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Two new species of *Scaphisoma* Leach (Coleoptera: Staphylinidae: Scaphidiinae) from the Andaman Islands

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Two new species of *Scaphisoma* Leach, *S. germanni* sp. nov. and *S. adivasis* sp. nov., are described from the Andaman Islands.

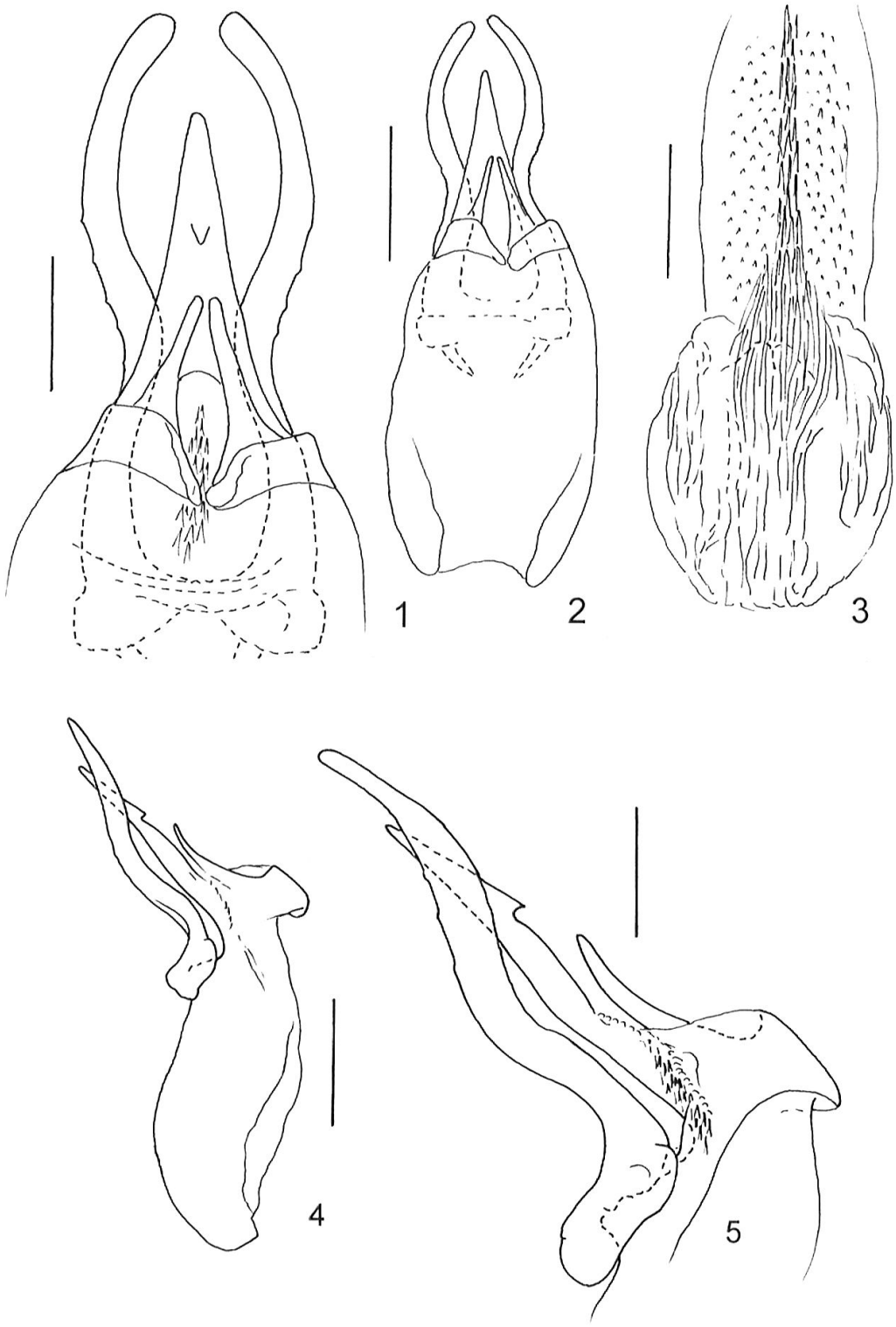
Keywords: Coleoptera, Staphylinidae, Scaphidiinae, Andaman Islands, taxonomy.

INTRODUCTION

The rove beetles of the subfamily Scaphidiinae are with some 1560 species recognized as valid almost worldwide in distribution (Löbl 1997 and subsequent papers). Most of them are known from the tropics and subtropics of Asia. The currently available information about Scaphidiinae from some archipelagos of the Indian Ocean is likely adequate, as far as the diversity of the group is concerned. This is the case of the Scaphidiinae of the Mascarene Islands (Vinson 1943; Löbl 1977) and the Seychelles (Scott 1922). Similarly, the group appears to be adequately documented from Sri Lanka (Löbl 1971) and South India (Löbl 1979, 2003), while from many other areas they are as good as unknown. This is also true for the Nicobar and Andaman Islands from which only two species were reported: *Scaphisoma maculiger* Löbl, 1975 from the former and *Scaphidium nigrocinctulum* Oberthür, 1884 from the latter (see also Löbl 1997). Therefore, it was particularly interesting to examine newly received specimens from the Andaman Islands. The material consists of two specimens, each representing a distinctive new species described below.

MATERIAL AND METHODS

The specimens examined are housed in the collection of the Muséum d'histoire naturelle, Geneva (MHNG). The locality data are reproduced as given on the respective labels and the data from different labels are separated by a slash. The length of antennomeres is measured on dry specimens, the body length is measured from the anterior pronotal margin to the inner apical angle of the elytra, the abdominal ventrites are counted from the first exposed ventrite, and the sides of the aedeagi refer to their morphological sides, rotated to 90° in the group.



Figs 1–5. *Scaphisoma germanni* sp. nov., aedeagus in dorsal and lateral views. Scale bars: 0.1 mm in Figs 1, 3, 5; 0.2 mm in Figs 2, 4.

TAXONOMY

Scaphisoma germanni sp. nov.

(Figs 1–5)

Holotype ♂: India, South Andaman Island, Chiriyatapu / N 11°30'11" E 92°42'03" 13.12.2006 (MHNG).

Description. Length 1.95 mm, width 1.25 mm. Head and pronotum black. Elytron black on narrow basal strip, along suture, along lateral margin, and on a large central area touching sutural stria. Basal fourth of elytron with large, transverse, not well delimited reddish spot reaching sutural stria, separated from basal margin by narrow black area and from lateral margin by fairly wide black area. Apical fourth of elytron light brown. Hypomera dark reddish-brown. Remainder of ventral side of thorax very dark, reddish-brown, appearing black under weak light. Abdomen dark reddish-brown, with slightly lighter apex. Appendages light brown, antennomeres VII to XI slightly darker than antennomeres I to VI. Antennae long, length ratio of antennomeres as: III 6: IV 17: V 20: VI 20: VII 22: VIII: 20: IX 25: X 23: XI 27; segment IV about 7 times as long as wide, V and VI slightly wider than IV, each almost 7 times as long as wide, segment VIII much wider than segment VI, about 4 times as long as wide; segment VIII only slightly wider than segment VI, about 6 times as long as wide; segments IX to XI each as wide as segment VIII, XI somewhat narrowed in middle and about 5.5 times as long as wide. Pronotum lacking microsculpture, moderately narrowed anteriad, with lateral margins oblique in basal half, weakly arcuate in anterior half, lateral margin carinae visible throughout in dorsal view. Pronotal punctation very dense, fine, consisting of shallow, not clearly delimited punctures usually smaller than puncture intervals. Tip of scutellum exposed. Elytron moderately narrowed apically, with lateral margin weakly rounded, lateral margin carina visible only in apical half in dorsal view, apical margin truncate with broadly rounded outer angle, denticulate at and near inner angle. Inner angle of apical margin situated behind level of outer angle. Sutural area somewhat impressed, irregularly punctate, widest shortly behind scutellum, at widest point about 0.10 mm, apically gradually narrowed. Sutural stria curved at base to form basal stria reaching to outer fourth of basal width. Elytral punctation fine near base, coarse and dense on most of discal surface, punctures fairly well delimited, usually smaller than puncture diameters. Hind wings fully developed. Hypomeron with scattered punctulate microsculpture. Mesanepisternum very finely, shallowly punctate, distinctly pubescent. Mesepimeron almost twice as long as interval to mesocoxa. Metaventrite weekly convex in centre, with flattened intercoxal process, lacking impressions or striae. Middle part of metaventrite very finely punctate and with microsculpture consisting of transverse striae. Punctures on metaventrite well delimited, sparse between mesocoxae, becoming dense posteriad. Lateral parts of metaventrite lacking microsculpture, extremely finely and sparsely punctate in anterior half, with punctation dense and becoming gradually coarser toward metacoxae, apical punctures partly confluent, forming irregular, not impressed row; narrow area between these punctures and margin of metacoxae smooth. Submesocoxal line parallel, distinctly punctate laterally, very finely punctate mesally, submesocoxal area 0.04 mm long, about as long as fifth of shortest interval to metaxoca. Metanepisternum almost flatt, very finely punctate, conspicuously

widened posteriad, at widest point 0.22 mm wide, at inner margin slightly below level of margin of metaventrite, in posterior two thirds strongly convex. Exposed abdominal ventrites with distinct microsculpture consisting of transverse striae and very finely punctate. Subcoxal lines of ventrite 1 arcuate, subcoxal areas 0.08 mm long, with coarse marginal punctures. Tibiae straight.

Male sexual characters. Segments 1 to 3 of protarsi and mesotarsi distinctly widened. Ventrite 5 with two shallow, minute admesal impression. Ventrite 6 prominent mesally to form subtriangular, blunt process. Aedeagus (Figs 1–5) 0. 85 mm long.

Habitat. Leaf litter at foot of an old, large tree in a secondary forest.

Etymology. Named in honour of my colleague Christoph Germann, Bern, Switzerland, in acknowledgement of his significant contribution on the study to the beetles of Switzerland.

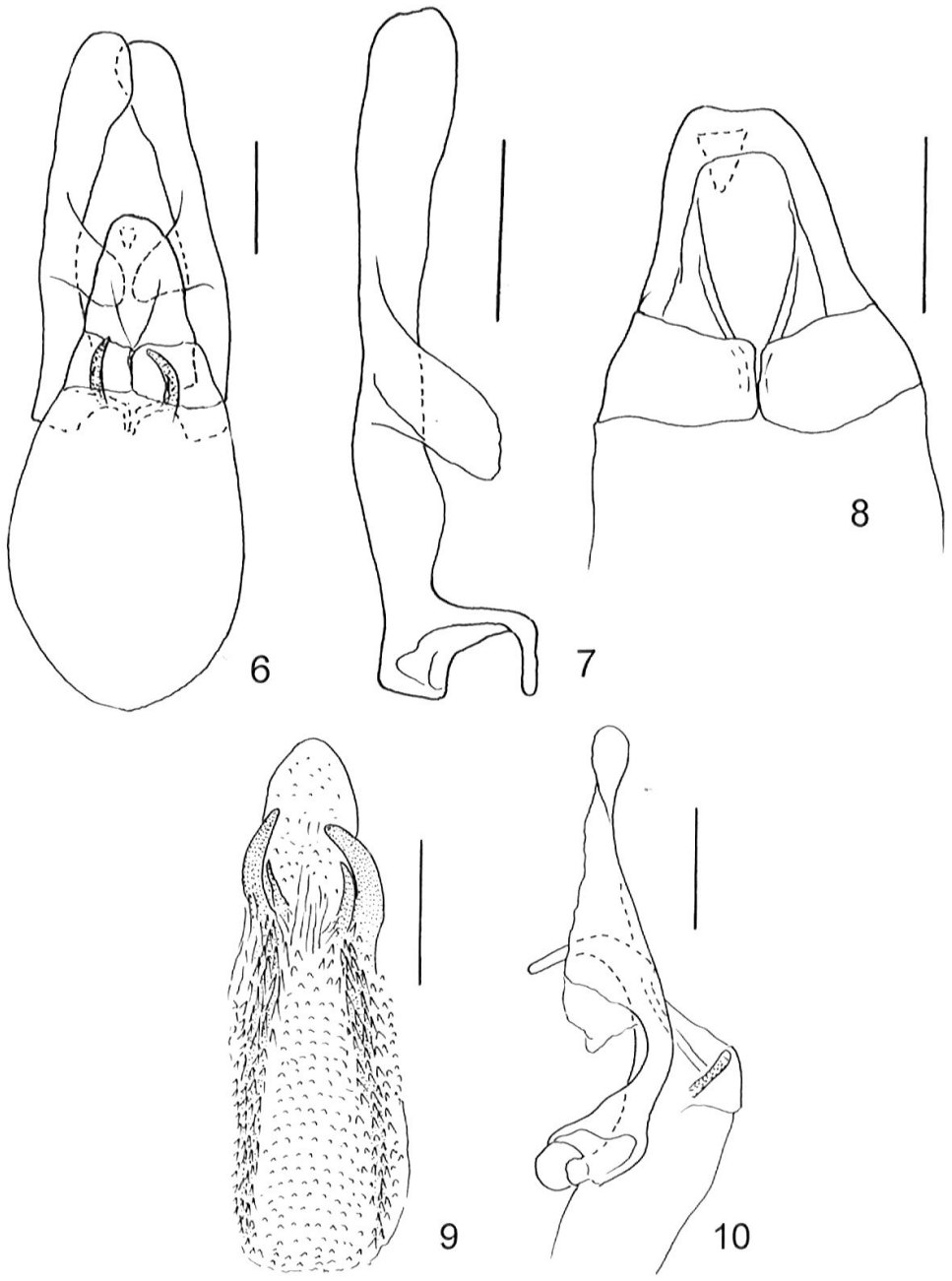
Comments. This species is a member of the *Scaphisoma haemorrhoidale* group. It has a trifid apex of the median lobe, with fairly long dorsal branches, as many other members of the group. While all those species have elytra without basal striae, this species possesses distinct basal striae. Another peculiar external feature of the new species is the pattern of the punctation on the lateral parts of the metaventrite. The aedeagal characters of *S. germanni* suggest relationships to *S. incurvum* Löbl, 1990 known from Thailand. Both have strongly sinuate parameres, a dorsal denticle on the ventral branch of the apical process of the median lobe, and large, vesiculate basal part of the internal sac. The new species differs, however, conspicuously by its parameres that are denticulate and lack membranous lobes, and the apical part of the internal sac bearing a narrow band of mesal spines.

Scaphisoma adivasis sp. nov.

(Figs 6 to 10)

Holotype ♂: India, South Andaman Island, Chiriyatapu / N 11°30'11" E 92°42'03" 13.12.2006 (MHNG).

Description. Length 1.37 mm, width 0.98 mm. Head and pronotum brown, with weak reddish shine. Elytron about as dark as pronotum on adsutural area, its apical fifth excepted, and on poorly delimited transversal band starting behind basal third and elytral mid-length, extended to apical third of elytron near lateral margin, to apical fifth near suture. Surface between base and dark band clearly lighter, reddish-brown, surface posterior to transverse band much lighter, almost yellowish. Ventral side of body brown, hypomera and apical abdominal segment lighter than remaining ventral surfaces. Appendages light brown, almost yellowish. Antennae long, length ratio of antennomeres as: III 5: IV 8: V 15: VI 13: VII 19: VIII: 15: IX 21: X 18: XI 22; segments IV to VI very slender, V and VI slightly wider than IV, segment VI about 4 times as long as wide; segment VII about 4 times as long as wide, distinctly wider than segment VI; segment VIII as wide as VI, 5 times as long as wide; segments IX to XI each about as wide as segment VIII, XI about 5.5 times as long as wide. Pronotum lacking microsculpture, strongly narrowed anteriad, with lateral margins arcuate, lateral margin carinae visible throughout in dorsal view. Pronotal punctation dense, fine, consisting of shallow, not clearly delimited punctures usually much smaller than puncture intervals. Tip of scutellum exposed. Elytron moderately narrowed apically, lateral margin weakly rounded, lateral margin



Figs 6–10. *Scaphisoma adivasis* sp. nov., aedeagus in dorsal and lateral views. Scale bars: 0.2 mm in Fig. 6; 0.1 mm in Figs 7–10.

carina visible throughout, apical margin slightly rounded, denticulate at and near inner angle. Inner angle of apical margin situated behind level of outer angle. Sutural area somewhat impressed, irregularly punctate, widest shortly behind scutellum, at widest point about 0.07 mm, from widest point gradually narrowed apically. Sutural stria curved near base to form short basal stria reaching basal mid-width (dorsal view). Elytral punctation fairly coarse and dense on most of discal surface, punctures not well delimited, usually smaller than puncture intervals; punctation near lateral margin and on humeral area fine. Hind wings fully developed. Hypomeron with microsculpture consisting of oblique striae. Mesanepisternum extremely

finely punctate. Mesepimeron about twice as long as interval to mesocoxa. Metaventrite distinctly convex in middle, lacking impressions, with microsculpture consisting of transverse striae, very finely and sparsely punctate, in additon with few larger punctures forming irregular row along metacoxae. Submesocoxal line parallel, almost impunctate, submesocoxal area 0.03 mm long, as long as fourth of interval to metacoxa. Metanepisternum swollen, at widest point about 0.10 mm, with inner margin level with margin of metaventrite, inner suture strongly convex. Abdomen very finely punctate, with microsculpture consisting of transverse striae, ventrite 1 with subcoxal areas 0.05 mm long, subcoxal lines arcuate, distinctly punctate. Protibiae straight, mesotibiae and metatibiae slightly curved.

Male sexual characters. Tarsomeres 1 to 3 of protarsi moderately widened, of mesotarsi weakly widened. Apical margin of abdominal ventrite 6 notched mesally. Aedeagus (Figs 6–10) 0.62 mm long.

Habitat. Leaf litter at foot of a large, old tree in a secondary forest.

Etymology. The species epithet is a name of an endemic tribe of the Andaman Islands.

Comments. The aedeagal characters of this new species suggest relationships to *S. centronotatum* (Pic, 1926), *S. solutum* Löbl, 1990, *S. leucopyga* Champion, 1927, *S parasolutum* Löbl, 2000, and *S. pseudosolutum* Löbl, 2000. These species have large and strongly sclerotized apical process of the median lobe, the ostium covered by a moderately sclerotized lobe-like process, wide parameres each bearing a mesal lobe, and a complex internal sac. The internal sac has usually one or several large sclerites, or is entirely membranous, as in *S. pseudosolutum*. *Scaphisoma adivasis* differs drastically from these species by the strongly arcuate apical process of the median lobe and by the internal sac bearing a pair of large subapical teeth-like sclerites joined to smaller teeth.

ACKNOWLEDGEMENTS

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