

First country records of the genus *Heliocopris* (Coleoptera: Scarabaeidae) from Chad and Mali

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Received 11 May 2023; accepted 16 June 2023
Published 27 August 2023

Abstract. First country records of *Heliocopris antenor* (Olivier, 1789) from Chad and Mali are presented. These data also represent the first reliable reports of the occurrence of the genus *Heliocopris* Hope, 1837 in Chad and Mali. The occurrence of *Heliocopris dilloni* Guérin-Méneville, 1847 was recently mentioned from Chad by Godeau et al. (2022), unfortunately without further data. Currently, *H. antenor* is known from most countries of Western, Central, and Eastern Africa.

Key words. Distribution, *Heliocopris antenor*, *Heliocopris dilloni*, Coprini, Scarabaeinae, Republic of Chad, Republic of Mali, Central Africa, Afrotropical region.

INTRODUCTION

Heliocopris Hope, 1837 is a relatively small genus belonging to tribus Coprini, which includes about 60 species (e.g., Pokorný et al. 2009, Schoolmeesters 2022). Most species are confined to Africa, only five are known only from Asia and one occurs in both continents (Pokorný et al. 2009, Moretto & Minetti 2022, Schoolmeesters 2022). African species are present in all the Sub-Saharan Region. However, there are no reliable published findings from Chad, Mali, and Mauritania (Ceccolini & Cianferoni 2020). Nevertheless, the occurrence of *Heliocopris dilloni* Guérin-Méneville, 1847 is recently mentioned from Chad by Godeau et al. (2022). Unfortunately, this is just a mention without further precise data. Godeau et al. (2022) reported only, that “...specimens used in this work come from O. Montreuil collections. They were collected in the Republic of Chad”. Despite the impressiveness of *Heliocopris* species, knowledge about their distribution is still poorly known and only fragmentarily published.

Adults are robust, rarely less than 30 mm long, usually 50 mm to 70 mm long (Pokorný et al. 2009). Sexual dimorphism is often present, manifested chiefly in cephalic and pronotal armament, which is frequently highly developed in males. All species are obligate coprophagous, require substantial quantities of dung for food and provisioning, and are therefore tied with populations of large herbivorous mammals such as elephants and bovines (Halfpter & Matthews 1966, Kingston & Coe 1977, Hanski & Cambefort 1991, Pokorný et al. 2009, Stanbrook 2020).

Heliocopris antenor was described by A. G. Olivier in 1789 based on material from Senegal, holotype is deposited in Muséum national d’Histoire naturelle (Paris, France), see also Pokorný et

al. (2009). This species is widely distributed in Western, Central, and Eastern Africa, and is well represented in collections (Pokorný et al. 2009, Schoolmeesters 2022). Nevertheless, knowledge about its exact distribution is still poorly known, because precise data are mostly unpublished. Beetles are often found in burrows under cattle pads (Pokorný et al. 2009) and human dung is also

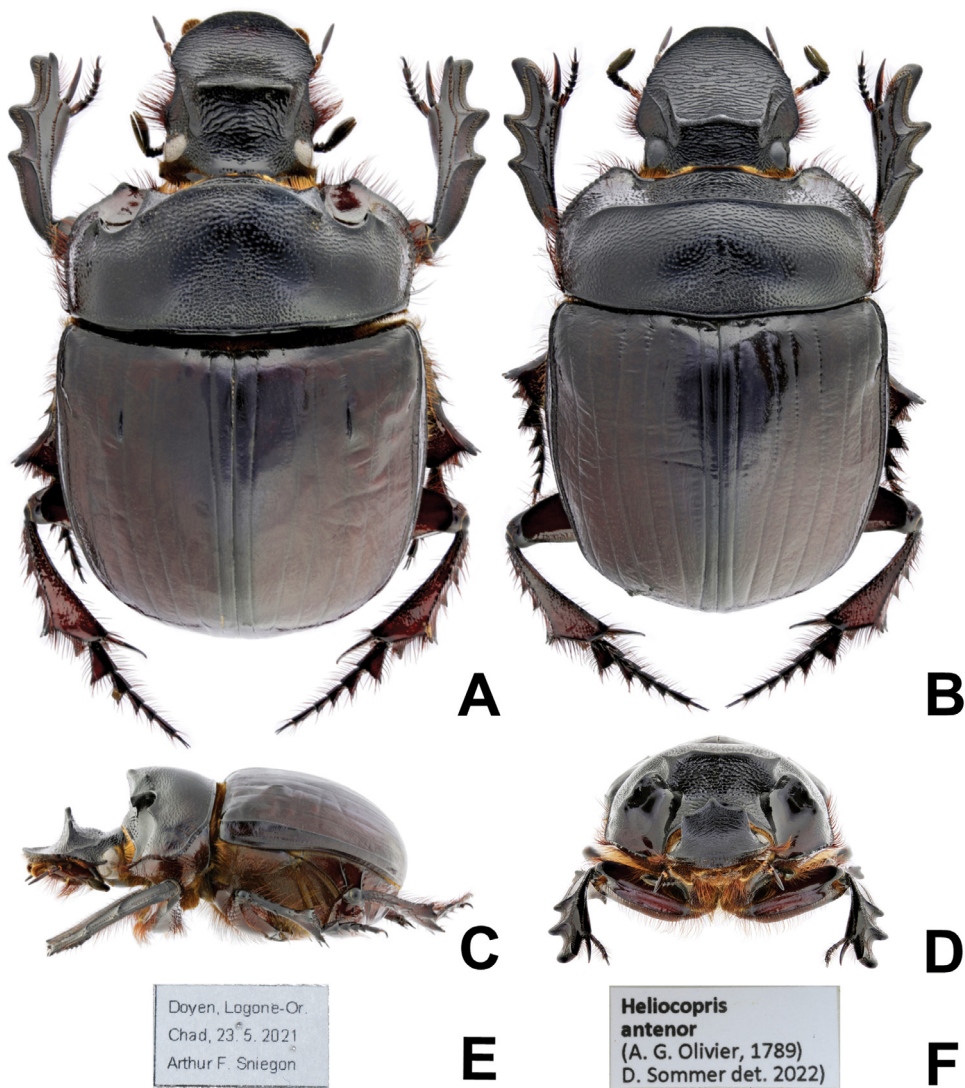


Fig. 1. *Heliocopris anterior* (Olivier, 1789) from Chad. A – male in dorsal view, B – female in dorsal view, C – male in lateral view, D – male in frontal view, E–F – labels; not to scale.

reported as a trophic source (Davis et al. 2008). Adults are usually collected at lights (Pokorný et al. 2009, De Jong & Krell 2011).

MATERIAL AND METHODS

Habitus photographs were taken using a Canon EF-S 60 mm f/2.8 Macro USM lens attached to a Canon EOS 70D camera. Partially focused images of each specimen were combined using Zerene Stacker (Zerene Systems LLC, Richland, USA). All pictures were digitally enhanced using Adobe Photoshop CC and Adobe Lightroom Classic CC. Plates were arranged in CorelDRAW 2021.

The following codes identify the collections housing the material examined (curators are given in parentheses).

ASCP Arthur F. Sniegón collection, Praha, Czech Republic;
LHCP Lucie Hřůzová collection, Praha, Czech Republic;
NMPC National Museum, Praha, Czech Republic (Jiří Hájek).

RESULTS

Heliocoprís antenor (Olivier, 1789) (Figs. 1–3)

MATERIAL EXAMINED. **Chad:** Neu Kamerun, Logone – Poma, v.1913, Dr. Houy lgt., ex. coll. V. Balthasar, 1 ♂ (NMPC); Logone-Oriental region, Laramanaye env., Doyen village, 7°56'06"N, 15°45'59"E, ca. 445 m a. s. l., 21.v.2021, A. F. Sniegón lgt., D. Sommer det. 2022, 1 ♂, 1 ♀ (ASCP), 1 ♀ (LHCP, Fig. 1A–F). **Mali:** Fr[ench]. Sudan [= nowadays Mali], Sikasso [ca. 11°19'N, 5°40'W], 1929, without collector's name, [coll.] Dr. Balthasar, 2 ♀♀ (NMPC) (Fig. 2C–D); Bamako [ca. 12°38'N, 7°59'W], xi.1965, Krupka lgt., ex. coll. V. Balthasar, 1 ♂ (NMPC, Fig. 2A–B).

ADDITIONAL MATERIAL EXAMINED. **Burkina Faso:** Haute Volta, Bobo Dioulasso [ca. 11°10'N, 4°17'W], v.1953, J. Hamon lgt., coll. Mus. Congo, ex. coll. V. Balthasar, V. Balthasar det. 1960, 1 ♀ (NMPC). **Cameroon:** Südl. Tschadsee [12°47'N, 14°25'E], zw[ischen]. 8.–6. Grad, n. Br. [= 8–6°N], 1913, Nähe Logones from Ebert, Sammlung Priefert, ex. coll. V. Balthasar, 1 ♂, 1 ♀ (NMPC). **Central African Republic:** Oubangi-Chari, without date, P. Renault lgt., coll. Mus. Congo, ex. coll. Dr. Breuning, ex. coll. V. Balthasar, V. Balthasar det. 1962, 1 ♂ (NMPC). **Democratic Republic of the Congo:** Belg. Kongo, Katanga, Kinda [ca. 9°18'S, 25°03'E], without date and collector's name, ex. coll. V. Balthasar, 1 ♂, 1 ♀ (NMPC); Lulua, Kananga [ca. 5°53'S, 22°25'E], xi.1933, F. G. Overlaet lgt., coll. Mus. Congo, ex. coll. V. Balthasar, 4 ♀♀ (NMPC). **Ethiopia:** Harar, 1960, Dr. Cakl lgt., ex. coll. V. Balthasar, 1 ♀ (NMPC); Zhewa, Nazret [= Adama, ca. 8°32'N, 39°16'E], viii.2002, Cyril Di Gennaro lgt., ex. coll. S. Pokorný det. 2003, 2 ♂♂, 1 ♀ (NMPC). **Ghana:** No[r]thern prov., Savelugu env. [ca. 9°37'N, 0°49'W], 14.–15.vi.2006, S. Pokorný lgt. et ex. coll., 1 ♀ (NMPC); No[r]thern prov., Damongo env. [ca. 9°05'N, 1°49'W], 16.–17.vi.2006, S. Pokorný lgt. et coll., 1 ♂, 1 ♀ (NMPC). **Guinea:** Kindia [10°02'N 12°51'W], 10.–16.v.[19]64, Dr. Šabatský lgt., ex. coll. Pokorný, 1 ♂, 1 ♀ (NMPC). **Kenya:** Kenya Colony, without date, Škulina lgt., 1 ♂ (NMPC). **Senegal:** Senegal, without date and collector's name, ex. coll. V. Balthasar, 3 ♂♂, 1 ♀ (NMPC); same locality, without date, Eing. Nr. 4, 1956 Sig. R. Oberthür, coll. Allard, ex. coll. V. Balthasar, 2 ♂♂, 1 ♀ (NMPC); Saint Louis [ca. 16°01'N, 16°29'W], Neuburger (Berlin) [lgt.], ex. coll. V. Balthasar, 1 ♀ (NMPC); Bignona [ca. 12°48'N, 16°13'W], 8.v.1931, ex. coll. V. Balthasar, 1 ♀ (NMPC). **Togo:** Togo, without date and collector's name, ex. coll. S. Pokorný, 1 ♀ (NMPC). **Zambia:** Isoka, Mbesuma ranch [ca. 10°02'S 32°10'E], 9.–10.xii.[20]04, [K.] Werner & [P.] Smrž lgt., ex. coll. S. Pokorný, 1 ♀ (NMPC).

DISTRIBUTION. So far known from Angola, Burkina Faso, Cameroon, Democratic Republic of the Congo, Eritrea, Ethiopia, Ghana, Guinea, Guinea-Bissau, Niger, Nigeria, Republic of the Congo, Senegal, Sierra Leone, Togo, Zambia, Zimbabwe (Pokorný et al. 2009), also from Central African Republic, Gambia, Mauretania, Uganda, and (?)Tanzania (De Jong & Krell, 2011, Ceccolini & Cianferoni 2020, Schoolmeesters 2022). First country records from Chad and Mali.

REMARKS. Two specimens from the series were collected on a cattle pasture near the Logone River (Fig. 3A–B). Both specimens were found near dung. Pasture contained not only cattle dung, but also hippopotamus dung. A third specimen was attracted at a light source near a pasture (A. F. Sniegón, pers. obs.).

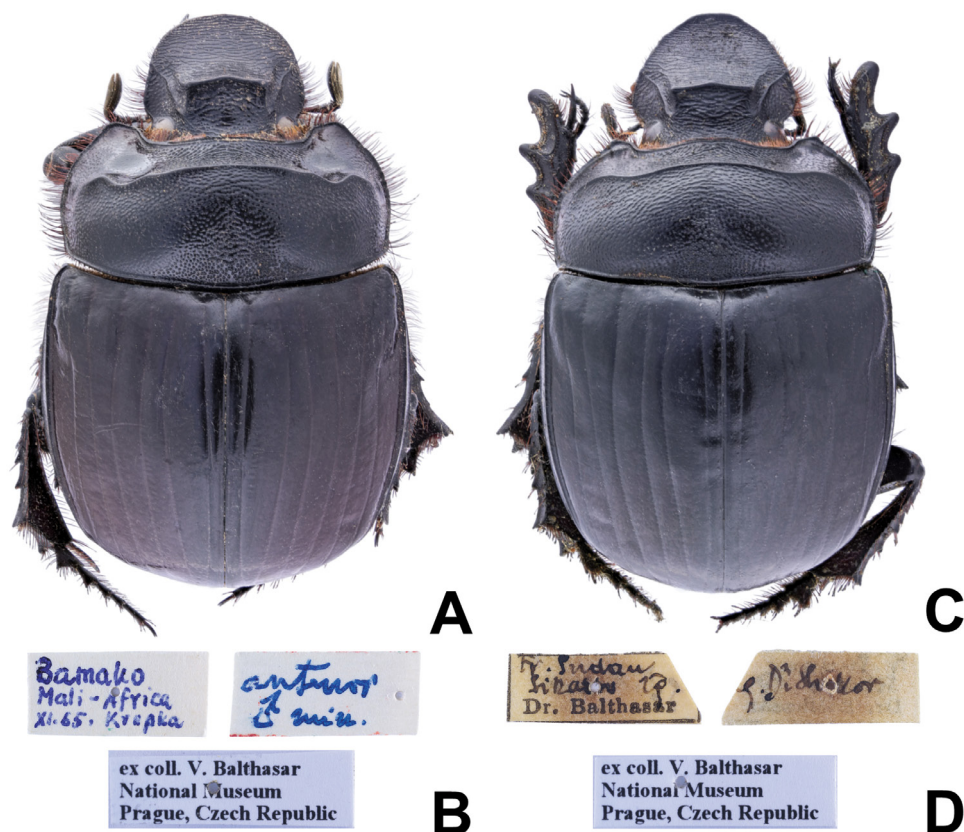


Fig. 2. *Heliocopris anterior* (Olivier, 1789) from Mali. A – male from Bamako in dorsal view, B – labels of the male specimen from Bamako, C – female from Sikasso in dorsal view, D – labels of the female specimen from Sikasso; not to scale.

Acknowledgements

We would like to thank Jiří Hájek (NMPC) for allowing access to comparative material housed at his institution and also Lucie Hružová (Charles University, Prague, CZ) for the loan of material. We express our thanks to the local collaborators from the A.L.C.P. NGO in Chad and Czech volunteers from Save-Elephants, z.s. The work of David Sommer and Michal Vais was supported by the Institutional Research Support grant of the Charles University, Prague (No. SVV 260571/2022).

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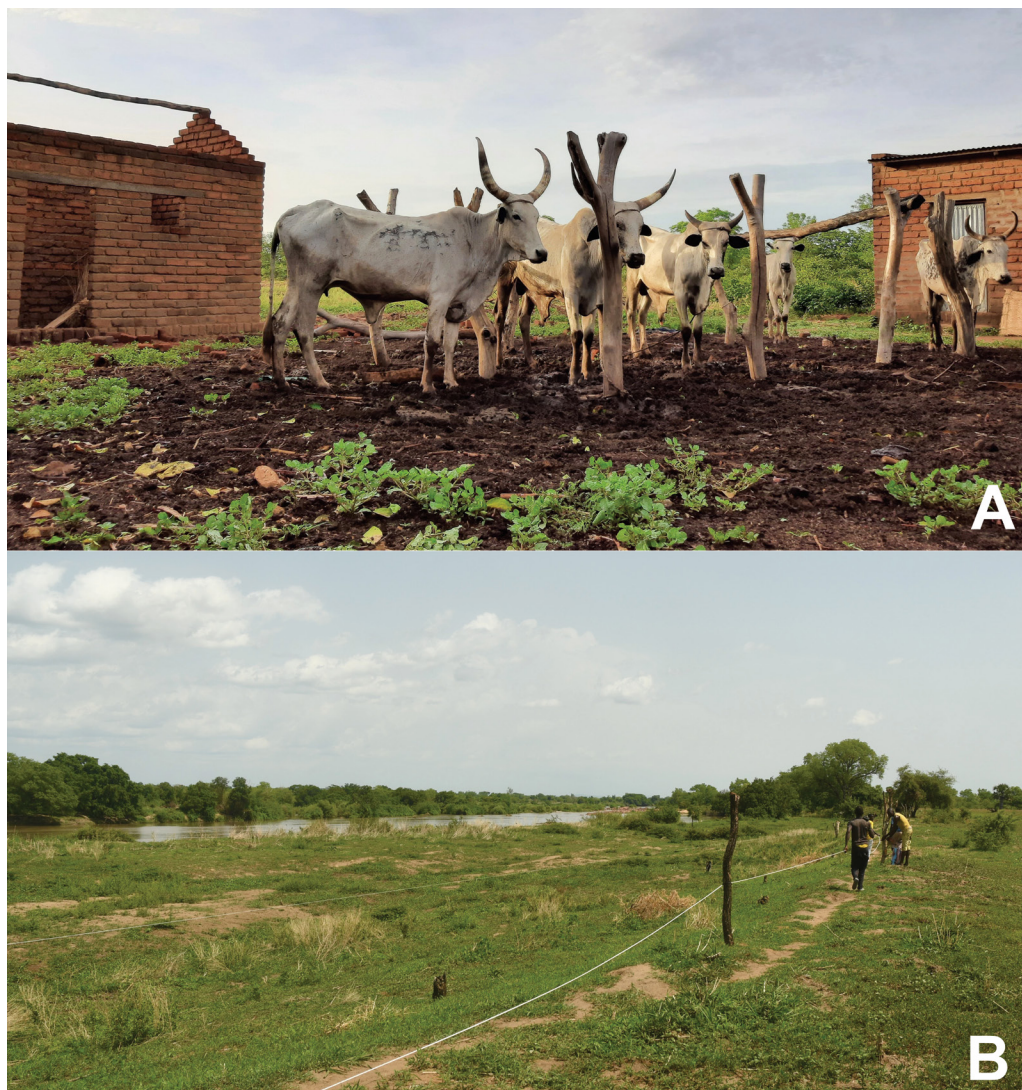


Fig. 3. A – local cattle breed in Chad. B – a pasture near the Logone River with cattle dung and hippopotamus dung, where two specimens of *Heliocopris antenor* (Olivier, 1789) were found. Photo by A. F. Sniegón, 21.v.2021.

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