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


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

*Daugavpils University, Institute of Life Sciences and Technology, Centre of Coleopterological Research, Daugavpils, Latvia; e-mail: uldis.valainis@biology.lv*

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 elytra: *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 Palaeartic 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;
VALAINIS U.

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 - Musee 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 (Omophron) species, including type specimens and additional material, are available at Carabidae of the World web-project (http://www.carabidae.org).

RESULTS

Omophron (Phrator) ethiopiensis n. sp.
(Fig. 1, 4)

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, punctuation on anterior part of pronotum less coarse, middle part of disc almost smooth, only with some fine wrinkles.
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 punctuation on the pronotum, as well as by the finer punctuation on the elytral striae. From *O. (P.) multiguttatum*, it differs by the well-de-
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
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*.
A new species and a new synonym of the genus Omophron Latreille, 1802 (Coleopt.: Carabidae: Omophronini)

(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, Keren (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, Abusinid leg.) (ZMH); 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.

ACKNOWLEDGEMENTS

The author would like to thank the following institutions and curators for their help that made this study possible: Museum für Naturkunde der Humboldt-Universität (Bernd Jäger), Eidgenössische Technische Hochschule-Zentrum Zurich (Franziska Schmid), Institut Royal des Sciences Naturelles de Belgique (Alain Drumont), Musee Royal de l’Afrique Centrale (Marc De Meyer), National Museum of Natural History in Paris (Thierry Deuve and Taghavian Azadeh) and Zoological Museum of University of Copenhagen. The author is very indebted to Alexey Shavrin, who was willing to read a previous draft of the manuscript, Māris Nitcis for cartographic material preparation, and to Anita Rukmane (all from Daugavpils, Latvia) for the photography preparation.

REFERENCES


Olivier A. G 1811. Encyclopédie méthodique, ou par ordre de matières; par une société de