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A new species of *Xola* Heller, 1931 from Oriental region (Coleoptera: Curculionidae: Cryptorhynchinae)

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Abstract. *Xola seczyki* sp. nov. is described from East India and Java. It is the second representative of the genus. A key to species of *Xola* Heller is given. Photographs of representatives of the genus and their diagnostic features are included, terminalia of *X. seczyki* are illustrated.

Key words: entomology, taxonomy, new species, key to species, Coleoptera, Curculionidae, Cryptorhynchinae, *Xola*, India, Java.

INTRODUCTION

Genus *Xola* Heller, 1910 was established for New Guinean *Xola notabilis* by Heller (1910). The author indicated the genus as closely related to formerly described *Lophotectorus* Heller, 1897 and compared those two genera. According to his diagnosis, in *Xola* the lateral sides of pronotum form distinctly raised ridges and pronotal keels are combined into one triangular process while in *Lophotectorus* lateral sides of pronotum do not form any ridges and keels on pronotum are very distinctly separated one from another. However, diagnostic value of these features at generic level is debatable and needed to be verified by comparative studies of the genera. The currently accepted systematic position of genus *Xola* (as well as *Lophotectorus*) presented in Alonso-Zarazaga & Lyal (1999) does not differ from that proposed by Heller (1910) and supported by Hustache in Junk & Schenkling (1936), the genus is classified within the tribe Cryptorhynchini and the subtribe Cryptorhynchina. During an examination of museum material I found two undetermined specimens from Australasian region that

are superficially very similar to the genus *Pachyonyx* Schönherr, but as further analysis showed they are representatives of a new species of the genus *Xola*.

METHODS

The photographs were taken using a camera Nikon CoolPix combined with stereoscopic microscope Nikon SMZ1500. Photographs were idealized with graphic software. The measurements of specimens were taken using ocular with a micrometer scale. Metric values are given in millimeters.

The following abbreviations are used:

BL – body length (from base of rostrum to end of elytra)

R/P – rostrum/pronotum length (without mandibles) ratio

PL/W – pronotal length/width ratio

EL/W – elytral length/width ratio

E/P – elytral/pronotal length ratio

T1/F1 – fore tibia/femur length ratio

T3/F3 – hind tibia/femur length ratio

F3/E – hind femur/elytra length ratio

Type labels are quoted literally, each separate in quotation marks. Type material is deposited in Muséum National d'Histoire Naturelle, Paris.

KEY TO SPECIES

1. Rostrum little longer than wide (length/width ratio: 1.18). Almost entire length of antennal scrobes visible in dorsal view of rostrum. Latero-epical part of elytron drawn out into blunt tooth. ..... ***X. notabilis*** **Heller**

–. Rostrum distinctly longer than wide (length/width ratio: 1.5). Only apical parts of antennal scrobes visible in dorsal view of rostrum. Apex of elytron broadly rounded. ..... ***X. seczyki*** **sp. nov.**

DESCRIPTION

Xola seczyki **sp. nov.**

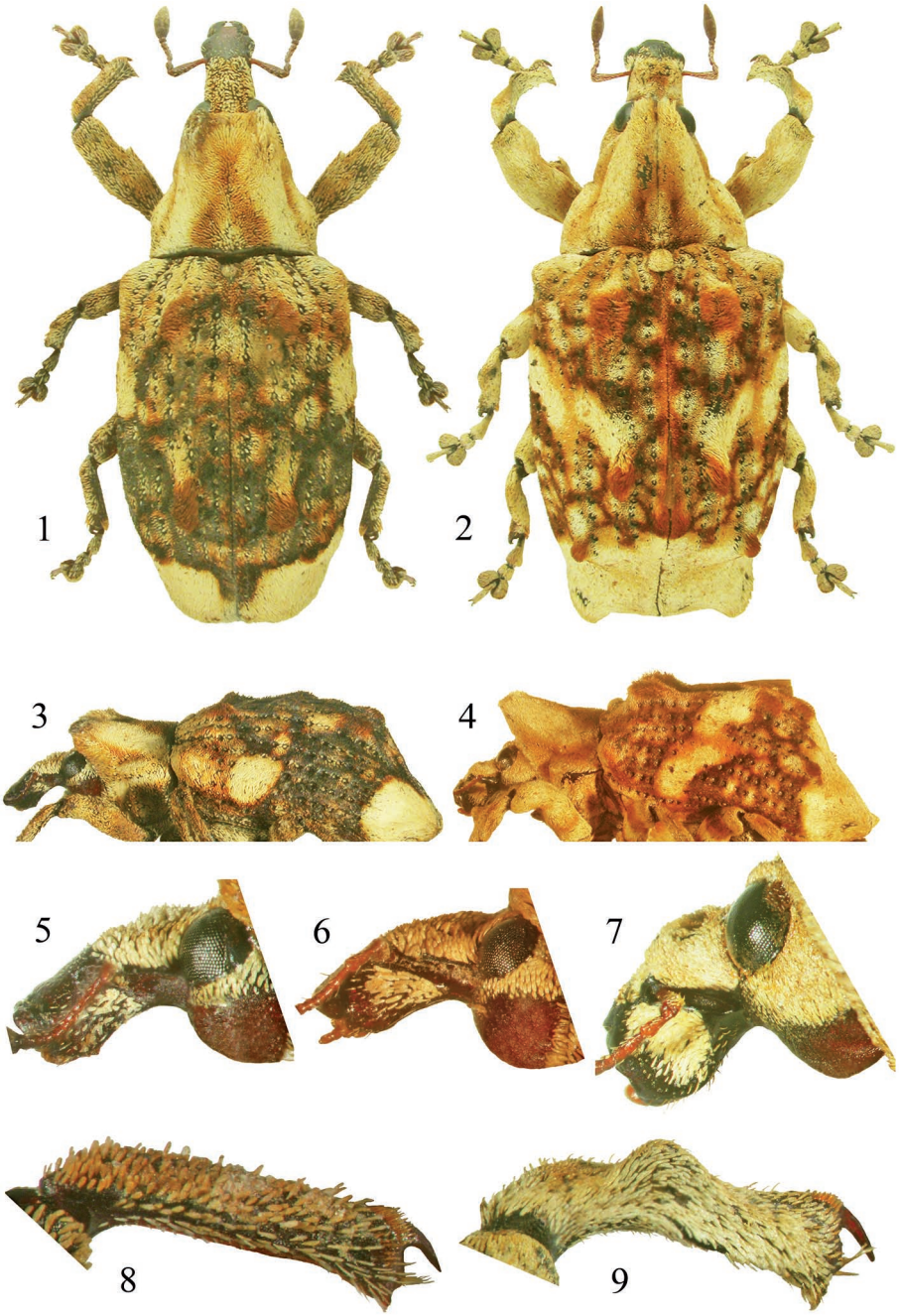
Etymology

The species is named after Dr. Waldemar Sęczyk. I would like to thank him for continued support during my studies.

Type material

Holotype, male: "Central India Khurda by Mhow. Collection E. Cordier"; "Dans le pétiole de la feuille de Butea frondosa (Papilionacia)"; "MUSEUM PARIS E. Cordier 1913" (Fig. 13).

Paratype, female: "Java"; "Muséum Paris ex Coll. R. Oberthür 1952".



1-9. *Xola seczyki* n. sp: 1 – female, dorsal view; 3 – female, lateral view; 5 – male rostrum, lateral view; 6 – female rostrum, lateral view; 8 – male fore tibia; *Xola notabilis* FAUST: 2 – male, dorsal view; 4 – male, lateral view; 7 –male rostrum, lateral view; 9 – male fore tibia

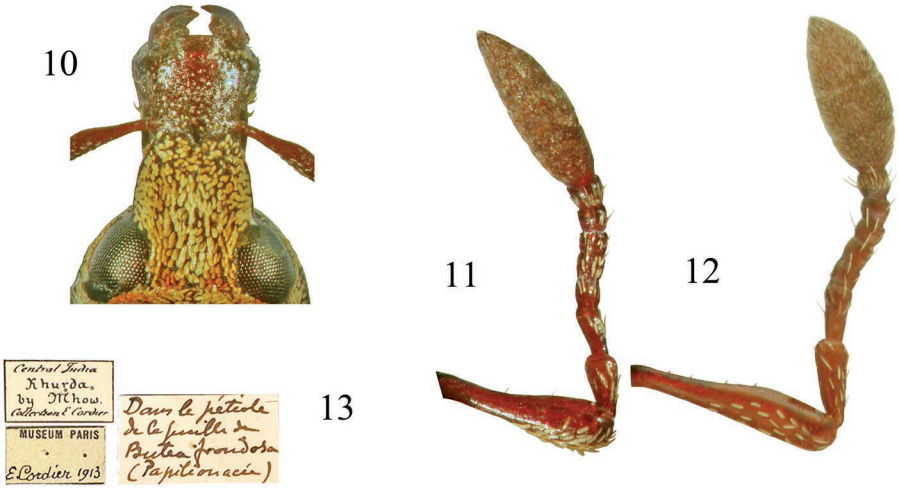
Diagnosis

Xola seczyki sp. nov. differs from *Xola notabilis* Heller (Fig. 2, 4) mainly in morphology of the rostrum, pronotum and legs. Rostrum in *X. seczyki* (Fig. 10) is clearly longer than wide (length/width ratio around 1.5:1), not elevated at the level of antennal insertion, only anterior part of antennal scrobes visible in dorsal view of rostrum. Rostrum in *X. notabilis* is hardly longer than wide (length/width ratio around 1.18:1) and much thicker (Fig. 7), at the level of antennal insertion forming transverse, thickened elevation, scrobes almost completely visible in dorsal view. In *X. seczyki* keels on anterior part of pronotum are very distinct, strongly elevated and well separated one from another, in *X. notabilis* they form one broad, triangular process. Pronotum in *X. notabilis* is almost 1.5 × wider than long, in *X. seczyki* 1.3 × wider at most. Shoulders in new species are rounded and first row on elytral base is almost straight, while in the type species shoulders are more prominent, triangular and first row is sinuous. Apex of elytron in *X. seczyki* is rounded, differently than in *X. notabilis*, where it forms distinct, blunt tooth, situated near outer corner of elytral apex. Males of *X. notabilis* are well characterized by unique construction of fore tibiae (Fig. 9), that form large, well raised lobe perpendicular to inner surface of tibia; and such structures are not present on tibiae of *X. seczyki* (Fig. 8). Moreover teeth on fore femora are bigger in *X. notabilis* and they are covered with a fringe formed by dense scaling, which is absent in the new species. Scaling on legs much denser in *X. notabilis*, integument hardly visible.

Description

Male

Measurements. BL: 7.5; R/P: 0.5; PL/W: 0.86; EL/W: 1.33; E/P: 2.36; T1/F1: 0.65; T3/F3: 0.68; F3/E: 0.36.



10-13. *Xola seczyki* n. sp.: 10 – head, dorsal view; 11 – male antenna; 12 – female antenna; 13 – labels of holotype

Integument black, general coloration yellow and orange. Antennae and onychium reddish. Body covered with two different kinds of scales: shorter, oval adherent scales located on whole body (except apical part of rostrum) and longer, rod-like scales that form brushes (tufts) on pronotum and elytra. Pronotum yellow, with triangular, orange smudge in middle part, elytra pale yellow in basal and apical part, middle part marbled, with spots and smudges of orange, yellow and brown scales. Legs unicolorous, without bands.

Head dull, with strong microsculpture, densely covered with adherent scales, integument visible between scales. Head behind eyes around 1.6 × wider than rostrum at base. Eyes strongly convex, rostrum at base nearly 1.3 × wider than eye diameter.

Rostrum stout, distinctly shorter than pronotum, slightly narrowed near antennal insertion, densely but shallowly punctate, with distinct, granular microsculpture. Basal part densely covered with adherent scales, with longitudinal keel that ends at the level of antennal insertion. Upper side without grooves or costae, antennae inserted in the postmedian part of rostrum. In lateral view (Fig. 5) more curved in basal part. Scrobes slightly curved only at inferior margin, narrowed in anterior part, with distinct microsculpture (except very shiny posterior part). Mandibles stout and large, with three distinct teeth.

Antennae (Fig. 11) slender, flagellum composed of seven segments, scape as long as five basal segments of flagellum combined. First and second funicular segments distinctly longer than wide, third and fourth slightly longer than wide and three last nearly as long as wide, pedicel clavate. Club slightly elongated, as long as last five antennomeres combined, sutures almost straight. Scape with dense scaling in its apical part, setae on flagellum and club strongly protruding, pale: on flagellum as long as its last segment, on club almost three times shorter.

Pronotum trapezoidal, widest at one thirds length from base, in apical part strongly narrowed (posterior margin over 1.8 × wider than anterior margin), distinctly narrower than elytra. In lateral view strongly vaulted in anterior part and more convex above fore coxae. Two large, strongly elevated keels are situated in anterior part of pronotum, they

14-19. *Xola seczyki* n. sp.: 14 – aedeagus, dorsal view; 15 – aedeagus, lateral view; 16 – male pygidium, sternite VIII and IX; 17 – female sternite VIII; 18 – ovipositor; 19 – spermatheca

are covered with dense tuft of scales and limited by distinct furrows laterally. Basal margin of pronotum in its median part slightly arcuated toward scutellum.

Scutellum rounded, densely covered with small, adherent scales. Elytra widest near mid-length, almost parallel-sided, in lateral view strongly vaulted, higher in posterior part. Shoulders prominent, apices of elytra broadly rounded, jointly rounded. Elytron with eleven intervals, the last one strongly narrowed from one thirds length. Intervals differently raised, form numerous tubercles, the largest are: anterior and posterior tubercle on third interval, median tubercle on second interval and tubercle on basal part of fifth interval. Tubercles on third interval are covered with dense tuft and well visible in lateral view of elytra. Rows three and a half to four times narrower than intervals (in apical part over four times narrower), with distinct, deep punctures, each bears one pale scale at the bottom. Scales from oval to very long (in tufts even six times longer than wide).

Underside of body covered with adherent scales, similar in shape and color to scales on legs, scaling dense on mesoventrite, metaventrite and lateral sides of abdominal sternites. Pectoral canal deep, narrowed near fore coxae and closed in posterior part by mesothoracic receptacle, that is densely covered with scales, reaches fore coxae anteriorly and mid coxae posteriorly. Mid coxae well separated, similarly as hind coxae, both pairs by the same distance. First abdominal ventrite the longest, sinuate in the middle of posterior margin, third and fourth ventrites similarly long.

Legs quite slender. Fore femora 1.3 × narrower than rostrum at base, with tooth around five times shorter than maximum width of femur, mid and hind femora with smaller, hardly visible teeth. Tibiae very slightly curved, with indistinct keels, according to terminology proposed by Thompson (1992) apex of tibia forms two tooth-like processes: uncus, formed by outer, apical margin of tibia and additional process on inner, apical margin – premucro. Unci are well developed on all tibiae, on fore tibiae situated obliquely to the long axis of tibiae and slightly curved, on mid and hind tibiae strongly curved toward base of first tarsomere. Premucrones large, slightly curved and flattened on fore tibiae and only very slightly marked on mid and hind tibiae. Mid and hind tibiae in apical part covered with a group of long hairs. All tibiae covered with slightly erected scales, integument visible. Tarsi quite slender, longer than three fourths of tibiae. First tarsomere longer than third, which is very distinctly broader than long, bilobed, with very shallow incision; onychium as long as first tarsomere. Claws free. Scales on tarsi long, erected scales even two times longer than adherent ones.

Aedeagus (Fig. 14) broad, pointed at apex, pedon distinctly shorter than apodemes, in lateral view (Fig. 15) strongly flattened and distinctly curved in premedian part, apex without setae. Sternite VIII (Fig. 16) divided into two parts, sternite IX slender, broadly furcate in basal part (Fig. 16).

Female (Fig. 1, 2)

Measurements. BL: 6.6; R/P: 0.53; PL/W: 0.83; EL/W: 1.43; E/P: 2.4; T1/F1: 0.61; T3/F3: 0.75; F3/E: 0.32.

Rostrum at apex with deeper punctures and very strong microsculpture, in lateral view (Fig. 6) slender and slightly curved, longitudinal keel hardly visible. Antennae (Fig. 12) relatively thicker, club less elongated.

Sternite VIII as in fig. 17, apical part of spiculum and basal plate furcate, setae short in lateral parts of plate and very long in its median part. Ovipositor (Fig. 18) consisted of stout gonocoxites and gonostyli, spermatheca (Fig. 19) c-shaped, apical part distinctly narrowed, but tip rounded.

Variability

The examined female has darker pattern on elytra, where brown or dark brown scales replace the orange ones observed in male. Since only two specimens were examined, it is difficult to conclude whether this represents sexual dimorphism or color variation.

Distribution

East India, Java.

Additional material studied

Xola notabilis Heller

Lectotype, male (present designation): "Kais. Wilhelmsland Toricelli Gebirge Dr. Schlaginhaufen / 720 m."; "g. Xola"; "Typus / Xola notabilis Heller"; "1910 1". Lectotype is designated from series of syntypes to preserve the stability of nomenclature by selecting name-bearing type of the taxon.

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