

TWO NEW SCAPHIDIIDAE (COLEOPTERA) FROM THE NEW HEBRIDES¹

By Ivan Löbl²

Abstract: Scaphidiid beetles are recorded from the New Hebrides for the first time. Treated are 2 species, with 1 of *Scaphisoma* and 1 of *Toxidium* described as new. Aedeagi are illustrated.

Although the family Scaphidiidae is known to be well represented in New Caledonia (see Löbl 1973) and is also known from Samoa, members of this family have not been recorded previously from any island lying between these 2 archipelagos. However, I have recently had the opportunity of examining small collections of Scaphidiidae made by Miss L. E. Cheesman and Dr J. L. Gressitt in the New Hebrides. These collections prove to consist of 2 new species which are described below. Holotypes are deposited in the British Museum (Natural History), London (BMNH), and paratypes are in BMNH, Bishop Museum, Honolulu (BISHOP), and the Muséum d'Histoire naturelle, Geneva (GENEVA).

Scaphisoma tannaense Löbl, new species

FIG. 1-2.

Length 1.05-1.2 mm.* Body moderately convex. Dorsal and ventral surfaces without microsculpture (except apical abdominal segments, where it is very fine), rather dark reddish brown, elytra often more or less darkened to piceous, femora and tibiae somewhat paler, tarsi and antennae yellowish. Antennal segments III to XI 0.46-0.54 mm long, their relative lengths in the following ratio: III 3-4: IV 5-6: V 8-11: VI 10-12: VII 14-16: VIII 7-9: IX 15-17: X 14-16: XI 19-21; IV rather narrow, V to VII progressively wider, VIII about 2 × as long as broad, broader than VI, XI about 3 × as long as broad. Pronotum at base 0.64-0.72 mm wide, with regularly rounded lateral margins; lateral keel in dorsal view not visible; dorsal puncturation rather sparse and very fine, barely visible at 25× magnification. Exposed portion of scutellum minute. Elytra 0.64-0.75 mm long at suture, combined breadth 0.72-0.83 mm, the widest point being generally just before the middle 1/3 of maximal length; lateral margins in basal 1/3 rounded, then straight or almost straight; lateral keel in dorsal view visible from basal to apical angle; apical margins somewhat convex or straight in middle part; sutural margin not elevated; interval between suture and sutural stria flat, 0.04 mm wide at middle, with a row of very fine punctures; sutural stria fine, almost parallel to suture, ending 0.04-0.07 mm behind apex of scutellum; discal puncturation as fine or slightly more distinct than that of pronotum. Mesepimera longer than the distance between them and mesocoxae. Metasternum about as finely punctured as upper surface, median portion convex, without depressions. Plates behind mesocoxal cavities 0.04 mm long, margins very finely punctured. Metepisterna flat, at widest point 0.06-0.07 mm broad, proximally distinctly narrowed, convex at inner basal angle; anapleural suture fine, slightly concave in the middle. Puncturation of 1st visible sternite very fine, denser in the median portion than on sides; postcoxal plates 0.03-0.04 mm long, rounded, with a dense and coarse row of marginal punctures. Metatibia straight, 0.27-0.34 mm long, slightly shorter than metatarsus.

1. Partial results of fieldwork supported in part by grant G-2127 from the National Science Foundation to Bishop Museum.
2. Muséum d'Histoire naturelle, Genève, Switzerland.
3. *The length of each species is measured from the middle of the apical pronotal margin to the inner apical angle of the elytra.

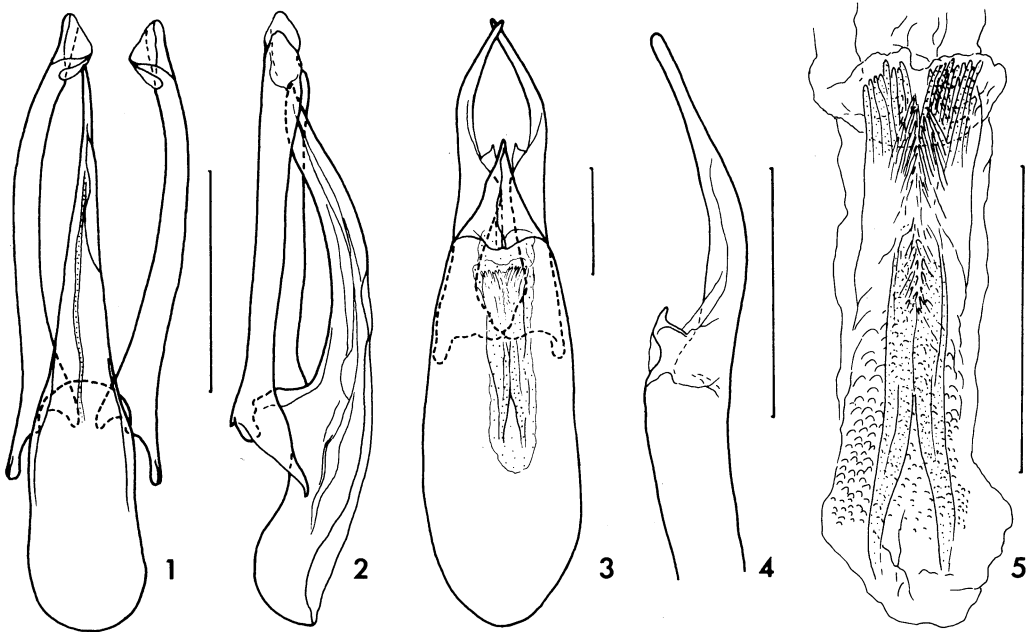


FIG. 1-5. 1-2, *Scaphisoma tannaense*, n. sp., paratype, aedeagus: 1, dorsal view; 2, lateral view. 3-5, *Toxidium malekulense*, n. sp., paratype: 3, aedeagus in dorsal view; 4, apical 2/3 of paramere in ventral view; 5, internal sac. Scale=0.1 mm.

♂. Segments I to III of protarsus scarcely enlarged. Aedeagus (FIG. 1 & 2) feebly sclerotized, 0.27-0.31 mm long.

Holotype ♂ (BMNH), NEW HEBRIDES: Tanna, X.1930, L.E. Cheesman: paratypes, 5 ♂♂, 3 ♀♀, same data as holotype (BMNH, BISHOP, GENEVA).

This species appears to be closely related to *Scaphisoma perpusillum* Löbl (from New Caledonia) but differs conspicuously in having much shorter sutural striae on the elytra. It may also be distinguished readily from that species by lighter color, smaller postcoxal plates of the 1st visible sternite and shorter antennal segment VIII, and from all known species of the genus in the shape of its aedeagus, especially that of the apical portion of the parameres.

Toxidium malekulense Löbl, new species

FIG. 3-5.

Length 1.4-1.5 mm; dorsoventral average 0.80-0.85 mm. Similar in general shape and most external characters to the Australian *T. oxyurum* Löbl and *T. cuspidatum*, and to *T. madurense* Pic. Antennae shorter than in *T. oxyurum*; relative lengths of segments: III 10-11: IV 8-9: V 10-11: VI 11-12: VII 15: VIII 9: IX 14-15: X 14-15: XI 20; segment VIII conspicuously short, scarcely 2 × as long as broad. Metasternum as in *T. madurense*, without coarse punctures. Free visible portion of metepisterna narrow, similar as in *T. madurense*; about 0.02 mm wide in basal 1/2, not or very feebly enlarged apically.

Aedeagus (FIG. 3-5) 0.52-0.58 mm long, moderately sclerotized; shape of parameres different from those in other species.

Holotype ♂ (BMNH), NEW HEBRIDES: Malekula: Malua Bay, VII.1929, L. E. Cheesman; paratypes, 5 ♂♂, same data as holotype (BMNH, GENEVA); 1 ♂, Efate I (NW), Limestone plateau N of Maat, 100 m, 21.VIII.1957, J. L. Gressitt (BISHOP).

Acknowledgments: My thanks are due to Drs P. M. Hammond and G. A. Samuelson for loan of this material from the collections of the British Museum (Natural History) and Bishop Museum, respectively.

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Pacific Insects Vol. 19, no. 1-2: 111-112

20 October 1978

BOOK REVIEW

PEST CONTROL. AN ASSESSMENT OF PRESENT AND ALTERNATIVE TECHNOLOGIES.

VOL. 4. FOREST PEST CONTROL. The report of the Forest Study Team, National Research Council, National Academy of Sciences, 1975. 170 p. \$ 5.75.

This is the 4th part of a 5-volume series published by the National Academy of Sciences, which attempts to assess the "diverse effects on society that arise from efforts to control pests, and to evaluate long-range alternatives available for accomplishing pest control." If there is a persistent theme in this study, it is that serious rethinking of the concept of "pest" is basic to urgently needed changes in forest management.

It is obvious that the tremendous variety of forest types, ownership patterns and management objectives in the United States make this overview a highly ambitious undertaking. The Forest Study Team, however, succeeded in outlining the problems, current solutions and probable alternatives. A summary and recommendation section in the beginning, rather than following the text, enables the reader to focus on the issues.

The Forest Study Team, which was almost entirely drawn from Academia, is clearly critical of the U.S. Forest Service, and especially of the expedient, "action-oriented" pest control programs which have characterized its operations in the past, e.g., the recent Douglas fir tussock moth program. In addition to calling for a repeal of the Forest Pest Control Act of 1947, the Team makes a strong plea for added research support aimed at improving loss inventories and sampling procedures and developing silvicultural and biological control methods as part of a rational system of integrated management. A vigorous program of public education in urban and suburban areas in the use and nonuse of pesticides is also recommended.