

First record of the family Sphindidae (Coleoptera: Cucujoidea) from Socotra

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Abstract. The cryptic slime-mold beetle *Sphindus* cf. *rendilianus* Lesne, 1922, described originally from Kenya, and so far known only from the holotype, is recorded from Socotra Island based on five specimens from recent collecting efforts. This is the first report of the family Sphindidae from the archipelago.

Key words. Coleoptera, Sphindidae, *Sphindus*, new record, Yemen, Socotra

Introduction

Sphindidae or cryptic slime-mold beetles represent a small group of Cucujoidea. Altogether they comprise 69 species, divided among nine genera and four subfamilies, occurring in all zoogeographical regions (MCHUGH 1993, FORRESTER & MCHUGH 2010). All members of the family are characterized by obligatory myxomycophagy (slime-mold feeding) – both as larvae and adults (LAWRENCE & NEWTON 1980).

Sphindidae species usually prefer warm, moist habitats, with an accumulation of decaying organic matter, where myxomycetes grow, and are encountered on slime mold fruiting bodies when they are exposed on surfaces during sporulation stage. Therefore discovery of a *Sphindus* Dejean, 1821 in rather arid Socotra was a surprise for us. The genus comprises 16 species occurring in all regions except Australasia (FORRESTER & MCHUGH 2010). However, no species is known from the Arabian Peninsula, and only single species are known from East Africa and Madagascar, respectively (LESNE 1922, FORRESTER & MCHUGH 2007). A comparison of the Socotran specimens with published description indicates the specimens are conspecific with the eastern African species *Sphindus rendilianus* Lesne, 1922, representing the first record from the Socotra Archipelago. As the taxon was previously known only from the female holotype, we add also an extensive (re)description and habitus photo of the species.

Material and methods

Examination and measurements were completed with the use of an Olympus SZX7 stereo-microscope with an ocular micrometer. Body length was measured from anterior margin of clypeus to apex of elytra, body width as maximum width of elytra combined.

The habitus photograph was taken with a Canon EOS 550D digital camera and a Canon MP-E 65 mm objective lens. Images at different focal planes were combined using Helicon Focus 5.1.19 software.

All studied specimens are deposited in the collection of the National Museum, Prague (NMPC).

Faunistics

Sphindus cf. *rendilianus* Lesne, 1922

(Fig. 1)

Sphindus rendilianus Lesne, 1922: 657.

Type locality. 'Afrique Orientale Anglaise – Rendilé: Mont Karoli'. We were not able to locate the mountain 'Mont Karoli', however, 'Rendilé', a region inhabited by the Rendille tribe is placed east of Lake Turkana, currently Marsabit County in northern Kenya.

Type material. Female holotype, deposited in Muséum nationale d'Histoire naturelle, Paris; currently not accessible (A. Mantilleri, pers. comm. 2017).

Material examined (5 ♀♀). **YEMEN: SOCOTRA ISLAND:** 1 ♀, Hadiboh env., 12°65'02"N, 54°02'04"E, 10–100 m, 21.xi.–12.xii.2003, J. Farkač leg.; 1 ♀, same data, but D. Král leg.; 2 ♀♀, wadi Ayhaft, 12°35.5'N, 53°58.9'E, 200 m, 7.–8.xi.2012, J. Hájek leg.; 1 ♀, same data, but J. Bezděk leg.

Redescription. Female. Subcylindrical, convex; brown to black, legs and antennae orange, frons (at least partly), clypeus, labrum, part of mandibles, apex of elytra and tip of pygidium reddish. Setae sparse, thin, semierect, light grey; uniform across dorsal surface. Body length 2.3–2.7 mm, width 1.1–1.3 mm.

Head transverse, narrower than anterior pronotal margin; width of head 0.86–0.94× width of anterior pronotal margin. Eyes convex, coarsely faceted. Frons convex, frontoclypeal suture arcuate, almost V-shaped. Clypeus subrectangular, moderately convex, finely and sparsely punctate; anterior margin truncate, not bordered; punctures markedly smaller than eye facets, mostly separated by more than one diameter; interspaces smooth and shining; anterior margin truncate, not bordered. Punctures of frons larger than those of clypeus, separated by one diameter or less, interspaces reticulate, dull. Lateral portions of frons with fan of longitudinal raised wrinkles diverging from base of antenna posteriad, outermost of them bordering inner margin of eye. Antennae shorter than width of head across eyes (ratio width of head/antenna length = 1.13–1.21), with ten antennomeres with apparently trimerous club (antennomere VIII as wide as base of antennomere IX).

Pronotum transverse, 1.52–1.64× wider than long, widest behind its midlength, convex. Anterior margin truncate, not bordered, anterior pronotal angles obtusely rounded, not prominent. Lateral carinae visible simultaneously from above, not explanate, strongly arcuate, converging more strongly anteriad than posteriad. Posterior pronotal angles broadly rounded. Basal margin broadly arcuate, very finely bordered. Pronotal punctures equal in size to eye



Fig. 1. Habitus of *Sphindus cf. rendilianus* Lesne, 1922 (Socotra, wadi Ayhaft).

facets, separated by one diameter or less, becoming smaller along median axis and towards anterior pronotal margin; punctures near lateral margins very large and dense, separated by much less than one diameter, sometimes almost contiguous; interspaces moderately shining with obsolete traces of reticulation, at sides duller. Scutellar shield triangular, densely and coarsely punctate.

Elytra seriate-punctate, 2.21–2.39× longer than pronotum and 1.31–1.35× longer than their combined width, 1.06–1.16× wider than pronotum, subparallel-sided, strongly transversely vaulted, simultaneously rounded apically, reaching their maximum length at suture. Lateral margins not explanate, not visible simultaneously from above in their entirety. Humeral angle obtusely angulate, in dorsal view partly concealed by humeral bulge. Surface of elytra

somewhat flattened along suture between puncture series III of both elytra. Each elytron with nine series of punctures. Punctures in the series nearly equal in size to eye facets, within one row separated mostly by less than one diameter. Intervals flat (not raised), as wide as 2–3 diameters of seriate punctures, moderately shining with obsolete traces of reticulation, with irregularly dispersed fine punctures bearing semierect setae. Series of punctures as a rule regular, but at places irregular or doubled.

Legs. Protibia 6.25× longer than wide, widest at midlength, outer margin broadly regularly arcuate. Mesotibia 5.45×, metatibia 5.33× longer than wide, respectively. All tarsi simple, narrow, pentamerous, tarsal claws simple, long, acute.

Pygidium broadly rounded with median longitudinal furrow at apex.

Ventral part. Antennal furrows short, situated just medial to eyes. Postmentum transversely canaliculate, punctures smaller than eye facets, separated by less than one diameter. Prosternum and hypomera coarsely rugosely punctate, punctures pit-shaped, equal in size to eye-facets. Prosternal process broad, widest at truncate apex. Mesoventrite in posterior half punctate like prosternum, anterior half impunctate, smooth. Metaventricle transversely convex, separately moderately bulged at posterior margin in front of metacoxae. Discrimen distinct only in posterior third, moderately impressed. Punctures small medially, in anterior half dense and rugose, on bulges lateral to discrimen widely spaced; punctures in outer thirds of metaventricle as large as eye facets, separated by about one diameter. No axillary spaces developed. Punctuation of abdominal ventrite I analogous to that of metaventricle, punctures of following abdominal ventrites finer.

Male. Unknown.

Remark. As we were not able to study the holotype of *S. rendilianus*, the identification of specimens from Socotra is not definite. However, Lesne's description is thorough and the Socotran specimens match the description in salient features, significantly: body shape and length, colouration, setation of dorsal surface, punctuation, and shape of antennomeres. Therefore we have little doubt about the identity of the species.

Collection circumstances. Exact collection details are unknown, but the specimens were most probably collected at light trap in a bush.

Distribution. Northern Kenya (LESNE 1922). **First record from Yemen (Socotra Island).**

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