

***Vachinius (Vachinius) arakanensis* sp.n. (Coleoptera: Carabidae: Chlaeniini) from Myanmar**

Ingo BRUNK & Erich KIRSCHENHOFER

Abstract

Vachinius (Vachinius) arakanensis sp.n. is described from Myanmar. Diagnostic morphological characters of the imago are illustrated. Differences between the new species and *V. (Sphodromimus) burmanensis* LASALLE, 2001 from Myanmar and some other related species of *Vachinius* are discussed. *Vachinius burmanensis* is illustrated for the first time.

Key words: Coleoptera, Carabidae, *Vachinius*, new species, Myanmar.

Zusammenfassung

Vachinius (Vachinius) arakanensis sp.n. wird aus Myanmar beschrieben. Die differentialdiagnostisch wichtigen Merkmale werden beschrieben und abgebildet. Unterschiede zwischen der neuen Art und der ebenfalls in Myanmar lebenden Art *V. (Sphodromimus) burmanensis* LASALLE, 2001 sowie einigen weiteren verwandten *Vachinius*-Arten werden diskutiert. *Vachinius burmanensis* wird erstmals abgebildet.

Introduction

The genus *Vachinius* belongs to the tribe Chlaeniini BRULLÉ, 1834, subtribe Chlaeniina, and was established by CASALE (1984) for *Pristonychus subglaber* ANDREWES, 1937 and three other species. Currently this genus contains two subgenera: *Vachinius* CASALE, 1984 and *Sphodromimus* CASALE, 1984, with thirteen known species in total. The genus is widespread in Southeast Asia with a distribution range from India to China and the Tonkin Gulf, and known from Sulawesi and the Philippines as well (BRUNK 2015).

Material and methods

Observations were made using a Zeiss Stemi V6 stereomicroscope; photographs were taken using a Canon D400 camera.

Measurements (in millimetres):

- BL Overall body length, measured from anterior margin of labrum to apex of elytra.
- HL Length of head, measured on left side, from base of left mandible to posterior margin of compound eye.
- HW Width of head, maximum transverse distance across head, including eyes.

- PL Length of pronotum along midline.
 PWM Maximum width of pronotum.
 PWm Width of pronotum, measured at mid-length.
 PWB Width of pronotum at base.
 EL Length of elytra, measured from basal ridge to apex.
 EWM Maximum width of elytra.

Additional material and types studied: *Vachinius burmanensis* LASALLE, 2001 (Myanmar paratype, allotype), *V. deuvei* (MORVAN, 1997) (China: Guangxi, 14 specimens), *V. holzschuhi* CASALE, 1984 (Nepal, 2 specimens), *V. laosensis* KIRSCHENHOFER, 2012 (Laos, types and 2 specimens), *V. luzoensis* BRUNK, 2015 (Luzon, holotype), *V. pseudoglaber* CASALE, 1984 (India, 1 specimen), all in I. Brunk collection; *V. subglaber* (ANDREWES, 1937) (Sikkim, holotype), in the Natural History Museum London; *V. wrasei* KIRSCHENHOFER, 2003 (China: Guangdong, holotype), in D. Wrase collection.

Taxonomy

Vachinius (Vachinius) arakanensis sp.n. (Figs. 1, 3, 4)

Type material: Holotype (female), labelled “Burma / Mt. Victoria / Chin hills 1000 m / V. 38 / leg. G. Heinrich” (printed on light brown paper, elevation corrected by hand), “Brit. Mus. / 1951-337” (printed on grey paper), deposited in the Natural History Museum, London.

Description: Measurements and proportions: BL = 19.0 mm, EWM = 7.0 mm; PWM/EWM = 0.71, PWM/PL = 1.19, PWm/PL = 1.23, EWM/PWM = 1.40 (Tab. 1, Fig. 1).

Head blackish; mandibles and other mouthparts and antennae contrasting unicolour rufotestaceous. Microsculpture isodiametric, luster dull; smooth except for some faint wrinkles at base, and some very faint punctuation near clypeus. Fixed seta at posterior fourth of eye. Laterally with sharp parallel keels from scapus to eye. Head medium sized (HL = 4.1 mm, HW = 3.5 mm), distinctly narrower than pronotum at its maximum width (PWM/HW: 1.43), somewhat narrower than pronotum base. Temples short, one third of eye length. Clypeus with very fine and scattered non-setigerous punctuation, one fixed seta at each side. Mentum tooth almost absent (feature of subgenus *Vachinius*, Fig. 4).

Pronotum cordiform, strongly narrowed towards base (PWB = 3.8 mm). Length of pronotum along midline (PL) 4.05 mm; maximum width of pronotum at anterior third (PWM = 5.0 mm), slightly larger than length (PWM/PL = 1.23). Very few setiferous punctures, bearing small light brown setae, at anterior angles and in basal foveae. One lateral seta near posterior angle, at posterior tenth of pronotum length; anterior seta at mid-length of pronotum (setae broken, but pores present). Disc of pronotum weakly convex, with fine, sharp median groove, expanding in a faintly depressed Y-shape towards anterior angles. Median groove reaching neither base nor anterior margin. Anterior angles of pronotum markedly protruding and well-marked. Lateral pronotum margins well-developed, only slightly narrowing towards base, visible up to end of base of pronotum (Fig. 3).

Elytra elongate ovate (EL = 8.4 mm, EL/EWM = 1.2, BL/EWM = 2.71). Shoulders completely flat and rounded. Elytra gradually broadened towards apex, maximum width almost at posterior third of elytra (EWM = 7.0 mm), from here strongly shortened towards elytral apex (Fig. 1). Elytral apex with a slightly concave subapical excision and small



Figs. 1–4: Habitus of (1) *Vachinius (Vachinius) arakanensis* sp.n., holotype, and (2) *V. (Sphodromimus) burmanensis* holotype. (3) Pronotum and (4) mentum of *V. arakanensis* sp.n., holotype.

Tab. 1: Measurements of *V. arakanensis* sp.n. and *V. burmanensis*. AT – allotype, HT – holotype, PT – paratype.

Species	Type	Sex	BL	EWM	BL/EWM	PWM/HW	PWm/PL	EWM/PWM
<i>V. arakanensis</i> sp.n.	HT	♀	19.0	7.0	2.71	1.43	1.19	1.40
<i>V. burmanensis</i>	AT	♀	20.2	7.1	2.85	1.26	1.16	1.72
	HT	♂	20.0	7.5	2.67	1.25	1.17	1.64
	PT	♂	20.7	7.8	2.65	1.20	2.03	1.60

denticulation. Elytral intervals very flat, very faintly convex, not carinate. Striae fine, deep, impunctate. Scutellary striole well-developed, scutellary pore puncture small, at base of stria 1. Intervals I to VII smooth (except for last ninth or tenth of elytral apex), intervals VIII and IX with fine irregular setiferous puncturation. Hind wings reduced.

Legs unicolourous rufo-testaceous, at knees slightly infuscated. Femora and tibiae long and slender. Trochanters simple and apically rounded, their length approximately two fifths of femur length. Claws simple, crescent-shaped. Foretibia not sulcate on dorsal side (feature of subgenus *Vachinius*).

Microsculpture consisting of very weakly engraved isodiametric meshes, causing a moderately shiny black surface; meshes on elytra somewhat larger and more prominent than on head and pronotum.

Ventral side unicolourous black, more or less glabrous, except for pro- and metasternum and abdominal sternites bearing a fine, light-brown setiferous puncturation. Prosternal process lobe between fore coxae flattened, rounded posteriorly, with brief emargination and fine, light-brown setiferous punctures. Last sternite bisetose.

Differential diagnosis: Due to the very small, almost absent mentum tooth, the strongly sinuate sides of pronotum, the unsculpted fore tibia and the almost smooth intervals of elytra the new species belongs to *Vachinius* sensu stricto. Here it most strongly resembles *Vachinius pseudoglaber* CASALE, 1984, which also has one anterior and one posterior seta on each pronotum side.

Proportional features of *Vachinius* vary in a wide range, especially between males and females of a species (Tab. 1). The males are normally more slender, their surface shinier (comp. Figs. 1 and 2). From the other Myanmarian species, *Vachinius (Sphodromimus) burmanensis* (type locality: Myanmar, état Shan, Namsham, 1600 m a.s.l.; Fig. 2; see also LASALLE 2001) the new species is well distinguished by the missing mentum tooth, puncturation, and colouration of legs. The female of *V. arakanensis* sp.n. is shorter than the *V. burmanensis* female. The ratio of width of elytra/width of pronotum (EWM/PWM) is much lower in *V. arakanensis* sp.n. than in *V. burmanensis* (1.40 vs. 1.60–1.72). The inner intervals of elytra are smooth and impunctate in *V. arakanensis* sp.n., but densely punctured in *V. burmanensis* (2–4 rows of punctures per interval).

The new species can be distinguished from the other *Vachinius* species by the following characters: The pronota of *V. thailandensis* MORVAN, 1991 (Thailand), *V. deuvei* MORVAN, 1997 (China: Guangxi), *V. pilosus* CASALE, 1984 (Vietnam) und *V. hunanus* MORVAN, 1997 (China: Hunan) are more or less completely punctured and pubescent, *V. hajeki* KIRSCHENHOFER 2012 (Laos) has a golden-copper pronotum, *V. laosensis* KIRSCHENHOFER 2012 (Laos) and *V. wrasei* KIRSCHENHOFER, 2003 (China: Guangdong) have well marked basal fovea of the pronotum, and the remaining other species have either dark legs (e.g. *V.*

holzschuhi CASALE, 1984, Nepal), a well-developed mentum tooth, or densely pubescent inner intervals of elytra (*V. luzoensis* BRUNK, 2015, Luzon).

E t y m o l o g y: Named after the locus typicus the Arakan-Yoma Mountains.

D i s t r i b u t i o n: Hitherto only known from the location of the holotype in northwestern Myanmar. Mt. Victoria is located in the Chin Hills (Chin Province). These mountains are part of the Arakan-Yoma Mountains, located at the borderline between India and Myanmar and form one of the south-eastern foothills of the Himalaya. The single specimen was found at an elevation of 1000 m.

A c k n o w l e d g e m e n t s

We thank Bernard Lasalle (Boissy-lès-Perche, France) for providing a photograph of the holotype of *Vachinius burmanensis* and the permission of printing it. Beulah Garner (The Natural History Museum, London, Great Britain) kindly loaned the types of the new species and of *V. subglaber*. We further thank Dr. Joachim Schmidt (Admannshagen, Germany) for several useful pieces of advice to improve the manuscript, and Julia Fält-Nardmann (Dresden, Germany) for proofreading the English.

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- Authors' addresses**: Dr. Ingo BRUNK, TU Dresden, Professur für Forstzoologie,
Piener Straße 7, D-01737 Tharandt, Germany (Deutschland).
E-mail: brunkin@web.de
- Erich KIRSCHENHOFER, Otto-Elsner-Gasse 10–12,
2380 Perchtoldsdorf, Austria (Österreich).

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Zeitschrift/Journal: [Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen](#)

Jahr/Year: 2016

Band/Volume: [68](#)

Autor(en)/Author(s): Brunk Ingo, Kirschenhofer Erich

Artikel/Article: [Vachinius \(Vachinius\) arakanensis sp.n. \(Coleoptera: Carabidae: Chlaeniini\) from Myanmar 51-55](#)