

## Three new Entiminae species from Malawi with one new generic synonymy (Coleoptera: Curculionidae)

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**Taxonomy, new species, new synonymy, Coleoptera, Curculionidae, Entiminae, Peritelini, Sciaphilini, Malawi, Afrotropical Region**

**Abstract.** Type material of *Cambefortinus insignis* Richard, 1986 was examined and *Cambefortinus* Richard, 1986 is proposed as a junior synonym of *Dysommatus* Marshall, 1933; *Cambefortinus insignis* Richard, 1986 is transferred as a valid species to the genus *Dysommatus*. *Dysommatus malawicus* sp. nov., *Tapinomorphus livingstonei* sp. nov. and *T. nyasicus* sp. nov., all from Malawi, are described, illustrated and compared with other species of the genera.

### INTRODUCTION

While some East African countries, for example Tanzania, was frequently mentioned in weevil literature, material from Malawi (formerly Nyasaland) is in entomological collection very scanty, and data on weevils from this country was published only very rarely, in a few articles, and in all cases only in singular data, for example in Marshall (1950, 1952) or Ferragu & Richard (1986). New material sifted in several mountains in Malawi provides more data about species diversity of this country.

### MATERIAL AND METHODS

Body length of all specimens was measured in dorsal view from the anterior border of the eyes to the apex of the elytra, excluding the rostrum. Width/length ratio of the rostrum was measured as width at base versus maximum length to the base of the mandibles in dorsal view. Width/length ratios of pronotum, elytra, antennal and tarsal segments were taken at the maximum width and length of the respective parts in dorsal view. Female genitalia were embedded in Solakryl BMX (Medika, Prague); male genitalia were mounted dry on the same card as the respective specimen. Habitus images were taken with a Canon EOS 5D mark II in combination with a Canon MP-E65 1-5x macro lens. The resulting images were focus stacked by Zerene Stacker and post-processed in Adobe Photoshop CC 2015. Terminology of the rostrum and the genitalia follows Oberprieler et al. (2014). Exact label data of type specimen examined: separate labels are indicated by double slash (//), separate lines by a simple slash (/). Authors' remarks and comments are in square brackets.

The material is deposited in the following collections (identified by the acronyms):  
BMNH Natural History Museum, London, United Kingdom (formerly British Museum of Natural History) (Maxwell Barclay);  
CMNC Canadian Museum of Nature Collection, Ottawa, Canada (Robert Anderson);  
MMB Moravian Museum Brno, Czech Republic (Petr Baňář);  
NMPC National Museum Prague, Czech Republic (Jiří Hájek);  
RBSC Roman Borovec, private collection, Sloupno, Czech Republic.

#### TAXONOMIC PART

The genus *Dysommatus* was described by Marshall (1933) for two species. Hoffmann (1951) described the blind species for which he proposed a new genus *Clavimorphus*, later synonymised with *Dysommatus* by Marshall (1959). Later Marshall (1955, 1959) described 13 new species and Osella (1976, 1978) described an additional 18 new species. The genus is known from the Democratic Republic of Congo. However, *Dysommatus* contains 34 species now and in its present conception contains species belonging to the genera *Fernandius* Marshall, 1954, *Tapinomorphus* Hartmann, 1904 and *Tylauchen* Marshall, 1955. Redefinition of this generic complex, these four genera, will be a subject of another paper.

The genus *Tapinomorphus* Hartmann, 1904 was described for the species *Tapinomorphus metallicus* Hartmann, 1904. The genus was later reviewed by Marshall (1940, 1953) and Voss (1962) and now contains 16 species from Kenya, Tanzania and the Democratic Republic of Congo. Borovec & Skuhrovec (2017) described one new species from Tanzania, Borovec & Nakládal (2020) enlarged the region of occurrence of the genus for species from Angola, Zambia and Zimbabwe and increased the number of species to 21. As mentioned above, some species originally described under generic name *Dysommatus* undoubtedly belong also to *Tapinomorphus*. Two new *Tapinomorphus* species described in the present paper extend the distribution of the genus also to Malawi.

#### *Dysommatus insignis* (Richard, 1986) comb. nov.

*Cambefortinus insignis* Richard, 1986: 154 (in Ferragu & Richard, 1986, original description); Alonso-Zarazaga & Lyal 1999: 187 (catalogue).

**Type locality.** Malawi, Mt. Mulanje, Lichenya plateau.

**Type material.** Holotype (sex not identified): Lichenya plateau / tamisage litiere / foret XII.1982 [printed, blue label] // Malawi massif de / Mulanje 1800 m / Y. Cambefort [printed, blue label] // HOLOTYPE [handwritten, red ink] / *Cambefortinus / insignis* m. / Det. R. Richard [handwritten, black ink] // HOLOTYPE [printed, red label] (MNHN).

**Remarks.** *Cambefortinus insignis* was described from one specimen, “apparement ♂, non disséqué”, from “Afrique australe orientale, Malawi, massif de Mulanje, Lichenya plateau.” There is one specimen labelled as the holotype in the museum in Paris. Rostrum is moderately slender and long, slightly longer than at the base wide, in apical portion slightly widened, rounded around scrobes forming slightly laterally protruding pterygia;

epifrons is narrow, evenly tapering basad, at base distinctly narrower than half of rostral width in respective part, separated from head by transverse sulcus; fronto-epistomal area large, glabrous, smooth; antennal scrobes in dorsal view opened, widely reniform, in lateral view conspicuous, occupying majority of lateral area of rostrum, glabrous, conspicuously enlarged posteriad, with dorsal margin copying dorsal margin of rostrum and ventral margin curved downwards, almost reaching ventral margin of rostrum; eyes small, in lateral view distinctly smaller than antennal club; abdominal ventrites slender, glabrous, with suture between ventrites 1 and 2 straight; claws fused on very short basal part and then divorced. Based on the above features, this species is clearly congeneric with *Dysommatus rufulus* Marshall, 1933, type species of the genus *Dysommatus* Marshall, 1933, and it represents another valid species of the genus. Thus *Cambefortinus* Richard, 1986 is a junior synonym of *Dysommatus* Marshall, 1933, **syn. nov.**

***Dysommatus malawicus* sp. nov.**

(Figs. 1, 4, 5, 10, 13, 16)

**Type locality.** Malawi south, Mulanje Mts., Chambe plateau.

**Type material.** Holotype (♂): S Malawi, Mulanje Mts., Chambe plateau, S 15°54'18.7" E 35°32'50.4", 1953 m, 21.11.1958, MLW/sift 08, sifting litter, Winkler app. extraction, P. Baňář & P. Hlaváč lgt., (NMPC). Paratypes: (1 ♂, 1 ♀): Malawi, Mt. Mulanje, Chambe plateau, Chambe hut, S 15°54'18.7", E 35°32'50.4", 1953 m, 21.XI.2018, sifting, P. Hlaváč lgt., (RBSC).

**Description.** Body length 2.16-3.06 mm, holotype 2.47 mm. Body (Fig. 1) dark brownish, antennae and legs paler, yellowish brown. Elytra glabrous, interstriae 6 and 7 along entire length and all interstriae at posterior declivity and very short basal part with inconspicuous, small, oval, greyish appressed scales, 2 across width of one interstria. Pronotum except glabrous disc and head with rostrum except glabrous epifrons densely, but inconspicuously covered with small, oval, greyish appressed scales. Each elytral interstria with one regular, inconspicuous row of short, erect, narrow, sparse setae; setae almost piliform, slightly enlarging apicad, about as long as half width of interstria, distance between two setae about 5 times longer than length of one seta. Pronotum and head with rostrum with extremely short, microscopic erect setae, hardly visible in lateral view, irregularly sparsely scattered. Scapes and femora with inconspicuous, small, greyish appressed scales; funicles with long, erect, white setae; clubs with short, dense, appressed and long, sparse, semi-erect white setae; tibiae and tarsi with short appressed setae.

Rostrum (Figs. 4, 5) long and slender, 1.14-1.22× as long as at base wide, slightly tapering anteriad with straight sides, at apical portion slightly rounded around antennal scrobes with weakly laterally prominent pterygia, in males at apex 1.07-1.11× as wide as at base, in female subequal in width; in lateral view almost straight. Epifrons very slender, widest between antennal insertions, evenly tapering posteriad, at base 0.4× as wide as rostral width in appropriate part, posteriorly separated from head by elevation, laterally distinctly marginated, dorsally slightly longitudinally deepened with slender median longitudinal keel. Fronto-epistomal area large, glabrous, smooth, slightly deepened at middle. Antennal scrobes in dorsal view opened, widely reniform; in lateral view conspicuous, occupying majority of

lateral rostral area, glabrous with appressed scales at posterior area, conspicuously enlarged posteriad, with dorsal margin copying dorsal margin of rostrum and ventral margin curved downwards, almost reaching ventral margin of rostrum. Eyes very small, in dorsal view almost flat, hardly prominent from outline of head; in lateral view placed in middle of head, with diameter shorter than apical width of scape. Vertex regularly vaulted with subtriangular elevated posterior part of epifrons at middle. Head behind eyes distinctly enlarged posteriad, smooth, vaulted.

Antennae long and slender. Scape straight,  $1.1\times$  as long as funicle, slender along entire length, widened only at itself apex, at apex  $0.6-0.7\times$  as wide as club; in repose exceeding anterior margin of pronotum. Funicle 7-segmented; segments 1 and 2 subequal in length, funicle segment 1  $2.0-2.2\times$  as long as wide; segment 2  $2.2-2.4\times$  as long as wide; segments 3 and 4  $1.3-1.5\times$  as long as wide; segment 5  $1.2-1.3\times$  as long as wide; segments 6 and 7  $1.1-1.2\times$  as long as wide; clubs  $1.6-1.8\times$  as long as wide.

Pronotum (Fig. 1) slender, about as long as wide, widest at midlength with regularly rounded sides, with anterior and posterior margins subequal in width; in lateral view regularly vaulted. Disc regularly roughly punctured; punctures about as large as those in elytral striae at base of elytra, distance between punctures slightly shorter than their diameter.

Elytra (Fig. 1) slender, long oval,  $1.54-1.59\times$  as long as wide, widest at middle, with regularly rounded sides; in lateral view vaulted. Striae conspicuous, roughly punctured, slightly wider than flat, narrow interstriae; distance between punctures shorter than their diameter.

Legs slender. Femora edentate. Protibiae slender,  $7.4-8.2\times$  as long as at middle wide, with straight lateral margin, apically rounded, fringed with short and fine white setae, enlarged inside, mucronate. Tarsi slender; protarsi slightly shorter with segment 2  $1.2-1.3\times$  as wide as long; segment 3 isodiametric and  $1.3-1.4\times$  as wide as segment 3; onychium  $1.1-1.2\times$  as long as segment 3; metatarsi with segment 2 isodiametric; segment 3  $1.1-1.2\times$  as long as wide and  $1.3-1.4\times$  as long as segment 3. Claws fused at short basal part, then distinctly divorced.

Abdominal ventrites  $1.33-1.41\times$  as long as wide, glabrous. Ventrite 1 with distinct slender transverse depression along anterior margin, slightly shorter than ventrites 2-4 together; ventrite 2 slightly longer than ventrite 3 or 4; ventrite 5 in males subtrapezoidal, apically shortly obtuse, in female subtriangular, apically pointed. Metaventral process obtuse, distinctly wider than transverse diameter of metacoxa.

Penis (Fig. 10) moderately long and slender, slightly wider at base, subparallel-sided along entire length, apically broadly rounded; in lateral view regularly curved, widest at base and distinctly evenly tapering apicad; tip narrowly rounded; endophallus with two long slender sclerites.

Sternite VIII in females (Fig. 16) with plate slender, distinctly longer than wide, subtriangular, apically narrowly sharpened, with two longitudinal sclerites; apodeme robust, subequal in length as plate. Gonocoxites narrowly subtriangular, evenly tapering apicad with two long styli with long setae. Spermatheca (Fig. 13) with cornu long and slender, regularly curved, evenly tapering apicad; ramus very short, wider than long, rounded; collum longer and wider than ramus, subtriangular.

**Differential diagnosis.** *Dysommatus malawicus* with its 7-segmented funicles, pronotum coarsely punctate and elytra with short, inconspicuous, not clavate or spatulate setae is similar to *Dysommatus posticus* Marshall, 1959 and *D. myops* Marshall, 1959, both known from the Democratic Republic of Congo. It is easily possible to distinguish it from *D. posticus* and *D. myops* by the more slender epifrons at base, more slender antennae, longer erect setae on elytra and also appressed scales on elytral interstriae 6 and 7 and at posterior declivity. From *D. insignis*, the only *Dysommatus* known also from Malawi, *D. malawicus* is easily distinguished by 7-segmented funicles, while *D. insignis* has funicles with 5 segments.

**Etymology.** Patronymic, refers to the country where the species was collected.

**Biology.** All three specimens were sifted from forest litter.

***Tapinomorphus livingstonei* sp. nov.**

(Figs. 2, 6, 7, 11, 14, 17)

**Type locality.** Malawi, Mulanje Mt., Lujeri env., Ruo Forest.

**Type material.** Holotype (♂): Malawi, Mulanje Mountain, Lujeri env., Ruo Forest, 15.970157 S, 35.654034 E, 970 m, 19.XI.2018, sifting, M. Kocian lgt., (NMPC). Paratypes: (42 specs.): same data as holotype (BMNH, CMNC, NMPC, RBSC); (85 specs.): Malawi, Mt. Mulanje, Ruo river Forest, S 15°58'17.0" E 35°39'18.3", 970 m, sifting, 18-25.XI.2018, P. Hlaváč lgt., (BMNH, CMNC, NMPC, RBSC); (13 specs.): Malawi, Mt. Mulanje, about 3 km from Mulanje, valley of Maloza stream, S 16°01'3.9" E 35°32'36.6", 750-950 m, 24.XI.2018, sifting, P. Hlaváč lgt., (RBSC); (20 specs.): Malawi, Mt. Mulanje, Ruo river Forest, S 15°58'17.0" E 35°39'18.3", 970 m, 18-25.XI.2018, sifting, P. Bañar & P. Hlaváč lgt., (MMB, RBSC); (3 specs.): Malawi, Mt. Zomba, Zomba city env., S 15°22'13.5" E 35°19'23.2", 1080 m, 27.XI.2018, sifting, P. Hlaváč lgt., (RBSC); (1 spec.): Malawi, Mt. Mulanje, Chambe plateau, Chambe hut, S 15°54'18.7" E 35°32'50.4", 1953 m, 21.XI.2018, sifting, P. Hlaváč lgt., (RBSC).

**Description.** Body length 1.81-2.44 mm, holotype 2.09 mm. Body (Fig. 2) dark brownish, antennal scapes, funicles, short apical portion of tibiae and tarsi paler, reddish brown. Elytra densely covered with moderately large, 2-3 across width of one interstria, irregularly angular appressed scales vertically standing on their margins forming peculiar structure. Pronotum and head with rostrum with half-sized, irregularly oval scales also standing on their margins. Each interstria with one regular row of inconspicuous, subspatulate, semi-erect setae, about as long as half interstria width, distance between two setae about 5 times longer than length of one seta. Pronotum and head with rostrum with distinctly shorter, irregularly scattered setae, hardly visible in lateral view. Scapes, femora and tibiae with dense, small, oval appressed scales; scapes with 3 long erect subspatulate setae at inner side; funicles with semi-erect setae; clubs finely setose; femora and tibiae with short semi-appressed, inconspicuous setae; tarsi setose.

Rostrum (Figs. 6, 7) short, 1.12-1.19× as wide as long, slightly tapering anteriorly with straight sides, apically broadly rounded; in lateral view regularly vaulted. Epifrons wide, occupying majority of rostrum in dorsal view, flat, at base almost as wide as rostrum, distinctly tapering anteriorly with regularly rounded sides, at base 1.38-1.44× as wide as at apex, posteriorly separated from head by almost straight narrow transverse sulcus. Frons short, glabrous, smooth, posteriorly contrastively separated from densely scaled epifrons.

Epistome very small, hardly visible. Scrobes in dorsal view hardly visible as extremely slender furrows along epifrons margins; in lateral view furrow-shaped, curved, with dorsal margin touching ventral margin of eye and ventral margin almost reaching ventral margin of rostrum. Eyes small, in dorsal view slightly protruding from outline of head; in lateral view subcircular, placed in dorsal half of head. Vertex very wide, flat.

Antennae slender. Scape  $1.2\times$  as long as funicles, at middle slightly curved, at basal half slender, at apical half evenly weakly enlarging apicad, at apex  $0.7-0.8\times$  as wide as clubs. Funicle 7-segmented. Segment 1  $2.1-2.2\times$  as long as wide and  $1.6-1.7\times$  as long as segment 2, this is  $1.7-1.8\times$  as long as wide; segments 3-5 isodiametric; segment 6  $1.1\times$  as wide as long; segment 7  $1.3-1.4\times$  as wide as long, clubs  $1.4-1.5\times$  as long as wide.

Pronotum (Fig. 2) wide and short,  $1.71-1.76\times$  as wide as long, widest at midlength, from here slightly tapering posteriad and conspicuously tapering anteriad, behind anterior margin distinctly constricted; disc regularly distinctly domed; base slightly arched; pronotum in lateral view regularly vaulted.

Elytra (Fig. 2) oval, in males  $1.09-1.12\times$  as long as wide, in females  $1.14-1.19\times$  as long as wide, with regularly rounded sides, apically broadly rounded, in males widest at midlength, in females widest behind base with laterally prominent subhumeral bump on interstriae 8 and 9, in both sexes with small irregular bumps mainly on interstriae 3 and 5 on base and behind midlength, sutural interstriae at posterior third slightly wider and elevated. Striae coarsely punctate, punctures completely hidden by appressed scales; interstriae almost flat. Elytra in lateral view vaulted.

Femora unarmed. Protibiae  $4.4-4.6\times$  as long as wide medially, at their short apex slightly curved inside, apex obliquely subtruncated, fringed with short and fine yellow setae, mucronate. Metatibiae in males with very small, slender, brownish spine at apical third, in some specimens hardly visible; in females without spine. Tarsi slender; segment 2  $1.2-1.3\times$  as wide as long; segment 3  $1.4-1.5\times$  as wide as long and  $1.3-1.4\times$  as wide as segment 2; onychium  $1.4-1.5\times$  as long as segment 3. Claws fused at basal third, then slightly divorced.

Abdominal ventrites densely squamose, short and wide,  $1.03-1.07\times$  as wide as long, with ventrite 1 slightly shorter than ventrites 2-4 together and ventrite 2 slightly longer than ventrite 3 or 4, ventrite 5 in males short, apically obtuse, in females slightly longer, apically rounded. Metaventral process slightly wider than transverse diameter of metacoxa, obtuse.

Penis (Fig. 11) moderately long and slender, widest at base, subparallel-sided along entire length with slightly rounded sides, in apical portion slightly tapered apicad, apex obtuse with long and slender, subtriangular tip; in lateral view regularly curved, narrow, tip shortly arrow-shaped. Endophallus with group of short sclerites. Tegmen without parameres.

Sternite VIII in females (Fig. 17) with plate umbrella-shaped with developed, slender apical margin and basal margin membranous; apodeme moderately long and slender, terminating inside plate, near apex. Gonocoxites with hemisternites flat, evenly tapered apicad with long and slender apical styli. Spermatheca (Fig. 14) with regularly curved cornu; corpus rounded; ramus rounded, about isodiametric, distinctly longer and wider than slender, pointed, subtriangular collum.

**Differential diagnosis.** *Tapinomorphus livingstonei* is easy to separate from all other *Tapinomorphus* species by rostrum with very wide and flat, densely squamose epifrons, at

base almost as wide as rostrum in respective part of rostrum, moderately short glabrous frons posteriorly contrastly separated from epifrons, female sternite VIII with plate umbrella-shaped, not pointed apically and lacking longitudinal sclerites. By all these features it is similar only to *Tapinomorphus latipennis* Borovec & Nakládal, 2018 and *T. verunkae* Borovec & Nakládal, 2018, both from Zimbabwe. From both species it is possible to separate it by special structure of the elytral appressed scales, standing on their margins, elytra with small irregular bumps on interstriae 3 and 5 and male metatibiae with only very small and slender spine at inner margin.

**Etymology.** The species is dedicated to David Livingstone (1813-1873), a Scottish explorer and missionary, who led the legendary Zambezi expedition through the area and in 1859 reached Lake Malawi (then Lake Nyasa).

**Biology.** All type material was sifted from forest litter.

*Tapinomorphus nyasicus* sp. nov.

(Figs. 3, 8, 9, 12, 15)

**Type locality.** Malawi, Mulanje Mts., Mabza stream valley.

**Type material.** Holotype (♂): S. Malawi, Mulanje Mts., Mabza stream valley, S 16°01'3.9" E 35°32'36.6", 972 m, 24.11.2018, sifting litter, Winkler app. extr., P. Baňář lgt., (NMPC). Paratypes: (13 specs.): same data as holotype, (BMNH, CMNC, NMPC, RBSC); (4 specs.): Malawi, Mt. Mulanje, Likhubula Forest Lodge, S 15°56'15.7" E 35°35'4.9", 827 m, 18-20.XI.2018, sifting, P. Hlaváč lgt., (RBSC); (2 specs.): Malawi, Mt. Mulanje, Chambe plateau, Chambe hut, S 15°54'18.7" E 35°32'50.4", 1953 m, 21.XI.2018, sifting, P. Hlaváč lgt., (RBSC).

**Description.** Body length 1.94-2.31 mm, holotype 2.25 mm. Body (Fig. 3) dark brownish, antennae except clubs, short apical part of tibiae and tarsi paler, reddish brown. Appressed scales on dorsal part of elytra dense but not fully covering integument, leaving slender space between scales; scales subtriangular, apically bifid, their emargination not reaching half of scale length, 2-3 across width of one interstria; scales on pronotum and head with rostrum identical in shape, only slightly smaller. Each interstria with dense conspicuous row of spatulate erect setae, slightly longer at posterior declivity than on disc, apically broadly rounded, slightly shorter than width of one interstria, distance between two setae 3-4x longer than length of one seta. Semi-appressed setae on pronotum slightly shorter than those on elytra, visible mainly in lateral view; erect setae on head and pronotum as long as elytral ones but more slender, placed mainly along epifrons margins. Apical part of scapes, femora and tibiae densely covered with small bifid appressed scales; scapes with 3 long erect subspatulate setae at inner side; funicles with semi-erect setae, long on last two segments; clubs finely setose; femora and tibiae with short semi-appressed, slender, inconspicuous setae; tarsi setose.

Rostrum (Figs. 8, 9) short and wide, 1.21-1.25x as wide as long, widest at base, slightly evenly tapered apicad with straight sides, apically broadly rounded; in lateral view regularly vaulted. Epifrons wide, occupying majority of rostrum in dorsal view, flat, at base almost as wide as rostrum, distinctly tapering anteriad with straight sides, at base 1.42-1.48x as wide





1



2

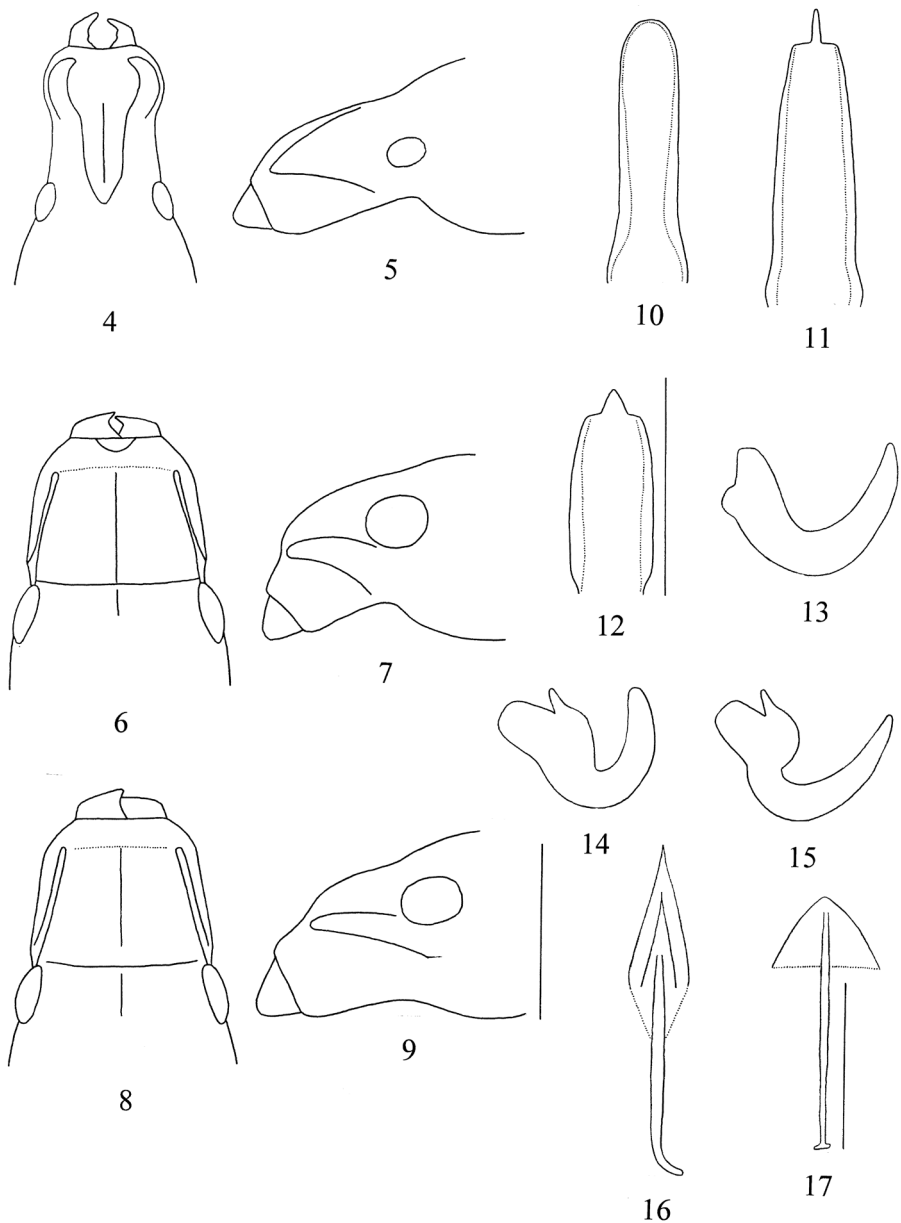


3

Figs. 1-3: Dorsal habitus. 1- *Dysommatus malawicus* sp. nov.; 2- *Tapinomorphus livingstonei* sp. nov.; 3- *T. nyasicus* sp. nov. Not to scale.

as at apex, posteriorly separated from head by almost straight narrow transverse sulcus. Frons short, glabrous, weakly chagrined, posteriorly contrastive separated from densely scaled epifrons. Epistome invisible. Scrobes in dorsal view visible as narrow furrows along entire length; in lateral view furrow-shaped, slightly curved, with dorsal margin touching





Figs. 4-17: Structural details. 4-9: head with rostrum. 4- *Dysommatus malawicus* sp. nov., dorsal view; 5- *D. malawicus* sp. nov., lateral view; 6- *Tapinomorphus livingstonei* sp. nov., dorsal view; 7- *T. livingstonei* sp. nov., lateral view; 8- *T. nyasicus* sp. nov., dorsal view; 9- *T. nyasicus* sp. nov., lateral view. 10-12: penis in dorsal view. 10- *Dysommatus malawicus* sp. nov.; 11- *Tapinomorphus livingstonei* sp. nov.; 12- *T. nyasicus* sp. nov. 13-15: spermatheca. 13- *Dysommatus malawicus* sp. nov.; 14- *Tapinomorphus livingstonei* sp. nov.; 15- *T. nyasicus* sp. nov. 16, 17: sternite VIII in female. 16- *Dysommatus malawicus* sp. nov.; 17- *Tapinomorphus livingstonei* sp. nov. Scale 0.50 mm for 4-12, 16, 17; 0.25 mm for 13-15.

ventral margin of eye and ventral margin not reaching ventral margin of rostrum. Eyes small, in dorsal view slightly protruding from outline of head; in lateral view subcircular, placed in dorsal half of head. Vertex very wide, flat.

Antennae slender. Scape 1.3-1.4× as long as funicles, at apical third curved, from here slightly evenly enlarged apicad, at apex 0.7-0.8× as wide as clubs. Funicle 6-segmented. Funicle segment 1 2.3-2.4× as long as wide and 2.0-2.1× as long as segment 2, this is 1.9-2.1× as long as wide; segments 3-5 isodiametric; segment 6 slightly larger than previous, 1.2-1.3× as wide as long; clubs 1.5-1.6× as long as wide.

Pronotum (Fig. 3) 1.63-1.69× as wide as long, moderately small in comparison to elytra, 0.51-0.57 as wide as width of elytra, widest at midlength, at basal half slightly tapered from middle to base, at apical half constricted behind anterior margin; disc regularly distinctly domed; base slightly arched; pronotum in lateral view regularly vaulted, flat on anterior third.

Elytra (Fig. 3) short and wide, almost regularly rounded, 1.04-1.09× as long as wide; disc lacking bumps, all interstriae equally wide and flat. Striae coarsely punctate, hidden under appressed scales. Elytra in lateral view distinctly vaulted.

Femora unarmed. Protibiae 5.3-5.6× as long as wide medially, just before apex curved inside; apex rounded, fringed with fine yellow setae, mucro brown, long. Metatibiae in males with long and distinct brown spine at apical third, in females lacking spine. Tarsi slender, segment 2 1.2-1.3× as wide as long; segment 3 1.3-1.4× as wide as long and 1.4-1.5× as wide as segment 2; onychium 1.4-1.5× as long as segment 3. Claws fused at basal third, then slightly divorced.

Abdominal ventrites densely squamose, short and wide, 1.19-1.24× as wide as long, with ventrite 1 shorter than ventrites 2-4 together, ventrite 2 slightly longer than ventrite 3 or 4, ventrite 5 in males short, apically obtuse, in females slightly longer, apically rounded. Metaventral process distinctly wider than transverse diameter of metacoxa, obtuse.

Penis (Fig. 12) short and wide, slightly evenly tapered apicad with slightly rounded sides; apex narrow, obtuse, with regularly triangular tip; in lateral view regularly curved, tip shortly elongate. Endophallus with transverse, T-shaped sclerite and longitudinal, 8-shaped sclerite behind it.

Sternite VIII in females (as in Fig. 17) with moderately large, umbrella-shaped plate with slender apical margin and membranous basal margin; apodeme slender, terminating inside plate, near apex. Gonocoxites with hemisternites flat, evenly tapered apicad with long and slender apical styli. Spermatheca (Fig. 15) with regularly curved, slender cornu; corpus rounded; ramus rounded, about isodiametric, distinctly longer and wider than slender, pointed, subtriangular collum.

**Differential diagnosis.** *Tapinomorphus nyasicus* is exceptional among all *Tapinomorphus* species with its 6-segmented funicles, while most other species have a funicle with 7 segments, or, in three species funicle with 5 segments.

**Etymology.** The name refers to historical name of Malawi, Nyasaland, a combination of the Lomwe word “Nyasa” to mean “lake” and an English word “land.” This combined word was formed by David Livingstone.

**Biology.** All type material was sifted from forest litter.

#### KEY TO *TAPINOMORPHUS* SPECIES WITH WIDE EPIFRONS

This key contains species with flat and wide epifrons, with the base almost as wide as the rostrum occupying almost the entire rostrum in dorsal view and with the glabrous frons posteriorly contrastive separated from densely squamose epifrons and female sternite VIII not apically pointed, lacking longitudinal sclerites.

1. Antennal funicle 6-segmented. Appressed elytral scales subtriangular, apically bifid. Erect elytral setae spatulate, wide, apically broadly rounded. Malawi. .... *T. nyasicus* sp. nov.
- Antennal funicle 7-segmented. Appressed elytral scales irregularly angular, oval or drop-shaped, not cut out apically. If elytral setae erect rather than slender, apically pointed. .... 2
2. Elytra with scales vertically standing on their margins, scales irregularly angular. Elytra with small irregular bumps mainly on interstriae 3 and 5. Metatibiae in males with very small and slender spine at inner margin. Malawi. .... *T. livingstonei* sp. nov.
- Elytra with appressed scales oval or drop-shaped, not vertically standing on margins. Elytra with flat interstriae, lacking bumps. Metatibiae in males with conspicuous long spine at inner margin. .... 3
3. Elytra with erect setae, slightly longer than half the interstria width, 3-4× as long as setae on pronotum. Rostrum shorter, 1.38-1.46× as wide as long. Elytra with appressed scales drop-shaped. Zimbabwe. ....
- Elytra with semi-appressed setae as long as a quarter the interstria width, subequal in length to pronotal setae. Rostrum longer, 1.28-1.33× as wide as long. Elytra with appressed scales oval. Zimbabwe. ....
- ..... *T. latipennis* Borovec & Nakládál

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