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# Description of a new *Omophron* Latreille, 1802 species from Madagascar (Coleoptera: Carabidae: Omophronini)

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*Omophron amandae* n. sp. are described from Madagascar. Type locality: Andapa, Sava Region, Antsiranana Province, Madagascar. Comparisons are made to *Omophron madagascarense* Chaud. Members of the new species are distinguished from *O. madagascarense* by its rounded form of elytra, characteristical green metalic tinge, nearly acute hind angles of pronotum, form of prosternal plate, reflexed margin of elytra and diferent form of aedeagus.

Key words: Coleoptera, Carabidae, Omophron, new species, Madagascar

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## INTRODUCTION

Ground beetles of the genus *Omophron* Latreille, 1802 are conspicuous due to their oval body outline, hidden mesosternum, concealed scutellum, multistriate elytra, and peculiar burrowing habits.

In the Afrotropical region, the genus *Omophron* Latr. is represented by 19 species, which belong to two subgenera: *Omophron* s.str. (6 species) and *Phrator* Semenov, 1922 (13 species) (Valainis, 2009). *O. (s. str) madagascarense* Chaudoir, 1850 and O. (*Phrator*) *grandidieri* (Alluaud, 1899) are endemic for Madagascar island. This article deals with the description of a new species, increasing the number of Madagascar *Omophron* species to three.

## MATERIALS AND METHODS

The material used for this study is deposited in the following collections: United Kingdom, London, The Natural History Museum (BMNH); Switzerland, Zurich, Erdgenössische Technische Hochschule-Zentrum (ETHZ); Belgium, Brussel, Institut Royal des Sciences Naturelles de Belgique (ISNB) and Belgium, Tervuren, Musee Royal de l'Afrique Centrale (MRAC).

The figures were produced using a *Zeiss SteREO Lumar V12* stereomicroscope and *Axiocam* digital camera. They have been processed and the morphometrical measurements were made using *Axioview 4.4* software. Total body length is measured from the tip of the labrum to the apex of the right elytron; the width of the head (HW) as the maximum linear distance across the head, including the compound eyes; the length of the

pronotum (PL) from the anterior to the posterior margin along the midline; the length of the elytra (EL) from the basal margin to the apex of the elytron and the width of the pronotum (PW) and elytra (EW) were measured at their broadest point.

## DESCRIPTION

***Omophron amandae* n. sp.**

**Type material.** Holotype male: "Madagascar, Andapa, 12.1948, leg. Capuron" (MRAC); Paratypes: 1 female, same as holotype (MRAC); 1 male: "Andapa, Basilewsky collection" (MRAC); 1 female, "Andapa, Basilewsky coll." (MRAC).

**Diagnosis.** A species of average size for *Omophron*, with oval and convex body, dark green paterns on the back and side of the head, central portion of pronotum and elytra. Elytra with 15 striae which extend from the elytral base to more than half of the elytral lentgh, after which they become evanescent, and eventually become obselete towards the apex. Habitus, see fig. 1.

**Description.** Body length 5.20-5.33 mm; width 3.34-3.37 mm (holotype 5.27 mm and 3.34 mm, respectively).

Colouration: Head, pronotum and elytra testaceous. Dark green patterns on back and sides of head, central portion of pronotum and elytra with a metallic hue. Legs and antennae dark brown. Mandibles dark rufous piceous. Underside, excluding epipleura, dark rufous piceous. Epipleura of elytra and pronotum dark brown.

Head moderately flat, coarsely punctate laterally and posteriorly, more sparsely punctate around clypeus and on the middle of the frons. Punctures deep, sides distinctly margined. Surface around eyes wrinkled. Clypeus with small wrinkles, bisetose. Labrum slightly emarginate, with six setae. Suboccular ridge well developed, sinuate. First segment of antennae unisetose at apex, third and fourth segments with 4–6 setae. HW: 1.68-1.69 mm.

Pronotum (Fig. 1) moderately convex, transverse, base bisinuate, sides slightly rounded, hind angles nearly acute (Fig. 3). Punctuation coarse. Apex, base and middle of disc densely punctated. Sides of disc sparsely punctured, with larger and deeper puncures. Reflexed margin wide, margined and with a few large punctures. Median line almost obsolete. PL: 1.24 – 1.39 mm., PW: 2.72 – 2.81 mm.

Elytra (Fig.1) moderately convex, ovate, sides hardly widened behind shoulders, with reflexed border much narrower than that of pronotum. Elytra with 15 striae which extend from the base to more than two thirds of the elytral lentgh, the reafter becoming evanescent. Striae deep, punctures clearly marked, intervals moderately convex and smooth, more convex and narrower laterally. EL: 3.12 – 3.20 mm., EW: 3.34 – 3.37

Prosternum and metastenum coarsely and irregulary punctate. Punctuation on the sides of the prosternum and episterna more coarse, puntures larger and deeper. Prosternal plate (Fig. 5) distinctly and broadly margined laterally. Metacoxae bisetose. Abdominal sternites 4-6 bisetose.

Median lobe of aedeagus see fig. 7.

**Comparisons.** The new species was compared with 9 specimens of *O. madagascarense* which are preserved in the BMNH, ETHZ, ISNB and MRAC collections.

In comparison with *O. madagascarense*, the new species have more rounded elytra (Figs. 1 and 2) with 15 striae. In the case of *O. madagascarense* elytra with 14 striae. The new species have a characteristic green metallic hue on the head, pronotum and elytra. In the reviewed material of *O. madagascarense*, this characteristic was not observed. In the case of *O. madagascarense*, the hind angles of the pronotum are more rounded and clearly elevated (Fig. 4). In the new species, the hind angles of the pronotom are nearly acute


Fig. 1. *Omophron amandae* sp. n., habitus (holotype)


Fig. 2. *Omophron madagascarense* Chaud., habitus

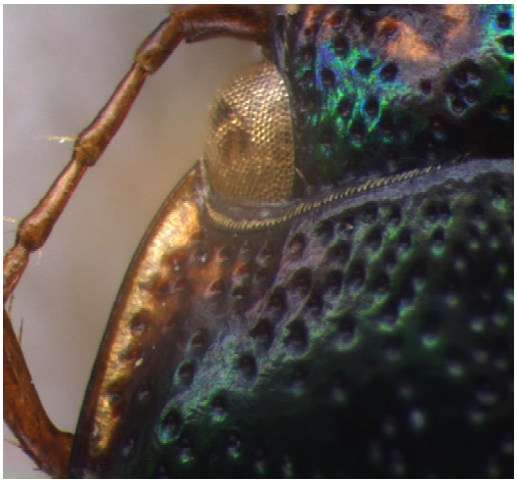

Fig. 3. *Omophron amandae* spec. nova, hind angle of pronotum (holotype)

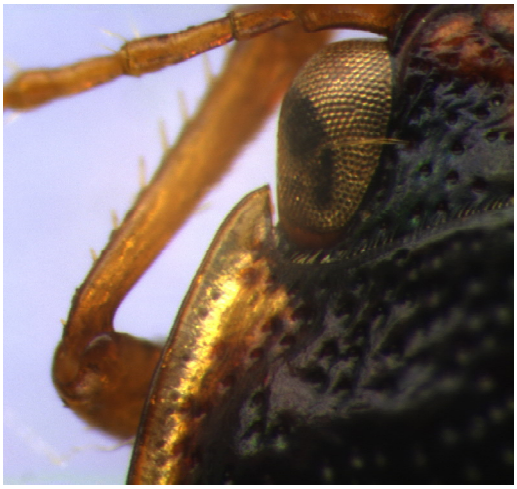

Fig. 4. *Omophron madagascarense* Chaud., hind angle of pronotum

Fig. 5. *Omophron amandae* spec. nova, prosternal plate (holotype)

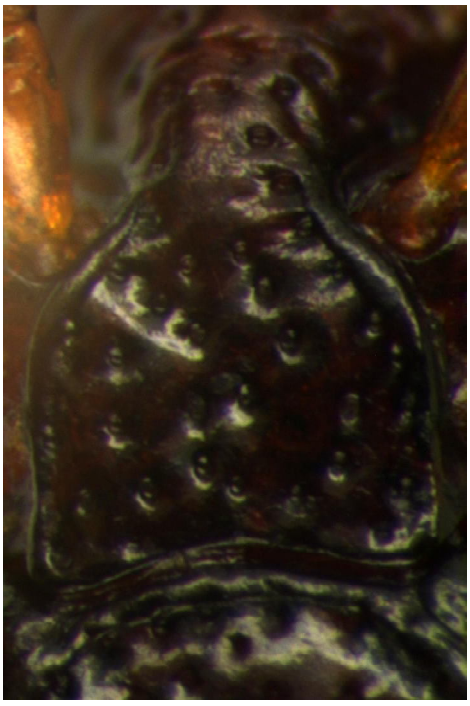

Fig. 6. *Omophron madagascarense* Chaud., prosternal plate

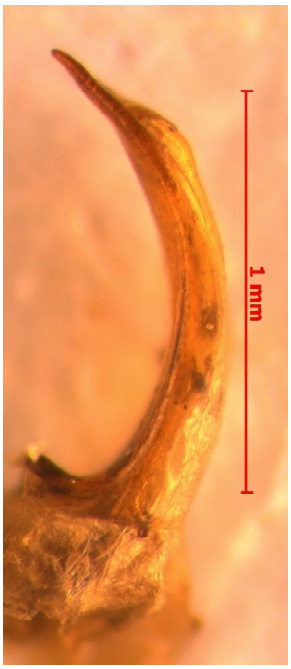


Fig. 7. *Omophron amandae* spec. nova, median lobe, lateral (holotype)

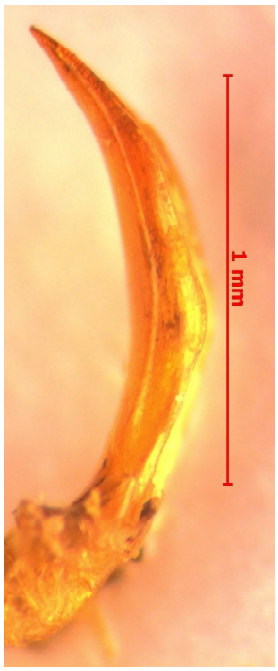


Fig. 8. *Omophron madagascarense* Chaud., median lobe, lateral

and less elevated (Fig. 3) Additionally, there are diferences in the conctruction of the prosternal plate. The hind angles of the prosternal plate of the new species are rounded, without any thickened edge (Fig. 5), and in the case of *O. madagascarensis*, the hind angles of the prosternal plate are point forwards and have a thickened edge (Fig. 6).

The new species can also be distinguished from *O. madagascarense* by the distinctive form of its aedeagus. In the lateral position, the apex of the aedeagus of the new species is slightly sinuate, but in the case of *O. madagascarense*, the apex of the aedeagus slopes evenly downwards (Figs. 7 and 8).

**Etymology.** The new species has been named in honour of my daughter Amanda Valaine, the species name *amandae* being taken from my daughter's name, Amanda.

**Distribution.** Currently this species is only known from the type locality.

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