

***Procirrus malgaceus* sp. nov., the first species of the genus from Madagascar
(Coleoptera: Staphylinidae: Paederinae: Pinophilini)**

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Abstract. A new species *Procirrus malgaceus* sp. nov. of the genus *Procirrus* Latreille, 1829 from Montagne d'Ambre and Ankarana, Northern Madagascar is described, illustrated and distinguished from related species.

INTRODUCTION

The subtribe Procirrina is represented by eight extant and one extinct genera and about 650 species (Herman 2010, Shaw et al. 2020). The genus *Procirrus* Latreille, 1829 comprises 29 species and 2 subspecies (Herman 2010, Newton, 2020) reported from the Canary Islands, southern Europe, continental Africa, southern Asia to Japan and Australia. Fifteen species are reported from Africa south of Sahara (Fagel 1970). No species has been hitherto known from Madagascar.

Among thousands of Staphylinidae specimens collected by Petr Baňář and his collaborators in Madagascar I surprisingly found a new species of *Procirrus*, which I describe in the present paper.

MATERIAL AND METHODS

Dry-mounted specimens were studied under a binocular stereomicroscope MBS 10. Habitus images were taken with a Canon EOS 700D camera in combination with a Canon MP-E65 1-5x macro lens. Images of aedeagi and male sternites were made using a Canon EOS 700D camera mounted on a Motic BA 410E-T compound microscope in transmitted or diffused reflected light. Resulting images were focus stacked using Zerene Stacker and then post-processed in Paint.Net, Paint, XnView and Live Photogalery.

Measurements were taken with the above mentioned stereomicroscope using an ocular scale. Measurements and indices in this study are based on all type specimens. Body length was measured from the tip of closed mandibles to the end of abdomen, the length of the forebody was measured from the tip of closed mandibles to the end of elytra.

Specimens were mounted on card plates using a water-soluble glue. Males were dissected and male genitalia were glued on the same plate as the specimen or embedded in Euparal. Locality labels for the material examined were cited in the original version and marked with quotation marks (“ ”).

The following abbreviations are used to indicate the depository of specimens:
MMBC Moravian Museum, Brno, Czech Republic (P. Baňář);

JJRC private collection Jiří Janák, Rtyně nad Bílinou, Czech Republic.

Other abbreviations: L = length, W = width, HW = width of head, PW = width of pronotum, M = arithmetic mean, R = ratio, HT = holotype, PT = paratype.

TAXONOMY

Procirrus Latreille, 1829

Type species: *Procirrus lefebvrei* Latreille, 1829.

Diagnosis. Following diagnosis was published by Herman (2010): *Procirrus* is separated from other Procirrina by the four inflated protarsomeres, pedunculated base of the head, quadridentate labrum, elongate pronotum, and absence of a pronotal marginal ridge. Abdominal segment III has a paratergal carina laterally, the tergum and sternum are fused, and the segment is cylindrical. Tergum and sternum VII are separated. The quadridentate labrum will separate *Procirrus* from *Paraprocirrus* Bernhauer, 1923. The absence of a ventral cephalic groove that extends diagonally from the margin of the eye to the neck distinguishes *Procirrus* from *Neoprocirrus* Blackwelder, 1952. The absence of setae on the edge of the posterior margin of the elytra will separate *Procirrus* from *Neoprocirrus*, *Oedodactylus* Fairmaire and Germain, 1861, *Pseudoprocirrus* Bernhauer, 1934, and *Stylokyrtus* Herman, 2010.

Description. For detailed description see Herman (2010).

Procirrus malgaceus sp. nov.

(Figs. 1-10)

Type locality. North Madagascar, Montagne d'Ambre.

Type material. Holotype (♂): "MDA/Jan.2015/10 N MADAGASCAR, MONTAGNE D'AMBRE ~950 m, circuit „Ampijoroana“, sifting litter by big trees, Winkler app. extr., 13.1.2015, P. Baňář & E.M. Rabotoson lgt.", "HOLOTYPUS *Procirrus malgaceus* sp. nov., J. Janák det. 2020" (MMBC). Paratypes: (1 ♂): same data as holotype (JJRC); (3 ♀♀): "N MADAGASCAR, ANKARANA NP, Sifting of leaf litter, S12°57'E49°07'; 113 m, 23-25.1.2016; P. Baňář lgt." (MMBC, JJRC), all with additional label "PARATYPUS *Procirrus malgaceus* sp. nov., J. Janák det. 2020".

Description. Body length 6.3-8.3 mm (M 7.7 mm, HT 8.0 mm), forebody length 3.2-3.4 mm (M 3.3 mm, HT 3.4 mm). Apterous, dark brownish, apical part of abdominal segment VII and whole segment VIII lighter, reddish brown, appendices lighter reddish brown, last antennomere light reddish yellow; head, pronotum and elytra dull, abdomen slightly shiny (Figs. 1, 2).

Head about as wide as pronotum (HW/PW = 0.96-1.03, M 0.99, HT 1.03), eyes moderately large, temples slightly less than twice as long as eyes (R 1.70-1.90, M 1.86, HT



Figs. 1-10. *Procirrus malgaceus* sp. nov.; 1-3, 7-9- holotype; 4-6- paratype male; 10- paratype female. 1- habitus; 2- forebody; 3, 4- aedeagus ventral; 5, 6- paramere; 7- male sternite VIII; 8- male tergites IX, X; 9- male sternite IX; 10- female tergites IX, X. Figs. 3, 7-9- diffused reflected light. Figs. 4-6, 10- transmitted light. Figs. 5, 6- scale 0.1 mm. Figs. 3, 4, 7-10- scale 0.5 mm.

1.90), behind eyes shortly parallel and then markedly narrowed behind, markedly convex, rugosely, very densely and moderately coarsely punctate, very narrow interspaces shiny, without reticulation. Antennae (Fig. 1) long, antennomeres 1, 2, 11 much more elongate than remaining segments, antennomere 5 about twice as long as wide (R 1.88-2.75, M 2.25, HT 2.00), antennomere 10 about 1.8 as long as wide (R 1.67-1.84, M 1.77, HT 1.67).

Pronotum more than half longer than wide (R 1.59-1.68, M 1.64, HT 1.66), sides in anterior half slightly widened, almost parallel, in apical half slightly narrowed behind, posterior angles largely rounded, with shallow lateral impressions and moderately deep basal impressions, rugosely, very densely and coarsely punctate, many punctures longitudinally confluent, very narrow interspaces shiny, without reticulation, impunctate median line extremely narrow, but mostly visible up to anterior quarter, near the basal impressions slightly elevated.

Elytra short and narrow, slightly longer than wide (R 1.14-1.22, M 1.18, HT 1.14), between deep sutural and lateral impressions markedly elevated, shoulders only slightly marked, lateral sides behind shoulders slightly narrowed behind; rugosely, very densely and coarsely punctate, some punctures confluent, narrow interspaces shiny, without reticulation.

Abdomen parallel, tergite III rugosely, very densely and coarsely punctate, many punctures confluent, following tergites gradually less coarsely punctate, tergite VII finely and densely punctate, all tergites without reticulation.

Male. Aedeagus (Fig. 3, 4) symmetric, elongate, sharply pointed apically (length HT 1.29 mm, PT 1.33 mm). Parameres slender starting from base, with about 7-15 apical setae (Figs. 3-6). Sternite VIII slightly shorter than tergite VIII, slightly emarginated at posterior margin (Fig. 7). Sternite IX as in Fig. 9. Tergites IX-X as in Fig. 8.

Female. Sternite VIII slightly shorter than tergite VIII, rounded at posterior margin. Tergites IX-X as in Fig. 10.

Differential diagnosis. *Procirrus malgaceus* sp. nov. shows some characters of the *P. filiformis* group defined by Fagel (1970) for three African species distributed in D.R. Congo, Kenya and Tanzania as: apterous, similar shape of the aedeagus with the symmetrical median lobe (in contrast to Herman's statement that the Procirrina have asymmetrical aedeagus - Herman 2010: 28) with parameres narrow starting from the base, but differs from the species included in this group (*P. filiformis* Fagel, 1970; *P. bacillus* Fagel, 1970; *P. strictus* Fagel, 1957) by the in general more parallel body, the sides of the elytra not widened but slightly narrowed in apical two thirds, by the different shape of the aedeagus, by the parameres with more numerous setae, and slightly emarginate male sternite VIII.

Etymology. The name of the species refers to its being from Madagascar.

Bionomics. All specimens have been found in siftings of forest litter.

Distribution. *P. malgaceus* sp. nov. is currently known only from the Montagne d'Ambre and Ankarana National Parks in North Madagascar.

Note. *Procirrus malgaceus* sp. nov. also shows all generic characters as described in the diagnosis by Herman (2010) - see above. Following specimen was used also for a comparison: *Procirrus lefebvrei* Latreille, 1829: "MOROCCO b. occ., Moulay Bousselham, 21.-22.5.1995, P. Bulirsch lgt.", (1 ♀), (JJRC).

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