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Hyphalus madli sp.n., a new intertidal limnichid beetle from the Seychelles (Coleoptera: Limnichidae: Hyphalinae)

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Abstract

A new intertidal beetle, *Hyphalus madli* sp.n. (Coleoptera: Limnichidae, Hyphalinae), is described from Silhouette Island (Seychelles) and compared with *H. crowsoni* HERNANDO & RIBERA from the Aldabra Atoll (Seychelles). This is the second species of the genus *Hyphalus* BRITTON from the Indian Ocean.

Key words: Coleoptera, Limnichidae, Hyphalinae, *Hyphalus*, new species, intertidal habitat, Silhouette Island, Seychelles.

Introduction

Based on a single specimen collected in the Aldabra Atoll (Seychelles), HERNANDO & RIBERA (2000) described the first species of *Hyphalus* BRITTON (*H. crowsoni* HERNANDO & RIBERA) from the Indian Ocean. The genus was previously known from six species from the coasts of New Zealand, Australia and Japan (Ryukyu Archipelago) (BRITTON 1971, 1973, 1977; SATÔ 1997). Here we describe an additional species from the Seychelles (Silhouette), which is apparently most closely related to *H. crowsoni*.

Acknowledgements and acronyms

We thank Michael Madl and Manfred A. Jäch (Naturhistorisches Museum Wien) for making available this interesting material for study, and for the information concerning the habitat.

CHB coll. Carles Hernando, Barcelona, Spain
NMW Naturhistorisches Museum Wien, Austria

Hyphalus madli sp.n.

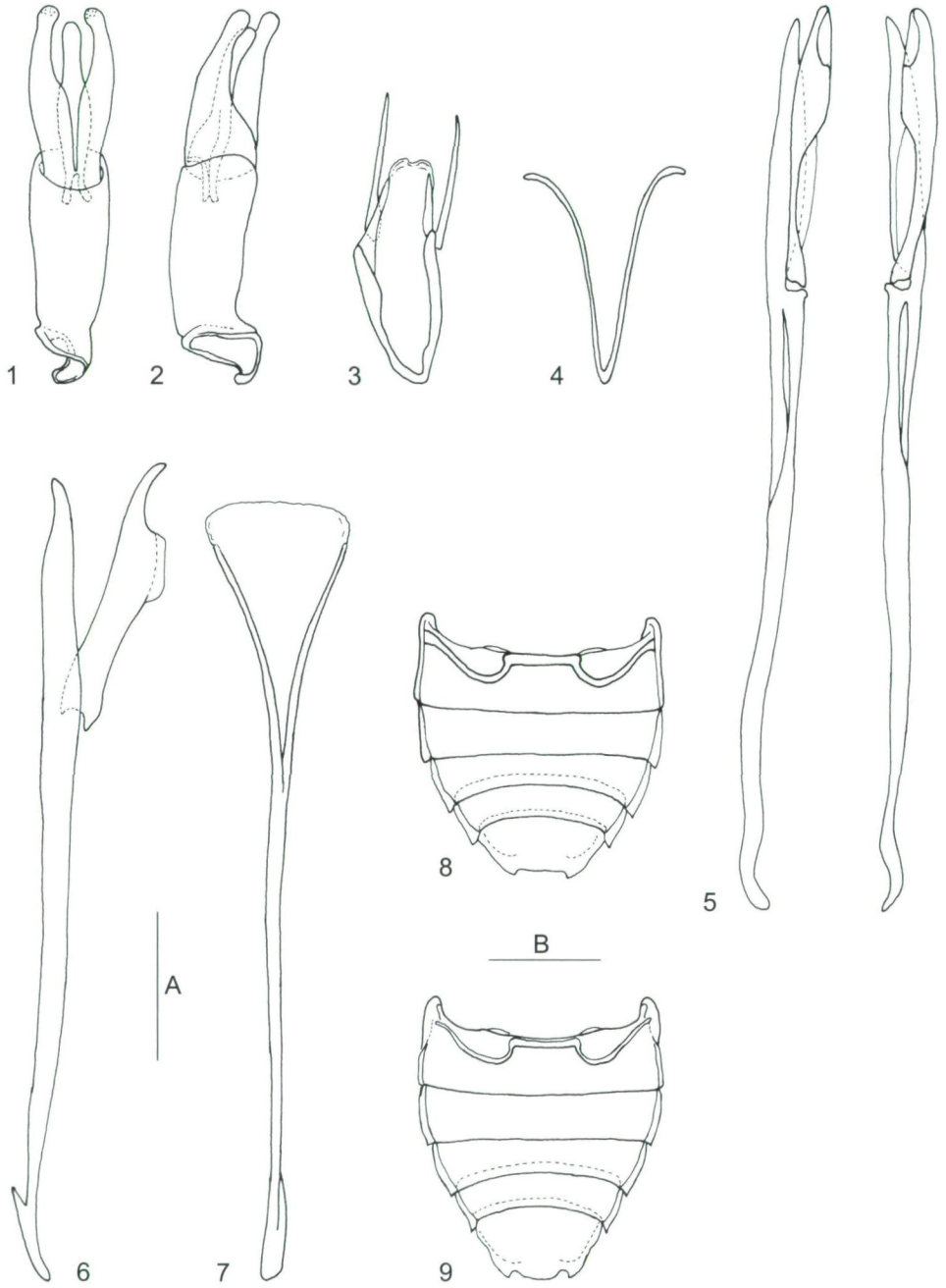
TYPE LOCALTY: Anse Lascars, Silhouette Island, Seychelles.

TYPE MATERIAL: **Holotype** ♂ (NMW): "SEYCHELLES: / SILHOUETTE / Anse Lascars / 20.V.2003, leg.Madl". **Paratypes** (NMW, CHB): 9 exs., same data as holotype.

DESCRIPTION[1]: 1.10 - 1.25 mm long (head included), 0.60 - 0.68 mm wide. Body shape short, stout. Pronotum slightly narrower than elytra. Body colour black, legs and cephalic appendages dark brown. Dorsal surface covered by short and recumbent silvery pubescence.

Head partially retracted in pronotum; surface with fine dense punctation, with a rugose appearance; disk with some coarser punctures. Eyes small, round and flat. Clypeal suture well defined at insertion of antennae. Labrum emarginate, with long and erect distal setae. Antennae with 11 segments, antennomeres 9-11 asymmetrical, forming a club.

[1] See LAWRENCE et al. (2000) for a comprehensive description of the genus.



Figs. 1 - 9: *Hyphalus madli* sp.n.; 1) aedeagus, ventral view; 2) aedeagus, ventro-lateral view; 3) male 9th genital segment, ventral view; 4) male 8th sternite; 5) gonocoxite and gonocoxal struts, ventral view; 6) same, lateral view; 7) spiculum ventrale; 8) abdominal ventrites, male; 9) abdominal ventrites, female. Scale bars: A) Figs. 1-7, 0.1 mm; B) Figs. 8-9, 0.25 mm.

Pronotum quadrangular; punctation as on head; lateral margins strongly bordered, slightly curved; base with a slight medial sinuation, with transverse strioles; anterior angles well-marked, round; posterior angles strongly acute, protruding in some specimens.

Elytral surface with punctation similar to that on head and pronotum; surface covered by small sparse tubercles, somewhat denser on apex. Elytral margins serrate, strongly bordered. Elytral apex strongly sinuate, forming a locking device with the last abdominal ventrite. Apterous.

Ventral surface dark brown. Prothoracic hypomera flat, without striae or sulcus. Prosternum glabrous; surface of prosternum strongly and densely punctate, with a rugose appearance. Prosternal apophysis strongly inserted in mesosternum; apex of prosternal apophysis truncate, lateral margins finely bordered along entire length. Mesosternum glabrous, narrow; with a large excavation for insertion of prosternal apophysis and procoxae, which are open distally. Metasternum flat, as long as mesosternum; surface of metasternum covered with sparse, fine punctation; with sparse short recumbent setae.

First two abdominal ventrites covered with short sparse recumbent pubescence; third abdominal ventrite with some disperse long setae; ventrites 4-5 with very dense short pubescence and many long erect setae, specially in the 5th (last ventrite), which is not emarginate. Ventrites 1-3 connate.

Legs short and robust, entirely pubescent. Claws long and robust, strongly curved, with a small inner denticle.

Male genitalia as in Figs. 1-4. Aedeagus articulated, elongate, with asymmetrical base, as long as parameres. Median lobe curved, shorter than parameres; with preapical narrowing; apex of median lobe round. Struts very short, forming a lobe. Parameres evenly curved (Figs. 1-2). Ninth genital segment spatulate (Fig. 3), wider at base; margins strongly sclerotized. Apex of 9th genital segment narrower, membranous. Parameres of 9th genital segment narrow and straight, longer than lamina. Eighth sternite (Fig. 4) V-shaped, with apex bent outwards, without membranous expansions.

Ovipositor as in Figs. 5-6, gonocoxal struts long, apex forming two round expansions on ventral side of gonocoxites. Gonocoxites long, apex sickle-shaped in lateral view. Spiculum ventrale (Fig. 7) as long as ovipositor, Y-shaped, with branches fused by a membranous expansion.

Female abdominal segments more elongate and acuminate than in males; lateral expansions of ventrites less prominent than in males. Apex of last ventrite acute in females, straight in males (Figs. 8-9). One of the dissected females had a single, very large egg occupying virtually the whole abdominal cavity.

DIFERENTIAL DIAGNOSIS: *Hyphalus madli* sp.n. seems to be closely related to *H. crowsoni*, both species having a very similar external morphology, although they can be easily distinguished: elytral tubercles on the whole surface in *Hyphalus madli* sp.n. (only in the apical region in *H. crowsoni*); lateral expansions of ventrites less prominent, but found on all segments in *Hyphalus madli* sp.n. (Figs. 8-9) (absent in the first ventrite but more prominent in the remaining segments in *H. crowsoni*, see HERNANDO & RIBERA 2000: Fig. 2). Additional differences refer to the aedeagus: parameres strongly curved in *H. madli* sp.n. (Figs. 1-2) and median lobe shorter than parameres, with pre-apical narrowing (with straight parameres and median lobe without narrowing in *H. crowsoni*, see HERNANDO & RIBERA 2000: Fig. 3).

HABITAT: Specimens were found running on the dry rock among intertidal pools (Fig. 10). They were never collected in the water of the pools, but in the wet zone (with algae) above the water level. Their distribution was restricted to the area where the rocks with vegetation meet the intertidal rock zone. There were no Limnichidae in the sandy beach area of Anse Lascars, on

Grande Anse (= La Passe) and on Anse Cipailles (Michael Madl, personal communication, 2003).

ETYMOLOGY: Named after Michael Madl (NMW), who collected the type series.

DISTRIBUTION: So far only known from the type locality.

Fig. 10: Habitat of *Hyphalus madli* sp.n. at the type locality (Anse Lascars, Silhouette Island, Seychelles) (photograph by M. Madl).

References

BRITTON, E.B. 1971: A new intertidal beetle (Coleoptera: Limnichidae) from the Great Barrier Reef. – Journal of Entomology (B) 40: 83-91.

BRITTON, E.B. 1973: *Hyphalus wisei* sp.n., a new intertidal beetle from New Zealand (Coleoptera: Limnichidae). – Records of the Auckland Institute and Museum 10: 119-122.

BRITTON, E.B. 1977: Three new intertidal species of Limnichidae (Coleoptera) from New Zealand. – Records of the Auckland Institute and Museum 14: 81-85.

HERNANDO, C. & RIBERA, I. 2000: The first species of the intertidal genus *Hyphalus* Britton from the Indian Ocean (Coleoptera: Limnichidae: Hyphalinae). – Annales de la Société Entomologique de France (Nouvelle Serie) 36: 239-243.

LAWRENCE, J.F., HASTINGS, A.M., DALLWITZ, M.J., PAINE T.A. & ZURCHER, E.J. 2000: Elateriformia (Coleoptera): descriptions, illustrations, identification, and information retrieval for families and sub-families. Version: 22nd December 2000. – http://biodiversity.uno.edu/delta/elateril/www/limn_hyp.htm.

SATÔ, M. 1999: Occurrence of a new *Hyphalus* (Col. Limnichidae) from the Ryukyu Archipelago, Japan. – Elytra, Tokio 25: 109-112.

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