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Review of the genus *Pseudolathra* Casey, 1905 (Coleoptera: Staphylinidae: Paederinae) of Réunion Island

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Abstract

A review of all species of the genus *Pseudolathra* Casey, 1905 known from Réunion is presented. Five species are recorded and one species, *Pseudolathra janaki* Kocian & Hlaváč, **sp. n.,** is described. New records for *Pseudolathra gomyi* (Lecoq, 1986) are given. Four species are illustrated and a key to all species is given.

Key words: Coleoptera, Staphylinidae, Paederinae, Lathrobiina, *Pseudolathra*, Réunion, new species

Introduction

The genus *Pseudolathra* Casey, 1905 with 100 described species (Newton pers. database), is a large genus of the subtribe Lathrobiina with a world-wide distribution, although the genus is absent from Australia, Oceania and New Zealand. The highest diversity of the genus is in the Holarctic and Oriental regions where 84 species are known. Two species are known from sub-Saharan Africa, three species from the Neotropical region, seven from New Guinea and five from Madagascar and Réunion, including the new species described here. However, the real number of species of the genus and its geographical distribution is only tentative because many species were described in other genera of Lathrobiina, namely *Lathrobium* Gravenhorst, 1802 and *Lobrathium* Mulsant & Rey, 1878 and not all have been revised (Assing 2013). Therefore further transfers from these genera to *Pseudolathra* are likely. A key to west Palaearctic species was provided by Coiffait (1982), and east Palaearctic and Oriental species were revised and keyed by Assing (2012, 2013).

Four species of *Pseudolathra* are known from Réunion Island. The first two species were described by Jarrige: *P. pauliani* (Jarrige, 1957) and *P. hamoni* (Jarrige, 1957). A third species, *P. keiseri* (Scheerpeltz, 1961), described from Madagascar, was recorded from Réunion by Janák (2014) and the fourth, *P. gomyi* was described by Lecoq (1986). The aim of this paper is the description of a fifth species, which was collected by the authors on their collecting trip to the island in February 2018.

Material and methods

Collections

NMP Národní Muzeum Praha, Czech Republic (J. Hájek)
MHNR Muséum d'Histoire Naturelle de La Réunion, Saint-Denis, Réunion (G. Cazanove)
cKoc private collection of Matúš Kocian, Prague, Czech Republic
cJan private collection of Jiří Janák, Rtyně nad Bílinou, Czech Republic

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Permanent preparations of abdominal segments and aedeagi were made in PVP (Polyvinylpyrrolidone). The morphological studies and measurements were conducted using a STM 822 5410 stereomicroscope. Drawings of abdominal segments and aedeagi were made using a Meopta microscope and a Zeiss drawing tube. Habitus images were taken with a Canon EOS 5D mark II in combination with a Canon MP-E65 1–5x macro lens.

The study was carried out under the following research permits: Arrêté No DIR-I-2017-097 issued on 7th June 2017 by Parc national de La Réunion.

Results

Pseudolathra pauliani (Jarrige, 1957)

Lobrathium (Pseudolathra) pauliani Jarrige, 1957: 106 (type locality: La Réunion, caverne Bateau, plaine des Cafres).
Lobrathium (Pseudolathra) pauliani: Lecoq, 1986: 433; Gomy, 2000: 47.
Lobrathium pauliani Lecoq, 2012: 96.
Pseudolathra (Madecalobrathium) pauliani: Lecoq, 2017: 206.

Remarks. The cavernicolous species is endemic to Réunion, recorded only from Caverne Bateau and known from several specimens. The illustrations of the habitus of the adult, the aedeagus and the larva were published by Lecoq (1986, 2012). The material of this species was not available for this study.

Distribution. Réunion.

Pseudolathra keiseri (Scheerpeltz, 1961)

Figs 1–4, 20.

Lathrobium (Madecalobrathium) keiseri Scheerpeltz, 1961: 251 (type locality: Madagascar, Soanierana-Ivongo).
Pseudolathra keiseri: Janák, 2014: 475.
Pseudolathra (Madecalobrathium) keiseri: Lecoq, 2017: 207.

Material studied. 6 specimens (4♂♂, 2♀♀): Réunion, St. Paul – Grand Étang, 29.12.1991 – 1.1.1992, J. Janák lgt. (cJan).

Remarks. Originally described from Madagascar, this is the only macropterous *Pseudolathra* known from Réunion so far. Male sternite VII (Fig. 4) is normally pubescent, lacking modified setae, similar to *P. hamoni* but with sparser pubescence particularly in the middle of posterior margin. The excision of the posterior margin of male sternite VIII (Fig. 20) is relatively deeper than in *P. hamoni*. The aedeagus (Figs 1–3) is characterised by two long processes attached to an asymmetrical apical portion of the ventral process of the aedeagus, a unique feature among Madagascan *Pseudolathra*. Habitus photos of this species were published by Janák (2014).

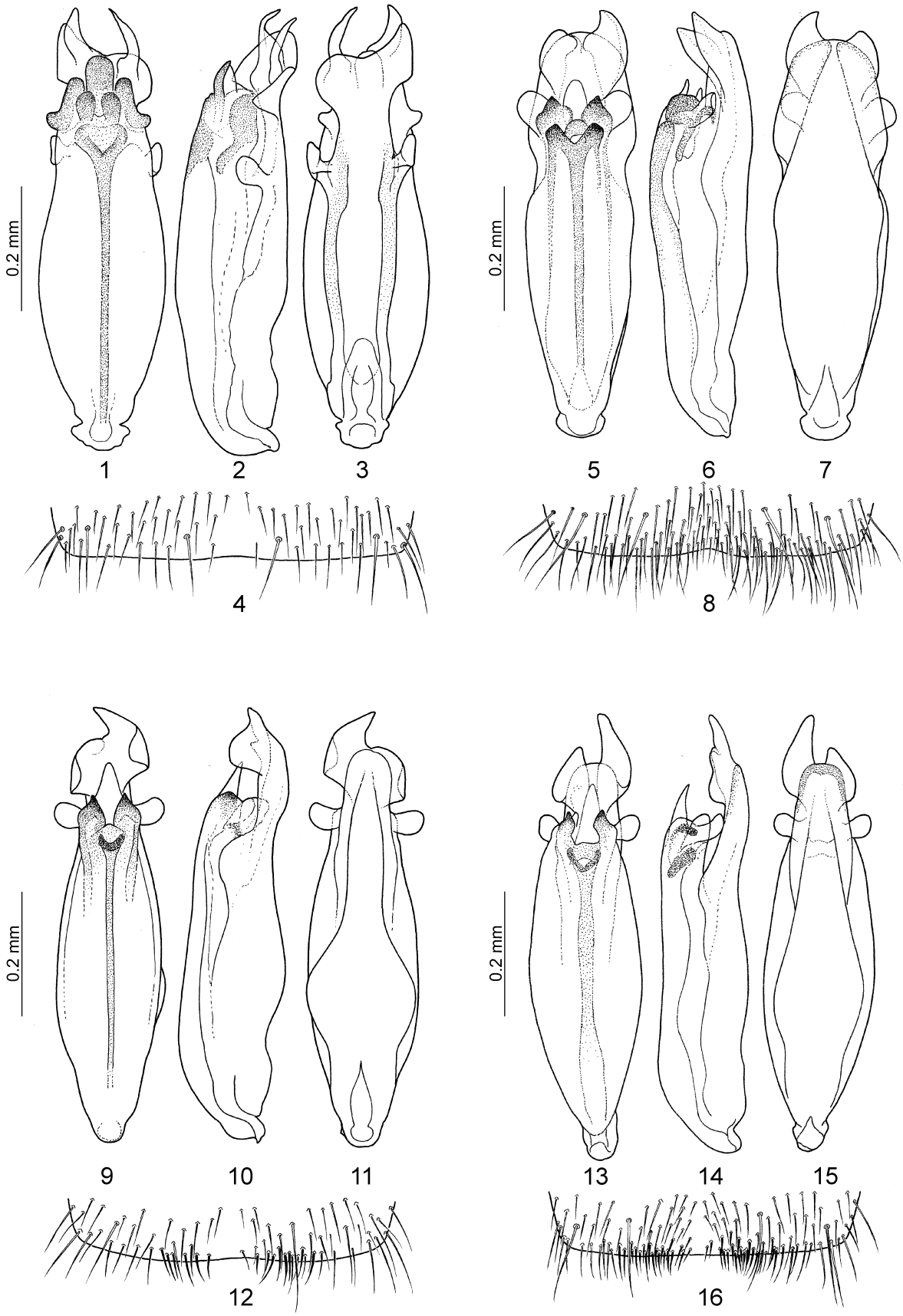
Distribution. Madagascar, Réunion.

Pseudolathra hamoni (Jarrige, 1957)

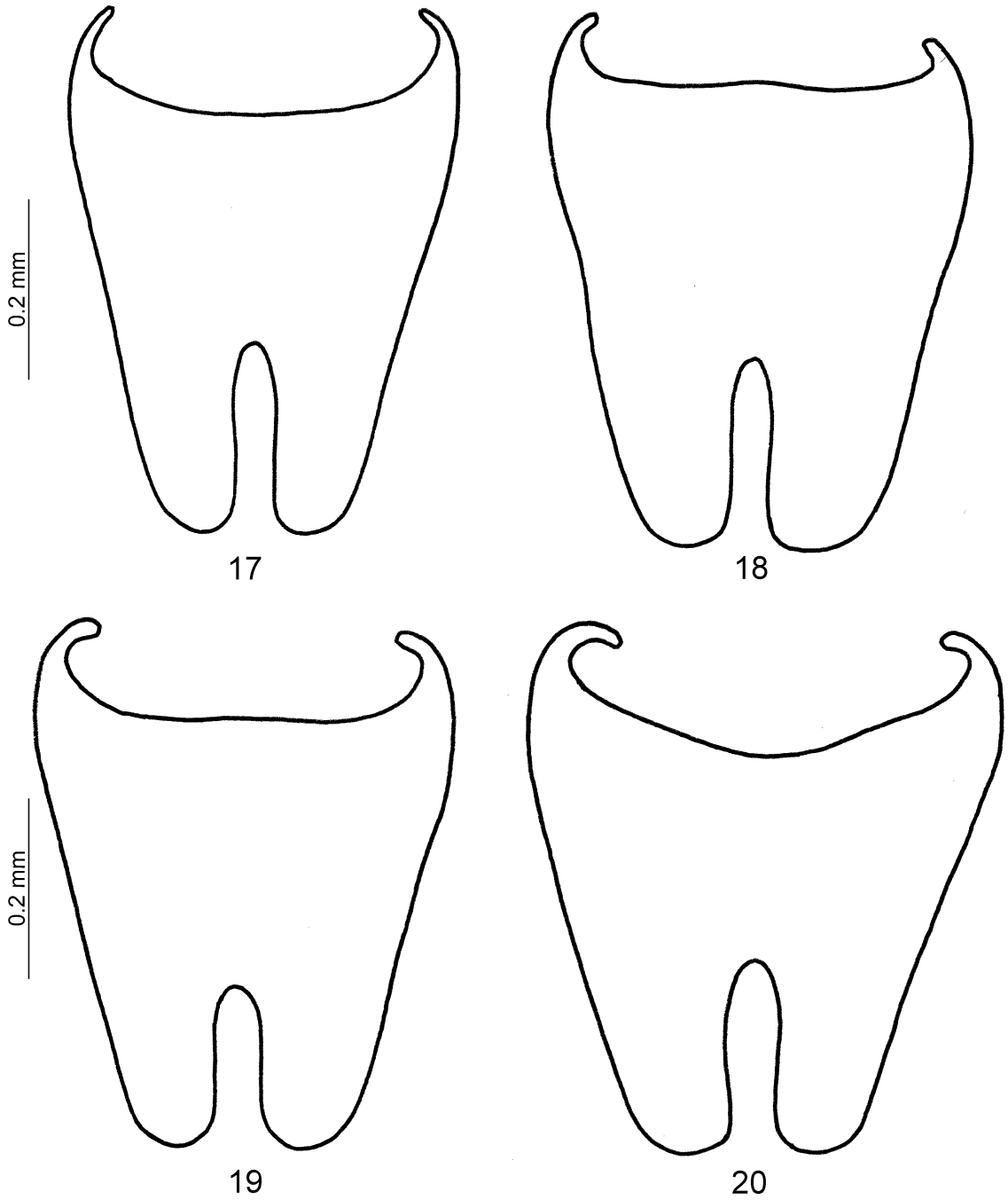
Figs 5–8, 19.

Lobrathium (Pseudolathra) hamoni, Jarrige, 1957: 106 (type locality: La Réunion, forêt de Bélouve).
Lobrathium hamoni: Lecoq, 1986: 433.
Lobrathium (Lobrathium) hamoni: Gomy, 2000: 47.
Pseudolathra hamoni: Janák, 2014: 474.
Pseudolathra (Madecalobrathium) hamoni: Lecoq, 2017: 207.

Material studied: Réunion, Route de Maido, 1700–1800m, 3.–10.1.1992, J. Janák lgt. (3♂♂, cJan); same labels but 7.–12.1.1992, 1600–1700m (1♂, cJan); Réunion, Forêt de Bébour, Plaine des Marsouins, 1200–1400m, 23.–27.12.1991, J. Janák lgt. (1♂, cJan).



FIGURES 1–16. *Pseudolathra keiseri* (1–4), *P. hamoni* (5–8), *P. gomyi* (9–12), *P. janaki* sp. n. (13–16). Aedeagus from dorsal (1, 5, 9, 13), lateral (2, 6, 10, 14) and ventral (3, 7, 11, 15) view; posterior margin of male sternite VII (4, 8, 12, 16). Scale bar: 0.2 mm.



FIGURES 17–20. Male sternite VIII, schematic. *Pseudolathra janaki* **sp. n.** (17), *P. gomyi* (18), *P. hamoni* (19), *P. keiseri* (20). Scale bar: 0.2 mm.

Remarks. This is a species endemic to Reunion, with strongly reduced wings. It is very similar to *P. gomyi* and *P. janaki* sp. n. but differs from both by having a narrower head, posterior angles more rounded, and antennae and legs paler. The posterior margin of male sternite VII (Fig. 8) is more concave in the middle, evenly pubescent, lacking short, dark modified setae. The posterior margin of male sternite VIII (Fig. 19) is deeply excised as in *P. gomyi* and *P. janaki* sp. n., but the excision is shorter and wider. In ventral view, the ventral process of the aedeagus (Figs 5–7) is apically much wider in ventral view and the apex is formed by two short asymmetrical semi-membranous processes. The ear-like lateral processes of the dorsal plate of the aedeagus do not extend beyond the overall lateral profile of the aedeagus when viewed ventrally or dorsally.

Distribution. Réunion.

***Pseudolathra gomyi* (Lecoq, 1986)**
Figs 9–12, 18, 23.

Lobrathium gomyi Lecoq, 1986: 433 (type locality: La Réunion, plaine des Cafres, Notre Dame de la Paix).
Lobrathium (Lobrathium) gomyi: Gomy, 2000: 47.
Pseudolathra (Madecalobrathium) gomyi: Lecoq, 2017: 206.
Pseudolathra gomyi: Janák, 2014: 474 (missidentification).

Material studied: 1♂, 1♀: LA RÉUNION, 12.II.2018, above La Plaine des Cafres, sifting in forest, 1580 m, -21.241227S; 55.585655E, Hlaváč P. & Kocian M. lgt., (cKoc).

Remarks. This is an endemic species to Réunion, with strongly reduced wings. It is very similar to *P. janaki* sp. n. and differs from late only in male terminalia. In contrast to *P. janaki* sp. n., male sternite VII (Fig. 12) is with less numerous short dark modified setae along the posterior margin. Male sternite VIII (Fig. 18) is similar to that of *P. janaki* sp. n. The ventral process of aedeagus (Figs 9–11) is broader in its basal part, as wide as the dorsal plate, and the apex is distinctly asymmetrical. The ventral process of the aedeagus in its basal portion is more protuberant in lateral view. The ear-like lateral processes of the dorsal plate of the aedeagus clearly extend beyond the overall lateral profile of the aedeagus when viewed ventrally or dorsally.

The material determined as *P. gomyi* and published by Janák (2014) is in fact *P. janaki* sp. n.

Distribution: Réunion.

***Pseudolathra janaki* Kocian & Hlaváč, sp. n.**
Figs 13–17, 21.

Description. Body (Fig. 21) length 8.5–8.8 mm, blackish-brown, legs and antennae dark brown, tarsi and palpi slightly paler, yellowish-brown. Head and pronotum with blue-metallic sheen.

Head 0.92–1.02 mm wide, 0.97–1.0 mm long (measured from anterior margin of clypeus to post-occipital suture). Eyes in dorsal view approximately twice shorter than temples. Temples moderately tapering posteriad, posterior angles distinctly marked. Lateral and posterior part of head densely and deeply punctate, median part smooth, with some coarse frontal punctures. Surface smooth, weakly shiny, with very fine and indistinct microsculpture. Antennae 2.2 mm long, filiform, all antennomeres longer than wide.

Pronotum 1.07–1.12 mm broad, 1.27–1.40 mm long; 1.15–1.24 times longer than wide. Dorsal part with two rows of punctures, discal area impunctate, shiny; and with sparse punctation among lateral and dorsal rows of punctures. Microsculpture of pronotum and head identical.

Elytra 0.97–1.06 mm wide, widest in posterior angles, 0.61–0.66 times shorter than pronotum along suture. Surface matt, with distinct leather-like microsculpture, dorsum with lateral, sutural and four discal rows of shallow punctures. Apical margin bordered with row of short setae. Wings strongly reduced.

Abdomen as wide as elytra, laterally parallel, from segment VI slightly tapering toward apex. Tergites finely and relatively densely punctate, only tergite VIII sparsely punctate. Posterior margin of tergite VII without palisade fringe. Surface with fine transverse microsculpture.

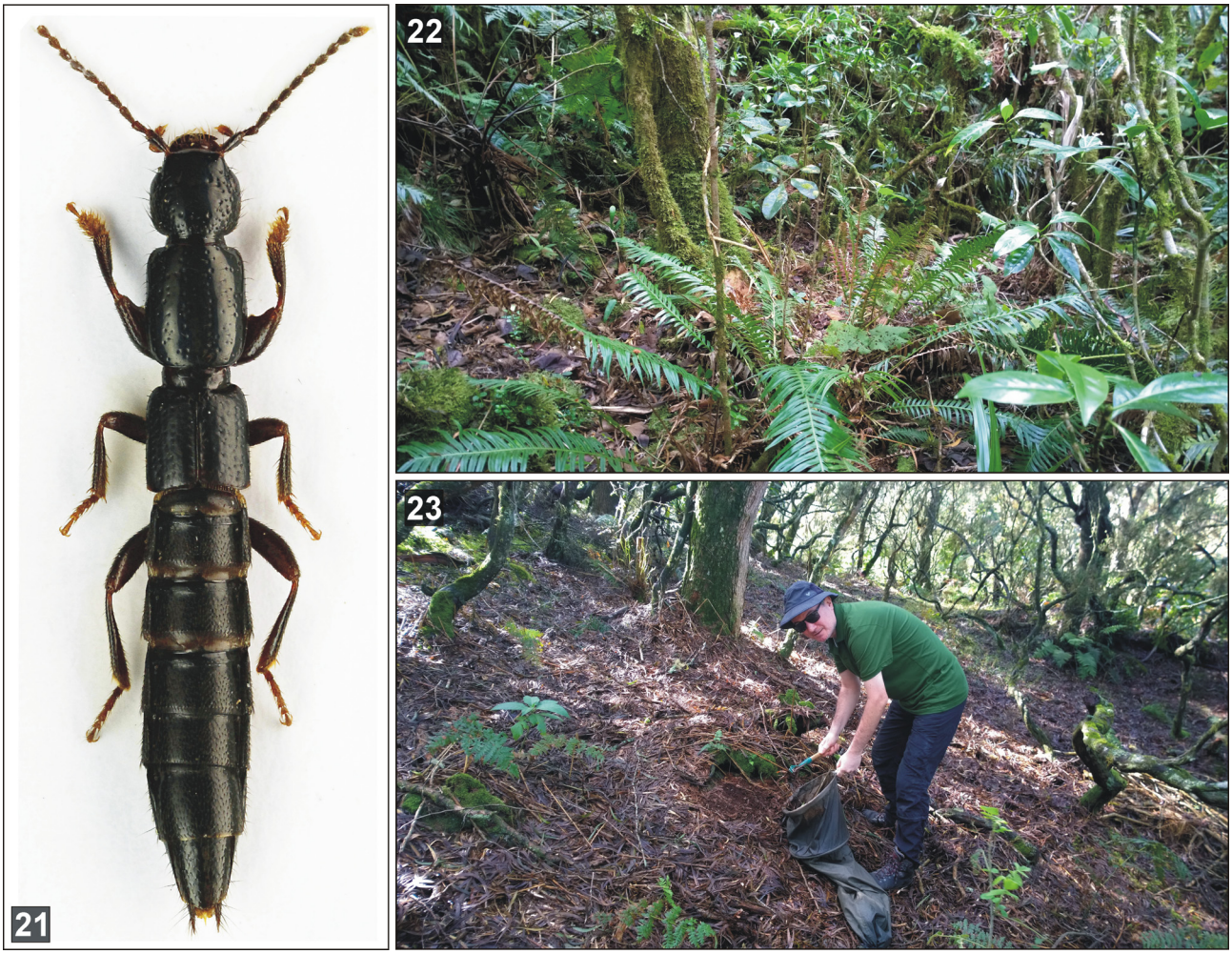
Male: Male with sternite VII (Fig. 16) densely pubescent, posterior margin in the middle straight, bordered with numerous dense modified short dark setae. Sternite VIII (Fig. 17) with sparse pubescence, posterior excision narrow and very deep. Aedeagus (Figs 13–15) well sclerotized, ventral process in ventral view in basal portion distinctly narrower than dorsal plate, with distinctly asymmetrical apex. Dorsal plate in apical part laterally with two symmetrical ear-like processes.

Female: Female sternite VII and VIII without conspicuous modifications.

Type material: Holotype, male: LA RÉUNION, 14.–21.II.2018, Forêt de Bébour, 1360 m, sifting in forest, -21.110868S; 55.565811E, Hlaváč P. & Kocian M. lgt. (NMP).

Paratypes (8): 2♂♂, 2♀♀: the same data as holotype, (MHNR, cKoc); 1♂, 3♀♀: Réunion, 23.–27.12.1991, Forêt de Bébour – Plaine des Marsouins, 1200–1400 m, J. Janák lgt. / *Lobrathium gomyi* Lecoq, J. Janák det. 1992 (NMP, cJan).

Two male paratypes are slightly immature, with paler, light brown colouration.



FIGURES 21–23. Habitus of *Pseudolathra janaki* **sp. n.** (21); type locality of *P. janaki* **sp. n.**, Forêt de Bébour (22); locality of *P. gomyi*, above La Plaine des Cafres (23).

Etymology: The species is dedicated to Jiří Janák (Rtyně nad Bílinou, Czech Republic) specialist on Staphylinidae and the collector of several paratypes.

Distribution: Réunion.

Remarks. *P. janaki* sp. n. is closely related to *P. gomyi* and differs only by the shape of the aedeagus and male secondary sexual characters (see Remarks for *P. gomyi* and the key to species).

All specimens were collected in the central part of Réunion, Forêt de Bébour, by sifting forest litter in indigenous montane forest (Fig. 22).

Key to the *Pseudolathra* species of Réunion

1 Microphthalmous species, eyes reduced . . . . . *P. pauliani* (Jarrige, 1957)

- Eyes well developed 2

2 Elytra at suture as long as or longer than pronotum. Posterior margin of tergite VII with palisade fringe. Wings fully developed . . . . . *P. keiseri* (Scheerpeltz, 1961)

- Elytra at suture distinctly shorter than pronotum. Posterior margin of tergite VII without palisade fringe. Wings strongly reduced 3

3 Head narrower and more oblong, posterior angles more rounded. Head and pronotum with surface strongly shining. Legs and antennae paler, yellowish. Posterior margin of male sternite VII without modified short dark setae (Fig. 8). Aedeagus as in Figs 5–7. . . . . *P. hamoni* (Jarrige, 1957)

- Head wider, posterior angles distinctly marked. Head and pronotum with surface less strongly shining, matt with weak microsculpture. Legs and antenna darker, brownish. Posterior margin of male sternite VII with modified dark and shorter setae (Figs 12, 16) 4

4 Modified short dark setae on posterior part of male sternite VII less numerous. Aedeagus as in Figs 9–11 . . . . . *P. gomyi* (Lecoq, 1986)

- Modified short dark setae on posterior portion of male sternite VII more numerous and denser. Aedeagus as in Figs 13–15 . . . . . *P. janaki* sp. n.

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