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## New species and new records of Staphylinidae from Reunion Island (Coleoptera: Staphylinidae)

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# Taxonomy, new species, new records, Coleoptera, Staphylinidae, Aftrotropical Region, Reunion, Mascarene Islands

Abstract. Seventy-five species of Staphylinidae have been recorded from Reunion Island. Three new brachypterous species, *Medon lecoqi* sp. nov., *Pseudomedon borbonicus* sp. nov. and *Dactylaptatus taborskyi* sp. nov. are described, illustrated and distinguished from related species. The following synonymy is proposed: *Erymus gracilis* (Fauvel, 1895) = *Leptacinus gomyi* Lecoq, 1990, syn. nov. Two species originally described in *Lathrobium* Gravenhorst, 1802 are transferred to *Pseudolathra* Casey, 1905, which resulted in new combinations as follows: *Pseudolathra gomyi* (Lecoq, 1987) and *P. keiseri* (Scheerpeltz, 1961); *Madecalobrathium* Scheerpeltz, 1961 originally described as a subgenus of *Lathrobium* Gravenhorst, 1802 is transferred as a subgenus to genus *Pseudolathra* Casey, 1905. Four species are recorded from Reunion island for the first time: *Palaminus montanus* Cameron, 1947, *Pachycorynus quadriceps* Cameron, 1926, *Pseudolathra keiseri* (Scheerpeltz, 1961), and *Thyreocephalus jocheni* Bordoni, 2002 (previously recorded as *T. anachoreta* (Erichson, 1834)). Additional data on distribution, bionomics and variability are given.

#### INTRODUCTION

The family Staphylinidae is the largest family of the order Coleoptera with more than 58 300 species (Grebennikov & Newton 2009, Solodovnikov et al. 2013) and nearly 3 500 genera grouped into 33 subfamilies. Staphylinidae of various islands were frequently studied and catalogued in the past, but only in few cases the catalogues were critically updated, as for example - the Madeira archipelago (Assing & Schülke 2006b).

Reunion Island creates with remaining two islands - Mauritius and Rodriguez - the Mascarene archipelago situated in the Indian Ocean about 700 km east of Madagascar. Reunion is the youngest island of the archipelago with its age of about 2.1 million years.

The first comprehensive publication on beetles fauna of Reunion (historical name: Ile Bourbon) was issued by Charles Coquerel (1866). He listed eight species of the family Staphylinidae. Albert Fauvel, Max Bernhauer and Malcolm Cameron published additional new species at the beginning of twentieth century. French entomologists Jean Vadon and Yves Gomy made rich collections in the Mascarene islands after the World War II. Jean Jarrige (1957) started study of their collections. At present, there are detailed publications on Staphylinidae of Reunion concerning subfamilies Osoriinae (Coiffait 1979), Euaesthetinae (Orousset 1988), Paederinae (Lecoq 1986, 1987, 1993, 1996, 2012, Frisch 2005, Janák & Lecoq 2007), Staphylininae (Lecoq 1990, Hromádka 2010, 2011) and Aleocharinae (Pace 1984a, 1984b, 2008, 2011). Subfamilies Piestinae, Oxytelinae, Omaliinae and Tachyporinae are still marginalized and have not yet been revised to a sufficient extent.

Gomy (2000) listed from Reunion Island 163 species of the family Staphylinidae (incl. subfamilies Pselaphinae, Scaphidiinae and Scydmaeninae) with total number of collected

specimens - about 2800. Poussereau et Lecoq (2008, 2010) published records of additional 15 species. Frisch (2005) described two species occurring in Reunion and excluded one previously recorded species, Janák & Lecoq (2007) described one species and Pace (2008, 2011) described three additional new species.

Three species are described in this paper as new and additional three species are recorded from Reunion for the first time. Comments to some species, where nomenclatorial changes were made after Gomy (2000), are added. The total number of species of Staphylinidae hitherto recorded from Reunion is of 189.

#### MATERIAL AND METHODS

In this paper I present results of studies of more than 3000 specimens that I collected over a six-weeks entomological trip to Reunion in December 1991 - January 1992. The subfamilies Aleocharinae, Pselaphinae, Scaphidiinae and Scydmaeninae are not treated here and all the collected specimens of these four subfamilies together with duplicate specimens of other subfamilies were deposited in the Museum für Naturkunde, Berlin.

Dry-mounted specimens were studied under binocular stereomicroscope MBS 10. Aedeagi and genital segments were studied under Zeiss Laboval compound microscope in transmitted light. Line drawings were made using the ocular grid of above mentioned microscopes. Measurements were taken using an ocular scale. The labels of specimens are given in their original version only if quoted in "", otherwise they are given in simplified way.

For the species descriptions, total length of the body was measured from the tip of closed mandibles to the apex of abdomen; length of forebody - from the tip of mandibles to the posterior margin of elytra; length of head - from neck constriction to the anterior margin of the clypeus; width of head - across the widest part of head including eyes.

Species are listed in subfamilies in alphabetic order. Some species were not identified to species level due to lacking revisions or confusing interpretation of species in some genera, even though these species are listed here and can be used in future research.

The following acronyms are used to indicate depository of specimens:

JJRC private collection of Jiří Janák, Rtyně nad Bílinou, Czech Republic;

MFNB Museum für Naturkunde, Berlin, Germany (Manfred Uhlig);

MHNP Muséum d'Histoire naturelle, Paris, France.

Abbreviations: n- number of specimens measured, L- length, W- width, M- arithmetic mean, R- ratio, HT- holotype, PT- paratype.

## LIST OF LOCALITIES

Position of the localities are indicated in Fig. 1.

1. Bras des Chèvrettes, 20°58'S, 55°37'E, altitude 100-200 m a.s.l., 16.-19.xii.1991,

a: under decaying banana (Fig. 29),

b: in decaying banana trees (Figs 30, 31),

c: sifting of plant debris in sugar cane field,



Fig.1. List of localities. 1- Bras des Chèvrettes, 2- Saint André, 3- Bourbier, 4- Takamaka, 5- Forêt de Bébour, Plaine des Marsouins, 6- Saint Paul, 7- Fleurimont, 8- Route de Maïdo, 9- Ravine de Saint Gilles, 10- Saint Gilles les Bains.

- d: under bark at brook bank,
- e: in decaying waste and rotten mango fruit,
- f: at light;
- **2.** Saint André, 20°59'S, 55°41'E, altitude 10-100 m a.s.l., 17.xii.1991, in decaying waste;
- **3. Bourbier**, 21°03′S, 55°40′E, altitude 100-200 m a.s.l., 20.xii.1991, in dung dump in a field;
- **4.** Takamaka (Fig. 33), 21°05′S, 55°37′E, altitude 500-900 m a.s.l., 21.-23.xii.1991, rain forest of low altitude,
  - a: under bark,
  - b: under stones and in rotten wood,
  - c: sifting of moss,
  - d: in rotten wood and rotten trunks of tree ferns;

- 5. Forêt de Bébour, Plaine des Marsouins (Figs 32, 34), 21°06'S, 55°34'E, altitude 1200-1400 m a.s.l., 23.-27.xii.1991, montainous rain forest (=forêt de ,,bois de couleurs" des hauts) with tree ferns and *Pandanus* (Cadet 1991),
  - a: sifting of forest litter,
  - b: beating,
  - c: under bark,
  - d: in mushrooms;
- 6. Saint Paul, 21°01'S, 55°16'E, altitude 10-50 m a.s.l., 29.xii.1991-1.i.1992,
  - a: treading in swamp (Fig. 35),
  - b: treading at lake shore of Grand Étang,
  - c: Rivière de Bernica (Fig. 38), in cow droppings in pasture,
  - d: in siftings of fallen leaves and plant debris,
  - e: at light,
  - f: in decaying banana trees;
- 7. Fleurimont (Fig. 39), 21°02′S, 55°16′E, altitude 200-400 m a.s.l., 2.i.1992, in siftings of plant debris and litter under introduced bamboo trees;
- 8. Route de Maïdo (Fig. 36), 21°03'S, 55°22'E, 3.-10.i.1992, montane forest (= forêt de Tamarin des hauts) composed of *Acacia heterophylla* and *Nastus borbonicus* (Cadet 1991),
  - a: 1700-1900 m a.s.l., sifting of forest litter,
  - b: 1600-1700 m a.s.l., sifting of litter under bamboo at the edge of forest,
  - c: 1300-1900 m a.s.l., in cow droppings,
  - d: 2000-2100 m a.s.l., sifting of moss;
- **9.** Ravine de Saint Gilles, 21°03′S, 55°15′E, 13.-14.i.1992 and 22.-23.i.1992, altitude 100-200 m a.s.l.,

a: treading at shore of lake Bassin des Aigrettes (Fig. 37) (growth of *Colocasia antiquorum*),

b: sifting of fallen leaves of introduced bamboo and treading of a brook banks near lake Bassin Cormoran (Figs 40, 41),

c: in big pile of decaying plant debris above lake Bassin Cormoran;

10. Saint Gilles les Bains, 21°05'S, 55°14'E, 15.-21.i.1992, altitude 0-20 m a.s.l.,

a: sifting of plant debris,

b: under seaweed.

Localities 1-5 are situated on the part windward side of the island, localities 6-10 on the leeward side of the island.

## RESULTS

Records are numbered according to the list of localities, number of collected specimens is indicated in parentheses "()".

## Tachyporinae

*Cilea limbifera* (Motschulsky, 1858) - 6c (23), 8c (1) *Coproporus* sp. 1 - 9b (1)

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*Coproporus* sp. 2 - 8a (1), 9a (3), 9b (27), 9c (13) *Coproporus* sp. 3 - 1a (8), 1c (9), 1e (2) *Sepedophilus* sp. - 5d (1), 8a (3)

#### Osoriinae

Clavilispinus jeani Herman, 2001 - 1d (1) Holotrochus etiennei Coiffait, 1979 - 4c (3) Lispinus microcephalus Fauvel, 1866 - det. Lecoq - 4c (8) Lispinus propinquus Cameron, 1936 - det. Lecoq - 4c (1), 4d (2), 5c (10) Nacaeus impressicollis (Motschulsky, 1857) - 1a (1), 1b (28), 1c (12), 1e (1), 6f (2), 9c (2) Neosorius rufipes (Motschulsky, 1857) - 6a (12)

#### Oxytelinae

Anotylus exasperatus (Kraatz, 1859) - 9b (2)

Anotylus insignitus (Gravenhorst, 1806) - 6c (18)

Anotylus nitidifrons (Wollaston, 1871) - 1d (2), 6d (1)

Anotylus pygmaeus (Kraatz, 1859) - 6c (1), 9c (1)

Anotylus vinsoni (Cameron, 1936) - 9 b (1)

*Oxytelus fusciceps* Fauvel, 1898 - 1a (12), 1d (2), 1f (13), 3 (1), 5d (3), 6c (5), 6e (1), 8d (1), 9a (1), 9b (4), 9c (2)

Oxytelus incisus Motschulsky, 1857 - 1f (1), 6c (28), 9b (8), 9c (8)

*Oxytelus* sp. 1 - 1f (1), 6c (5), 8c (5)

*Oxytelus* sp. 2 - 6c (1)

*Oxytelus* sp. 3 - 6c (67)

## Paederinae

Astenus borbonicus Janák & Lecoq, 2007 - 8a (19): holotype and paratypes Astenus distinctus Cameron, 1947 - 6b (4) Astenus leptocerus (Eppelsheim, 1895) - 9b (1), 9c (1) Astenus richardi Jarrige, 1957 - 5a (24) Astenus viettei Jarrige, 1957 - 9b (16), 9c (3) Lithocharis nigriceps Kraatz, 1859 - 1f (5), 3 (3), 8a (1), 9b (8), 9c (7) Lithocharis ochracea (Gravenhorst, 1802) - 6c (3), 9b (35), 9c (59), 10a (1) Lithocharis sororcula Kraatz, 1859 - 9b (3), 9c (18) Lithocharis vilis Kraatz, 1859 - 6e (1), 9a (1), 9b (11), 9c (6) Lobrathium gomvi Lecoq, 1986 - 5a (4) Lobrathium hamoni Jarrige, 1957 - 8a (29), 8b (30) Lobrathium keiseri Scheerpeltz, 1961 - 6a (159) Medon lecoqi sp. nov. - 5a (1) Medon planus Kraatz, 1859 - 1a (2), 1b (8) Paederus cf. colettae Lecoq, 1987 - 8a (77), 8b (64) Paederus insularis Cameron, 1938 - 5a (20), 5d (1)

Palaminus montanus Cameron, 1947 - 5a (2)

*Pseudomedon borbonicus* sp. nov. - 5a (1)

Phinopilus brincki Fagel, 1963 - 1c (1)

Rugilus lemurianus (Fagel, 1953) - 1a (17), 1f (1), 9a (3), 9b (23), 9c (5)

Scopaeus janaki Frisch, 2005 - 9b (4), 9c (2): paratypes

Scopaeus sundaensis Frisch, 2005 - 9a (1), 9b (17), 9c (5): paratypes

Sunius debilicornis (Wollaston, 1857) - 6d (1), 7 (5), 9b (24), 9c (11)

## Staphylininae

Atanygnathus variegatus Lecoq, 1990 - 9a (96) Dactylaptatus taborskyi sp. nov. - 8b (24) Diochus punctipennis (Motschulsky, 1858) - 9b (2) *Erichsonius franzi* Lecog, 1990 - 8b (1  $\mathcal{Q}$ ) *Erichsonius* sp. - 5a  $(1 \ )$ Ervmus gracilis (Fauvel, 1895) - 9b (29), 9c (3) Gabrius fauvelii (Cocquerel, 1866) - 4d (1), 8a (3) Gabrius fimbriolatus (Erichson, 1840) - 6c (2), 9b (3), 9c (2) Gabrius gomvi Lecoq, 1990 - 8a (1), 8b (61) Gabrius macer Lecoq, 1990 - 5a (21), 8a (47), 8b (7) Gabrius rabigoides Jarrige, 1957 - 5a (3), 8a (1) *Gabrius* sp. - 5a  $(1 \ )$ *Gabronthus maritimus* (Motschulsky, 1858) - 2 (1), 6c (91), 7 (2), 9a (46), 9b (247), 9c (196) Gabronthus pygmaeus (Kraatz, 1859) - 6c (1), 9a (3), 9b (85), 9c (15) Gabronthus thermarum (Aubé, 1850) - 9c (2) Neobisnius sp. - 9a (2), 9b (4) Pachycorynus quadriceps Cameron, 1926 - 1b (2) Phacophallus flavipennis (Kraatz, 1859) - 6c (393), 7 (1), 9b (35), 9c (64), 10 (1) Phacophallus pallidipennis (Motschulsky, 1858) - 6c (2), 9b (7), 9c (37) Philonthus crassicornis Fauvel, 1895 - 1a (4), 1c (3), 1e (10) Philonthus discoideus (Gravenhorst, 1802) - 3 (6), 6c (3), 6e (1) Philonthus dilutipes Fauvel, 1898 - 6c (7) *Philonthus flavipes* Kraatz, 1859 - 6c (1  $\mathcal{Q}$ ) Philonthus flavocinctus Motschulsky, 1858 - 1a (3), 1e (2), 9a (13), 9b (2) Philonthus gemellus Kraatz, 1859 - 3 (47), 6c (2) Philonthus longicornis (Stephens, 1832) - 1a (1), 3 (7), 6c (20), 7 (1), 8c (30), 8d (1), 9c (1) Philonthus peliomerus Kraatz, 1859 - 9a (9) *Philonthus peregrinus* Fauvel, 1886 - 1a (62), 3 (13), 6c (5), 9a (6), 9b (1) Philonthus tumulinus Tottenham, 1955 - 3 (1), 6b (2), 9a (1), 9b (1), 9c (1) Remus corallicola (Fairmaire, 1849) - 10b (1) Thyreocephalus jocheni Bordoni, 2002 - 3 (1), 6c (6)

## NOTEWORTHY SPECIES AND NEW SPECIES DESCRIPTIONS

#### Osoriinae

## Nacaeus impressicollis (Motschulsky, 1857)

Lispinus impressicollis (Motschulsky, 1857); Gomy, 2000.

Material examined. "La Réunion: Bras des Chèvrettes, 16.-19.xii.1991, J. Janák lgt.", 42 spec., (JJRC). "La Réunion: Saint Paul, 29.xii.1991, J. Janák lgt.", 2 spec., (JJRC). "La Réunion: Ravine de St. Gilles, Bassin Cormoran env., 13.-14.i.1992, J. Janák lgt.", 2 spec., (JJRC).

Bionomics. Most specimens were collected in fallen banana-trees (Fig. 30).

**Comments.** The species was redescribed by Irmler (2003) and can be differentiated from other species of the genus *Nacaeus* Blackwelder, 1952 by characteristic netlike reticulate elytra and specific shape of spermatheca and aedeagus.

**Distribution.** *Nacaeus impressicollis* has pantropical distribution and in Madagascan Region is hitherto recorded from Madagascar, Mauritius and Reunion (Jarrige 1957, Gomy 2000, Herman 2001).

## Clavilispinus jeani Herman, 2001

Paralispinus piceus Jarrige, 1957; Gomy, 2000.

Material examined. "La Réunion: Bras des Chèvrettes, 16.-19.xii.1991, J. Janák lgt.", 1 spec., (JJRC).

**Bionomic.** The only specimen was collected under bark of a fallen tree at a brook bank situated in a hollow.

**Comments.** The genus *Paralispinus* Bernhauer, 1921 is a primary homonym of the genus *Paralispinus* Eichelbaum, 1913 (synonym of *Lispinus* Erichson, 1839) so the next oldest name, *Clavilispinus* Bernhauer, 1926, a subgenus of *Paralispinus*, replaced the preoccupied name. *Clavispinus piceus* (Jarrige, 1957) is a secondary homonym of *Clavilispinus piceus* Fauvel, 1902 and Herman (2001) proposed a new name for the species described by Jarrige - *Clavilispinus jeani*. The species was originally described on a single specimen from Brûlé de Mare Longue forest near Saint-Philippe, the second specimen was recorded from Bon-Accueil forest near Makes by Poussereau & Lecoq (2008).

**Distribution.** *Clavilispinus jeani* has still been recorded only from three localities in Reunion: Brûlé de Mare Longue, Bon-Accueil and Bras des Chèvrettes.

#### Paederinae

## *Medon lecoqi* sp. nov. (Figs 2, 6, 17, 19-21, 32, 34)

Type locality. Réunion Island, Bébour forest, Plaine des Marsouins.

**Type material.** Holotype (♂): "La Réunion: Forêt de Bébour - Plaine des Marsouins, 23.-27.xii.1991, 1200 - 1400 m, J. Janák Igt.", (JJRC).

**Description.** Brachypterous. Body length 2.9 mm, forebody length 1.7 mm. Elongate, but relatively stout, brownish-red, elytra slightly paler, abdomen reddish-brown, posterior margins of segments VII and segment VIII reddish-yellow (Fig. 2).

Head (Fig. 6) rounded trapezoidal, as long as wide (width/length 1.03), slightly convex. Eyes small, slightly prominent, temples 3.4 times longer than eyes, moderately widened behind, posterior angles largely rounded, base slightly emarginate. Maximum width of head in posterior third. Surface, except for unpunctured median strip in basal half of head, coarsely and moderately densely punctured, interstices between punctures slightly smaller than diameter of puncture. Frons more coarsely and densely punctured than middle part of head. Pubescence semi-erect. Surface shining, without microsculpture. Labrum slightly bilobed, with median carina, without distinct teeth. Mandibles with 3 teeth left and 2 right, basal tooth larger than others. Neck wide, as wide as half of maximum width of head. Antennae moderately short, first segment elongate, as long as segments 2 and 3 together, second segment about 1.4 times as long as wide, third segment as long as second, fifth segment about 1.2 times longer than wide, sixth segment as long as wide, following segment transverse, tenth segment 1.5 times wider than long, last segment egg-shaped, 1.3 times as long as wide.

Pronotum slightly wider than long (width/length 1.04), slightly convex, shorter than head (length of pronotum/length of head 0.90), anterior margin straight, anterior angles obtuse, moderately rounded. Sides distinctly narrowed behind in almost straight line, posterior angles obtuse, straight truncate toward base, base medially slightly emarginate. Surface, except for narrow unpunctured midline, moderately coarsely, densely and rugosely punctured. Pronotum shining, without microsculpture. Scutellum elongate, with sparse transverse mesh.

Elytra trapezoidal, slightly convex, moderately transverse (width/length 1.15), slightly shorter and wider than pronotum (length of elytra/length of pronotum 0.93, width of elytra/ width of pronotum 1.02). Sides markedly widened behind. Surface densely and rather finely punctured. Punctures slightly finer than on pronotum and markedly finer than on head. Interstices between punctures smaller or as large as diameter of puncture. Pubescence yellow, erect, moderately long. Surface slightly shining, finely wrinkled, without microsculpture. Abdomen slightly widened to segment V, finely and densely punctured. Surface with fine microsculpture consisting of fine slightly transverse mesh. Tergite VII without membranous palisade fringe at its posterior margin.

Male. Sternite VII deeply emarginate (Fig. 21). Aedeagus (Fig. 19, 20) 0.45 mm, median lobe narrowed in apical third and with rounded apex.

Female unknown.

**Comparative notes.** *Medon lecoqi* sp. nov. is closely related to *Medon gomyi* Lecoq, 1987 from Reunion and to *M. vinsoni* Cameron, 1947 from Mauritius, but differs by the shape of the aedeagus. The apex of the aedeagus is rounded in *M. lecoqi* sp. nov., pointed in *M. gomyi*, and the narrowed apical part of aedeagus is in *M. vinsoni* markedly longer than in the preceding species. The new species differs externally from *M. gomyi* by smaller eyes, by head more widened behind, by pronotum more narrowed behind and by distinctly transverse elytra. *Medon lecoqi* sp. nov. differs from *M. gomyi* (Figs 3, 7) by smaller eyes, more coarsely punctured head and by shorter and more transverse elytra.

These three species are currently tentatively assigned to *Medon* sensu lato. They differ from other species of the genus by bilobed, edentate labrum (cf. Figs 17, 18 and Coiffait 1984: Fig. 1B).

Etymology. The new species is dedicated to French entomologist Jean-Claude Lecoq.

**Bionomics.** *Medon lecoqi* sp. nov. was collected by sifting of moss and forest litter in indigenous mountane forest (Fig. 32, 34).

**Distribution.** The new species is recorded only from Bébour forest and is endemic to Reunion.

## Paederus cf. colettae Lecoq, 1987

**Material examined.** "La Réunion: Route de Maïdo, 3.-10.i.1992, 1700 - 1800 m, J. Janák Igt.", 33 ♂♂, 44 ♀♀, (MFNB, JJRC, MNHNP), same data, but "7.-12.i.1992, 1600 - 1700 m", 42 ♂♂, 22 ♀♀, (MFNB, JJRC).

**Bionomics.** All specimens were collected by sifting of forest litter in indigenous forest (Fig. 36).

**Comments.** Specimens from Route de Maïdo differ from specimens from Roche Écrite (loc. typ.) by markedly darker, brown pronotum, by darker last 3 segments of abdomen and by slightly lighter legs. In other external characters, the shape of aedeagus and its inner structures, they are similar to this species. Currently I place these specimens tentatively near *P. colettae*.

**Distribution.** *Paederus colettae* is endemic to Reunion and has been hitherto recorded from Roche Écrite and Plaine des Chicots (Lecoq 1987).

#### Palaminus montanus Cameron, 1947

Material examined. "La Réunion: Forêt de Bébour - Plaine des Marsouins, 23.-27.xii.1991, 1200 - 1400 m, J. Janák lgt.", 1  $\Diamond$ , 1  $\Diamond$ , (JJRC).

Binomics. The specimens were collected by sifting in indigenous forest (Figs 32, 34).

**Comments.** Specimens from Reunion differ from specimens from Mauritius slightly in the external characters published in the description (Lecoq 1987: 120): total length larger (3.55 and 3.65 mm), coloration lighter - reddish with only tergites 3-6 brownish, head less transverse (width/length 1.21, 1.26), pronotum slightly transverse (width/length 1.03, 1.08), elytra as wide as pronotum (width of elytra/width of pronotum 1.03, 0.98), but the aedeagus is identical (Lecoq 1987: Fig. 199).

**Distribution.** *Palaminus montanus* has still been recorded only from Mauritius: Mt. Cocotte, Grand Bassin. New species to Reunion.

#### Pseudolathra gomyi (Lecoq, 1987), comb. nov.

Lobrathium gomyi Lecoq, 1987: 433. Lobrathium (Lobrathium) gomyi; Gomy, 2000.

Material examined. "La Réunion: Forêt de Bébour - Plaine des Marsouins, 23.-27.xii.1991, 1200 - 1400 m, J. Janák lgt.", 1 3, 3 9, (JJRC).

**Bionomics.** The species was collected by sifting of moss, forest litter and epiphytic plants in indigenous mountain forest (Figs 32, 34).

**Distribution.** *Pseudolathra gomyi* is endemic to Reunion and has been hitherto recorded from Plaine des Cafres and Bébour forest.

**Comments.** This species is transferred to the genus *Pseudolathra* Casey, 1905, as it has characters currently accepted to be basic for this genus (Coiffait 1982, Assing et Schülke 2006a, Assing 2012) - deflexed sides of elytra with a longitudinal line dorsal of epipleurae, punctation between dorsal series of pronotum and pronotal sides sparse and irregular, body flattened. *Pseudolathra gomyi* together with the following two species *P. hamoni* (Jarrige, 1957) and *P. keiseri* (Scheerpeltz, 1961) represent a separate species group within *Pseudolathra*, formally named as subgenus *Madecalobrathium* Scheerpeltz, 1961 erected for *keiseri*. For that reason *Madecalobrathium* Scheerpeltz, 1961, originally described as subgenus of *Lathrobium* Gravenhorst, 1802, is transferred as a subgenus to the genus *Pseudolathra* Casey, 1905. This group can be characterized mainly by elongate aedeagus and moderately convex body.

#### Pseudolathra hamoni (Jarrige, 1957)

Lathrobium (Pseudolathra) hamoni Jarrige, 1957. Lobrathium hamoni; Lecoq, 1986. Lobrathium (Lobrathium) hamoni; Gomy, 2000.

**Material examined.** "La Réunion: Route de Maïdo, 3.-10.i.1992, 1700 - 1800 m, J. Janák Igt." 5 ♂♂, 24 ♀♀ (MFNB, JJRC), same data, but "7.-12.1.1992, 1600 - 1700 m", 1 ♂♂, 29 ♀♀, (MFNB, JJRC).

**Bionomics.** The species was collected by sifting of forest litter in indigenous forest of *Acacia heterophylla* and *Nastus borbonicus* (Fig. 36).

**Distribution.** *Pseudolathra hamoni* is endemic to Reunion and has been hitherto recorded from Bélouve forest, Rivière des Remprants, Roche Écrite, Télelave forest, plaine de Chicots, and Route de Maïdo.



Figs. 2-9. 2, 6- *Medon lecoqi* sp. nov. (holotype male). 3, 7- *Medon vinsoni* Cam. (male from Mt. Cocotte, Mauritius, Janák lgt.). 4, 8- *Pseudomedon borbonicus* sp. nov. (holotype female). 5, 9- *Pseudolathra keiseri* (Scheerp.) (male from St. Paul). 2-5: habitus; 6-9: head and pronotum.

*Pseudolathra keiseri* (Scheerpeltz, 1961) comb. nov. (Figs 5, 9, 10, 35)

Lathrobium (Madecalobrathium) keiseri Scheerpeltz, 1961: 251.

**Material examined.** "La Réunion: St. Paul - Grand Étang, 29.xii.1991-1.i.1992, J. Janák lgt.", 53 ♂♂, 104 ♀♀, (JJRC, MNHNP, MFNB).



Figs. 10-18. 10- *Pseudolathra keiseri* (Scheerp.) (male from St. Paul). 11-16: *Dactylaptatus taborskyi* sp. nov. (11, 12, 16- holotype male; 13, 14, 15- paratype female). 17- *Medon lecoqi* sp. nov. (holotype male). 18- *Medon vinsoni* Cam. (male from Mt. Cocotte, Mauritius, Janák lgt.). 10- aedeagus, 11- habitus, 12- head and pronotum dorsal, 14- anterior part of head ventral, 15- anterior part of pronotum ventral, 16- male foreleg, 17-18: labrum and mandibles.

**Bionomics.** *Pseudolathra keiseri* was collected by treading vegetation in a swamp near the lake Grand Étang (Fig. 35).

**Comments.** The species was described from Madagascar (type locality: Soanierana-Ivongo in Tamatave region) and only the holotype has been hitherto known (Scheerpeltz 1961). The

aedeagus of this species (Fig. 10) corresponds to the illustration by Scheerpeltz (1961: Fig. 4) and to additional specimens from Madagascar (Janák, unpubl. records).

**Distribution.** *Pseudolathra keiseri* is distributed in Madagascar and Reunion: Grand Étang. New species for Reunion.

## Pseudomedon borbonicus sp. nov.

(Figs 4, 8, 32, 34)

Type locality. Réunion Island, Bébour forest, Plaine des Marsouins.

**Type material.** Holotype ( $\bigcirc$ ): "La Réunion: Forêt de Bébour - Plaine des Marsouins, 23.-27.xii.1991, 1200 - 1400 m, J. Janák Igt.", (JJRC).

**Description.** Brachypterous. Body length 3.8 mm, forebody length 1.9 mm. Elongate, light brownish-red, abdominal tergites slightly darkened in the middle (Fig. 4).

Head (Fig. 8) rounded trapezoidal, slightly longer than wide (length/width 1.02), slightly convex. Eyes small, not prominent, temples about 2.6 times as long as eyes, distinctly widened behind, posterior angles largely rounded, base slightly rounded. Maximum width of head in posterior third. Surface finely and rather densely punctured, interstices between punctures (except for sparsely punctured middle area) smaller than diameter of puncture. Pubescence short, moderately erect, with a few long black setae at sides. Surface dull, with dense microsculpture, consisting of irregular mesh. Labrum slightly emarginate medially, with median elevated area. Mandibles with 2 teeth left and 3 teeth right. Neck moderately wide, as wide as third width of head. Antennae rather long, first segment elongate, as long as segments 2 and 3 together, second segment about twice as long as wide, third segment as long as second and slightly narrower, fifth segment about 1.6 times as long as wide, seventh segment about as long as wide, tenth segments together.

Pronotum rounded oblong, slightly convex, moderately longer than wide (length/width 1.11), slightly longer than head and as wide as it (length of pronotum/length of head 1.09, width of pronotum/width of head 1.00), anterior margin slightly emarginate. Sides slightly rounded in anterior third, before middle slightly emarginate and slightly narrowed in posterior third, posterior angles widely rounded, base straight. Surface finely and densely punctured. Punctures slightly coarser than on head. Interstices between punctures (except for sparsely punctured middle area) slightly smaller than diameter of puncture. Pronotum less shining due to dense punctures, but without microsculpture. Scutellum elongate, with fine punctures and sparse transverse mesh.

Elytra trapezoidal, flat, markedly transverse (width/length 1.18), markedly shorter and moderately wider than pronotum (length of elytra/length of pronotum 0.83, width of elytra/ width of pronotum 1.09). Sides markedly widened behind. Surface finely, densely, rugosely punctured. Interstices at most places slightly smaller than diameter of punctures. Pubescence yellow, moderately long, erect. Elytra with fine hardly visible remnants of microsculpture.

Abdomen rather wide, slightly widened to segment V, finely and densely punctured. Most punctures grouped in short transverse rows. Surface dull with very dense and fine mesh. Basal pubescence moderately long, yellowish. Tergite III-VII with a few longer dark setae Tergite VII without membranous palisade fringe at its posterior margin. Male unknown. Female. Sternite VIII largely rounded posteriorly.

**Comparative notes.** *Pseudomedon borbonicus* sp. nov. is remarkable by its small eyes and short elytra. The new species is closely related to *P. griveaudi* Jarrige, 1968, described from Comoro Island (Grande Comore), but differs by larger size (3.8 mm compared with 3.2 mm in *P. griveaudi*), larger eyes and shorter first segment of antenna in relation to following segments. *Pseudomedon borbonicus* sp. nov. differs markedly from the only one species of the genus hitherto recorded from Reunion - *P. gomyi* Jarrige, 1968 - by brachyptery with elytra markedly transverse.



Figs. 19-28. 19-21: *Medon lecoqi* sp. nov. (holotype male). 22-24: *Dactylaptatus taborskyi* sp. nov. (holotype male). 25-28- *Neobisnius* sp. (males from Bassin Cormoran). 19, 22, 25, 26- aedeagus ventral; 21- sternite 9; 23, 28- tergite 10, 24- sternite 9; 27- apical part of sternite 9. Scale: 0.2 mm (19=20), 0.1 mm (21, 25 = 26-28), 0.5 mm (22 = 23, 24).

**Etymology.** The new species is named after the historical name of Reunion - Ile de Bourbon.

**Bionomics.** *Pseudomedon borbonicus* sp. nov. was collected by sifting of moss and forest litter and epiphytic plants in indigenous mountane forest (Fig. 32, 34).

**Distribution.** The new species is recorded only from Bébour forest and is endemic to Reunion.

## Staphylininae

#### Dactylaptatus taborskyi sp. nov.

(Figs 11-16, 22-24, 36)

Type locality. Reunion Island, Route de Maïdo.

**Type material.** Holotype ( $\eth$ ): "La Réunion: Route de Maïdo, 7.-12.i.1992, 1600 - 1700 m, J. Janák lgt.", (JJRC). Paratypes: same data as holotype, 4  $\eth \eth$ , 19  $\Im \diamondsuit$ , (JJRC, MNHNP, MFNB).

**Description** (n = 10): Brachypterous, hind wings reduced to remnants about quarter as long as elytra. Body length 5.9-7.1 mm (M = 6.6 mm, HT = 6.7 mm), forebody length 3.1-3.4 mm (M = 3.2 mm, HT =3.4 mm), elongate, brownish-red, abdomen brown, the tip up to posterior margin of eighth segment brownish-yellow (Fig. 11). Palpi, legs and first three segments of antennae brownish-yellow, remaining segments brown.

Head (Fig. 12) elongate, about 1.3 times as long as wide (length/width 1.28-1.40, M = 1.34. HT = 1.29), moderately convex, between eyes slightly flattened. Eyes small, flat, not prominent, temples about 5 times as long as eves (R = 4.33-5.68, M = 5.09, HT =4.91), slightly widened behind, posterior angles largely rounded, base moderately rounded. Maximum width of head in posterior third. Surface, except for unpunctured frons, rather finely and sparsely punctured, interstices between punctures 3-5 times as large as diameter of puncture, puncturation denser between tips of ocular grooves, here interstices about twice as large as diameter of puncture. Head moderately shining, with microsculpture consisting of sparse transverse waves, from with variable mesh - slightly longitudinal or transverse. Labrum bilobed, markedly emarginate medially. Frontal grooves very superficial and short, slightly visible. Ocular grooves rather deep, reaching to the posterior margin of eyes. Neck as wide as two sixth of maximum width of head. Antennae relatively short, first three segments shining, following segments dull, with very short and dense pubescence, first segment slightly longer than segments 2 to 5 together, second segment about twice as long as wide, third segment as long as second, twice as long as wide, following segments transverse, fifth segment about 1.6 times as wide as long (width/length 1.21-1.81, M = 1.58), tenth segment about twice as wide as long (width/length 1.81-2.05, M = 1.95), last segments stout, 1.3 as long as wide, apically pointed.

Pronotum elongate, convex, about a half longer than wide (length/width 1.48-1.57, M = 1.53, HT = 1.48), longer than head and as wide as head (length of pronotum/length of head 1.13-1.21, M = 1.16; width of pronotum/width of head 0.99-1.03, M = 1.02), anterior margin rounded towards obtuse anterior angles. Sides markedly widened behind, posterior angles and posterior margin widely rounded. Sides (in dorsal view) in posterior half and base narrowly bordered. Dorsal rows of 15 to 18 points, remaining surface except for unpunctured

midline rather coarsely and densely punctured. Punctures slightly coarser than on head. Interstices 2-3 times as large as diameter of puncture. Pronotum moderately shining, with microsculpture consisting of transverse waves. Scutellum elongate, with transverse waves and with sparse fine punctures posteriorly.

Elytra trapezoidal, slightly convex, slightly longer than wide (length/width 1.10-1.16, M = 1.13, HT = 1.16), shorter and slightly wider than pronotum (length of elytra/length of pronotum 0.75-0.80, M = 0.77; width of elytra/width of pronotum 1.01-1.07, M = 1.04). Sides markedly widened behind. Surface very densely and rather coarsely punctured. Interstices as large as diameter of puncture. Pubescence yellow, semi-erect. Elytra dull, with dense microsculpture. Abdomen rather wide, parallel. Surface rather finely and densely punctured, rather dull, with fine microsculpture consisting of transverse waves. Base of tergites with microsculpture consisting of isodiametric mesh. Tergite VII without membranous palisade fringe at posterior margin.

Male. Sternite VIII shorter than tergite, posterior margin not emarginate, but truncate. Aedeagus (Fig. 22) 1.32-1.57 mm (n = 3, M = 1.48 mm, HT = 1.57 mm), elongate, with distinct parametes. Inner sac in basal part with group of fine spines and row of short spines. Sternite 9 as in Fig. 24, tergite 10 as in Fig. 23.

Female. Genital segment typical for Xantholinini, not modified.

**Comparative notes.** *Dactylaptatus taborskyi* sp. nov. shows generic characters of *Dactylaptatus* Lecoq, 1990 - dilated anterior tarsi in both sexes (Fig. 16), last segment of labial and maxillary palpi markedly narrower than preceding segment (Fig. 14), gular grooves parallel (Fig. 13), prosternum longitudinally elevated (Fig. 15). The new species differs from the only one species of the genus - *D. insularis* Lecoq, 1990, described based on single female from Reunion (without other data), by shorter elytra (brachypterous species), more punctures in dorsal series of pronotum, smaller eyes and wider head and pronotum.

**Etymology.** The new species is dedicated to my mentor in entomology in the time of my entomological beginnings Ivan Táborský (Litvínov), specialist in water beetles.

**Bionomics.** Dactylaptatus taborskyi sp. nov. was collected by sifting of rotten leaves of bamboo Nastus borbonicus, on a bank of a periodical stream at the border of indigenous forest of Acacia heterophylla and Nastus borbonicus on the west slope of the Mt. Maïdo, about 100 meters from the asphalt road to Maïdo (Fig. 34 shows the forest near the place, where type specimens were collected). All specimens were taken in very small place of about 2 x 5 m for 5 days by repeated siftings. All attempts to find additional specimens by siftings in surroundings were unsuccessful.

**Distribution.** The new species is recorded only from Route de Maïdo and is endemic to Reunion.

**Discussion.** The genus *Dactylaptatus* Lecoq, 1990 is placed by the author close to *Paulianella* Jarrige, 1951, which comprises nine species from Madagascar. On the basis of my investigation on Afrotropical Xantholinini, *Dactylaptatus* is very close to *Metocinus* Cameron, 1950. Both genera have some characters identical - the general shape of body, the shape of maxillary palpi and anterior tarsi dilated in both sexes. *Metocinus* differs from *Dactylaptatus* by anterior tibiae with several spines on external side, by frontal grooves more superficial, but mainly by different shape of prosternum, which is in *Dactylaptatus* elevated

in whole length, in *Metocinus* anteriorly flat and largely elevate in the middle. *Paulianella* has in contrast to *Dactylaptatus* and *Metocinus* entirely different shape of maxillary palpi with the base of last segment about as wide as apical margin of preceding segment and not distinctly dilated anterior tarsi.

#### Erymus gracilis (Fauvel, 1895)

Leptacinus gomyi Lecoq, 1990: 188, syn. nov.

**Material examined.** "La Réunion: Bras des Chèvrettes, 16.-19.xii.1991, J. Janák lgt.", 1  $\Diamond$ , (JJRC). "La Réunion, Ravine de St. Gilles, Bassin Cormoran, 13.-14.i.1992, J. Janák lgt.", 20  $\Diamond \Diamond$ , 9  $\Diamond \Diamond$ , (MFNB, JJRC); same data, but "Bassin Cormoran env., 13.-14.i.1992", 1  $\Diamond$ , 2  $\Diamond \Diamond$ , (MFNB, JJRC). "La Réunion: Saint Paul - Ravine de Bernica, 29.xii.1991 - 1.i.1992, J. Janák lgt.", 1  $\Diamond$ , (JJRC).

**Bionomics.** Most specimens were collected by sifting of rotten leaves of bamboo at a bank of a brook, the others in rotten plants and under rotten banana.

**Comments.** The genus *Erymus* Bordoni, 2002 is very near to *Leptacinus* Erichson, 1839 and it can be distinguished by external characters, for example slightly different sculpture of the forebody and the shape of maxillary and labial palpi, but also by the shape of genital segment and aedeagus. *Erymus gracilis* (Fauvel) was redescribed and illustrated by Bordoni (2002). The specimens from Reunion correspond to the published redescription and illustrations.

**Distribution.** *E. gracilis* is distributed in Central Asia (Azerbaijan, Turkmenistan) and Oriental Region (Sri Lanka, India, Burma, Thailand, Laos, Malaysia, China, Sumatra, Java, Lombok, Sumba) (Bordoni 2002).

## Gabrius sp.

Material examined. "La Réunion, Forêt de Bébour, Plaine des Marsouins, 23.-27.xii.1991, 1200 - 1400 m, J. Janák lgt.", 1 ♀, (JJRC).

**Bionomics.** The species was collected by sifting of forest litter in indigenous forest (Fig. 32, 34).

**Comments**. Due to the fact, that only one female was currently known, I decided not to describe the species, even if the specimen can be easily distinguished externally from all species known from Madagascan region.

## Neobisnius sp. (Figs 25-28)

**Material examined.** "La Réunion, Ravine de St. Gilles, Bassin des Aigrettes, 13.-14.i.1992, J. Janák Igt.",  $2 \Im \Im$ , (JJRC). "La Réunion, Ravine de St. Gilles, Bassin Cormoran, 22.-23.i.1992, J. Janák Igt."  $2 \Im \Im$ ,  $2 \Im \Im$ , (JJRC).

**Bionomics.** The species was collected by siftings of rotten leaves of bamboo at a bank of a brook and by treading of vegetation at a lake shore (Figs 35, 38, 39).

**Comments.** This species is different from both *Neobisnius* Ganglbauer, 1895 hitherto recorded from Reunion: *N. oculatus* (Fauvel, 1905) and *N. orbus sanguinicollis* Lecoq,

1990. It is characterised by large paramere without peg setae (Figs 25, 26) and is similar to specimens from Madagascar and southern Africa. As Afrotropical *Neobisnius* have not been revised yet, the species cannot be identified.

#### Pachycorynus quadriceps Cameron, 1926

Material examined. "La Réunion: Bras des Chèvrettes, 16.-19.12.1991, J. Janák lgt.", 1 ♂, 1 ♀, (JJRC).

**Bionomics.** The species was collected in fallen narrow stalks of a banana-tree on a bank of a brook (Fig. 31).

**Distribution.** *Pachycorynus quadriceps* has been hitherto recorded from Mauritius: Mt. Cocotte. New species for Reunion.

#### Phacophallus pallidipennis (Motschulsky, 1858)

Leptacinus tricolor Kraatz, 1859, synonymized by Bordoni, 1982. Phacophallus tricolor; Gomy, 2000.

Material examined. "La Réunion: Ravine de St. Gilles, Bassin Cormoran, 13.-14.i.1992, J. Janák lgt.", 3 ex., (MFNB, JJRC), same data, but "22.-23.i.1992", 4 ex., (JJRC); same data, but "Bassin Cormoran env., 13.-14.i.1992", 34 ex., (MFNB, JJRC). "La Réunion: Saint Paul - Ravine de Bernica, 29.xii.1991 - 1.i.1992, J. Janák lgt.", 2 ex., (MFNB). "La Réunion: St. Gilles les Bains, 15.-21.i.1992, J. Janák lgt.", 3 ex., (JJRC).

**Bionomics.** The species was collected in cow droppings and in siftings of rotten plants.

**Distribution.** *Phacophallus pallidipennis* is distributed in Oriental, Palaearctic and Nearctic Regions.

#### Thyreocephalus jocheni Bordoni, 2002

Thyreocephalus anachoreta; Lecoq, 1990; Gomy, 2000.

**Material examined.** "La Réunion: Bourbier, 20.xii.1991, J. Janák lgt.", 1  $\bigcirc$ , (JJRC); "La Réunion: Saint Paul - Ravine de Bernica, 29.xii.91-1.i.92, J. Janák lgt.", 3  $\bigcirc \bigcirc$ , 3  $\bigcirc \bigcirc$ , (JJRC).

Bionomics. The species was collected in cow droppings and in dung.

**Comments.** Specimens from Reunion have slightly different coloration of the tip of abdomen than noted in the description of *T. jocheni* Bordoni and in one specimen of this species from Nepal I have for comparison - only the genital segment is light colored - brownish yellow. In this character these specimens are similar to *T. palmi* Bordoni, 2002, but the shape of labrum and the aedoeagus is the same as in *T. jocheni* and different than in *T. palmi* Bordoni.

**Distribution.** The species is distributed in Nepal, Northern India and Reunion. The records of *T. anachoreta* Erichson, 1834 from Mauritius and Madagascar have to be checked and compared to species described/redescribed by Bordoni (2002).



Figs. 29-31: Bras de Chèvrettes. 29- Plantations of banana and sugar cane. 30- Fallen banana trees. 31- Fallen narrow stalks of a banana tree (locality of *Pachycorynus quadriceps* Cam.).



Figs. 32-34. 32, 34- Forêt de Bébour, Plaine des Marsouins (locality of *Medon lecoqi* sp. nov. and *Pseudomedon borbonicus* sp. nov.). 33- Takamaka.



Figs. 35-37. 35- St. Paul (locality of *Pseudolathra keiseri* (Scheerp.)). 36- Route de Maïdo (locality of *Paederus* cf. *colettae* Lecoq and *Gabrius* spp.). 37- Ravine de St. Gilles, Bassin des Aigrettes (locality of *Atanygnathus variegatus* Lecoq).



Figs 38-41. 38- St. Paul, Ravine de Bernica (locality of *Thyreocephalus jocheni* Bord.). 39- Fleurimont. 40, 41-Ravine de St. Gilles, Bassin Cormoran (locality of *Scopaeus janaki* Frisch, *Erymus gracilis* Fauvel and *Neobisnius* sp.).

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