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Bembidiina of Afrotropical Region: 3. *Bembidion* subgenus *Peryphus* Dejean, 1821 and related subgenera (Coleoptera, Carabidae)

Abstract: The six known Afrotropical species attributed to *Bembidion* subgenus *Peryphus* Dejean, 1821 in the previous literature (*B. scottustulatum* Netolitzky, 1937, *B. muscicola* Basilewsky, 1953, *B. melanocentrum* Chaudoir, 1876, *B. jeanneli* Alluaud, 1939, *B. sjoestedti* Alluaud, 1926 and *B. africanum* Chaudoir, 1876) are here revised. For one of them, *B. muscicola* Basilewsky, 1953, secondary homonym of the North American *B. (Semicampa) muscicola* Hayward, 1897, a synonymy with *B. basistriatum* Fairmaire, 1893, is proposed. *Bembidion basistriatum*, *B. melanocentrum* and *B. africanum* are transferred to the subgenus *Ocydromus* Clairville, 1806. In addition, *B. fontinale* Raffray, 1885 currently assigned to the genus *Sinechostictus* Motschulsky, 1864, is placed into the *Bembidion* subgenus *Ocydromus* Clairville, 1806. For *B. jeanneli* the lectotype and two paralectotypes are designated. Four new species from Ethiopia are also described: *Bembidion (Ocydromus) augustovignai* n.sp., *B. (Ocydromus) melanocentroides* n.sp., sister species of *B. melanocentrum*, and two species closely related to *B. scottustulatum*: *B. (Peryphus) damota* n.sp. and *B. (Peryphus) baleense* n.sp.

Riassunto: *Bembidiina della regione afrotropicale: 3. Bembidion sottogenere Peryphus Dejean, 1821 e sottogeneri vicini (Coleoptera, Carabidae)*

Vengono qui riviste le sei specie Afrotropicali attribuite nella precedente letteratura a *Bembidion* sottogenere *Peryphus* Dejean, 1821 (*B. scottustulatum* Netolitzky, 1937, *B. muscicola* Basilewsky, 1953, *B. melanocentrum* Chaudoir, 1876, *B. jeanneli* Alluaud, 1939, *B. sjoestedti* Alluaud, 1926 e *B. africanum* Chaudoir, 1876). Per una di esse, *B. muscicola* Basilewsky, 1953, omonimo secondario del Nordamericano *B. (Semicampa) muscicola* Hayward, 1897, è proposta la sinonimia con *B. basistriatum* Fairmaire, 1893. *Bembidion basistriatum*, *B. melanocentrum* e *B. africanum* sono trasferiti al sottogenere *Ocydromus* Clairville, 1806. Inoltre, *B. fontinale* Raffray, 1885 attualmente attribuito al genere *Sinechostictus* Motschulsky, 1864, viene qui trasferito in *Bembidion*, sottogenere *Ocydromus* Clairville, 1806. Per *B. jeanneli* sono designati il lectotipo e due paralectotipi. Sono anche descritte quattro specie di Etiopia: *Bembidion (Ocydromus) augustovignai* n.sp., *B. (Ocydromus) melanocentroides* n.sp., specie gemella di *B. melanocentrum*, e due specie in stretta relazione con *B. scottustulatum*: *B. (Peryphus) damota* n.sp. e *B. (Peryphus) baleense* n.sp.

Key words: Bembidiina, Africa, new taxa, *Ocydromus*, *Sinechostictus*, *Testedium*, distribution, systematics, taxonomy, synonymy, key to subgenera, key to species.

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INTRODUCTION

With few exceptions, the *Bembidion* Latreille, 1802 species inhabit moist habitats in temperate and colder environments. Those in tropical Africa can be found mainly along brooks, rivers and moorland of the mountains and in the afroalpine zone. This study, published in parallel with another revisionary paper (Bonavita & Vigna Taglianti, 2021) which deals with the *Bembidion* subgenus *Microserrullula* Netolitzky, 1921, is a further step to revising the Afrotropical fauna of Bembidiina. The first one (Bonavita *et al.* 2016) regarded the subgenus *Omotaphus* Netolitzky, 1914.

Six species presently attributed to the subgenus *Peryphus* Dejean, 1821, one species of the subgenus *Testedium* Motschulsky, 1864, and one species of the Bembidiina genus *Sinechostictus* Motschulsky, 1864, are known to occur in the mountains of tropical East Africa, all of which are characterized by relatively restricted geographical distributions (Ethiopia, Tanzania, Kenya). This is the first study that attempts to review these species all together, and describe some new species related to them.

Morphologically, most Bembidiina of East

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Africa share the typical marked shoulders of winged species, with exception of *Sinechostictus fontinale* Raf-fray, 1885 (Ethiopia), *Bembidion jeanneli* Alluaud, 1939 (Kenya) and *B. sjoestedti* Alluaud, 1926 (Tanza-nia), showing rounded humeri. *Bembidion sjoestedti*, also due to the relatively small size, is highly conver-gent in habitus with species of the subgenus *Hyp-sipezum* Alluaud, 1917 occurring in the same region.

After the investigation of comprehensive material, including type material of all known species and the material collected during expeditions conducted in Ethiopia by Augusto Vigna Taglianti (1973 and 1991) and more recently (2013-2020) by a team of researchers leaded by one of us (JS), we were able to discover four undescribed species from Ethiopia and make clear the systematic position of formerly poorly known taxa.

One of these new species was collected at Anderaccia (Ethiopia, Kaffa Province) by Augusto Vigna Taglianti in 1973: his student (PB) notes that this species was the preferred one of Augusto; for this reason, we decided to dedicate the species to him, with the name of *B. augustovignai* n.sp. The entire study presented here is dedicated to the late Augusto who, before us, already suspected that some of the taxa described here were new to science.

MATERIALS AND METHODS

This paper is based on the study of about 1900 specimens of *Bembidion* subgenus *Peryphus* Dejean, 1821 and related subgenera. The specimens are from or will be deposited in the collections of the following institutions and individuals:

AVT	Augusto Vigna Taglianti private collection, now preserved in the Museo Civico di Storia Naturale di Genova, Italy (Roberto Poggi, Maria Tavano)
NHMUK	The Natural History Museum, London, UK (Max Barclay, Beulah Garner)
CDW	David Wrase private collection, Gusow-Platkow, Germany (part of Zoologische Staatssammlung München, Germany)
CE	Dominique Echaroux private collection, Etrenchy, France
CH	Ingmar Harry private collection, Freiburg, Germany
CSCHM	Joachim Schmidt working collection, Rostock, Germany

CTVR	Luca Toledano private collection, Verona, Italy
MNHN	Muséum National d'Histoire Naturelle, Paris (Thierry Deuve, Azadeh Taghavian)
MRAC	Musée Royal de l'Afrique Centrale, Tervuren, Belgium (Marc De Meyer, Didier Van den Spiegel, Stéphane Hanot)
NHMW	Naturhistorisches Museum, Wien, Austria (Heinrich Schönmann, Manfred Jäch, Harald Schillhammer)
OSAC	Oregon State Arthropod Collection, Oregon State University, Corvallis, USA (David Maddison)
PB	Paolo Bonavita private collection, Roma, Italy
ZMAA	Zoological Museum, Addis Ababa University
ZSM	Zoologische Staatssammlung München, Germany (Michael Balke)

Body measurements were made with Leica M205C stereomicroscopes at 25x magnification. Ratios and measurements are abbreviated in the text as follows:

Al	antennal length
Bl	body length
El	elytral length
El/Ew	elytral length / elytral width ratio
Ew	elytral width
Ew/Pw	elytral width / pronotal width ratio
Hw	head width
Paw	width of pronotal anterior margin
Pbw	width of pronotal base
Pl	pronotal length
Pw	pronotal maximum width
Pw/Pl	pronotal width / pronotal length ratio

The body length was measured, in mounted specimens, from the front margin of the labrum to the apex of the elytra, and the length of antennae from the base of antennomere 1 to the apex of antennomere 11. The head width is the maximum width, including the eyes. The pronotal length was measured along the midline from the anterior to the posterior margin. The elytral width was measured at the widest point across both elytra.

Dissections were made using standard techniques. Genitalia and small parts were preserved in Euparal, attached to label-size acetate sheets and mounted on the same pins as the specimens.

The photographs made by LT (Figs. 5, 6, 10, 11) are composite images with progressive focusing obtained with a Nikon DSFi1 digital camera controlled by Nikon DS-L2 stand alone remote controller mounted on a Leica Z6 microscope equipped with a 1.0x Leica lens and a customized motorized stand made by LT, then processed with Helicon Focus® 6.4.3 and optimized with Photoshop® Elements 14. Photographs of the aedeagi (Figs. 13-23) are made with the same setup and processing method described above, although using a 5x Infinity Corrected Nikon Fluor lens on the Z6 microscope. The photos made by JS (Figs. 1-4, 7-9, 12) were taken with a Leica M205-C stereomicroscope and 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 systematic treatment of the subtribe Bembidiina follows Maddison (2012). In the following text, “type seen” means that we were able to study the type of a given species in the past but not during the compilation of this paper.

TAXONOMIC RESULTS

Bembidion subgen. *Peryphus* Dejean, 1821

Type species: *Carabus littoralis* Olivier, 1795 = *Bembidium tetracolum* Say, 1823

SYSTEMATIC NOTE. Based on morphology of the endophallus, particularly due to the high similarity in the respective shapes of the central sclerite complex, the flagellum, and the ostidial fold, the following four species seem closely related to the Western Palearctic species *B. scapulare* Dejean, 1831 and *B. fluvatile* Dejean, 1831.

Bembidion (*Peryphus*) *scottustulatum* Netolitzky, 1937 (Figs. 1, 2, 13)

DIAGNOSIS. Mid-sized Ethiopian *Bembidion* subg. *Peryphus* with light apical elytral spots and endophallus showing relatively small central sclerite and narrow flagellum.

TYPE LOCALITY. Jem Jem Forest, central Ethiopia.

MATERIAL EXAMINED. Type (NHMUK) seen (LT); 1 Paratype, “Abyssinia, / Djem Djem Forest / from river

bed. / circa 8,000 ft. / 2.x.1926 / Dr. H. Scott. // Para / type [round, printed, bordered in yellow] // Coll. / Netolitzky [printed] // scottustulatum / cotypus [handwritten] det Netolitzky [printed] // CO [handwritten] / TYPE [red. printed]” (NHMW); 3 exx., Athiopien: Prov. Gondar, Simien: Jinbar Wenz 3200-3400m 15.-19.4.1976 Leg. Löffler (CTVR); 15 exx., Begemdir Prov., Gimbar stream 5 km S. of Geech 3170m, 22-X-73 // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC, CSCHM, CTVR, PB); 2 exx., Begemdir Prov.: Semiens Mts., Jimbar stream, 22-X-73 // Coll. Mus. Tervuren, Ethiopie, G. de Rougemont (MRAC, CTVR); 1 ex., Begemdir Prov.: from Debanak to Ankober, 3000-3170 m 22-X-73 // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC); 24 exx., Ethiopia, Simien, Mecana torrent, below Mecana Abbo, c, 10,000 ft., 9.xii.1952. // N. Ethiopia, 1952-1953. Hugh Scott, B.M. 1953-335 (NHMUK, MRAC, CTVR, PB, JS); 2 exx., Ethiopia: Simien, ravine on W side of Mal Shaha Valley, c. 9,000 ft. 14.xii.1952. // Coll. Mus. Congo, Col. P. Basilewsky (MRAC); 12 exx., Ethiopie N. Wollo Amhara, bord ruisseau Col Abuna Youssef 3993m 7.1.2013 leg. Queinnec (CE, CTVR); 4 exx., ETHIOPIA Amhara, Mt. Abuna Yosef, S-slope, 3700-3800 m, 12°09'10"N 39°09'35"E, 5.III.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM); 55 exx., ETHIOPIA Amhara, W-slope Mt. Choke, 2750-2900 m, 10°38'N 37°45'E, 1.III.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM, CTVR, OSAC: DNA 5626, PB, ZMAA); 28 exx., ETHIOPIA Amhara, N-slope Mt. Choke, 3800-3950 m, 10°43'16"N 37°51'15"E, 26.II.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM); 11 exx., Gojjam Prov.: 8 km W of Falega Birhan, Anguata river, 2820m, 18.XII.1972 // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC, CSCHM, CTVR); 1 ex., Shoa Prov.: Mussolini pass 3000/3200m., I.VIII-73 // Coll. Mus. Tervuren, Ethiopie, G. de Rougemont (MRAC); 4 exx., Akaki River, Old Airport, Addis Abeba, 27.XII.1970 // under stone, by river // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC, CTVR); 1 ex., Meta Ambo, 13 km west of Addis Abeba, 27.XII.1970 // Under rock, by waterfall // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC); 1 ex., Shoa Prov.: Sabeta, 23-XI-73 // Coll. Mus. Tervuren, Ethiopie, G. de Rougemont (MRAC); 1 ex., Coll. Mus. Tervuren, Ethiopie: Addis Abeba, 1971, G. de Rougemont (MRAC); 3 exx., Bale Prov.: 20 km E de Adaba, 2500m, 16.XII.1971, Coll.

Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC, CTVR); 2 exx., Bale Prov.: 20 km E de Adaba, 2509m, 16.XII.1971, Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC, CTVR); 4 exx., ETHIOPIA - Arussi - Loc. 28, Gondi, m 2200 circa - 3-XI-1973, A. Vigna (AVT, PB); 19 exx., ETHIOPIA Oromia, Bale Mts., Finchaya Habera Camp, river valley, 3400-3500 m, 07°00'N 39°43'E, 20-21.II.2013, leg. J. Hagge, Y. Teklu, J. Schmidt (CSCHM); 10 exx., ETHIOPIA Oromia, Bale Mts., Sebsebe Washia Forest, Salgen Vall. 2720-2800 m, 07°01'N 39°34'E, 3.II.2019, leg. R. Emmerich, J. Schmidt, Yeshitla M. (CSCHM); 1 ex., "Bale Prov.: 3 km W de Dinshu 3040m, 17-XII-1971 // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke" (MRAC); 1 ex., "Bale prov.: 8 km W de Dinshu, 3050 m, 19.XII.1971 // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke" (CTVR).

REDESCRIPTION. Bl = 5.04 to 5.84 mm. Colour: head and pronotum piceous-black; elytra brown to dark brown, slightly lighter at shoulders; yellowish apical lunula with undefined edges, extending to the elytral epipleura. Legs reddish-testaceous; antennomeres 1 to 3, basal half of 4 and basal end of the remaining reddish, rest of antenna darkened.

Head (Hw = 1.0 to 1.2 mm) with parallel frontal furrows, rather deep, wrinkled in most specimens; eyes convex, temples short. Microsculpture of the frons very superficial, in some specimens not visible, if visible, in weakly transverse superficial sculpticells, becoming slightly more evident and isodiametric at neck. Al = 2.8 to 3.0 mm.

Pronotum cordate, convex, transverse (Pl = 1.00 to 1.16 mm, Paw = 0.96 to 1.10 mm, Pw = 1.32 to 1.60 mm, Pbw = 1.00 to 1.20 mm, Pw/Pl = 1.29 to 1.38); anterior transverse impression and median line rather superficial; basal transverse impression finely punctate; basal foveae rather superficial; laterobasal carina present, but rudimentary. Sides rounded, sinuate before the square and sharp hind angles. Lateral gutter narrow, with one pore puncture bearing a seta at the anterior third and one exactly at the corner. Basal margin slightly arcuate at posterior convexity. Pronotal microsculpture absent at magnification of up to 100x, only faint traces at hind corners visible at 100x.

Elytra (El = 3.16 to 3.68 mm, Ew = 2.08 to 2.44 mm, El/Ew = 1.32 to 1.70, Ew/Pw = 1.35 to 1.85) oval, shoulders somewhat rounded but evident, apex rounded. Elytral striae 1 to 7 evident, punctate with punctures very close to one another in the basal ¾, then

only sulcate or very superficially punctate in the apical fourth. Apical stria short, isolated in the specimens with apical portion of striae completely wanting, or connected with stria 5. Two discal pores in the third interval, adjoining stria 3. Intervals convex, more markedly in the basal half, slightly flatter in the apical half. Elytral microsculpture consists of sharp, irregular, evidently transverse sculpticells.

Fully winged species.

MALE GENITALIA (Fig. 13). Median lobe of the aedeagus with ventral margin almost rectilinear, bent ventrally at apex. Central sclerite oval, relatively small, diagonally oriented; flagellum relatively narrow and short; basal end of ostial flag regularly rounded, sometimes simply folded near ventral side of median lobe.

COMPARATIVE NOTES. *Bembidion scottustulatum* is distinguishable from *B. damota* n.sp. mainly by endophallic characters: by the smaller size of the central sclerite and the narrower flagellum.

DISTRIBUTION. The species is known from northern, central and southern Ethiopia south to the Arsi and Bale Mountains. In the latter, the species was only found on the northern slope of the mountain range. At the type locality (Jem Jem Forest) the species is sympatric with *B. africanum* Chaudoir, 1876, and on northern slope of the Bale Mountains it is sympatric and syntopic with *B. baleense* sp.n.

HABITAT. The species occurs on the banks of different kinds of mountain streams at elevations of about 2200 - 3900 m. At lower elevations, the species prefers river shores moderately shaded by trees. At higher elevations, open shores of creeks and springs are the preferred habitat of *B. scottustulatum*.

***Bembidion (Peryphus) damota* n.sp.** (Figs. 3, 14)

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C9B9AD5A-A47D-4E34-AA57-0BE9CE531FB7

DIAGNOSIS. *Bembidion* subg. *Peryphus* from southwestern Ethiopia with light apical elytral spots and endophallus showing, in respect to *B. scottustulatum*, larger central sclerite, and thicker flagellum.

HISTORICAL NOTES. This species is extremely similar to *B. scottustulatum* for body characters. The Basilevsky's (1957) mention of *B. scottustulatum* from the Gughe Highlands most probably refers to this species.

TYPE LOCALITY. Mt. Damot, Southern Nations Nationalities and people, Ethiopia.

TYPE SERIES. Holotype, male, "ETHIOPIA Sodo, Mt. Damot, 2380 m, 06°53'26"N 37°46'51"E, 3.XII.2017, leg. D. Hauth, J. Schmidt, Yeshitla M." (CSCHM). Paratypes: 56 exx. same collecting data as the holotype (CSCHM, CTVR, PB, ZMAA); 1 ex., "ETHIOPIA Sodo, Mt. Damot, 2800-2900 m, 06°54'24"N 37°47'07"E, 3.XII.2017, leg. D. Hauth, J. Schmidt, Yeshitla M." (CSCHM); 30 exx., "ETHIOPIA Gughe Highlands, env. Dorze and Chench, 2600-2700 m, 06°15'N 37°34'E, 4.XII.2017, leg. D. Hauth, J. Schmidt, Yeshitla M." (CSCHM, CTVR, OSAC: DNA5779, PB); 4 exx., "ETHIOPIA Gughe Highlands, near Tola vill., 2950 m, 06°18'48"N 37°33'57"E, 5.XII.2017, leg. D. Hauth, J. Schmidt, Yeshitla M." (CSCHM); 1 ex., "ABYSSINIA: Gamo Prov, near Ezo, c. 9,600 ft., 20.21.xi.1948. [printed] // From bed of stream. [printed] // ETHIOPIA 1948-1949. Hugh Scott., B.M. 1949-184" (MRAC); 1 ex., "ABYSSINIA: Gamo Prov., Gughé highlands, between Bonghé and Algudi, 9,000-10,000 ft., 30.xii.1948 - I.I.1949. // ETHIOPIA 1948-1949. Hugh Scott., B.M. 1949-184 // Coll. Mus. Congo, Col. P. Basilewsky" (MRAC); 1 ex., "ABYSSINIA: / Gamo Prov., / Gughé highlands / between Bonghé and / Algudi, 9,000-10,000 ft. / 30.xii.1948 - I.I.1949. // ETHIOPIA / 1948-1949. Hugh Scott. / B.M. 1949-184" (NHMUK); 1 ex., "Coll. Mus. Tervuren, Ethiopie: Kaffa Prov. Beletta for. 19.XI.71 G. de Rougemont" (MRAC); 6 exx., "ETIOPIA - Kaffa - Loc. 18, Anderaccia, ponte naturale di Gurgutto, m. 1650 circa - 26-X-1973 [printed], Vigna [handwritten]" (AVT, CTVR, PB); 2 exx., "Kaffa Prov.: Tukur, c. 15 mls N of Jimma, 2600m, 6.III.1972, Coll. Mus. Tervuren Ethiopie, R.O.S. Clarke" (MRAC, CTVR); 1 ex., "28 km S de Jimma, 2000m, 5-X.1971, Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke" (MRAC); 1 ex., Abyssinia, M. Chillalo. Dr. H. Scott 1926 [handwritten] // Brit. Mus. dedit [handwritten] // basis thoracis fere inpunctata, rugosa prope africanum Chd, det. Netolitzky [handwritten] // Spur eines Basalrandes? [handwritten] // coll. Netolitzky [printed] // fontinale Raff. / ? Netolitzky [handwritten] // coll. Netolitzky [printed] // coll. Netolitzky [printed]" (NHMW); 1 ex., "Abyssinia Mt. Chillalo, forest, circa 9,000ft., 15-16.xi.1926, Dr. H. Scott. [printed] // Brit. Mus. 1927-127. [printed] // Under stones near stream [printed] // cf. fontinale Raffr., det. Netolitzky [handwritten]" (NHMUK).

DESCRIPTION. Bl = 4.7 to 6.2 mm. Colour: head and pronotum piceous-black; elytra brown to dark brown, yellowish apical lunula with undefined edges, extending to the elytral epipleura. Legs reddish-testaceous; antennomeres 1 to 3, basal half of 4 and basal end of the remaining reddish, rest of antenna darkened.

Head (Hw = 0.98 to 1.24 mm) with parallel frontal furrows, rather deep, wrinkled in most specimens; frons with some scattered punctures and wrinkles; eyes very convex, temples short. Microsculpture superficial, isodiametric, only at neck. Al = 2.8 to 3.1 m.

Pronotum cordate, convex, transverse (Pl = 0.92 to 1.20 mm, Paw = 0.88 to 1.12 mm, Pw = 1.24 to 1.60 mm, Pbw = 0.90 to 1.16 mm, Pw/Pl = 1.33 to 1.35); anterior transverse impression and median line rather superficial; basal transverse impression finely punctate; basal foveae rather superficial, laterobasal carina present, but rudimentary. Sides rounded, less sinuate than the preceding species before the slightly obtuse and sharp hind angles. Lateral gutter relatively wide, with one pore puncture bearing a seta at the anterior third and one exactly at the corner. Basal margin slightly arcuate at posterior convexity. Pronotal microsculpture very superficial near the sides and hind corners, in a few specimens also on disk, visible at 100x.

Elytra (El = 2.88 to 3.80 mm, Ew = 2.02 to 2.56 mm, El/Ew = 1.42 to 1.48, Ew/Pw = 1.60 to 1.63) more oval than in the preceding species, shoulders slightly rounded, apex rounded. Elytral striae 1 to 7 evident, punctate with punctures very close to one another in the basal ¾, then only sulcate or very superficially punctate in the apical fourth. Apical stria short, connected with stria 7. Two discal pores in the third interval, adjoining stria 3. Intervals convex, more markedly in the basal half, slightly flatter in the apical half. Elytral microsculpture in very sharp, evidently transverse sculpticells.

Fully winged species.

MALE GENITALIA (Fig. 14). Median lobe of the aedeagus with ventral margin almost rectilinear, bent ventrally at apex. Central sclerite larger and flagellum thicker and longer than in *B. scottustulatum*.

ETYMOLOGY. The name derives from the type locality, the Mt. Damot (= Mt. Damota) in southwestern Ethiopia and it is given in apposition.

COMPARATIVE NOTES. *Bembidion damota* is distinguishable from *B. scottustulatum* mainly by the

larger size of the central sclerite and the thicker flagellum.

DISTRIBUTION. The species is known from the mountains in southwestern Ethiopia west of the Rift Valley and from foot of Mt. Chillalo east of the Rift Valley. It occurs at elevations of about 2000 - 3000 m.

HABITAT. In the Gughe Highlands and on Mt. Damot the species was found on the banks of mountain streams moderately shaded by trees.

***Bembidion (Peryphus) baleense* n.sp.** (Figs. 4, 15)

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95B38E04-AC91-4384-8508-0CBF4680BCE1

DIAGNOSIS. Unicolourous, piceous-brown *Bembidion* subg. *Peryphus* from the Bale Mountains of southern Ethiopia with rounded shoulders and endophallus very similar to that of *B. damota*, i.e. showing large central sclerite, and thick flagellum.

TYPE LOCALITY. Ethiopia, Oromia, Bale Mountains, Sebsebe Washia Forest, Salgen Valley 3130 m.

TYPE SERIES. Holotype, male, "ETHIOPIA Oromia, Bale Mts., Sebsebe Washia Forest, Salgen Vall. 3130 m, 07°02'08"N 39°36'06"E, 4.II.2019, leg. R. Emmerich, J. Schmidt, Yeshitla M." (CSCHM). Paratypes: 172 exx., same collecting data as the holotype (CSCHM, CTVR, PB, ZMAA, ZSM); 3 exx., "ETHIOPIA Oromia, Bale Mts., Sebsebe Washia Forest, Salgen Vall., upp. Salgen Vall. 3340-3500 m, 07°03'N 39°37'E, 4.II.2019, leg. R. Emmerich, J. Schmidt, Yeshitla M." (CSCHM); 98 exx., "Ethiopia Oromia 10-11.XII.16 western Bale Mts. above Dodola 2700-2850m, leg. J. Schmidt 06°53'49"N 39°11'32"E" (CSCHM, CTVR, OSAC: DNA5182, PB); 8 exx., "ETHIOPIA Oromia, N-slope Bale Mts above Goba, 3650 m, 06°54'43"N 39°55'6"E, 17.XII.16, leg. J. Schmidt" (CSCHM); 13 exx., "ETHIOPIA Oromia, N-slope Bale Mts, river valley above Goba, 2990 m, 06°56'08"N 39°57'20"E, 7+18.II.17, leg. Berndt & Schmidt" (CSCHM, OSAC: DNA5184); 1 ex., "ETHIOPIA Oromia, N-slope Bale Mts, brook valley above Goba, 3750-3800 m, 06°54'42"N 39°54'38"E, 19.II.17, leg. Berndt & Schmidt" (CSCHM); 2 exx., "ETHIOPIA Oromia, Bale Mts, Tegona valley above Goba, 3550 m, 06°54'42"N 39°53'35"E, 20.II.17, leg. Berndt, Renken & Schmidt" (CSCHM); 6 exx., "ETIOPIA - Bale - Loc. 39 / Goba. M. Sgona / m. 3650 circa - 8-XI-1973 [printed] / Cottarelli [handwritten]" (AVT, CTVR, PB); 23 exx., "ETHIOPIA Oromia, Bale Mts.,

Angeso Vall. S Goba, 3050 m, 6.932923, 39.951341, 5.II.2020, leg. J. Schmidt, C. Wirkner, Yeshitla M., Yitbarek W." (CSCHM); 2 exx., "ETHIOPIA Oromia, Bale Mts., Angeso Vall. S Goba, 3750 m, 6.897265 39.922529, 7.II.2020, leg. J. Schmidt, C. Wirkner, Yeshitla M., Yitbarek W." (CSCHM).

DESCRIPTION. Bl = 5.5 to 6.1 mm. Colour: dorsal surface dark brown to blackish, moderately shiny, elytral epipleurae brown. Legs reddish-brown, with darker knees; antennomeres 1, 2 and base of 3 reddish-brown, the rest of antennae piceous-brown. Sometimes antennomere 2 darkened at middle, with base and apex reddish-brown. Last maxillary palpomere yellowish, penultimate dark brown, rest of palps reddish.

Head (Hw = 1.10 to 1.24 mm): frons smooth, with frontal furrows slightly converging, rather deep and uneven. Eyes moderately convex, with temples oblique; antennae elongate (Al = 3.1 to 3.36 mm). Microsculpture very superficial, isodiametric on neck, in most specimens absent on the frons and in the frontal furrows, if present then in weakly transverse sculpticells. Pronotum (Pl = 1.04 to 1.16 mm, Paw = 0.96 to 1.10 mm, Pw = 1.36 to 1.50 mm, Pbw = 1.02 to 1.12 mm, Pw/Pl = 1.29 to 1.31): moderately cordate and transverse, less convex than in the preceding species; anterior transverse impression variable in shape, from shallow to deep in the median part, to represented by a series of short longitudinal wrinkles; median line sharp; basal transverse impression wide, with longitudinal wrinkles in most specimens, with a few scattered punctures at middle in some other specimens; basal foveae small but rather deep, wrinkled; laterobasal carina absent or barely visible. Lateral gutter of irregular width, narrow in the anterior third, then widened in correspondance with the anterior lateral seta, then narrowing again after the seta and evidently widening at the sinuation before the hind angles; these last from square to barely acute. Microsculpture completely absent in some specimens, superficial and restricted to the pronotal sides in some other.

Elytra (El = 3.44 to 3.76 mm, Ew = 2.20 to 2.44 mm, El/Ew = 1.54 to 1.56, Ew/Pw = 1.62 to 1.63): oval, with rounded shoulders, maximum width slightly behind middle and round apex. Elytral striae 1 to 7 evident, punctate with punctures very close to one another in the basal $\frac{3}{4}$, then only sulcate or very superficially punctate in the apical fourth. Apical stria short, connected with stria 5. Two discal pores in the third interval, adjoining stria 3. Intervals flat. Elytral

microsculpture consists of weakly transverse, rather large irregular sculpticells.

A polymorphic species, with hindwings shortened or fully developed.

MALE GENITALIA (Fig. 15). Almost identical to those of *damota*, only a slight difference in the shape of the basal end of the ostial flag, regularly rounded in *B. baleense*, somewhat waved in *damota*.

ETYMOLOGY. The name is an adjective, neutral, that derives from the Bale Mountains of southern Ethiopia.

COMPARATIVE NOTES. *Bembidion baleense* is the unique species near *B. scottustulatum* lacking elytral spots with rounded shoulders living in Ethiopia. It is distinguishable from *B. sjoestedti* (Tanzania) by the evidently larger size and the more convex eyes, and from *B. jeanneli* (Kenya) by the narrower pronotum more sinuate at sides.

DISTRIBUTION. Based on current knowledge, the species seems endemic to the Bale Mountains of southern Ethiopia.

HABITAT. The species was found on the banks of mountain streams at elevations of 3100 - 3800 m. At the type locality, it was found syntopic with *B. scottustulatum*.

Bembidion (Peryphus) jeanneli Alluaud, 1939 (Figs. 5, 16)

DIAGNOSIS. Large sized (5.8 to 6.2 mm) dark brown *Bembidion* subg. *Peryphus* from Kenya with wider pronotum (> 1.5mm) in respect to the other African *Peryphus* species with rounded shoulders.

TYPE LOCALITY. Mount Aberdare, central Kenya.

NOTES ON THE TYPE MATERIAL. We were allowed to examine three male specimens of *Bembidion jeanneli* Alluaud, 1939 with the same collecting data. One, from the Musée Royal de l'Afrique Centrale, Tervuren, was labelled as "Paratypus", while the other specimens, from the Muséum National d'Histoire Naturelle, Paris, were both labelled as "Type", therefore we designated here one of these specimens as Lectotype and the other two as Paralectotypes.

MATERIAL EXAMINED. Lectotype, male, "KENYA / for. bambous . Kinangop / Mt. ABERDARE, VERS' OUEST / 2900-3100 [printed] // MUSEUM DE PARIS / Mission de l'Omo / C. Arambourg / P.A. Chappuis & R. Jeannel / 1932-33 [blue, printed] // TYPE [red. printed] // *Bembidion / Peryphus / jeanneli* / Type All. [handwritten, bordered in red] // Lectotypus / *Peryphus jeanneli* / Alluaud, 1939 / Des. Toledano,

Bonavita & Schmidt [red, printed]" (MNHN); paralectotypes: 1 male, "Kenya / for. bambous du Kinangop / Mt. Aberdare, vers'ouest / 2900-3100 m [printed] // Paralectotypus / *Peryphus jeanneli* / Alluaud, 1939 / Des. Toledano, Bonavita & Schmidt [red, printed] // Museum de Paris / Mission de l'Omo / C. Arambourg / P.A. Chappuis & R. Jeannel / 1932-33 [blue, printed] // Coll. Mus. Congo / ex Muséum Paris) / Coll. P. Basilewsky // PARATYPUS [red, printed] // jeanneli [handwritten]" (MRAC); 1 male, "KENYA / for. bambous . Kinangop / Mt. ABERDARE, VERS' OUEST / 2900-3100 [printed] // MUSEUM DE PARIS / Mission de l'Omo / C. Arambourg / P.A. Chappuis & R. Jeannel / 1932-33 [blue, printed] // TYPE [red. printed] // jeanneli [handwritten] // Paralectotypus / *Peryphus jeanneli* / Alluaud, 1939 / Des. Toledano, Bonavita & Schmidt [red, printed]" (MNHN).

REDESCRIPTION. Bl = 5.8 to 6.2 mm. Colour: brown to piceous-brown, legs reddish, antennomere 1 reddish, antennomere 2 darkened at middle, with apex and base reddish, base of antennomere 3 reddish, rest of antennae darkened. Palps reddish, except for last maxillary palpomere yellowish, and penultimate darkened.

Head (Hw = 1.20 to 1.28 mm) with frons rather smooth; parallel, uneven and rather superficial frontal furrows. Eyes normally convex, with temples short. Antennae elongate (Al = 3.2 to 3.3 mm). A very faint trace of microsculpture in weakly transverse sculpticells on the frons and in the frontal furrows, evident, isodiametric, on neck.

Pronotum (Pl = 1.08 to 1.24 mm, Paw = 1.14 to 1.16 mm, Pw = 1.54 to 1.58 mm, Pbw = 1.08 to 1.16 mm, Pw/Pl = 1.27 to 1.42): relatively flat; large and weakly sinuate at sides before the hind angles that are, consequently, obtuse. Anterior transverse impression and median line very superficial; basal transverse impression wide, wrinkled; basal foveae superficial, rugose. Lateral gutter wide. At magnification of 100x, microsculpture absent on the pronotal disc, very superficial but present, in weakly transverse sculpticells, at sides.

Elytra (El = 3.60 to 3.88 mm, Ew = 2.28 to 2.40 mm, El/Ew = 1.58 to 1.62, Ew/Pw = 1.48 to 1.52): oval, with rounded shoulders, maximum width slightly behind middle and round apex. Elytral striae 1 to 7 evident, punctate-sulcate with punctures very close to one another in the basal half, then only sulcate or very

superficially punctate in the apical half. Apical stria short, connected with stria 5. Two discal pores in the third interval, adjoining stria 3. Intervals flat. Elytral microsculpture in weakly transverse, rather large irregular sculpticells.

Micropterous species.

MALE GENITALIA (Fig. 16). Endophallus very similar to that of *B. damota*.

COMPARATIVE NOTES. *B. jeanneli* is distinguishable from the other unspotted African species of *Peryphus* mainly by the wider pronotum.

DISTRIBUTION. The species is known from central Kenya, Mt. Aberdare, where it is sympatric with *Bembidion* (*Hypsipezum*) *aberdarenses* Alluaud, 1939 (the holotype of this last species bears the same collecting label as the lectotype of *B. jeanneli*) and *B. (Omotaphus) kilimanum* Alluaud, 1908 (also the holotype of *B. altipeta* Alluaud, 1917, synonym of *B. kilimanum*, shares the same collecting label with the two aforementioned types).

HABITAT. The specimens of the type series were found in the bamboo forest zone at an elevation of 2900 - 3000 m.

Bembidion (Peryphus) sjoestedti Alluaud, 1926 (Figs. 6, 17)

DIAGNOSIS. A *Bembidion* from Tanzania with discal elytral pores in the third interval, adjoining stria 3, rounded shoulders, flat eyes and long temples, very similar in habitus to the species of the alpine subg. *Hypsipezum* Alluaud, 1917 but easily distinguishable from these last by the elytral microsculpture, clearly isodiametric in the subgenus *Hypsipezum* and in irregular, moderately transverse sculpticells in *B. sjoestedti*.

TYPE LOCALITY. Mt. Kilimanjaro, Tanzania.

MATERIAL EXAMINED. Holotype, male, "Kiboscho / 3' - 4000 m. [printed] // Kilimandj / Sjöstedt [printed] // MUSEUM PARIS / Coll. Ch. ALLUAUD [blue, printed] // TYPE [red, printed] // *Bembidion / sjoestedti* / TYPE Alluaud [handwritten] / Alluaud, dét. 1934 [printed, in red, the whole label bordered in red]" (MNHN); 1 ex., "PARATYPE [red, printed] // MUSEE DU CONGO [printed] / Kilimandjaro: Kiboscho / 3'-4000m (Sjostedt) / (don Alluaud) [handwritten] // Kiboscho / 3'-4000 m [printed] // Kilimandj. / Sjöstedt [printed] // R. DET / 2457 [printed]" (MRAC); 4 exx., "PARATYPUS [red, printed] // Kilimandj. / Sjöstedt [printed] // Kiboscho / 3000-4000

m [printed] // Bärgs- / ängarne [printed] // COLL.MUS. CONGO / Col. P. Basilewsky [printed]" (MRAC); 7 exx., Kiboscho, 3' - 4000 m, Kilimandj., Sjöstedt, MUS. ROY. AFR. CENTR. (ex coll. Mus. Stockholm, Col. P. Basilewsky) (MRAC, CTVR); 3 exx., Camp 2 12,450 ft., Shira Plateau, Kilimanjaro, T.T., 29.XI.48 G. Salt, COLL.MUS. CONGO (don. G. Salt) (MRAC); 46 exx., COLL. MUS. CONGO, Tanganyika Terr.: Kilimanjaro, Vers. Sud., 4200/4600m., 18/20-VII-1957, prairie alpine, Mission Zoolog. I.R.S.A.C. en Afrique Orientale (P. Basilewsky et N. Leleup) (MRAC, CSCHM, CTVR, PB); 40 exx., I.R.S.A.C. - MUS. CONGO, Kilimanjaro, lim. sup. Ericetum, 4300/4450M., N. Leleup, 14.II.1956, base du Mawenzi, Mission Zoolog. I.R.S.A.C. en Afrique Orientale (P. Basilewsky et N. Leleup) (MRAC, CSCHM, CTVR, PB); 3 exx., I.R.S.A.C. - MUS. CONGO, Kilimanjaro, Versant Est, Ericetum, 3200/3700m., N. Leleup, 16.II.1956, Mission Zoolog. I.R.S.A.C. en Afrique Orientale (P. Basilewsky et N. Leleup) (MRAC, CTVR); 2 exx., Tanganika: / W Shore of L. Manyara. / June-Sept. 1935. / B. Cooper. / B.M. 1935-472 (NHMUK, CTVR); 11 exx., Zoologische Staatssammlung, Tanganjika, Kilimandjaro, Bismarckhütte, 4000m, 9.X.1952 leg. Lindemann und Pavlitzki, COLL.MUS. CONGO, Col. P. Basilewsky (MRAC, CTVR); 18 exx., Kibo S W Hang, 2500-3100m, lg.H. Franz, Kilimanjaro, Tanganyika (NHMW coll. Franz, CSCHM, CTVR, PB); 5 exx., Kibo S W Hang, 2500-3100m, lg.H. Franz, Kilimanjaro, Tanganyika COLL. MUS. CONGO, ex coll. Franz, Col. P. Basilewsky (MRAC); 1 ex., Kibo S W Hang, 3500-4600m, lg.H. Franz, Kilimanjaro, Tanganyika COLL. MUS. CONGO, ex coll. Franz, Col. P. Basilewsky (MRAC); 3 exx., Kilimandjaro, Horonbo 3200-3800m, 4. IX. 1983 leg. P. Beron (CTVR); 1 ex., Kilimandjaro, Sadelpatan 4400m, 25/6/48 A. Holm, MUS. ROY. AFR. CENTR. (ex coll. Mus. Stockholm, Col. P. Basilewsky) (MRAC); 1 ex., Kilimanjaro 12500, February 1942, Mrs P.R.O. Bally, COLL. MUS. CONGO, Col. P. Basilewsky (MRAC); 2 exx., Kilimanjaro, T.T., 14500 ft. 27.X.48 G. Salt [printed], under and beside stones on saddle [handwritten] // Brit. Mus. 1949-616 [printed] // 1016 [handwritten] // *Peryphus sjoestedti* All., P. Basilewsky det., 1949 [handwritten] (NHMUK); 7 exx., Kilimanjaro, T.T. 14500 ft. 27.X.48 G. Salt [printed], under and beside stones on saddle [handwritten] // 1045, COLL. MUS. CONGO (don. G. Salt) (MRAC); 2

exx., Kilimanjaro, T.T., 16000 ft., 25.X.48 G. Salt, under stones outside Kibo Hut, 1002, COLL. MUS. CONGO (don. G. Salt) (MRAC); 1 ex., Kilimanjoro 1500 Ft, COLL. MUS. CONGO, Col. P. Basilewsky (MRAC); 1 ex., Mrs P.R.O. Bally, Kilimanjoro 1600 Ft, February 1942, COLL. MUS. CONGO, Col. P. Basilewsky (MRAC); 1 ex., Mrs P.R.O. Bally, Kilimanjoro 1500 Ft, February 1942, COLL. MUS. CONGO, Col. P. Basilewsky (MRAC); 2 exx., Mrs P.R.O. Bally, Kilimanjoro 1600 Ft. February 1942 [printed] // Pres. by Com. Inst. Ent, B. M. 1948/83 [printed] // *Hypsipezum sjöstedti* All. [handwritten], P. Basilewsky det. [printed] (NHMUK); 6 exx., Tanzania: Mt. Kilimanjaro, -3.1391 37.4428, 3697m, 26.x.2014, under stone V. Grebennikov (CSCHM, OSAC: DNA5535).

REDESCRIPTION. Bl = 4.3 to 5.2 mm. Colour: dark brown to piceous-brown. Legs reddish brown, antennomeres 1, 2, base of 3 and sometimes base of 4 reddish-brown, rest of antennae darkened. Palps reddish-brown, last maxillary palpomere yellowish, sometimes penultimate maxillary palpomere darkened.

Head (Hw = 1.0 to 1.1 mm): frons smooth; frontal furrows parallel and rather deep; eyes flat and temples long; Al = 2.2 to 2.7. Microsculpture superficial but mostly visible, in very weakly transverse sculpticells on the frons and in the frontal furrows, isodiametric on neck.

Pronotum (Pl = 0.92 to 1.04 mm, Paw = 0.82 to 1.00 mm, Pw = 1.20 to 1.40 mm, Pbw = 0.84 to 1.00 mm, Pw/Pl = 1.30 to 1.35): strongly convex, transverse, cordate. Anterior transverse impression shallow, median line sharp and superficial; basal transverse impression narrow with some rugosities. Basal foveae very superficial, square, almost flat; laterobasal carina short but evident. Sides rounded, weakly sinuate before the slightly obtuse hind angles. Lateral gutter narrow. Microsculpture absent on disc, sometimes visible but superficial in weakly transverse sculpticells at sides.

Elytra (El = 2.64 to 3.12 mm, Ew = 1.70 to 2.04 mm, El/Ew = 1.53 to 1.55, Ew/Pw = 1.42 to 1.46): oval, rounded shoulders, apex somewhat pointed. Elytral striae finely punctured in the basal two thirds and sulcate in the apical third, superficial but visible almost up to the apex, stria 7 more superficial than the others, marked by a row of superficial, sharp punctures. Apical stria short and superficial, connected

with the end of stria 5 or 7, both sometimes very difficult to see at the extreme apex. Intervals flat. Microsculpture evident on the whole elytra consisting in irregular, weakly transverse sculpticells.

Micropterous species.

MALE GENITALIA (Fig. 17). Median lobe of the aedeagus gently arcuate, narrow, with oval central sclerite relatively small; flagellum short and basal end of the ostial flag more sclerotized than the rest of the flag.

COMPARATIVE NOTES. *B. sjöstedti* seems isolated from the other East African species of the subgenus, but very similar in the male genitalia to the European *Bembidion (Euperyphus) scapulare* Dejean, 1831.

DISTRIBUTION. The species is endemic to the Mt. Kilimanjaro in Tanzania.

HABITAT. Based on the information presented on the label data of the material studied, occurrence of this species seems not to be restricted to mountain streams as in the Ethiopian species of the subgenus *Peryphus*. Instead, it was found under and beside stones in the *Erica* forests of the high mountain zone and in the afroalpine zone. *Bembidion sjöstedti* occurs at elevations of about 2500 - 4500 m (based on label data).

***Bembidion* subgenus *Ocydromus* Clairville, 1806**

Type species: *Carabus modestus* Fabricius, 1801

***Bembidion (Ocydromus) basistriatum* Fairmaire, 1893 (Figs. 7, 18) new combination**

Bembidium basistriatum Fairmaire, 1893.

Bembidion (Testedium) basistriatum Fairmaire, 1893 (Csiki, 1928)

Bembidion (Testedium) basistriatum Fairmaire, 1893 (Lorenz 1998, 2005)

= *Bembidion muscicola* Basilewsky, 1953 (nec *Bembidion (Semicampa) muscicola* Hayward, 1897)

n. syn.

NOMENCLATORIAL NOTES. The name *muscicola* Basilewsky, 1953 is preoccupied by the North American *B. (Semicampa) muscicola* Hayward, 1897. During this study, thanks to the precious help of our friend Paolo Neri we were allowed to study the original description of *B. basistriatum* Fairmaire, 1893, described from Shoa Province, in Central Ethiopia, at present attributed to the subgenus *Testedium* Motschulsky, 1864 (Lorenz 1998, 2005). It is very unlikely that the boreo-montane subgenus *Testedium* is distributed in tropical Africa. The type of *B. basistriatum* is probably preserved at MNHN,

however, we were unable to study it due to the pandemic. Instead, we carefully compared the original description of *B. basistriatum* with the species dealt with here and we discovered that it could match *B. melanocerum* as well as *B. muscicola* Basilewsky 1953. However, some details indicate that *B. basistriatum* more likely refers to this last taxon. The following characters noted by Fairmaire (1893) match *B. muscicola* Basilewsky better than *B. melanocerum*: (i) body colouration bronze; (ii) head with punctures; (iii) elytral striae markedly punctate. Therefore, at least provisionally, in order to prevent the introduction of unnecessary names in nomenclature, we decided to state here the following synonymy, waiting for crucial evidence coming from the restudy of the type material of *B. basistriatum*:

***Bembidion muscicola* Basilewsky, 1953, n. syn. of *Bembidion basistriatum* Fairmaire, 1893.**

DIAGNOSIS. Shiny, piceous black species with bronze lustre from Ethiopia, with discal elytral pores in the third interval adjoining stria 3, few small punctures behind the frontal furrows or at their base, elytral striae 2 to 5 superficial, but present at the apical fifth, sharply punctate and not sulcate, lacking elytral microsculpture at 100x and with aedeagus as in Fig.18.

TYPE LOCALITY. "Choa" (= Shoa, former province of Shewa), Ethiopia.

TYPE MATERIAL EXAMINED. Type (NHMUK) seen (LT); 6 paratypes of *B. muscicola* Basilewsky, 1953, "Paratypus [red, printed] // ABYSSINIA: / Wolamo Prov., / Mt. Damota, / over 10,000 ft., / 5.xi.1948 [printed] // ETHIOPIA: / 1948-1949. / Hugh Scott. / B.M. 1949-184. [printed] // From moss on / wet rock-face / of spring. [printed] // COLL. MUS. CONGO / Col. P. Basilewsky [printed]" (MRAC); 2 paratypes of *B. muscicola* Basilewsky, 1953, "Paratypus [red, printed] // ABYSSINIA: / Wolamo Prov., / Mt. Damota, / over 10,000 ft., / 5.xi.1948 [printed] // ETHIOPIA: / 1948-1949. / Hugh Scott. / B.M. 1949-184. [printed] // From moss on / wet rock-face / of spring. [printed] // COLL. MUS. CONGO / Col. P. Basilewsky [printed]" (MRAC).

OTHER MATERIAL EXAMINED. 5 exx., Begemdir Prov.: Gimbar stream 5 km S. of Geech 3170m, 22-X-73 // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC, CTVR); 1 ex., Begemdir Prov.: Semiens Mts.; Jimbar stream 22-X-73 // Coll. Mus. Tervuren, Ethiopie, G.

de Rougemont (MRAC); 2 exx., Begemdir Prov.: Debarek: 1/2 km N. of Town 2840m 21-X-73 Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC, CTVR); 3 exx., Begemdir Prov.: Semiens Mts. Nat. Park, Geech 8/9-IX-74, leg. Rob Bosmans // Coll. Mus. Tervuren, Ethiopie, leg. Rob Bosmans (MRAC, CTVR); 1 ex., Begemdir Prov.: / Geech area, 23/24-X.73 / 3250/3500 m // Coll. Mus. Tervuren / Ethiopie / G. de Rougemont (MRAC); 1 ex., Ethiopia: Simien, nr. Mindigabsa over 10,000 ft. 29.xii.1952. [printed] // N. Ethiopia: 1952-1953. Hugh Scott B.M. 1953-335 [printed] // *Peryphus muscicola* Basil. [handwritten], P. Basilewsky det., 195 [printed] 5 [handwritten] (NHMUK); 2 exx., Ethiopia: Simien, nr. Mindigabsa, over 10,000ft 16.xi.1952. // N. Ethiopia: 1952-1953. Hugh Scott B.M. 1953-335 // from dry soil in roots of tufted plants overhanging a stream (NHMUK); 1 ex., Ethiopie N. Wollo Col Abuna Yussuf 4000m 6.1.2013 Leg. E. Queinnec (CTVR); 1 ex., Ethiopie N. Wollo S Dessie Amba farit 3500m 1.1.2013 Queinnec Leg. (CTVR); 1 ex., Gojjam Prov.: Mt. Choke 3200/3500m 15/18.XII.1972 Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC, CTVR); 4 exx., ABYSSINIA: Wolamo Prov., Mt. Damota, over 10,000 ft., 5.xi.1948 [printed] // ETHIOPIA: 1948-1949. Hugh Scott. / B.M. 1949-184. [printed] // From moss on wet rock-face of spring. [printed] (NHMUK, CTVR); 2 exx., Coll. Mus. Tervuren, Ethiopie: Entoto Hills 5 km N Addis Abeba R.O.S. Clarke 17.IV.1971 (MRAC, CTVR); 28 exx., Arussi Prov.: Arussi Mts, c 8 km E of Dighellu 3000m 1972 Coll. Mus. Tervuren Ethiopie R.O.S. Clarke (MRAC, CTVR); 1 ex., Coll. Mus. Tervuren / Ethiopie; Addis Abeba / 1971 / G. de Rougemont (MRAC); 34 exx., Ethiopia Oromia 2.XII.16 Mt. Chillalo, SW slope 3000-3300m leg. Schmidt 07°54'01"N 39°11'26" E (CSCHM, CTVR, PB); 42 exx., Ethiopia Oromia 30.XI.16 Mt. Chillalo, SW slope 2985m leg. Schmidt 07°53'31"N 39°10'18" E (CDW, CSCHM, CTVR, OSAC: DNA5185, PB); 53 exx., ETHIOPIA Oromia, SE-slope of Mt. Chillalo, Dhaba village, 3200 m, 19.II.2020, 7.861644 39.27711, leg. J. Schmidt, C. Wirkner, Yeshitla M. (CSCHM, ZMAA, ZSM); 1 ex., ETHIOPIA Oromia, SE-slope of Mt. Chillalo, Damamelkeso Vall., 3500 m, 25.II.2020, 7.891089 39.256121, leg. J. Schmidt, C. Wirkner, Yeshitla M. (CSCHM); 3 exx., ETHIOPIA Oromia, Mt Enkuolo, NE-slope, 3100-3200m, 07°24'41"N 39°22'26"E, 5-7.XII.16, leg. J. Schmidt (CSCHM); 27 exx., ETHIOPIA Oromia, Mt Enkuolo,

N-slope, 3350-3600m, 07°22'48"N 39°21'07"E, 6-9.XII.16, leg. J. Schmidt (CSCHM); 1 ex., ETHIOPIA Oromia, western Bale Mts above Dodola, 2700-2850 m, 06°53'49"N 39°11'32"E, 10-11.XII.16, leg. J. Schmidt (CSCHM); 1 ex., ETHIOPIA Oromia, western Bale Mts above Dodola, 3400-3700 m, 06°51'N 39°14'E, 12-13.XII.16, leg. J. Schmidt (CSCHM); 9 exx., ETHIOPIA Oromia, Bale Mts., Sebsebe Washia Forest, Salgen Vall. 2720-2800 m, 07°01'N 39°34'E, 3.II.2019, leg. R. Emmerich, J. Schmidt, Yeshitla M. (CSCHM); 31 exx., ETHIOPIA Oromia, Bale Mts., Sebsebe Washia Forest, Salgen Vall. 3130 m, 07°02'08"N 39°36'06"E, 4.II.2019, leg. R. Emmerich, J. Schmidt, Yeshitla M. (CSCHM); 6 exx., ETHIOPIA Oromia, Bale Mts., Sebsebe Washia Forest, upp. Salgen Vall. 3340-3500 m, 07°03'N 39°37'E, 4.II.2019, leg. R. Emmerich, J. Schmidt, Yeshitla M. (CSCHM); 5 exx., ETHIOPIA Oromia, Bale Mts., Sebsebe Washia Forest, upp. Salgen Vall. 3630 m, 07°01'47"N 39°37'43"E, 6.II.2019, leg. R. Emmerich, J. Schmidt, Yeshitla M. (CSCHM); 1 ex., ETHIOPIA Oromia, N-slope Bale Mts above Goba, 3650 m, 06°54'43"N 39°55'6"E, 17.XII.16, leg. J. Schmidt (CSCHM); 4 exx., ETHIOPIA Oromia, S-slope Bale Mts., S of Rira, Katcha, 2380 m, 06°42'58"N 39°43'25"E, 3.III.2015, leg. J. Hagge *et al.* (CSCHM); 1 ex., ETHIOPIA Oromia, Bale Mts., Hareenna Forest W Rira, 3000 m, 06°45'57"N 39°41'47"E, 14.XII.2017, leg. D. Hauth, J. Schmidt, Yeshitla M. (CSCHM); 3 exx., ETHIOPIA Oromia, Bale Mts., Angeso Vall. S Goba, 3050 m, 6.932923, 39.951341, 5.II.2020, leg. J. Schmidt, C. Wirkner, Yeshitla M., Yitbarek W. (CSCHM); 1 ex., ETHIOPIA Oromia, Bale Mts., Shaya Vall. SW Goba, 3100-3150 m, 6.991843 39.884397, 6.II.2020, leg. J. Schmidt, C. Wirkner, Yeshitla M., Yitbarek W. (CSCHM); 18 exx., ETHIOPIA Oromia, Mt. Kaka, E-slope above Meraro, 3300-3420 m, 07°24'N 39°12'E (env.Camp 1), 23-28.II.2017, leg. D. Hauth, J. Schmidt, Yeshitla M. (CSCHM, ZMAA); 4 exx., ETHIOPIA Oromia, Mt. Kaka, E-slope above Meraro, 3350-3400 m, 07°23'30"N 39°11'41"E, 28.XI.2017, leg. D. Hauth, J. Schmidt, Yeshitla M. (CSCHM); 1 ex., ETHIOPIA Oromia, Mt. Kaka, E-slope above Meraro, 3370-3500 m, 07°22'57"N 39°11'27"E, 25.XI.2017, leg. D. Hauth, J. Schmidt, Yeshitla M. (CSCHM); 9 exx., ETHIOPIA Oromia, Mt. Kaka, NE-slope above Meraro, 3400-3670 m, 07°24'N 39°11'E, 27.XI.2017, leg. D. Hauth, J. Schmidt, Yeshitla M. (CSCHM,

ZMAA); 1 ex., ETHIOPIA Oromia, Mt. Kaka, SE of crater, 3700-4100 m, 07°21'54"N 39°09'48"E to 07°21'09"N 39°10'18"E, 1.XII.2017, leg. D. Hauth, J. Schmidt, Yeshitla M. (CSCHM); 34 exx., ETHIOPIA Sodo, Mt. Damot, 2800-2900 m, 06°54'24"N 37°47'07"E, 3.XII.2017, leg. D. Hauth, J. Schmidt, Yeshitla M. (CSCHM); 3 exx., ETHIOPIA Gughe Highlands, near Tola vill., 2950 m, 06°18'48"N 37°33'57"E, 5.XII.2017, leg. D. Hauth, J. Schmidt, Yeshitla M. (CSCHM); 1 ex., ETHIOPIA Gughe Highlands, near Mt. Gughe, 2880-2950 m, 06°12'00"N 37°20'19"E, 7.XII.2017, leg. D. Hauth, J. Schmidt, Yeshitla M. (CSCHM); 20 exx., ETHIOPIA Amhara, W-slope Mt. Choke, 3450 m, 10°38'09"N 37°46'06"E, 22.II.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM, ZMAA); 44 exx., ETHIOPIA Amhara, W-slope Mt. Choke, 3370 m, 10°38'07"N 37°45'51"E, 23.II.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM, CTVR, PB); 1 ex., ETHIOPIA Amhara, SW-slope Mt. Choke, 3630-3730 m, 10°38'02"N 37°50'08"E, 28.II.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM); 1 ex., Ethiopia IV 94 Gemu Gofa Prov. Ch'en'cha 2500m Werner leg. (CTVR).

REDESCRIPTION. Bl = 4.3 to 4.8 mm. Colour: piceous-black with bronze lustre. Legs brown, in some specimens with infuscated basal half of femora. Antennomere 1 and base of 2 to 4 reddish, rest of antennae darkened. Palps dark brown with penultimate palpomere darker and last palpomere yellowish.

Head (Hw = 0.88 to 1.00 mm): frons smooth with a few scattered punctures, a few also behind the parallel and uneven frontal furrows. Eyes normally protruding, with temples very short. Al = 2.0 to 2.1 mm. Microsculpture absent on the head, except for neck where it is superficial, in isodiametric sculpticells.

Pronotum (Pl = 0.76 to 0.96 mm, Paw = 0.76 to 0.92 mm, Pw = 1.04 to 1.32 mm, Pbw = 0.80 to 1.02 mm, Pw/Pl = 1.36 to 1.37): weakly convex, markedly transverse. Anterior transverse impression and median line superficial; basal transverse impression narrow, coarsely punctured. Basal foveae deep, square with irregular surface, laterally limited by an evident laterobasal carina. Sides rounded, moderately sinuate before the slightly obtuse hind angles. Pronotal microsculpture not visible.

Elytra (El = 2.76 to 2.88 mm, Ew = 1.60 to 1.92 mm, El/Ew = 1.50 to 1.72, Ew/Pw = 1.45 to 1.54): convex, subparallel, with marked shoulders; elytral stria 1 punctate-sulcate, 2 to 7 punctate and not sulcate. Striae 2 to 5 almost complete at apex even though very superficial, represented by rows of very small punctures. Intervals flat. Microsculpture absent on the whole elytra (magnification 100x).

Fully winged species.

MALE GENITALIA (Fig. 18). Median lobe of the aedeagus narrow, arcuate, with apex evidently bent ventrally. Central sclerite narrow and elongate, in diagonal orientation; flagellum long, almost reaching the ostial flag.

COMPARATIVE NOTES. *Bembidion basistriatum* is distinguishable from both the sympatric species *B. melanocerum* and *melanoceroides* by the elytral striae 2 to 5 punctate from the apical fifth to their apex (faintly sulcate, not punctate in *melanocerum* and *melanoceroides*).

DISTRIBUTION. The species is widely distributed in the highlands of northern and southern Ethiopia.

HABITAT. Based on our own field data (JS) the species occurs on the banks of different kind of mountain streams, and it was found in a wide elevational range (about 2380 - 4000 m). It occurs sympatric with *B. melanocerum* in northern and central Ethiopia, *B. melanoceroides* in southern Ethiopia, *B. scottustulatum* in northern and central Ethiopia, *B. damota* in southwestern Ethiopia, *B. baleense* in the Bale Mts., and with the following species of the *Bembidion* subgenus *Omotaphus*: *B. aethiopicum* Raffray, 1886, *B. tropicum* Chaudoir, 1876, and *B. scotti* Netolitzky, 1931.

***Bembidion (Ocydromus) melanocerum* Chaudoir, 1876 (Figs. 8, 19)**

Bembidion (Peryphus) melanocerum Chaudoir, 1876.

Bembidion (Peryphus) melanocerum Chaudoir, 1876 (Lorenz 1998, 2005)

REMARK. In the 2017 version of the online Global Database of Ground Beetles (Lorenz, 2020) this species is already listed within the subgenus *Ocydromus*.

DIAGNOSIS. Brown to piceous black species of the northern and central Ethiopian highlands, with elytral striae 2 to 5 superficial, but present and sulcate from the apical fifth to their apex, and with elytral microsculpture visible at 50x. A few small punctures

behind the frontal furrows or at their base, less evident than in *B. basistriatum*.

TYPE LOCALITY. Adowa, Ethiopia.

MATERIAL EXAMINED. Type (MNHN) seen (LT); 1 ex., Ethiopien: Prov. Gondar, Simien: Jinbar Wenz 3200-3400m 15.-19.4.1976 Leg. Löffler (CTVR); 20 exx., Ethiopia Simien, Mecana torrent, below Mecana Abbo, c. 10,000 ft., 9.xii.1952. // N. Ethiopia, 1952-1953. Hugh Scott, B.M. 1953-335 // Coll. Mus. Congo, Col. P. Basilewsky (MRAC, NHMUK, CTVR, PB); 2 exx., Ethiopia: Simien, nr. Mindigabsa, over 10,000ft 16.xi.1952. // N. Ethiopia: 1952-1953. Hugh Scott B.M. 1953-335 // from dry soil in roots of tufted plants overhanging / a stream (MRAC, NHMUK); 2 exx., Ethiopia: Simien, nr. Mindigabsa, over 10,000ft 16.xi.1952. // N. Ethiopia: 1952-1953. Hugh Scott B.M. 1953-335 // from stiff wet mud or under stones in bed of torrent. // Coll. Mus. Congo Col. P. Basilewsky (MRAC, NHMUK); 5 exx., Tigre Prov.: Geralta, 5.7.1976, Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC, CTVR); 1 ex., Wollo Zeggin (?) Ambò Giag. (?) 2-45 [handwritten] // Coll. Mus. Congo, Don Cerruti handwritten, Col. P. Basilewsky (MRAC); 6 exx., Gojjam Prov.: 8 km W of Falega Birhan, Anguata river, 2820m, 18.XII.1972 // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC, CTVR); 8 exx., ETHIOPIA Amhara, Mt. Abuna Yosef, S-slope, 3700-3800 m, 12°09'10"N 39°09'35"E, 5.III.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM); 38 exx., ETHIOPIA Amhara, W-slope Mt. Choke, 2750-2900 m, 10°38'N 37°45'E, 1.III.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM, CTVR, OSAC: DNA5535, PB, ZMAA); 1 ex., ETHIOPIA Amhara, Mt. Choke, crater valley, 3700-3800 m, 10°41'14"N 37°50'07"E, 24.II.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM); 8 exx., ETHIOPIA Amhara, W-slope Mt. Choke, 3370 m, 10°38'07"N 37°45'51"E, 23.II.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM); 3 exx., ETHIOPIA Amhara, W-slope Mt. Choke, 3450 m, 10°38'09"N 37°46'06"E, 22.II.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM); 1 ex., Abyssinia, Addis Allem, circa 8,000 ft., 18.-19.ix.1926 Dr. H. Scott // Coll. Mus. Congo Col. P. Basilewsky // cultivated country // Box 7 // melanocerum det Netolitzky [handwritten] (NHMUK); 1 ex., Abyssinia, Addis Allem, circa 8,000 ft., 18.-19.ix.1926 Dr. H. Scott // Coll. Mus. Congo Col. P. Basilewsky // cultivated country // melanocerum det Netolitzky [handwritten]

(MRAC); 2 exx., Abyssinia, Addis Alem, circa 8,000 ft., 18.-19.ix.1926 Dr. H. Scott // cultivated country // Box 7 // melanocerum det Netolitzky [handwritten] (NHMW); 1 ex., Abyssinia: Douber R. between Debra Libanos and Addis Abeba, circa 8,500 ft., 5.i.1927, Dr. H. Scott // Coll. Mus. Congo Col. P. Basilewsky // melanocerum det Netolitzky [handwritten] (MRAC); 20 exx., Ethiopia, Hang Jammatal b. Debre Libanos 2300mNN 9,746°N 38,815°O leg I. Harry 28.11.2012 (CH, CTVR, PB); 1 ex., Abyssinia; Entoto, circa 9,000 ft., 16.IX. 1926. Dr. H. Scott. [printed] // Brit. Mus. / 1927-127 [printed] // melanocerum Chd. det. Netolitzky [handwritten] (NHMUK); 1 ex., COMP. TYP. BASILEWSKY [red, printed] // Abyssinia; Entoto, circa 9,000 ft., 16.IX. 1926. Dr. H. Scott. Coll. Mus. Congo Col. P. Basilewsky // melanocerum det. Netolitzky [handwritten] // melanocerum Chd. [handwritten] P. Basilewsky det. 1967 (MRAC); 1 ex., Athiopien: Ambo 13.-17.10.1990 leg. Rybalov (CTVR); 3 exx., Etiopia - Shoa - Loc. 1 Tra Addis Abeba e Holetta / n. 2400 circa - 21-X-1973, A Vigna Leg. (AVT, PB); 1 ex., Shoa Prov.: 40 km of Addis Abeba (Old airport zone) 10.I.1973 // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC); 19 exx., Shoa Prov.: Top of Blue Nile, Gorge near Goha Tsion 5-V-74 Coll. Mus. Tervuren Ethiopie G. de Rougemont (MRAC, CTVR).

REDESCRIPTION. Bl = 4.7 to 4.8 mm. Colour: piceous-brown, legs testaceous-red, antennomere 1 and base of antennomeres 2, 3, 4 reddish, rest of antennae darkened. Palps brown, except for last maxillary palpomere, yellowish, and the penultimate maxillary palpomere, darkened.

Head (Hw = 1.00 to 1.04 mm): frons weakly rugose, frontal furrows very slightly convergent, uneven and rather deep. Eyes relatively small but convex, temples very short. Al = 2.4 to 2.5 mm. Microsculpture, at magnification of 100x, visible only on neck, isodiametric.

Pronotum (Pl = 0.90 to 0.92 mm, Paw = 0.88 to 0.96 mm, Pw = 1.20 to 1.26 mm, Pbw = 0.92 to 0.96 mm, Pw/Pl = 1.33 to 1.37): small, transverse; median line rather deep; anterior transverse impression superficial, with some scattered punctures in the central portion; basal transverse impression relatively wide, with coarse punctures; basal foveae small and rather deep, square, wrinkled and punctate; sides rounded, evidently sinuate before the square hind angles. Lateral gutter rather wide; laterobasal carina very thin,

sharp. Pronotal microsculpture not visible at magnification of 100x.

Elytra (El = 2.46 to 2.54 mm, Ew = 1.88 to 2.00 mm, El/Ew = 1.50 to 1.54, Ew/Pw = 1.57 to 1.59): subparallel, marked shoulders, apex rounded. Elytral striae 1 to 6 punctate-sulcate, 7 punctate. Apical stria short, ending in direction of the apical traces of stria 5. Elytral microsculpture visible at least at 50x, in transverse, irregular sculpticells.

Macropterous species.

MALE GENITALIA (Fig. 19). Median lobe of aedeagus short, narrow, evidently arcuate. Long flagellum, narrowing from base to apex, connected at base with the basal chitin platelet and ending at apex, in correspondance with the ostial flag, with a gently waved end. Central brush oblique; sclerotized stylet apically ending with a shortly enlarged, flat tip. Ventral sclerite narrow, at middle of the aedeagus, weakly sclerotized. INTRASPECIFIC VARIABILITY. In the examined specimens the elytral microsculpture is variable in depth, from superficial to evidently impressed, but it is in any event always visible at 50x magnification.

COMPARATIVE NOTES. *Bembidion melanocerum* is distinguishable from *B. basistriatum* by the elytral striae 2 to 5 sulcate at the apical fifth (sharply punctate, not sulcate in *basistriatum*), and from its sister species *melanoceroides* n.sp. by the elytral microsculpture visible at 50x (not visible at 50x in *melanoceroides* n.sp.) and the flagellum in the endophallus, longer and almost reaching the ostial flag in *melanocerum*, shorter in *melanoceroides* sp.n. For the endophallic structure the species is strikingly similar to *B. africanum* (see below).

DISTRIBUTION. The species is widely distributed in the highlands of northern and central Ethiopia.

HABITAT. As in *B. basistriatum*, see above.

***Bembidion (Ocydromus) melanoceroides* n.sp.** (Figs. 9, 20)

urn:lsid:zoobank.org:act:

F3DEA175-FC92-4D14-ACEB-699E03CE3FE7

DIAGNOSIS. Brown to piceous black species of southern Ethiopia with elytral striae 2 to 5 superficial, but present and sulcate at the apical fifth, and with elytral discal microsculpture very faintly engraved, not visible at 50x. A few small punctures behind the frontal furrows or at their base in some specimens, in some others frontal punctures absent.

TYPE LOCALITY. Oromia, Bale Mts., Ethiopia, Sebsebe

Washia Forest, Salgen Vall. 2720-2800 m, 07°01'N 39°34'E, 3.II.2019.

TYPE SERIES. Holotype, male, "ETHIOPIA Oromia, Bale Mts., Sebsebe Washia Forest, Salgen Vall. 2720-2800 m, 07°01'N 39°34'E, 3.II.2019, leg. R. Emmerich, J. Schmidt, Yeshitla M." (CSCHM). Paratypes: 114 exx., same collecting data as the holotype (CSCHM, CTVR, PB, ZMAA); 18 exx., "ETHIOPIA Oromia, Bale Mts., Sebsebe Washia Forest, Salgen Vall. 3130 m, 07°02'08"N 39°36'06"E, 4.II.2019, leg. R. Emmerich, J. Schmidt, Yeshitla M." (CSCHM); 1 ex., "ETHIOPIA Oromia, Bale Mts., Sebsebe Washia Forest, upp. Salgen Vall. 3340-3500 m, 07°03'N 39°37'E, 4.II.2019, leg. R. Emmerich, J. Schmidt, Yeshitla M." (CSCHM); 1 ex., "ETHIOPIA Oromia, Bale Mts., Angeso Vall. S Goba, 3050 m, 6.932923, 39.951341, 5.II.2020, leg. J. Schmidt, C. Wirkner, Yeshitla M., Yitbarek W." (CSCHM); 5 exx., "Bale Prov.: 20 km E de Adaba, 2500m 16.XII.1971 Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke" (MRAC, CTVR); 2 exx., "Bale prov.: 8 km W de Dinshu, 3050 m, 19.XII.1971 // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke" (MRAC); 3 exx., "Etiopia - Bale - Loc. 44 A est di Abeba, m 2600 circa - 9-XI-1973 [printed], C. Consiglio [handwritten]" (AVT, PB); 10 exx., "Etiopia - Bale - Loc. 44, A est di Abeba, m 2600 circa - 9-XI-1973 [printed], Cottarelli [handwritten]" (AVT, CTVR, PB); 9 exx., "Etiopia - Bale - Loc. 44 A est di Abeba, m 2600 circa - 9-XI-1973 [printed], Vigna [handwritten]" (AVT, CTVR, PB); 20 exx., "Ethiopia Oromia 2.XII.16 Mt. Chillalo, SW slope 3000-3300m leg. Schmidt 07°54'01,"N 39°11'26" E" (CSCHM, CTVR); 136 exx., "ETHIOPIA Oromia, Mt Chillalo, SW-slope, 2985 m, 07°53'31"N 39°10'18"E, 30.XI.16, leg. J. Schmidt" (CDW, CSCHM, CTVR, PB, ZSM); 21 exx., ETHIOPIA Oromia, SE-slope of Mt. Chillalo, Dhaba village, 3200 m, 19.II.2020, 7.861644 39.27711, leg. J. Schmidt, C. Wirkner, Yeshitla M. (CSCHM, ZMAA); 1 ex., "Abyssinia, Mt. Chillalo, forest . circa 9,000ft., 15-16.xi.1926. Dr. H. Scott. // Brit. Mus. 1927-127. // box 101 // Under stones near stream // melanocerum det. Netolitzky" (NHMUK); 4 exx., "ETHIOPIA Oromia, Mt Chillalo, SW-slope, 3000-3300 m, 07°54'01"N 39°11'26"E, 2.XII.16, leg. J. Schmidt" (CSCHM); 2 exx., "ETHIOPIA Oromia, N-slope Bale Mts, river valley above Goba, 2990 m, 06°56'08"N 39°57'20"E, 7+18.II.17, leg. Berndt & Schmidt" (CSCHM); 17 exx., "ETHIOPIA Oromia,

western Bale Mts above Dodola, 2700-2850 m, 06°53'49"N 39°11'32"E, 10-11.XII.16, leg. J. Schmidt" (CSCHM, OSAC: DNA5183); 15 exx., "ETHIOPIA Oromia, Mt Enkuolo, NE-slope, 3100-3200m, 07°24'41"N 39°22'26"E, 5-7.XII.16, leg. J. Schmidt" (CSCHM); 9 exx., "ETHIOPIA Oromia, Mt Enkuolo, N-slope, 3350-3600m, 07°22'48"N 39°21'07"E, 6-9.XII.16, leg. J. Schmidt" (CSCHM); 6 exx., "ETHIOPIA Oromia, Mt. Kaka, E-slope above Meraro, 3300-3420 m, 07°24'N 39°12'E (env.Camp 1), 23-28.11.2017, leg. D. Hauth, J. Schmidt, Yeshitla M." (CSCHM); 1 ex., "ETHIOPIA Oromia, Mt. Kaka, E-slope above Meraro, 3350-3400 m, 07°23'30"N 39°11'41"E, 28.11.2017, leg. D. Hauth, J. Schmidt, Yeshitla M." (CSCHM); 3 exx., "ETHIOPIA Oromia, Mt. Kaka, E-slope above Meraro, 3370-3500 m, 07°22'57"N 39°11'27"E, 25.11.2017, leg. D. Hauth, J. Schmidt, Yeshitla M." (CSCHM); 2 exx., "ETHIOPIA Oromia, Mt. Kaka, NE-slope above Meraro, 3400-3670 m, 07°24'N 39°11'E, 27.11.2017, leg. D. Hauth, J. Schmidt, Yeshitla M." (CSCHM); 90 exx., "Arussi Prov.: Arussi, Mts. c. 4 km E of Dighellu, 2850m, 1972, Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke" (MRAC, CTVR); 1 ex., "Arussi Prov.: Asella, 2600m, 9-XII-73, Coll. Mus. Tervuren, Ethiopie, G. De Rougemont" (MRAC).

DESCRIPTION. BL = 4.2 to 5.0. Colour: piceous-brown, legs testaceous-red, antennomere 1 and base of antennomeres 2, 3, 4 reddish, rest of antennae darkened. Palps brown, except for last maxillary palpomere, yellowish, and the penultimate maxillary palpomere, darkened.

Head (Hw = 0.92 to 1.12 mm): frons weakly rugose, frontal furrows very slightly convergent, uneven and rather deep. Eyes relatively small but convex, temples very short. Al = 2.1 to 2.4 mm. Microsculpture visible only at neck, isodiametric.

Pronotum (Pl = 0.84 to 0.96 mm, Paw = 0.82 to 0.96 mm, Pw = 1.12 to 1.28 mm, Pbw = 0.86 to 1.00 mm, Pw/Pl = 1.33 to 1.40): small, transverse; median line rather deep; anterior transverse impression superficial, with some scattered punctures in the central portion; basal transverse impression relatively wide, with coarse punctures; basal foveae small and rather deep, square, wrinkled and punctate; sides rounded, sinuation before the hind angles slightly less marked than in *B. melanocerum*, thus hind angles very slightly obtuse. Lateral gutter rather wide, laterobasal carina very thin, sharp. No microsculpture visible.

Elytra (El = 2.56 to 3.08 mm, Ew = 1.72 to 2.00 mm, El/Ew = 1.49 to 1.55, Ew/Pw = 1.49 to 1.56): subparallel; marked shoulders, apex rounded. Elytral striae 1 to 6 punctate-sulcate, 7 punctate. Apical stria short, ending in direction of the apical traces of stria 5. Elytral discal microsculpture scarcely visible at magnification of 100x, not visible at 50x.

Macropterous species.

MALE GENITALIA (Fig. 20). Median lobe of aedeagus short, evidently arcuate, with flagellum almost anteriorly reaching the ostial flag.

INTRASPECIFIC VARIABILITY. In the examined specimens the elytral microsculpture may vary from absent to very superficial at magnification of 100x, but always invisible at 50x.

ETYMOLOGY. The name is an adjective that refers to the extreme similarity with *B. melanocorum*.

COMPARATIVE NOTES. *B. melanoceroides* is distinguishable from *B. basistriatum* by the elytral striae 2 to 5 sulcate at the apical fifth (sharply punctate, not sulcate in *basistriatum*), and from *melanocorum* by the elytral discal microsculpture not visible at 50x (visible at 50x in *melanocorum*). The species *melanocorum* and *melanoceroides* are certainly strictly related to one another, as also shown by the endophallic structure, where the first shows a longer flagellum, but the rest of the characters are shared by both species.

DISTRIBUTION. The species is known from the Arsi and Bale Mountains of southern Ethiopia.

HABITAT. As in *B. basistriatum* and *B. melanocorum*, see above.

Bembidion (Ocydromus) africanum Chaudoir, 1876 (Figs. 10, 21)

Bembidion (Peryphus) africanum Chaudoir, 1876.

Bembidion (Notaphomimus) africanum Chaudoir, 1876 (Netolitzky, 1937).

Bembidion (Peryphus) africanum Chaudoir, 1876 (Lorenz, 1998; 2005)

REMARK. In the 2017 version of the online Global Database of Ground Beetles (Lorenz, 2020) this species is already listed within the subgenus *Ocydromus*.

DIAGNOSIS. Brown, unspotted *Bembidion* species from Southern and Southwestern Ethiopia with wide pronotum, discal elytral pores near stria 3, convex, ovate elytra, evidently convex elytral intervals, and elytral microsculpture consisting of very sharp and transverse sculpticells.

TYPE LOCALITY. Edges of Tsana Lake, Ethiopia.

MATERIAL EXAMINED. Type (MNHN) seen (LT); 1 ex., Abyss. Raffray [blue, printed] // Coll. Netolitzky [printed] // in Coll. Putzeys, "P. africanus" Chaud bezettelt [handwritten] (NHMW); 1 ex., Abyssinia, Mt. Chillalo, forest. circa 9,000ft., 15-16.xi.1926., Dr. H. Scott. [printed] // Box 101, [printed] // Brit. Mus. 1927-127. [printed] // Under stones near stream [printed] // africanum [handwritten] det. Netolitzky [printed] (NHMUK); 1 ex., Abyssinia, Djem Djem Forest, from river bed. circa 8,000 ft. 2.x.1926, Dr. H. Scott. // Coll. Netolitzky [printed] // africanum det Netolitzky [printed] // Coll. Netolitzky [printed] (NHMW); 2 exx., Abyssinia, Djem Djem Forest, from river bed. circa 8,000 ft. 2.x.1926, Dr. H. Scott. // Coll. Netolitzky [printed] // africanum det Netolitzky [printed] // Coll. Netolitzky [printed] (NHMUK); 1 ex., ABYSSINIA: Gamo Prov, near Ezo, c. 9,600 ft. 20,21.xi.1948. [printed] // From bed of stream. [printed] // ETHIOPIA 1948-1949. Hugh Scott. B.M. 1949-184 (NHMUK); 1 ex., Addis Abeba Old Airport 25.XII.1970 Under rocks by river Coll. Mus. Tervuren Ethiopie R.O.S. Clarke (CTVR); 2 exx., Akaki River Old Airport, Addis Abeba, 27.XII.1970 [handwritten] // under stone by river [handwritten] // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC); 7 exx., Athiopien: Ambo 13.-17.10.1990 leg. Rybalov (CSCHM, CTVR, PB); 3 exx., Athiopien: Ambo, 1.-4.11.1990, leg. Rybalov (CTVR); 1 ex., Coll. Mus. Tervuren, Ethiopie: Munagaschia Forest 29km. W. Addis Abeba, R.O.S. Clarke (MRAC); 16 exx., Ethiopia, Hang Jammatal b. Debre Libanos 2300mNN 9,746°N 38,815°O leg I. Harry 28.11.2012 (CH, CSCHM, CTVR, PB); 6 exx., Ethiopia, Wald b. Wondo Gennet 2000mNN 7,099°N 38,641°O leg I. Harry 28.11.2012 (CH, CTVR); 1 ex., Ethiopia: Ghedo 7,500 ft. 20.v.46, K.M. Guichard, B.M. 1945-39 [printed] // Coll. Mus. Congo, Col. P. Basilewsky [printed] // COMP. TYP. / BASILEWSKY [red, bordered in black, printed] // africanus / Chd [handwritten] / P. Basilewzky det., 19 [printed] 67 [handwritten] (MRAC); 1 ex., Ethiopia: Ghedo 7,500 ft., 20.v.46, K.M. Guichard, B.M. 1945-39 [printed] // *Peryphus africanus* Chd. [handwritten] det. S.L. Straneo 1948 [printed] (NHMUK); 12 exx., Ethiopie - E. Gojam Amhara Gona: Ts'iyon Gorges du Nil 10.1.2013 Leg. E. Queinnec (CE, CSCHM, CTVR, PB); 6 exx., Etiopia - Shoa - Loc. 1, Tra Addis Abeba e Holetta, n. 2400 circa - 21-X-1973, A Vigna Leg. (AVT, CTVR, PB); 2 exx., Meta Ambo, 13 km west

of Addis Abeba, 27.XII.1970 [handwritten] // Under rock by waterfall // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC, CTVR); 2 exx., Shoa Prov.: Sabeta 23-XI-73 // Coll. Mus. Tervuren, Ethiopie, G. de Rougemont (MRAC, CTVR); 1 ex., Shoa Prov.: 40 km of Addis Abeba (old airport zone) 10.I.1973 // Coll. Mus. Tervuren, Ethiopie, R.O.S. Clarke (MRAC).

REDESCRIPTION. Bl = 5.3 to 6.2 mm. Colour: piceous-brown with metallic reflection. Legs testaceous, antennomeres 1 and 2 and base of 3 and 4 testaceous, rest of antennae darkened. Palps testaceous, except for last maxillary palpomere, yellowish, and the penultimate maxillary palpomere, darkened.

Head (Hw = 1.10 to 1.28 mm): frons with some scattered punctures, in some specimens also in the bottom of the frontal furrows and behind them. Frontal furrows almost parallel, uneven. Eyes normally convex but relatively small, with temples oblique, relatively long. Al = 3.0 to 3.5 mm. Microsculpture in a few specimens very superficial, hard to see, in weakly transverse sculpicells on the frons; isodiametric on neck.

Pronotum (Pl = 1.04 to 1.20 mm, Paw = 0.98 to 1.10 mm, Pw = 1.40 to 1.56 mm, Pbw = 1.00 to 1.16 mm, Pw/Pl = 1.30 to 1.35): cordate, convex, transverse; anterior transverse impression with some punctures, median line not deep; transverse basal impression rather wide, with coarse punctures; sides rounded, markedly sinuate before the right hind angles; subquadrate basal foveae rather superficial, rugose; laterobasal carina sometimes sharp, sometimes rudimentary, in some cases almost invisible. Pronotal microsculpture absent at magnification of 100x.

Elytra (El = 3.32 to 3.84 mm, Ew = 2.16 to 2.40 mm. El/Ew = 1.54 to 1.60, Ew/Pw = 1.53 to 1.54): evidently convex, with marked shoulders and sides gently rounded. Elytral striae 1 to 7 evidently impressed, punctate-sulcate, at apex striae 1 to 3 sulcate, outer striae only punctate and evanescent. Apical stria short, terminating at the end of stria 5 or 7. Elytral intervals very convex in the basal half, then progressively less convex. Two discal elytral pores in the third interval, adjoining stria 3. Elytral microsculpture well visible, in extremely transverse and sharp sculpicells.

Macropterous species.

MALE GENITALIA (Fig. 21). Median lobe of the aedeagus narrow, with ventral margin evidently arcuate. Long flagellum, evidently narrowing from

base to apex, connected at base with the basal chitin platelet, waved in its apical fourth and ending at the ostial flag. Well sclerotized stylet, arcuate with ventral concavity and apical tip abruptly enlarged and flat. Central brush oblique. Ventral sclerite narrow and arcuate, well sclerotized, with ventral concavity, at middle of the aedeagus.

INTRASPECIFIC VARIABILITY. The specimens from E. Gojam Amhara Gona, Ts'iyon Gorges du Nil show a shorter and less pointed apical fourth of the aedeagus. COMPARATIVE NOTES. In spite of the external similarity, the endophallic characters of *B. africanum* reveal that the species is not related to *B. scottustulatum* and nearest relatives. From this perspective it seems to show marked affinities with *B. melanocerum*, since it shares the main layout of the sclerites. In particular, both species share a flagellum evidently narrowing from base to apex, apically ending with a wave, a strikingly identical basal chitin platelet at base of the flagellum (see Figs. 19 and 21) and a sclerotized stylet, at the apical second fourth, apically ending with an abruptly enlarged, flat tip. Also the ventral sclerite is similar, even though less sclerotized in *B. melanocerum*.

DISTRIBUTION. The species seems widely distributed in Ethiopia. It was collected from the Arsi Mountains (Mt. Chillalo) in the south to the Blue Nile Gorge in the north.

HABITAT. Based on label data, the species was found under stones and on river banks at elevations of about 2300 - 3000 m.

***Bembidion (Ocydromus) augustovignai* sp.n.** (Figs. 11, 22)

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DIAGNOSIS. Blue, shiny species from Anderaccia (Kaffa Province, Ethiopia) similar to *B. africanum* but distinguishable from this last by the narrower pronotum and the aedeagus as in Fig. 22.

TYPE LOCALITY. Anderaccia, Gurgutto natural bridge, Southern Nations Nationalities and people, Ethiopia.

TYPE SERIES. Holotype, male, "Etiopia - Kaffa - Loc. 18 / Anderaccia, / ponte naturale di Gurgutto / m. 1650 circa - 26-X-1973 [printed] / Vigna [handwritten]" (AVT); Paratype, female, same collecting data as the holotype (PB).

DESCRIPTION. Bl = 4.9 to 5.7 mm. Colour: black with blue, metallic reflections. Legs reddish-testaceous, antennomere 1 and base of 2 to 4 reddish, rest of

antennae darkened. Palps dark reddish, penultimate palpomere darkened, last palpomere yellowish.

Head (Hw = 0.96 to 1.16 mm): eyes moderately convex; temples oblique, relatively long; frons smooth showing a few scattered punctures between the slightly convergent, uneven frontal furrows. A few sharp punctures behind the frontal furrows. Microsculpture in slightly transverse sculpticells superficial on labrum and clypeus, almost invisible on the frons, isodiametric on neck. Al = 2.8 to 3.0 mm.

Pronotum (Pl = 0.96 to 1.10 mm, Paw = 0.86 to 0.96 mm, Pw = 1.16 to 1.40 mm, Pbw = 0.88 to 1.04 mm, Pw/Pl = 1.21 to 1.27): relatively small, cordate, with rounded sides gently sinuate before the hind angles, square in the holotype, slightly obtuse in the paratype. Anterior transverse impression sulcate, evident, with some punctures in the median portion; median line evidently impressed; basal transverse impression rather wide, coarsely punctate. Basal foveae small, square, rugose, laterobasal carina present, very thin in the holotype, barely visible in the paratype. Lateral gutter narrow. Pronotal microsculpture absent.

Elytra (El = 3.00 to 3.60 mm, Ew = 2.00 to 2.26 mm, El/Ew = 1.54 to 1.59, Ew/Pw = 1.61 to 1.72): large, with shoulders somewhat rounded but evident. Sides subparallel, very gently rounded, apex wide. Elytral striae deeply punctate-sulcate; stria 7 evident, impressed like the inner ones. All striae visible, even though more superficial, at apex. Apical stria short, connected with the apical end of stria 5. Intervals strongly convex in the basal 3/5, then progressively more flat. Two discal elytral pores in the third interval, adjoining stria 3. Elytral microsculpture well visible, in extremely transverse and sharp sculpticells.

MALE GENITALIA (Fig. 22). Ventral margin of the median lobe of the aedeagus arcuate, with ventral concavity. Long and thick, waved flagellum, evidently narrowing from base to apex. A moderately sclerotized stylet about at the apical third, arcuate with ventral concavity and pointed at apex. Basal chitin platelet large and flat. Central brush moderately sclerotized, horizontally positioned at the basal second fourth. Ventral sclerite present, but very narrow, about at middle of the aedeagus.

ETYMOLOGY. The species is named in memory of our late friend Augusto Vigna Taglianti, specialist, among other countless skills, in Carabidae and Dermaptera, giant of Italian and international entomology, teacher of one of us (PB) and fundamental reference point for

Italian entomology during half century of scientific activity. This species was personally collected by Augusto himself, and he informed one of us (PB) that it was his favourite Ethiopian capture. The name is genitive.

COMPARATIVE NOTES. Except for the body colour (*B. augustovignai* is the sole Afrotropical *Bembidion* with blue, metallic integument), the species looks very similar to specimens of *B. africanum*. Many similarities in the layout of the sclerites within the endophallus appear to confirm that the two species are near relatives.

DISTRIBUTION. Currently, the species is only known from the type locality near Bonga in southwestern Ethiopia.

***Bembidion (Ocydromus) fontinale* Raffray, 1885 (Figs. 12, 23) new combination**

Bembidium (Peryphus) fontinale Raffray, 1885

Sinechostictus fontinalis (Raffray 1885) (Csiki, 1928)

Bembidion (Sinechostictus) fontinale Raffray 1885 (Lorenz, 1998; 2005)

DIAGNOSIS. A relatively large (5.0 to 5.6 mm) dark brown to piceous-brown Ethiopian *Bembidion* species with rounded shoulders and small punctures behind the frontal furrows.

SYSTEMATIC NOTES. In the original description this species was retained “très voisine du *rufipes*, var. *stomoides*” (Raffray 1885). Therefore, later it was listed under *Sinechostictus* Motschulsky, 1864 (Csiki 1928; Lorenz, 1998, 2005). We were allowed to examine the holotype, male, of *Bembidion fontinale* Raffray, 1885 and ascertain that the species actually belongs to the subgenus *Ocydromus* Clairville, 1806, as clearly shown by the armature of the endophallus.

TYPE LOCALITY. Mount Abuna Yousef, Amhara, Ethiopia.

TYPE SERIES. Holotype, male, “Abyssinie / A. Raffray / Voy. 1881. [printed, bordered in black] // Mt. Abuna / Yussef [handwritten] // *Bembidium / fontinale* Raffr. / Type! [handwritten] // TYPE [red, printed]”, MNHN).

NON TYPE MATERIAL EXAMINED. 8 exx., Ethiopia Amhara, Mt. Abuna Yosef, N-slope, 3800-3950 m, 12°07'52"N 39°11'39"E, 4.III.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM, OSAC: DNA5589); 144 exx., Ethiopia Amhara, Mt. Abuna Yosef, S-slope, 3850-3900 m, 12°07'29"N 39°11'21"E, 5.III.2019, leg. D. Hauth, J. Schmidt,

Yeshitla M., Yitbarek, W. (CSCHM, CTVR, OSAC: DNA5590, PB, ZMAA, ZSM); 19 exx., Ethiopia Amhara, Mt. Abuna Yosef, S-slope, 3700-3800 m, 12°09'10"N 39°09'35"E, 5.III.2019, leg. D. Hauth, J. Schmidt, Yeshitla M., Yitbarek, W. (CSCHM); 1 ex., Ethiopie, N. Wollo, Amhara, bord ruisseau, Col Abuna Youssef 3993m, 7.1.2013 leg. E. Queinnec (CTVR). REDESCRIPTION. BL = 5.2 to 5.6 mm. Colour: elytra dark brown to piceous brown, head and pronotum often lighter than elytra, often with a lighter longitudinal band at middle of the pronotum. Legs reddish, antennomere 1 and base of 2 to 4 reddish, rest of antennae darkened, palps yellowish-red, except for the penultimate maxillary palpomere, darkened.

Head (Hw = 1.04 to 1.16 mm): with convex eyes, frontal furrows parallel, uneven, frons smooth, with a few scattered punctures between the frontal furrows and behind them. Microsculpture in isodiametric sculpticells more or less visible, from evident to very superficial, sometimes barely visible on the frons and the clypeus, more evident on neck and even more marked on labrum. Al = 2.6 to 3.2 mm.

Pronotum (Pl = 1.00 to 1.12 mm, Paw = 0.90 to 1.02 mm, Pw = 1.26 to 1.44 mm, Pbw = 0.88 to 1.00 mm, Pw/Pl = 1.26 to 1.29): weakly convex, cordate, with rounded sides markedly sinuate before the square hind angles. Median line and anterior transverse impression rather superficial, this last sometimes with a few punctures or wrinkles at middle. Basal transverse impression rather wide, with many wrinkles, longitudinally oriented. Basal foveae superficial, wrinkled. Laterobasal carina absent. Lateral gutter narrow. Pronotal microsculpture in weakly transverse sculpticells, superficial, almost invisible on the disc, more marked on the sides.

Elytra (El = 3.08 to 3.44 mm, Ew = 2.00 to 2.24 mm, El/Ew = 1.53 to 1.54, Ew/Pw = 1.56 to 1.59): oval, with markedly rounded shoulders and sides. Elytral striae 1 to 7 evident, punctate-sulcate, with punctures not deep, easily visible up to the apex, apical stria connected with the apical end of stria 5. Elytral intervals flat. Elytral microsculpture evidently impressed, in polygonal, slightly transverse sculpticells.

Micropterous species.

MALE GENITALIA (Fig. 23). Median lobe of the aedeagus long, ventral margin evidently arcuate with ventral concavity, apex markedly pointed. Endophallus extremely similar to that of *B. siculum*

Dejean, 1831, with central brush near the basal opening, very long tubular flagellum extending from the basal opening to the extreme apex, ostial flag long, ending posteriorly with a pointed, well sclerotized tip. COMPARATIVE NOTES. The endophallic structure suggests that *B. fontinale* is close related to western Palearctic species of *Ocydromus* in the strict sense, being strikingly similar in this perspective to *B. siculum* and thus clearly differing from the other East African species dealt with in this study. The *atlanticum* species group is the only *Ocydromus* species group already reported for East Africa (*B. adowanum* Chaudoir, 1876).

DISTRIBUTION. This species is probably endemic to the Abuna Yousef Massif in northern Ethiopia.

HABITAT. The species was found at the banks of small sunny mountain streams at elevations of 3700 - 4000 m.

KEY TO THE EAST AFRICAN SPECIES OF
BEMBIDION LATREILLE, 1802 WITH SPECIAL REFERENCE
TO THE SUBGENERA *PERYPHUS* DEJEAN, 1821 AND
OCYDROMUS CLAIRVILLE, 1806

- 1 elytral shoulders finely saw-toothed
.....*Bembidion* subg. *Microserrullula*
Netolitzky, 1921
- elytral shoulders normal.....2
- 2 discal elytral pores situated almost in the middle
of third interval; species often with *Notaphus*-like
elytral spots or light apical elytral lunula.....
.....*Bembidion* subg. *Omotaphus* Netolitzky,
1914 and *Notaphocampa* Netolitzky, 1914
- discal elytral pores in the third interval adjoining
stria 3.....3
- 3 eyes markedly convex, protruding as a full
semicircle
.....*Bembidion* subg. *Ocydromus* Latreille,
1806 (*atlanticum* Wollaston, 1854 species group)
- eyes normally protruding4
- 4 elytral apical light lunula more or less developed
but visible.....5
- elytra unicolourous6
- 5 species from North, Central and South Ethiopia, in
southern Ethiopia east of Rift Valley with marked
elytral shoulders; endophallus (Fig. 13) with

- relatively small central sclerite and narrow flagellum ..*Bembidion (Peryphus) scottustulatum* Netolitzky, 1937
- species only from southern Ethiopia with rounded shoulders; endophallus (Fig. 14) with larger central sclerite and thicker flagellum.....
.....*Bembidion (Peryphus) damota* n.sp.
- 6 rounded elytral shoulders (Figs. 4-6, 12).....7
- square elytral shoulders (Figs. 1-3).....11
- 7 total body length > 5.5 mm, maximum elytral width beyond the middle.....8
- total body length < 5.5 mm, elytra more evenly ovate.....10
- 8 vertex with fine punctures near basal end of frontal furrows (Abuna Yousef Massif of northern Ethiopia).....
.....*B. (Ocydromus) fontinale* Raffray, 1885
- vertex smooth.....9
- 9 pronotum wider in respect to the elytra (ew/pw = 1.48 to 1.52), aedeagus as in Fig. 16, Kenya.....
.....*Bembidion (Peryphus) jeanneli* Alluaud, 1939
- pronotum narrower in respect to the elytra (ew/pw = 1.62 to 1.63), aedeagus as in Fig. 15, Southern Ethiopia.....*Bembidion (Peryphus) baleense* sp.n.
- 10 elytral microsculpture distinctly isodiametric.....
.....*Bembidion* subgg. *Acropezum* Alluaud, 1917 and *Hypsipezum* Alluaud, 1917
- elytral microsculpture in irregular, moderately transverse sculpticells, aedeagus as in Fig. 17.....
.....*Bembidion (Peryphus) sjoestedti* Alluaud, 1926
- 11 relatively small species (total length 4.3 to 5.0 mm), piceous black, mostly with bronze lustre, elytral microsculpture absent (magnification 100x) or superficial, in moderately transverse sculpticells12
- on average larger species (total length 5.0 to 6.2 mm), dorsal surface dark brown or blueish, elytral microsculpture evident, in very transverse and sharp sculpticells.....14
- 12 dorsal surface very shiny, black with metallic bronze lustre, a few small punctures behind the frontal furrows or at their base, elytral striae 2 to 5 more superficial at apex, but visible in rows of sharp punctures, legs dark brown, aedeagus as in Fig. 18
.....*Bembidion (Ocydromus) basistriatum* Fairmaire, 1893
- elytral striae 2 to 5 more superficial at apex but always sulcate, not in rows of punctures, small punctures behind the frontal furrows very scarce or absent.....13
- 13 Elytral microsculpture evident at 50x, aedeagus as in Fig. 19, northern and central Ethiopia
.....*Bembidion (Ocydromus) melanocerum* Chaudoir, 1876
- Elytral microsculpture absent or not visible at 50x, aedeagus as in Fig. 20, Arsi and Bale Mountains of southern Ethiopia.....
.....*Bembidion (Ocydromus) melanoceroides* n.sp.
- 14 dorsal surface shiny blue, pronotum less cordate and narrower in respect to the elytra (ew/pw = 1.61 to 1.72), aedeagus as in Fig. 22.....
.....*Bembidion (Ocydromus) augustovignai* n.sp.
- dorsal surface brownish, pronotum more cordate and wider in respect to the elytra (ew/pw = 1.53 to 1.54), aedeagus as in Fig. 21.....
.....*Bembidion (Ocydromus) africanum* Chaudoir, 1876

CONCLUSIONS

The subgenus *Peryphus* Dejean, 1831, formerly was reported to be present in East Africa with six species. Of these, based on the results of this study, four species have to be transferred to the subgenus *Ocydromus* Clairville, 1806. However, we identified two new *Peryphus* species so that this subgenus is now present in the area with four species all occurring in Ethiopia.

Based on our results, the genus *Sinechostictus* Motschulsky, 1864 is not part of the East African fauna. The only species of that area formerly attributed to this genus actually belongs to *Bembidion* subgenus *Ocydromus*. The same applies for the *Bembidion* subgenus *Testedium* Motschulsky, 1864. The only species formerly attributed to this taxon we likewise identified as belonging to *Ocydromus*.

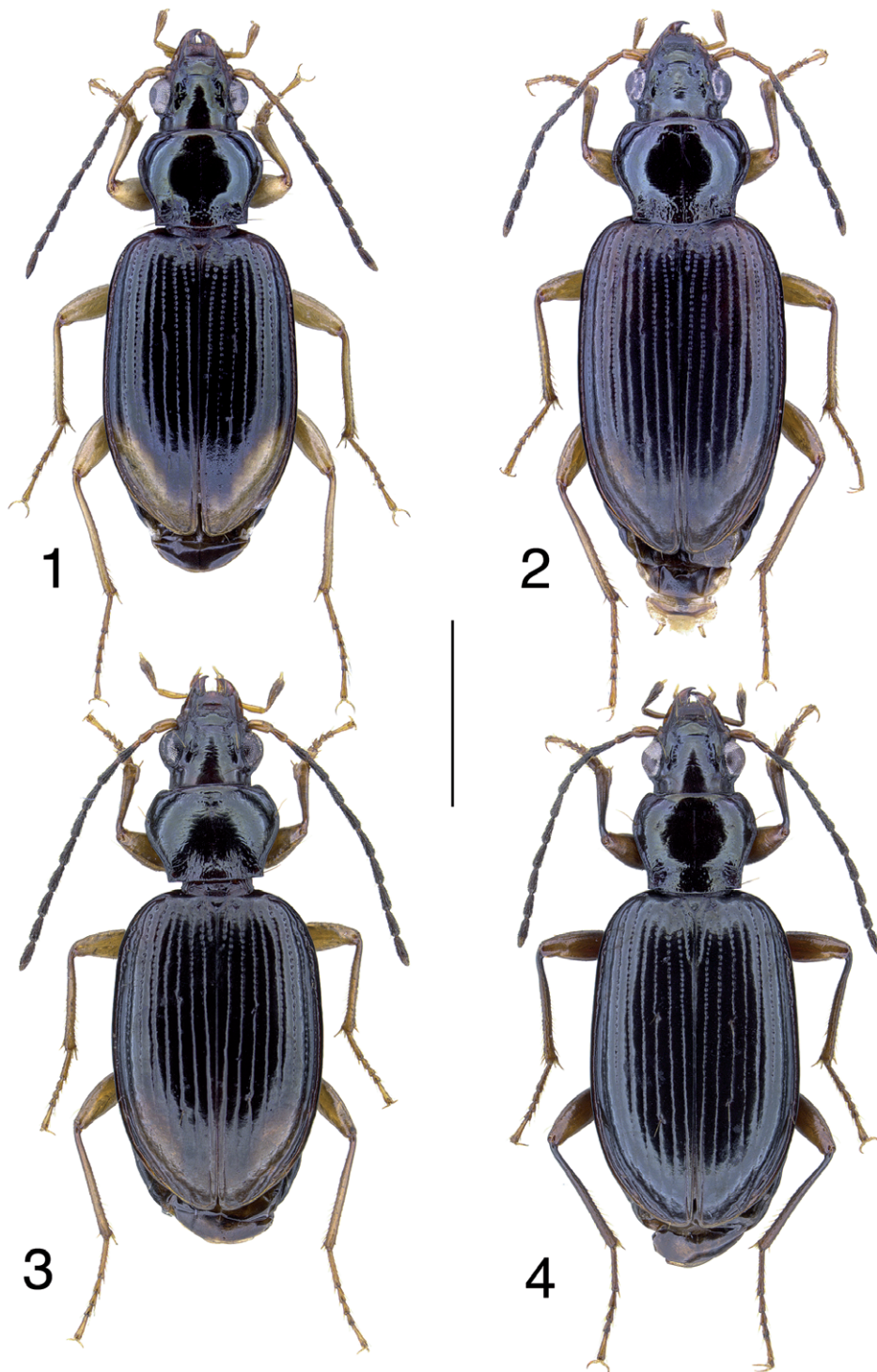
Presence of the subgenus *Ocydromus* in East Africa is not surprising but a well-known fact since

representatives of the *atlanticum* Wollaston, 1854 species group are known to occur in different areas from North to South Africa: *B. atlanticum* Wollaston, 1854, (North Africa), *B. adowanum* Chaudoir, 1876 (Ethiopia), *B. leleupi* Basilewsky, 1954 (Kenya), *B. ortsii* Netolitzky, 1938 (Congo), *B. meruanum* Basilewsky, 1962 (Tanzania), *B. drago* Basilewsky, 1958 (Lesotho, South Africa). Together with *B. adowanum*, the taxonomic changes noted above, and the two species newly described in the present paper, ten *Ocydromus* species are now known to occur in East Africa, seven of which seem to be endemic to Ethiopia. Therefore, Ethiopia harbours a particularly rich *Bembidion* fauna, which is very probably a result of the diversity of the local climates and the remarkable geomorphology with several of the many high mountains of the country reaching up to the afroalpine zone.

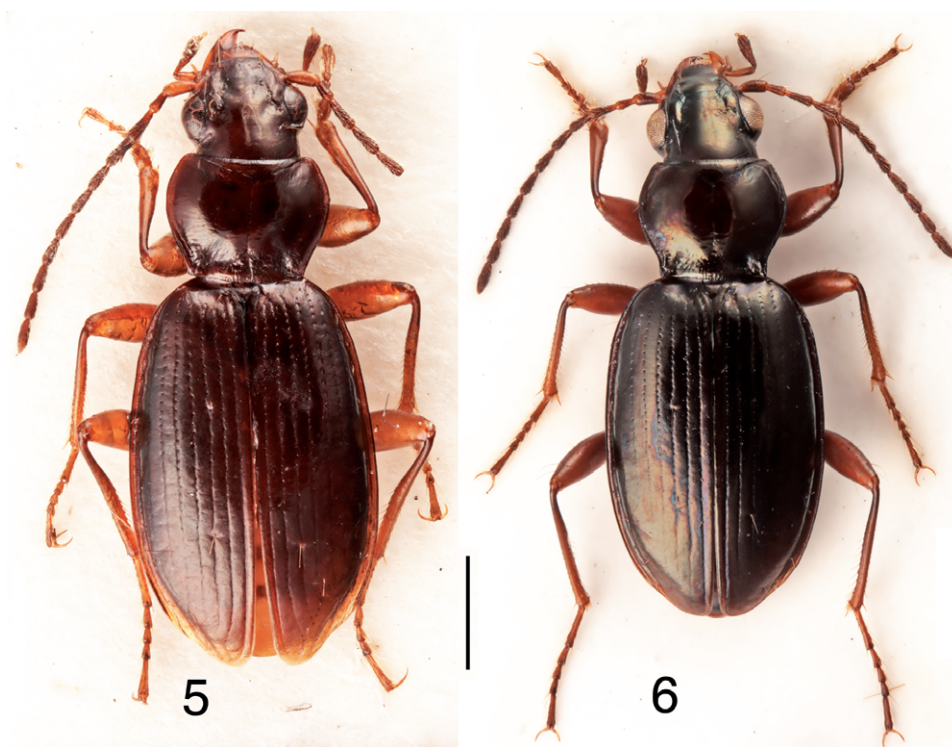
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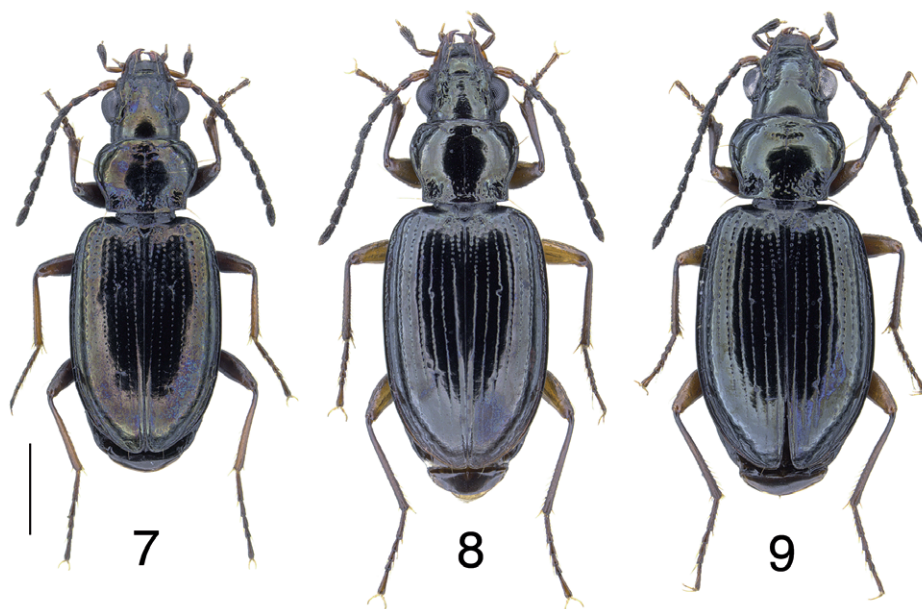
(Etrechy, France), Sergio Facchini (Piacenza, Italy), Beulah Garner (NHMUK), Stéphane Hanot (MRAC), Ingmar Harry (Freiburg, Germany), Manfred Jäch (NHMW), Wolfgang Lorenz (Tutzing, Germany), David Maddison (Corvallis, Oregon), Paolo Neri (Forlì, Italy), Roberto Poggi (MSNG), Harald Schillhammer (NHMW), Heinrich Schönmann (NHMW), Azadeh Taghavian (MNHN), Didier Van den Spiegel (MRAC) and David Wrase (Gusow Platkov). JS thanks the Ethiopian Wildlife Conservation Authority, the Ethiopian Biodiversity Institute, the College of Natural and Computational Sciences and the Department of Plant Biology and Biodiversity Management, Addis Ababa University, the Bale Mountains National Park and the Arsi Mountain National Park for their cooperation and kind permission to conduct field work. Particular thanks are due to David Hauth (Munich), Katinka Thielsen, Mekbib Fekadu and Yeshitla Merene (Marburg), Ralph Emerich (Rostock) and Yitbarek Wolde-Hawariat (Addis Ababa) for supporting or organising fieldwork of JS. We wish to thank David Maddison for the review which markedly improved the manuscript, Paolo Neri for providing useful information and bibliographic material, and Jon Cooter (Oxford) for the linguistic revision of the text.



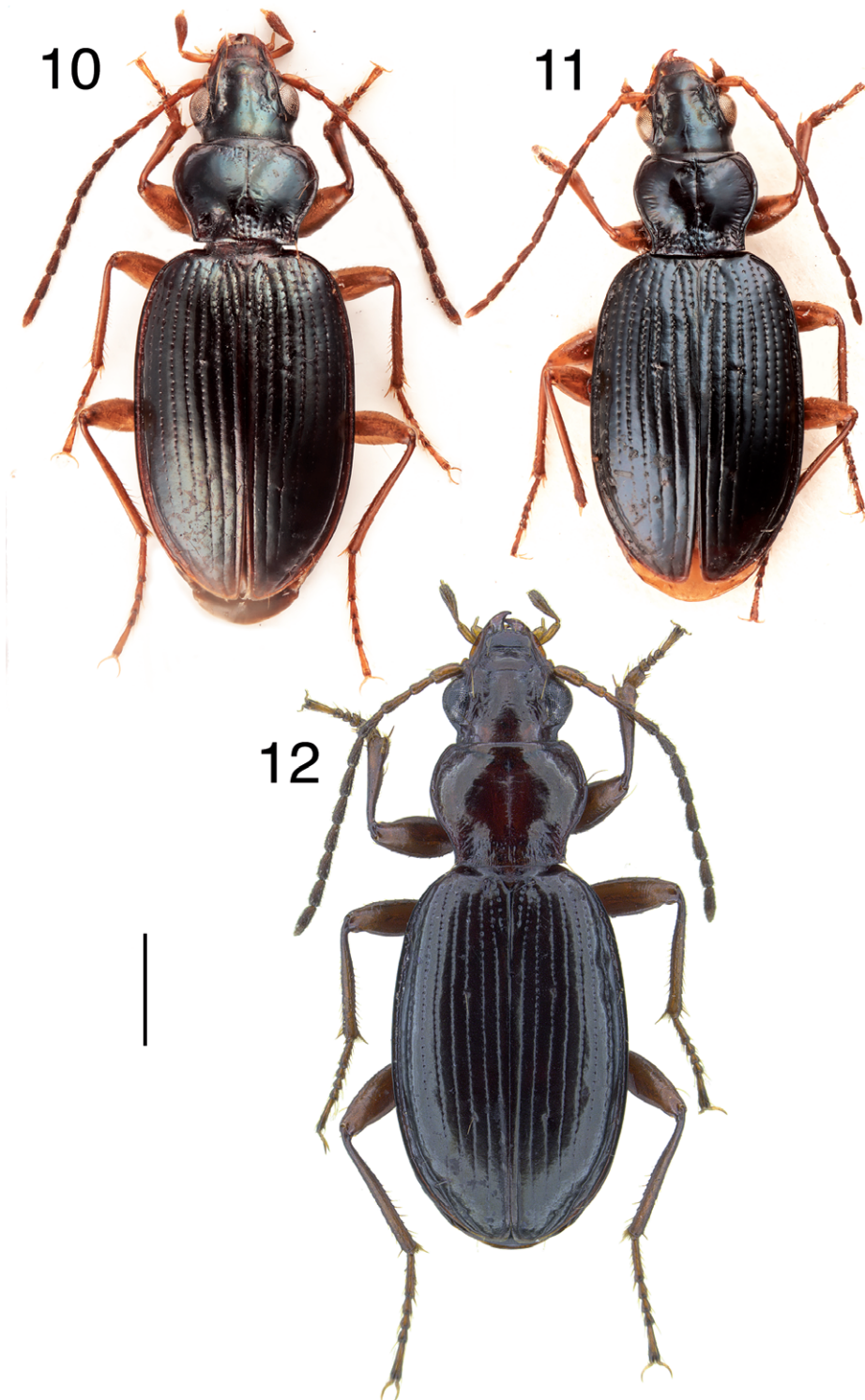
Figs. 1-4. habitus of: 1. *Bembidion scottustulatum* Netolitzky, 1937, specimen from Mt. Choke (CSCHM); 2. *Bembidion scottustulatum* Netolitzky, 1937, specimen from Abuna Yousef (CSCHM); 3. *Bembidion damota* n.sp., holotype (CSCHM); 4. *Bembidion baleense* n.sp., holotype (CSCHM); scale: 2 mm.



Figs. 5-6. habitus of: 5. *Bembidion jeanneli* Alluaud, 1939, paratype (MNHN); 6. *Bembidion sjoestedti* Alluaud, 1926, specimen from Mt. Kilimanjaro (CTVR); scale: 1 mm.



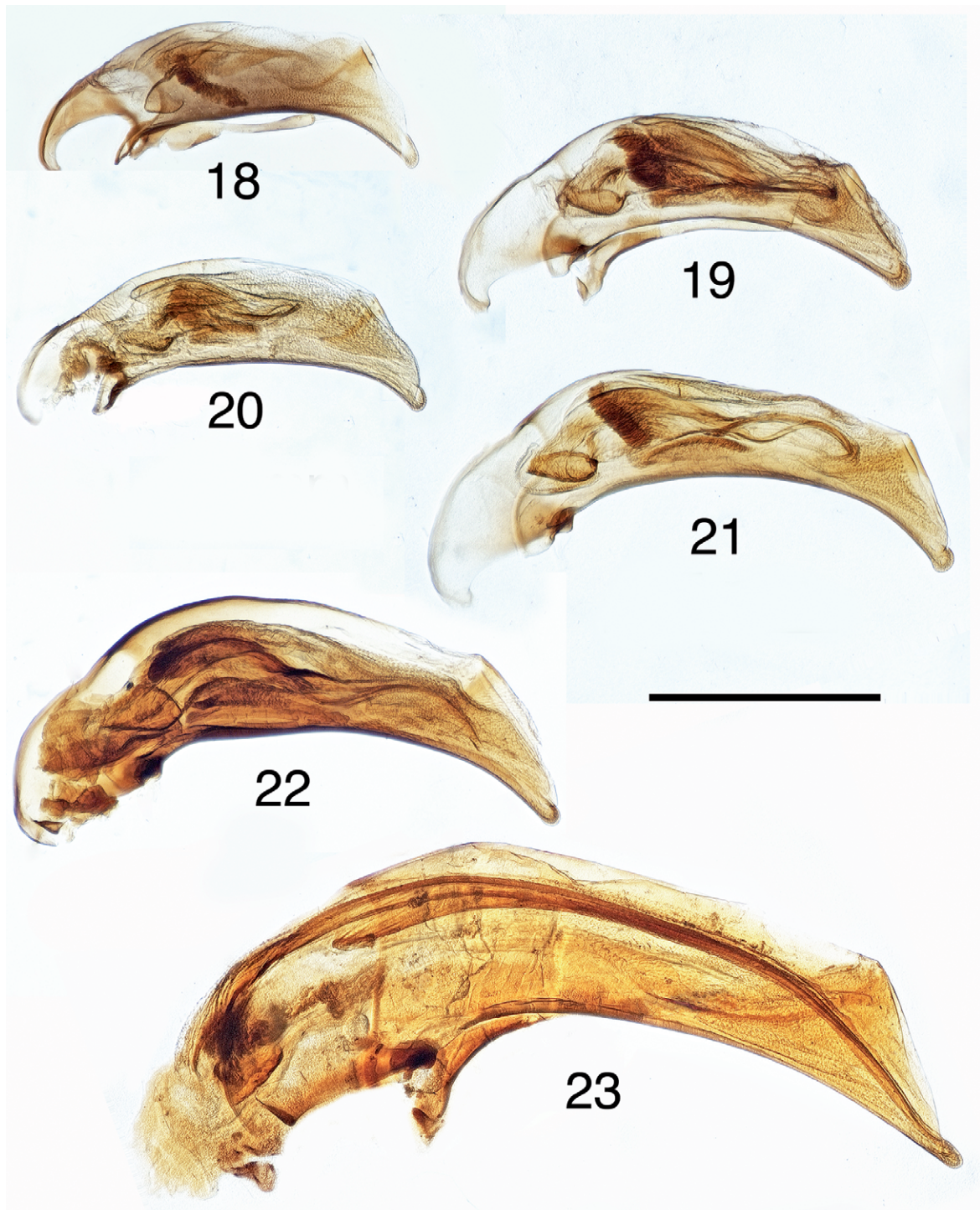
Figs. 7-9. habitus of: 7. *Bembidion basistriatum* Fairmaire, 1893, specimen from Enkuolo (CSCHM); 8. *Bembidion melanocerum* Chaudoir, 1876, specimen from Mt. Choke (CSCHM); 9. *Bembidion melanoceroides* n.sp., paratype from Enkuolo (CSCHM); scale: 1 mm.



Figs. 10-12. habitus of: 10. *Bembidion africanum* Chaudoir, 1876, specimen from Debre Libanos (CTVR); 11. *Bembidion augustovignai* n.sp., Holotype (AVT); 12. *Bembidion fontinale* Raffray, 1885, specimen from Abuna Yousef (CSCHM); scale: 1 mm.



Figs. 13-17: Median lobe of aedeagus of: 13. *Bembidion scottustulatum* Netolitzky, 1937, paratype from Djem Djem Forest (NHMW); 14. *Bembidion damota* n.sp., paratype from Mt. Chillalo (NHMUK); 15. *Bembidion baleense* n.sp., paratype from Dodola (CTVR); 16. *Bembidion jeanneli* Alluaud, 1939, Holotype (MNHN); 17. *Bembidion sjoestedti* Alluaud, 1926, specimen from Horonbo, Mt. Kilimanjaro (CTVR); scale: 0.5 mm.



Figs. 18-23. Median lobe of aedeagus of: 18. *Bembidion basistriatum* Fairmaire, 1893, specimen from Mt. Chillalo (CTVR); 19. *Bembidion melanocerum* Chaudoir, 1876, specimen from Holetta (AVT); 20. *Bembidion melanoceroides* n.sp., paratype from "Bale, a Est di Abeba" (AVT); 21. *Bembidion africanum* Chaudoir, 1876, specimen from Ghedo (MRAC); 22. *Bembidion augustovignai* n.sp., Holotype (AVT); 23. *Bembidion fontinale* Raffray, 1885, Holotype (MNHN); scale: 0.5 mm.

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