

A new species of *Scaphisoma* Leach from the Society Islands with commentary on Staphylinidae of the French Polynesia (Coleoptera, Staphylinidae, Scaphidiinae)

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Abstract. – The richness of the terrestrial fauna of French Polynesia is discussed, with emphasis on the beetle family Staphylinidae. Currently, members of the subfamily Scaphidiinae are unrecorded from the archipelago or even the whole French Polynesia. The first member of this subfamily, *Scaphisoma jacqi* n. sp., was collected on the Raiatea Island and is described. This new species shows affinities with *S. perkinsi* Scott, 1908, known from Hawaii and Bonin Islands.

Résumé. – Une espèce nouvelle du genre *Scaphisoma* Leach des îles de la Société, avec des commentaires sur les Staphylinidae de Polynésie française (Coleoptera, Staphylinidae, Scaphidiinae). La diversité de l'entomofaune terrestre de Polynésie française est présentée, en mettant l'accent sur les Coléoptères Staphylinidae. Actuellement, aucun membre de la sous-famille des Scaphidiinae n'est cité des îles de la Société, voire même de Polynésie française. La première espèce de cette sous-famille, *Scaphisoma jacqi* n. sp., a été collectée sur Raiatea et est décrite ici. Cette espèce nouvelle montre des affinités avec *S. perkinsi* Scott, 1908, connu d'Hawaii et des îles Bonin.

Keywords. – Insects, rove beetles, shining fungus beetles, taxonomy, South Pacific.

The South-East Pacific Society Islands encompass 14 volcanic and coral islands, about 1.5 to 2 million years old, covered by evergreen rain and cloud forests. The vascular flora includes 62% of endemic species (GARGOMINY & BOCQUET, 2013). These islands, together with the remaining islands of French Polynesia, are inhabited by a peculiar insect fauna with a high percentage of endemism (61%) (RAMAGE, 2017). Many classes and orders of Chelicerata Heymons, 1901, and Hexapoda Blainville, 1816, are missing, a feature called taxonomic dis-harmony (RODERICK & GILLESPIE, 2016). The absence of these taxonomic groups is to some degree counterbalanced by the impressive speciation of several genera such as in *Miocalles* Pascoe, 1883 (Curculionidae, Cryptorhynchinae, 103 species described) and in *Rhyncogonus* Sharp, 1885 (Curculionidae, Entiminae, 66 species described) (RAMAGE, 2017, 2021). Of a total of 2556 species of Hexapoda reported from French Polynesia, 116 species, in nine subfamilies, belong to the family Staphylinidae. More than 80 % of the native rove beetle species are endemic to French Polynesia, and 30 species having a large distribution (Indo-Pacific to cosmopolitan) are considered introduced there (RAMAGE, 2017). CAMERON (1933a, b, 1936) was the first to work specifically on staphylinids of French Polynesia, based on collections of the Pacific Entomological Survey. In the 1970s, the amateur entomologists Jean Gourvès and Gérard Perrault lived on Tahiti and intensively collected there, especially in the mountains. Coiffait worked on their collections and described many genera and species (COIFFAIT, 1976, 1977, 1980). The genera *Carpelimus* Kirby, 1819 (Oxytelinae, Oxytelini) and *Tahitia* Coiffait, 1976 (Aleocharinae, Homalotini), with respectively 9 and 15 endemic species, are of particular interest. Recent surveys yielded many new species in the two most diverse Coleoptera families in French

Polynesia (Curculionidae Latreille, 1802, and Carabidae Latreille, 1802) (LIEBHERR, 2012a, b, 2013; LIEBHERR & MADDISON, 2013; RAMAGE & DUHAMEL, 2015; RAMAGE, 2021; unpublished data). There is no doubt that dedicated taxonomical work on the Staphylinidae of French Polynesia, Coleoptera's third most diverse family in this country, will lead to numerous discoveries of both endemic and introduced species. This is the case with a new species of *Scaphisoma* Leach, 1815, described in the present paper. It is the first record of a member of the mycophagous and myxomycetophagous subfamily Scaphidiinae for the entire French Polynesia.

MATERIAL AND TECHNIQUES

The holotype of the new species is deposited in the Muséum d'histoire naturelle de Genève (MHNG). Its locality data are reproduced verbatim. The body-length is measured from the



Fig. 1-2. – *Scaphisoma jacqi* n. sp. – 1, Dorsal view. – 2, Lateral view. Scale = 0.5 mm.

anterior pronotal margin to the posterior inner angles of elytra. The abdominal microsculpture refers to the exposed segments, and not to the intersegmental membranes. The sides of the aedeagus refer to their morphological side with the ostium situated dorsally, while it is in resting position rotated 90°. The dissected aedeagus is embedded in Euparal and fixed on a separate card on the same pin as the respective specimen.

RESULTS

Scaphisoma jacqi Löbl & Ramage, n. sp.

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HOLOTYPE: ♂, French Polynesia, Society Islands, Raiatea Island, Faaroa Valley, 16°50'51.2"S 151°25'47.7"W, 57 m, Malaise trap, 1-8.III.2021, leg. Frédéric Jacq ; MHNG-ENTO 0093802 (MHNG).

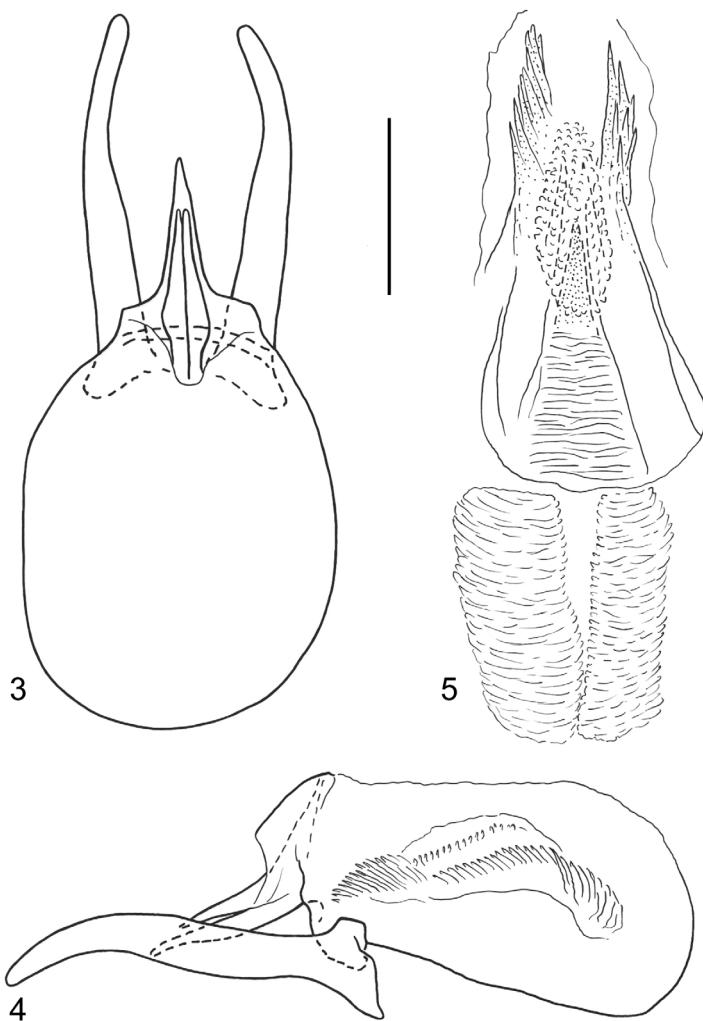


Fig. 3-5. – *Scaphisoma jacqi* n. sp., aedeagus. – 3, Median lobe and parameres in dorsal view, scale = 0.1 mm. – 4, Aedeagus in lateral view, same scale. – 5, Internal sac in dorsal view, scale = 0.05 mm.

Description. – Length 1.28 mm, width 0.87 mm. Head and pronotum blackish (fig. 1-2). Elytra blackish along bases, suture, lateral margins and on transverse area posterior of mid-length and anterior apical sixth. Area anterior of blackish transverse band dark reddish brown, apical sixth yellowish. Venter of thorax and ventrite I blackish, following abdominal segments and appendages light, ochraceous or yellowish.

Pronotum not microsculptured, with lateral margins evenly arcuate, lateral margins carinae visible in dorsal view, lateral striae finely punctate, discal punctuation dense and fine, consisting of well delimited punctures much smaller than puncture intervals. Exposed tip of scutellum minute, triangular. Elytra not microsculptured, moderately narrowed apically, with lateral margins nearly evenly rounded, lateral margins striae impunctate near bases, densely punctate posterior basal third of lateral length; apical margins rounded, inner apical angles situated in level with outer apical angles; sutural margin not raised, sutural striae starting at level of scutellar tip, straight, gradually converging apically; adsutural areas flat, combined 0.16 mm wide at level of scutellar tip, each with three irregular puncture rows in basal third reduced to a single puncture row in apical third. Hind wings fully developed. Hypomeron not microsculptured, smooth, lacking traces of punctuation. Mesepimeron nearly four times as long as wide and slightly longer than interval to mesocoxa. Median part of metaventrite slightly convex, lacking impressions. Lateral areas of metaventrite not microsculptured, without antecoxal puncture row, sparsely and very finely punctate. Submesocoxal area about 0.05 mm, as fourth of interval to metacoxa. Submesocoxal line arcuate, fairly coarsely punctate. Metanepisternum flat, narrowed anteriad, with slightly sinuate suture, not microsculptured, with punctuation as that on sides of metaventrite. Tibiae straight. Abdomen with transversely striate microsculpture. Ventrite I as finely and sparsely punctate as lateral parts of metaventrite; submetacoxal area about 0.08 mm, as two thirds of interval to apical margin; submetacoxal line convex, fairly coarsely punctate.

Male characters. Protarsomeres I to III distinctly widened, narrower than apices of tibiae. Mesotarsomeres not widened. Apical process of ventrite VI triangular, acute, 0.02 mm long. Aedeagus (fig. 3-5) 0.49 mm long. Basal bulb large, about twice as long as apical process, with robust, ventrally prominent



Fig. 6. – The site in Faaroa Valley, Raiatea Island.

articular process. Ventral branch of apical process sinuate, in lateral view, lacking denticles. Parameres sinuate in lateral view, arcuate and narrowed posterior of mid-length in dorsal view. Internal sac with two apical bunches of long, straight denticles, single large, straight mesal denticle and two basal vesicles containing dense, curved denticles appearing in dorsal view as irregularly striate structures.

Etymology. – The specific epithet refers to the family name of the collector of the species, Frédéric Jacq, a great naturalist and photographer, and for his huge contribution to the knowledge of the entomofauna of French Polynesia. The species epithet is to be treated as a noun in the genitive case.

Habitat. – The Malaise trap (fig. 6-7) was set along an abandoned trail, in a *Talipariti tiliaceum* (L.) Fryxell secondarized forest, degraded with *Syzygium cumini* (L.) Skeels, *Ardisia elliptica* Thunb., and *Passiflora laurifolia* L. The herbaceous understory was composed of *Sphagneticola trilobata* (L.) Pruski, *Christella sp.*, *Zingiber zerumbet* (L.) Roscoe ex Sm., *Nephrolepis hirsutula* (G.Forst.) C.Presl and *Centotheca lappacea* (L.) Desv.

Comments. – The species is a member of the *Scaphisoma haemorrhoidale* group, defined by the aedeagi symmetrical with a trifid apical process, narrow, simple parameres usually lacking lobes and a complex internal sac lacking flagellum (LÖBL, 1970). The aedeagal characters suggest relationships with *S. perkinsi* Scott, 1908, described from Hawaii, redescribed and subsequently recorded from the Bonin (Ogasawara) Islands (LÖBL, 1981). The new species may be readily distinguished from *S. perkinsi* by the pattern of elytral colour (the latter has elytra uniformly black between bases and the light apical area) and by the internal sac of the aedeagus bearing an elongate mesal denticle absent from *S. perkinsi*, and lacking an elongate V-shaped sclerite.

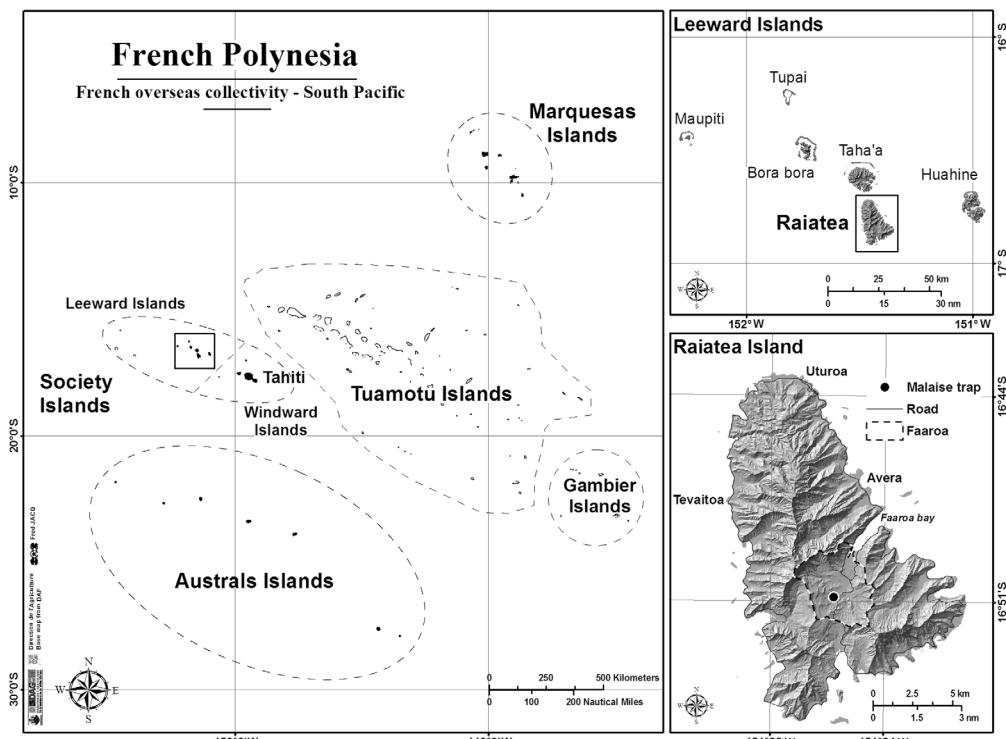


Fig. 7. – Maps of French Polynesia and Raiatea Island.

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