

***Hydraena legorskyi* sp.n.**
from Rodrigues (Mascarene Islands, Indian Ocean)
(Coleoptera: Hydraenidae)

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Abstract

Hydraena legorskyi sp.n. (Coleoptera: Hydraenidae) is described from Rodrigues Island (Mascarene Islands, Indian Ocean). The female pygidial sclerites and the spermatheca of *H. balfourbrownnei* BAMEUL, 1986 are described for the first time.

Key words: Coleoptera, Hydraenidae, *Hydraena*, new species, Mauritius, Rodrigues, Indian Ocean.

Introduction

Rodrigues, a semi-autonomous island part of the Republic of Mauritius is located in the Indian Ocean, about 650 km east of Mauritius and about 1,500 km east of Madagascar. It is part of the Mascarene Islands, which include Mauritius, Cargados Carajos shoals and the French island Réunion. The area of Rodrigues is 108 km². It is of volcanic origin.

While there is no species of *Hydraena* KUGELANN recorded from the island of Mauritius so far, this genus was collected on Rodrigues already in 1918 (see BAMEUL 1986: 880).

BAMEUL (1986) described one endemic species from Rodrigues: *H. balfourbrownnei*. The specimens on which his description was based were collected by J. Vinson (1963) and Y. Gomy (1972).

In the course of comprehensive entomological surveys, Michael Madl (Frauenkirchen) surprisingly discovered a second species on Rodrigues in 2008. This species is described herein.

Abbreviations:

BMNH	The Natural History Museum, London, UK
MHNG	Muséum d'Histoire naturelle, Genève, Switzerland
NMW	Naturhistorisches Museum Wien, Austria

***Hydraena (Hydraenopsis) balfourbrownnei* BAMEUL, 1986**

Hydraena (s.str.) *balfourbrownnei* BAMEUL 1986: 878. – HANSEN 1998 (catalogue).

Hydraena rodriguezi BAMEUL 1986: 880 (nomen nudum).

Hydraena (Hydraenopsis) balfourbrownnei BAMEUL: JÄCH et al. 2000 (checklist); TRIZZINO et al. in press (checklist).

TYPE LOCALITY: Solitude, 19°41'S 63°26'E, northern Rodrigues Island.



Fig. 1: Habitus of *Hydraena balfourbrowniei*.



Fig. 2: Habitus of *Hydraena legorskyi*, holotype; left antenna and right middle tarsus added digitally.

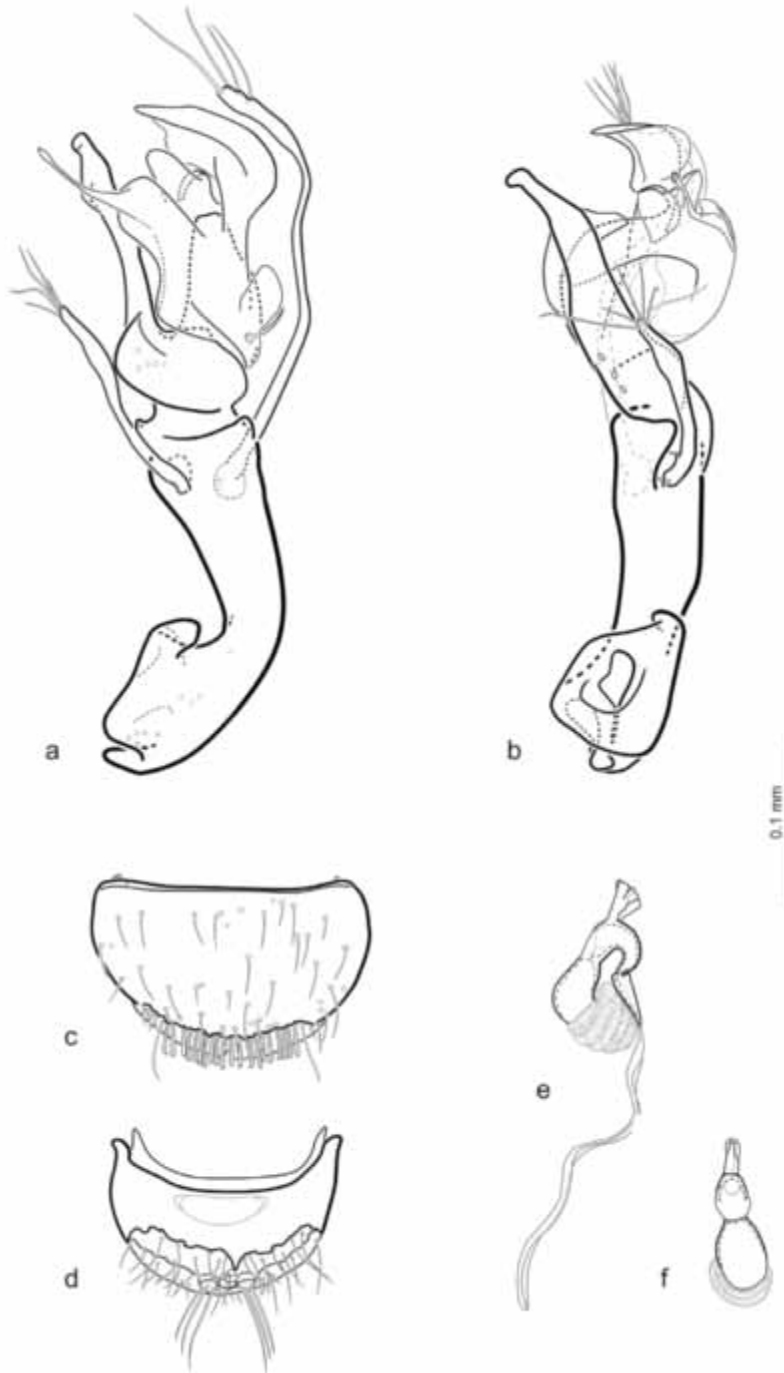


Fig. 3: *Hydraena balfourbrowniei*: a–b) aedeagus in lateral (a) and ventral (b) view; c) female tergite X; d) gonocoxite; e–f) spermatheca.



Fig. 4: *Hydraena legorskyi*: aedeagus: a) lateral, and b) ventral view.

TYPE MATERIAL EXAMINED: **Holotype** ♂ (MHNG): “RODRIGUEZ: \ Solitude, ca. 450 ft., \ I.xi.1963, J.Vinson. \ Under stones \ in rivulet \ ♂ \ Type [round label with red margin] \ Hydraena (s.str.) \ rodriguezi Type \ J. Balfour-Browne det. III. 1975 \ HOLOTYPE [red label] \ Hydraena (s.str.) \ balfourbrownei n. sp. \ HOLOTYPE \ F. BAMEUL des. 1986”. **Paratypes:** 1 ♀ (MHNG): same locality data as holotype, but: “♀ \ PARATYPE [red label] \ Hydraena (s.str.) \ balfourbrownei n.sp. \ PARATYPE \ F. BAMEUL det. 1986”; 1 ♂ (NMW): same data, but without gender label; 1 ♂, 1 ♀ (BMNH): same data but with gender labels, and “Brit Mus \ 1986-353”, and male with an additional label “Para- \ type [round label with yellow margin]”; 1 ♀ (MHNG): “Ile Rodrigue \ La Ferme \ 13-5-72 Tamisage \ Bergerie \ Y. Gomy \ ♀ \ PARATYPE [red label] \ Hydraena (s.str.) \ balfourbrownei n.sp. \ PARATYPE \ F. BAMEUL des. 1986”.

ADDITIONAL MATERIAL EXAMINED:

RODRIGUES: 1 ♂, 3 ♀♀ (NMW): “MAURITIUS \ Rodrigues, Port Sud Est \ Rivière Cascade Victoire \ 30.4.[20]08, leg. M. Madl”; 7 exs. (NMW): “MAURITIUS \ Rodrigues, Port Sud Est \ Rivière Cascade Victoire \ 1.5.[20]08, leg. M. Madl”; 2 ♂♂, 1 ♀ (NMW): “MAURITIUS \ Rodrigues, Latanier \ Rivière Cascade Victoire \ 7.5.[20]08, leg. M. Madl”; 2 ♂♂, 2 ♀♀ (NMW): “MAURITIUS \ Rodrigues \ Port Sud Est \ Riv. Cascade Victoire \ 24.04.[20]10, leg. M. Madl”; 2 ♂♂, 2 ♀♀ (NMW): “MAURITIUS \ Rodrigues, Baie aux Huitres \ Font Baie aux Huitres \ 2.5.[20]08, leg. M. Madl”; 3 ♂♂, 10 ♀♀ (NMW): “MAURITIUS \ Rodrigues, Tasman \

'Rivière Tasman', pools \ 5.5.[20]08, leg. M. Madl"; 1 ♂, 5 ♀ (NMW): "RODRIGUES leg. Clive R. Turner 17 Dec 2005 \ 19° 44' S 63° 24.5' E c.10m \ Oyster Bay (Baie aux Huitres) river at bridge over \ river to agricultural research station , small pools \ vegetated and filamentous algae"; 6 ♂♂, 11 ♀♀ (NMW): "RODRIGUES leg. Clive R. Turner \ 17 Dec 2005 19° 43' S 63° 26' E \ c.350m Solitude, shallow riffle in river \ amongst plant roots and under rocks in \ river"; 1 ♂ (NMW): "MAURITIUS \ Rodrigues \ Intertidal zone Anse Fournier \ 2.5.[20]08, leg. M. Madl"; 1 ♀ (NMW): "I. Rodrigues/ \ Rivière Acacia, \ 28.5.1995, Schöller \ leg./Coll. HENDRICH \ Hydraena balfourbrownei \ det. M. Jäch 1996"; 1 ♀ (BMNH): "Rodrigues I. \ viii-xi,1918. \ H.J.Snell and H.P.Thomasset \ [blue square label] \ Knisch det. 1922 \ Hydraena nov. spec. \ Unicum. \ Brit. Mus. \ 1957-442".

DESCRIPTION OF FEMALE PYGIDIAL SCLERITES AND SPERMATHECA:

Female tergite X (Fig. 3c) transverse, subsemicircular, basal margin more or less straight, lateral basal corners rounded, apical margin inconspicuously excised medially; disc sparsely covered with trichoid setae; subapical fringe with vermiform setae.

Gonocoxite (Fig. 3d) strongly transverse; basal condyles strongly produced; apical margin evenly rounded; inner plate basally projecting, condyles longer than those of outer plate, cavae small and transverse.

Spermatheca (Fig. 3e–f): Distal portion rather small, gland conspicuously wrinkled; proximal portion crescentic, with conspicuous crest near distal end.

DISTRIBUTION: Endemic to the island of Rodrigues (Mascarene Islands, Indian Ocean).

Hydraena (Hydraenopsis) legorskyi sp.n.

TYPE LOCALITY: Stream (Rivière Cascade Victoire), ca. 1–2 m wide, flowing through forest, above reservoir, 19°43'34"S 63°27'00"E, southern Rodrigues Island.

TYPE MATERIAL: **Holotype** ♂ (NMW): "MAURITIUS \ Rodrigues, Port Sud Est \ Rivière Cascade Victoire \ 30.4.[20]08, leg. M. Madl". Left antenna and basal two tarsomeres of right middle leg lost; apical three tarsomeres of right middle leg incl. claws glued separately.

DESCRIPTION (male): Habitus as in Fig. 2. Body length: 1.75 mm. Externally, *Hydraena legorskyi* agrees very well with *H. balfourbrownei*.

Males of *Hydraena legorskyi* can be distinguished from those of *H. balfourbrownei* (Fig. 1) by the following external characters: all legs slightly more robust; carina in distal third of anterior face of foretibia more distinct; hind tibia slightly curved.

Aedeagus (Fig. 4): ca. 400 µm long. Main piece moderately long and slender, slightly compressed laterally; deeply emarginate apically, ventral branch longer than dorsal branch; sides slightly sinuous; with one dorso-dextral short seta near base of distal lobe. Distal lobe inserted on right side of dorsal branch of main piece; basally slender, with two moderately large branches, a long angulate dorsal one and a more strongly sclerotized wider one on right side, which is provided with a tube-like thin appendage pointing apicad. Phallobase distinctly asymmetrical. Parameres long and very slender, with few apical setae; right paramere inserted near basal 0.4, not reaching apex of aedeagus; left paramere inserted slightly more proximal, more curved than right one, reaching apex of main piece.

The aedeagus of *Hydraena balfourbrownei* (Fig. 3a–b) can be distinguished from that of *H. legorskyi* mainly by the following characters: Main piece conspicuously constricted near middle; ventral apical branch of main piece more slender; parameres inserted further distal; right paramere shorter.

DISTRIBUTION: Known only from the type locality.

ETYMOLOGY: This species is named in honour of Franz Johann Legorsky, long-time president of the Vienna Coleopterists Society, to commemorate his 90th birthday (see also JÄCH 2012).

Discussion

The discovery of a second species of *Hydraena* on such a small and remote oceanic island (about 1,500 km east of Madagascar) is quite surprising, particularly since there is no species known from Mauritius (about 900 km east of Madagascar) so far. Even the island of Réunion (about 700 km east of Madagascar) has only one species. Even more surprising is the fact that only one specimen has been discovered, compared to more than 60 specimens of *H. balfourbrowniei*.

Both species were found in the same locality.

The female of *H. legorskyi* still remains undescribed. All the females examined from Rodrigues are here tentatively assigned to *H. balfourbrowniei*. Therefore, females of *H. legorskyi* and *H. balfourbrowniei* are either indistinguishable morphologically or the female of the former has not been collected yet. Therefore, all identifications of single females and especially those from the type locality should be considered with some reservation.

Three specimens have been sent to I. Ribera (voucher number IBE-RA652) for DNA sequencing.

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