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A new species and new data of *Cosmodiscus* Sloan, 1907 (Coleoptera, Carabidae, Pterostichinae) from the Philippines

Alexander Anichtchenko, Milton Norman Medina

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Cosmodiscus shavrini Anichtchenko, sp. nov. from Mindanao is described, illustrated, and compared with closely related species. *Cosmodiscus rufolimbatus* Jedlička, 1936 is recorded for the first time in Luzon.

Key words: Coleoptera, Abacetini, taxonomy, new species, new record, Philippines

Alexander Anichtchenko. Institute of Life Sciences and Technologies, Daugavpils University, Vienibas 13, Daugavpils, LV-5401, Latvia; e-mail: beetl2000@mail.ru

Milton Norman Medina. Faculty of Agriculture and Life Sciences and University Research Complex, Tropical Genomics Laboratory, Davao Oriental State University, City of Mati, 8200 Philippines.
National Museum of Natural History Philippines, Ermita, Manila, Philippines; e-mail: miltonnormanmedina@gmail.com

INTRODUCTION

For half a decade of working on the beetle fauna in the Philippine archipelago (2019-2023), we harbored numerous materials from our annual expeditions which up to now largely remain undetermined. The Philippines is a megadiverse country and majorly of known species are unique from its major islands which greatly needs more attention from taxonomists around the world. Mindanao, the second largest island in the Philippines is the home of several mountain ecosystems that serve as a haven for its unique biodiversity. For five years, our expedition has been greatly focused on this island.

This work presents thedescription ofa new species of the genus *Cosmodiscus* Sloan, 1907from closely related groups of genera recently revised by Fedorenko (2021). A refined and expanded diagnosis of the tribe Abacetiniand key to oriental species of the genus *Cosmodiscus* were provided by Fedorenko (2021). All species of the tribe Abacetini,to which the new species belong,are extremely rare in the Philippines. For over six expeditions, we only manage to collectseven specimens from light traps and sifting of litter.

MATERIAL AND METHODS

All measurements were made using Nikon SMZ 745Tstereomicroscope. Measurements of the total body length (TL) were made from the front of the clypeus to apex of elytra. The other measurements were

taken at respective maxima, i.e., greatest width of head (HW), labrum (LL, LW), pronotum (PL, PW), elytron (EL, EW), and aedeagus (AL). The label data of type specimens are reported from pinhead to pinpoint in quotationmarks with label sides divided by a single slash and separate labels indicated by a double slash. White label color and rectangular shape, however, were not explicitly noted. All remaining pertinent variants are reported within brackets.

Specimens mentioned here are deposited in the following collections:
AAc Alexander Anichtchenko Collection, Daugavpils, Latvia.
PNM Philippine National Museum, Ermita, Manila, Philippines.

Male and female genitalia preparation stored in DMHF (Dimethyl hydantoin formaldehyde resin dissolved in water).

The illustrations were made using a Canon EOS 6D digital camera with a Canon MP-E 65mm macro lens, using StackShot macro rail system and Helicon Focus software, and subsequently edited in Photoshop CC 2019. High-resolution images of species and additional material are available at the "Carabidae of the World" web project (http://www.carabidae.org/taxa/abacetini).

RESULTS

***Cosmodiscus shavrini* Anichtchenko, sp. nov.**

Material. Holotype, male: "Philippines, Mindanao, Araibo, / Pantukan, Campostela Valley, / 900m, Candalaga Mts./ 7°16'35.3N 128°10'12.8E, / 4.5.2019, Shavrin A.V. leg." (DUBC). Paratypes. 1 male: "Panamokan, Bukidnon, Mindanao / July 2014" (PNM); 1 female: "Masara, Compostela Valley, Mindanao / January 2015" (DUBC).

Diagnosis. New species is similar to *C. platynotus* (Bates, 1873) by its uniformly black body color, but easily distinguishable by strongly transverse pronotum, with maximum width at the middle and not dentate humeri, i.e. in *C. platynotus* pronotum trapezoidal, and broadest distinctly behind the middle and humeri slightly dentate. By the transverse shape of pronotum, new species is similar with *C. brunneus* Darlington, 1962, known from New Guinea. It can be differentiated by concave anterior margin of pronotum, with anteriorly prominent angles, and by completely rounded posterior angles of pronotum, i.e. in *C. brunneus* anterior margin straight, anterior angles of pronotum not prominent and posterior angles obtuse but distinct (Darlington, 1962).

Description. BL = 5.9 – 6.1 mm. Body (Fig. 1) shiny black, explanate lateral margins of pronotum, reflexed lateral margin of elytra, legs, antennae, mouthparts and labrum yellow. Ventral side black, except for redmiddle of pro-, meso- and meta-sternum. Dorsal microsculpture meshed, very superficial, almost obsolete on head, strongly transverse on pronotum and elytra, granulate in marginal groove of the latter, not well traceable on pronotal disc.

Head with abruptly prominent eyes and a nearly imperceptible neck constriction on sides. HW/PW = 0.56 – 1.57. Frontal sulci short, deep, very slightly diverging based, disappearing on a level with anterior supraocular setae. Mandibles short, laterally rounded. Labrum truncate, weakly concave at middle. Antennae reaching pronotal base. Pronotum strongly transverse, PW/PL = 1.6 – 1.61. Sides evenly rounded, lateral margins slightly reflexed, borderline between explanate margins and disc obliterate basally. Margins finely beaded throughout except basally, apical bead very distinct, medially flat and much wider than laterally. Base truncate and gently trisinuate; basal angles obtuse and rounded. Basal sulci

moderately deep, indistinctly converging basally, much shallow basally. Apical margin rather deeply concaved between obtuse and rounded apical angles. Median line fine, nearly entire, obliterate just basally. Disc convex and smooth; anterior and lateral margins, and interval between basal sulci irregularly and very shallowly rugate; basal angles slightly convex and smooth.

Fig. 1. Habitus of *Cosmodiscus shavrini* Anichtchenko, **sp. nov.** (holotype). Scale bar 1mm.

Elytra wide, EL/EW =1.36 – 1.38, slightly wider than pronotum, EW/PW =1.09 – 1.16, almost parallel-sided in basal 3/4, widest behind middle; slightly sinuated before apices; apices rounded combined. Humeri rounded, without humeral tooth. Striae entire, deep, minutely punctate, much deeper apically and toward lateral margin. Intervals moderately convex, more elevatedin apical third and toward lateral margin. Scutellar setigerous pores present, on base of stria II, slightly removed back from basal margin with distance of diameter of pore or so. Discal pore indistinct. Stria VII with two apical setae. Umbilicate series consist of 15 setigerous pores (6 humeral, 1 lateral and 8 apical).

Prosternum, proepisterna and abdominal sterna smooth. Anterior margin of mesoepisterna, metepisterna and metasternum densely shallowly punctate. Anterior margin of abdominal sternites IV–VI with pair of setae; sternite III asetose. Prosternum without median groove, prosternal process convex and apically beaded.

Legs. Protarsomeres I-IV of males symmetrically dilated; in females protarsomeres I and II modified, with internal angle strongly extended forward. Protibia with three latero-apical spines. Metafemur bisetose. Mesotibia with four spiniform anterolateral setae, inner setal brush consisting of 7+1 setae; metatibia with two spiniform seta at middle of external ridge. First meso- and metatarsomere 1 externally sulcate.

Male genitalia (Fig. 2). Genital ring (Fig. 2a) with short triangular process. Median lobe of aedeagus (Fig. 6b) in overall appearance similar with other species of the genus, i.e. the basal part is curved at a right angle slightly before the middle of its length, apex slightly curved down in lateral view, internal sac without sclerotized pieces. Right paramere elongate and narrow, left paramere large and rounded.

Etymology. Named after Dr. Alexey Shavrin, best friend and colleague, a specialist in Staphylinidae, who caught this species during one of our joint expeditions in the Philippines.

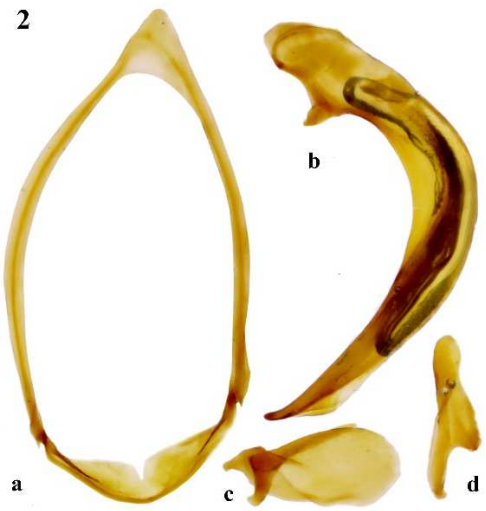

Fig. 2. Male genitalia of *Cosmodiscus shavrini* Anichtchenko, **sp. nov.** Scale bar 1mm. a – genital ring; b – median lobe of aedeagus; c – left paramere; d – right paramere. Scale bar 1mm.

Distribution. Known from Mindanao only.

***Cosmodiscus rufolimbatus* Jedlička, 1936**

louwerensi Straneo, 1940: 215 (Saleier Is., S Celebes); Darlington, 1962: 515, syn. by Fedorenko, 2021: 426.

Material: 1f – Philippines, N Luzon, Ifugao, Banaue, VI.2016 (DUBC).

Comments. Species described from Mindanao (Jedlička, 1936: 103), also known from Sulawesi. First record from Luzon.

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