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A new *Bembidion* LATREILLE, 1802 from Ethiopia and faunistic remarks on additional species (Coleoptera: Carabidae)

J. SCHMIDT

Abstract

A new species of the *Bembidion* subgenus *Peryphus* DEJEAN, 1821 (Coleoptera: Carabidae) is described from southern Ethiopia. *Bembidion* (*Peryphus*) *fridae* sp.n. was found in the Afromontane Harenna Forest on the southern slope of the Bale Mountains. It differs from all other Ethiopian species of that subgenus, first of all, in the larger body size, the markedly elongate elytra and the rounded humeri. So far, only two female specimens are available. A key to the species of the subgenus *Peryphus* known to occur in Ethiopia is provided. New faunistic data on several additional *Bembidion* species occurring in the Ethiopian Highlands are also presented. *Bembidion* (*Notaphocampa*) *foveolatum* DEJEAN, 1831 is recorded from Ethiopia for the first time.

Key words: Coleoptera, Carabidae, ground beetles, Bembidiini, *Peryphus*, taxonomy, faunistics, new species, Ethiopia, Afromontane fauna, Bale Mountains.

Introduction

Species of the *Bembidion* subgenus *Peryphus* DEJEAN, 1821 occurring in the mountains of East Africa were just recently revised by TOLEDANO et al. (2021), who identified three species as being endemic to the Ethiopian Highlands. Based on endophallic morphology, the Ethiopian *Peryphus* species seem very closely related to each other and to the western Palearctic *Bembidion fluviatile* DEJEAN, 1831 and *B. scapulare* DEJEAN, 1831 (TOLEDANO et al. 2021).

In this paper, a fourth new *Peryphus* species found in the Harenna Forest on the southern slope of the Bale Mountains, is described from Ethiopia. Only two female specimens of the new species were collected, and the character states of the male genitalia are thus not available for study. As a consequence, the relationships with other *Peryphus* species in the region are difficult to determine with certainty. It may therefore be considered a shortcoming of the description of the new species presented in this paper that it is based only on female specimens. However, the discovery of male specimens will be difficult if not impossible in the near future due to the political situation in Ethiopia. The country has been in a state of heavy civil conflict since 2018. As a result, the situation in most parts of the country, including the highlands, is so dangerous that field research is largely impossible. There is currently no prospect of the situation calming down or improving. It is therefore unlikely that it will be possible to revisit the type locality in the coming years or possibly even in the next decades to collect further specimens of the species and to study the morphology of its male genitalia. The present work is therefore intended as a contribution to the taxonomic diversity of the *Peryphus* in Ethiopia, without clarifying further questions about the actual relationships of the species. The new species can also be identified easily by features of the exoskeleton. Therefore, a revised identification key to the Ethiopian *Peryphus* is provided in this paper, which focuses on external character states. Furthermore, faunistic data on eleven additional *Bembidion* species occurring in the Ethiopian Highlands are presented.

Material and Methods

Specimens were examined with a Leica M205-C stereomicroscope. The photographs were taken with a Leica DFC450 digital camera using a motorised focusing drive, light base Leica TL5000 Ergo, diffused light with Leica hood LED5000 HDI, subsequently processed with Leica LAS application software, and enhanced with CorelDRAW Graphics Suite X5.

The description of the patterns of microsculpture refers to the dorsal surface of the body and was studied under a magnification of 80×.

Body size was measured from the tip of the mandibles in open position to the apex of the longer elytron. The width of the head (HW) was measured at its widest part, including the compound eyes. The width of the pronotum (PW) and the width of the elytra (EW) were measured at their widest point. Pronotal length (PL) was measured along the midline. The widths of the apical (PAW) and basal (PBW) margins of the pronotum were measured between the tips of the apical and basal angles, respectively. Elytral length (EL) was measured from the tip of the scutellary shield to the apex of the longer elytron.

The specimens are deposited in the following collections:

CLT	coll. Luca Toledano, Verona, Italy
CSCHM	Joachim Schmidt working collection, Admannshagen, Germany, to be deposited in the ZSM
NHMAA	Natural History Museum, Addis Ababa University, Ethiopia
NMW	Natural History Museum Vienna, Wien, Austria
ZSM	Zoologische Staatssammlung, Munich, Germany

Bembidion (*Peryphus*) *fridae* sp.n.

(Fig. 1)

TYPE MATERIAL: **Holotype** ♀: Ethiopia, Oromia, south slope of Bale Mts., south of Rira, Katcha Campsite, 2380 m, 6°42'58"N 39°43'25"E, 3.III.2015, leg. J. Hagge (CSCHM). **Paratype** ♀, same label data as holotype (CSCHM).

DESCRIPTION: Body length: 6.7–6.9 mm.

Proportions (n = 2): PW/HW 1.30–1.31; PW/PL 1.28–1.31; PW/PWB 1.32–1.35; PWB/PWA 1.22; EW/PW 1.60–1.61; EL/EW 1.54–1.55.

Colour: Head, pronotum and elytra blackish with slight metallic lustre, elytra with blurred, light brownish apical spots which extend to the tips of the elytra. First and second antennomeres yellowish, contrasting with the markedly darkened antennomeres 3–11. Palps and legs yellowish in most parts, but penultimate maxillary palpomere and knees slightly darkened.

Microsculpture: Head with very finely engraved isodiametric meshes on disc and slightly more distinctly engraved meshes on clypeus, neck and in supraorbital furrows. Pronotum with very small, very finely engraved, slightly transverse meshes on disc and more distinct, almost isodiametric meshes in pronotal basolateral impressions. Elytral intervals with very finely engraved, narrow transverse meshes.

Head: Size averaged for *Bembidion*, eyes large and protruding, tempora very small, approximately 1/5 diameter of eyes, distinctly wrinkled to the neck. Supraorbital furrows rather shallow, smooth, frons markedly convex. Antennae moderately long, tip of the seventh antennomere reaching pronotal base.

Prothorax: Pronotum rather small, transverse, broader than head and much narrower than elytra, broadest slightly before middle, sides markedly narrowed towards apex and base, basal margin slightly broader than apical margin. Lateral margin concave in basal quarter, with laterobasal angles moderately large, rectangular or slightly acute, laterally slightly protruding. Anterior

pronotal margin concave, anterior angles small, slightly protruding anteriad. Base slightly but distinctly convex, with basal angles slightly shifted anteriad. Lateral gutter very narrow in anterior 2/5, very slightly broadened from level of anterior marginal seta towards base; laterobasal carina short, very fine. Disc markedly convex, smooth in most parts, with a few scattered small punctures near the anterior transverse impression; median line fine in middle, absent near apex and base. Basal transverse impression very broad and shallow, distinctly punctate; laterobasal impressions moderately large, deep, rugose-punctate.

Pterothorax: Elytra markedly elongate, convex on disc, lateral margin convex throughout, maximum width about at middle; anterior part moderately slender with rounded humerus; preapical sinuation distinct. Apex of each elytron shortly rounded towards suture. A parascutellary seta and two discal setae are present, the two latter are adjoined to the third stria. Parascutellary stria long, moderately deep, punctate; first and eighth striae deeply impressed throughout, 2–7 anteriorly deep, disappearing near apex; seventh stria distinct but shallower than internal striae; striae 1–7 distinctly punctate; intervals convex. Apical stria flat and short, not connected to any of the discal striae. Hind wings fully developed. Metepisterna about twice as long as wide.

Legs: Moderately slender.

Aedeagus: Male unknown.

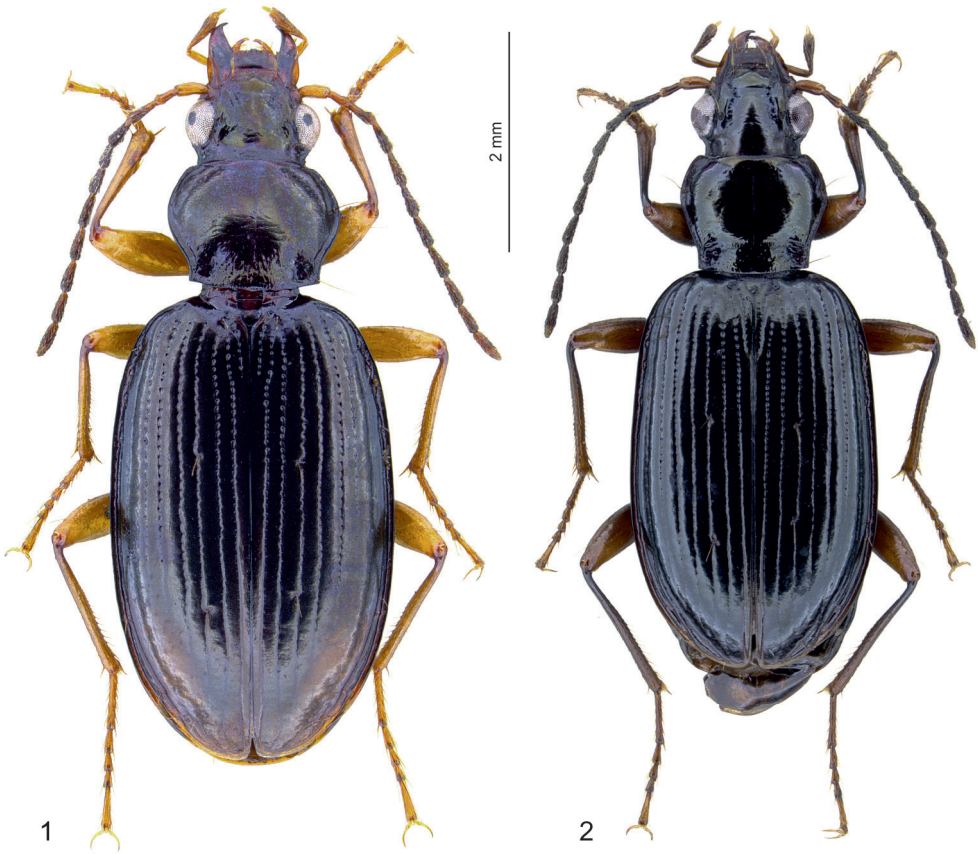
RECOGNITION: *Bembidion fridae* is the largest species of the subgenus *Peryphus* in Ethiopia. In addition, it differs from all other species of the subgenus in the markedly elongate ovate elytra and the colouration.

Bembidion baleense TOLEDANO, BONAVITA & SCHMIDT, 2021 is endemic to the northern slope of the Bale Mountains and is distinguished from the new species by the darkened palpomeres, femoral base, tibiae and tarsomeres, completely dark elytra, flatter body and less transverse pronotum (Fig. 2). *Bembidion damota* TOLEDANO, BONAVITA & SCHMIDT, 2021 is more widely distributed in Ethiopia. It is distinguished from the new species by the less transverse, more cordate pronotum, which is broadest distinctly before middle (its apical margin is about as broad as the basal margin), by the broader ovate elytra and the much more contrasting apical spots on the elytra (Fig. 4). *Bembidion scottustulatum* NETOLITZKY, 1937 is likewise widely distributed in Ethiopia. It is distinguished from the new species by the three basal antennomeres being yellowish, by the more markedly reduced microsculpture with almost polished discs of head and pronotum, by the more cordate pronotum (as noted for *B. damota*) and by the shorter elytra with more pronounced humeri (see Fig. 3).

DISTRIBUTION: The new species is very probably endemic to the Harenna Forest on the southern slope of the Bale Mountains. Until today, it is known only from the type locality, the Katcha Campsite near the Bale Mountain Lodge about 6.5 km south of Rira, 45 km south of Dinsho.

HABITAT: Not noted. The specimens were most likely found along the small stream that flows through the Katcha Campsite. The area consists of a pasture that interlocks with a very speciose semi-natural Afromontane forest.

ETYMOLOGY: This new species is dedicated to my granddaughter Frida, who, in her short life, was passionate about nature, arts and mythical creatures, but died of an incurable illness at the age of just eight.



Figs. 1–2: Habitus of 1) *Bembidion* (*Peryphus*) *fridae*, holotype, female; 2) *B.* (*P.*) *baleense*, male.

Key to the Ethiopian species of *Bembidion* subgenus *Peryphus*

1 Elytra unicolourous, blackish brown with slight metallic lustre. Antennomeres 2–11 darkened. Femora darkened in basal half (Fig. 2) ..... *baleense*

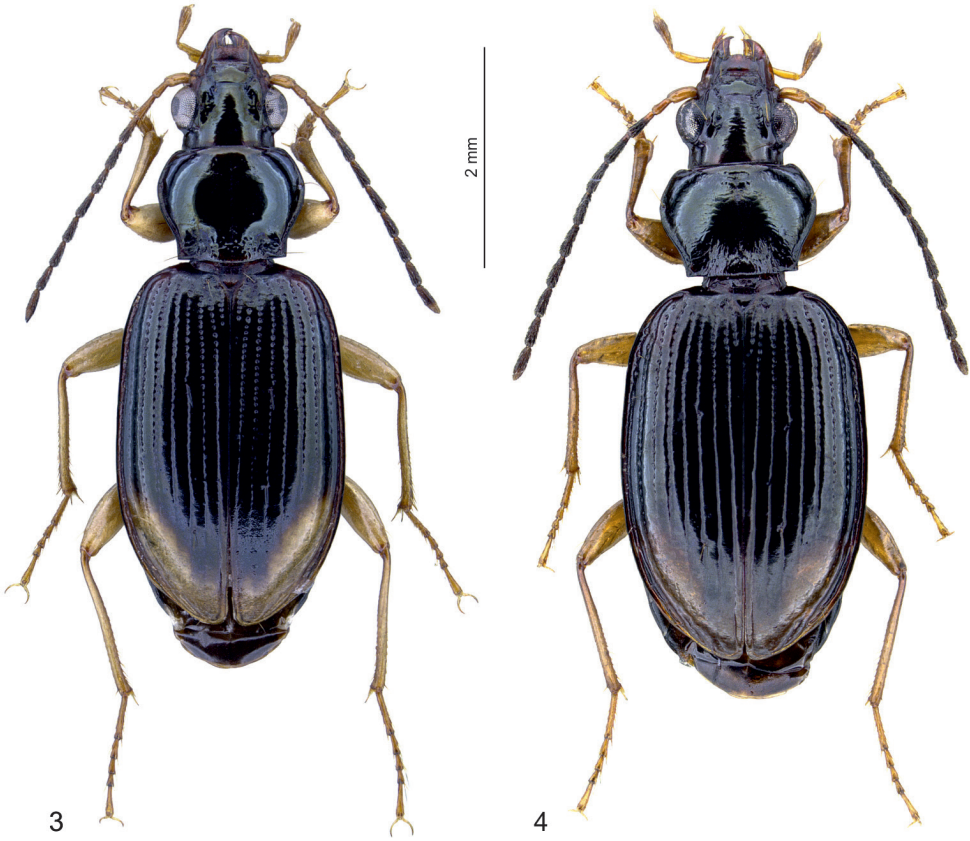
\- Elytra with yellowish apical lunula. Antennae darkened beginning from the third or fourth antennomere. Femora entirely yellowish 2

2 Antennomeres 4–11 darkened (Fig. 3) ..... *scottustulatum*

\- Antennomeres 3–11 darkened 3

3 Body length > 6.5 mm. Pronotum broadest at middle, apical margin smaller than basal margin. Elytra markedly elongate (ratio EW/PW ≥ 1.60), slender at base, humerus gently rounded and indistinct. Apical spots on the elytra vaguely defined (Fig. 1) ..... *fridae* sp.n.

\- Body length < 6.3 mm. Pronotum broadest distinctly before middle, apical margin about as broad as basal margin. Elytra shorter (ratio EW/PW < 1.55), broad at base, humerus shortly rounded and distinct. Apical spots on the elytra much more contrasting (Fig. 4) ..... *damota*



Figs. 3–4: Habitus of 3) *Bembidion* (*Peryphus*) *scottustulatum*, male; 4) *B*. (*P*.) *damota*, male.

New faunistic data on *Bembidion* species from the Ethiopian Highlands

Bembidion (*Notaphocampa*) *foveolatum* DEJEAN, 1831

Widespread on the African continent, but not yet reported for Ethiopia (JEANNEL 1946, BASILEWSKY 1963, MERENE et al. 2023). The following record is apparently the first one for this species in Ethiopia.

New sampling data:

Amhara Regional State: Lake Tana shore NE Bahir Dar, 1790 m, 11°38'37"N 37°24'54"E, 14.V.2022, 4 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM).

Bembidion (*Ocydromus*) *africanum* CHAUDOIR, 1876

This species is endemic to Ethiopia and widespread in the country (TOLEDANO et al. 2021).

New sampling data:

Amhara Regional State: W-slope Mt. Choke, river valley, 2750–2900 m, 10°38'N 37°45'E, 1.III.2019, 2 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, SW-slope Mt. Choke, river valley, 2840 m, 10°36'35"N 37°46'53"E, 29.IV.2022, 65 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM). Ditto, N-slope Mt. Choke, N of Waber, 3450–3600 m, 10°44'48"N 37°46'22"E, 7.V.2022, 3 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM).

Bembidion (*Ocydromus*) *atlanticum adowanum* CHAUDOIR, 1876

Described from Adwa in North Ethiopia (CHAUDOIR 1876). MERENE et al. (2023) follow LORENZ (2005) and list *B. adowanum* as distinct species. However, the external and internal genital morphology of the populations from Ethiopia is identical with that of the Mediterranean *B. atlanticum atlanticum* WOLLASTON, 1854 (unpublished data). I therefore follow the systematics of *B. atlanticum* (s.l.) proposed by NETOLITZKY (1937) and BASILEWSKY (1953) who assigned subspecific status to the Ethiopian populations.

New sampling data:

Amhara Regional State: Mt. Abune Yosef, 3700–3850 m, 12°7'29"N 39°11'21"E, 5.III.2019, 5 exs., leg. J. Schmidt et al. (CSCHM). W-slope Mt. Choke, river valley, 2750–2900 m, 10°38'N 37°45'E, 1.III.2019, 3 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, SW-slope Mt. Choke, river valley, 2840 m, 10°36'35"N 37°46'53"E, 29.IV.2022, 10 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Northern Guassa Plateau, "Yegana Natural Forest", river valley, 3125 m, 10°26'3"N 39°47'16"E, 20.V.2022, 19 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM, NHMAA).

Oromia Regional State: NW-slope Bale Mts., Salgen Valley, Sebsebe Washia Forest, 2720–2800 m, 7°1'N 39°34'E, 3.II.2019, 1 ex., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, 3130 m, 7°3'N 39°37'E, 4.II.2019, 1 ex., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). Gughe Highlands, env. Dorze and Chencha, 2600–2700 m, 6°15'N 37°34'E, 4.XII.2017, 37 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM).

Bembidion (*Ocydromus*) *basistriatum* FAIRMAIRE, 1893

This species is endemic to Ethiopia and widely distributed in the northern and southern highlands (TOLEDANO et al. 2021).

New sampling data:

Amhara Regional State: E-slope Mt. Choke, above Wondasha Guskuam, 3650 m, 10°41'5"N 37°59'21"E, 2.V.2022, 3 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, N-slope Mt. Choke, N of Waber, 3450–3600 m, 10°44'48"N 37°46'22"E, 7.V.2022, 5 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Northern Guassa Plateau, "Yegana Natural Forest", river valley, 3125 m, 10°26'3"N 39°47'16"E, 20.V.2022, 1 ex., leg. J. Schmidt & Yeshitla Merene (CSCHM).

Oromia Regional State: N-slope Bale Mts., Shaya Valley SW of Goba, 3100–3150 m, 6°59'12"N 39°52'57"E, 6.II.2020, 1 ex., leg. J. Schmidt et al. (CSCHM).

Bembidion (*Ocydromus*) *melanoceroides* TOLEDANO, NERI & SCHMIDT, 2021

This species is endemic to the highlands of southern Ethiopia (TOLEDANO et al. 2021).

New sampling data:

Oromia Regional State: Road Adaba–Dinsho, 12 km ENE Adaba, Ashilo River, 2524 m, 7°2'21.6"N 39°29'43.9"E, 22.II.2014, 3 exs., leg. M.A. Jäch, loc. 21 (NMW).

Bembidion (*Ocydromus*) *melanocerum* CHAUDOIR, 1876

This species is endemic to the highlands of northern Ethiopia (TOLEDANO et al. 2021).

New sampling data:

Amhara Regional State: SW-slope Mt. Choke, river valley, 2840 m, 10°36'35"N 37°46'53"E, 29.IV.2022, 16 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, NE-slope Mt. Choke, 3700–3800 m, 10°42'56"N 37°55'16"E, 4.V.2022, 1 ex., leg. J. Schmidt & Yeshitla Merene (CSCHM, NHMAA). Ditto, Mt. Choke, eastern crater valley, 3700–3800 m, 10°42'59"N 37°54'13"E, 6.V.2022, 1 ex., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, N-slope Mt. Choke, N of Waber, 3450–3600 m, 10°44'48"N 37°46'22"E, 7.V.2022, 16 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM, NHMAA). Ditto, W-slope Mt. Choke, 3680–3780 m, 10°40'11"N 37°48'33"E, 11.V.2022, 4 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM).

Oromia Regional State: SW Shewa Zone, Sebeta town, Kersa stream, 2166 m, 8°55'40"N 38°31'10"E, 12.I.2012, 15 exs., leg. Aschalew Lakew (CSCHM, NMW).

Bembidion (*Omotaphus*) *aethiopicum* RAFFRAY, 1886

This species is endemic to Ethiopia and very widespread in the country (BONAVITA et al. 2016).

New sampling data:

Amhara Regional State: Mt. Abune Yosef, 3700–3850 m, 12°7'29"N 39°11'21"E, 5.III.2019, 12 exs., leg. J. Schmidt et al. (CSCHM). W-slope Mt. Choke, 3450 m, 10°38'9"N 37°46'6"E, 22.II.2019, 18 exs., leg. J. Schmidt et al. (CSCHM, NHMAA, ZSM). Ditto, 3370 m, 10°38'7"N 37°45'51"E, 23.II.2019, 7 exs., leg. J. Schmidt et al. (CSCHM). Ditto, 3700–3900 m, 10°42'17"N 37°50'29"E, 25.II.2019, 2 exs., leg. J. Schmidt et al. (CSCHM). Ditto, river valley, 2750–2900 m, 10°38'N 37°45'E, 1.III.2019, 58 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM). Mt. Choke, crater valley, 3780–3900 m, 10°42'12"N 37°50'58"E, 27.II.2019, 2 exs., leg. J. Schmidt et al. (CSCHM). SW-slope Mt. Choke, 3630–3730 m, 10°38'2"N 37°50'8"E, 28.II.2019, 52 exs., leg. J. Schmidt et al. (CSCHM, NHMAA, ZSM). Ditto, river valley, 2840 m, 10°36'35"N 37°46'53"E, 29.IV.2022, 110 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM). Ditto, NE-slope Mt. Choke, above Felege Birhan, 3750–3850 m, 10°42'13"N 37°56'32"E, 30.IV.2022, 1 ex., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, Mt. Choke, western crater valley, 3500–3600 m, 10°41'00"N 37°50'35"E, 1.V.2022, 1 ex., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, E-slope Mt. Choke, above Wondasha Guskuam, 3650 m, 10°41'5"N 37°59'21"E, 2.V.2022, 2 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, NE-slope Mt. Choke, 3700–3800 m, 10°42'56"N 37°55'16"E, 4.V.2022, 1 ex., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, N-slope Mt. Choke, N of Waber, 3450–3600 m, 10°44'48"N 37°46'22"E, 7.V.2022, 32 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM). Debre Markos, Tshamoga River, 2400 m, 10°17'47"N 37°45'41"E, 29.IV.2022, 2 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Northern Guassa Plateau, near Guassa Community Lodge, 3300 m, 10°17'17"N 39°47'54"E, 18.V.2022, 29 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM, ZSM). Ditto, "Aste wuha", 3400 m, 10°24'N 39°48'E, 19.V.2022, 2 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, "Yegana Natural Forest", river valley, 3125 m, 10°26'3"N 39°47'16"E, 20.V.2022, 12 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM).

Oromia Regional State: Road Kofele-Dodola, 2570 m, 7°1'45"N 38°57'5"E, 9.XII.2017, 1 ex., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). S-slope Mt. Chilalo, Dhaba village, 3200 m, 7°51'52"N 39°16'46"E, 19.II.2020, 6 exs., leg. J. Schmidt, C. Wirkner & Yeshitla Merene (CSCHM). W-slope Mt. Chilalo, 3720 m, 7°54'34"N 39°13'3"E, 23.II.2020, 1 ex., leg. J. Schmidt, C. Wirkner & Yeshitla Merene (CSCHM). Mt. Chilalo, crater valley, 3750–3800 m, 7°54'45"N 39°13'46"E, 21.–22.II.2020, 1 ex., leg. J. Schmidt, C. Wirkner & Yeshitla Merene (CSCHM). N-slope Mt. Enkuolo, 3100–3200 m, 7°24'41"N 39°22'26"E, 5.–7.XII.2016, 4 exs., leg. J. Schmidt (CSCHM). Mt. Kaka, E-slope above Mararo, 3300–3420 m, 7°24'N 39°12'E, 23.–28.XI.2017, 10 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, 3720–3770 m, 7°23'9"N 39°10'41"E, 26.XI.2017, 4 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). NW-slope Bale Mts., Salgen Valley, Sebsebe Washia Forest, 2720–2800 m, 7°1'N 39°34'E, 3.II.2019, 1 ex., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, 3130 m, 7°2'8"N 39°36'6"E, 4.II.2019, 5 exs., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, above Sebsebe Washia Forest, 3340–3500 m, 7°3'N 39°37'E, 4.II.2019, 13 exs., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, Web River below Dinsho, 3000 m, 7°7'18"N 39°46'3"E, 5.II.2019, 4 exs., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, forest remnant W Dinsho, 3100 m, 7°6'16"N 39°44'46"E, 8.II.2019, 1 ex., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, Fincha Habera Camp, river valley, 3400–3500 m, 7°0'N 39°43'E, 20.–21.II.2013, 23 exs., leg. J. Hagge, Y. Teklu & J. Schmidt (CSCHM). Ditto, 3470 m, 7°0'32"N 39°43'26"E, 20.II.2015, 10 exs., leg. J. Hagge (CSCHM). Ditto, 3460 m, 7°0'59"N 39°43'19"E, 11.II.2019, 3 exs., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). S-slope Bale Mts., Harenna Forest, below Rira, *Schefflera* forest, 2400–2500 m, 6°43'N 39°44'E, 28.II.2013, 6 exs., leg. J. Hagge, Y. Teklu & J. Schmidt (CSCHM). Ditto, Katcha, 2380 m, 6°42'58"N 39°43'25"E, 3.III.2015, 36 exs., leg. J. Hagge (CSCHM). Ditto, 2380 m, 6°43'17"N 39°43'14"E, 16.XII.2016, 17 exs., leg. J. Schmidt (CLT, CSCHM). Harenna Forest, Hadukha Valley W of Rira, 2850 m, 6°47'47"N 39°40'2"E, 11.II.2020, 3 exs., leg. J. Schmidt et al. (CSCHM). Ditto, Asrada Valley, 2550 m, 6°49'46"N 39°37'49"E, 12.–13.II.2020, 5 exs., leg. J. Schmidt et al. (CSCHM). N-slope Bale Mts., above Goba, river valley, 2990 m, 6°56'8"N 39°57'20"E, 7./18.XII.2017, 6 exs., leg. M. Berndt & J. Schmidt (CLT, CSCHM). Ditto, Angesu Valley S of Goba, 3050 m, 6°55'58"N 39°57'5"E, 5.II.2020, 11 exs., leg. J. Schmidt et al. (CSCHM). Ditto, Shaya Valley SW of Goba, 3100–3150 m, 6°59'12"N 39°52'57"E, 6.II.2020, 1 ex., leg. J. Schmidt et al. (CSCHM). Western Bale Mts., near pass South of Adaba, 3250 m, 6°46'33"N 39°24'58"E, 22.II.2017, 2 exs., leg. M. Berndt & J. Schmidt (CSCHM). SE-slope Mt. Damot, river valley, 2360 m, 6°53'26"N 37°46'51"E, 3.XII.2017, 46 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM). Mt. Damot, top ridge, 2800–2900 m, 6°54'24"N 37°47'7"E, 3.XII.2017, 15 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). Gughe Highlands, near Tola village, 2950 m, 6°18'48"N 37°33'57"E, 5.XII.2017, 5 exs., leg.

D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, near Mt. Gughe, 2880–2950 m, 6°12'00"N 37°20'19"E, 7.XII.2017, 2 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM).

Bembidion (*Omotaphus*) *scotti* NETOLITZKY, 1931

This species is endemic to Ethiopia and widespread in the northern and southern highlands (BONAVITA et al. 2016).

New sampling data:

Amhara Regional State, W-slope Mt. Choke, 3450 m, 10°38'9"N 37°46'6"E, 22.II.2019, 81 exs., leg. J. Schmidt et al. (CSCHM, NHMAA, ZSM). Ditto, 3370 m, 10°38'7"N 37°45'51"E, 23.II.2019, 25 exs., leg. J. Schmidt et al. (CSCHM, ZSM). Ditto, 3700–3900 m, 10°42'17"N 37°50'29"E, 25.II.2019, 2 exs., leg. J. Schmidt et al. (CSCHM). Ditto, river valley, 2750–2900 m, 10°38'N 37°45'E, 1.III.2019, 4 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). Mt. Choke, crater valley, 3780–3900 m, 10°42'12"N 37°50'58"E, 27.II.2019, 1 ex., leg. J. Schmidt et al. (CSCHM). SW-slope Mt. Choke, 3630–3730 m, 10°38'2"N 37°50'8"E, 28.II.2019, 38 exs., leg. J. Schmidt et al. (CSCHM, ZSM). Ditto, river valley, 2840 m, 10°36'35"N 37°46'53"E, 29.IV.2022, 26 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, E-slope Mt. Choke, above Wondasha Guskuam, 3650 m, 10°41'5"N 37°59'21"E, 2.V.2022, 1 ex., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, N-slope Mt. Choke, N of Waber, 3450–3600 m, 10°44'48"N 37°46'22"E, 7.V.2022, 37 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, W-slope Mt. Choke, Shoa Kidaneberet Valley, 3700–3800 m, 10°39'8"N 37°49'45"E, 8.V.2022, 2 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Northern Guassa Plateau, near Guassa Community Lodge, 3300 m, 10°17'17"N 39°47'54"E, 18.V.2022, 19 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, "Aste wuha", 3400 m, 10°24'N 39°48'E, 19.V.2022, 3 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, "Yegana Natural Forest", river valley, 3125 m, 10°26'3"N 39°47'16"E, 20.V.2022, 37 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM).

Oromia Regional State: SW-slope Mt. Chilalo, 2985 m, 7°53'31"N 39°10'18"E, 30.XI.2016, 11 exs., leg. J. Schmidt (CSCHM). Ditto, 3500–3800 m, 7°54'N 39°13'E, 1.–4.XII.2016, 4 exs., leg. J. Schmidt (CSCHM). Ditto, 3000–3300 m, 7°54'1"N 39°11'26"E, 2.XII.2016, 1 ex., leg. J. Schmidt (CSCHM). Ditto, south of crater, 3640 m, 7°53'53"N 39°13'48"E, 20.II.2020, 2 exs., leg. J. Schmidt, C. Wirkner & Yeshitla Merene (CSCHM). Ditto, crater valley, 3750–3800 m, 7°54'45"N 39°13'46"E, 21.–22.II.2020, 3 exs., leg. J. Schmidt, C. Wirkner & Yeshitla Merene (CSCHM). W-slope Mt. Chilalo, 3720 m, 7°54'34"N 39°13'3"E, 23.II.2020, 4 exs., leg. J. Schmidt, C. Wirkner & Yeshitla Merene (CSCHM). S-slope Mt. Chilalo, Dhaba village, 3200 m, 7°51'52"N 39°16'46"E, 19.II.2020, 11 exs., leg. J. Schmidt, C. Wirkner & Yeshitla Merene (CSCHM). Ditto, Damamelkeso Valley, 3500 m, 7°53'17"N 39°15'34"E, 25.II.2020, 5 exs., leg. J. Schmidt, C. Wirkner & Yeshitla Merene (CSCHM). N-slope Mt. Enkuolo, 3100–3200 m, 7°24'41"N 39°22'26"E, 5.–7.XII.2016, 41 exs., leg. J. Schmidt (CSCHM, ZSM). Ditto, W-slope Mt. Enkuolo, 3350–3600 m, 7°22'48"N 39°21'7"E, 6.–9.XII.2016, 1 ex. leg. J. Schmidt (CSCHM). Mt. Kaka, E-slope above Mararo, 3300–3420 m, 7°24'N 39°12'E, 23.–28.XI.2017, 35 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM, NHMAA). Ditto, 3370–3500 m, 7°22'57"N 39°11'27"E, 25.XI.2017, 5 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, 3400–3670 m, 7°24'N 39°11'E, 27.XI.2017, 1 ex., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, 3350–3400 m, 7°23'30"N 39°11'41"E, 28.XI.2017, 6 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). Mt. Kaka, southeast of crater, 3900–4100 m, 7°21'19"N 39°9'44"E, 1.XII.2017, 19 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CLT, CSCHM, NHMAA). Ditto, 3700–4100 m, 7°21'54"N 39°9'48"E to 7°21'9"N 39°10'18"E, 1.XII.2017, 10 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). Western Bale Mts., above Dodola, 2700–2850 m, 6°53'49"N 39°11'32"E, 10.–11.XII.2016, 117 exs., leg. J. Schmidt (CSCHM, NHMAA). NW-slope Bale Mts., Dinsho, N.P. headquarter area, 3230 m, 7°5'46"N 39°47'33"E, 2.II.2019, 2 exs., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, Salgen Valley, Sebsebe Washia Forest, 2720–2800 m, 7°1'N 39°34'E, 3.II.2019, 44 exs., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, 3130 m, 7°2'8"N 39°36'6"E, 4.II.2019, 160 exs., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM). Ditto, above Sebsebe Washia Forest, 3340–3500 m, 7°3'N 39°37'E, 4.II.2019, 56 exs., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM). Ditto, Web River below Dinsho, 3000 m, 7°7'18"N 39°46'3"E, 5.II.2019, 6 exs., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, Fincha Habera, 3460 m, 7°0'59"N 39°43'19"E, 11.II.2019, 1 ex., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). Gughe Highlands, env. Dorze and Chencha, 2600–2700 m, 6°15'N 37°34'E, 4.XII.2017, 1 ex., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM). Ditto, near Tola village, 2950 m, 6°18'48"N 37°33'57"E, 5.XII.2017, 18 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM).

Bembidion (*Omotaphus*) *tropicum* CHAUDOIR, 1876

This species is known from Ethiopia and Kenya. In Ethiopia it occurs in subtropical and Afromontane environments throughout the country (BONAVITA et al. 2016).

New sampling data:

Addis Ababa City: Gefersa Reservoir outflow, stream, 9°3'43"N 38°38'56"E, 2011–2012, 1 ex., leg. Aschalew Lakew (NMW).

Amhara Regional State: Mt. Choke, crater valley, 3700–3800 m, 10°41'14"N 37°50'7"E, 24.II.2019, 2 exs., leg. J. Schmidt et al. (CSCHM). Ditto, 3780–3900 m, 10°42'12"N 37°50'58"E, 27.II.2019, 1 ex., leg. J. Schmidt et al. (CSCHM). W-slope Mt. Choke, 3700–3900 m, 10°42'17"N 37°50'29"E, 25.II.2019, 2 exs., leg. J. Schmidt et al. (CSCHM). Ditto, river valley, 2750–2900 m, 10°38'N 37°45'E, 1.III.2019, 38 exs., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM, ZSM). SW-slope Mt. Choke, river valley, 2840 m, 10°36'35"N 37°46'53"E, 29.IV.2022, 98 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM). Ditto, NE-slope Mt. Choke, above Felege Birhan, 3750–3850 m, 10°42'13"N 37°56'32"E, 30.IV.2022, 3 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, E-slope Mt. Choke, above Wondasha Guskuam, 3650 m, 10°41'5"N 37°59'21"E, 2.V.2022, 5 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Debre Markos, Tshamoga River, 2400 m, 10°17'47"N 37°45'41"E, 29.IV.2022, 38 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM). Lake Tana shore NE Bahir Dar, 1790 m, 11°38'37"N 37°24'54"E, 14.V.2022, 12 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM).

Oromia Regional State: N-slope Mt. Enkuolo, 3100–3200 m, 7°24'41"N 39°22'26"E, 5.–7.XII.2016, 1 ex., leg. J. Schmidt (CSCHM). W Shewa Zone, Ginchi town, Awash [catchment area of Awash River], Chilimo stream, 2327 m [ca. 2350 m], 9°3'54"N 38°7'50"E, 2011–2012, 2 exs., leg. Aschalew Lakew (NMW). Ditto, Aleltu town, Beke 2 stream, 2580 m, 27.X.2011, 1 ex., leg. Aschalew Lakew (NMW). 44 km W Addis Ababa, 5 km SW Addis Alem, Berga River, 2140 m, 9°1'27.6"N 38°21'7.8"E, 25.II.2014, 2 exs., leg. M.A. Jäch, loc. 27 (NMW). 50 km ESE Shashemene, 17 km WNW Dodola, Wabe River, 2480 m, 7°0'51.0"N 39°1'54.7"E, 20.II.2014, 1 ex., leg. M.A. Jäch. loc. 10 (NMW). Road Adaba-Dinsho, 12 km ENE Adaba, Ashilo River, 2524 m, 7°2'21.6"N 39°29'43.9"E, 22.II.2014, 1 ex., leg. M.A. Jäch, loc. 21 (NMW). Western Bale Mts., above Dodola, 2700–2850 m, 6°53'49"N 39°11'32"E, 10.–11.XII.2016, 1 ex., leg. J. Schmidt (CSCHM). NW-slope Bale Mts., Salgen Valley, Sebsebe Washia Forest, 2720–2800 m, 7°1'N 39°34'E, 3.II.2019, 1 ex., leg. R. Emmerich, J. Schmidt & Yeshitla Merene (CSCHM). S-slope Bale Mts., below Rira, 2380 m, 6°43'17"N 39°43'14"E, 16.XII.2016, 2 exs., leg. J. Schmidt (CSCHM). Ditto, south of Rira, 1780 m, 6°35'38"N 39°45'12"E, 17.II.2017, 1 ex., leg. M. Berndt & J. Schmidt (CSCHM). SE-slope Mt. Damot, river valley, 2360 m, 6°53'26"N 37°46'51"E, 3.XII.2017, 1 ex., leg. D. Hauth, J. Schmidt & Yeshitla Merene (CSCHM).

Bembidion (*Peryphus*) *damota* TOLEDANO, NERI & SCHMIDT, 2021

This species is endemic to Ethiopia. It was previously known only from the southern highlands (TOLEDANO et al. 2021). The new record listed below is the first one that lies west of the Rift Valley.

New sampling data:

Amhara Regional State: Northern Guassa Plateau, "Yegana Natural Forest", river valley, 3125 m, 10°26'3"N 39°47'16"E, 20.V.2022, 57 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM).

Bembidion (*Peryphus*) *scottustulatum* NETOLITZKY, 1937

This species is endemic to Ethiopia and widespread in the northern highlands. In the southern highlands it occurs only in the Bale and Arsi Mountains (TOLEDANO et al. 2021).

New sampling data:

Amhara Regional State: SW-slope Mt. Choke, river valley, 2840 m, 10°36'35"N 37°46'53"E, 29.IV.2022, 214 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM). Northern Guassa Plateau, "Aste wuha", 3400 m, 10°24'N 39°48'E, 19.V.2022, 11 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM). Ditto, "Yegana Natural Forest", river valley, 3125 m, 10°26'3"N 39°47'16"E, 20.V.2022, 38 exs., leg. J. Schmidt & Yeshitla Merene (CSCHM, NHMAA, ZSM).

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Dr. Joachim SCHMIDT
General and Systematic Zoology, University of Rostock, Universitätsplatz 2, D – 18055 Rostock, Germany
(joachim.schmidt@uni-rostock.de)