

A REVIEW OF SPECIES OF THE GENUS *LAMPROBITYLE* HELLER, 1923 (COLEOPTERA: CERAMBYCIDAE)

Arvīds Barševskis

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The taxonomic and faunistic data on species of the endemic for the Philippines archipelago genus *Lamprobityle* Heller, 1923 (Coleoptera: Cerambycidae) are provided. Three new species are described: *L. katrinae* sp. n., *L. kristinae* sp. n. and *L. zeltitae* sp. n. The key for all known ten species of the genus is given for the first time.

Key words: Cerambycidae, Lamiinae, *Lamprobityle*, Philippines, new species, fauna.

Arvīds Barševskis. *Daugavpils University, Institute of Life Sciences and Technologies, Coleopterological Research Center, Vienības Str. 13, Daugavpils, LV-5401, Latvia; e-mail: arvids.barsevskis@du.lv*

INTRODUCTION

The genus *Lamprobityle* Heller, 1923 (Coleoptera: Cerambycidae) belongs to the subfamily Lamiinae Latreille, 1825 and the tribe Apomecynini Thomson, 1860. The Lamiinae is one of the most species rich subfamilies of the longhorn beetle family and consists of approximately 21 000 species. Whereas, in the tribe Apomecynini about 230 genera (Barševskis 2014) with almost 2 000 species are represented, most of which are not completely studied and need a taxonomic revisions.

Heller (1923) described the genus *Lamprobityle* and included to it a newly described species *L. magnifica* Heller, 1923. Later this genus was synonymized with *Doliops* by Waterhouse (1841), but in its status was raised to the generic rank again (Barševskis & Jäger 2014). In addition to that, Barševskis & Jäger (2014) described a new species *L. mindanaoense* Barševskis &

Jäger, 2014 and published a list of all species of this genus.

Vives (2009) described the genus *Stenodoliops* and included to it a newly described species *S. mariae* Vives, 2009 as well as a previously described species *Doliops conspersa* Aurivillius, 1927. Three years later, the same author (Vives 2012a, 2012b) described three new species from this genus: *S. azureus* Vives, 2012, *S. rugulatus* Vives, 2012 and *S. fasciatus* Vives, 2012.

Until now, there were known seven species of the genus *Lamprobityle*, and all of them are endemic for the Philippine archipelago, therefore it is important to clarify their distribution patterns. The available data is not sufficient to make objective assessment of real distribution for each species. Most of the species are rare, sporadic, known only from few specimens and are poorly represented in the collections. Perhaps in the case of some species, we need to think about protecting their habitats.

Analysing the biogeography of the genus *Lamprobityle* in the Philippine archipelago (Heller 1923, Aurivillius 1927, Vives 2009, 2012a, 2012b, Barševskis & Jäger 2014), we can conclude that one species (*L. magnifica* Heller, 1923) occurs in Luzon Island and Negros Island; two species (*L. mariae* Vives, 2009 and *L. rugulata* (Vives, 2012)) are distributed in

Luzon Island; two species (*L. fasciata* (Vives, 2012) and *L. mindanaoense* Barševskis & Jaeger, 2014) occur in Mindanao Island; *L. conspersa* (Aurivillius, 1927) is known from Sibuyan Island and *L. azurea* (Vives, 2012) from Samar Island. Consequently, all these species are endemics to specific islands of the Philippine archipelago.



Fig. 1. The distribution map of new species of the genus *Lamprobityle* in the Philippines archipelago.

The aim of this article is to summarize available faunistic data about species of the genus *Lamprobityle*, and to perform the revision of the genus deposited in the beetle collection of the Daugavpils University (Ilgas, Daugavpils District, Latvia) (DUBC), therefore improving our knowledge about this genus.

In the present study, three new species are described and new faunistic data for some species are presented. Currently, in the world fauna there are nine species of the genus.

MATERIAL AND METHODS

In total, 28 specimens (all of them from collection of A. Barševskis) of the genus *Lamprobityle* that belong to 6 species (including newly described) are deposited in the DUBC. All specimens have been collected in the Philippines by local collectors.

Specimens were examined using Nikon AZ100 Multizoom, Nikon SMZ745T and Zeiss SteREO Lumar.V12 digital stereomicroscopes, NIS-Elements Advanced Research software, and Canon EOS 60D and Canon EOS-1Ds Mark II digital cameras.

The image of *L. conspersa* (Auriv.) was obtained from an online database (Cerambycoïd Primary Types of the Smithsonian Institution; see Lingafelter & al. 2014).

The distribution map of species of the genus the *Lamprobityle* Hell. of the Philippines archipelago (Fig. 1) was drawn using Esri ArcGIS 10 software.

RESULTS AND DISCUSSION

Taxonomy

Lamprobityle katrinae sp. nov.

(Fig. 2)

Type material. Holotype. Female: Philippines: Samar Isl., Hinabangan, 08.2014, local collector

leg. (DUBC).

Description. Body length 8.7 mm, width 3.5 mm. Body black; surface roughly dotted and in some places covered with fine tomentum. Legs and antennae red.

Head small, black and with slightly metallic gloss. Clypeus brown, glossy. Labrum black, with metallic gloss. Head covered with fine grey tomentum and outstanding setae; ventral surface smooth and shiny. Eyes large, double-lobed; they surround elevated antennal bases from one side. Forehead between antennal bases sunken, with narrow longitudinal corrugation. Antennae relatively long and thin, not reaching apex of elytra at females. Antennal segments covered with fine tomentum and longer setae. Basal antennomere red. Second antennomere black, with blue metallic gloss. Third antennomere red, darker basally and apically, with metallic gloss, dentiformly enlarged and thicker at apex. Residual antennomeres dark, covered with silver-



Fig. 2. *Lamprobityle katrinae* sp. nov.

grey tomentum, slightly darker at their apices.

Pronotum cylindrical, slightly wider than long, completely margined in posterior border, with transversal furrow. Surface of pronotum strongly and sparsely punctured, with fine and sparse tomentum. Scutellum black, round at apex, with pale tomentum in medial part.

Elytra long, not parallel sided; elytra between humeri and middle part slightly narrowed and widened posteriorly, widely rounded in their apical part. Elytra roughly dotted, broadly impressed between humeri and medial parts of each elytron, with convex protuberances behind humeri. One fourth of base black, with very fine sparse tomentum. Other one fourth of base covered with dense silver grey tomentum, and looks like greyish wide transverse stripe. Residual part of elytra black with fine sparse tomentum.



Fig. 3. *Lamprobityle kristinae* sp. nov.

Legs red. Mesa- and metafemori black, with bluish luster. Tarsi black, with blue gloss. Tarsomeres flattened, covered with short tomentum and long setae.

Ventral side of body roughly dotted, covered with silver-grey tomentum.

Differential diagnosis. This species differs from all other currently known congeneric taxa by the shape and coloration of elytra, legs and antennae. It is slightly similar to *L.* (s. str.) *azurea* (Vives) from Samar Island, but *L. katrinae* sp. nov. has smaller body size, other coloration of antennae, legs and dorsal surface of the body.

Distribution. Philippines: Samar Isl. This species is probably endemic to Samar Island.

Etymology. The species is named in honour of my daughter Katrīna Barševska, in gratitude for co-operation in research on Latvian beetles.

***Lamprobityle kristinae* sp. nov.**
(Fig. 3)

Type material. Holotype. Female: Philippines: Luzon Isl., Belance, Nueva Viscaya, 05.2014, local collector leg. (DUBC).

Description. Length of body 9.8 mm, width 3.3 mm. Body metallic green, surface roughly dotted and covered with fine tomentum, which consists of many tiny white spots. Legs and antennae black, with metallic luster and grey tomentum.

Head small. Clypeus black, glossy. Labrum black, with metallic green gloss, covered by outstanding setae. Head covered with fine tomentum; ventral surface shiny. Genae with white tomentum. Eyes large, double-lobed; they surround elevated antennal bases from one side. Antennae relatively long and thin. Antennal segments covered with fine tomentum and longer setae, darkened at apex.

Pronotum cylindrical, slightly wider than long, in posterior and anterior borders completely margined with transversal furrow. Surface of

pronotum, strongly and sparsely punctured, with fine and sparse tomentum. Scutellum black, round at apex, in middle with tomentum.

Elytra long, parallelsided, glossy, covered with white tomentum, which consists of many tiny spots. Between humeri and middle part slightly narrowed, at apex widely rounded. Elytra roughly dotted and between humeri and middle of each elytron broadly impressed, behind humeri with convex protuberances.

Legs black, glossy, covered by grey tomentum. Tarsomeres flattened, also covered with short, grey tomentum and setae.

Ventral side of body metallic green, glossy, roughly dotted and covered with tomentum.

Differential diagnosis. The new species differs from all other currently known congeneric taxa by the shape and the coloration of the body. It is slightly similar to *L. (s. str.) magnifica* (Vives), elytra of which are black, with white transverse bands, below which metallic green glossy area. Elytra of the new species are unicolor, metallic green, with fine tomentum, which consists of many tiny white spots.

Distribution. Philippines: Luzon Isl. This species is probably endemic for the Luzon Island.

Etymology. The species is named in honour of my colleague Kristine Nagle, in gratitude for cooperation.

***Lamprobityle zeltitae* sp. nov.**
(Fig. 4)

Type material. Holotype. Female: Philippines: Mindanao Isl., Cabanglasan, Bukidnon, 06.2014, local collector leg. Deposited in the DUBC.
Paratype. Female. Philippines: Mindanao Isl., Bukidnon, 11.2013, local collector leg. (DUBC).

Description. Body length 9.0–11.0 mm, width 3.5–4.5 mm. Body black, surface roughly dotted and in some places covered with fine tomentum.

Elytra with thin transverse stripe covered by white tomentum. Legs and antennae black.

Head small, black, glossy and covered with greyish tomentum. Clypeus and labrum black and glossy. Facial part with many outstanding setae. Head in frontal part with fine microsculpture, with small transverse and slightly convoluted stripes and in some places with very gentle reticulate microsculpture. Eyes large, double-lobed; they surround elevated antennal bases from one side. Forehead between antennal bases sunken, with narrow longitudinal corrugation covered with greyish tomentum. Antennae relatively long and thin, not reaching apex of elytra at females. Many antennomeres covered with fine tomentum and long setae. Antennomeres I and II black, with slightly bluish metallic gloss. Antennomere III black, dentiformly enlarged and thicker in apical part. Gloss darker in widest part of flagellum, therefore it looks like bichromatic. Residual



Fig. 4. *Lamprobityle zeltitae* sp. nov.

antennal segments dark and covered with silver-grey tomentum, at their apices slightly darker. Pronotum cylindrical, slightly wider than long, in posterior border completely marginated with transversal furrow. Surface of pronotum strongly and sparsely punctured, with fine and sparse tomentum. Scutellum black, round at apex, with pale tomentum in medial part. Both sides of pronotum at posterolateral angles covered with dense silver-grey tomentum.

Elytra long, well developed, without parallel edges; elytra slightly narrowed between humeri and middle part, slightly widened behind middle -, widely rounded at their apical part. Elytra roughly dotted, broadly impressed between humeri and medial parts of each elytron. Dent contains narrow transverse stripe covered with white tomentum; with convex protuberances behind humeri. One fourth of base black, with very fine sparse tomentum. Residual elytra covered with fine grey and in some places sparse tomentum.

Legs short, robust, black, with bluish or aeruginous gloss. Apex of profemori strongly widened, slightly darker. Legs mostly with dark

tomentum and setae. Tarsi black, with bluish gloss. Tarsomeres flattened, covered with short or long, light or dark tomentum and setae. Ventral side of body dotted, covered with silver-grey tomentum.

Differential diagnosis. This species differs from all other currently known congeneric taxa by the shape of elytra. It is slightly similar to *L.* (s. str.) *fasciatus* (Vives) and *L. rugulata* (Vives) from Luzon Island, but *L. zeltitae* sp. nov. has more convex and protruding elytral protuberances that are situated behind humeri. Moreover, a new species has a white narrow transverse stripe at the elytra. New species is similar also to *L. mindanaoensis* Barševskis & Jaeger, which differ by the morphological characters specified in the determination key below.

Distribution. Philippines: Mindanao Isl. This species is probably endemic for the Mindanao island.

Etymology. The species is named in honour of my wife Zeltīte Barševska, in gratitude for her great support.

The key for the genus *Lamprobityle*

1(4) Largest part of profemuri red and/or with darkened apices.

2(3) Dorsal surface with intense metallic blue gloss. Antennae blue-black. Profemuri red, with darkened apices. Body length 13 mm. *L. azurea* (Vives)

3(2) Dorsal surface greyish, without intense metallic blue gloss, with wide silvery transverse tomentum stripe. First three antennomeres partly red. Profemuri monochromatic, red (without darkened apices). Body length 8.7 mm *L. katrinae* Barševskis sp. n. (Fig. 2)

4(1) Profemuri completely black, or largest part of femur black, sometimes with metallic luster.

5(10) Elytral surface fully or partly with intense green, blue, golden or violet metallic gloss, with spots or transverse stripes.

6(7) Elytral surface fully with intense green metallic gloss and with many small white spots, without large yellow spots or strict transverse stripes. *L. kristinae* Barševskis sp. n. (Fig. 3)

7(6) Elytral surface black, with transverse wide areas of intense green metallic colour and with large or large and small spots and/or strict transverse stripes of white tomentum.

- 8(9) Dorsal surface of elytra with transverse stripes and some small spots covered with grey-white tomentum and surrounded by intense metallic and glossy blue, green or violet area *L. magnifica* Heller (Fig. 5)
- 9(8) Dorsal surface of elytra with white and yellow spots surrounded by wide, transverse, intense metallic and glossy green or golden areas *L. mariae* (Vives)* (Fig. 6)
- 10(5) Dorsal surface grey or black, without intense green, blue or violet metallic gloss, monochromatic or with spots and transverse stripes.
- 11(12) Elytral surface with many tiny spots arranged in chaotic manner through all surface, behind shoulders, sometimes forming transverse, interrupted band *L. conspersa* (Aurivillius) (Fig. 7)
- 12(11) Elytra monochromatic or with light wide or narrow transverse stripe and/or with large spots, without many tiny spots arranged in chaotic manner through all surface.
- 11(14) Elytra monochromatic or with wide and smudgy transverse band of tomentum
- 12(13) Legs with metallic blue gleam. Body length more than 10 mm *L. rugulata* (Vives) (Fig. 8)
- 13(12) Legs with metallic bronze gloss. Body length less than 10 mm *L. fasciata* (Vives)
- 14(11) Elytra with explicit, narrow and light transverse stripe or also with additional spots.
- 15(16) Elytra black or greyish and, prior to middle, with narrow, transverse stripe that close to suture turns into small spots; apex-directed surface covered with several tiny and light spots *L. zeltitae* Barševskis sp.n. (Fig. 3)
- 16(15) Elytra grey and, prior to middle, with irregularly shaped transverse stripe, and several large spots at base, at both sides and at apex, in some places with slightly metallic and green gloss *L. mindanaoensis* Barševskis & Jaeger (Fig. 9)

* Specimens of *L. mariae* (Vives) deposited in our collection slightly differs from the figure of the type specimen, published by E.Vives (2009) by the shape of elytra. It may well be that these forms are different species, but for this conclusion requires additional large series of specimens in order to accurately determine the species.

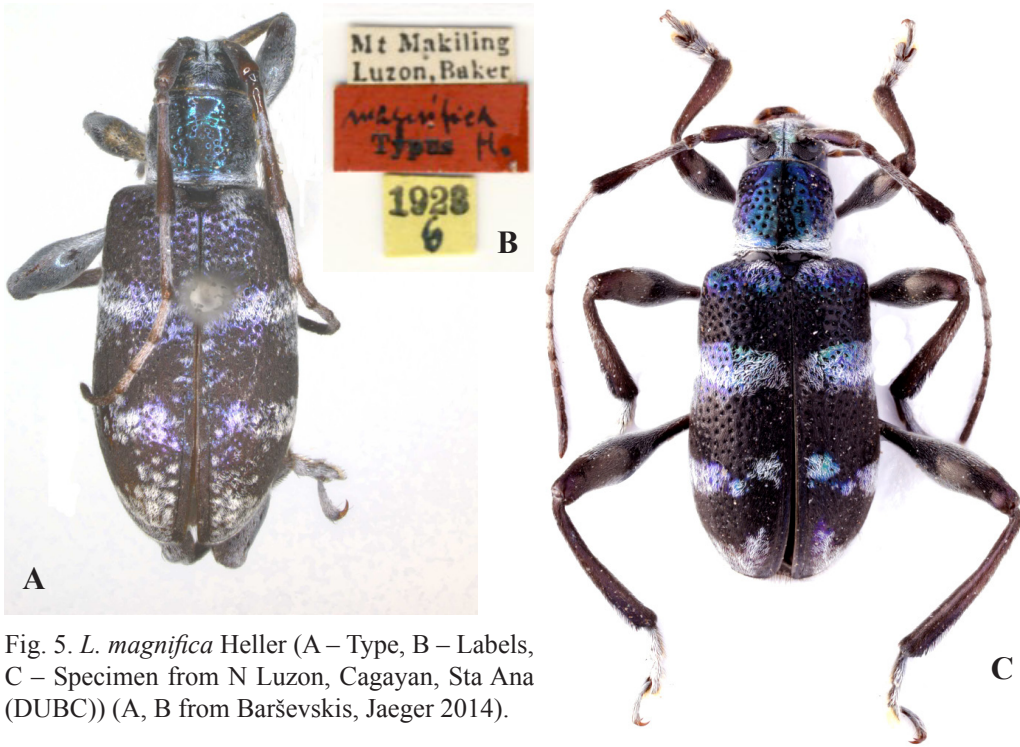


Fig. 5. *L. magnifica* Heller (A – Type, B – Labels, C – Specimen from N Luzon, Cagayan, Sta Ana (DUBC)) (A, B from Barševskis, Jaeger 2014).

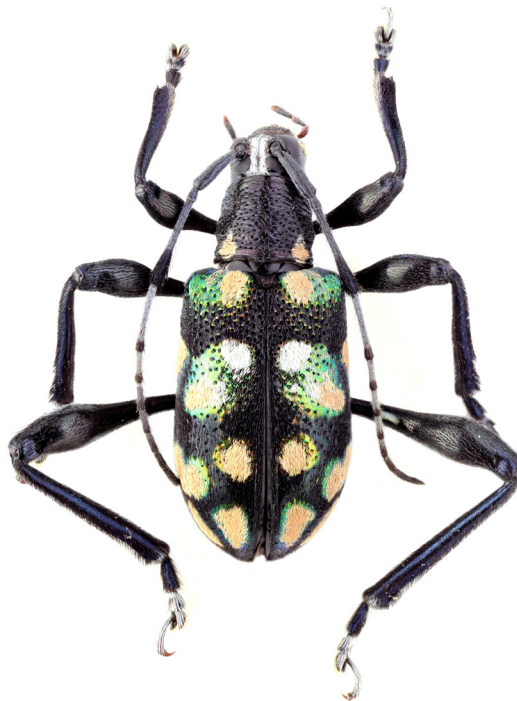


Fig. 6. *L. mariae* (Vives)? [See the note at the species identification keys]

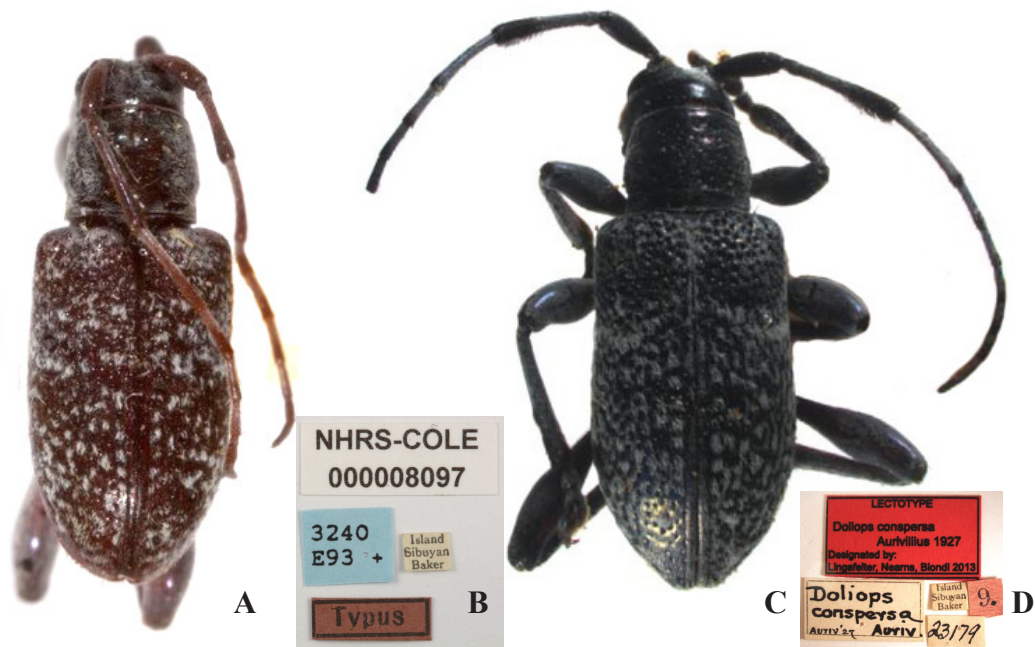


Fig. 7. *L. conspersa* (Aurivillius) (A – Holotype (from: www.naturarv.se), B – Labels of holotype (from: www.naturarv.se), C – lectotype (<http://smithsoniancerambycidae.com>), D – Labels of lectotype(<http://smithsoniancerambycidae.com>))

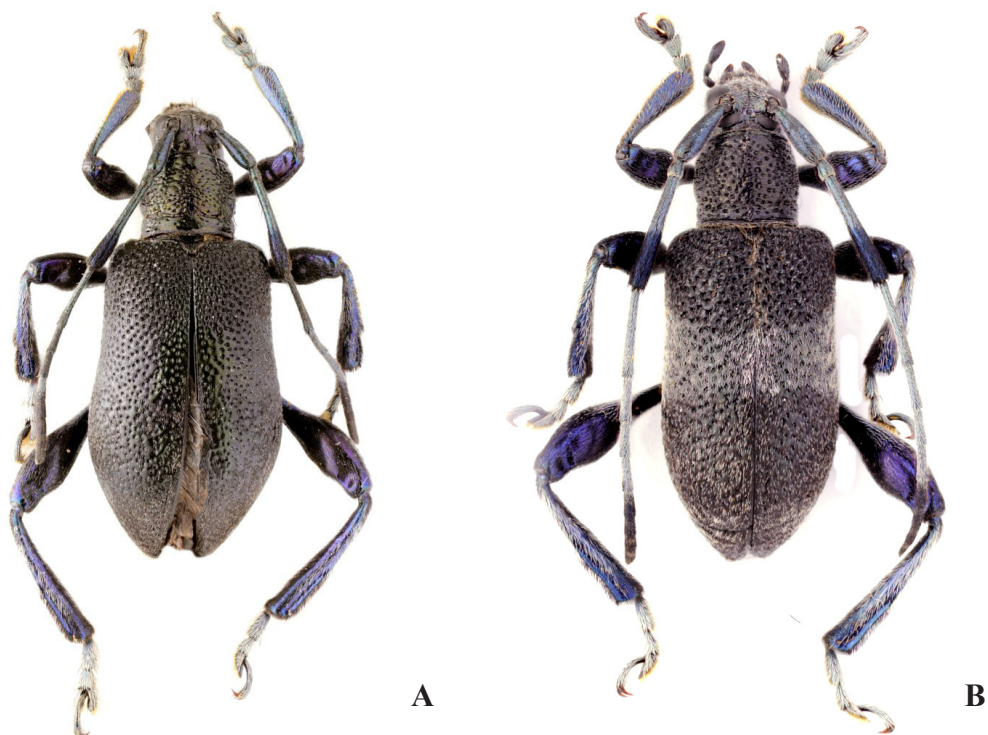


Fig. 8. *L. rugulata* (Vives) (A, B).

A catalogue of the genus *Lamprobityle* Heller, 1923

Lamprobityle fasciatus Barševskis & Jaeger, 2014: 17

Genus: *Lamprobityle* Heller, 1923

Distribution: Philippines: Luzon Isl.

1. *Lamprobityle azurea* (Vives, 2012)

Stenodoliops azureus Vives, 2012a: 79
Stenodoliops azureus Vives, 2012b: 45
Lamprobityle azureus Barševskis & Jaeger, 2014: 17

4. *Lamprobityle katrinae* Barševskis, sp. nov.

Distribution: Philippines: Samar Isl.

Distribution: Philippines: Samar Isl.

5. *Lamprobityle kristinae* Barševskis, sp. nov.

Distribution: Philippines: Luzon Isl.

2. *Lamprobityle conspersa* (Aurivillius, 1927)

Doliops conspersa Aurivillius, 1927: 563
Lamprobityle conspersa Barševskis & Jaeger, 2014: 17

6. *Lamprobityle magnifica* Heller, 1923

Lamprobityle magnifica Heller, 1923: 420
Lamprobityle magnifica Barševskis & Jaeger, 2014: 17

Distribution: Philippines: Sibuyan Isl.

New faunistic data: Luzon Isl., Cagayan, Santa Ana, 03.2014., 2 specim., local collector leg.; Nueva Viscaya, Belance, 05.2014, 1 specim., local collector leg.

Distribution: Philippines: Luzon Isl., Negros Isl.

3. *Lamprobityle fasciata* (Vives, 2012)

Stenodoliops fasciatus (Vives, 2012): 45

7. *Lamprobityle mariae* (Vives, 2009)

Stenodoliops mariae (Vives, 2009): 17
Lamprobityle mariae Barševskis & Jaeger, 2014: 17

New faunistic data: Luzon Isl., Nueva Viscaya, Belance, 03.2014, 2 specim., local collector leg., 04.2014, 3 specim., local collector leg., 05.2014, 3 specim., local collector leg., 06.2014, 3 specim., local collector leg.; Nueva Viscaya, Kasibu, 09.2014, 1 specim., local collector leg.

Distribution: Philippines: Luzon Isl.

Remark: See the note at the species identification keys



Fig. 9. *L. mindanaoensis* Barševskis & Jaeger (Holotype, from: Barševskis, Jaeger 2014).

8. *Lamprobityle mindanaoense* Barševskis & Jaeger, 2014

Lamprobityle mindanaoense Barševskis & Jaeger, 2014: 10

Distribution: Philippines: Mindanao Isl.

9. *Lamprobityle rugulata* (Vives, 2009)

Stenodoliops rugulatus Vives, 2009: 78
Lamprobityle rugulatus Barševskis & Jaeger, 2014: 18

New faunistic data: Luzon Isl., Nueva Viscaya, Belance, 08.2013, 1 specim., local collector leg., 04.2014., 2 specim., local collector leg., 05.2014., 4 specim., local collector leg., 06.2014, 2 specim., local collector leg.; Quirino, Nogatipunan, 05.2014, 1 specim., local collector leg.

Distribution: Philippines: Luzon Isl.

10. *Lamprobityle zeltitae* Barševskis, sp. nov.

Distribution: Philippines: Mindanao Isl.

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