

**A new species of the genus *Sybacodes* Fairmaire, 1896 from Borneo  
(Coleoptera: Scarabaeidae: Aphodiinae)**

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**Taxonomy, new species, Scarabaeidae, Aphodiinae, Rhypariini, *Sybacodes*, Borneo**

**Abstract.** *Sybacodes borneensis* sp. nov., a new species of the genus *Sybacodes* Fairmaire, 1896 from Borneo is described, compared and illustrated. The new species is most similar to *Sybacodes liliae* Dellacasa, 1978.

## INTRODUCTION

In 1978 G. Dellacasa revised the genus *Sybacodes* Fairmaire, 1896 with description of *Sybacodes liliae* Dellacasa, 1978 from Myanmar. In the course of an examination of material in collection of Institute of Systematics and Evolution of Animals in Kraków and in the collection of one of the authors we found two specimens of an undescribed species from genus *Sybacodes* Fairmaire, 1896.

## MATERIAL AND METHODS

The specimens were observed with Nikon SMZ-U stereoscopic microscope. The photos published here were taken by the use of the Meopta laboratory microscope and CMOSS digital camera. Photos were edited in the Helicon Focus programme.

For morphological terms used in the description of specimens we follow Dellacasa et al. (2001).

Holotype and paratype of the new species are indicated by a red, printed label added to the same pin and bearing the status of the specimen, sex, its name, name of the author, mounth and year of the designation.

The holotype is deposited in collection of Institute of Systematics and Evolution of Animals in Kraków. The paratype is deposited in the private collection of third author.

Addenda and remarks are found in brackets, separate label lines are indicated by slash (/).

## DESCRIPTION OF THE NEW SPECIES

### *Sybacodes borneensis* sp. nov.

(Figs. 1-7)

**Type material.** Holotype (♂): Borneo Sabah Mt. / Kinabalu Nat. Park / Poring Hot Spgs. / 495m., 30.viii.1988 / leg. A. Smetana [B161]. Paratype (♀): Nord Borneo Sabah / Umg. von Ranau / Poring Hot Springs / 22.-25.xi. 2002 / leg. Horst Rudolph.

**Description.** Dorsum (Fig. 1). Total body length 3.6 - 4.0 mm. Body elongate, convex, matt, dark brownish.

Head convex, matt. Clypeus slightly sinuate anteriorly, rounded on sides, with border not bristled, genae distinctly rounded in anterior part, straight in posterior part; anterior part of genae distinctly more protruding than eyes. Epistome with two distinct grooves on sides of median gibbosity. Head in basal part with two small gibbosities with protruding bristles. Punctuation of head dense, coarse, slightly longitudinal, with thin, quite long bristles on each puncture.

Pronotum transverse, wide, as wide as base of elytra, convex, dull, on sides nearly straight, with anterior angles widely rounded, sinuate before hind angles, anteriorly, basally, and laterally not bordered, with six longitudinal, thin, shiny ridges. Four median ridges widely interrupted in medio-anterior part, lateral ridges opposite the interruption of median ridges sinuate towards sides. On sides of each ridge with a row of small short-bristled punctures. Punctuation of pronotum dense, coarse, with thin, quite long bristles in each puncture.

Elytra elongate, convex, widest before the middle, dull, with odd intervals shiny in basal part, without humeral denticle, with nine striae, and nine intervals; ninth striae, and ninth interval visible from middle to apex of elytra. Odd intervals basally much higher than even, apically with the same height. Striae weakly demarcated from even intervals, with coarse, quite dense punctuation. On sides of each interval with a row of very short, small bristles.

Femora matt, quite densely and coarsely punctate; all punctures with bristles. Protibiae distinctly bidentate at outer margin; proximally not serrulate, upper side smooth, shiny, with small, bristled punctures; apical spur acute, elongate, moderately broad, distinctly bent downward and bidentate. Meso- and metatibiae nearly straight at outer margin, with two rows of small setae, on inner margin distinctly broadened nearby femora, proximally nearly straight. Mesotibiae with straight inferior margin, apical rounded with short bristle comb. Claws fine, regularly arcuate.

Macropterous.

Venter. Meso- metaventral plate (Fig. 7) dull, flattened, with distinct longitudinal groove in the middle, latter is broadened basally, and with five small depressions near anterior margin; punctuation of meso- metaventral plate quite dense, rather coarse, and with bristles. Sternites dull, densely, rather not coarsely punctate; punctures with bristles, arranged in transverse rows, on last sternite there are four rows of punctures, on other sternites there are one or two rows of punctures. Pygidium dull, densely, slightly coarsely, regularly punctured; all punctures with short bristles.

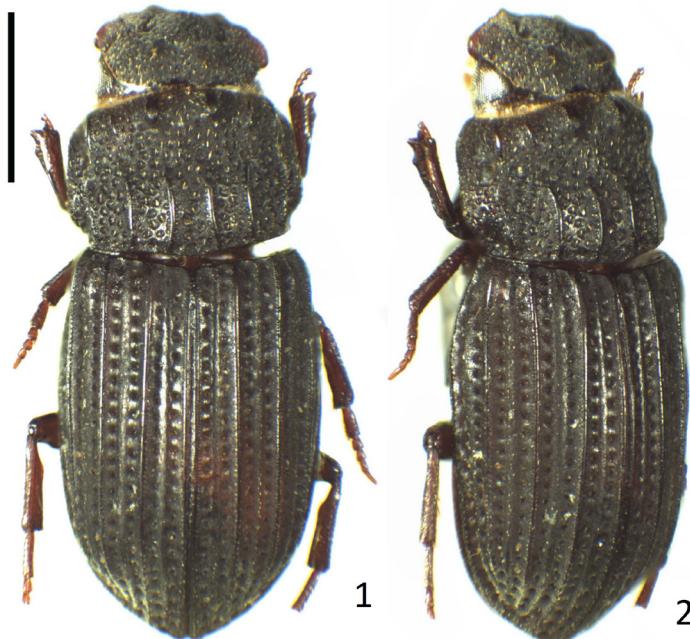
Aedeagus (Figs. 3-5) with parameres only slightly shorter than base, parameres sinusoid.

Epipharynx (Fig. 6) transverse, lateral sides broadly rounded. Corypha not visible, distinctly concave, with a few spinules on anterior border. Tormae short, regularly rounded.

**Sexual dimorphism.** Male: with longitudinal groove in the middle of meso- metaventral plate slightly narrowed towards the front. Mesotibiae with apical tooth on inferior edge much more distinct, inwardly direct. Mesotibiae with inferior margin basaly angulate; metatibiae with inferior margin basaly more angulate. Female: with longitudinal groove in the middle of meso- metaventral plate rather parallel. Mesotibiae with apical tooth on inferior edge less distinct, downwardly direct. Mesotibiae with inferior margin basaly widely rounded; metatibiae with inferior margin basaly less angulate.

**Differential diagnosis.** Based on the key to species given by Dellacasa, 1978 the new species is most similar to *S. liliae* Dellacasa, 1978. The two species correspond in size, body shape and punctuation of elytra. The new species differs in shape of first and second median ridges of pronotum which are widely interrupted in anterior part, by shape of epipharynx, shape of male mesotibiae and in male genitalia.

**Etymology.** Toponymic - adjective derived from the name of the island where type material was collected - i.e. Borneo.



Figs. 1-2. *Sybacodes borneensis* sp. nov., ♂, holotype: 1- dorsal view; 2- dorso-lateral view. Figs. 1-2: scale line: 1.0 mm.



Figs. 3-5. *Sybacodes borneensis* sp. nov., ♂, holotype: 3- aedeagus, lateral view; 4- aedeagus, dorso-lateral view; 5- aedeagus, dorsal view. Figs. 3-5: scale line: 0.5 mm.

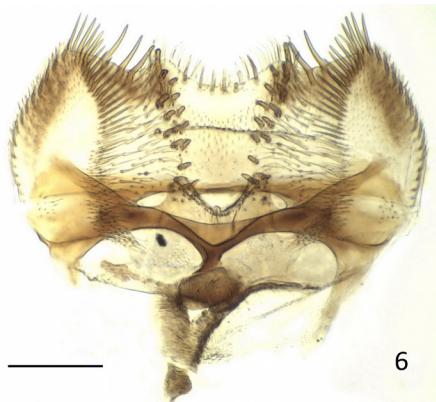
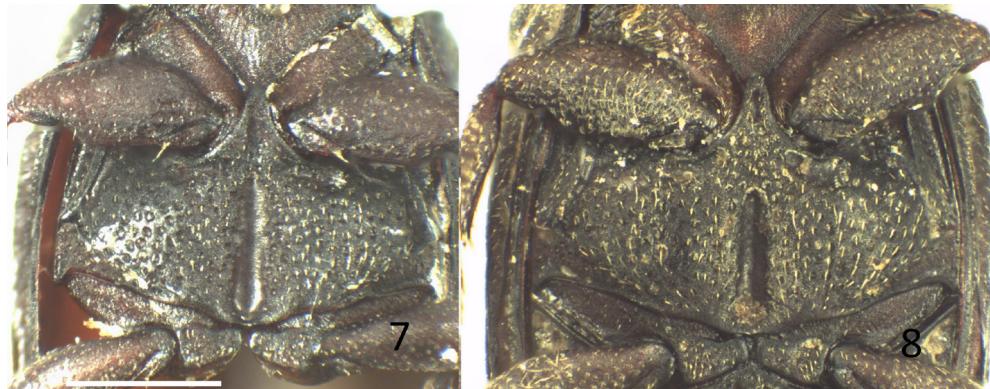
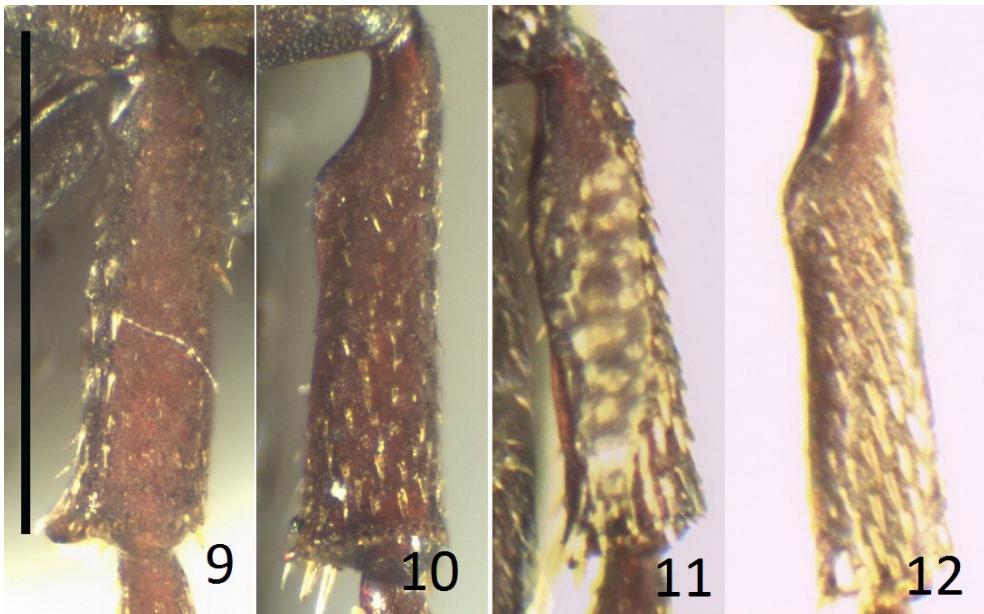


Fig. 6. *Sybacodes borneensis* sp. nov., ♀, paratype: epipharynx; scale line: 0.1 mm.



Figs. 7-8. Metasternal plate: 7- *Sybacodes borneensis* sp. nov., ♂, holotype; 8- *Sybacodes borneensis* sp. nov., ♀, paratype. Figs. 7-8: scale line: 0.5 mm.



Figs. 9-12. Tibiae: 9, 10- *Sybacodes borneensis* sp. nov., ♂, holotype: 9- mesotibia, 10- metatibia; 11, 12 - *Sybacodes borneensis* sp. nov., ♀, paratype: 11- mesotibia, 12- metatibia. Figs. 9-12: scale line: 0.5 mm.

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