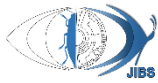


Short Article 

# A new species of the genus *Sclerocardius* Schoenherr, 1847 (Coleoptera, Curculionidae) from Thailand

Andrei A. Legalov <sup>1,2,3</sup>  | Vitaly G. Bezborodov <sup>4</sup> 

1 Institute of Systematics and Ecology of Animals, Siberian Branch, Russian Academy of Sciences, Frunze street-11, Novosibirsk 630091, Russia.

2 Tomsk State University, Prospekt Lenina, 36, Tomsk 634050, Russia.

3 Samarkand State Pedagogical Institute, 166 Spitamen St., Samarkand 140102, Uzbekistan.

4 Amur Branch of the Botanical Garden-Institute of the Far Eastern Branch of the Russian Academy of Sciences, Ignatievskoe Shosse 2-d km, Blagoveshchensk 675000 Russia. E-mail: cichrus@yandex.ru

Corresponding author: Andrei A. Legalov |  [fossilweevils@gmail.com](mailto:fossilweevils@gmail.com)

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**ABSTRACT.** A new species, *Sclerocardius lyali* sp. nov., is described and illustrated from Mae Hong Son Province, Thailand. The new species is close to *Sclerocardius indicus* Hartmann, 1903, but differs in the body covered with short setiform yellowish and pale scales, the postero-ventral side of the protibia lacking teeth, a pronotum with quite large punctation, and a narrower aedeagus. This is the first record of *Sclerocardius* Schoenherr, 1847, from Thailand. A key to Asian species of the genus *Sclerocardius* is also given.

**KEYWORDS:** Curculionoidea, Molytinae, new species, Sclerocardiini, Oriental, weevils

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## INTRODUCTION

The genus *Sclerocardius* Schoenherr, 1847, belongs to the monotypic tribe Sclerocardiini Lacordaire, 1866. It differs from other groups in that the apex of the rostral channel is not bounded by a complete carina, the free claws have no teeth, the sclerolepidia are absent, the tibiae are widened and flattened, the protibiae have three teeth on the exterior margin, the antennal club is clearly different from the flagellum and is not fused with the eighth antennomere, the labial palpi are three-segmented, the metacoxae are transversely elongate and the abdominal process is much narrower than the metacoxal (Legalov 2018).

The genus *Sclerocardius* includes five species, *S. africanus* (Boheman, 1845) from South Africa, Sierra Leone, Ivory Coast, Togo, Zambia, Tanzania, Nigeria, and Angola; *S. bohemani* Schoenherr, 1847 from South Africa, Swaziland, Malawi, Angola, Zimbabwe, Ethiopia, Tanzania, Democratic Republic of the Congo, Mozambique, Nigeria, and Madagascar; *S. kuscheli* Lyal, 2018 from Angola; *S. indicus* Hartmann, 1903 from Malaysia (Peninsular Malaysia, Sarawak), Indonesia (Sumatra) (Lyal 2018), and a new species from Thailand. According to iNaturalist, reliable sightings of *Sclerocardius indicus* have been recorded from Sabah (Malaysia).

This paper describes a new species of the genus *Sclerocardius* discovered in Mae Hong Son Province, Thailand. This is the first record of this genus in the country.

## MATERIAL AND METHODS

The beetle specimen was collected from the shrub vegetation of the lower tier of a tropical monsoon forest on a mountain. The preparation of the aedeagus was carried out using standard techniques (Yunakov & Nadein 2004). Descriptions, body measurements, and photographs were made using a Zeiss Stemi 2000-C dissecting stereomicroscope. The revision of the genus *Sclerocardius* Schoenherr, 1847, by Lyal (2018) and the collection of the Institute of Systematics and Ecology of Animals, Siberian Branch, Russian Academy of Sciences (Novosibirsk) were used to identify the specimen. The terminology of weevil body structure is based on Lawrence et al. (2010). The systematics of the studied taxa are based on Legalov (2018). The type specimen is deposited in the Institute of Systematics and Ecology of Animals, Novosibirsk, Russia (ISEA).

## RESULTS

**Class Insecta Linnaeus, 1758**

**Order Coleoptera Linnaeus, 1758**

**Family Curculionidae Latreille, 1802**

**Subfamily Molytinae Schoenherr, 1823**

**Tribe Sclerocardiini Lacordaire, 1866**

**Genus *Sclerocardius* Schoenherr, 1847**

**Type species.** *Sclerocardius bohemani* Schoenherr, 1847.

***Sclerocardius lyali* Legalov & Bezborodov, sp. nov.**

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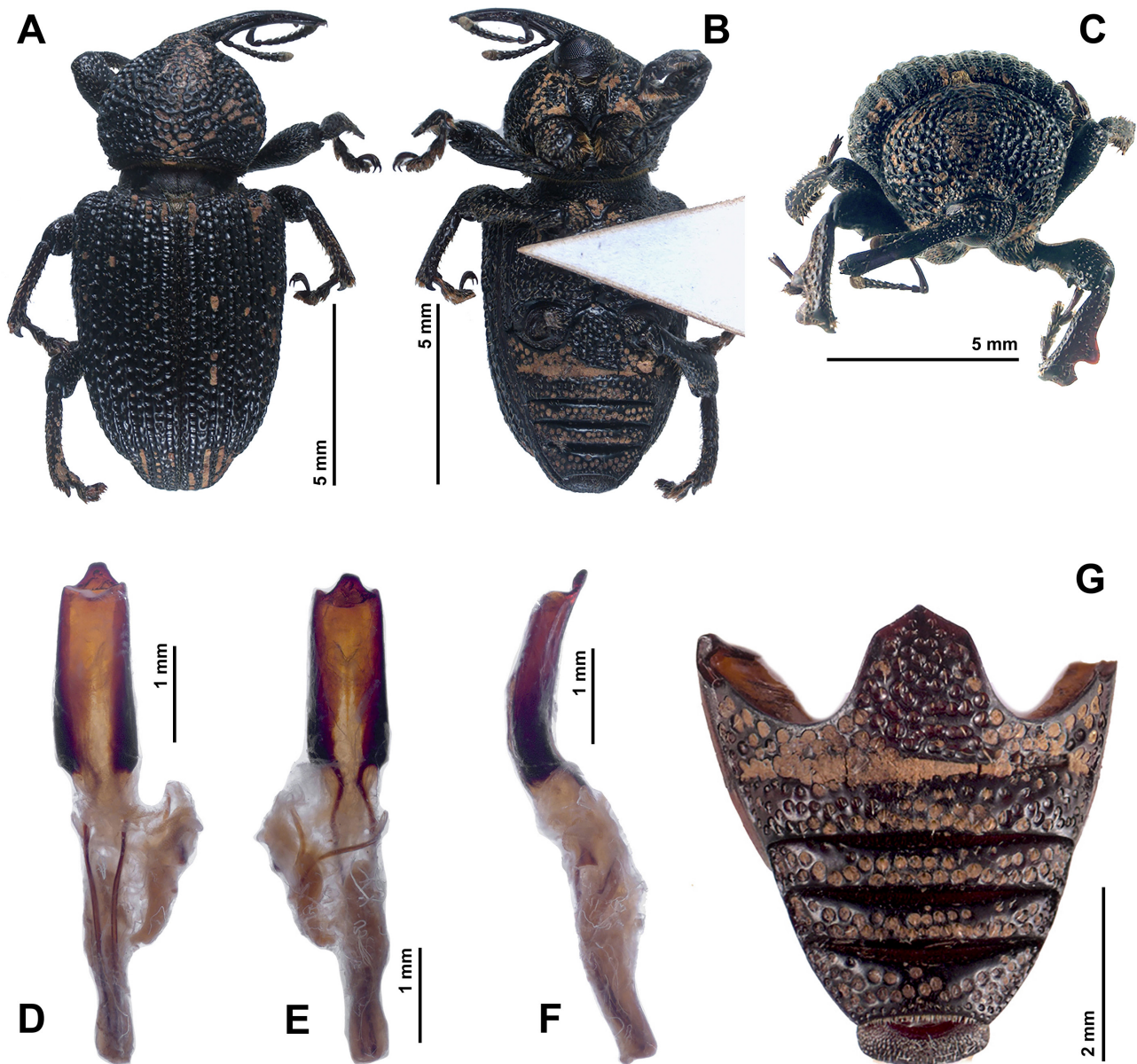
**Fig. 1A–G**

**Material examined.** **Holotype** ♂ (ISEA), Thailand, Mae Hong Son Prov., Ban Na Pa Paek vill., 950 m, 21.V.2023, V. Bezborodov.

**Etymology.** Patronymic. In honour of Christopher H.C. Lyal (London, UK), who revised the genus *Sclerocardius*.

**Diagnosis.** This new species is closely related to *Sclerocardius indicus* Hartmann, 1903, but differs in that it has short setiform yellowish and pale scales on the body, a postero-ventral side of the protibia without teeth, a pronotum with quite large punctation, and a narrower aedeagus. *Sclerocardius indicus* is characterised by a body covered in long, narrow, orange scales; a pronotum with relatively small punctation; a postero-ventral side of the protibia with three rounded teeth; and the aedeagus is also wider.

**Description.** — **Male** (Holotype). Total body length (without rostrum) 12.0 mm. Length of rostrum 3.4 mm. Body black, covered with short sparse decumbent pale and yellowish short setiform scales (Fig. 1A–C). Rostrum long, slightly curved (Fig. 1A–B), weakly widened at apex and in place of antennal attachment, about 5.9 times as long as wide at apex, about 5.5 times as long as wide in middle and at base, about 0.8 times as long as pronotum, finely punctate in apical half, coarsely punctate in basal half, lacking carina. Mandibles large, straight at outer edge. Labial palpi 3-segmented. Eyes large, transverse-oval, finely faceted, not protruding from contour of head (Fig. 1B). Forehead flat, quite narrow, of same width to rostrum base width, coarsely punctate (Fig. 1C). Antennal scrobes laterally, towards lower edge of eye, invisible dorsally. Antennae long, inserted in middle of rostrum (Fig. 1B). Antennomere I quite long, not reaching eyes, about 4.3 times as long as wide at apex. Antennomeres II and III long-conical. Antennomere II about 1.8 times as long as wide at apex, about 0.3 times as long as and about 0.7 times as narrow as antennomere I. Antennomere III about 2.1 times as long as wide at apex, slightly longer and narrower than antennomere II. Antennomeres IV–VIII conical. Antennomere IV slightly longer than wide at apex, 0.6 times as long as and slightly wider than antennomere III. Antennomere V equal in length and width, slightly shorter and wider than antennomere IV.



**Figure 1.** *Sclerocardius lyali* sp. n., holotype, male. **A.** Habitus, dorsal view; **B.** Habitus, ventral view; **C.** Habitus, frontal view; **D.** Aedeagus, dorsal view; **E.** Aedeagus, ventral view; **F.** Aedeagus, lateral view; **G.** Abdomen, ventral view.

Antennomere VI about 0.9 times as long as wide at apex, of same length and about 1.2 times as wide as antennomere V. Antennomere VII 0.7 times as long as wide at apex, slightly narrower and of same width to antennomere VI. Antennomere VIII about 0.6 times as long as wide at apex, of same length and about 1.3 times as wide as antennomere VII. Antennal club compact, with fused antennomeres, well different from flagellum, not fused with antennomere VIII, about 1.6 times as long as wide in middle, about 0.3 times as long as antennomeres II–VII combined, tomentose. Antennomere IX about 0.5 times as long as wide at apex, of same length and about 1.1 times as wide as antennomere VIII. Antennomere X about 0.4 times as long as wide at apex, about 0.7 times as long as and of same width to antennomere IX. Antennomere XI slightly longer than wide at base, 1.8 times as long as and about 0.6 times as narrow as antennomere X. Pronotum bell-shaped, constricted apically, about 2.4 times as long as wide at apex, about 0.9 times as long as wide in middle, about 1.1 times as long as wide at base. Disk convex, coarsely rugose-punctate (Fig. 1A). Scutellar shield almost rhomboidal, convex, slightly

longer than width, densely punctate. Elytra (Fig. 1A) about 1.4 times as long as wide at base and in middle, about 1.8 times as long as wide at apical fourth, about 1.7 times as long as pronotum, narrowed apically. Humeri convex. Elytral striae distinct, with large punctation. Interstriae weakly convex, 1.6–2.5 times as wide as width of elytral striae, with row of coarse points. Prosternum with distinct postocular lobes (Fig. 1C). Procoxal portion long, about 0.8 times as long as length of procoxal cavity, with rostral canal (Fig. 1B). Postcoxal portion about 0.3 times as long as length of procoxal cavity. Apex of rostral channel bounded by incomplete carina. Procoxal cavities narrowly separated. Mesocoxal cavities separated. Metanepisternum quite wide, about 8.2 times as long as wide in middle, coarsely punctate. Sclerolepidia absent. Metaventrite flat, coarsely punctate, slightly longer than length of metacoxal cavity. Abdomen flattened, coarsely punctate (Fig. 1G). Abdominal process acuminate, much narrower than metacoxa. Ventrites I and II quite long. Ventrite I 0.4 times as long as length of metacoxal cavity. Ventrite II 2.0 times as long as ventrite I. Ventrites III and IV short, equal in length. Ventrite III about 0.8 times as long as ventrite II. Ventrite V about 1.2 times as long as ventrite IV, slightly shorter than ventrite II. Procoxae large, conical (Fig. 1C). Mesometacoxae subspherical. Metacoxae transversely elongate. Femora and tibiae densely punctate (Fig. 1A–C). Femora thickened, with small teeth. Tibiae widened and flattened, with uncus and mucro. Protibiae with three teeth on exterior margin (Fig. 1C). Postero-ventral side of protibia without teeth. Tarsi quite long (Fig. 1A–C). Tarsomeres I–III, with pulvilli on lower surface. Tarsomere I long-conical. Tarsomere II conical, wider and shorter than tarsomere I. Tarsomere III wide-bilobed. Tarsomere V elongate. Tarsal claws free, strongly divergent, without teeth.

**Distribution.** Thailand, Mae Hong Son Province.

#### Key to the Asian species of the genus *Sclerocardius* Schoenherr, 1847

- 1 Body covered with short setiform yellowish and pale scales (Fig. 1A–B). Postero-ventral side of protibia without teeth. Pronotum with quite large punctation (Fig. 1A). Aedeagus narrower (Fig. 4). Thailand. ....  
..... *Sclerocardius lyali* sp. nov.
- Body covered with long narrow orange scales (Lyal 2018, fig. 19). Pronotum with quite small punctation (Lyal, 2018, fig. 19A). Postero-ventral side of protibia with three rounded teeth (Lyal, 2018, fig. 20B). Aedeagus wider (Lyal 2018, fig. 22E). Malaysia (Peninsular Malaysia, Sarawak, Sabah), Indonesia (Sumatra). ..... *Sclerocardius indicus* Hartmann, 1903

#### DISCUSSION

Various groups of weevils contain examples where representatives of the same genus are distributed across the Ethiopian and Oriental biogeographic regions. In total, five species of the genus *Omophorus* Schoenherr, 1835, belonging to the tribe Metatygini Pascoe, 1888 (Molytinae), are known from Africa, while four species are found in China (Yunnan), the Philippines, Malaysia (Sabah), and Papua New Guinea (Tseng et al. 2018; Legalov 2025). Twenty-four species belonging to the genus *Demimaea* Pascoe, 1870 of the subtribe Demimaeina Voss, 1937 (Tychiini C.G Thomson, 1859; Curculioninae Latreille, 1802), are distributed across the Oriental Region, including Japan, China, Korea, northern India, Indonesia, Malaysia, Myanmar, the Philippines, Thailand, Vietnam, and New Guinea (Legalov et al. 2023). One species is found in Equatorial Africa (Democratic Republic of the Congo) (Voss 1962). Seven species of the genus *Ancylocnemis* Marshall, 1920 of the tribe Ancylocnemidini Voss, 1962 (Curculioninae) are found in Africa, specifically in Cameroon, Chad, Algeria, South Africa, Tanzania, Mali, Mauritania, Morocco, Kenya, Sudan, Mozambique, Democratic Republic of the Congo, and Zimbabwe (Caldara et al. 2014). Two species have also been described from India (Marshall 1943). Around ten species of the genus *Thamnobius* Schoenherr, 1835 have been recorded in South Africa, Guinea, Cameroon, Gabon, Democratic Republic of the Congo, Kenya, Ethiopia, and Zimbabwe (Alonso-Zarazaga & Lyal 1999). However, one species (*Thamnobius orientalis* Kojima & Morimoto, 2002) has also been found in Taiwan (China) and the Ryukyus (Japan) (Kojima & Morimoto 2002). This new discovery confirms the relationship between Ethiopian and Oriental faunas.

## AUTHOR'S CONTRIBUTION

The authors confirm their contribution to the paper as follows: Andrei A. Legalov: Manuscript preparation, taxonomical expertise, scientific illustration, revising the manuscript and correspondence; Vitaly G. Bezborodov: collecting the specimen in the fields. Both authors read and approved the final version of the manuscript.

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## AVAILABILITY OF DATA AND MATERIAL

The type specimen listed in this study is deposited at the Institute of Systematics and Ecology of Animals, Novosibirsk, Russia (ISEA) and is available from the curator upon request.

## ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This study only included arthropod material, and all required ethical guidelines for the treatment and use of animals were strictly adhered to in accordance with international, national, and institutional regulations. No human participants were involved in any studies conducted by the authors for this article.

## CONSENT FOR PUBLICATION

Not applicable.

## CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest regarding the publication of this paper.

## GENERATIVE AI STATEMENT

No generative AI tools were used in the preparation of this paper.

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## یک گونه جدید از جنس *Sclerocardius* Schoenherr, 1847 (Coleoptera, Curculionidae) از تایلند

اندری آ. لگالوف<sup>۱,۲,۳\*</sup>، ویتالی جی. بزبورودوف<sup>۲</sup>

- ۱ مؤسسه رده‌بندی و اکولوژی جانوری، شاخه سیبری، آکادمی علوم روسیه، نووسیبیرسک، روسیه  
 ۲ دانشگاه دولتی تومسک، پروسپکت لنین، تومسک، روسیه  
 ۳ مؤسسه آموزش دولتی سمرقند، ازبکستان  
 ۴ شاخه خاور دور آکادمی علوم روسیه، بخش امور باغ گیاه‌شناسی، بلاگوشچنسک، روسیه

نویسنده مسئول: اندری آ. لگالوف | [fossilweevils@gmail.com](mailto:fossilweevils@gmail.com)

**چکیده:** یک گونه جدید به نام *Sclerocardius lyali* sp. nov. از استان مائه هونگ سون، تایلند توصیف و تصویرسازی شد. این گونه جدید به *Sclerocardius indicus* Hartmann, 1903 نزدیک است، اما با داشتن بدن پوشیده از فلس‌های زرد و کم‌رنگ کوتاه، عدم وجود دندانۀ در سمت پشتی ساق پای جلو، وجود حفرات نسبتاً بزرگ روی پیش‌گرده و اندام زادآوری باریک حشره نر متمایز می‌شود. حضور این گونه، اولین ثبت از پراکنش جنس *Sclerocardius* Schoenherr, 1847، در تایلند است. یک کلید برای شناسایی گونه‌های جنس *Sclerocardius* در آسیا نیز ارائه شد.

ویراستار علمی  
هیوا ناصرزاده

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**واژگان کلیدی:** سرخرطومی‌ها، Molytinae، گونه جدید، Sclerocardiini، خاورزمین، سوسک‌چه