 km NNE Berastagi Town, near Sidebuk-Debuk hot springs, N 3°13'15.3", E 98°30'41.8", h = 1452 m, mountain forest, 15.03.2020, leg. A. Prosvirov".

Description. Body length 4.2 mm, humeral width 1.1 mm. Body black, shining; mouthpart, antennae, anterior legs, meso- and metafemora red-brown; meso- and metatibiae dark, almost black. Head densely and coarsely sculptured, with sparse recumbent white hairs and erect brown setae; genae with downward triangular protuberance; antennae short, reaching last third of elytra; antennomeres 1–6 with single long erect setae; with an extended external apical angle in antennomeres 5–10.

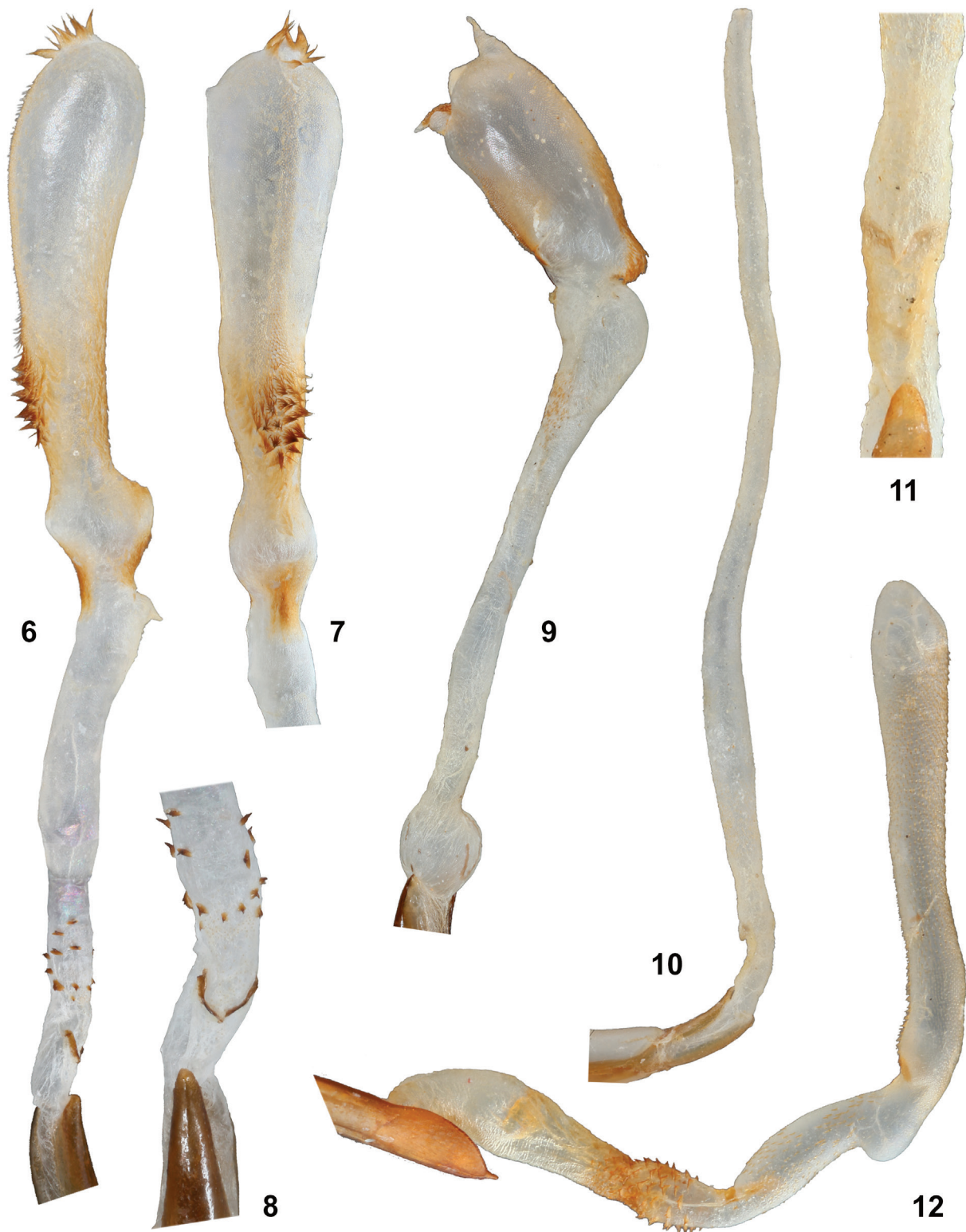
Pronotum 1.52 times longer than wide at base; slightly compressed on sides; with distinct constriction in basal part; finely and sparsely punctured on disc; with a large cellular sculpture on sides and very fine transverse rugose sculpture on anterior margin. Pronotum with dense hiding sculpture white fascia in base; with erect and semierect long setae, brown on disc and sides, white on base.

Scutellum triangular, rounded apically. Elytra 2.67 times as long as broad at base; humeri distinctly laterally flattened; with thin and short lateral carina in apical quarter; basal and apical parts with very sparse, large punctures, with dense and coarse punctures in middle (between first and second elytral fascies); elytral surface with distinct microsculpture. White hairs forming three transversal fascia on elytra: at basal third, at middle and at apical third. Elytra with long erect brown setae along entire length.



Figs 1–5. Species of the genus *Dembickya*, habitus and details of structure, and habitat of the new species.
 1–3 – *D. lobanovi* sp. n.; 4 – *D. pacholatkoii* (by Miroshnikov [2013]). 1 – habitus; 2–4 – elytral and pronotal sculpture. 5 – habitat of *D. lobanovi* sp. n. (photo by A.S. Prosvirov).

Рис. 1–5. Виды рода *Dembickya*, общий вид и детали строения, и местообитание нового вида.
 1–3 – *D. lobanovi* sp. n.; 4 – *D. pacholatkoii* (по [Miroshnikov, 2013]). 2–4 – скульптура надкрылий и переднеспинки. 5 – местообитание *D. lobanovi* sp. n. (фотография А.С. Просви́рова).

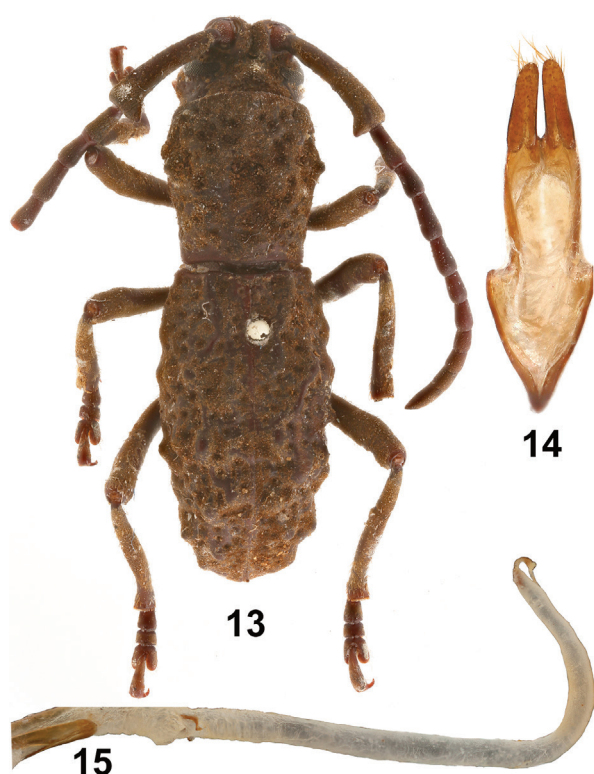


Figs 6–12. Endophallic structures of some Apatophyseinae.

6–8 – *Mimapatophysis gressitti*: 6 – lateral view, 7 – apical phallosome, dorsal view, 8 – basal phallosome, ventral view; 9 – *Toxitades sericeus* (Guerin-Menneville, 1844), lateral view; 10–11 – *Apatophysis serricornis* (Gebler, 1843): 10 – lateral view, 11 – basal phallosome, ventral view; 12 – *Logisticus angusticollis* (Waterhouse, 1880), lateral view.

Рис. 6–12. Структуры эндофаллуса некоторых Апатопхейсины.

6–8 – *Mimapatophysis gressitti*: 6 – вид сбоку, 7 – апикальный фалломер, вид сверху, 8 – базальный фалломер, вид снизу; 9 – *Toxitades sericeus* (Guerin-Menneville, 1844), вид сбоку; 10–11 – *Apatophysis serricornis* (Gebler, 1843): 10 – вид сбоку, 11 – базальный фалломер, вид снизу; 12 – *Logisticus angusticollis* (Waterhouse, 1880), вид сбоку.



Figs 13–15. *Anexodus cf. aquilus*.

13 – habitus, dorsal view; 14 – tegmen and lateral lobes; 15 – endophallus, lateral view.

Рис. 13–15. *Anexodus cf. aquilus*.

13 – общий вид сверху; 14 – тегмен и парамеры; 15 – эндофаллус, вид сбоку.

Ventral side lustre, fine and sparsely punctured, with microsculpture. Abdominal ventrites with dense white hairs on sides; mesepisterna, mesepimera and posterior half of metasternum covered with dense white hairs.

Femora claviform, with distinct rugose microsculpture; dorsally with white hairs.

Differential diagnosis. This new species is distinctly differs from *D. pacholatkoii* Miroshnikov, 2013 (Fig. 4) by the following characters: very well developed dense and large cellular sculpture on the pronotum in female (Fig. 2); the distinct coarse elytral sculpture between basal and median hair fascia; coarser head puncturation (Fig. 3).

Bionomics. The beetle was collected in the forest (Fig. 5) by clapping of trees branches.

Etymology. This new species is dedicated to my colleague and friend, Andrey Lobanov (1940–2020), a well-known specialist in Cerambycidae.

Note. The monotypic genus *Dembickya* Miroshnikov, 2013 was described from West Malaysia (West Pahang, Cameron Highlands) and interpreted as a taxon close to *Khampaseuthia* Holzschuh, 2009 according to the original description [Miroshnikov, 2013]. One female of a new species of this genus was among material from Sumatra given to the author.

Mimapatophysis gressitti Miroshnikov, 2014
(Figs 6–8)

Material. 1♂ (NMHD), W Thailand, Nam Tok, 16–18.05.2004 (S. Bílý).

Notes. This species was described by three specimens from Laos [Miroshnikov, 2014]. We found in the MNHD collection one male from Thailand. The endophallic structure of this species was examined and it shows very deep differences from the genus *Apatophysis* Chevrolat, 1860. The endophallus of *Apatophysis* is very simple, with the only indistinct BLV-sclerites and without microtrichial fields and chambers, differentiation between phallomeres is indistinct (Fig. 6). The endophallus of *Mimapatophysis* Miroshnikov, 2014 has, quite to the contrary, a lot of sclerotized elements and chambers; BLV-sclerites well developed, strongly sclerotized (Fig. 8); the base of the medial tube with many scattered little spiny sclerites, the apical part of the medial tube with the distinct ventral protuberance; the apical phallomere is presented by two chambers – small proximal and large distal ones. The proximal-apical chamber is diamond-shaped in lateral projection, with ventral and dorsal microtrichial fields; the distal-apical chamber is very elongated, club-shaped, covered with microtrichiae in the basal half and has the large trichial brush on the dorsal surface and the apical angle. Characters of the endophallus in *Mimapatophysis* is more similar to some Madagascar genera of Apatophyseinae (Figs 9, 12) than to that in *Apatophysis* (Figs 10, 11). So, the large apical chamber with the trichial brush is typical for *Toxitiades* Fairmaire, 1893, basal spiny sclerites were indicated for *Logisticus* Waterhouse, 1878. The general architecture of the endophallus for genera *Logisticus* and *Toxitiades* is also similar to that in *Mimapatophysis*, excluding basal phallomere. Further study of genital structures in different genera of Apatophyseinae and Dorcasomatinae can clarify phylogenetic and taxonomic relationships between mentioned above these taxa.

Anexodus cf. aquilus Pascoe, 1886
(Figs 13–15)

Material. 1♂ (NMHD), “Philippines, Palawan, Mantalingajan, Taganbung, 1150 meter, 17 Sept. 1961, Noona Dan Exp. 61-62, caught by mercury-light, 19.00-03.30”.

Notes. The genus *Anexodus* Pascoe, 1886 includes four species, distributed only on Borneo [Gabriš et al., 2017]. We examined one male of *Anexodus* sp. from the Philippines. It is the first record of this genus and the tribe Morimopsini for the Philippines. This fact is not very surprising because Borneo and Palawan have a common geological history in the Pleistocene [Heaney, 1986; Roubles, 2013; Huges et al., 2015]. The examined specimen is preliminarily identified as *A. aquilus*. However, the examined beetle has a number of features that do not allow making an unambiguous conclusion about the species placement. Specimens presented in the revision of *Anexodus* [Gabriš et al., 2017] demonstrate considerable variability in the elytral sculpture and in the size of the lateral pronotal spines. At the same time, all of them have a lateral pale stripe on the pronotum and the triangular patch in the scutellar area, unlike the specimen from Palawan. It would be premature to draw any taxonomic conclusions based on one specimen despite obvious differences and taking into account known morphological variability in this group.

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