

A new species and a new synonym of the genus *Omophron* Latreille, 1802 (Coleoptera: Carabidae: Omophronini)

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A new species is described: *Omophron (Phrator) ethiopiensis* sp.n. (Ethiopia). *O. (P.) rothschildi* Alluaud, 1918 syn. n., is hereby synonymized with *Omophron (Phrator) multiguttatum* Chaudoir, 1850. Illustrations of the habitus of the new species and closely related species are provided.

Carabidae, *Omophron*, *Phrator*, new species, new synonym, Africa

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INTRODUCTION

The genus *Omophron* Latreille, 1802 of the tribe Omophronini Bonelli, 1810 (Carabidae: Omophroninae Bonelli, 1810) is divided into two subgenera: *Omophron s.str.* and *Phrator* Semenov, 1922.

In the present paper a new species, *O. (Phrator) ethiopiensis* sp.n., is described, illustrated, and compared with other species of the *O. (P.) 'variegatum'* group, which differs from other species of the subgenus *Phrator* by 14 striae on the elytrae: *O. (P.) depressum* Klug, 1853, *O. (P.) grandidieri* (Alluaud, 1899), *O. (P.) multiguttatum* Chaudoir, 1850 and *O. (P.) variegatum* Olivier, 1811.

Omophron (P.) rothschildi Alluaud, 1918 syn. n., is hereby synonymized with *O. (P.) multiguttatum* Chaudoir, 1850. The study of an extensive material of *O. (P.) multiguttatum* and

its comparison with *O. (P.) rothschildi* showed that these taxa are morphologically identical.

The subgenus *Phrator* Semenov, 1922 is now represented by nine species, eight of them are distributed in the Afrotropical Region, and *O. (P.) variegatum* is peculiar to the Palaearctic Region. Both adults and larvae of the species of this subgenus, like other species of the genus *Omophron* Latreille, 1802, live in bare sandy habitats, near water.

MATERIALS AND METHODS

The material used for this study is deposited in the following collections:

ETHZ - Erdgenössische Technische Hochschule-Zentrum, Zurich, Switzerland;
ISNB – Institut Royal des Sciences Naturelles de Belgique, Brussel, Belgium;

MNHN - Muséum National d'Histoire Naturelle, Paris, France;

ZMHB - Museum für Naturkunde der Humboldt-Universität, Berlin, Germany;

ZMUC - Zoological Museum, University of Copenhagen, Denmark;

MRAC - Musée Royal de l'Afrique Centrale, Tervuren, Belgium.

For the taxonomic treatment standard methods were used. The habitus photographs were obtained with a digital camera Canon EOS 6D fitted with a Canon MP-E 65 mm macro lens, using Helicon Focus auto montage and subsequently edited using Photoshop CS6.

The total body length was 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; the width of the pronotum (PW) and elytra (EW) at their broadest point. All measurements are given in millimeters.

High-resolution habitus images of *Phrator* (*Omophon*) species, including type specimens and additional material, are available at Carabidae of the World web-project (<http://www.carabidae.org>).

RESULTS

Omophon (*Phrator*) *ethiopiensis* n. sp.
(Fig. 1, 4)

Material examined. Holotype, male: Ethiopia: Blue Nile Gorge, 1100 m, 10.11.1971 (R.O.S. Clarke leg.) (MRAC).

Paratypes, 13 males, 13 females: Ethiopia: Blue Nile Gorge, 1100 m, 10.11.1971 (R.O.S. Clarke leg.) (MRAC).

Description. Measurements: Body length 7.73–8.12 (holotype: 8.02); width 5.18–5.31 (holotype: 5.24); HW: 2.47–2.63; PL: 2.32–2.37; PW: 3.89–4.07; EL: 4.97–5.32; EW: 4.85–5.29.

Coloration: elytra, vertex of head and median patch on pronotum dark green, patches on elytra, sides of pronotum and frons yellowish brown. Legs, antennae and base of mandibles yellowish brown, apical part of mandibles darkly brown. Underside of body excluding epipleura brown, epipleura of elytra and pronotum yellowish brown. Habitus as in Fig. 1.

Head fairly flat, coarsely and deeply punctate on vertex, finely striate near eyes, and almost smooth on frons, with one supraorbital setiferous puncture on each side of head near eye. Subocular ridge well developed, curved upwards and slightly rounded. Clypeus bisetose, slightly elevated on base, evenly concave on border with labrum. Labrum distinctly emarginate, with six setae near front margin, anterior angles of labrum acute, curved upwards. Mentum with elevated and rounded lobes, with acute tooth in middle. Penultimate segment of labial palpi with long setae on inner side, distal segment glabrous. Penultimate segment of maxillary palpi with several apical setae, distal segment glabrous, with deep longitudinal slit. First segment of antennae unisetose at apex, antennomeres 1–4 bare, antennomeres 5–11 densely covered with thin setae.

Pronotum moderately convex, transverse, bisinuate on each side, with deep impression parallel to base of pronotum. Median impression well developed. Lateral sides of pronotum slightly concave near base and evenly rounded at middle, with edge expanding toward anterior margin. Irregular shape of patch on pronotum black, reaching from base to front margin. Anterior angles distinctly raised, nearly acute. Base of pronotum slightly wrinkled, coarsely and densely punctate, punctation on anterior part of pronotum less coarse, middle part of disc almost smooth, only with some fine wrinkles.



Fig. 1. Habitus of *Omophron (P.) ethiopiensis* sp. n..

Proepisternum smooth. Prosternum almost smooth, only with some coarse punctures around procoxa. Prosternal lobe smooth.

Elytra moderately convex, ovate. Elytra with distinct 14 punctate striae, striae equally deep up to apex of elytra, punctures small, becoming evanescent at about two-thirds from base. Intervals of elytra smooth, distinctly convex. Elytra with specific form pattern (Fig. 1). Mesosternum almost invisible. Metasternum smooth, only with some coarse punctures near metepisternum,

metepimeron and metepisternum smooth. Sterna 2, 3 and 4 punctured on juncture, sterna 5, 6 and 7 smooth.

Comments. Morphologically, this species resembles *O. (P.) depressum* (Fig. 2) and *O. (P.) multiguttatum* (Fig. 3). From *O. (P.) depressum*, it differs by the well-developed green pattern on elytra, pronotum and head, by more deep and coarser punctation on the pronotum, as well as by the finer punctation on the elytral striae. From *O. (P.) multiguttatum*, it differs by the well-de-



Fig. 2. Habitus of *Omophron (P.) depressum* Klug, 1853

veloped green pattern on the body, as well as by the deeper elytral striae.

There are no specific differences observed among species of genus *Phrator* Sem. in the structure of the aedeagus.

Distribution. The new species is at present known only from the type locality in Blue Nile Gorge, Ethiopia. The map with known locality of *O. (P.) ethiopiensis* sp.n. and distribution of all other species of the subgenus *Phrator* as in Fig. 4.

Etymology. The specific epithet refers to the geographical distribution of the new species.

***Omophron (Phrator) multiguttatum* Chaudoir, 1850**

=*tessellatum* Dejean, 1826 nec Say, 1823

=*somalicum* Alluaud, 1935

=*rothschildi* Alluaud, 1918, **syn. nov.**

Type material examined. Afrique Orientale, Turkana lake (formerly Rodolphe lake), 1905 (1



Fig. 3. Habitus of *Omophron (P.) multiguttatum* Chaudoir, 1850.

female, Rothschild leg.) (Holotype of *O. (P.) rothschildi* (MNHN), 1905 (1 female, Rothschild leg.) (Cotype) (MNHN).

Additional material examined. Congo Democratic Republic: (1 Female) (ISNB); P.N.B. Miss., 01.02.1951 (9 Males, 12 Females, Saeger leg.) (ISNB); Kalemie, Lake Tanganyika, 09.1946 (1

Male) (ISNB); Congo Belge, P.N.G., Miss., 29.01.1951 (7 Males, 7 Females, Saeger leg.) (MRAC); 01.02.1951 (6 Males, 13 Females, Saeger leg.) (MRAC); 17.05.1951 (1 Female, Saeger leg.) (MRAC); 01.06.1951 (1 Male, 1 Female, Saeger leg.) (MRAC); 07.08.1951 (1 Female, Saeger leg.) (MRAC); 02.11.1951 (1 Female, Saeger leg.) (MRAC); 17.01.1952 (1 Female, Saeger leg.)

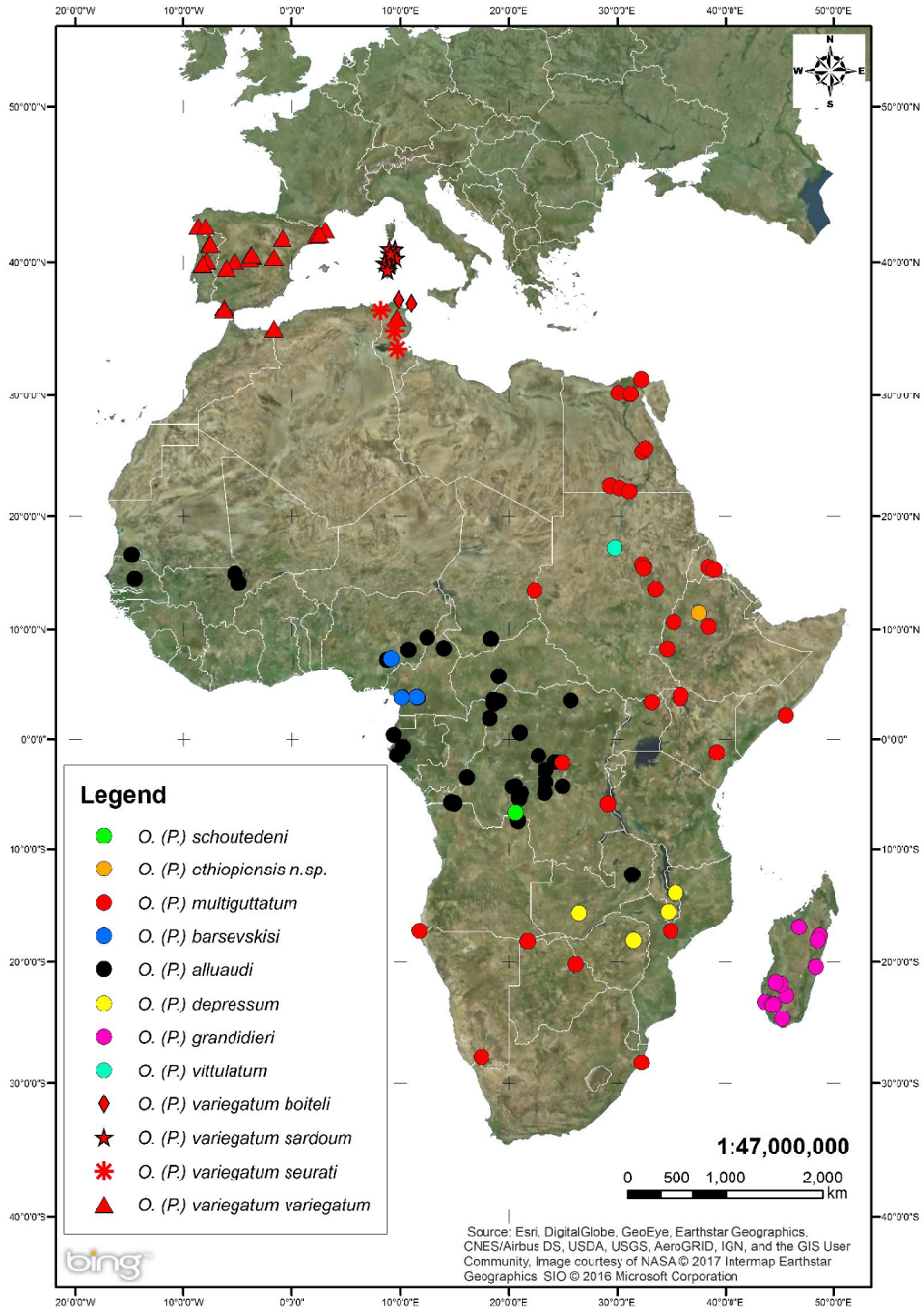


Fig. 4. Distribution map with known localities for all species of the subgenus *Phrator*.

(MRAC); 01.04.1952 (4 Males, 3 Females, Saeger leg.) (MRAC); 29.04.1952 (1 Female, Saeger leg.) (MRAC); 08.05.1952 (1 Female, Saeger leg.) (MRAC); 06.08.1952 (2 Males, Saeger leg.) (MRAC); 20.08.1952 (2 Females, Saeger leg.) (MRAC); 29.08.1952 (2 Females, Saeger leg.) (MRAC); 26.06.1952 (1 Male, 1 Female, Saeger leg.) (MRAC); 1949 - 1952 (5 Males, 2 Females, Saeger leg.) (MRAC); **Eritrea:** Keren (3 Males, 3 Females) (ETHZ); Asmara (1 Male, 2 Females) (ETHZ); Ginner, S. Kristensen (2, 01.1931) (ETHZ); Abessinien, 15.V 1926 (3 Males, 7 Females, A. Kristensen leg.) (ZMUC); Eritrea, Kenen (u) (1, male) (MNHN); Nubia (1 male); Eritrea, Keren (1 female) (MNHN); **Kenia:** Tana River, B.E.A., 1915 (Babault leg.) (MNHN); Afrique Orientale, Turkana lake (formerly Rodolphe lake) (MNHN), Afrique Orientale, Turkana lake (formerly Rodolphe lake), 1905 (3 female, 2 male, Rothschild leg.) (MNHN). **Somalia:** Somalia It., PnadiFungalango, 03.04.1923 (1 male, Patrizi leg.) (Holotype of *O. somalicum*) (MNHN), Somalia It., PnadiFungalango, 03.04.1923 (2 female, Patrizi leg.) (MNHN); Somalia It. Belet Amin, 03.-04.1923 (1 female, Patrizi leg.) (MNHN); **Sudan:** Khartoum, 1906 (3 Males, 2 Females, Alluaud leg.) (ETHZ); Prov. North Darfur, El Geneina, 16.08.1979 (1 female, Abusinin leg.) (ZMHB); **Uganda:** Turkana Prov., 1934 (1 Male, Buxton leg.) (BMNH).

Comments on classification. *O. (P.) rothschildi* has been described by Alluaud (1918) after specimens from Turkana Lake (formerly known as Lake Rudolf). The author stated that the new species differs from *O. (P.) multiguttatum* in coloration, shape of elytral patterns and depth of elytral striae. However, the study of an extensive material of *O. (P.) multiguttatum* from the Central Africa and its comparison with *O. (P.) rothschildi* showed that these two taxa are identical. Thus, I consider here *O. (P.) rothschildi* as synonym of *O. (P.) multiguttatum*.

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REFERENCES

- Anichtchenko A. 2014. Carabidae of the World. <http://www.carabidae.org>.
- Alluaud C. 1918. Collections recueillies par M. Maurice de Rothschild dans Afrique orientale. Coleopteres carabiques; diagnoses preliminaires des especes nouvelles Bull. Mus. d'Hist. Nat. Paris, XXIV: 493-497.
- Alluaud C. 1899: Description d'un Coléoptere nouveau du genre *Epactius* (*Omophron*) pris par M. Guillaume Grandidier dans le Sud de Madagascar. Extrait du Bulletin du Museum s'histoire naturelle: 1-2.
- Alluaud C. 1935. Etudes sur les Omophron du s. G. Phrator Semenov. Afra, Cahiers d'Entomologie, 9: 1 – 10.
- Chaudoir M. 1850. Mémoire sur la famille des carabiques. 2e partie (continuation). Bulletin de la Société Impériale des Naturalistes de Moscou, 23 (2): 424 – 429.
- Klug J. C. F., 1853. Peter's Reise nach Mossamb., Monatsber. Akad. Wiss. Berlin: 163.
- Olivier A. G. 1811. Encyclopédie méthodique, ou par ordre de matières; par une société de

gens de letters, de savans et d'artistes;
precede d'un vocabulaire universel, serv-
ant de table pour tout l'ouvrage, ornée des
portraits de Mm. Diderot & d'Alembert,
premiers éditeurs de l'Encyclopédie.
Histoire naturelle. Insectes. Vol. 8., Paris:
Agasse: 486.

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Semenov-Tian-Shanskij A. 1922. Carabinorum
tribus Omophronina (Coleoptera)
classificata. Conspectus praecursorius.
Revue Russe d'Entom., 18: 36 – 45.