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RESEARCH PAPER

New species and new records of minute moss beetles from East Africa (Coleoptera: Hydraenidae)

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Abstract. Despite much recent progress, knowledge of Afrotropical Hydraenidae remains limited, particularly in areas experiencing tropical climates, where large numbers of species likely remain undetected. Here, three new species are described from material recently collected from two Malawian mountains: *Coelometopon dedzae* sp. nov. from Mount Dedza and *Hydraena* (*Hydraenopsis*) *mulanje* sp. nov. and *Ochthebius* (*Asiobates*) *erinaceus* sp. nov. from Mount Mulanje. All specimens were sampled by sifting, and *Hydraena mulanje* sp. nov. and *Ochthebius erinaceus* sp. nov. appear to be terrestrial, in forest litter. Specimens of *Decarthrocerus* Orchymont, 1948 from Mount Dedza are apparently referable to *D. jeanneli* Orchymont, 1948, described from Mount Elgon, Kenya, as is a specimen examined from Mount Hanang in Tanzania. These represent new country records for this species, which appears to be widespread in East African Mountains.

Key words. Coleoptera, Hydraenidae, taxonomy, new species, new records, humicolous, madicolous, Malawi, Tanzania, Afrotropical Region

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Introduction

The hydraenid fauna of the Afrotropical Region remains incompletely known, particularly in tropical areas of West, Central and East Africa, where limited targeted sampling has been conducted to date (see Perkins 2022). Southern Africa, particularly the Republic of South Africa, supports a phylogenetically and ecologically diverse suite of hydraenid lineages (e.g. Perkins & Balfour-Browne 1994; Perkins 2005, 2009), some of which include species distributed further north in the East African mountains (e.g. Perkins 2005, 2009; Bilton 2021). Whilst many species of the widespread *Hydraena* Kugelan, 1794 and *Ochthebius* Leach, 1815 have been named from Southern Africa (e.g. Perkins 2011, 2014), these genera remain very poorly known in most of tropical Africa. For example, prior to 2022 a total of 19 species of *Hydraena* were described from the tropical heart of Africa south of the Sahara; Perkins (2022) adding 33 new species, discovered during relatively limited sampling in Cameroon. Here three new hydraenid species are described from a small collection taken as bycatch during litter sifting for terrestrial beetles in Malawi by Peter Hlaváč, an associate researcher of the National Museum in Prague. In addition, I take the opportunity to document new country records for *Decarthrocerus jeanneli* Orchymont, 1948 from Malawi and Tanzania.

Materials and methods

Specimens were studied using Leica MZ8 and M205C stereomicroscopes, with LED gooseneck lights diffused using a tracing paper collar and tubes derived from opaque white plastic film canisters. Habitus photographs were taken with a Canon EOS 5D Mark IV camera fitted to a Leica M205C stereomicroscope, with a 1× objective lens. Specimens were illuminated with gooseneck lights, diffused with a film canister tube. Genitalia were mounted on glass slides in Kisser's glycerol gelatine (see Riedel 2005) and imaged using an Olympus CX31 microscope and Canon EOS 500D camera. All image stacks were

produced by hand, and combined using Zerene Stacker software (www.zerenesystems.com).

Exact label data are cited for specimens. Slashes "/" indicate new line in label text.

The following abbreviations are used in the text:

CRM	collection Ignacio Ribera, Museo Nacional de Ciencias Naturales, Madrid, Spain;
NMPC	Národní muzeum, Prague, Czech Republic;
BL	body length (front of labrum to elytral apices);
EL	elytral length (outer angle of shoulder to apex);
EW	elytral width at widest point.

Taxonomy

Coelometopon dedzae sp. nov.

(Figs 1–2, 4)

Type locality. Malawi, Mount Dedza, 14°21′42.3″S 34°10′50.0″E, 2030 m.

Type material. Holotype: ♂, labelled: "MALAWI: Mt. Dedza / Dedza env., 2030 m / S14°21'42.3" E34°10'50.0" / 28.XI.2018, P.Hlaváč lgt." (NMPC) with red holotype label. Paratypes: 1 ♂ 2 ♀♀, same data as Holotype and red paratype label (NMPC).

Description. ***Male.*** *Colour*. Dorsum (Fig. 1A) dark brown to black, legs dark to reddish brown. Maxillary palpi yellowish brown. Antennal club black, stem segments paler yellowish brown. Venter brown to dark brown.

Head broadly triangular, broadest at posterior margin of eyes and narrowing to labral apex. Eyes strongly raised, protruding, and occupying approximately 1/3 of side margin of head. Labrum set beneath margin of clypeus, transverse, with semicircular apicomedian emargination. Anterior and lateral margins evenly rounded, strongly raised and inflexed anterodorsally, with dense erect setae, longer laterally. Clypeus with front angles produced and raised, particularly laterally; front margin arcuate, with stout recurved yellow setae. Dorsal surface dull, granulate, with scattered, curved, yellow setae. Frontoclypeal suture arcuate, weakly impressed. Frons and vertex shining, with dense, strongly raised large granules, particularly interior to compound eyes; with very sparse, curved, yellow setae; setae stouter longer and much denser in front of and around interior margins of eyes. Ocelli indistinct, resembling granules, in posterior part of vertex.

Pronotum transverse, cordiform, broadest at middle. Sides obtusely produced at widest part, narrowing strongly to protruding front angles, and weakly emarginated in front of and behind middle. Posterior angles obtuse. Anterior margin broadly sinuate in middle half, then strongly curved forwards to front angles; posterior margin sinuate around acuminate middle. Median longitudinal furrow of disc moderate, somewhat interrupted in middle; deeper anteriorly and posteriorly, with large, sparse granules in deeper areas. Anterior admedian fovea shallow, deeper anterolaterally and here granulate. Posterior admedian fovea deeper than anterior, with large granules. Anterior adlateral fovea shallow and open laterally, granulate; posterior adlateral fovea deeper, opening laterally to pronotal margin, granulate. Dorsal surface of pronotum shining, without microreticulation, granules restricted to setose ridges between foveal areas.

Elytra elongate, widest approximately in middle, where pseudepipleuron formed from 8th interval is broadest. Sides almost parallel-sided behind this widest point, weakly narrowing to posterior 1/5, and then strongly rounded to conjointly weakly emarginated apex. Sides of elytra granulate, granules spaced 0.5–1 granule's width apart, and bearing long, posteriorly recurved, yellow setae. Elytra shining, with some intervals bearing low costae, all costae with rows of long, golden posteriorly recurved setae. Costae most strongly raised on intervals 2 and 4; less so on intervals 5 and 6. Second elytral interval costate in 3 sections. Interval 4 costate in 4 sections. Costae lower posteriorly, but row of setae reaching elytral apex. Interval 5 with setae below shoulder and between costae 2 and 3 of interval 4, overlapping with these costae somewhat. Interval 6 with two weak costae. Interval 7 raised from just behind shoulder to just before apical narrowing of elytra, with row of shorter, yellow, recumbent. Intervals 1 and 3 flat; 3 with short row of similar granules and setae just behind middle.

Venter. Mentum transverse, produced into blunt process apicomedially and with broad, shallow trapezoidal depressions posteriorly either side of midline; lateral margins broadly raised. Shining, with very weak, almost obsolete remnants of microreticulation outside depressions; with stout, erect setae at front angles, along raised margins and posteriorly around depressions. Submentum triangular, shining, without microreticulation; with stout, erect setae as mentum. Prosternum with very low median ridge anterior to procoxae; dull, with scale-like vestiture. Pronotal hypomera very broad, dull, with granulate reticulation and stout, recumbent outwardly-directed setae. Elytral epipleura and pseudepipleura dull; pseudepipleura broad, especially around anterior 1/3, but continued to close to apex. Epipleura continued to apex, but narrowing in posterior 1/4; surface minutely granulate, with a row of shallow depressions. Pseudepipleura granulate, with row of stout, semi-erect setae close to outer margin of epipleura. Mesoventrite dull, granulate, with microscopic scale-like vestiture; raised into small projection between mesocoxae. Metaventrite shining in centre, dull at sides, where surface is minutely reticulate. With shallow elongately oval central depression occupying posterior half of ventrite; depression staggered, deeper in centre. Area around and in front of depression with sparse, shallow, medium punctures, each bearing a long, stout decumbent to recumbent seta. Dull sides of metaventrite with sparse but very coarse, shallow punctures, bearing similar setae. Anterior margins of metaventrite with raised, narrow, arcuate carinae, fringing mesocoxae; centre below posterior junction of mesocoxae with shallow depression in shape of inverted V. Posterior edges of metaventrite, immediately in front of metacoxae, with scale-like vestiture. Abdominal ventrite 1 with strong, curved carina behind each coxa. Abdominal ventrites 1–6 weakly shining, with weak granulate microreticulation; surface increasingly rugose towards margins. Ventrites 1–5 each with 2 irregular transverse rows of punctures bearing decumbent setae. Ventrite 6 with rugose punctures and setae in lateral 0.3s; shining centrally and here with

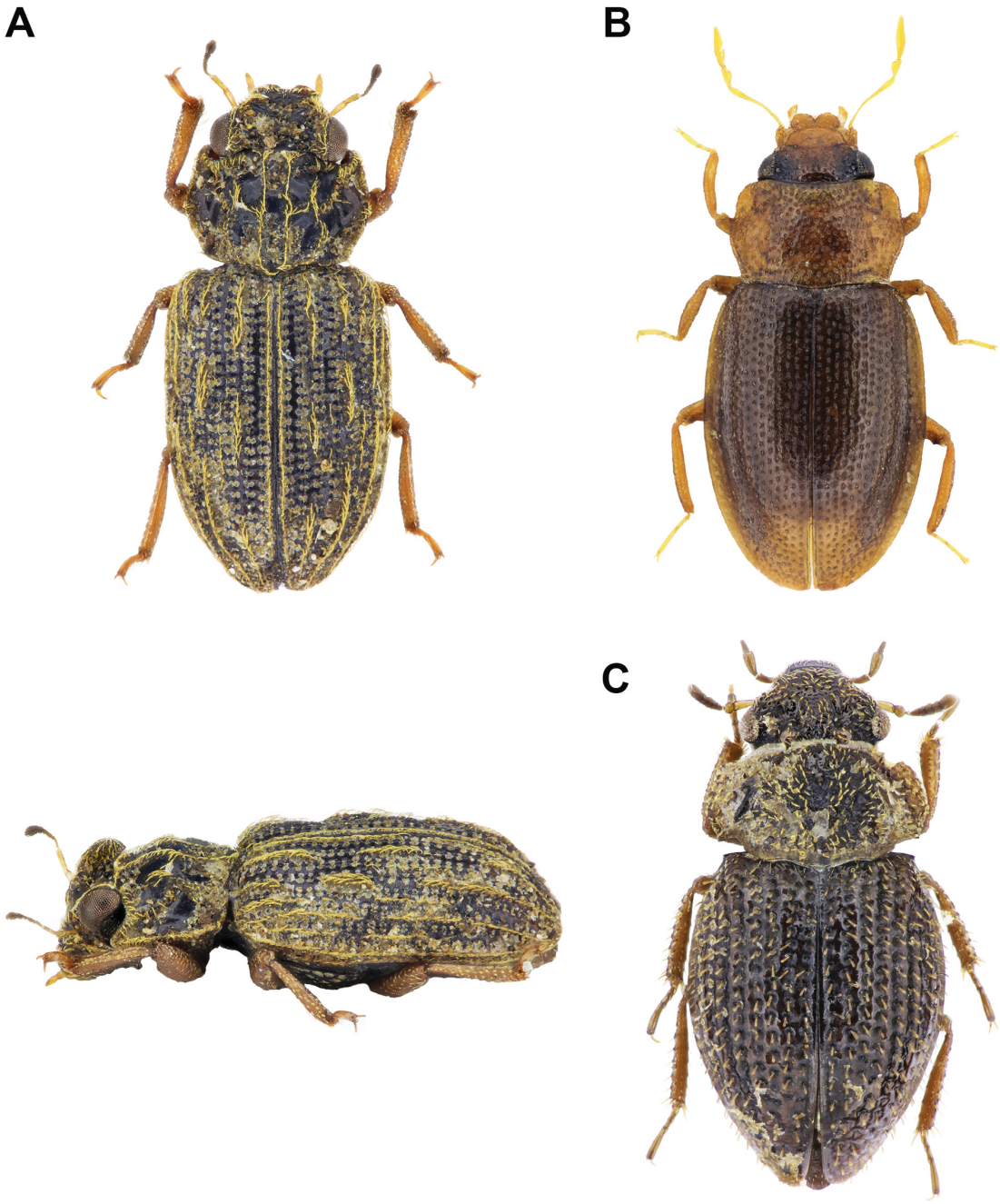

Fig. 1. Malawi Hydraenidae, habitus. A – *Coelometopon dedzae* sp. nov.; B – *Hydraena mulanje* sp. nov.; C – *Ochthebius erinaceus* sp. nov.

characteristic scale-like reticulation, isodiametric anteriorly and elongate posteriorly.

Aedeagus (Fig 2A) robust, main piece broadening apically in ventral and dorsal views. Complex in structure; membranous process minutely spinose, large, expandable; parameres sinuate, joined near base of main piece, reaching proximal part of expanded apical portion of main piece, tipped with long, straight setae; main piece with complex internal sclerotizations, including an internal sclerotised plate occupying the entire lumen and supplied with musculature proximally – presumably constituting part of a pumping mechanism.

Female. Largely as males; last tergite rounded, edges with short, stout, truncate, flattened spines.

Variation. Some variation in degree of granulation of pronotal depressions between specimens.

Measurements. Holotype BL = 2.70 mm; EL = 1.60; EW = 1.15 mm. Paratype male BL = 2.65 mm; EL = 1.60; EW = 1.20 mm. Paratype females BL = 2.60–2.70 mm; EL = 1.15–1.65 mm; EW = 1.15–1.20 mm.

Differential diagnosis. A member of the *leleupi* group of *Coelometopon* (see Perkins 2005), which includes four described East African species: *C. cavifrons* Janssens, 1972, *C. kilimanjaro* Perkins, 2005, *C. leleupi* Janssens, 1972 and *C. madidum* Janssens, 1972. It shares with these species a relatively large size (2.60–2.70 mm), a short labrum, mostly hidden under the clypeus, wide lateral depressions on the pronotum and details of aedeagal anatomy.

The new species would key to *C. cavifrons* in Perkins (2005), a species known from the Uluguru Mountains of Tanzania. It can most easily be distinguished from *C. cavifrons* by the uniformly dark coloration and the anatomy of the aedeagus.

Etymology. Named after the type locality. The specific epithet is a noun in the genitive case.

Distribution and ecology. Only known from the type locality, an isolated massif in central Malawi which rises 2198 m and supports remnant patches of native evergreen forest close to its summit (Fig. 4). No ecological data on the specimens, but likely sampled from or near madicolous habitats, given the known ecology of members of this genus.

Hydraena (*Hydraenopsis*) *mulanje* sp. nov.

(Figs 1–2, 4)

Type locality. Malawi, Mt. Mulanje, Ruo River Forest, 15°58′17.0″S 35°39′18.3″E, 970 m.

Type material. Holotype: ♂, labelled: "S MALAWI. Mulanje Mts. / Ruo river Forest / S15°58'17.0"E35°39'18.3" / 18-25.xi.2018, 970 / sifting P.Hlaváč lgt." (NMPC) with red holotype label. Paratypes: 1 ♂ 3 ♀♀, same data as Holotype; 1 ♀, labelled: "MALAWI: Mt. Mulanje / Ruo river Forest, sifting,970m / S15°58'17.0"E35°39'18.3" / 18-25.xi.2018, P.Hlaváč lgt.", all with red paratype labels (NMPC).

Description. ***Male.*** *Colour*. Dorsum (Fig. 1B) predominantly reddish brown; pronotum lighter than elytra except on parts of disc; head darkened posteriorly and almost black inside of compound eyes, legs light reddish brown;

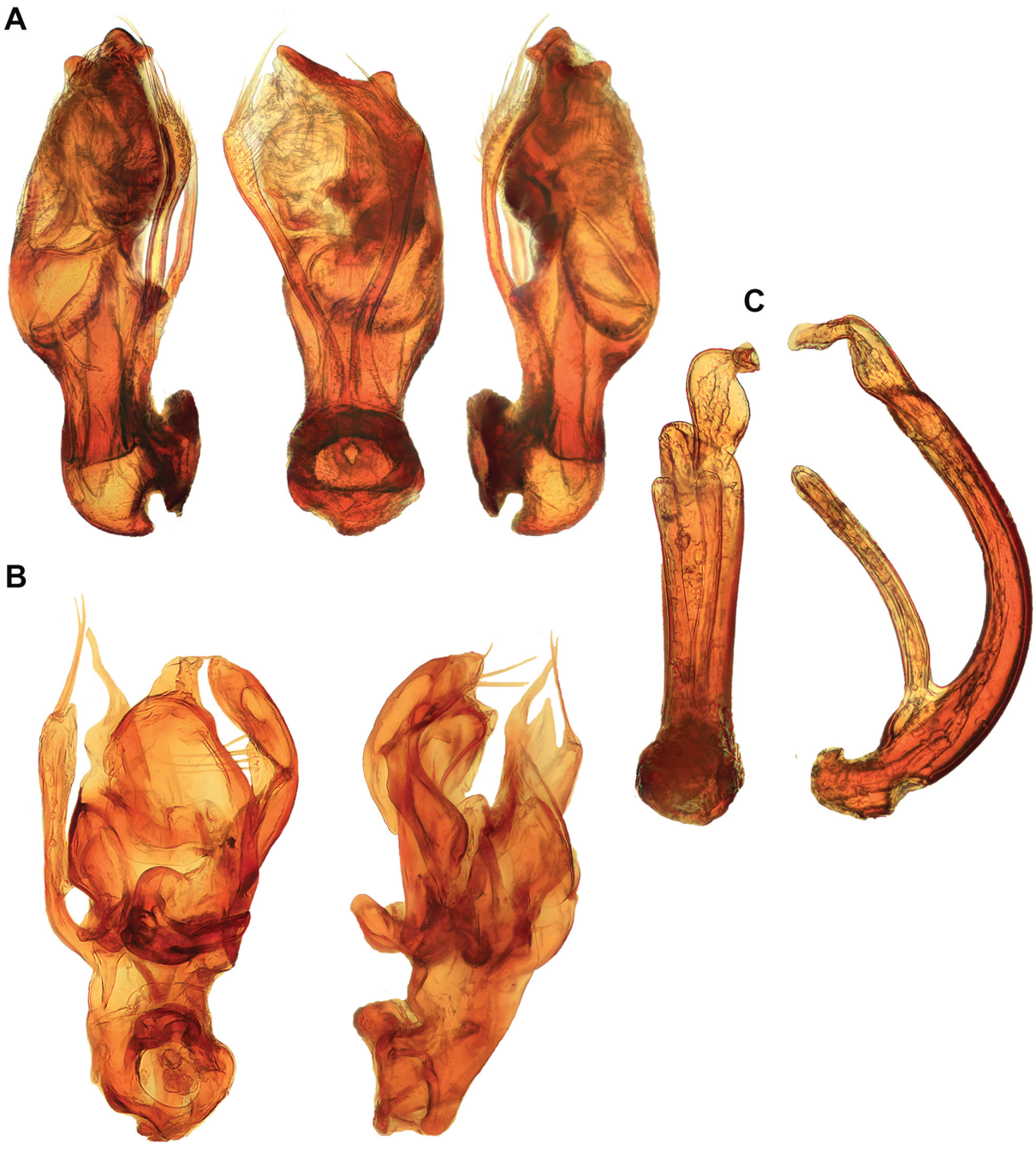

Fig. 2. Malawi Hydraenidae, aedeagus, lateral and ventral views. A – *Coelometopon dedzae* sp. nov.; B – *Hydraena mulanje* sp. nov.; C – *Ochthebius erinaceus* sp. nov.

maxillary palpi yellowish brown; antennal stem segments pale yellowish brown, club somewhat darker; venter reddish brown to dark brown.

Head broadly triangular, broadest at posterior margin of eyes; narrowing abruptly in front of clypeus; narrowest at base of labrum. Compound eyes relatively large, occupying approximately 1/2 of side margin of head excluding labrum. Labrum transverse, deeply emarginate anteromedially, creating two rounded lateral lobes; lobes widest at base, labrum distinctly narrowed behind. Anterior and lateral margins slightly thickened and upturned, with short, curved setae. Upper surface of labrum dull, with fine microreticulation and scattered punctures bearing short, curved setae. Clypeus shining, with very sparse, short, curved setae; with weakly arcuate anterior margin, anterolateral angles obtuse; lateral margins slightly thickened, minutely serrate, with small, curved setae. Frontoclypeal suture indistinct, weakly arcuate. Frons much wider than clypeus, with front angles sharp and slightly obtuse; margins minutely serrate and setose in front of compound eyes; surface shining in centre, with dense, large, shallow punctures, bearing fine recumbent to decumbent setae; punctures in centre spaced 0.1–1 puncture diameter apart; closer towards inner margins of compound eyes, where cuticle has a somewhat rugose appearance. Maxillary palpi with palpomeres 3 and 4 somewhat expanded.

Pronotum transverse, cordiform, broadest just behind middle. Sides dentate, with smaller, curved setae; broadly rounded at broadest point, then weakly concave to posterior angles and weakly concave, then broadly rounded to anterior angles. Posterior angles pointed, weakly obtuse; anterior angles right angled. Anterior margin broadly emarginate in middle half, then almost straight to anterior angles. Posterior margin weakly bisinuate around centre and slightly recurved to posterior angles. Disc shining, devoid of microreticulation; with dense, large, shallow punctures bearing fine recumbent to decumbent setae; punctures larger than on head, spaced 0.1–2 puncture diameters apart. Pronotum weakly rugose towards lateral margins, particularly anteriorly. Anterolateral pronotal foveae shallow, transverse, open laterally; posterolateral pronotal foveae shallow, slightly elongate, continued to posterior margin.

Elytra broad, moderately elongate, widest close to middle. Sides weakly rounded to shallowly emarginated apex. Elytral margin broadly explanate, from just behind shoulder to close to apex; minutely serrate. Elytra shining, with 15 non-striate rows of large, shallow punctures, bearing long, fine recumbent setae, many lost; punctures larger and deeper than on pronotum. Elytral disc flat, gradually declining to apex over posterior half.

Venter. Mentum transverse, produced into broad triangular process apicomedially; anterior margins with dense suberect setae; lateral angles broadly rounded; surface shining, with sparse, fine punctures bearing long, fine recumbent to decumbent setae. Gena shining, without transverse ridges. Prosternal intercoxal process carinate, rugulosely sculptured. Pronotal hypomera broad, somewhat dull, with rugulose reticulation. Elytral epipleura broad, dull, isodiametrically microreticulate; continued almost to apex. Mesoventrite dull, strongly and rugulosely microreticulate, with dense setose vestiture; mesoventral intercoxal process parallel sided, lateral margins raised and shining. Metaventrite rugulosely punctured with dense vestiture and oval posteromedian depression; with short arcuate ridge on each side, extended posteriorly from margin of each mesocoxal cavity. Mesoventral plaques elongate ovals, flat, shining and slightly raised above rest of ventrite. Abdominal intercoxal sclerite width at arcuate posterior margin approx. 2× that of apex of mesoventral intercoxal process. Abdominal ventrites 1–4 slightly shining, with scale-like microreticulation and setose vestiture. Ventrite 5 shining in centre, with transverse microreticulation; vestiture restricted to anterolateral portions; apical margin broadly arcuate. Ventrite 6 shining, devoid of vestiture, with transverse reticulation; apical margin broadly arcuate. Ventrite 7 shining, with long, internal anteriorly directed processes bearing broad apical apodemes, supporting dense musculature. Last tergite with broad apicomedial notch.

Aedeagus (Fig. 2B) complex; main piece with an elongate process on right-hand side in ventral view, which is arcuate and paramere-like. Parameres attached just before mid-way on main piece; left paramere relatively large, with an expanded, setose apex; right paramere smaller, setae at right angles to shaft, left paramere partly obscured by angled process of main piece.

Female. Largely as males; maxillary palpi with segments 3 and 4 less expanded; abdominal ventrites 5–6 with straight apical margins; ventrite 6 with dense row of irregular puncture close to apical margin, bearing fine recumbent yellow setae.

Variation. Some variation in colour amongst the type series.

Measurements. Holotype BL = 1.65 mm; EL = 1.05; EW = 0.80 mm. Paratype male BL = 1.65 mm; EL = 1.10; EW = 0.80 mm. Paratype females BL = 1.65–1.70 mm; EL = 1.05–1.10 mm; EW = 0.80–0.85 mm.

Differential diagnosis. There are now 146 *Hydraena* known from the Afrotropical Region, of which only 50 are recorded from areas of tropical Africa south of the Sahara. Thirty-three of these were recently described from Cameroon by Perkins (2022). Amongst known Afrotropical species, *H. mulanje* sp. nov. is readily distinguished by its broadly explanate elytral margins and aedeagal anatomy. The form of the aedeagus would apparently place the new species in Aedeagal Species Group 3 of *Hydraenopsis* Janssens, 1972 in Perkins (2022), but the process adjacent to the right paramere is much larger in *H. mulanje* sp. nov. than in any of the described Cameroonian species.

Etymology. Named in reference to the type locality. The specific epithet is a noun in the nominative case.

Distribution and ecology. Known only from Mount Mulanje, an inselberg in southeast Malawi which reaches 3200 m, making it the highest mountain in the country (Fig. 4). Specimens were collected from a forested ravine on the south side of the mountain where they were sifted from leaf litter. Apparently a terrestrial species.

Ochthebius (*Asiobates*) *erinaceus* sp. nov.

(Figs 1–2, 4)

Type locality. Malawi, Mt. Mulanje, ca. 0.7 km ENE of Chambe Hut on Chambe Plateau, 15°54′18.7″S 35°32′50.4″E, 1953 m.

Type material. Holotype: ♂, labelled: "MALAWI: Mt. Mulanje / Chambe plateau, Chambe hut / 1953m, sifting / S15°54'18.7" E35°32'50.4" / 21.XI.2018 P.Hlaváč lgt." (NMPC) with red holotype label. Paratype: 1 ♀ same data as Holotype and with red paratype label (NMPC).

Description. ***Male.*** *Colour*. Dorsum (Fig. 1C) with head dark brown to black, ocelli paler, setae creating a weakly aeneous appearance at anterior margins of frons and on clypeal ridges; pronotum dark brown on disc, paler reddish brown on lateral areas; elytra dark reddish brown; venter rufopiceous, underside of head, metaventrite and apex of abdomen rufous; maxillary palpi, antennae and legs dark yellow-brown; antennal club darker than stem.

Head. Eyes rather small, in dorsal aspect 10 weakly convex facets in longest series. Frons shining, with dense, coarse punctures bearing short, golden suberect setae; interocular foveae large, round, deep, width of each about 1/3 width of head between compound eyes, each internally with few setiferous punctures. Clypeus smooth and shining, with medium punctures bearing short, stout, recumbent, golden setae. Labrum shining, very sparsely setiferously punctate; anterior margin with distinct, shallow apicomedian emargination.

Pronotum transverse, widest at middle. Anterior margin sinuated around middle, with narrow hyaline border and small, sharp, postocular emarginations. Sides arcuate; strongly excised in posterior 1/4, excised portion separated from anterior 3/4 by strongly acuminate acute projection; with narrow hyaline border restricted to excised portion.

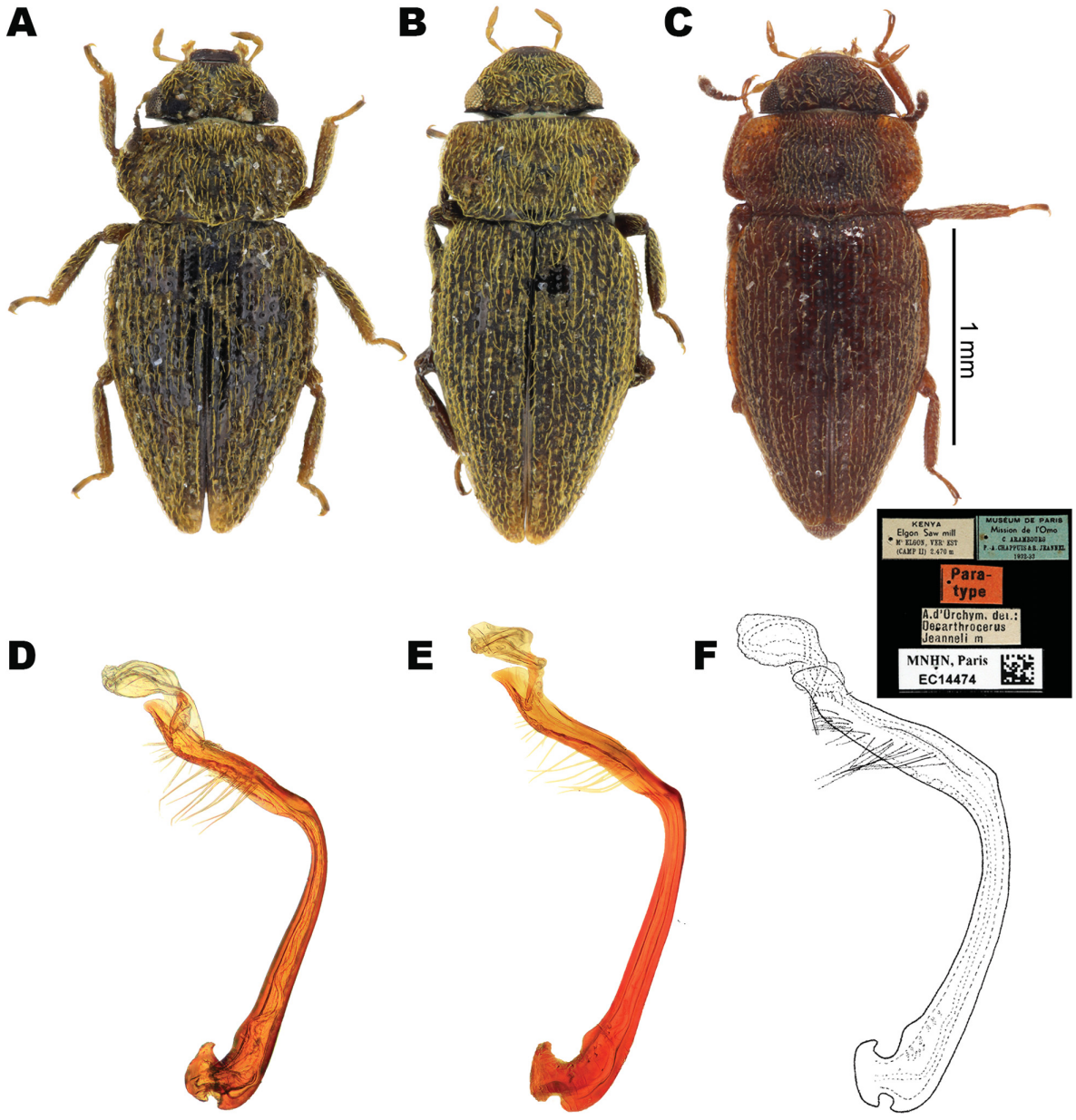

Fig. 3. *Decarthrocerus jeanneli* Orchymont, 1948. A–C – habitus, D–F – aedeagi, lateral view. A & D – Malawi, Mt Dedza; B & E – Tanzania, Mt Hanang; C & F – Kenya, Mt Elgon, paratype (photo © MNHN, Paris, A. Mantilleri; aedeagus after Perkins (2009)).

Posterior margin broadly arcuate around centre, with narrow hyaline border, most visible over central 1/2. Disc shining, with very coarse, dense, often confluent punctation; punctures reticulate and bearing short, stout, golden, recumbent setae. Median longitudinal sulcus distinct, deepened anteriorly and posteriorly; floor punctate. Admedian foveae distinct, elongate, anterior shorter than posterior. Adlateral foveae distinct, anterior elongate, posterior transverse, confluent with posterior admedian fovea.

Elytra stout and arched, widest at middle; shoulders sharply acuminate. Sides arcuate, with broad explanate margin. Apices narrowly separately rounded, slightly acuminate. Ten-seriate punctate, series not striate-impressed but intervals slightly tumid, particularly on disc. Serial punctures large, slightly transverse, each bearing a short, stout, erect, somewhat spathulate seta, arising from just behind anterior margin of puncture. Surface between punctures weakly shining, without visible microreticulation.

Venter. Mentum shining, with long, curved, stout setae close to anterior margin and anterolateral angles; surface moderately sparsely punctate, each puncture bearing a stout, flattened, decumbent seta. Posterior margin of compound eyes abruptly incised, with dense field of short, erect, white setae occupying sides of head below posteroventral margin of eyes. Metaventrite pubescent laterally, shining on disc, glabrous, with sparse, coarse punctures, bearing stout semi-erect setae. Abdominal ventrites 1–5 with medium, fine, reticulate punctation, punctures bearing fine, recumbent setae, some of which reach past anterior margin of next ventrite. Ventrite 6 minutely reticulated, with sparse, irregular row of fine setae close to base. Last tergite slightly acuminated apically.

Legs. Underside of basal protarsomeres with stout suction setae.

Aedeagus (Fig. 2C). Main piece evenly curved in lateral view, with hooked apex to terminal piece.

Female. Externally similar to male, other than absence of suction setae on fore-tarsi and last tergite strongly acuminated, with broad, flattened, modified setae close to posterior margin.

Variation. ***Measurements.*** Holotype BL = 1.75 mm; EL = 1.10; EW = 0.85 mm. Paratype female BL = 1.80 mm; EL = 1.10; EW = 0.90 mm.

Differential diagnosis. *Asiobates* Thomson, 1859 is a largely Palaearctic subgenus (Jäch 1990), with approximately 20 species known from the Americas, mainly North (Perkins 1980). Only five named species are known currently from the Afrotropical Region, one of which (*O. andreinii* Régimbart, 1905) has been divided into four subspecies (Orchymont 1948). Of these, *O. andronius* Orchymont, 1948 was raised to species level by Perkins & Balfour-Browne (1994), and it is likely the other three also represent good species. The new species is immediately distinguished from all other described members of the subgenus by the spathulate (sub-) erect setae on the dorsum. Aedeagus characteristic (Fig. 2C).

Etymology. Named in reference to the stout setae on the dorsum, which mean that the species bears some resemblance to a hedgehog (e.g. the African Hedgehogs, *Atelerix* Pomel, 1848). The specific epithet, *erinaceus*, is an adjective.

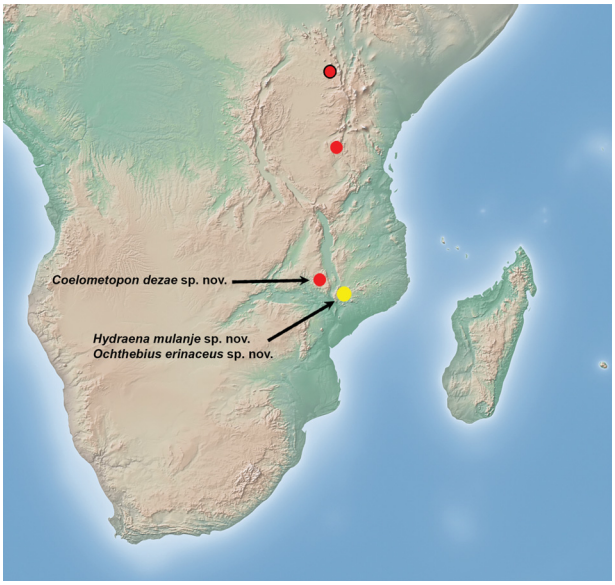

Fig. 4. Distribution map for taxa covered in this paper. Red circles indicate localities for *Decarthrocerus jeanneli* Orchymont, 1948 (bordered circle type locality).

Distribution and ecology. Known only from the type locality, a remnant patch of indigenous forest on the Chambe Plateau, a northwestern outlier of Mount Mulanje (Fig. 4). Specimens were sifted from forest litter and the species is likely terrestrial.

Decarthrocerus jeanneli Orchymont, 1948

(Figs 3–4)

Material studied. 1 ♂ 1 ♀, "MALAWI: Mt. Dedza / Dedza env., 2030 m / S14°21'42.3" E34°10'50.0" / 28.XI.2018, P.Hlaváč lgt." (NMPC); 1 ♂, "TANZANIA, Mt. Ha- / nang, S. slope, / S4.46111° E35.39741° / 2383m, 17.xii.2012, sift. 23 V. Grebennikov leg.", "DNA specimen / E.E. IBE-AN536" (CRM).

Comments. A species described from Mt Elgon, Kenya (Orchymont 1948, Perkins 2009) and not so far reported elsewhere. I have seen material apparently referable to this species from Malawi and Tanzania. Males, together with their aedeagi, are shown in Fig. 3, alongside a paratype from Mt Elgon (after Perkins 2009). Whilst there are small differences between specimens, these are much smaller than those seen between described species of *Decarthrocerus* (see Perkins 2009). As there do not appear to be any significant, consistent differences between populations, either aedeagal or external, I consider these conspecific, particularly in the absence of genetic data, despite the large geographical distances between them (Fig. 4). Similar situations have been reported in other East African mountain beetle taxa, including hydraenids (see e.g. Bilton 2021).

Acknowledgements

I am grateful to Peter Hlaváč (NMPC) for collecting these beetles whilst in search of other taxa, and Jiří Hájek (NMPC) for passing them to me for study. Antoine Mantilleri (MNHN, Paris) kindly photographed a paratype of *Decarthrocerus jeanneli* Orchymont, 1948.

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