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Generic review and key to all Afrotropical genera of the subfamily Elminae (Coleoptera: Elmidae)

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Abstract. A comprehensive review of the Afrotropical Elminae is presented herein, encompassing 23 genera: *Aspidelmis*, *Ctenelmis*, *Elmidolia*, *Elpidelmis*, *Eumicrodinodes*, *Exolimnius*, *Helminthocharis*, *Helminthopsis*, *Lathridelmis*, *Leielmis*, *Leptelmis*, *Lobelmis*, *Ludyella*, *Microdinodes*, *Pachyelmis*, *Peloriolus*, *Pseudancyronyx*, *Pseudelmidolia*, *Pseudomacronychus*, *Sphragidelmis*, *Stenelmis*, *Trachelminthopsis*, *Tropidelmis* and three subgenera: *Elmidoliana*, *Paractenelmis*, *Paramicrodinodes*. The characteristics of all taxa are included, photographs of the dorsal habitus, dorsolateral habitus, pronotum, prosternum, and tarsal claw are provided for most genera. Additional information on similar genera, larval descriptions, distribution, and known species is supplied for each taxon. A differential key to all 26 taxa is also presented, along with new country records for eight genera. Several genera exhibit considerable variability, and a revision to assess their monophyly is recommended.

Keywords. Africa, new country records, riffle beetles.

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Introduction

The highest biodiversity of the family Elmidae Curtis, 1830, which comprises approximately 1500 species in 150 genera (Jäch *et al.* 2016), is found in the tropical forests of South America, Africa, and Southeast Asia (Jäch & Balke 2008). This family is traditionally divided into two subfamilies, Elminae and Larainae, which differ markedly in both morphology and ecology. The majority of species belong to the subfamily of Elminae, whose adults have a long lifespans and are typically found in lotic stream habitats (Kodada *et al.* 2016). Among the tropical regions, the African fauna of Elminae is arguably the least explored. Currently, 23 genera are known from the Afrotropical region, accounting for just two-thirds of more than 35 genera found in both the Neotropical and Indomalayan realms. Furthermore, over 80%

of the Afrotropical Elmidae were described by just two authors, and until recently, no new species of Elminae had been described since the 1970s (Jäch *et al.* 2016; Bilton 2017, 2018).

Research on Elminae in the Afrotropical realm began with and has long been associated with French-speaking entomologists. One of the early contributors was Eugène L. Simon, who travelled to South Africa and collected three species of riffle beetles endemic to the Western Cape province (Grouvelle 1895). A key figure in the exploration and collection of Africa's invertebrate fauna was Charles A. Alluaud, who undertook more than 20 voyages across the continent and its surrounding archipelagos in the Atlantic and Indian oceans between 1883 and 1938. His 189no3 expedition to Antsiranana marked one of his early contributions to the field, material from both northern and central Madagascar, collected by Alluaud and other researchers, was subsequently described by Léon M.H. Fairmaire (e.g., 1897) and Antoine H. Grouvelle (e.g., 1899). Specimens collected during Alluaud's three expeditions to Kilimanjaro and its surrounding area (1903–1912) formed the main body of African Elminae described by Grouvelle (1906, 1911, 1920). Furthermore, Alluaud's (1933) final voyage to tropical Africa resulted in the discovery of six new species of Elminae, all of which he described himself (Jeannel 1952).

Two decades after Grouvelle's death (Desbordes 1919), his role in the taxonomy of African Elmidae was largely assumed by Belgian entomologist Joseph Delève. In contrast to the broader scope of his French predecessors, Delève's work was focused primarily on the family of Elmidae. Over the course of 37 years, he described more than 60% of the currently known Afrotropical riffle beetles (Jäch *et al.* 2016), utilizing material housed in major institutions collected by various researchers such as H. Schouteden, A. d'Orchymont, A. Collart, R. Jeannel, G. de Witte, F. Starmühler, R. Paulian, H. De Saeger, A. Harrison, G. Colas, P. Basilewsky, H. Bertrand, J. Balfour-Browne, A. Descarpentries, J. Decelle, A. Villers, C. Blickenstaff, and Z. Kaszab (e.g., Delève 1946, 1970). Type specimens of taxa described by Delève are scattered throughout Europe, America, and Africa: Natural History Museum, London (United Kingdom); Institut royal des Sciences naturelles de Belgique, Brussels (Belgium); Musée royal de l'Afrique centrale, Tervuren (Belgium); Hungarian Natural History Museum, Budapest (Hungary); National Museum of Natural History, Washington D.C. (USA); Dundo Museum (Angola); Muséum national d'Histoire naturelle, Paris (France); Zoological Museum, Lund University, Lund (Sweden); Ditsong National Museum of Natural History, Pretoria (South Africa). His private collection was later deposited in the Institut royal des Sciences naturelles de Belgique and stored separately from the general collection.

A thorough understanding of the current taxonomy is essential for the accurate processing of new material and the description of new taxa, while also preventing the introduction of inconsistencies that could lead to ambiguity and hinder future research. In this work, we provide diagnostic characters, illustrations, and supplementary information for all 23 Afrotropical genera of Elminae and three subgenera, accompanied by detailed photographs of these taxa. Additionally, a differential key to all 26 taxa is presented herein.

Material and methods

Specimens examined were relaxed in warm water and mounted on a clean card, or were already mounted. Habitus photographs of selected taxa were taken with a Canon DSLR camera, Laowa 25 mm macro lens. All photographs were processed through a focus stacking software, Helicon Focus (ver. 7.7.4), and were edited using GIMP (ver. 2.10.28).

The beginning and end of label text are indicated using double quotes (“”); a double slash (//) separates the data on different labels; square brackets ([]) indicate data written on both sides; curly brackets ({}) indicate comments for specific text and remarks added to label data.

Distribution of genera is largely based on Jäch *et al.* (2016) with a few modifications, subsequently published literature (Bilton 2017, 2018) and new country records presented herein.

Institutional abbreviations

ANHR = African Natural History Research Trust, Leominster, UK
BMNH = Natural History Museum (formerly British Museum, Natural History), London, United Kingdom
CMN = Canadian Museum of Nature, Ottawa, Canada
FBC = Frey Beetle Collection, Basel, Switzerland (part of NMB collection)
HNHM = Hungarian Natural History Museum, Budapest, Hungary
IRSNB = Institut royal des Sciences naturelles de Belgique, Brussels, Belgium
KUMJ = Kyushu University Museum, Fukuoka, Japan
LBPC = Lukáš Bureš Private Collection, Czech Republic
MRAC = Musée royal de l'Afrique centrale, Tervuren, Belgium
MFNB = Museum für Naturkunde, Berlin, Germany
MZUF = Museo di Storia Naturale, Sezione di Zoologia "La Specola", Italy
NMB = Naturhistorisches Museum, Basel, Switzerland
NHMW = Naturhistorisches Museum Wien, Vienna, Austria
NMPC = Národní Muzeum, Praha, Czech Republic

Results

Key to the genera and subgenera of adult Afrotropical Elminae

1. Inner margin of protibia without fringes of hairy tomentum (Fig. 8E) 2
– Inner margin of protibia with fringes of hairy tomentum (Fig. 7E) 3

2. Pronotum without lateral constriction and almost always with a median longitudinal groove (Fig. 6E) (widely distributed) ..... ***Stenelmis*** Dufour, 1835
– Pronotum with lateral constriction in apical half and without a distinct median longitudinal groove (Fig. 5D) (widely distributed) ..... ***Leptelmis*** Sharp, 1888

3. Legs about the length of the whole body (Fig. 3C) 4
– Legs shorter than the whole body (Fig. 3E) 5

4. Pronotum with a complete transverse impression in apical half, medially with two large prebasal gibbosities (Fig. 6A) (widely distributed) ..... ***Pseudancyronyx*** Bertrand & Steffan, 1963
– Pronotum simple, without transverse impression or prebasal gibbosities (Fig. 6C) (widely distributed) ..... ***Pseudomacronychus*** Grouvelle, 1906

5. Legs with femora spindle–shaped, strongly widened in the middle (Fig. 2F) 6
– Legs with femora stout, clavate to narrow (Figs 1E, H, 3C) 8

6. Prosternal process moderately wide with rounded apex (Fig. 12F–G) 7
– Prosternal process wide with broadly rounded apex (Fig. 11F) (Central Africa) .... ***Eumicrodinodes*** Delève, 1965

7. Female genitalia with long and moderately narrow coxites (Fig. 18A) (widely distributed) .... ***Microdinodes*** Grouvelle, 1906
– Female genitalia with moderately short and wide coxites (Fig. 18B) (widely distributed) .... ***Paramicrodinodes*** Delève, 1965 (subgenus of *Microdinodes*)

8. Elytra with all intervals carinate (Fig. 7E) 9
– Elytra without carinae on all intervals 11

9. Tarsal claws with at least one subbasal tooth 10
– Tarsal claws simple (Fig. 14E) (South Africa) ..... ***Elpidelmis*** Delève, 1964

10. Tarsal claws pectinate (Fig. 14B) or with at least two subbasal teeth (South Africa) ..... ***Ctenelmis*** Delève, 1964
– Tarsal claws with one subbasal tooth (Fig. 14C) (South Africa) ..... ***Paractenelmis*** Delève, 1964 (subgenus of *Ctenelmis*)

11. Tarsal claws with one additional tooth 12
– Tarsal claws simple 13

12. Body shape rather wide (Fig. 1G), pronotum with sublateral and prescutellar carinae, median longitudinal groove thin and shallow (Fig. 4G) (Madagascar) ..... ***Exolimnius*** Delève, 1954
– Body shape narrow (Fig. 3G), pronotum without sublateral or prescutellar carinae, median groove in a form of large fovea in the middle (Fig. 6G) (South Africa) ..... ***Tropidelmis*** Delève, 1964

13. Pronotum with sublateral carinae reaching almost to apex 14
– Pronotum with sublateral carinae indistinct to distinct in basal ½ 16

14. Pronotum without prescutellar carinae 15
– Pronotum with prescutellar carinae (Fig. 6D) (Madagascar) ..... ***Sphragidelmis*** Delève, 1964

15. Prosternal process wide with subtriangular apex (Fig. 11H) (widely distributed) ..... ***Helminthocharis*** Grouvelle, 1906
– Prosternal process markedly wide, sides subparallel at base, apically widened into broadly rounded apex with wide medial projection (Fig. 12H) (widely distributed) ..... ***Pachyelmis*** Fairmaire, 1898

16. Antennae with segments 3–10 filiform and subequal (Fig. 15B–C) 17
– Antennae with segments 7 and 9 enlarged (Fig. 15A) (Madagascar, Tanzania, Zimbabwe) ..... ***Lobelmis*** Fairmaire, 1898

17. Dorsal surface rugose fully covered by grey plastron tomentum 18
– Dorsal surface mostly smooth, occasionally alutaceous or glabrous, without or only partially covered by grey plastron tomentum 19

18. Body shape narrow, dorsum fully covered by grey plastron tomentum with the exception of the elytral carina and elytral suture (Fig. 2B), pronotum with median longitudinal groove thin and shallow (Fig. 5B) (DR Congo) ..... ***Lathridelmis*** Delève, 1965
– Body shape rather wide, dorsum fully covered by grey mesh–like plastron tomentum (Fig. 3F), pronotum with a median groove in a form of small fovea in the middle (Fig. 6F) (widely distributed) ..... ***Trachelminthopsis*** Delève, 1965

19. Elytra without distinct long carinae 20
– Elytra with at least one prominent carina reaching before apex 21

20. Pronotum widest at base, tapering towards broadly rounded anterior margin (Fig. 5C) (South Africa) ..... ***Leielmis*** Delève, 1964
– Pronotum widest and subparallel in basal ⅓ then tapering towards broadly rounded anterior margin (Fig. 5I) (South Africa, Saint Helena) ..... ***Peloriolus*** Delève, 1964

21. Elytra with only one prominent sublateral carina on 6th interval (Fig. 8A) (widely distributed) .... ***Helminthopsis*** Grouvelle, 1906, ***Ludyella*** Reitter, 1899, ***Elmidoliana*** Delève, 1965 (subgenus of *Helminthopsis*)
– Elytra with at least two prominent carinae 23

23. Elytra with sublateral carinae on 5th and 7th intervals 24
– Elytra with sublateral carinae on 6th and 8th intervals (Fig. 7D) (Madagascar) ....***Elmidolia*** Fairmaire, 1897

24. Elytra with granulate sublateral carinae (Fig. 9D) (Madagascar) ..... ***Pseudelmidolia*** Delève, 1963
– Elytra with crenulate sublateral carinae (Fig. 7A) (Madagascar) ..... ***Aspidelmis*** Delève, 1954

Generic review of Afrotropical Elminae

Class Insecta Linnaeus, 1758
Order Coleoptera Linnaeus, 1758
Suborder Polyphaga Emery, 1886
Superfamily Byrrhoidea Latreille, 1804
Family Elmidae Curtis, 1830

Genus ***Aspidelmis*** Delève, 1954
Figs 1A, 4A, 7A, 11A, 14A

Aspidelmis Delève, 1954: 29.

Type species

Aspidelmis scutellaris Delève, 1954.

Differential diagnosis

Aspidelmis is characterized by the combination of the following characters: 1) body (Figs 1A, 7A) robust, elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 1A, 4A, 7A) smooth, micropunctured; lateral margin sometimes serrate; anterolateral angles distinctly produced; sides moderately arcuate; sublateral carinae in basal ⅖; prescutellar carinae shorter; median longitudinal groove thin and shallow; 4) surface of the elytra (Figs 1A, 7A) moderately smooth with lateral margin crenulate; sides subparallel in basal ⅔ then tapering towards rounded apex; sublateral carinae on 5th and 7th intervals; intervals nearly flat to partly raised; 5) prosternum long in front of procoxae; anterior margin laterally lowered and indented; prosternal process moderately wide with arrow-head apex (Fig. 11A); 6) legs with femora stout, tarsal claws (Fig. 14A) simple.

Similar genera

Aspidelmis can be confused with some species of *Pseudelmidolia* due to shared features such as a pronotum with sublateral and prescutellar carinae, elytra with sublateral carinae on the 5th and 7th intervals, and simple tarsal claws. However, *Aspidelmis* differs by its narrower pronotum relative to the width of the elytra and its crenulate rather than granulate elytral carinae.

Larva

Described and illustrated by Bertrand (1962).

Distribution

Endemic to Madagascar.

Known species

Aspidelmis grouvellei Delève, 1964; *A. perrieri* (Fairmaire, 1897); *A. scutellaris* Delève, 1954; *A. subfuliginosa* (Grouvelle, 1906).

Aspidelmis scutellaris Delève, 1954
Figs 1A, 4A, 7A, 11A, 14A

Material examined

MADAGASCAR • 1 ♂; "♂ // Para- type // Itremo, riv. VIII-49 J.Millot // Prép. Asp. Let2 19533 // J. Delève det., 1953 *Aspid. scutellaris* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB • 1 ♂; "MADAGASCAR: Vatovavy-Fltovlnany, Ranomafana N.P., (alt. 1010 m), 21.266°S, 47.426°E, 31 I- 3 II 2018, S. KAKIZOE, (LT) // S. KAKIZOE Collection SKC002892 // *Aspidelmis scutellaris* Delève, 1954 ♂ K. Matsumoto det. 2019 // BMNH{E} 2019–58 S. Kakizoe"; illustrated in Figs 1A, 4A, 7A, 11A, 14A; BMNH.

Aspidelmis subfuliginosa (Grouvelle, 1906).

Material examined

MADAGASCAR • 1 ex.; "Itrema riv. // Madagasc. VIII- 49 J.M. // Prépar.genit N°169631 // J. Delève det., 1953 *Aspid. subfuliginosa* Gr. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Aspidelmis perrieri (Fairmaire, 1897).

Material examined

MADAGASCAR • 1 ex.; "Madagasc. IX.49 J.M // Gué de Tanandou Andringitra // J. Delève det., 1953 *Aspid. perrieri* Fairm // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Genus ***Ctenelmis*** Delève, 1964 sensu stricto
Figs 1B, 4B, 7B, 11B, 14B

Ctenelmis Delève, 1964: 171.

Type species

Ctenelmis harrisoni Delève, 1964.

Differential diagnosis

Ctenelmis is characterized by the combination of the following characters: 1) body (Figs 1B, 7B) robust, elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 1B, 4B, 7B) granulose; anterolateral angles moderately to distinctly produced; sides arcuate; sublateral carinae almost complete, in the middle zagged inwards; median groove almost complete, usually narrowed in basal half, with raised or carinate outline; 4) surface of the elytra (Figs 1B, 7B) granulose; sides subparallel in basal ⅔, then tapered into rounded apex; odd intervals almost entirely carinate, even intervals carinate only at base; 5) prosternum moderately short in front of procoxae without chin piece; anterior margin without distinct indentation; prosternal process moderately narrow with rounded apex (Fig. 11B); 6) legs with femora stout, tarsal claws pectinate (Fig. 14B) or with at least two subbasal teeth.

Remarks

The main generic traits that vary are the development of the anterolateral angles and the structure of the tarsal claws. The subgenus of *Paractenelmis* also shows less developed anterolateral angles and non-pectinate tarsal claws.

Similar genera

Ctenelmis can be confused with *Elpidelmis* due to their robust, rather wide bodies and similar patterns of elytral carinae. However, *Ctenelmis* differs by its long, almost complete sublateral carinae on the pronotum, shorter prosternum, tarsal claws with additional teeth, and generally narrower body.

Larva

Unknown.

Distribution

Endemic to South Africa. The record from Angola is omitted (see Discussion).

Known species

Ctenelmis crinipes Delève, 1966; *C. elegans* Delève, 1966; *C. harrisoni* Delève, 1964; *C. incerta* (Grouvelle, 1890); *C. lata* Delève, 1964; *C. rufipes* Delève, 1966; *C. tibialis* Delève, 1966.

Ctenelmis crinipes Delève, 1966

Material examined

SOUTH AFRICA • 1 ♂; "Holo- type // ♂ // Stn.No. 274 // Tampa, ca. 4000ft., 15.vi.1954. drying pools in sandy river bed, foul water. // S.AFRICA: Angola. Hulia District. J.Balfour-Browne. B.M.1954-797. // Prépar. Genit. N°23165.7 // J. Delève det., 1965 *Ctenelmis crinipes* n.sp. // NHMUK013792806"; BMNH.

Ctenelmis elegans Delève, 1966

Material examined

SOUTH AFRICA • 1 ♂; "Holo- type // ♂ // Stn.No. 32 // Stream with falls and in grassy pools 1000 ft. // S.AFRICA: Cape Province. Caledon District. J.Balfour-Browne. B.M.1954-797. // Prépar. Genit. N°25165.1 // J. Delève det., 1965 *Ctenelmis elegans* n.sp"; BMNH • 1 ♂; "Para- type // ♂ // Stn.No. 274 // S.AFRICA: Angola. Hulla District. J.Balfour-Browne. B.M.1954-797. // Tampa,ca.4000ft., 15.vi.1954 drying pools in sandy river bed, foul water. // Prépar. Genit. N°15165.3 // J. Delève det., 1965 *Ct. elegans* n.sp"; BMNH • 1 ♂; "Para- type // ♂ // Stn.No. 274 // Tampa,ca.4000ft., 15.vi.1954 drying pools in sandy river bed, foul water. // S.AFRICA: Angola. Hulla District. J.Balfour-Browne. B.M.1954-797. // Prépar. Genit. N°25165.6 // J. Delève det., 1965 *Ct. elegans* n.sp"; BMNH • 1 ♂; "Para- type // ♂ // Stn.No. 32 // Stream with falls and in grassy pools 1000 ft. // S.AFRICA: Cape Province. Caledon District. J.Balfour-Browne. B.M.1954-797. // Prépar. Genit. N°25165.2 // J. Delève det., 1965 *Ct. elegans* n.sp"; BMNH • 1 ♂; "♂ // Stn.No. 43. // Tradouw Pass. 13. iii. 1954. // On waterfall and in stony stream below, 1500 ft // S.AFRICA: Cape Province. Swellendam District. J.Balfour-Browne. B.M.1954-797. // Prépar. Genit. N°20165.6 // J. Delève det., 1965 *Ct. elegans* n.sp // NHMUK013792851"; BMNH • 1 ♂; "♂ // Stn.No. 32 // Stream with falls and in grassy pools 1000 ft. // S.AFRICA: Cape Province. Caledon District. J.Balfour-Browne. B.M.1954-797 // Prépar. Genit. N°25165.3 // J. Delève det., 1965 *Ct. elegans* n sp"; BMNH • 1 ♂; "♂ // Stn.No. 32 // Stream with falls and in grassy pools 1000 ft. // S.AFRICA: Cape Province. Caledon District. J.Balfour-Browne. B.M.1954-797 // Station 32 // Prépar. Genit. N°25165.4 // J. Delève det., 1965 *Ct. elegans* n sp"; BMNH • 1 ♂; "♂ // Stn.No. 32 // Stream with falls and in grassy pools 1000 ft. // S.AFRICA:

Cape Province. caledon District. J.Balfour-Browne. B.M.1954-797 // Prépar. Genit. N°25165.5 // J. Delève det., 1965 *Ct. elegans* n sp"; BMNH • 1 ♀; "♀ // Stn.No. 32 // Stream with falls and in grassy pools 1000 ft. // S.AFRICA: Cape Province. Caledon District. J.Balfour-Browne. B.M.1954-797. // J. Delève det., 1965 *Ct. elegans* n sp"; BMNH • 1 ♀; "♀ // Stn.No. 43. // Tradouw Pass. 13. iii. 1954. // On waterfall and in stony stream below, 1500 ft // S.AFRICA: Cape Province. Swellendam District. J.Balfour-Browne. B.M.1954-797. // J. Delève det., 1965 *Ct. elegans* n.sp"; BMNH • 1 ♀; "Para-type // ♀ // Stn.No. 32 // Stream with falls and in grassy pools 1000 ft. // S.AFRICA: Cape Province. Caledon District. J.Balfour-Browne. B.M.1954-797. // J. Delève det., 1965 *Ct. elegans* n.sp"; BMNH • 1 ex.; "Stn.No. 43. // Tradouw Pass. 13. iii. 1954. // On waterfall and in stony stream below, 1500 ft // S.AFRICA: Cape Province. Swellendam District. J.Balfour-Browne. B.M.1954-797. // J. Delève det., 1965 *Ct. elegans* n.sp"; BMNH • 23 ex.; "Stn.No. 32 // Stream with falls and in grassy pools 1000 ft. // S.AFRICA: Cape Province. Caledon District. J.Balfour-Browne. B.M.1954-797. // ♀ // J. Delève det., 1965 *Ct. elegans* n sp"; BMNH.

Ctenelmis harrisoni Delève, 1964

Figs 1B, 4B, 7B, 11B, 14B

Material examined

SOUTH AFRICA • 1 ♂; "♂ // Stn.No. 77 // Kruiseivier, 19.iii.1954. in moss on falls. // S.AFRICA: Cape Province, Humansdorp District. J.Balfour-Browne. B.M.1957-797. // Prépar. genit. N°20165.8 // J. Delève det., 1965 *Ctenelmis harrisoni* Delève"; BMNH • 1 ♂; "♂ // Stn.No. 77 // Kruiseivier, 19.iii.1954. in moss on falls. // S.AFRICA: Cape Province, Humansdorp District. J.Balfour-Browne. B.M.1957-797. // Prépar. genit. N°241064.6 // J. Delève det., 1965 *Ctenelmis harrisoni* Delève"; BMNH • 2 ♀♀ (BMNH): "♀ // Stn.No. 77 // Kruiseivier, 19.iii.1954. in moss on falls. // S.AFRICA: Cape Province, Humansdorp District. J.Balfour-Browne. B.M.1957-797. // J. Delève det., 1965 *Ctenelmis harrisoni* Delève"; BMNH • 1 ex.; "3M S.Africa Great Berg River French Hock Forest Reserve 24. 5. 50 // J. Delève det., 1964 *Ct. harrisoni* Del. // H.E. Hinton collection. B.M.1977-566."; illustrated in Figs 1B, 4B, 7B, 11B, 14B; BMNH.

Ctenelmis incerta (Grouvelle, 1890)

Material examined

SOUTH AFRICA • 1 ex.; "C. B. Exp. // Coll. Van de Poll. 1937-744 // *Helmis incerta* ty Grouve"; BMNH • 1 ♂ (BMNH): "♂ // Stn.No. 77 // Krulsrivier, 19.iii.1954. in moss on falls. // S.AFRICA: Cape Province, Humansdorp District. J.Balfour-Browne. B.M.1957-797. // J. Delève det., 1965 *Ct. incerta* Grouv"; BMNH • 2 ♀♀; "♀ // Stn.No. 77 // Krulsrivier, 19.iii.1954. in moss on falls. // S.AFRICA: Cape Province, Humansdorp District. J.Balfour-Browne. B.M.1957-797. // J. Delève det., 1965 *Ct. incerta* Grouv"; BMNH.

Ctenelmis rufipes Delève, 1966

Material examined

SOUTH AFRICA • 1 ♂; "Holo- type // ♂ // Stn.No. 39 // S.AFRICA Cape Province. Swellendam District. J.Balfour-Browne. B.M.1954-797. // Cape Province. Swellendam. Wolfkloof, 12.III.1954. In mountain stream In deep gorge, 1500ft // Prépar. Genit. N°19165.3 // J. Delève det., 1965 *Ctenelmis rufipes* n.sp. // NHMUK013792805"; BMNH.

Ctenelmis tibialis Delève, 1966.

Material examined

SOUTH AFRICA • 1 ♂; "Type // ♂ // Cape Province. Swellendam. Wolfkloof, 12.III.1954. In mountain stream In deep gorge, 1500ft. // S.AFRICA Cape Province. Swellendam District. J.Balfour-Browne. B.M.1954-797. // Prépar. Genit. N° 191651 // J. Delève det., 1965 *Ctenelmis* (*tibialis* n.sp // NHMUK013792807"; BMNH • 1 ♂; "Para- type // ♂ // Stn.No. 274 // S.AFRICA: Angola. Hulia District. J.Balfour-Browne. B.M.1954-797. // Tampa, ca.4000ft., 15.vi.1954. drying pools in sandy river bed, foul water. // Prépar. Genit. N°15165.1 // J. Delève det., 1965 *Ctenelmis* (*tibialis* n.sp. // NHMUK013792808"; BMNH.

Subgenus ***Paractenelmis*** Delève, 1964
Figs 1C, 4C, 7C, 11C, 14C

Paractenelmis Delève, 1964: 532.

Type species

Ctenelmis discrepans Delève, 1964.

Differential diagnosis

Paractenelmis is characterized by the combination of the following characters: 1) body (Figs 1C, 7C) elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 3, 4C, 7C) granulose; anterolateral angles moderately produced; sides arcuate; sublateral carinae complete, in the middle zagged inwards; median groove almost complete, narrowed in basal half, with carinate outline; 4) surface of the elytra (Figs 1C, 7C) granulose; sides subparallel in basal ⅔, then tapered into rounded apex; odd intervals almost entirely carinate, even intervals carinate only at base; 5) prosternum moderately short in front of procoxae without chin piece; anterior margin without distinct indentation; prosternal process moderately narrow with rounded apex (Fig. 11B); 6) legs with femora stout, tarsal claws (Fig. 14C) with one subbasal tooth.

Remarks

The subgenus was erected based on the presence of a single subbasal tooth on the tarsal claws, in contrast with *Ctenelmis*, which has at least two subbasal teeth or pectinate tarsal claws.

Larva

Unknown.

Distribution

Endemic to South Africa.

Known species

Ctenelmis discrepans Delève, 1964.

Ctenelmis* (*Paractenelmis*) *discrepans Delève, 1964
Figs 1C, 4C, 7C, 11C, 14C

Material examined

SOUTH AFRICA • 1 ♂; "♂ // 218A S.Africa Great Berg River Groot Drakenstein 12. 3. 51 // Prépar. Genit. N°20464.3 // Para - type // J. Delève det., 1965 *Paractenelmis discrepans* n.sp. // H.E. Hinton collection. B.M. 1977-566."; illustrated in Figs 1C, 4C, 7C, 11C, 14C; BMNH.

Genus ***Elmidolia*** Fairmaire, 1897
Figs 1D, 4D, 7D, 11D, 14D

Elmidolia Fairmaire, 1897: 369.
Helminthopsoides Delève, 1954: 33 (synonymized by Delève 1963: 2).

Type species

Elmidolia sericans Fairmaire, 1897.

Differential diagnosis

Elmidolia is characterized by the combination of the following characters: 1) body (Figs 1D, 7D) elongate; 2) antennae thin; segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 1D, 4D, 7D) alutaceous to moderately smooth; lateral margin serrate; anterolateral angles moderately produced; sides arcuate; feeble sublateral carinae in basal ⅓; median longitudinal groove thin and shallow; 4) surface of the elytra (Figs 1D, 7D) alutaceous, moderately smooth; sides subparallel in basal ⅔, then tapered into rounded apex; granulate sublateral carinae, more distinct one on 6th and a feeble one on 8th interval; intervals nearly flat; 5) prosternum long in front of procoxae; anterior margin laterally lowered and indented; prosternal process moderately wide with arrow-head to rounded apex (Fig. 11D); 6) legs with femora stout, tarsal claws (Fig. 14D) simple.

Similar genera

Elmidolia can be confused with *Helminthopsis* due to their similar body shape, pronotum structure, elytral carinae composed of granules, and simple tarsal claws. However, *Elmidolia* differs by having two sublateral carinae on the elytra, whereas *Helminthopsis* has only one.

Larva

Briefly diagnosed by Bertrand (1962) as *Helminthopsoides*.

Distribution

Endemic to Madagascar.

Known species

Elmidolia binervosa binervosa (Grouvelle, 1899); *Elm. binervosa lamarcquei* (Paulian, 1959); *Elm. fuliginea* (Fairmaire, 1902); *Elm. opaca* Delève, 1963; *Elm. sericans* Fairmaire, 1897.

Elmidolia opaca Delève, 1963

Material examined

MADAGASCAR • 1 ♂; "♂ // TYPE // Madagascar R. Antsampandrano // F.M. 95/25.7.58 F. Starmuhler // F.M. 95/25.7.58 ANTSAMPANDRANO -Badr [O. Madagascar. 1958 leg. F. Starmuhler] // Prépar. genit N°23163.9 // J. Delève det., 1963 *Elmidolia opaca* n.sp. Type // R.I.Sc.N.B. I.G..22.864"; IRSNB.

Elmidolia binervosa binervosa (Grouvelle, 1899)
Figs 1D, 4D, 7D, 11D, 14D

Material examined

MADAGASCAR • 1 ex.; "Co- type // antongil Bay Madagascar 1910 . 220 // Madagascar B. d'antongil // *Helmis binervosa* Coty. Grou"; BMNH • 1 ex.; "Co- type // Madagascar. A. Mocquerys. 99-96. // *Helmis binervosa* C. ty. Grouv"; BMNH • 1 ex.; "MADAGASCAR, 19.-20.i.2013, ISALO N.P., Oasïs, 879m, S22°37′05″, E45°21′08″, M. Trýzna leg. // BMNH{E} 2015-39"; illustrated in Figs 1D, 4D, 7D, 11D, 14D; BMNH.

Genus ***Elpidelmis*** Delève, 1964

Figs 1E, 4E, 7E, 11E, 14E

Elpidelmis Delève, 1964: 166.

Type species

Helmis capensis Grouvelle, 1890.

Differential diagnosis

Elpidelmis is characterized by the combination of the following characters: 1) body (Figs 1E, 7E) robust, elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 1E, 4E, 7E) granulose; anterolateral angles distinctly produced; sides broadly arcuate; sublateral carinae indistinct to distinct slightly beyond the basal half; rather wide median groove almost complete, with carinate outline or in a form of large fovea; 4) surface of the elytra (Figs 1E, 7E) granulose; sides subparallel in basal ⅔, then tapered into rounded apex; odd intervals almost entirely carinate, even intervals carinate only at base; 5) prosternum long in front of procoxae; anterior margin laterally lowered and indented; prosternal process wide, broadly rounded with medial projection (Fig. 11E); 6) legs with femora stout, tarsal claws (Fig. 14E) simple.

Remarks

The two known species differ markedly in pronotal structure. In *Elpidelmis fossicollis*, the pronotum lacks any carinae, and the median groove is modified into a large central fovea. In contrast, the pronotum of *Elp. capensis* has distinct sublateral carinae extending slightly beyond the basal half and the median groove is longitudinal, conspicuously broad, and bordered by carinae.

Similar genera

Elpidelmis can be confused with *Ctenelmis* due to their robust, rather wide bodies and similar patterns of elytral carinae. However, *Elpidelmis* differs by its sublateral carinae on the pronotum that are indistinct to distinct in basal half, longer prosternum, simple tarsal claws, and generally wider body.

Larva

Described and illustrated by Bertrand (1965).

Distribution

Endemic to South Africa. The record from Angola is omitted (see Discussion).

Known species

Elpidelmis capensis (Grouvelle, 1890); *Elp. fossicollis* Delève, 1964.

Elpidelmis capensis (Grouvelle, 1890)

Figs 1E, 4E, 7E, 11E, 14E

Material examined

SOUTH AFRICA • 1 ♀; “SYN- TYPE // C. Bon. spei // TYPE // 14548 // Fry Coll. 1905-100 // *Helmis capensis*”; BMNH • 1 ex.; “Coll. Van de Poll. 1937-744 // *H. capensis* ty Grou C. B. Exp”; illustrated in Figs 1E, 4E, 7E, 11E, 14E; BMNH.

Elpidelmis fossicollis Delève, 1964

Material examined

SOUTH AFRICA • 1 ex.; "Hoogekraalpas Hoëkrallrivier 7.xi.2009 // SA175 // SOUTH AFRICA BMNH{E} 2017-45 P.M.Hammond // NHMUK013652258 // *Elpidelmis fossicollis* Delève, 1964 K. Matsumoto det. 2019"; BMNH • 1 ex.; "SOUTH AFRICA West Cape. Hoëkraal River 07 November 2009 P.M. Hammond // BMNH {E} 2011-81 // *Elpidelmis fossicollis* Delève, 1964 K. Matsumoto det. 2019"; BMNH.

Genus ***Eumicrodinodes*** Delève, 1965
Figs 1F, 4F, 7F, 11F, 14F

Eumicrodinodes Delève, 1965b: 53.

Type species

Eumicrodinodes bipustulatus Delève, 1965.

Differential diagnosis

Eumicrodinodes is characterized by the combination of the following characters: 1) body (Figs 1F, 7F) elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 1F, 4F, 7F) coarse to moderately smooth; anterolateral angles moderately produced; sides arcuate; carinae absent; median groove absent or indistinct; 4) surface of the elytra (Figs 1F, 7F) moderately coarse to smooth; sides subparallel in basal ⅔, then tapered into rounded apex; feeble granulate sublateral carinae on 6th and 7th intervals; intervals nearly flat; 5) prosternum moderately long in front of procoxae; anterior margin laterally lowered and indented; prosternal process wide with broadly rounded apex (Fig. 11F); 6) legs with spindle-shaped femora, tarsal claws (Fig. 14F) with one basal tooth.

Similar genera

A simple pronotum, and tarsal claws with a basal tooth place *Eumicrodinodes* close to *Pseudomacronychus*. However, *Eumicrodinodes* can be reliably distinguished by its spindle-shaped femora and elytra with a pair of feeble sublateral carinae. Compared to other taxa with spindle-shaped femora, such as *Microdinodes* and *Paramicrodinodes*, it differs by its distinctly wide prosternal process.

Larva

Unknown.

Distribution

Known from Democratic Republic of the Congo, Gabon, Republic of the Congo.

Known species

Eumicrodinodes bipustulatus Delève, 1965; *Eum. concolor* Delève, 1967; *Eum. quadrimaculatus* Delève, 1972.

Eumicrodinodes bipustulatus Delève, 1965
Figs 1F, 4F, 7F, 11F, 14F

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // Scobe de M-Bolo// MUS. ROY. AFR. CENTR. Tshuapa: Terr. Bikoro, Mabali (à la lumière) N. Leleup IX/X-1959 // Prépar. genit. N°16164.12 // J. Delève det., 1964 *Eumicrodinodes bipustulatus* n.sp. Type // TYPE"; MRAC • 1 ex.;

"♀ // J. Delève det., 1965 *Eumicrodinodes bipustulatus* m // H.E. Hinton collection. B.M.1977-566."; illustrated in Figs 1F, 4F, 7F, 11F, 14F; BMNH.

Eumicrodinodes concolor Delève, 1967

Material examined

REPUBLIC OF THE CONGO • 1 ♂; "♂ // Para- type // Ozdala Congo octobu // Prépar. genit. N°13265.16 // J. Delève det., 1965 *Eumicrodinodes concolor* n. sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Eumicrodinodes quadrimaculatus Delève, 1972

Material examined

GABON • 1 ♂; "♂ // Para- type // Gabon, Lac Zile J. De Muizon // Prépar. genit. N°141171.2 // J. Delève det., 1971 *Eumicrodinodes* 4-*maculatus* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Genus ***Exolimnius*** Delève, 1954
Figs 1G, 4G, 7G, 11G, 14G

Exolimnius Delève, 1954: 27.

Type species

Exolimnius ungulatus Delève, 1954.

Differential diagnosis

Exolimnius is characterized by the combination of the following characters: 1) body (Figs 1G, 7G) elongate; 2) antennae thin; segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 1G, 4G, 7G) alutaceous to moderately smooth; anterolateral angles moderately produced; sides moderately arcuate; sublateral carinae in basal ⅗; prescutellar carinae about half as long; median longitudinal groove thin and shallow; 4) surface of the elytra (Figs 1G, 7G) smooth; sides subparallel in basal ⅔, then tapering towards rounded apex; granulate sublateral carinae on 5th and 7th intervals; intervals nearly flat; 5) prosternum long in front of procoxae; anterior margin laterally lowered and indented; prosternal process moderately wide with rounded apex (Fig. 11G); 6) legs with femora stout, tarsal claws (Fig. 14G) with one subbasal tooth.

Similar genera

Exolimnius can be confused with some species of *Microdinodes* that also have a pronotum with sublateral and prescutellar carinae. However, *Exolimnius* differs by having a longer prosternum and stout femora, whereas *Microdinodes* has spindle-shaped femora.

Larva

Unknown.

Distribution

Endemic to Madagascar.

Known species

Exolimnius lateritius (Fairmaire, 1902); *Exo. ungulatus* Delève, 1954.

Exolimnius lateritius (Fairmaire, 1902)
Figs 1G, 4G, 7G, 11G, 14G

Material examined

MADAGASCAR • 1 ex.; "Madagascar Ampamanerana ruiss. // F.M. 129/5.8.58 F. Starmühler // J. Deleve det., 1963 *Exol. Lateritia* Fairm. // H.E. Hinton B.M. 1977-566."; illustrated in Figs 1G, 4G, 7G, 11G, 14G; BMNH.

Genus ***Helminthocharis*** Grouvelle, 1906
Figs 1H, 4H, 7H, 11H, 14H

Helminthocharis Grouvelle, 1906: 321.

Type species

Helminthocharis picea Grouvelle, 1906.

Differential diagnosis

Helminthocharis is characterized by the combination of the following characters: 1) body (Figs 1H, 7H) compact, obovate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 1H, 4H, 7H) moderately smooth to glabrous; anterolateral angles feebly produced; sides broadly arcuate narrowing to prolonged anterior margin; sublateral carinae almost complete; prescutellar carinae absent; median groove absent to barely noticeable as a thin line; 4) surface of the elytra (Figs 1H, 7H) smooth to glabrous; sides subparallel in basal ⅔, then narrowed into rounded apex or arcuately narrowing from base to rounded apex; distinct sublateral carinae on 5th and at least basally on 7th interval; intervals flat, partly diminished; 5) prosternum moderately short in front of procoxae; anterior margin laterally lowered, without distinct indentation; prosternal process wide with subtriangular apex (Fig. 11H); 6) legs with femora stout to clavate, tarsal claws (Fig. 14H) simple.

Remarks

Partial lateral carinae on the pronotum and elytra, curving inward from the base, are visible in the dorsolateral view (Fig. 7H). These carinae were observed in one described species and several unidentified specimens. However, as no other species were available for comparison and they are not mentioned in the descriptions or illustrations of known species, their presence requires further confirmation to determine whether they are a generic or species-specific trait.

Similar genera

An obovate body and long sublateral carinae on the pronotum place *Helminthocharis* close to *Pachyelmis* and *Sphragidelmis*. It can be distinguished from *Pachyelmis* by its narrower and more elongate prosternal process. In contrast to *Sphragidelmis*, it has longer sublateral carinae on the pronotum, lacks prescutellar, arcuately diverging carinae, and the lateral margin of the pronotum and elytra is smooth, not serrate.

Larva

Unknown.

Distribution

Widespread in Angola, Burkina Faso, Central African Republic, Côte d'Ivoire, Democratic Republic of the Congo, Ghana, Liberia, Madagascar, Republic of the Congo, Rwanda, South Africa, Tanzania. New country records for Cameroon, Kenya, Mali, Sierra Leone, Togo, Uganda and Zambia.

Known species

Helminthocharis abdominalis abdominalis Delève, 1956; *Hch. abdominalis nigra* Delève, 1967; *Hch. congoensis* Delève, 1967; *Hch. cristula* Delève, 1967; *Hch. diasticta* Alluaud, 1933; *Hch. filicornis* Jäch & Kodada, 2016; *Hch. picea* Grouvelle, 1906; *Hch. polita* Delève, 1964; *Hch. schoutedeni* Delève, 1938.

Helminthocharis abdominalis nigra Delève, 1967
Figs 1H, 4H, 7H, 11H, 14H

Material examined

REPUBLIC OF THE CONGO • 2 ex.; "Soil-Zoological Exp. Congo-Brazzaville Kindamba, Méya near Adam cave // 7.11.1963. No 114 in brook bed leg. Endródy-Younga // J. Delève det., 1966 *H. abdominalis nigra* subsp. n. // Paratypus"; illustrated in Figs 1H, 4H, 7H, 14H; BMNH • 1 ex.; "Para- type // Soil-Zoological Exp. Congo-Brazzaville Kindamba, Méya near Adam cave // 7.11.1963. No 114 in brook bed leg. Endródy-Younga // J. Delève det., 1966 *H. abdominalis nigra* subsp. N."; illustrated in Fig. 11H; BMNH.

Helminthocharis sp.

Material examined

CAMEROON • 10 ex.; "CAMEROON N-W prov. Wum VILL. env., UV light 6°23′10″ N, 10°04′59″ E 10.xii. 2010 local collector BMNH(E)2016-44"; BMNH.

KENYA • 4 ex.; "KENYA: Central Prov. Mt Kenya, 1660 m, 28. 2. 1998 Kiganjo town, Gaitei Vill. Sangana riv., leg. B.M. Mwangi"; NHMW • 9 ex.; "KENYA 10.XII Shimba Hills (11) leg. M.Jach 1989"; NHMW.

MALI • 4 ex.; "MALI 24.2.2000 100 km Sikasso, Bagoé river 11°27′N 6°35′W leg. Komarek & Mayer (24-1)"; NHMW.

SIERRA LEONEF • 2 ex.; "Sierra Leone, 80m, Kalainkay nr. Kamabai Northern Prov. 3-6.xi.15; N09°10′52″ W11°56′ 44″ Light Trap, R.Goff coll. Leg. Smith.R & Takano.H, BMNH(E) 2016-197"; BMNH.

TOGO • 1 ex.; "TOGO 415m Fazao-Malfakassa NP Point de vue campsite Sudanian savannah 8°48′50″ N, 0°49′3.2″ E 16-23.viii.2018. // Actinic light trap Aristophanous,M., Geiser,M., Moretto,P., Sanbena,B. leg. ANHRT: 2018.31, BMNH(E) 2018-148"; BMNH.

UGANDA • 2 ex.; "UGANDA: Mukono Bujikwe, Mubeya River 1141m a.s.l. 00°20.000''N / 33°08.476′ E 01. 12.09, leg. J. P. Obubu"; NHMW.

ZAMBIA • 1 ex.; "ZAMBIA, 1316m Nkwaji, Mwinilunga 11°36′22″ S, 24°33′17″ E 3-10.xi.2017. Actinic Light Trap. // Carter, M., Lloyd, A., Miles, W., Oram, D., Smith, R. leg. ANHRT: 2017:27, ZM-011 BMNH(E) 2017-194"; BMNH.

Genus ***Helminthopsis*** Grouvelle, 1906 sensu stricto
Figs 1I, 4I, 8A, 11I, 14I

Helminthopsis Grouvelle, 1906: 319.

Type species

Helminthopsis lucida Grouvelle, 1906.

Differential diagnosis

Helminthopsis is characterized by the combination of the following characters: 1) body (Figs 1I, 8A) elongate; 2) antennae thin; segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 1I, 4I, 8A) alutaceous to glabrous; anterolateral angles moderately produced; sides moderately to almost broadly arcuate; sublateral carinae feeble to distinct, reaching basal ⅕ to ⅖; median longitudinal groove thin and shallow; 4) surface of the elytra (Figs 1I, 8A) alutaceous to glabrous; sides subparallel in basal ⅔, then narrowed into rounded apex; granulate sublateral carina on 6th interval; intervals nearly flat; 5) prosternum moderately long in front of procoxae; anterior margin laterally lowered and indented; prosternal process moderately wide with rounded apex (Fig. 11I); 6) legs with femora stout, tarsal claws (Fig. 14I) simple.

Remarks

This genus exhibits considerable variation, as reflected in the seven species groups proposed by Delève (1965a) based solely on male genitalia. Given the vast number of species of *Helminthopsis*, including those within its subgenus *Elmidoliana*, the pronounced differences in body shape, coloration, and the presence and distribution of the dorsal plastron tomentum, as well as the enigmatic placement of *Ludyella*, known only from a single holotype, a comprehensive revision of these taxa is necessary to clarify their monophyly.

Similar genera

This genus resembles *Elmidolia* in body shape, a similar pronotum, elytral carinae composed of granules, and simple tarsal claws but differs by having only one sublateral carina on the elytra, whereas *Elmidolia* has two. *Helminthopsis* also shares similarities with *Lathridelmis* and *Trachelminthopsis*. It can be distinguished from *Lathridelmis* by its broader body shape and a smoother, non-rugose cuticle. Compared to *Trachelminthopsis*, it differs by the presence of elytral carinae, smoother cuticle, and by the pronotum that has longitudinal median groove, whereas *Trachelminthopsis* has a groove in the form of small fovea.

Larva

Described and illustrated by Bertrand (1962).

Distribution

Widespread in Angola, Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Democratic Republic of the Congo, Gabon, Ghana, Guinea, Kenya, Liberia, Republic of the Congo, South Africa, Zimbabwe. New country records for Nigeria, Sierra Leone, Togo and Uganda.

Known species

Helminthopsis allansoni Delève, 1967; *Hps. assimilis* Delève, 1967; *Hps. bifida* Delève, 1965; *Hps. castanea* Delève, 1965; *Hps. ciliata* Delève, 1965; *Hps. dissimilis* Grouvelle, 1906; *Hps. elegans* Alluaud, 1933; *Hps. fallaciosa* Delève, 1965; *Hps. gracilis* Delève, 1945; *Hps. hypocrita* Delève, 1965; *Hps. interposita* Delève, 1965; *Hps. lepida* Delève, 1965; *Hps. lucida* Grouvelle, 1906; *Hps. marginalis* Delève, 1973; *Hps. melanaria* Delève, 1967; *Hps. perfida* Delève, 1967; *Hps. perplexa* Delève, 1945; *Hps. placita* Delève, 1968; *Hps. proxima* Delève, 1945; *Hps. punctulata* Delève, 1945; *Hps. quadrinotata* Delève, 1965; *Hps. reticulata* Delève, 1945; *Hps. subglobosa* Delève, 1967.

Helminthopsis bifida Delève, 1965

Material examined

SOUTH AFRICA • 1 ♂; "♂ // Para- type // Para- type // S.RHODESIA: Marandellas.ii.1962. 18°10′S. 31°36′E J.S.Weir.M.V.light. B.M.1963-18 // See slide Coll.No. // Prépar. Genit. N°19364.1 // J. Delève det., 1964 *Helminthopsis bifida* n.sp. (macropt.)"; BMNH.

Helminthopsis gracilis Delève, 1945

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // TYPE / KAI BAKU 7-V-26 A.COLLArT // Prépar. genit. N°10364.5 // J. Delève det., 1944 *H. gracilis* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Helminthopsis lepida Delève, 1965

Material examined

GUINEA • 1 ♀; "♀ // Para- type // Guinee Chute du Konkouré 15.II.57 H. Bertrand // Prépar. genit. N°20864.6 // J. Delève det., 1964 *Helminthopsis lepida* n. sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Helminthopsis lucida Grouvelle, 1906

Material examined

KENYA • 1 ♀; "KENYA Camp 1 de l'Elgon M' ELGON, VERS' EST 2.100 m. // MUSÉUM DE PARIS Mission de l'Omo C.ARAMBOURG P.-A.CHAPPUIS & R. JEANNEL 1932-1933 // ♀ // J. Delève det., 1938 *Helminthopsis lucida* Gr. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Helminthopsis marginalis Delève, 1973

Material examined

LIBERIA • 2 ex.; "LIBERIA Suakoko X II-19 -51 // 6-9pm light trap Blickenstaff // BM. 1979-136 // Para- type // J. Delève det., 1972 *H.marginalis* n.sp."; BMNH.

Helminthopsis melanaria Delève, 1967

Material examined

REPUBLIC OF THE CONGO • 1 ex.; "Soil-Zoological Exp. Congo-Brazzaville Kindamba, Méya near Adam cave // 7.11.1963. No 114 in brook bed leg. Endródy-Younga // J. Delève det., 1966 *Helminthopsis melanaria* n.sp. // Paratypus"; BMNH.

Helminthopsis perplexa Delève, 1945

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // TYPE / KAI BAKU 7-VII-26 A.COLLArT // Prépar. genit. N°103641 // J. Delève det., 1943 *H. perplexa* n.sp // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; BMNH.

Helminthopsis sp.
Figs 1I, 4I, 8A, 11I, 14I

Material examined

CÔTE D'IVOIRE • 3 ex.; "IVORY COAST, 380m, Yeale Village, Mt Nimba, 07°31′35.3″ N, 08°25′20.1″ W, 18-29. IV. 2016, Light Trap, // Aristophanous, M., Geiser, M., Moretto, P., leg., BMNH(E) 2016-109, Trip Ref: CI-003(ANHRT 17)"; illustrated in Figs 1I, 4I, 8A, 11I, 14I; BMNH.

NIGERIA • 1 ex.; "Nigeria: Ile-Ife W State 11 Oct 1969 J. T. Medler Coll. // E-25 // H.E. Hinton collection B.M. 1977-566."; BMNH.

SIERRA LEONE • 1 ex.; "SIERRA LEONE 420m Loma Mountains farmland/forest mosaic N09°07′47″;W11°05′24″ // 11-15.vi.16 Light Trap leg.Takano, Miles & Goff Trip Ref: SL-001 (ANHRT 18) BMNH(E) 2016-196"; BMNH.

TOGO • 5 ex.; "TOGO: Reg. Plateaux Pref. Kloto, ca. 5 km from Konda (village), 9.II.2006 leg. Komarek & Hounguè (28) // 0°58′5.3″ N 00°34′18.2″ E ca. 510 m a.s.l. small stream in prim. Forest"; NHMW • 2 ex.; "TOGO: Reg. Plateaux Pref. Kloto, ca. Konda forest 10.II.2006, leg. Komarek & Houn'uè (30) // 0°58′8.7″ N 00°34′10.7″ E ca. 520 m a.s.l. waterfall in prim. Forest"; NHMW • 13 ex.; "TOGO: Reg. Plateaux Pref. Kloto, ca. 5 km from Konda (village), 9.II.2006, leg. Komarek & Houn'uè (29) // 0°58′1.4″ N 00°34′11.9″ E ca. 500 m a.s.l. small stream in prim. Forest"; NHMW.

UGANDA • 1 ex.; "Uganda near Kazi 2. IX 1929 G.L.R. Hancock // H.E. Hinton collection B.M. 1977-566."; BMNH • 3 ex.; "UGANDA: Mukono Bujikwe, Mubeya River 1141m a.s.l. 00°20.0′0′ N / 33°08.476′ E 01. 12.09, leg. J. P. Obubu"; NHMW • 1 ex.; "UGANDA: Mukono Buikwe, Kisizita river at Kassanga-Senyi 1185 m a.s.l. 00°11.0′4′ N / 33°00.740′ E 17.11.09 leg. J. P. Obubu"; NHMW.

Subgenus *Elmidoliana* Delève, 1965
Figs 2A, 5A, 8B, 12A, 14J

Elmidoliana Delève, 1965a: 22.

Type species

Helminthopsis luteopicta Delève, 1938.

Differential diagnosis

Elmidoliana is characterized by the combination of the following characters: 1) body (Figs 2A, 8B) elongate; 2) antennae thin; segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 2A, 5A, 8B) alutaceous to smooth; anterolateral angles moderately produced; sides moderately to almost broadly arcuate; sublateral carinae indistinct to feeble, reaching to basal ⅓; median longitudinal groove thin and shallow; 4) surface of the elytra (Figs 2A, 8B) alutaceous to smooth; sides subparallel in basal ⅔, then narrowed into rounded apex; granulate sublateral carina on 6th interval; intervals nearly flat; 5) prosternum moderately long in front of procoxae; anterior margin laterally lowered and indented; prosternal process moderately wide with rounded apex (Fig. 12A); 6) legs with femora stout, tarsal claws (Fig. 14J) simple.

Similar genera

This subgenus was established based on its dark, matt, predominantly alutaceous surface and the presence of yellow patterns on the elytra. *Helminthopsis* and its subgenus *Elmidoliana* are likely closely related to the genus *Ludyella*, but a thorough revision of these taxa is needed to clarify their relationships and resolve their monophyly.

Larva

Unknown.

Distribution

Widespread in Angola, Cameroon, Côte d'Ivoire, Democratic Republic of the Congo, Gabon, Ghana, Liberia, Nigeria, Republic of the Congo, South Africa, Tanzania, Zambia, Zimbabwe. New country records for Kenya, Sierra Leone and Uganda.

Known species

Helminthopsis ambigua Delève, 1974; *Hps. compacta* Delève, 1965; *Hps. elongata* Delève, 1965; *Hps. inornata* Delève, 1968; *Hps. luteopicta luteopicta* Delève, 1938; *Hps. luteopicta nigeriana* Delève, 1974; *Hps. machadoi* Delève, 1966; *Hps. medleri* Delève, 1974; *Hps. micros* Delève, 1974; *Hps. molesta* (Grouvelle, 1920); *Hps. propinqua* Delève, 1974; *Hps. rhodesiana* Delève, 1965; *Hps. zambezica zambezica* Delève, 1965; *Hps. zambezica arcuata* Delève, 1974.

Helminthopsis* (*Elmidoliana*) *compacta Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // Para- type // Elisabethville(à la lumière) 1953/1955 Ch. Seydel // Prépar. genit. N°19164.3 // J. Delève det., 1964 *Helminthopsis compacta* n. sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Helminthopsis* (*Elmidoliana*) *elongata Delève, 1965

Material examined

ZAMBIA • 1 ♂; "♂ // Para- type // Para- type // S.RHODESIA: Mwinilunga District. Ikelenge, nr. Kalene Zambezi Rapids. // E.Pinhey. 3 v.1963 M.V. Light trap B.M. 1963-742 // See slide Coll.No. // Prépar. Genit. N°20364.7 // J. Delève det., 1965 *H. (Elmidoliana) elongata* n.sp."; BMNH.

Helminthopsis* (*Elmidoliana*) *luteopicta luteopicta Delève, 1938
Figs 2A, 5A, 14J

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♀; "PARATYPE // Bas-Uele : Koteli 1-21-I-1925 Dr H.Schouteden // ♀ // J. Delève det., 1938 *Helminthopsis luteopicta* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; illustrated in Figs 2A, 5A, 14J; IRSNB.

Helminthopsis* (*Elmidoliana*) *luteopicta nigeriana Delève, 1974,

Material examined

NIGERIA • 1 ♂; "♂ // HOLOTYPE // Nigeria Ile. Ife 15.III.69 // J.T.Medler DA-6 // Prépar. Genit. N°26870.2 // J. Delève det., 1970 *H. (Elmidoliana) luteopicta* Delève // J. Delève det., 1973 Subsp. nigeriana // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Helminthopsis* (*Elmidoliana*) *machadoi Delève, 1966

Material examined

ANGOLA • 1 ♂; "♂ // Para- type // Angola Env. Dundo 23.V.1966 // Forêt. galerie Sources R, Mussungue Piscine du Dundo // Ang 198541 // J. Delève det., 1966 *Elmidoliana machadoi* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Helminthopsis* (*Elmidoliana*) *medleri Delève, 1974

Material examined

NIGERIA • 1 ♂; "♂ // HOLOTYPE // Nigeria Ile. Ife 20.II.70 // J.T.Medler D.7 // Prépar. Genit. N°1.10.70.2 // J. Delève det., 1973 *Elmidoliana medleri* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Helminthopsis* (*Elmidoliana*) *micros Delève, 1974,

Material examined

GHANA • 1 ♂; "♂ // Para- type // GHANA: Ashanti region Kwadaso 259 m,N 6 55 – W 1 39 Dr. S. ENDRODY-YOUNGA // Nr. 366 – light trap on field, UV light 26.V.1969 // Prépar. Genit. N°271072.4 // J. Delève det., 1972 *E. micros* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Helminthopsis* (*Elmidoliana*) *propinqua Delève, 1974

Material examined

GHANA • 1 ♂; "♂ // GHANA: Ashanti region Kwadaso 320 m,N 6 42 – W 1 39 Dr.*S. ENDRODY*-YOUNGA // Nr. 345 black light 5.V.1969 // Para- type // J. Delève det., 1972 *E. propinqua* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Helminthopsis* (*Elmidoliana*) *rhodesiana Delève, 1965

Material examined

ZIMBABWE • 1 ♂; "♂ // Type // Holotype // S.RHODESIA: Marandellas.ii.1962. 18°10′S. 31°36′E J.S.Weir.M.V.light. B.M.1963-18 // See slide Coll.No. // Prépar. Genit. N°27364.2 // J. Delève det., 1965 *H. (Elmidoliana) rhodesiana* n.sp"; BMNH.

Helminthopsis* (*Elmidoliana*) *zambezica zambezica Delève, 1965,

Material examined

ZAMBIA • 1 ♂; "♂ // Type // TYPE // N. RHODESIA: Mwinilunga District, Ikelenge, nr. Kalene Zambezi Rapids // Zambezi Rapids. // E.Pinhey. 3 v.1963 M.V. Light trap B.M. 1963-742 // See slide Coll.No. // Prépar. Genit. N°20364.8 // J. Delève det., 1965 *H. (Elmidoliana) zambezica* n. sp."; BMNH.

Helminthopsis* (*Elmidoliana*) *zambezica arcuata Delève, 1974

Material examined

GHANA • 1 ♂; "♂ // GHANA: Ashanti region Kumasi, Nhiasu 330 m,N 6 43 – W 1 36 Dr. S. ENDRODY-YOUNGA // Nr. 221 at light 28.V.1967 // 2 // Para- type // J. Delève det., 1972 *E. arcuata* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

***Helminthopsis* (*Elmidoliana*)** sp.
Figs 8B, 12A

Material examined

KENYA • 1 ex.; "Kenya 3.vii. 2002 Kakamega Forest N.R. primary forest (8) 0.21,34 N; 34.5139 E 1600 m, light trap"; MFNB.

SIERRA LEONE • 1 ex.; "Sierra Leone, 80m, Kalainkay r. Kamabai Northern Prov. 3-6.xi. 15; // N09°10′52″; W11°56′ 44″ Light Trap, R.Goff coll. Leg. Smith. R & Takano.H, BMNH(E) 2016-197"; illustrated in Figs 8B, 12A; BMNH.

UGANDA • 1 ex.; "UGANDA: Mukono Bujikwe, Mubeya River 1141m a.s.l. 00°20.000′ N / 33°08.476′ E 01. 12.09, leg. J. P. Obubu"; NHMW.

Genus ***Lathridelmis*** Delève, 1965
Figs 2B, 5B, 8C, 12B, 14K

Lathridelmis Delève, 1965: 105.

Type species

Lathridelmis crenicollis Delève, 1965.

Differential diagnosis

Lathridelmis is characterized by the combination of the following characters: 1) body (Figs 2B, 8C) narrow, elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 2B, 5B, 8C) rugose, granulose; anterolateral angles moderately produced; sides arcuate; sublateral carinae short, reaching to basal ⅖; median longitudinal groove thin and shallow; 4) surface of the elytra (Figs 2B, 8C) granulose, rugose; sides subparallel in basal ⅔, then tapered into rounded apex; feeble granulate sublateral carina on 6th interval; intervals nearly flat; 5) prosternum moderately long in front of procoxae; anterior margin laterally lowered and indented; prosternal process moderately wide with rounded apex (Fig. 12B); 6) legs with femora stout, tarsal claws (Fig. 14K) simple.

Similar genera

This genus resembles *Helminthopsis* and *Trachelminthopsis*. It can be distinguished from *Helminthopsis* by its narrower body shape and more rugose cuticle. Compared to *Trachelminthopsis* it differs by the presence of elytral carinae, its narrower body shape, and by its pronotum that has longitudinal median groove, whereas *Trachelminthopsis* has groove in a form of small fovea.

Larva

Unknown.

Distribution

So far known only from Democratic Republic of the Congo.

Known species

Lathridelmis crenicollis Delève, 1965.

Lathridelmis crenicollis Delève, 1965
Figs 2B, 5B, 8C, 12B, 14K

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ex.; “Lac. Tanganika : Uvira Stat. 126 27.XI.1959 Dr R. Kiss // COLL. MUS. TERVUREN // J. Delève det., 1970 *Lathr. Crenicollis* Dlve // H.E. Hinton collection. B.M. 1977-566.”; illustrated in Figs 2B, 5B, 8C, 12B, 14K ; BMNH • 1 ♂; “♂ // Para- type // Kivu: Uvira III.1953 (J. Bouillon) // Prépar. genit. N°15364.8 // J. Delève., 1964 *Lathridelmis crenicollis* n.sp // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève”; IRSNB.

Genus ***Leielmis*** Delève, 31964
Figs 2C, 5C, 8D, 12C, 14L

Leielmis Delève, 1964: 159.

Type species

Helmis georyssoides Grouvelle, 1890.

Differential diagnosis

Leielmis is characterized by the combination of the following characters: 1) body (Figs 2C, 8D) obovate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 2C, 5C, 8D) moderately smooth to glabrous, micropunctured; lateral margin in some species with a row of spaced out granules; anterolateral angles feebly produced; sides broadly narrowing from base to prolonged anterior margin; carinae absent; median groove absent; 4) surface of the elytra (Figs 2C, 8D) moderately smooth to glabrous; sides broadly narrowing into rounded apex; carinae absent; intervals nearly flat; 5) prosternum moderately short in front of procoxae; anterior margin medially broadly emarginate, laterally slightly lowered, without distinct indentation; prosternal process wide, with broadly rounded apex (Fig. 12C); 6) legs with femora stout, tarsal claws (Fig. 14L) simple.

Similar genera

Leielmis could be confused with *Peloriolus* due to their smaller, compact body size, mostly simple pronotum, and similar moderately short, medially emarginate prosternum with a wide prosternal process. However, the sides of the pronotum in *Leielmis* broadly narrow from the base to the prolonged anterior margin, whereas in *Peloriolus*, the sides are subparallel in the basal third before narrowing.

Larva

Unknown.

Distribution

Endemic to South Africa. The record from Angola is omitted (see Discussion).

Known species

Leielmis armipes Bilton, 2018; *Lei. georyssoides* (Grouvelle, 1890); *Lei. gibbosus* Bilton, 2017; *Lei. hirsutus* Bilton, 2017.

Leielmis hirsutus Bilton, 2017

Material examined

SOUTH AFRICA • 2 ex.; "11/ii/2015 South Africa WC Groote Winterhoekberge stream below Sneeugatpiek 1,300 m D T Bilton leg // *Leielmis hirsutus* Paratype D T Bilton 2017 // David Bilton BMNH(E) 2018-143"; BMNH.

Leielmis georyssoides (Grouvelle, 1890)
Figs 2C, 5C, 8D, 12C, 14L

Material examined

SOUTH AFRICA • 1 ♀; "STN. 5 // Kirstenbosch. 28.ii.1954. «nearly dry waterfall and stream» // ♀ // S. AFRICA. Cape Province. Cape District. J. Balfour-Browne B.M. 1954-797. // J. Delève det., 1965 *L. georyssoides* Gr. // *Leielmis georyssoides* (Grouvelle, 1890) D T Bilton det. 2016"; illustrated in Figs 2C, 5C, 8D, 12C, 14L; BMNH • 1 ♀; "♀ // Stn.No. 9 // Blinkwater falls, In running water (dry season) 1650 ft. 2.iii.1954. // S.Africa. Cape Province. Cape District. J.Balfour-Browne. B.M.1954-797. // J. Delève det., 1965 *L. georyssoides* (Gr) // *Leielmis georyssoides* (Grouvelle, 1890) D T Bilton det. 2016"; BMNH • 1 ex.; "STN. 5 // S. AFRICA. Cape Province. Cape District. J. Balfour-Browne

B.M. 1954-797. // Kirstenbosch. 28.ii.1954. «nearly dry waterfall and stream» // J. Delève det., 1965 *L. georyssoides* Gr. // *Leielmis georyssoides* (Grouvelle, 1890) D T Bilton det. 2016"; BMNH.

Leielmis gibbosus Bilton, 2017

Material examined

SOUTH AFRICA • 8 ex.; "Stn.No. 39 // Cape Province Swellendam, Wolfkloof,12.iii.1954. In mountain stream in deep gorge, 1500ft. // S.AFRICA: Cape Province, Swellendam District. J.Balfour-Browne B.M.1954-797 // J. Delève det., 1965 *L. georyssoides* (Grouv. // *Leielmis gibbosus* Paratype D T Bilton 2017 // David Bilton BMNH(E) 2018-143"; BMNH • 1 ex.; "♂ // Stn.No. 39 // Cape Province Swellendam, Wolfkloof,12.iii.1954. In mountain stream in deep gorge, 1500ft. // S.AFRICA: Cape Province, Swellendam District. J.Balfour-Browne B.M.1954-797 // Prépar. Genit. N°22265.1 // J. Delève det., 1965 *L. georyssoides* (Gr. // *Leielmis gibbosus* Paratype D T Bilton 2017 // David Bilton BMNH(E) 2018-143"; BMNH • 1 ex.; "Stn.No. 39 // S.AFRICA: Cape Province, Swellendam District. J.Balfour-Browne B.M.1954-797 // Cape Province Swellendam, Wolfkloof,12.iii.1954. In mountain stream in deep gorge, 1500ft. // J. Delève det., 1965 *L. georyssoides* (Gr. // *Leielmis gibbosus* Paratype D T Bilton 2017 // David Bilton BMNH(E) 2018-143"; BMNH • 1 ex.; "Stn.N°. 39. // In mountain stream in deep gorge,1500 ft // Swellendam, Wolfkoof. 12.iii.1954 // S.AFRICA: Cape Province, Swellendam District. J.Balfour-Browne B.M.1954-797 // J. Delève det., 1965 *L. georyssoides* (Gr. // *Leielmis gibbosus* Paratype D T Bilton 2017 // David Bilton BMNH(E) 2018-143"; BMNH • 1 ♂; "♂ // S.Africa Great Berg River Upper French Hock Forest Reserve // G.S.I.R.-StreamSurvey 81B 13. 9. 50 // J. Delève det., 1964h)] *L. georyssoides* Gr. // H.E. Hinton collection. B.M. 1977-566. // *Leielmis gibbosus* Paratype D T Bilton 2017"; BMNH • 2 ex.; "S.Africa Great Berg River Upper French Hock Forest Reserve // G.S.I.R.-StreamSurvey 81B 13. 9. 50 // J. Delève det., 1964h)] *L. georyssoides* Gr. // H.E. Hinton collection. B.M. 1977-566. // *Leielmis gibbosus* Paratype D T Bilton 2017"; BMNH.

Genus ***Leptelmis*** Sharp, 1888
Figs 2D, 5D, 8E, 12D, 14M

Leptelmis Sharp, 1888: 243.

Type species

Leptelmis gracilis Sharp, 1888.

Differential diagnosis

Leptelmis is characterized by the combination of the following characters: 1) body (Figs 2D, 8E) narrow, elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 2D, 5D, 8E) coarse to moderately smooth; anterolateral angles moderately produced; sides arcuate before and after lateral constriction; carinae absent; median groove absent; complete transverse impression in apical half; 4) surface of the elytra (Figs 2D, 8E) moderately smooth; sides subparallel in basal ⅔, then tapered into rounded apex; carinae absent; intervals markedly impressed, nearly flat to slightly raised; 5) prosternum moderately long in front of procoxae; anterior margin almost straight, laterally lowered without distinct indentation; prosternal process wide with broadly rounded apex (Fig. 12D); 6) legs with femora stout to almost spindle-shaped, tibiae without apical fringes, tarsal claws (Fig. 14M) with one basal tooth.

Similar genera

Leptelmis is closely related to *Stenelmis*, sharing the lack of cleaning fringe on the inner margin of the protibia and a similar body shape. However, it is distinguished by a pronotum constricted by a complete transverse impression in the apical half, the absence of a median groove, and longer legs.

Larva

First fully described and illustrated from Japan by Hayashi & Yoshitomi (2014).

Distribution

Widespread in Côte d'Ivoire, Democratic Republic of the Congo, Gabon, Ghana, Republic of the Congo, South Africa. New country records for Kenya, Sierra Leone, Angola, Ethiopia, Nigeria, Togo, Uganda and Zambia. Occurs also in the Indomalayan and Palaearctic regions.

Included Afrotropical species

Leptelmis amoena Delève, 1966; *Lep. collarti* (Delève, 1937); *Lep. costulata* Delève, 1942; *Lep. fragilis* Delève, 1966; *Lep. major* Delève, 1966; *Lep. orchymonti* Delève, 1942; *Lep. seydeli* Delève, 1966; *Lep. sobrina* Delève, 1974.

Leptelmis amoena Delève, 1966

Material examined

CÔTE D'IVOIRE • 1 ♂; "♂ // HOLOTYPUS // COLL. MUS. TERVUREN Côte d'Ivoire : Divo V.1964 J. Decelle // Holotype // Prépar. genit. N°84654 // J. Delève det., 1965 *Leptelmis amoena* n.sp"; MRAC.

Leptelmis collarti (Delève, 1937)

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 5 ex.; "SANZULU 4-4-26 A.COLLART // PARATYPE // J. Delève det., 1937 *Leptelmis Collarti* n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH • 1 ex.; "TYPE // SANZULU 4-4-26 A.COLLART // J. Delève det., 1937 *Leptelmis Collarti* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Leptelmis costulata Delève, 1942

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ex.; "TYPE // KAI Baku [Punctured]-VII-26 A.COLLART // J. Delève det., 1942 *L. costulatus* n.sp. Type // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Leptelmis fragilis Delève, 1966

Material examined

SOUTH AFRICA • 1 ♂; "♂ // Para- type // Waal-River-System Stn;V.D.21. 1075L 22.3.60 N.I.W.R. // Prépar,genit N°111263.4 // J. Delève det., 1964 *L. fragilis* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Leptelmis major Delève, 1966

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // COLL. MUS. CONGO Elisabethville (lumière) XI. 1951 – II. 1952 Ch. Seydel // Holotype // Prépar. genit. N°12864.2 // J. Delève det., 1964 *Leptelmis major* n.sp."; MRAC.

Leptelmis orchymonti Delève, 1942

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♀; "TYPE // FARADJE:8ESENGE 19. III. 30 A.COLLART // Riv. Dola Sur "moule,, // J. Delève det., 1942 *Lept. d'Orchymonti* n.sp. Type"; IRSNB.

Leptelmis seydeli Delève, 1966

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // COLL. MUS. CONGO Elisabethville (à la lumière) 1-III-52/30-IX.1953 Ch. Seydel // Holotype // Prépar. genit. N˚12864.1 // J. Delève det., 1964 *Leptelmis seydeli* n.sp"; MRAC.

Leptelmis sobrina Delève, 1974

Material examined

GHANA • 1 ♂; "♂ // Para- type // GHANA:Northern region Banda-nkwanta 150 m,N 8 22 – W 2 08 Dr. S. ENDRODY-YOUNGA // Nr.88 light trap 1-6.X.1965 // Prépar. genit. N˚211172.2 // J. Delève det., 1972 *Lept. sobrina* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Leptelmis sp.
Figs 2D, 5D, 8E, 12D, 14M

Material examined

ANGOLA • 1 ♂; "ANGOLA 1298m, Kangumbe, Lungué-Bungo River, 12.58449S,18.66771E; // 18-20.xi.2019, Uv LED, Matsumoto,K. leg. Okavango Wilderness Project, BMNH (E) 2020-30"; BMNH.

ETHIOPIA • 15 ex.; "ETHIOPIA – Illubador Region, Buno Bedele: dintorni di Bedele, alla luce- 29-30. VII.2002 A.Sforzi & L.Bartolozzi legit // Museo Zoologico «La Specola» num. Mag. 2484"; MZUF.

KENYA • 1 ♂; "Kenya Western Prov. Kakamega Forest N.R. 0.21, 1 N; 34.51 E 26.ix.2001, grassland 1600m, light trap 5 leg. L. Kühne & J.Holstein"; MFNB.

NIGERIA • 1 ex.; "Umuahia 3.ix.-4.x.1960 J.L. Gregory // C.E. Tottenham collection B.M. 1974-587."; BMNH.

SIERRA LEONE • 1 ♀; "SIERRA LEONE 1050m Loma Mountains Closed-canopy forest N09°10′35″; W11°05′25″ // 7-10.vi.16 Light Trap leg. Takano, Miles & Goff ANHRT 18: SL-001 BMNH(E) 2016-196"; BMNH • 1 ex.; "SIERRA LEONE 420m Loma Mountains farmland/forest mosaic N09°07′47″;W11°05′24″ 11-15.vi.16 Light Trap leg.Takano, Miles & Goff ANHRT 18: SL-001 BMNH(E) 2016-196"; illustrated in Figs 2D, 5D, 8E, 12D, 14M; BMNH.

TOGO • 1 ex.; "TOGO 505m Fazao-Malfakassa NP Mare aux crocodiles campsite Sudanian savannah/ dry forest 8°44′58.8″ N, 0°48′51.8″ E 26.viii-7.ix.2018. // Actinic light trap Aristophanous,M., Geiser,M., Moretto,P., Sanbena,B. leg. ANHRT: 2018.31, BMNH(E) 2018-148"; BMNH .

UGANDA • 1 ex.; "UGANDA: Mukuno Buikwe, Mubeya River 1141 m a.s.l. 00°20.000′N / 33°08.476′ E 01.12.09, leg. J.P. Obubu"; NHMW • 4 ex. «; "UGANDA: Mukuno Lugazi T/council Musamya riv. up-stream 1882 m a.s.l. 00°21.535′N / 32°58.399′ E 24. 11 09, leg. J.P. Obubu"; NHMW.

ZAMBIA • 22 ex.; "ZAMBIA 1460m Mutinondo Wilderness Area, Mpika, Northern Prov. 12°27′06″ S, 31°17′30″ E 14-17.ii.2019 // Actinic Light Trap Dérozier, V., Mulvaney, L., Takano, H. Leg. ANHRT:2019.4, BMNH(E) 2020-19"; BMNH.

Genus ***Lobelmis*** Fairmaire, 1898
Figs 2E, 5E, 8F, 12E, 14N, 15A

Lobelmis Fairmaire, 1898: 467.

Type species

Lobelmis cucullata Fairmaire, 1898.

Differential diagnosis

Lobelmis is characterized by the combination of the following characters: 1) body (Figs 2E, 8F) elongate; 2) antennae filiform; segments 7 and 9 enlarged; segment 11 longest (Fig. 15A); 3) surface of the pronotum (Figs 2E, 5E, 8F) alutaceous to smooth, micropunctured; anterolateral angles moderately produced; sides broadly arcuate; sublateral carinae short, reaching to basal ⅓; median groove absent; 4) surface of the elytra (Figs 2E, 8F) moderately smooth; sides subparallel in basal ⅔, then tapered into rounded apex; carinae absent; intervals nearly flat; 5) prosternum moderately short in front of procoxae; anterior margin laterally slightly lowered and indented; prosternal process moderately narrow with arrow-head apex (Fig. 12E); 6) legs with femora stout, tarsal claws (Fig. 14N) simple.

Remarks

Characterized by the enlargement of the 7th and 9th antennomeres, *Lobelmis* is a unique genus and seemingly the only genus in Elminae to show enlargement on any of the 3rd to 10th antennomeres.

Similar genera

Lobelmis has a broad body shape, wide pronotum, and simple tarsal claws, placing it close to *Pseudelmidolia*. However, it differs from *Pseudelmidolia* by its modified 7th and 9th segments of antennae, and its shorter prosternum.

Larva

Unknown.

Distribution

Known from Madagascar, Tanzania, Zimbabwe.

Known species

Lobelmis cucullata cucullata Fairmaire, 1898; *Lob. cucullata tanalana* Delève, 1964; *Lob. harrisoni* Delève, 1967; *Lob. lineicollis* (Fairmaire, 1902); *Lob. minuta* Delève, 1964; *Lob. odiosa* (Grouvelle, 1906); *Lob. subnigra* Grouvelle, 1906; *Lob. vicina* Delève, 1964.

Lobelmis harrisoni Delève, 1967
Fig. 12E

Material examined

ZIMBABWE • 3 ex.; "Csval 839 K // Bull. Sten. 11. 11. 59 // J. Delève det., 1964 *Lob. Harrisoni* n.sp // Para- type // H.E. Hinton collection. B.M. 1977-566."; illustrated in Fig. 12E; BMNH.

Lobelmis odiosa (Grouvelle, 1906)

Material examined

MADAGASCAR • 1 ex.; "Co- type // Madagascar (Sud) Fort-Dauphin Alluaud 1900 11 reverse: 1910. 220 // *Helmidolia odiosa*. Coty. Grouv"; BMNH.

Lobelmis subnigra Grouvelle, 1906
Figs 2E, 5E, 8F, 14N, 15A

Material examined

TANZANIA • 1 ♂, 1 ♀; "Co- type // AFRIQUE Orle ALLEMANDE // KILIMANDJARO (ZONE DES CULTURES) CH. ALLUAUD 1-IV 1904 // Grouvelle Coll. 1908-170 // *Lobelmis subnigra* Coty. Grouv"; illustrated in Figs 2E, 5E, 8F, 14N, 15A; BMNH.

Genus ***Ludyella*** Reitter, 1899
Fig. 16

Ludyella Reitter, 1899: 283.

Type species

Ludyella corticariiformis Reitter, 1899.

Differential diagnosis

Ludyella is characterized by the combination of the following characters: 1) body (Fig. 16A–D) elongate; 2) surface of the pronotum (Fig. 16A–D) alutaceous; anterolateral angles moderately produced; sides moderately arcuate; sublateral carinae feeble, reaching to ca basal ¼; median longitudinal groove thin and shallow; 3) surface of the elytra (Fig. 16A–D) alutaceous; sides subparallel in basal ⅔, then tapered into rounded apex; granulate sublateral carina on 6th interval; intervals nearly flat; 4) prosternum long in front of procoxae; anterior margin laterally lowered and indented; prosternal process moderately wide with arrow-head apex (Fig. 16B); 5) legs with femora stout, tarsal claws (Fig. 16C) simple.

Remarks

Antennae are missing in holotype. Characters are based on photographs of the holotype and redescription by Jäch (1983). The genus was erected for a single male specimen of *Lud. corticariiformis* from an unknown locality.

Similar genera

Ludyella closely resembles the genus *Helminthopsis* or its subgenus *Elmidoliana*, and it may even be synonymous with them. The only apparent difference is its longer prosternum; however, this feature has been examined in only a limited number of specimens from the latter two taxa. Jäch (1983) hypothesized a close relationship with *Lathridelmis*, as both genera share a similar pronotal structure, a granulate sublateral carina on the 6th interval, small body size, and a crenulate pronotal margin. Although they differ in elytral width, this variation could be explained by the loss of wings in one taxon and their retention in the other. The name *Lathridelmis* reflects its resemblance to the family Latridiidae, and the type species of *Ludyella*, *Lud. corticariiformis*, is likewise named for its likeness to the genus Corticaria from the same family. Both *Ludyella* and *Lathridelmis* have neatly arcuate pronotal sides, narrowed both apically and basally, creating a subglobular outline reminiscent of Corticaria. However, this and the other characters mentioned above fall well within the broad variability of *Helminthopsis*, and a proper revision of that genus is necessary to clarify the enigmatic position of *Ludyella*. The most striking difference

between *Lathridelmis* and *Helminthopsis* is the thick, rugose layer of plastron tomentum covering almost the entire body in the former. Although the type specimen of *Lud. corticariiformis* is not in the best condition, its cuticle appears closer to alutaceous than to that of *Lathridelmis*, and it seems to have yellow markings on the elytra - at least on the humeri - which is consistent with species of *Elmidoliana*.

Larva

Unknown.

Distribution

Unknown, arguably Afrotropical.

Known species

Ludyella corticariiformis Reitter, 1899.

Ludyella corticariiformis Reitter, 1899
Fig. 16

Material examined

UNKNOWN COUNTRY • 1 ♂; "Spanien ? // 33 // Ludy. n. g. // {unreadable texts} // Monotypus 1899 *Ludyella corticariiformis* Reitter // Coll. Reitter // *Ludyella corticarifor* mis m. 1899."; illustrated in Fig. 16; HNMH.

Genus ***Microdinodes*** Grouvelle, 1906 sensu stricto
Figs 2F, 5F, 8G, 12F, 14O, 15B, 18A

Microdinodes Grouvelle, 1906: 324.

Type species

Microdinodes quadrifasciatus Grouvelle, 1906.

Differential diagnosis

Microdinodes is characterized by the combination of the following characters: 1) body (Figs 2F, 8G) elongate; 2) antennae with segments 3–10 filiform; segment 11 longer (Fig. 15B); 3) surface of the pronotum (Figs 2F, 5F, 8G) alutaceous to moderately smooth; anterolateral angles moderately produced; sides arcuate; sublateral carinae indistinct to distinct, reaching behind basal half; prescutellar carinae indistinct to distinct, reaching to basal ¼; median groove indistinct to prominent; 4) surface of the elytra (Figs 2F, 8G) slightly coarse to moderately smooth; sides subparallel in basal ⅔, then tapered into rounded apex; granulate carinae absent to present in various combinations of 2nd to 8th intervals; intervals usually nearly flat; 5) prosternum moderately long in front of procoxae; anterior margin laterally lowered and indented; prosternal process moderately wide with rounded apex (Fig. 12F); 6) legs with spindle-shaped femora, tarsal claws (Fig. 14O) with one to two basal teeth; 7) ovipositor with long and moderately narrow coxites (Fig. 18A).

Remarks

The considerable variability within this genus suggests potential polyphyly, a notion supported by Delève (1965b), who proposed more than ten groups based primarily on male genitalia. Clear distinctions in the presence of sublateral and prescutellar carinae on the pronotum, along with the pronotal median groove and granulate carinae on the elytra, highlight the need for a thorough generic revision to clearly define the boundaries of this taxon.

Similar genera

Species of *Microdinodes* are characterized by spindle-shaped femora, a similar overall body form, and tarsal claws bearing at least one basal tooth. Although *Eumicrodinodes* also has spindle-shaped femora, it can be distinguished from *Microdinodes* by its distinctly wide prosternal process. *Microdinodes* shares some features with *Exolimnius*, but the latter can be reliably separated by its stouter femora and a longer prosternum. Delève (1965b) noted a close relationship between *Microdinodes*, *Aspidelmis*, and *Pseudelmidolia*, all of which share a similar pronotal sculpture, a comparable prosternal process, and thickened antennae. However, the latter two genera possess only simple tarsal claws, whereas *Microdinodes* has one or two basal teeth.

Larva

First described and illustrated as Helmiinae by Bertrand (1935), who later redescribed it (Bertrand 1962).

Distribution

Widespread in Angola, Cameroon, Democratic Republic of the Congo, Ethiopia, Gabon, Ghana, Guinea, Kenya, Liberia, Mozambique, Republic of the Congo, Rwanda, South Africa, Tanzania, Uganda, Zambia. New country records for Central African Republic, Côte d'Ivoire and Togo.

Known species

Microdinodes balfouri Delève, 1967; *M. basilewskyi* (Janssens, 1962); *M. bimaculatus* Delève, 1965; *M. blickenstaffi* Delève, 1973; *M. caelatus* Delève, 1965; *M. camerunensis* Delève, 1963; *M. dahli* Delève, 1963; *M. difficilis* Grouvelle, 1911; *M. discedens* Delève, 1965; *M. elegans* Delève, 1965; *M. gabonensis* Delève, 1972; *M. garambanus* Delève, 1963; *M. guineensis* Delève, 1965; *M. illustris* (Grouvelle, 1902); *M. imagineus* Delève, 1965; *M. insolitus* Delève, 1965; *M. jeanneli* Delève, 1946; *M. leleupi* Delève, 1965;,*M. lituratus* Delève, 1965; *M. marlieri* Delève, 1965; *M. melaenus* Grouvelle, 1906; *M. multimaculatus* Delève, 1965; *M. nigrolineatus* Delève, 1937; *M. obscurus* Delève, 1965; *M. octoguttatus* Delève, 1967; *M. ornatus* Grouvelle, 1911; *M. parallelus* Delève, 1946; *M. pilistriatus* Delève, 1965; *M. quadrifasciatus* Grouvelle, 1906; *M. quadrisignatus* Grouvelle, 1911; *M. sexualis* Delève, 1965; *M. similis* Delève, 1937; *M. simoni* (Grouvelle, 1895); *M. tarsalis* Delève, 1942; *M. tibialis* Delève, 1938; *M. transvaalicus* (Grouvelle, 1895); *M. troilus* Hinton, 1940; *M. venustus* Delève, 1965; *M. villiersi* Delève, 1967; *M. zambesinus* (Brancsik, 1914).

Microdinodes balfouri Delève, 1967

Material examined

ZAMBIA • 1 ♂; "♂ // Type // Holotype // N.RHODESIA: Mwinilunga District Ikelenge, nr. Kalene Zambezi Rapids // E. Pinhey 3.v.1963. M.V. Light trap. B.M.1963-742 // See slide Coll.No. // Prépar. Genit. N°6464.2 // J. Delève det., 1964 *Microdinodes balfouri* n.sp."; BMNH • 8 ♂♂; "♂ // Para- type // N.RHODESIA: Mwinilunga District Ikelenge, nr. Kalene Zambezi Rapids // E. Pinhey 3.v.1963. M.V. Light trap. B.M.1963-742 // J. Delève det., 1964 *M. balfouri* n.sp."; BMNH • 13 ♀♀; "♀ // Para- type // N.RHODESIA: Mwinilunga District Ikelenge, nr. Kalene Zambezi Rapids // E. Pinhey 3.v.1963. M.V. Light trap. B.M.1963-742 // J. Delève det., 1964 *M. balfouri* n.sp."; BMNH.

Microdinodes bimaculatus Delève, 1965,

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "TYPE // SANZULU 4-IV-26 A.COLLART // ♂ // J. Delève det., 1943 *M. bimaculatus* n.sp. ♂ Type. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Microdinodes blickenstaffi Delève, 1973

Material examined

CÔTE D'IVOIRE • 5 ex.; "IVORY COAST, 174m, Taï NP. Taï Research Station, 05°49′59.8″ N, 07°20′32.0″ W, 14–23.XI.2015, // Edwards Trap, Aristophanous,M., Moretto,P., Ruzzier,E., leg., BMNH(E) 2015–177"; BMNH.

LIBERIA • 2 ex.; "LIBERIA Suakoko X II-19 -51 // 6-9pm light trap Blickenstaff // BM. 1979-136 // PARATYPE // J. Delève det., 1976 *M. blickenstaffi* n.sp."; BMNH • 1 ♀; "♀ // LIBERIA Suakoko X II-19 -51 // 6-9pm light trap Blickenstaff // BM. 1979-136 // PARATYPE"; BMNH • 1 ex.; "Suakoko,Liberia II -26 - 52 // C C Blickenstaff // BM. 1979-136 // PARATYPE"; BMNH • 50 ex.; "LIBERIA 140m Krahn-Bassa Reserve, 7.5km SW Pellokon Town, Juboe River, Sinoe County, 5°39′4″ N; 8°39′4″ W // 14–20.i.2018 MV Light trap (125W). Geiser, M., Sáfián, Sz., & Simonics, G., leg. ANHRT 28, LR–001, BMNH(E) 2018–39"; BMNH • 1 ex.; "LIBERIA, 230m, Zuwulor Village School, Lofa county, 7°54′52″ N, 9°31′08″ W, 8.xi.2017, // Light trap (blended bulb 250W), Aristophanous, M., Sáfián, Sz., Simonics, G., & Smith, L., leg., ANHRT 28, LR–001, BMNH(E) 2018–39"; BMNH.

Microdinodes camerunensis Delève, 1963

Material examined

CAMEROON • 1 ♂; "♂ // Para- type // Cameroun – 1949-50 13|12 – 222 Lok. R.F.Nyong. loc. 174 J.B.-S. J.D. // 13862.4 // J. Delève det., 1962 *Micr. camerunensis* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Microdinodes dahli Delève, 1963

Material examined

CAMEROON • 1 ♂; "♂ // Para- type // Cameroun – 1949-50 13|12 – 222 Lok. R.F.Nyong. loc. 174 J.B.-S. J.D. // 3862.4 // J. Delève det., 1962 *Micr. dahli* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Microdinodes difficilis Grouvelle, 1911

Material examined

KENYA • 1 ♂; "♂ // KENYA Camp 1 de l'Elgon M' ELGON, VERS' EST 2.100 m. // MUSÉUM DE PARIS Mission de l'Omo C.ARAMBOURG P.-A.CHAPPUIS & R. JEANNEL 1932-1933 // Prépar. genit. N°271063.3 // J. Delève det., 1938 *Microdinodes difficilis* Gr. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Microdinodes discedens Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // I.R.S.A.C.-MUS. CONGO Kivu: T. Kalehe, Bitale, riv. Tshibaya 2.000 m 30-III-1950 // TYPE // Prépar.genit N°191163.4 // J. Delève det., 1964 *Microdinodes discedens* n.sp Type"; MRAC.

Microdinodes elegans Delève, 1965

Material examined

ANGOLA • 1 ♂; "♂ // Para- type // Angola // Mucologe (r) 9. VII. 57 A.21 H. Bertrand // Prépar.genit N°251163.2 // J. Delève det., 1963 *Micr. elegans* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Microdinodes garambanus Delève, 1963

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // Congo belge, P. N. G. Miss. H. De Saeger I/a/1, 1-v-1950 Réc. G. Demoulin. 471 // COLL. MUS. CONGO. (ex coll. I. P. N. C. B.) // TYPE TY // Prép. 151062/3 // J. Delève det., 162 *Microdinodes garambanus* n.sp. Type"; MRAC.

Microdinodes guineensis Delève, 1965

Material examined

GUINEA • 1 ♀; "♀ // Para- type // Guinee Chute du Tinkisso 26. II. 1957 // H. Bertrand // Prépar. genit N˚28164.1 // J. Delève det., 1964 *Microd. Guineensis* n.sp // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Microdinodes illustris (Grouvelle, 1902)

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // TYPE // Kinchassa 28.5.97 Waelbroeck // *Helmis illustris* Ty. Grouv // Déterm. Grouvelle // Prépar.genit N°17164.1"; IRSNB.

Microdinodes imagineus Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // I.R.S.A.C.-MUS.CONGO Kivu : Uvira, riv Mugadja 25.XI.1949 G. Marlier // TYPE // Prépar. genit. N°191163.7 // J. Delève det., 1963 *Microdinodes imagineus* n.sp Type"; MRAC.

Microdinodes insolitus Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // I.R.S.A.C.-MUS.CONGO Kivu: Terr. Kalehe, Bitale Bunyakiri, Affl. Tshingan- da, russ.Asulu, 1200m. G. Marlier III-1950 // TYPE // Prépar.genit N°191163.5 // J. Delève det., 1963 *Microdinodes insolitus* n.sp. Type"; MRAC.

Microdinodes jeanneli Delève, 1946

Material examined

KENYA • 1 ♂; "♂ // PARATYPE // KENYA Camp 1 de l'Elgon M' ELGON, VERS' EST 2.100 m. // MUSÉUM DE PARIS Mission de l'Omo C.ARAMBOURG P.-A.CHAPPUIS & R. JEANNEL 1932-

1933 // Prépar.genit N°271063.1 // J. Delève det., 1938 *Microdinodes jeanneli* n.sp. ♂ // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Microdinodes leleupi Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // Dans humus en forêt // I.R.S.A.C.-MUS.CONGO Kivu : Terr.Kabare, Lwiro 2000/2200 m. IX-1953 N.Leleup // Prépar.genit. N°191163.8 // TYPE // J. Delève det., 1963 *Microdinodes leleupi* n.sp"; MRAC.

Microdinodes lituratus Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♀; "♀ // I.R.S.A.C.-MUS.CONGO Kivu : riv. Natulonge, terr. Rizi I-1957 N. Leleup // Prépar.genit N°16164.15 // J. Delève det., 970 *Microdinodes lituratus* Dlve"; MRAC.

Microdinodes marlieri Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // I.R.S.A.C.-MUS. CONGO Kivu : R. Nyabarongo, 56 km. Cost, 1600 m. 16-XII-1950 G. Marlier // TYPE // Prépar. genit N°261062.3 // J. Delève det., 1963 *Microdinodes marlieri* n.sp. Type"; MRAC.

Microdinodes multimaculatus Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♀; "♀ // Para- type // Tshuapa: Terr. Ikela riv. Lukendo, IX.1959 B. 103 N. Leleup // Humus en forêt marecageuse // J. Delève det., 1964 *Microd. Multimaculatus* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

ZAMBIA • 1 ex.; "ZAMBIA, 1400m, Hillwood, Ikelenge 11°16′02″ S, 24°18′59″ E 30.x–3.xi.2017. Actinic Light Trap. // Carter, M., Lloyd, A., Miles, W., Oram, D., Smith,R. leg. ANHRT: 2017:27, ZM–011 BMNH(E) 2017–194"; BMNH.

Microdinodes nigrolineatus Delève, 1937
Fig. 18A

Material examined

ANGOLA • 4 ex.; "at light // ANGOLA (A26) Salazar, I.I.A.A. 9–15.iii.1972 // Southern African Exp. B.M.1972–1"; BMNH.

CAMEROON • 1 ex.; "CAMEROON N-W prov. Wum VILL. env., UV light 6°23′10″ N, 10°04′59″ E 10.xii. 2010 local collector BMNH(E)2016–44 // NHMUK014377678"; BMNH.

DEMOCRATIC REPUBLIC OF THE CONGO • 4 ex.; "MADUDA 1-25 A.COLLART // PARATYPE // J. Delève det., 1937 *Microd. nigrolineatus* n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH

• 1 ex.; “MADUDA 1-25 A.COLLART // PARATYPE // J. Delève det., 1937 *M. nigrolineatus* n.sp. // H.E. Hinton collection. B.M. 1977-566.”; BMNH • 12 ex.; “Coll. Mus. Tervuren Mayumbe : Kai-Mbaku (á la lampe) 3.V.1970 P.M. Elsen”; MRAC.

SIERRA LEONE • 21 ex.; “Sierra Leone , 80m, Kalainkay nr. Kamabai Northern Prov. 3–6.xi.15; N09°10′52″; W11°56′ 44″ Light Trap, R.Goff coll. Leg. Smith.R & Takano.H, BMNH(E) 2016–197”; BMNH.

TOGO • 18 ex.; “TOGO 415m Fazao-Malfakassa NP Point de vue campsite Sudanian savannah 8°48′50″ N, 0°49′3.2″ E 16–23.viii.2018. // MV light trap Aristophanous,M., Geiser,M., Moretto,P., Sanbena,B. leg. ANHRT: 2018. 31, BMNH(E) 2018–148”; illustrated in Fig. 18A; BMNH.

Microdinodes obscurus Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; “♂ // HOLOTYPE // MUS.ROY.AFR.CENTR. Kivu: ruisseau Mihomba 24-I.1960 (R. Kiss) // TYPE // Prépar. genit. N°16164.9 // 129 f // J. Delève det., 1964 *Microdinodes obscurus* n.sp. Type”; MRAC.

Microdinodes octoguttatus Delève, 1967

Material examined

REPUBLIC OF THE CONGO • 1 ♂; “♂ // Para- type // BRAZZAVILLE CONGO II-1964 // MUSÉUM PARIS MISSION A. DESCARPENTRIES ET A. VILLIERS 1963-1964 // J. Delève det., 1965 *Microdinodes octoguttatus* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève”; IRSNB.

Microdinodes pilistriatus Delève, 1965

Material examined

SOUTH AFRICA • 1 ♂; “♂ // 1061 g // J. Delève det., 1964 *Micr. pilistriatus* n.sp // Para- type // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève”; IRSNB.

Microdinodes quadrifasciatus Grouvelle, 1906
Figs 2F, 5F, 8G, 12F, 14O, 15B

Material examined

TANZANIA • 1 ex.; “SYN- TYPE // AFRIQUE ORLE ALLEMANDE KILIMANDJARO (ZONE DES CULTURES) CH. ALLUAUD I-IV 1904 // *microdinodes* 4.*fasciatus* coty. Grouv”; illustrated in Figs 2F, 5F, 8G, 12F, 14O, 15B; BMNH.

Microdinodes sexualis Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; “♂ // HOLOTYPUS // I.R.S.A.C.-MUS.CONGO Kivu: Riv. Luvimvi, près Nyakasiba G. Marlier 25-VII-1955 // TYPE // Prépar.genit N°231163.2 // J. Delève det., 1964 Type *Micr. sexualis* n.sp.”; MRAC.

Microdinodes similis Delève, 1937

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ex.; "Samba 2.12.23 // Para- type // J. Delève det., 1937 *M. similis* n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH.

Microdinodes simoni (Grouvelle, 1895)

Material examined

CÔTE D'IVOIRE • 1 ex.; "IVORY COAST, 174m, Taï NP. Taï Research Station, 05°49′59.8″ N, 07°20′32.0″ W, 14–23.XI.2015, // Edwards Trap, Aristophanous,M., Moretto,P., Ruzzier,E., leg., BMNH(E) 2015–177"; BMNH.

MOZAMBIQUE • 6 ex.; "MOZ: SOFALA, Chitengo campsite, P.N.G., 18°58′34″ S 34°20′59″ E, 40m, 1-3.V.2017 F. & J. Génier, open savanna clay soil, ex light trap, 2017-35"; CMN.

NIGERIA • 1 ex.; "COLL. MUS, TERVUREN Nigeria : Zaria á la lampe 1969 Dr H. Roberts"; MRAC.

ZAMBIA • 62 ex.; "ZAMBIA 350m Luangwa, Redcliff Zambezi Lodge (Mopane Woodland) 15°38′34.2″ S, 30°16′32.9″ E 11-17.iii.2019 // Lepiled Light Trap. Derozier, V., Imakando, M., Miles, W., Mulvaney, L. Leg ANHRT: 2019.5, BMNH(E) 2020-19"; BMNH, MRAC, IRSNB, NMW.

Microdinodes tarsalis Delève, 1942

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // TYPE // MADUDA 4-VI-26 A. COLLART // Prépar.genit N°271063.6 // J. Delève det., 1943 *Micr. tarsalis* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Microdinodes tibialis Delève, 1938

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // M. TYPE ♂ tibialis // MUSÉE DU CONGO Stanleyville a Kilo L. Burgeon // R. DÈT B 1402 // R. DÈT E 3463 // *Microdinodes tibialis* nov.sp. // Prépar.genit N°16164.4 // J. Delève det., 1938 *Microdinodes tibialis* n.sp. ♂"; MRAC.

Microdinodes troilus Hinton, 1940

Material examined

ETHIOPIA • 1 ♂; "Type // Abyssinia: Small stream, Djem-Djem Forest. 8,000 ft.-10.x.1926. J.Omer Cooper. // *Microdinodes troilus* Hinton Type"; BMNH • 1 ♀; "♀ // Para- type // Abyssinia: Small stream, Djem-Djem Forest. 8,000 ft.-10.x.1926. J.Omer Cooper. // *Microdinodes troilus* Hinton P-type"; BMNH • 1 ex.; "Para- type // Abyssinia: Small stream, Djem-Djem Forest. x.1926. J.Omer-Cooper. // *Microdinodes troilus* Hinton P-type"; BMNH.

Microdinodes venustus Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // Dans humus en forêt // I.R.S.A.C.-MUS.CONGO Kivu : Terr. Masisi, 800 m, Mutakato IX-1953 N. Leleup // TYPE // Prépar. genit. N°231163.10 // J. Delève det., 1964 *Microd.* Type *venustus* n.sp"; MRAC.

Microdinodes villiersi Delève, 1967

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // Para- type // ODZALA CONGO OCTOBRE // MUSÉUM PARIS MISSION A. DESCARPENTRIES ET A. VILLIERS 1963-1964 // Prépar. genit. N°13265.12 // J. Delève det., 1965 *Micr. villiersi* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Microdinodes sp.

Material examined

CENTRAL AFRICAN REPUBLIC • 1 ♂; "CENTRAL AFRICAN REP MAMBERE KADEI prov. CARNOT-Gadzi road 15 km E CARNOT, 5.-6.6.2009 600m, A. Kudma JR. lgt."; NMPC.

Subgenus ***Paramicrodinodes*** Delève, 1965
Figs 2G, 5G, 8H, 12G, 14P, 18B

Paramicrodinodes Delève, 1965b: 51.

Type species

Microdinodes vaalensis Delève, 1965.

Differential diagnosis

Paramicrodinodes is characterized by the combination of the following characters: 1) body (Figs 2G, 8H) elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 2G, 5G, 8H) alutaceous to smooth; anterolateral angles moderately produced; sides arcuate; sublateral carinae indistinct; prescutellar carinae indistinct; median longitudinal groove moderately wide and deep; 4) surface of the elytra (Figs 2G, 8H) moderately smooth; sides subparallel in basal ⅔, then tapered into rounded apex; carinae absent; intervals nearly flat; 5) prosternum moderately short in front of procoxae; anterior margin laterally lowered and indented; prosternal process moderately wide with rounded apex (Fig. 12G); 6) legs with spindle-shaped femora, tarsal claws (Fig. 14P) with two basal teeth; 7) ovipositor with moderately short and wide coxites (Fig. 18B).

Similar genera

The subgenus differs from *Microdinodes* s.add space (see EJT list of abbreviations) s. str. by a reduced ovipositor, with shorter and broader coxites, similar to *Pseudelmidolia* and reminiscent of most genera of Larainae. Otherwise, it falls within the great variability observed within the genus.

Larva

Unknown.

Distribution

So far known from Madagascar, South Africa. New country records for Kenya, Tanzania and Zambia.

Known species

Microdinodes vaalensis Delève, 1965.

Microdinodes* (*Paramicrodinodes*) *vaalensis Delève, 1965
Figs 2G, 5G, 8H, 12G, 14P, 18B

Material examined

KENYA • 1 ex.; "KENYA, TSAWO West National Park, near Kitani Lodge // Hung.Sci.Africa. Exp. "Teleki" 14.IV.1988. No. 265 leg. A.Vojnits"; HNHM.

SOUTH AFRICA • 1 ♀; "Natal Bishmans R. 3. 2. 56 // Buo 28 R 7 // J. Delève det., 1965 *Paramicrodinodes vaalensis* Dlve"; illustrated in Fig. 18B; BMNH.

TANZANIA • 1 ex.; "Tanzania TZ 2014 S Ikwiri exv. Rufiji riv. 7.2. [E 038°40.252′ S 07°53.591′] Leg. L. Bureš"; LMPC.

ZAMBIA • 1 ♂; "ZAMBIA 1300m Nyangombe Falls Miombo/riverine forest mosaic 11°48′25″ S, 24°32′12″ E 15-17.xi.2018. // Actinic light trap Aristophanous,M., Derozier,V., Laszlo, G., Oram, D. leg. ANHRT: 2018.40, BMNH(E) 2019-90"; illustrated in Figs 2G, 5G, 8H, 12G, 14P; BMNH.

Genus ***Pachyelmis*** Fairmaire, 1898
Figs 2H, 5H, 9A, 12H, 14Q

Pachyelmis Fairmaire, 1898: 467.

Type species

Pachyelmis validipes Fairmaire, 1898.

Differential diagnosis

Pachyelmis is characterized by the combination of the following characters: 1) body (Figs 2H, 9A) compact, obovate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 2H, 5H, 9A) moderately smooth, lateraly granulose; lateral margin serrate; anterolateral angles feebly produced; sides broadly arcuate narrowing to prolonged anterior margin; sublateral carinae almost complete; prescutellar carinae absent; median groove absent; 4) surface of the elytra moderately smooth; sides broadly arcuate, widest in the middle, then tapered into rounded apex; granulate sublateral carinae on 5th and 7th intervals, 3rd interval sometimes carinate at base or almost complete; intervals nearly flat to raised, partly diminished; sometimes with gibbosities (Figs 2H, 9A); 5) prosternum short in front of procoxae; anterior margin laterally lowered, without distinct indentation; prosternal process markedly wide, sides subparallel at base, apically widened into broadly rounded apex with wide medial projection (Fig. 12H); 6) legs with femora stout, tarsal claws (Fig. 14Q) simple.

Similar genera

An obovate body and long sublateral carinae on the pronotum place *Pachyelmis* close to *Helminthocharis* and *Sphragidelmis*. It can be distinguished from *Helminthocharis* by its markedly broader prosternal process. In contrast to *Sphragidelmis*, it has longer sublateral carinae on the pronotum and lacks prescutellar, arcuately diverging carinae.

Larva

Described and illustrated by Bertrand (1962).

Distribution

Widespread in Angola, Cameroon, Côte d'Ivoire, Democratic Republic of the Congo, Ghana, Kenya, Liberia, Madagascar, Republic of the Congo, Rwanda, South Africa, Tanzania, Uganda, Zimbabwe. New country records for Sierra Leone, Togo and Zambia.

Known species

Pachyelmis aemula Delève, 1964; *Pac. aequata* Delève, 1967; *Pac. alluaudi* Delève, 1963; *Pac. amaena* Grouvelle, 1906; *Pac. basilewskyi* Delève, 1956; *Pac. bertrandi* Delève, 1964; *Pac. bigibbulosa* Delève, 1973; *Pac. capuroni* Delève, 1963; *Pac. collarti* Delève, 1964; *Pac. convexa convexa* Grouvelle, 1911; *Pac. convexa janssensi* Delève, 1964; *Pac. distinguenda* Delève, 1938; *Pac. fairmairei* (Grouvelle, 1899); *Pac. gibba* Grouvelle, 1911; *Pac. grouvellei* (Zaitzev, 1908); *Pac. ingens* Grouvelle, 1906; *Pac. interstitialis interstitialis* Fairmaire, 1902; *Pac. interstitialis meridionalis* Delève, 1963; *Pac. madudana* Delève, 1937; *Pac. manca* Delève, 1938; *Pac. obesa* Delève, 1964; *Pac. obliqua* Grouvelle, 1906; *Pac. obscura* obscura Delève, 1963; *Pac. obscura minor* Delève, 1963; *Pac. persimilis* Delève, 1974; *Pac. quadricarinata* Delève, 1964; *Pac. regimbarti* Grouvelle, 1906; *Pac. rubripes* (Fairmaire, 1898); *Pac. rufomarginata* Delève, 1964; *Pac. rufula* Delève, 1963; *Pac. securigera* Delève, 1974; *Pac. schoutedeni* Delève, 1938; *Pac. silvatica* Grouvelle, 1906; *Pac. tibialis* Delève, 1968; *Pac. upembana* Delève, 1955; *Pac. validipes* Fairmaire, 1898.

Pachyelmis aequata Delève, 1967

Material examined

REPUBLIC OF THE CONGO • 1 ex.; "Soil-Zoological Exp. Congo-Brazzaville Lefinte reservation bungalow near Mpo // 6.1.1964. No 589 by lamplight leg. Endródy-Younga // J. Delève det., 1966 *Pach. aequata* n.sp. // Paratypus // H.E. Hinton collection. B.M. 1977-566."; BMNH.

Pachyelmis basilewskyi Delève, 1956

Material examined

RWANDA • 1 ex.; "HOLOTYPUS // COLL. MUS. CONGO Ruanda : Rutovu, for du Rugege, 2350 m, P.Basilewsky20/23-I-53 // J. Delève det., 1955 *Pachyelmis Basilewskyi* n.sp. Type"; MRAC.

Pachyelmis bigibbulosa Delève, 1973

Material examined

LIBERIA • 2 ex.; "Suakoko,Liberia II -26 - 52 // C C Blickenstaff // BM. 1979-136 // PARATYPE *Pachyelmis bigibbulosa* Deleve"; BMNH • 4 ex.; "LIBERIA Suakoko XII-19 -51 // 6-9pm light trap Blickenstaff // BM. 1979-136 // PARATYPE *Pachyelmis bigibbulosa* Deleve"; BMNH • 3 ex.; "LIBERIA Suakoko 18 Nov52 Blickenstaff // BM. 1979-136 // PARATYPE *Pachyelmis bigibbulosa* Deleve"; BMNH • 1 ex.; "LIBERIA Suakoko XII-19-51 // 6-9pm light trap Blickenstaff // BM. 1979-136 // PARATYPE *Pachyelmis bigibbulosa* Deleve"; BMNH • 2 ex.; "LIBERIA 140m Krahn-Bassa Reserve, 7.5km SW Pellokon Town, Juboe River, Sinoe County, 5°39′4″ N; 8°39′4″ W // 14-20.i.2018 Edwards trap Geiser, M., Sáfián, Sz., & Simonics, G., leg. ANHRT 28, LR-001, BMNH(E) 2018-39"; BMNH.

Pachyelmis collarti Delève, 1964

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ex.; "Singa Kondo (Mayumbe) 27. VI. 26 // Riv. Butani // J. Delève det., 1943 *Pach. Gibba* Grouv // Prépar. genit. N°2364.1 // J. Delève et., 1964 Pach. collarti n.sp. Type"; IRSNB.

Pachyelmis convexa janssensi Delève, 1964

Material examined

TANZANIA • 1 ♂; "♂ // HOLOTYPUS // COLL. MUS. CONGO Tanganyika Terr.: Bunduki Uluguru Mts., moy. Mgeta 1300 m. 30-IV/11-V-1957 // Mission Zoolog. I.R.S.A.C. en Afrique orientale (P. Basilewsky et N. Leleup) // E.Janssens det., 1959 *Pachyelmis gibba* Grouvelle // TYPE // Prépar. genit. N°26264.1 // J. Delève det., 1964 *Pach. convexa* Type *janssensi* subspn."; MRAC.

Pachyelmis distinguenda Delève, 1938

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // TYPE P. *distin- guenda* // MUSÉE DU CONGO Kasai : Ngombe 16-XI-1921 Dr H. Schouteden // *Pachyelmis distinguendus* nov.sp. // R. DÉT S 1401 // R. DÉT Q 3463 // Prépar. genit. N°222642 // J. Delève det., 1938 *Pach. distinguenda* n.sp. Type"; MRAC.

Pachyelmis madudana Delève, 1937

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 2 ex.; "PARATYPE // MADUDA -1-25 A.COLLART // J. Delève det., 1937 *Pach. madudana* n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH.

Pachyelmis manca Delève, 1938

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♀; "♀ // HOLOTYPE // TYPE *P. manca* // MUSÉE DU CONGO Kasai : Ngombe 16-XI-1921 Dr H. Schouteden // R. DÉT N 3463 // R. DÉT 1955 Q // Prépar. genit. N°222649 // J. Delève det., 1938 *Pachyelmis manca* n.sp. Type"; MRAC.

Pachyelmis persimilis Delève, 1974,

Material examined

GHANA • 1 ♂; "♂ // Para- type // GHANA: Ashanti region Kwadaso 320 m,N 6 42 – W 1 39 Dr. S. ENDRODY-YOUNGA // Nr. 345 black light 5.V.1969 // J. Delève det., 1972 *Pachyelmis persimilis* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pachyelmis regimbarti Grouvelle, 1906

Material examined

MADAGASCAR • 1 ♂; "MADAGASCAR, 2007, Lakato env., near Andasibe-Mantadia N.P., M. Trýzna leg., 9.-10.i. BMNH{E} 2010-29 // *Pachyelmis regimbarti* Grouvelle, 1906 ♂ K. Matsumoto det. 2019"; BMNH.

Pachyelmis rufomarginata Delève, 1964

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // COLL. MUS. CONGO Elisabethville (à la lumière) 1-III-52/30-IX.1953 Ch. Seydel // TYPE // Prépar. genit. N˚41263.2 // J. Delève det., 1964 *Pach. rufomarginata* Type n.sp."; MRAC.

Pachyelmis upembana Delève, 1955,

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // Congo belge : P.N.U. Gorges de la Pelenge (1.150 m.) 28-v-1947 Mis. G. E. de Witter. 435a // TYPE // Prépar. genit. N°3364.1 // J. Delève det., 1953 *Pach. upembana* n.sp Type"; MRAC.

Pachyelmis sp.
Figs 2H, 5H, 9A, 12H, 14Q

Material examined

SIERRA LEONE • 1 ex.; "Sierra Leone , 80m, Kalainkay nr. Kamabai Northern Prov. 3-6.xi.15; N09°10′52″; W11°56′ 44″ Light Trap, R.Goff coll. Leg. Smith.R & Takano.H, BMNH(E) 2016-197"; illustrated in Figs 2H, 5H, 9A, 12H, 14Q; BMNH.

TOGO • 1 ex.; "TOGO: Reg. Plateaux Pref. Kloto, forèt de Missahoé 9.II.2006, leg. Komarek & Hounguè (27) // 06°56′52.3″ N 00°35′49.0″ E ca. 300 m a.s.l. waterfall in primary forest."; NHMW • 1 ex.; "TOGO: Reg. Plateaux Pref. Kloto, Kpalimé near Hoyoh, 9.II.2006, leg. Komarek & Hounguè (26) // 06°56′58.9″ N 00°35′18.0″ E ca. 300 m a.s.l. small shallow stream"; NHMW.

ZAMBIA • 10 ex.; "ZAMBIA, 1340m Jiwundu Swamp 11°51′54″ S, 25°33′20″ E 25-30.x.2017. Edwards' Trap. // Carter, M., Lloyd, A., Miles,W., Oram, D., Smith, R. leg. ANHRT: 2017:27, ZM-011 BMNH(E) 2017-194"; BMNH.

Genus ***Peloriolus*** Delève, 1964
Figs 2I, 5I, 9B, 12I, 14R, 17

Peloriolus Delève, 1964: 161.

Type species

Peloriolus granulosus Delève, 1964.

Differential diagnosis

Peloriolus is characterized by the combination of the following characters: 1) body (Figs 2I, 9B) elongate to obovate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum

(Figs 2I, 5I, 9B) moderately smooth, granulose; lateral margin in some species serrate; anterolateral angles feebly to moderately produced; sides subparallel in basal ⅓ then broadly narrowing from base to prolonged anterior margin ; sublateral carinae indistinct to distinct in basal ⅓; median groove absent; 4) surface of the elytra (Figs 2I, 9B) granulose; sides subparallel in basal ⅔, then tapered into rounded apex; carinae absent or present basally; intervals nearly flat to slightly raised; 5) prosternum moderately short in front of procoxae; anterior margin medially broadly emarginate, laterally slightly lowered, without distinct indentation; prosternal process moderately wide with rounded apex (Fig. 12I); 6) legs with femora stout, tarsal claws (Fig. 14R) simple.

Similar genera

Peloriolus could be confused with *Leielmis* due to their smaller, compact body size, mostly simple pronotum, and similar moderately short, medially emarginate prosternum with a wide prosternal process. However, the sides of the pronotum in *Peloriolus* are subparallel in the basal third before narrowing to the prolonged anterior margin, whereas in *Leielmis*, the sides broadly narrow from the base.

Larva

Described and illustrated by Bertrand (1962) as Helmiinae genus S 3.

Distribution

Currently endemic to South Africa; previously reported from Saint Helena, where it is extinct. The record from Angola is omitted (see Discussion).

Known species

Peloriolus brunneus (Waterhouse, 1879); *Pel. costulatipennis* Delève, 1964; *Pel. difficilis* Delève, 1970; *Pel. granulosus* Delève, 1964; *Pel. interstitialis* Delève, 1970; *Pel. parvulus* Delève, 1964; *Pel. patruelis* Delève, 1966; *Pel. pilosellus* Delève, 1966.

Peloriolus brunneus (Waterhouse, 1879)
Fig. 17

Material examined

SAINT HELENA • 2 ex.; "79·34 [Under card] // Type // St. Helena <3730> // *Elmis brunneus* (Type) F.Waterh. // *Peloriolus brunneus* viol. Jäch '13"; illustrated in Fig. 17; BMNH.

Peloriolus costulatipennis Delève, 1964

Material examined

SOUTH AFRICA • 1 ♂; "♂ // C.S.I.R.-Stream Survey 6AA // S.Africa Great Berg River bove Groot Drakenstein // J. Delève det., 1964 *P. costulatipennis* Del. // H.E. Hinton collection B.M. 1977-566"; BMNH.

Peloriolus granulosus Delève, 1964
Figs 2I, 5I, 9B, 12I, 14R

Material examined

SOUTH AFRICA • 1 ♂; "♂ // Stn.No. 30 // S.AFRICA: Cape Province Somerset West District J.Balfour-Browne B.M.1954-798 // Steenbras Dam 19.iii.1954 in damp trickles on stream bed 1600ft // Prépar. genit. N°21164.6 // J. Deleve det., 1965 *Peloriolus granulosus* Delève"; illustrated in Figs 2I,

5I, 9B, 14R; BMNH • 1 ♂; "♂ // Stn.No. 39 // Cape Province Swellendam Wolfkloof,12.iii.1954. In mountain stream in deep gorge, 1500 ft. // S.AFRICA: Cape Province Swellendam District. J.Balfour-Browne. B.M.1954-797. // Prépar. genit. N°21165.1 // J. Delève det., 965 *Peloriolus granulosus* Dlve"; illustrated in Fig. 12I; BMNH • 1 ex.; "555B S.Africa Great Borg River French Hook Forest Reserve 17. 9. 52 // J. Deleve det., 1964 *P granulosus* Del. // H.E. Hinton collection. B.M.1977-566."; BMNH • 2 ex.; "6AA S.Africa Great Borg River French Hook Forest Reserve 24. 5. 50 // J. Deleve det., 1964 P.granulosus Del. // H.E. Hinton collection. B.M.1977-566."; BMNH • 1 ♀; "♀ // S.Africa Great Borg River French Hook Forest Reserve 24. 5. 50 6AA // J. Deleve det., 1964 *P. granulosus* Del. // H.E. Hinton collection. B.M.1977-566."; BMNH • 1 ♂; "♂ // S.Africa Great Borg River French Hook Forest Reserve 24. 5. 50 6AA // J. Deleve det., 1964 *P. granulosus* Del. // H.E. Hinton collection. B.M.1977-566."; BMNH.

Peloriolus parvulus Delève, 1964

Material examined

SOUTH AFRICA • 2 ♂; "2 ♂ (BMNH): "♂ // 1256 S.Africa Great Berg River French Hoek Forest Reserve 30. 10. 50 // J. Delève det., 1964 *P. parvulus* Del. // H.E. Hinton collection. B.M. 1977-566"; BMNH • 1 ♀; "♀ // 1256 S.Africa Great Berg River French Hoek Forest Reserve 30. 10. 50 // J. Delève det., 1964 *P. parvulus* Del. // H.E. Hinton collection. B.M. 1977-566"; BMNH.

Peloriolus patruelis Delève, 1966

Material examined

SOUTH AFRICA • 1 ♂; "Type // ♂ // Stn.No. 39 // S.AFRICA: Angola. Hulia District. J.Balfour-Browne. B.M.1954-797. // Cape Province. Swellendam. Wolfkloof, 12.III.1954. In mountain stream In deep gorge, 1500ft. // Prépar. Genit. N°21165.4 // J. Delève det., 1965 *Peloriolus patruelis* n.sp"; BMNH • 1 ♂; "Para- Type // ♂ // Stn.No. 39 // Cape Province. Swellendam. Wolfkloof, 12.III.1954. In mountain stream In deep gorge, 1500ft. // S.AFRICA: Angola. Hulia District. J.Balfour-Browne. B.M.1954-797. // Prépar. Genit. N°21165.3 // J. Delève det., 1965 *Peloriolus patruelis* n.sp"; BMNH • 1 ♀; "Para- Type // ♀ // Stn.No. 39 // Cape Province. Swellendam. Wolfkloof, 12.III.1954. In mountain stream In deep gorge, 1500ft. // S.AFRICA: Angola. Hulia District. J.Balfour-Browne. B.M.1954-797. // Prépar. Genit. N°21165.3 // J. Delève det., 1965 *Peloriolus patruelis* n.sp"; BMNH.

Genus ***Pseudancyronyx*** Bertrand & Steffan, 1963
Figs 3A, 6A, 9C, 13A, 14S

Pseudancyronyx Bertrand & Steffan, 1963: 829.

Type species

Ancyronyx quadriguttatus Delève, 1937.

Differential diagnosis

Pseudancyronyx is characterized by the combination of the following characters: 1) body (Figs 3A, 9C) elongate; 2) antennae compact; segments 3–11 filiform; 3) surface of the pronotum (Figs 3A, 6A, 9C) smooth to glabrous, partly coarse; anterolateral angles feebly produced; sides broadly arcuate from base to transverse impression then almost straight; carinae absent; median groove absent; complete transverse impression in apical half; medially with two large prebasal gibbosities; 4) surface of the elytra (Figs 3A, 9C) moderately smooth to glabrous; sides subparallel in basal ⅔, then tapered into

rounded apex; carinae absent; intervals nearly flat; 5) prosternum very short in front of procoxae, without chin piece; anterior margin without distinct indentation; prosternal process markedly wide with broadly rounded apex (Fig. 13A); 6) very long legs with femora narrow, tarsal claws (Fig. 14S) with one basal tooth.

Similar genera

Very long legs, similar body shape, and simple elytra without carinae may superficially resemble *Pseudomacronychus*. However, its pronotum, featuring a complete transverse impression in the apical half, is markedly different to the simple one of *Pseudomacronychus*. This character is found only in one additional Afrotropical genus, *Leptelmis*, though the two genera are completely dissimilar. The pronotal structure, along with the very short prosternum and shorter antennomeres, will reliably distinguish this genus from all other genera of Elminae.

Larva

Described and illustrated by Bertrand (1962) as *Ancyronyx*.

Distribution

Widespread in Cameroon, Democratic Republic of the Congo, Kenya, Republic of the Congo, Rwanda, South Africa, Swaziland, Tanzania, Uganda. New country records for Gabon, Zimbabwe and Togo.

Known species

Pseudancyronyx alluaudi (Grouvelle, 1911); *Psa. basilewskyi* (Janssens, 1962); *Psa. concolor* (Grouvelle, 1920); *Psa. humeralis humeralis* (Grouvelle, 1906); *Psa. humeralis natalensis* Delève, 1970; *Psa. insignis* (Delève, 1938); *Psa. kivuensis* Delève, 1970; *Psa. posticalis* (Delève, 1963); *Psa. purpurascens* (Grouvelle, 1920); *Psa. quadriguttatus* (Delève, 1937); *Psa. robustus* (Delève, 1937); *Psa. spathifer* (Delève, 1956).

Pseudancyronyx basilewskyi (Janssens, 1962)

Material examined

TANZANIA • 1 ex.; "HOLOTYPUS // COLL. MUS. CONGO. Tanganyika Terr.: Bunduki Uluguru Mts., moy. Mgeta 1300 m. 30-IV/11-V-1957 // Mission Zoolog. I.R.S.A.C. en Afrique orientale (P. Basilewsky et N. Leleup) // TYPE // Prep. Micro IIS 102591 // E. Janssens det., 1959 *Ancyronyx Basilewskyi* n.sp."; MRAC.

Pseudancyronyx humeralis natalensis Delève, 1970

Material examined

SOUTH AFRICA • 1 ♀; "♀ // Para- type // Olifants-Klip River System St.7 61g 30. 12. 59 N.I.W.R. // J. Delève det., 1970 *Ps. humeralis natalensis* subsp.n // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pseudancyronyx insignis (Delève, 1938)

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ex.; "HOLOTYPUS // MUSÉE DU CONGO Kasai : Ngombe 16-IX-1921 Dr H.Schouteden // R. DÉT. B 1401 // *ancyronyx insignis* n.sp. // R. DÉT. BB 3463 // J. Delève det. 1937 ; *Ancyronyx* Type *insignis* n.sp."; MRAC.

Pseudancyronyx kivuensis Delève, 1970

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // Para- type // BELGIAN CONGO: Kivu Prov. 2500 m. alt. // CNHM 1961 Purchased ex Ch. De Wyngaert (Brussels) // Prépar. genit. N°16370.5 // J. Delève det., 1970 *Ps. kivuensis* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pseudancyronyx posticalis (Delève, 1963)

Material examined

CAMEROON • 1 ♂; "♂ // Para- type // Cameroun – 1949-50 13|12 – 222 Lok. R.F.Nyong. loc. 174 J.B.-S. J.D. // J. Delève det., 1962 *Anc. posticalis* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pseudancyronyx quadriguttatus (Delève, 1937)
Figs 3A, 6A, 9C, 13A, 14S

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ex.; "TYPE // SANZULU 4-4-26 A.COLLART // Delève det., 1937 *A. 4guttatus* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; illustrated in Figs 3A, 6A, 9C, 13A, 14S; IRSNB.

Pseudancyronyx robustus (Delève, 1937)

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ex.; "TYPE // SINGA-KONDO 20-VI-26 A.COLLART // Delève det., 1937 *A. robustus* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pseudancyronyx spathifer (Delève, 1956)

Material examined

RWANDA • 1 ♂; "HOLOTYPUS // COLL. MUS. CONGO. Ruanda: Shangugu, 1500 m. -IV-1953 P. Basilewsky // J. Delève det., 1955 *Ancyronyx ♂ spathifer* n.sp Type"; MRAC.

Pseudancyronyx sp.

Material examined

GABON • 2 ♂♂; "GABON 185m Dilo ANPN camp, Ivindo Disturbed forest 0°14′1′'S, 12°17′49″ E 14-19.viii.2019. MV light Albert,J-L.,Aristophanous,M., Bie Mba, J., Dérozier, V., Moretto, P. BMNH(E) 2020-19"; BMNH.

TOGO • 1 ex.; "TOGO: Reg. Plateaux Pref. Kloto, forèt de Missahoé 9.II.2006, leg. Komarek & Hounguè (27) // 06°56′52.3″ N 00°35′49.0″ E ca. 300 m a.s.l. waterfall in primary forest."; NHMW.

ZIMBABWE • 1 ex.; "ZIMBABWE: 31.71994 Chimanimani NP Southern lakes, 1380m leg. Mazzoldi"; NHMW.

Genus ***Pseudelmidolia*** Delève, 1963
Figs 3B, 6B, 9D, 13B, 14T

Pseudelmidolia Delève, 1963: 9.

Type species

Elmidolia biapicata Fairmaire, 1898.

Differential diagnosis

Pseudelmidolia is characterized by the combination of the following characters: 1) body (Figs 3B, 9D) robust, elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 3B, 6B, 9D) alutaceous to smooth, granulose; lateral margin sometimes serrate; anterolateral angles moderately to distinctly produced; sides broadly arcuate; sublateral carinae indistinct to distinct in basal ⅓; prescutellar carinae absent to short; median longitudinal groove absent or thin and shallow; 4) surface of the elytra (Figs 3B, 9D) moderately smooth; sides subparallel in basal ⅔, then tapered into rounded apex; granulate sublateral carinae feeble to distinct at least on 5th and 7th intervals; intervals nearly flat; 5) prosternum moderately long in front of procoxae; anterior margin laterally lowered and indented; prosternal process moderately wide, apex varies from arrow-head to almost rounded or medially emarginate (Fig. 13B); 6) legs with femora stout, tarsal claws (Fig. 14T) simple.

Remarks

The male genitalia exhibit considerable variation, suggesting that the genus may require subdivision (Delève 1963). Additionally, the body shapes and the sculpturing of the pronotum and elytra show significant differences, underscoring the need for a comprehensive generic revision to clarify its monophyly.

Similar genera

The broad body shape, simple pronotum, and simple tarsal claws place *Pseudelmidolia* close to *Lobelmis*, though it differs in simple antennae and longer prosternum. Some species of *Pseudelmidolia* can be confused with *Aspidelmis* due to shared features such as a pronotum with sublateral and prescutellar carinae, elytra with sublateral carinae on the 5th and 7th intervals, and simple tarsal claws. However, *Pseudelmidolia* differs by its broader pronotum relative to the elytra and its granulate rather than crenulate elytral carinae.

Larva

Described and illustrated by Bertrand (1962) as *Elmidolia*.

Distribution

Endemic to Madagascar.

Known species

Pseudelmidolia atra Delève, 1963; *Pse. bertrandi* Delève, 1963; *Pse. biapicata* (Fairmaire, 1898); *Pse. colasi* Delève, 1963; *Pse. conspecta* (Grouvelle, 1906); *Pse. conspicua* (Grouvelle, 1906); *Pse. coriariocollis* Delève, 1963; *Pse. crassa* (Grouvelle, 1906); *Pse. disconcinna* Delève, 1963; *Pse. eximia* Delève, 1963; *Pse. fusca* Delève, 1963; *Pse. gregaria* Delève, 1963; *Pse. humilis* Delève, 1963; *Pse. metatibialis* Delève, 1963; *Pse. minor* (Fairmaire, 1898); *Pse. nigricula* Delève, 1963; *Pse. ochraceipennis* (Grouvelle, 1899); *Pse. pallidipennis* Delève, 1963; *Pse. pauliani* Delève, 1963; *Pse. pinguis* (Fairmaire, 1902); *Pse. sordida* (Grouvelle, 1906); *Pse. soror* (Grouvelle, 1906); *Pse. spreta* Delève, 1963; *Pse. starmuhleri* Delève, 1963; *Pse. striolata* (Fairmaire, 1902); *Pse. stulta* (Grouvelle, 1906); *Pse. trinervosa* Delève, 1963; *Pse. umbrina* (Fairmaire, 1898); *Pse. verrucosa* Delève, 1963.

Pseudelmidolia atra Delève, 1963:

Material examined

MADAGASCAR • 1 ♂; "♂ // TYPE // IIrivald bei Andrambovato 153 / 6. 8. 58 // O. Madagasc. Exp. 1958 leg. E. Pomezol // Prépar.genit. N°20163.7 // J. Delève det. 1963 *Pseudelmidolia atra* n. sp. Type"; IRSNB.

Pseudelmidolia coriariocollis Delève, 1963:

Material examined

MADAGASCAR • 1 ex.; "Para- type // Pèrinet // INSTITUT SCIENTIFIQUE MADAGAScAR // J. Delève det., 1963 *Pseudelm. coriariocollis* n.sp // R.I.Sc.N.B. I.G..22.864″; IRSNB.

Pseudelmidolia disconcinna Delève, 1963

Material examined

MADAGASCAR • 1 ♂; "♂ // TYPE // Madagascar Andrambovato F. M. 131/6.8.58 // F. Starmuhler // Prépar.genit. N°231632 // J. Delève det., 1963 *Pseudelmidolia disconcinna* n.sp Type // R.I.Sc.N.B. I.G..22.864″; IRSNB.

Pseudelmidolia fusca Delève, 1963

Material examined

MADAGASCAR • 1 ♂; "♂ // Para- type // Ampijoroa Tsaramandroso // INSTITUT SCIENTIFIQUE MADAGASCAR / Prépar.genit. N°20163.5 // J. Delève det., 1963 *Pseudelmid. fusca* n.sp // R.I.Sc.N.B. I.G..22.864″; IRSNB.

Pseudelmidolia gregaria Delève, 1963

Material examined

MADAGASCAR • 1 ex.; "Para- type // Pèrinet // INSTITUT SCIENTIFIQUE MADAGAScAR // J. Delève det., 1963 *Pseudelm. gregaria* n.sp // R.I.Sc.N.B. I.G..22.864″; IRSNB.

Pseudelmidolia humilis Delève, 1963

Material examined

MADAGASCAR • 1 ♂; "♂ // TYPE // Madagascar Andrambovato F. M. 131/6.8.58 // Prépar.genit N°23163.3 // J. Delève det., 1963 *Pseudelmidolia humilis* n.sp Type"; IRSNB.

Pseudelmidolia metatibialis Delève, 1963

Material examined

MADAGASCAR • 1 ♂; "♂ // TYPE // Madagascar Lac froid.. affl. Ankaratra. Geb. // F.M.60/17.7.58 quant. F. Starmuhler // FM60/17.7.1958/quant. Lac froid-ZūflūB ANKARATRA geb. <Ő. Madagascar E. 1958 leg. F. Starmuhler> // J. Deleve det., 1963 *Pseudelmidolia metatibialis* n.sp Type // R.I.Sc.N.B. I.G..22.864″; IRSNB.

Pseudelmidolia nigricula Delève, 1963

Material examined

MADAGASCAR • 1 ♂; "Para- type // Perinet // INSTITUT SCIENTIFIQUE MADAGASCAR // Prépar. genit N°20163.1 // J. Delève det., 1963 *Pseudelmidolia nigricula* n.sp // R.I.Sc.N.B. I.G..22.864″; IRSNB.

Pseudelmidolia pallidipennis Delève, 1963

Material examined

MADAGASCAR • 1 ♂; "♂ // Fampanambo II.1959 20 (Lavage de terre) // MUS.ROY.AFR.CENTR. Madagascar Est : Baie d'Antongil J. Vadon // Para- Par type typ // Prépar.genit. N°153633// J. Delève det., 1963 *Pseudelmidolia pallidipennis* n.sp"; IRSNB.

Pseudelmidolia soror (Grouvelle, 1906)

Material examined

MADAGASCAR • 1 ♀; "♀ // quelle von Nanokely 115/26. 7. 58 // Ost. Madag. Exp. 1958 leg. E. Pomeisl // J. deleve det., 1963 *Pseudelmidolia soror* Grouv. // H.E. Hinton collection B.M.1977-566."; BMNH.

Pseudelmidolia starmuhleri Delève, 1963

Material examined

MADAGASCAR • 1 ♂; "♂ // TYPE // FM 217/11.3 1958 Mandromodronotoa Dadr 20 km N de FORT DAUPHIN <Ő. MadagascarE. 1958 leg. F. Starmuhler> // Prépar.genit. N°2013.8 // J. Delève det., 1963 *Pseudelmidolia starmuhleri* n.sp Type // R.I.Sc.N.B. I.G..22.864″; IRSNB.

Pseudelmidolia umbrina (Fairmaire, 1898)
Figs 3B, 6B, 9D, 13B, 14T

Material examined

MADAGASCAR • 1 ♂; "MADAGASCAR,24.-27.i.2013, ZOMBITSE N.P., (main entr.), Ambakintany forest, 816m, S22˚53′11″,E44˚41′31″, M.Trýzna leg. // BMNH(E) 2016-44″; BMNH • 1 ♂; "MADAGASCAR 2011 ANKARAFANTSIKA N.P. S16 18′43″,E46 48′59″ 100M; 23.IV.; local coll. // BMNH(E) 2016-44″; illustrated in Figs 3B, 6B, 9D, 13B, 14T; BMNH.

Pseudelmidolia verrucosa Delève, 1963

Material examined

MADAGASCAR • 1 ♂; "♂ // TYPE // Madagascar Andrambovato F.M.131/6.8.58 // Prépar.genit. N°23163.7 // J. Delève det., 1963 *Pseudelmidolia verrucosa* n.sp Type // R.I.Sc.N.B. I.G..22.864"; IRSNB.

Genus ***Pseudomacronychus*** Grouvelle, 1906
Figs 3C, 6C, 9E, 13C, 14U, 15C

Pseudomacronychus Grouvelle, 1906: 326.

Type species

Pseudomacronychus castaneus Grouvelle, 1906.

Differential diagnosis

Pseudomacronychus is characterized by the combination of the following characters: 1) body (Figs 3C, 9E) elongate; 2) antennae with segments 3–10 filiform; segment 11 longer (Fig. 15C); 3) surface of the pronotum (Figs 3C, 6C, 9E) alutaceous to moderately smooth, sometimes granulose; anterolateral angles feebly to moderately produced; sides arcuate; carinae absent; median longitudinal groove absent or thin and shallow; 4) surface of the elytra (Figs 3C, 9E) moderately coarse to smooth; sides subparallel in basal ⅔, then tapered into rounded apex; carinae absent; intervals nearly flat; 5) prosternum moderately short in front of procoxae; anterior margin laterally lowered and feebly indented; prosternal process wide with broadly rounded apex (Fig. 13C); 6) very long legs with femora narrow, tarsal claws (Fig. 14U) with one basal tooth.

Similar genera

Pseudomacronychus can superficially resemble *Pseudancyronyx*, as both genera have very long legs and simple elytra lacking carinae, and it may also resemble *Eumicrodinodes*, as both possess a simple pronotum. Moreover, all three genera share tarsal claws with a single basal tooth. However, *Pseudomacronychus* can be reliably distinguished from *Pseudancyronyx* by its simple pronotum, and from *Eumicrodinodes* by its narrow femora and simple elytra without carinae.

Larva

Described and illustrated by Bertrand (1962) as Helmiinae genus A.

Distribution

Widespread in Angola, Côte d'Ivoire, Democratic Republic of the Congo, Gabon, Ghana, Guinea, Kenya, Liberia, Republic of the Congo, Rwanda, South Africa, Tanzania. New country records for Benin, Burkina Faso, Cameroon, Togo and Zambia.

Known species

Pseudomacronychus brevis Delève, 1965; *Psm. castaneus castaneus* Grouvelle, 1906; *Psm. castaneus litigiosus* Delève, 1945; *Psm. castaneus miliaris* Delève, 1965; *Psm. castaneus nitidus* Delève, 1965; *Psm. decoratus* Grouvelle, 1911; *Psm. humeralis* Delève, 1937; *Psm. intermedius* Delève, 1963; *Psm. lineatus* Delève, 1967; *Psm. occidentalis* Alluaud, 1933; *Psm. ovatus* Delève, 1965; *Psm. rufilabris* Delève, 1956; *Psm. scutellatus scutellatus* Delève, 1965; *Psm. scutellatus circumcinctus* Delève, 1968; *Psm. simulator* Delève, 1945; *Psm. variolosus* Delève, 1945.

Pseudomacronychus brevis Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // TYPE // BUHUDE. Biruwe 20. IX. 29 A.COLLART // Riv Felowa // Prépar. genit. N˚4964.9 // J. Delève det., 1944 *Ps. occidentalis* All. // J. Delève *Ps. brevis* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pseudomacronychus castaneus litigiosus Delève, 1945

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "TYPE // LOLO DAMVU 17-IV-26 A.COLLART // ♂ // J. Delève det., 1944 *castaneus* Gr. Type *litigiosus* subsp.nov. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pseudomacronychus castaneus miliaris Delève, 1965

Material examined

ANGOLA • 1 ♂; "♂ // Para- type // Angola Mussunge (r) 15. VII. 57 H. Bertrand // Prépar. genit. N°30126410 // J. Delève det., 1964 *Ps. miliaris* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pseudomacronychus castaneus nitidus Delève, 1965

Material examined

ANGOLA • 1 ♂; "♂ // Para- type // Angola affl. Luachimo rte Turismo 28. VI. 57 H. Bertrand // Prépar. genit. N°301264.5 // J. Delève det., 1964 *Ps. castaneus nitidus* subsp.n. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pseudomacronychus humeralis Delève, 1937

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "TYPE // SINGA-KONDO 20-VI-26 A.COLLART // ♂ // J. Delève det., 1937 *Ps. humeralis* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pseudomacronychus intermedius Delève, 1963
Figs 3C, 6C, 9E, 13C, 14U, 15C

Material examined

BENIN • 3 ex.; "BÉNIN loc. 22 Sanson, W. o. Parakou 21. VII. 1989 leg. j. v. Vondel"; NHMW.

CÔTE D'IVOIRE • 10 ex.; "IVORY COAST, 380m, Yeale Village, Mt Nimba, 07°31′35.3″ N, 08°25′20.1″ W, 18-29. IV. 2016, Light Trap, // Aristophanous, M., Geiser, M., Moretto, P., leg., BMNH(E) 2016-109, Trip"Ref: CI-003(ANHRT 17)"; illustrated in Figs 3C, 6C, 9E, 13C, 14U, 15C; BMNH.

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♀; "♀ // HOLOTYPUS // Cono Belge P. N. G. Miss. H. De Saeger Naluguambala, 2-VI-1950 Réc. H. De Saeger. 574 // COLL. MUS. CONGO (ex coll. I. P. N. C. B.) // TYPE TY // Prép. 121062/1 // // J. Delève det., 1962 *Pseudomacronychus intermedius* n.sp Forme ailée. Type"; MRAC.

Pseudomacronychus ovatus Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS // I.R.S.A.C.-MUS.CONGO Kivu : Terr.Kabare, Lwiro 2000/2200 m. IX-1953 N.Leleup // TYPE <*ovatus* Delève> // Prépar. genit. N°261163.2 // J. Delève det., 1965 *Ps. ovatus* n.sp"; MRAC • 1 ♀; "♀ // PARATYPUS // I.R.S.A.C.-MUS.CONGO Kivu : Terr.Kabare, Lwiro 2000/2200 m. IX-1953 N.Leleup // J. Delève det., 1964 *Ps. ovatus* n.sp"; MRAC.

Pseudomacronychus rufilabris Delève, 1956

Material examined

RWANDA • 1 ♂; "HOLOTYPUS COLL. MUS. CONGO. Ruanda : Shangugu 1500 m, 6-IV-1953 P. Basilewsky // J. Delève det., 1955 *Pseudomacronychus rufilabris* n.sp ♂ ailé Type"; MRAC.

Pseudomacronychus scutellatus scutellatus Delève, 1965

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // HOLOTYPUS A// A la lumière // I.R.S.A.C.-MUS.CONGO Kivu : Terr. Masisi, 800 m, Mutakato IX-1953 N. Leleup // TYPE // Prépar. genit. N˚271163.6 // J. Delève det., 1965 *Ps. scutellatus* n.sp."; MRAC • 1 ♀; "♀ // PARATYPUS // Dans humus en forêt // I.R.S.A.C.-MUS.CONGO Kivu : Terr. Masisi, 800 m, Mutakato IX-1953 N. Leleup // Prépar. genit. N˚2165.7 // J. Delève det., 1965 *Ps. scutellatus* n.sp."; MRAC.

Pseudomacronychus scutellatus circumcinctus Delève, 1968

Material examined

BURKINA FASO • 3 ex.; "BURKINA FASO: Prov. Comoe Karfiguela. river 10.72244938/4.82181218 03.07.2012, leg. I. Kaboré (A5)"; NHMW.

CAMEROON • 3 ex.; "SW-CAMEROON: Etam 4°42.43′N 9°32.36′E 8. 4. 1997 leg. J. Denton"; NHMW • 1 ex.; "CAMEROON, Rég. Centre, Nyong-et-So'o, Ebogo, (Light trap), alt , 638-660 m., 3.39°N,11.46°E, 20-21.IV.2024, SEKI Kyōta leg."; KUMJ.

CÔTE D'IVOIRE • 1 ♂; "♂ // HOLOTYPUS // COLL.MUS. TERVUREN Côte d'Ivoire: Divo J. Decelle 12.X.1962 // Holotype // Prépar. genit. N˚15165.5 // J. Delève det., 1965 *Ps. scutellatus circumcinctus* subsp n."; MRAC.

TOGO • 1 ex.; "TOGO: Reg. Plateaux Pref. Kloto, near Kpimé, ~1km NW Seva (village), 10.II.2006 leg. Komarek & Hounguè (31) // 06°51′50.2″ N 00°38′57.2″ E 300 a.s.l. small stream"; NHMW.

Pseudomacronychus simulator Delève, 1945

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ex.; "TYPE // MADUDA 4-VI-26 A.COLLART // J. Delève det., 196 *Ps. simulator* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pseudomacronychus variolosus Delève, 1945

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "TYPE // Sanzulu 4.IV.26 A.Collart // ♂ // J. Delève det., 1944 *Ps. variolosus* n.sp. Type // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Pseudomacronychus sp.

Material examined

TOGO • 1 ex.; "TOGO: Reg. Plateaux Pref. Kloto, ca. 5 km from Konda (village), 9.II.2006 leg. Komarek & Hounguè (28) // 06°58′05.3″ N 00°34′18.2″ E ca. 510 m a.s.l. small stream in prim. Forest"; NHMW.

ZAMBIA • 3 ex.; "ZAMBIA 1460m Mutinondo Wilderness Area, Mpika, Northern Prov. 12°27′06″ S, 31°17′30″ E 14-17.ii.2019 // Actinic LightTrap Dérozier, V., Mulvaney, L. Takano, H. Leg. ANHRT":2019.4, BMNH(E) 2020-19"; BMNH.

Genus ***Sphragidelmis*** Delève, 1964
Figs 3D, 6D, 9F, 13D, 14V

Sphragidelmis Delève, 1964: 26.

Type species

Limnius ikopae Fairmaire, 1898.

Differential diagnosis

Sphragidelmis is characterized by the combination of the following characters: 1) body (Figs 3D, 9F) compact, obovate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 3D, 6D, 9F) smooth to glabrous; lateral margin slightly serrate; anterolateral angles feebly produced; sides broadly arcuate, narrowing to prolonged anterior margin; sublateral carinae in basal ⅗; prescutellar carinae longer, arcuately diverging; median longitudinal groove indistinct or thin and shallow; 4) surface of the elytra (Figs 3D, 9F) smooth to glabrous, lateral margin slightly serrate; sides broadly arcuate, widest in the middle, then tapered into rounded apex; sublateral carina on 5th interval; intervals flat, partly diminished; 5) prosternum moderately short in front of procoxae; anterior margin laterally lowered, without distinct indentation; prosternal process wide with subtriangular to rounded apex (Fig. 13D); 6) legs with femora stout, tarsal claws (Fig. 14V) simple.

Similar genera

An obovate body and long sublateral carinae on the pronotum place *Sphragidelmis* close to *Helminthocharis* and *Pachyelmis*. It can be distinguished from both genera by its shorter sublateral carinae on the pronotum and the presence of prescutellar, arcuately diverging carinae.

Larva

Unknown.

Distribution

Endemic to Madagascar.

Known species

Sphragidelmis atomaria (Fairmaire, 1898); *Sph. bothrideres* (Fairmaire, 1902); *Sph. ikopae* (Fairmaire, 1898); *Sph. trilineatus* (Grouvelle, 1906).

Sphragidelmis atomaria (Fairmaire, 1898)
Figs 3D, 6D, 14V

Material examined

MADAGASCAR • 1 ♂; "♂ // Madagr Suborblle H.Perrier // Prépar. genit. N°27867.4 // J. Delève det., 1967 *Sphragidelmis atomarius* Fmr // I.R.Sc. N. B. I. G. 24.229"; illustrated in Figs 3D, 6D, 14V; IRSNB.

Sphragidelmis sp.
Figs 9F, 13D

Material examined

MADAGASCAR • 1 ex.; "Madagascar (170) 29. 11. 2001 Tampoketsan Ankazobe (Antana- narivo), River Andranofeno Sud at bridge R.N.4, km 130, 1450 m asl., Gerecke & Goldschmidt coll."; illustrated in Figs 9F, 13D; NHMW.

Genus ***Stenelmis*** Dufour, 1835
Figs 3E, 6E, 10A, 13E, 14W

Stenelmis Dufour, 1835: 158.
Nomuraelmis Satô, 1964: 11 (synonymized by Kobayashi *et al.* 2021: 870).

Type species

Limnius canaliculatus Gyllenhal, 1808.

Differential diagnosis

Stenelmis is characterized by the combination of the following characters: 1) body (Figs 3E, 10A) elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 3E, 6E, 10A) smooth to granulose; anterolateral angles moderately to distinctly produced; sides slightly arcuate to bisinuate; sublateral carinae absent to almost complete; median groove usually distinct, in many species with raised or carinate outline; transverse impression absent; some species have gibbosities or impressions on pronotum; 4) surface of the elytra (Figs 3E, 10A) smooth; sides subparallel in basal ⅔, then tapered into rounded apex; sublateral carina on 6th interval, 3rd interval flat or carinate basally, rarely completely; intervals nearly flat; 5) prosternum moderately long to long in front of procoxae; anterior margin laterally lowered without distinct indentation; prosternal process moderately wide, apically widened with rounded apex (Fig. 13E), often medially emarginate; 6) legs with femora stout, tibiae without apical fringes, tarsal claws simple (Fig. 14W) or with feebly developed basal tooth.

Similar genera

Stenelmis is closely related to *Leptelmis*, sharing the lack of cleaning fringe on the inner margin of the protibia and a similar body shape. However, it is distinguished by the absence of a transverse impression on the pronotum, the presence of a median groove in most species, and shorter legs.

Larva

First time described and illustrated from USA by Matheson (1914). For detailed description see e.g., Bertrand (1962), Hayashi & Yoshitomi (2014).

Distribution

Widespread in Angola, Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Democratic Republic of the Congo, Ethiopia, Gabon, Ghana, Guinea, Kenya, Liberia, Malawi, Republic of the Congo, Rwanda, Sierra Leone, South Africa, Tanzania, Uganda. New country records for Benin, Togo and Zambia. Occurs also in the Indomalayan, Nearctic and Palaearctic regions.

Included Afrotropical species

Stenelmis adusta Delève, 1938; *Ste. alluaudi* Grouvelle, 1906; *Ste. aloysiisabaudiae* Pic, 1930; *Ste. ampliata* Delève, 1938; *Ste. angolensis* Delève, 1966; *Ste. aphela* Alluaud, 1933; *Ste. ares* Hinton, 1941; *Ste. calceata* Delève, 1963; *Ste. carbonaria* Delève, 1966; *Ste. cavicula* Delève, 1966; *Ste. chappuisi* Alluaud, 1933; *Ste. clavareaui* Grouvelle, 1900; *Ste. confusa* Delève, 1966; *Ste. cristata* Delève, 1966; *Ste. decellei* Delève, 1966; *Ste. fastuosa* Delève, 1966; *Ste. gades* Hinton, 1941; *Ste. grouvellei* Alluaud, 1933; *Ste. hera* Hinton, 1941; *Ste. jeanneli* Grouvelle, 1920; *Ste. laeticollis* Delève, 1966; *Ste. liberiana* Delève, 1973; *Ste. merella* Hinton, 1941; *Ste. noblei* Delève, 1966; *Ste. nomia* Hinton, 1941; *Ste. phymatodes* Alluaud, 1933; *Ste. planiuscula* Delève, 1963; *Ste. prusias* Hinton, 1941; *Ste. rufocarinata* Delève, 1956; *Ste. scotti* Hinton, 1940; *Ste. simplex simplex* Delève, 1938; *Ste. simplex nyongi* Delève, 1963; *Ste. soror* Delève, 1938; *Ste. tarsalis* Delève, 1937; *Ste. thusa* Hinton, 1941.

Stenelmis adusta Delève, 1938

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // PARATYE // Elisabethville 25/30-XI-1930 R. Masart // Prépar. genit. N°17964.4 // J. Delève det., 1938 *St. adusta* n.sp. ♂"; IRSNB.

Stenelmis angolensis Delève, 1966

Material examined

ANGOLA • 1 ♂; "♂ // Para- type // Angola Env. Dundo .V.1966 Luna // Forêt. galerie Sources R, Mussungue Piscine du Dundo // Ang 198541 // J. Delève det., 1966 *St. angolensis* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Stenelmis aphela Alluaud, 1933

Material examined

COTE D'IVOIRE • 1 ♂; "♂ // Cote d'Ivoire : Divo . Decelle 28 12.XI.1963 // COLL.MUS.TERVUREN // J. Delève det., 1964 *St. aphela* All. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Stenelmis ares Hinton, 1941

Material examined

SOUTH AFRICA • 1 ex.; "Type // New Hanover. XII.16.1916 Natal C.B. Hardenberg // Brit. Mus. 1940-99 // *Stenelmis ares* Hinton Type"; BMNH • 4 ex.; "New Hanover. XII.16.1916 Natal C.B. Hardenberg // Brit. Mus. 1940-99 // *Stenelmis ares* Hinton P-type"; BMNH.

Stenelmis calceata Delève, 1963

Material examined

CAMEROON • 1 ♂; "♂ // Para- type // Cameroun – 1949-50 13|12 – 222 // Lok. R.F.Nyong. loc. 174 J.B.-S. J.D. // 31762/2 // J. Delève det., 1962 *St. calceata* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Stenelmis carbonaria Delève, 1966

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // Elisabethville (à la lumière) 1-III-52/30-IX-1953 Ch. Seydel // Prépar. genit. N°121064.5 // J. Delève det., 1965 *St. carbonaria* n. sp. // Para- type // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève".

Stenelmis chappuisi Alluaud, 1933

Material examined

CÔTE D'IVOIRE • 1 ex.; "PARATYPUS // MUSÉE DU CONGO Man Côte d'Ivoire {don Ch. Alluaud} // R. DÉT. J 3461 // R DÉT. Q 3254 // Prépar.genit. N°2563.3 // *Stenelmis Chappuisi* Cotype Alluaud, det. 192"; MRAC.

Stenelmis confusa Delève, 1966

Material examined

CÔTE D'IVOIRE • 1 ♂; "♂ // Cote d'Ivoire Touba // Prépar. genit. N°171164.3 // Para- Pa type ty // J. Delève det., 1964 *St. confusa* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Stenelmis cristata Delève, 1966

Material examined

CÔTE D'IVOIRE • 1 ♂; "♂ // Para- type // COLL.MUS. TERVUREN Côte d'Ivoire : Divo J. Decelle 28.XI.1963 // J. Delève det., 1964 *St. cristata* n.sp // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; MRAC.

Stenelmis decellei Delève, 1966

Material examined

CÔTE D'IVOIRE • 1 ♂; "♂ // Para- type // Cote d'Ivoire : Divo J. Decelle 28.XI.1963 // COLL. MUS. TERVUREN // J. Delève det., 1964 *St. decellei* n.sp. // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Stenelmis fastuosa Delève, 1966

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ // Elisabethville (à la lumière) 1-III-52/30-IX.1953 Ch. Seydel // Prépar. genit. N°24964.1 // J. Delève det., 1965 *Stenelmis fastuosa* n.sp // Para-type // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Stenelmis gades Hinton, 1941

Material examined

SOUTH AFRICA • 1 ex.; "Estcourt, Natal. G.A.K. Marshall. reverse: Feb.1893 // Brit. Mus. 1922-431 // Type // *Stenelmis gades* Hinton Type"; BMNH • 1 ♂: "♂ // S. Africa. R.E. Turner Brit. Mus. 1923-189 // Umatata, Transkei. 18. ii. - 18. iii. 1923. // *Stenelmis gades* Hinton P-Type"; BMNH.

Stenelmis grouvellei Alluaud, 1933

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ex.; "MADUDA -1-25 A.COLLART // Para- type // J. Delève det., 1938 *St. bidenticulata* n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH • 1 ex.; "MADUDA -1-25 A.COLLART // Para- type // J. Delève det., 1938 *St. bidenticulata* n.sp. // H.E. Hinton collection. B.M. 1977-566. // *St. bidenticulata* n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH • 1 ex.; "MADUDA -1-25 A.COLLART // Para- type // J. Delève det., 1938 *St. bidenticulata* n.sp. // H.E. Hinton collection. B.M. 1977-566. // *St. bidenticulata* ♂ n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH • 1 ex.; "MADUDA -1-25 A.COLLART // Para- *bidenticulata* type // J. Delève det., 1938 *St. bidenticulata* n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH.

Stenelmis hera Hinton, 1941

Material examined

CAMEROON • 1 ♂; "♂ // Type // CAMEROONS D.R. Rosevear // Brit. Mus. 1940 - 99 // *Stenelmis* hera Hinton Type"; BMNH • 2 ♀♀: "♀ // CAMEROONS D.R. Rosevear // Brit. Mus. 1940 - 99 // *Stenelmis hera* Hinton P-Type"; BMNH • 2 ♂♂; "♂ // CAMEROONS D.R. Rosevear // Brit. Mus. 1940 - 99 // *Stenelmis hera* Hinton P-Type"; BMNH • 1 ex.; "CAMEROONS D.R. Rosevear // Brit. Mus. 1940 - 99 // *Stenelmis hera* Hinton P-Type"; BMNH.

Stenelmis laeticollis Delève, 1966
Figs 3E, 6E, 10A, 13E, 14W

Material examined

CÔTE D'IVOIRE • 1 ♀; "♀ // Para- type // Côte d'Ivoire: Divo J. Decelle 28.XI.1963 // Prépar. genit. N°211264.2 // J. Delève det., 1964 *St. Laeticollis* n sp // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; illustrated in Figs 3E, 6E, 10A, 13E, 14W; IRSNB.

Stenelmis liberiana Delève, 1973

Material examined

LIBERIA • 8 ex.; "LIBERIA Suakoko X II-19 -51 // 6-9pm light trap Blickenstaff // BM. 1979-136 // PARATYPE"; BMNH • 1 ex.; "LIBERIA Suakoko I. 31 1952 Blickenstaff // ♂ // BM. 1979-136 // PARATYPE"; BMNH.

Stenelmis merella Hinton, 1941

Material examined

SIERRA LEONE • 1 ♂; "♂ // SIERRA LEONE Njala 15 xi-8.xii 1930 E.Hargreaves At light // *Stenelmis merella* Hinton Type // Brit.Mus. 193940-99"; BMNH • 1 ♀; "♀ // SIERRA LEONE Njala 15 xi-8.xii 1930 E.Hargreaves At light // Brit.Mus. 193940-99 // *Stenelmis merella* Hinton P-type"; BMNH.

Stenelmis nomia Hinton, 1941

Material examined

CAMEROON • 1 ♀; "♀ // Kamerun Conradt // *Stenelmis nomia* Hinton Type // [Blue blank label]"; BMNH.

Stenelmis phymatodes Alluaud, 1933

Material examined

CÔTE D'IVOIRE • 1 ex.; "PARATYPUS // MUSÉE DU CONGO Man Côte d'Ivoire (Leraba IV.20) {don Ch. Alluaud} // R. DÉT. O 3254 // R DÉT. M 3461 // Prépar.genit. N°2563.23 // *Stenelmis phymatodes* Cotype Alluaud, det. 192"; MRAC.

LIBERIA • 2 ex.; "LIBERIA 140m Krahn-Bassa Reserve, 7.5km SW Pellokon Town, Juboe River, Sinoe County, 5°39′4″ N; 8°39′4″ W // 14-20.i.2018 Edwards trap Geiser, M., Sáfián, Sz., & Simonics, G., leg. ANHRT 28, LR-001, BMNH(E) 2018-39"; BMNH.

Stenelmis planiuscula Delève, 1963

Material examined

CAMEROON • 1 ♂; "♂ // Para- type // Cameroun – 1949-50 20| - 454 Lok. R.F.Nyong J.B.-S. J.D. // 29762/4 // J. Delève det., 1962 *St. planiuscula* ♂ n.sp // I.R.Sc.N.B. I.G. 25.041 Coll. & det. J. Delève"; IRSNB.

Stenelmis prusias Hinton, 1941

Material examined

MALAWI • 1 ex.; "Type // Nyasaland. Mianje. Mch. 18,1913. S.A. Neave. 1913-140. // Aslayuya Nyasaland 25·II· 1913 . S. A. Neave. // *Stenelmis prusias* Hinton Type"; BMNH.

Stenelmis scotti Hinton, 1940

Material examined

ETHIOPIA • 1 ex.; "Abyssinia Mulu, above Muger Valley. Circa 8,000ft. 18-23.xii.1926. Dr. H.Scott. // Brit. Mus 1933-136 // From vegetation near streams // Brit. Mus. 1927-127 // *Stenelmis scottianus* 1940 Hinton Type"; BMNH.

Stenelmis simplex simplex Delève, 1938

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ex.; "MADUDA -1-25 A.COLLART // PARATYPE // J. Delève det., 1937 *St. simplex* n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH.

Stenelmis soror Delève, 1938

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ex.; "TYPE // FARADJE:8ESENGE 19.III.30 A.COLLART // Riv.Dola "sur moule,,. // *Stenelmis Collarti* All. Alluaud 1933 // Prépar. Genit. N°91264.1 // J. Delève det., 1938 *St. soror* n.sp.♂ Type"; IRSNB.

Stenelmis tarsalis Delève, 1937

Material examined

DEMOCRATIC REPUBLIC OF THE CONGO • 2 ex.; "MADUDA -1-25 A.COLLART // PARATYPE // J. Delève det., 1937 St. simplex n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH • 2 ♂♂; "PARATYPE // MADUDA -1-25 A.COLLART // ♂ // J. Delève det., 1937 *St. tarsalis* n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH • 1 ex.; "SANZULU 4-4-26 A.COLLArT // Para- type // J. Delève det., 1937 *St. tarsalis* n.sp. // H.E. Hinton collection. B.M. 1977-566."; BMNH.

Stenelmis thusa Hinton, 1941

Material examined

UGANDA • 1 ♂; "♂ // Type // UGANDA. LALBERT . 845 BUHUKA. 14.4.28 E.B.WORTHINGTON. // Brit. Mus. 1929-201 // *Stenelmis thusa* Hinton Type"; BMNH • 1 ♂; "♂ // UGANDA. LALBERT. 845 BUHUKA. 14.4.28 E.B.WORTHINGTON. // Brit. Mus. 1929-201 // *Stenelmis thusa* Hinton P-Type"; BMNH • 1 ♀; "♀ // UGANDA. LALBERT. 845 BUHUKA. 14.4.28 E.B.WORTHINGTON. // Brit. Mus. 1929-201 // *Stenelmis thusa* Hinton P-Type"; BMNH.

Stenelmis sp.

Material examined

BENIN • 3 ex.; "BENIN/Tanougou waterfall nr Pendjari gamepark 16. Feb. 2007 Leg.: A. Komarek *et al.* // Fundort 14/200710° 48′27.27″ N 1°26′08.15″ E"; NHMW • 5 ex.; "BÉNIN: DepZou Za Kpota&Cové, Zou riv. 7.II.2006 leg. Goergen, Komarek & Hounguè // 07°12′04.5″ N 02°17′19.8″ E ca. 30 m a.s.l bridge at road Abomey-Covè"; NHMW.

TOGO • 2 ex.; "TOGO: Reg. Plateaux Pref. Kloto, ca. 5 km from Konda (village), 9.II.2006 leg. Komarek & Hounguè (28) // 06°58′05.3″ N 00°34′18.2″ E ca. 510 m a.s.l. small stream in prim. Forest"; NHMW • 1 ex.; "TOGO: Reg. Plateaux Pref. Kloto, Kpalimé near Hoyoh, 9.II.2006, leg. Komarek & Hounguè (26) // 06°56′58.9″ N 00°35″18.0″ E ca. 300 m a.s.l. small shallow stream"; NHMW • 1 ex.; "TOGO: Reg. Plateaux Pref. Kloto, ca. Konda forest 10.II.2006, leg. Komarek & Hounguè (30) // 06°58′18.7″ N 00°34′10.7″ E ca. 520 m a.s.l. waterfall in prim. Forest"; NHMW.

ZAMBIA • 13 ex.; "ZAMBIA, 1400m Hillwood, Ikelenge 11°16′02″ S, 24°18′59″ E 30.x-3.xi.2017. Edwards' Trap. // Carter, M., Lloyd, A., Miles, W., Oram, D., Smith, R. leg. ANHRT: 2017:27, ZM-011 BMNH(E) 2017-194"; BMNH.

Genus ***Trachelminthopsis*** Delève, 1965

Figs 3F, 6F, 10B, 13F, 14X

Trachelminthopsis Delève, 1965a: 110.

Type species

Trachelminthopsis terrifera Delève, 1965.

Differential diagnosis

Trachelminthopsis is characterized by the combination of the following characters: 1) body (Figs 3F, 10B) elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 3F, 6F, 10B) meshy, rugose; lateral margin crenulate; anterolateral angles moderately produced; sides moderately arcuate; carinae indistinct; median groove in a form of small fovea in the middle; basal margin with sublateral oblique impressions; 4) surface of the elytra (Figs 3F, 10B) meshy, rugose; sides subparallel in basal ⅔, then tapered into rounded apex; carinae absent; intervals nearly flat, sometimes crenulate; 5) prosternum moderately long in front of procoxae; anterior margin laterally lowered and indented; prosternal process moderately wide with arrow-head apex (Fig. 13F); 6) legs with femora stout, tarsal claws (Fig. 14X) simple.

Similar genera

This genus resembles *Lathridelmis* and *Helminthopsis* but differs from both in the pronotum with a groove in a form of small fovea, and in simple elytra without carinae. It can further be distinguished from *Lathridelmis* by its broader body shape, and from *Helminthopsis* by its rugose, meshy cuticle.

Larva

Unknown.

Distribution

Known from Angola, Democratic Republic of the Congo, Gabon, Republic of the Congo. New country records for Côte d'Ivoire, Sierra Leone, Kenya and Zambia.

Known species

Trachelminthopsis terrifera Delève, 1965.

Trachelminthopsis terrifera Delève, 1965
Figs 3F, 6F, 10B, 13F, 14X

Material examined

CÔTE D'IVOIRE • 3 ex.; "IVORY COAST, 380m, Yeale Village, Mt Nimba, 07°31′35.3″ N, 08°25′20.1″ W, 18-29. IV. 2016, Light Trap, // Aristophanous, M., Geiser, M., Moretto, P., leg., BMNH(E) 2016-109, Trip Ref: CI-003(ANHRT 17)"; illustrated in Figs 3F, 6F, 10B, 13F, 14X; BMNH.

DEMOCRATIC REPUBLIC OF THE CONGO • 1 ♂; "♂ //HOLOTYPUS // Esobe de M-Bolo // MUS. ROY. AFR. CENTR. Tshuapa : Terr. Bikoro, Mabali (à la Lumière) N. Leleup IX/X-1959 // TYPE // Prépar. genit. N°15364.12B // Prépar. Genit. N°15364.12A // J. Delève det., 1964 *H. (Trachelminthopsis) terrifera* n. sp."; MRAC.

SIERRA LEONE • 2 ex.; "Sierra Leone, 80m, Kalainkay nr. Kamabai Northern Prov. 3-6.xi.15; // N09°10′52″; W11°56′ 44″ Light Trap, R.Goff coll. Leg. Smith.R & Takano.H, BMNH(E) 2016-197"; BMNH.

ZAMBIA • 3 ex.; "ZAMBIA, 1400m, Hillwood, Ikelenge, 11°16′02″, 24°18′59″ E, 25-27.xi2014, Edwards' Trap, Smith,R., Takano,H., leg, BMNH(E) 2015-19"; BMNH.

Trachelminthopsis sp.

Material examined

KENYA • 1 ex.; "Kenya Western Prov. Kakamega Forest N.R. 0.21,1N 34.5 E 15.-26-IX.2001 light trap, leg. L. Kühne"; MFNB.

Genus ***Tropidelmis*** Delève, 1964
Figs 3G, 6G, 10C, 13G, 14Y

Tropidelmis Delève, 1964: 537.

Type species

Tropidelmis hintoni Delève, 1964.

Differential diagnosis

Tropidelmis is characterized by the combination of the following characters: 1) body (Figs 3G, 10C) narrow, elongate; 2) antennae with segments 3–10 filiform; segment 11 longer; 3) surface of the pronotum (Figs 3G, 6G, 10C) moderately smooth to granulose; anterolateral angles feebly produced; sides slightly arcuate; carinae absent; median groove in a form of large fovea in the middle; 4) surface of the elytra (Figs 3G, 10C) smooth; sides subparallel in basal ⅔, then tapered into rounded apex; carinae absent; intervals nearly flat; 5) prosternum moderately short in front of procoxae, without chin piece; anterior margin without distinct indentation; prosternal process moderately narrow with rounded apex (Fig. 13G); 6) legs with femora stout, tarsal claws (Fig. 14Y) with one basal tooth.

Similar genera

Tropidelmis is distinct from all Afrotropical genera but may superficially resemble the subgenus *Paractenelmis*, as both share a similar narrow, elongate body shape, a moderately short prosternum without a chin piece, and tarsal claws with an additional tooth. However, *Tropidelmis* differs in lacking carinae on both the pronotum and elytra.

Larva

Unknown.

Distribution

Endemic to South Africa.

Known species

Tropidelmis hintoni Delève, 1964.

Tropidelmis hintoni Delève, 1964
Figs 3G, 6G, 10C, 13G, 14Y

Material examined

SOUTH AFRICA • 18 ex.; "C.S.I.R.-Stream Survey 128A 30. 10. 50 // S.Africa Great Borg River French Hook Forest Reserve // Para- type // J. Delève det., 1964 *Trop. hintoni* n.sp. // H.E. Hinton collection. B.M. 1977-566."; illustrated in Figs 3G, 6G, 10C, 13G, 14Y; BMNH.

Discussion

Approximately half of the Afrotropical genera of Elminae lack strong regional associations and are distributed across the entire realm. Two genera, *Leptelmis* and *Stenelmis*, extend their ranges even beyond the Afrotropical region: both occur in the Indomalayan and Palaearctic realms, with *Stenelmis* also found in the Nearctic. Although these cosmopolitan genera exhibit no clear distributional patterns at the generic level, distinct patterns become apparent at the species level (K. Matsumoto unpublished results).

There are two primary hotspots of endemism of Elminae in tropical Africa: Madagascar and South Africa. According to Jäch *et al.* (2016), five genera – *Aspidelmis*, *Elmidolia*, *Exolimnius*, *Pseudelmidolia*, and *Sphragidelmis* are endemic to Madagascar, while *Tropidelmis* is the only genus endemic to South Africa. Four additional genera – *Ctenelmis*, *Elpidelmis*, *Leielmis*, and *Peloriolus* – were originally described from South Africa (Delève 1964) but were later recorded in southern Angola (Delève 1966a). These records originate from a single locality, Tampa in Huíla Province (station no. 274), where specimens were collected by Jack Balfour-Browne in 1954 during his six-month expedition across southern Africa.

Balfour-Browne's journey began in Cape Town, where he sampled 202 stations across South Africa in two months before heading to Namibia, where he collected from 36 more sites over 15 days. He then travelled to Angola, visiting 79 sites in just over 33 days. On his return, he sampled one station in Namibia and 37 more during his final 20 days in South Africa. In total, the expedition covered 355 sites and yielded an extensive collection of specimens (Turner 2009).

Delève (1966b) later examined additional material from Angola but was unable to verify the presence of the four genera (*Ctenelmis, Elpidelmis, Leielmis, and Peloriolus*) with further records. Given this, along with the fact that specimens from station no. 274 included already-known species from South Africa and considering the vast number of localities visited during Balfour-Browne's expedition, it is highly likely that this station was mislabelled and that the specimens were actually collected in South Africa. Based on current records, the presence of these genera in Angola appears unlikely. As Bilton (2017) previously argued for *Leielmis*, all four genera should be regarded as endemic to South Africa.

The genus *Peloriolus* comprises eight known species, all but one of which occur in South Africa. The sole exception, *Pel. brunneus*, was collected by Darwin on Saint Helena. While Darwin did spend a week on the island in 1836 (e.g., Herbert 1980), Wollaston's (1877) six-month study of Saint Helena's Coleoptera fauna

found no water beetles. Since its colonization, the island's original flora and fauna have been drastically altered, and to this day, only a single aquatic beetle species is known to persist (Key *et al.* 2021). Given this, it is highly likely that *Peloriolus* – at least in the present day – is also endemic to South Africa, Darwin's previous stopping point.

Several genera that were initially described from the Democratic Republic of Congo are now also recorded in neighbouring countries, including *Eumicrodinodes* and *Trachelminthopsis*. Only *Lathridelmis* is still known solely from this country, although additional sampling could revise this conclusion.

The Afrotropical realm is the most understudied tropical region, with 23 currently recognized genera of Elminae and six from the subfamily Larainae (Jäch *et al.* 2016). Brown (1977) emphasized the importance of larvae for taxonomic purposes, particularly in generic groupings. Our entire knowledge of Afrotropical larvae of Elmidae essentially rests on the work of one individual, Bertrand (1962, 1965), who described larvae of ten known genera of Elminae and six genera of Larainae. Perhaps an even more noteworthy is that Bertrand described several larval types that could not be assigned to any existing genera. He identified additional larval types beyond the 16 recognized genera, including six from the Democratic Republic of the Congo, three from Madagascar, and three from South Africa, bringing the total to 28 types which is a surprisingly high number, considering there are currently only 29 recognized genera. In comparison, less than two-thirds of Neotropical genera have larvae assigned, despite that realm being more thoroughly researched. This discrepancy may be partly due to the large number of monotypic genera in the Neotropical region, of which only a third have known larvae (Jäch *et al.* 2016; González-Córdoba *et al.* 2020). Although there are only two monotypic Afrotropical genera, the high number of larval types suggests the likely presence of more genera than currently recognized, further supporting the possibility of polyphyly in several genera. This was already suggested by Delève (1963, 1965a, 1965b), particularly for the genera *Helminthopsis*, *Microdinodes*, and *Pseudelmidolia*. Their considerable variability in external and genital characters obscures generic boundaries, and their monophyly should be clarified through a thorough generic revision.

Research on the presence and distribution of plastron structures in Afrotropical Elminae is almost non-existent. Approximately half of all genera exhibit what appears to be plastron tomentum on the pronotum, characterized by either a shiny, metallic-like or matt surface. However, plastron occurrence on the elytra is relatively rare, even though this feature is a notable characteristic of the tribe Macronychini (e.g., Kodada & Čiampor 2003). It is hypothesized to represent an adaptation to habitats with slow-moving water or low dissolved oxygen levels. Species in such environments often display additional adaptations, including smaller tarsal segments and slender tarsal claws, which are advantageous in fast-flowing waters (Spangler 1981).

In the Afrotropical region, six taxa are known to exhibit plastron tomentum on the elytra, all of which share at least superficially similar body shapes and comparable pronotal and elytral sculpturing. Four of these – *Elmidolia*, *Helminthopsis*, *Elmidoliana*, and *Ludyella* – feature a thin, alutaceous layer of tomentum, while the remaining two – *Lathridelmis* and *Trachelminthopsis* – are characterized by a thick, rugose layer that nearly fully covers the dorsum, forming a radial pattern in the former and a meshed pattern in the latter. Intriguingly, the latter genus bears a striking resemblance to some Neotropical taxa, such as Portelmis (e.g., Polizei & Fernandes 2020).

This paper offers a comprehensive characterization and additional information on all 23 genera and three subgenera of Afrotropical Elminae. These diagnoses are supported by detailed figures, and most of the taxa are photographed for the first time. With the notable exception of the complex *Helminthopsis-Elmidoliana-Ludyella*, all genera can be distinguished from one another by a set of diagnostic characters presented here. The goal of this study is to clarify the current state of taxonomy within Afrotropical Elminae, without proposing any nomenclatural changes.

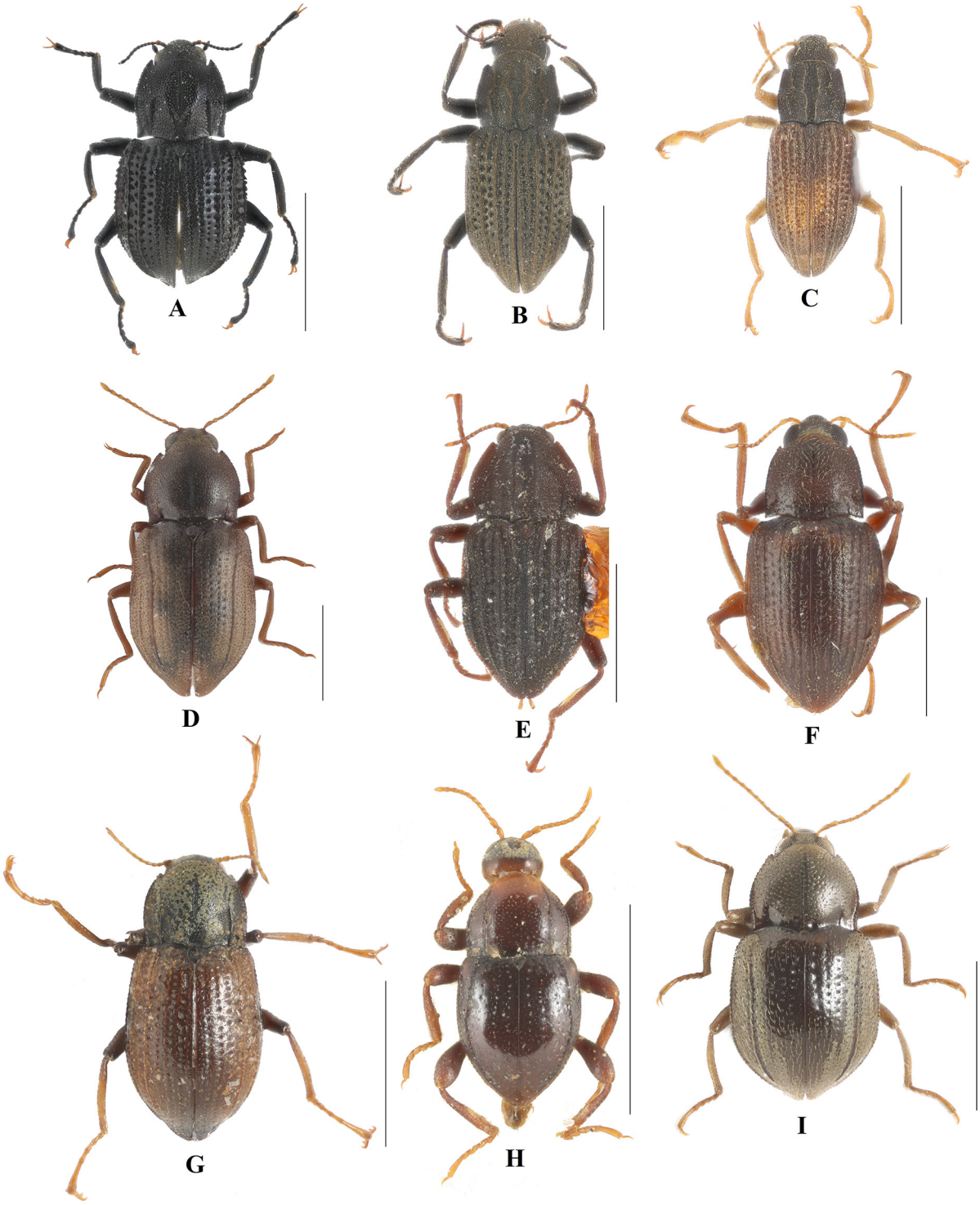

Fig. 1. Dorsal habitus of Afrotropical Elmidae. **A**. *Aspidelmis scutellaris* Delève, 1954 [non-type, BMNH]. **B**. *Ctenelmis* (*Ctenelmis*) *harrisoni* Delève, 1964 [non-type, BMNH]. **C**. *Ctenelmis* (*Paractenelmis*) *discrepans* Delève, 1964 [non-type, BMNH]. **D**. *Elmidolia binervosa binervosa* (Grouvelle, 1899) [non-type, BMNH]. *E. Elpidelmis capensis* (Grouvelle, 1890) [syntype, BMNH]. **F**. *Eumicrodinodes bipustulatus* Delève, 1965 [non-type, BMNH]. **G**. *Exolimnius lateritius* (Fairmaire, 1902) [non-type, BMNH]. **H**. *Helminthocharis abdominalis nigra* Delève, 1967 [syntype, BMNH]. **I**. *Helminthopsis* (*Helminthopsis*) sp. [non-type, BMNH]. Scale bars = 1.0 mm.

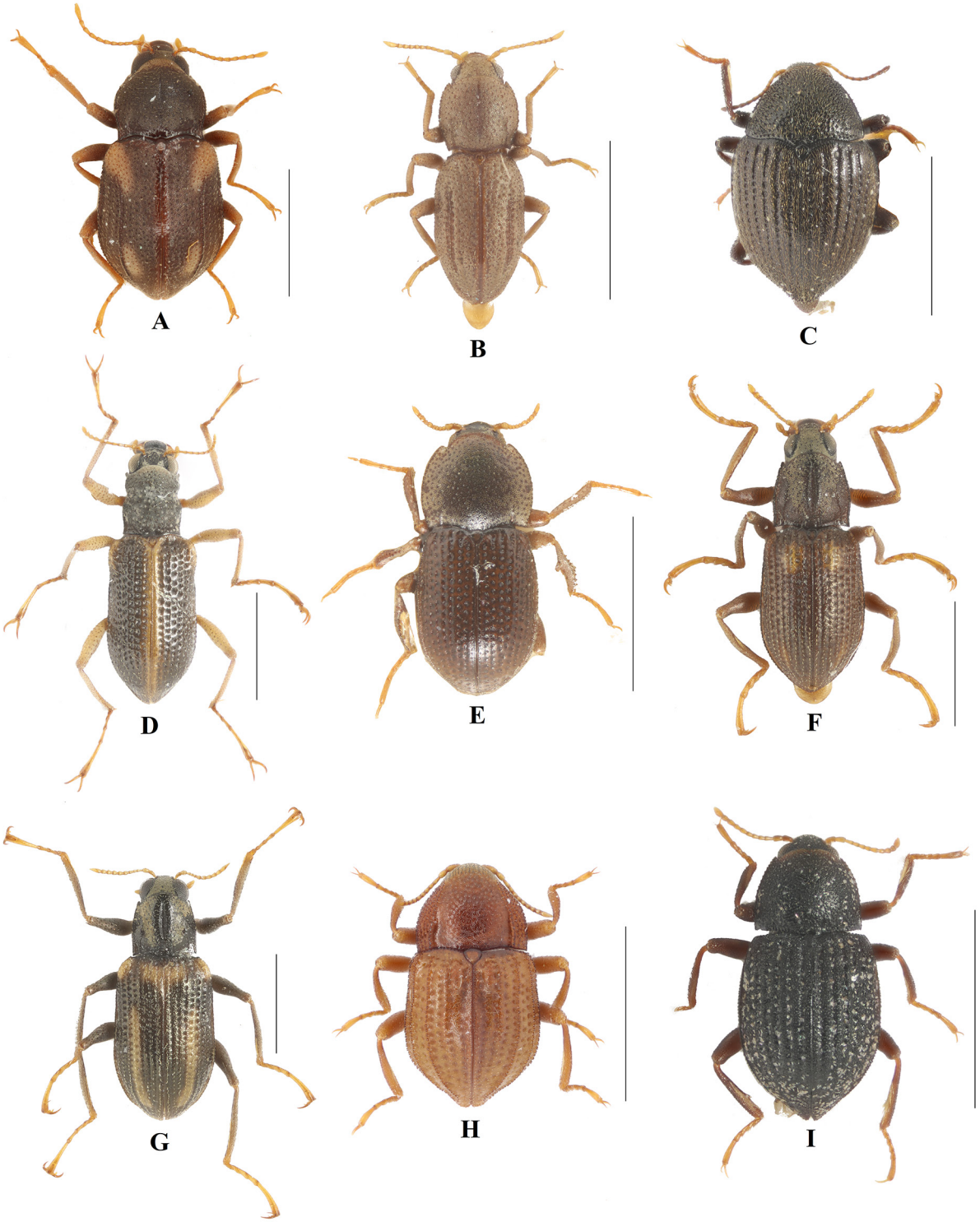

Fig. 2. Dorsal habitus of Afrotropical Elmidae. **A**. *Helminthopsis* (*Elmidoliana*) *luteopicta luteopicta* Delève, 1938 [paratype, IRSNB]. **B**. *Lathridelmis crenicollis* Delève, 1965 [non-type, BMNH]. **C**. *Leielmis georyssoides* (Grouvelle, 1890) [non-type, BMNH]. **D**. *Leptelmis* sp. [non-type, BMNH]. **E**. *Lobelmis subnigra* Grouvelle, 1906 [syntype, BMNH]. **F**. *Microdinodes* (*Microdinodes*) *quadrifasciatus* Grouvelle, 1906 [syntype, BMNH]. **G**. *Microdinodes* (*Paramicrodinodes*) *vaalensis* Delève, 1965 [non-type, BMNH]. **H**. *Pachyelmis* sp. [non-type, BMNH]. **I**. *Peloriolus granulosus* Delève, 1964 [non-type, BMNH]. Scale bars = 1.0 mm.

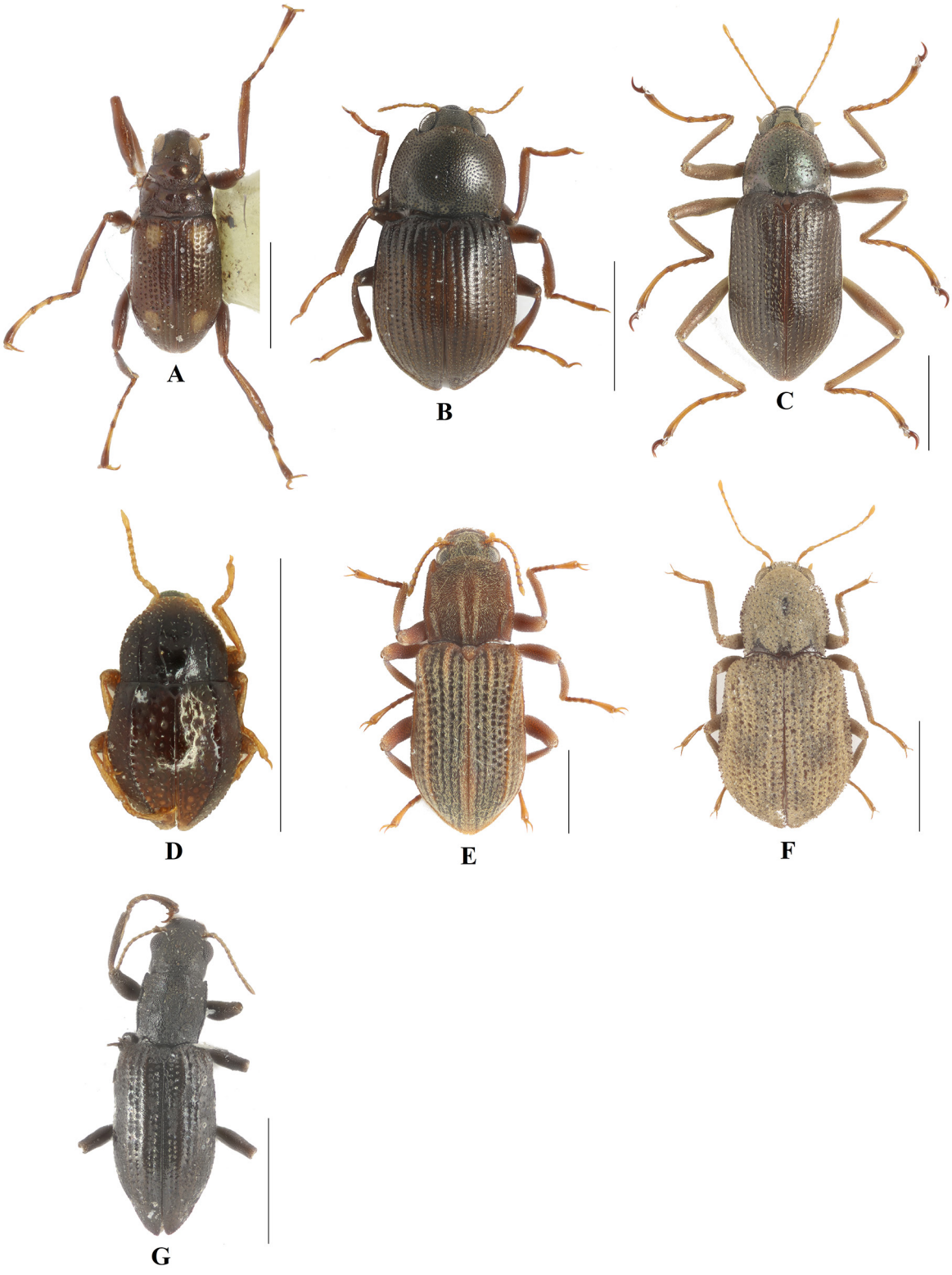

Fig. 3. Dorsal habitus of Afrotropical Elmidae. **A**. *Pseudancyronyx quadriguttatus* (Delève, 1937) [paratype, IRSNB]. **B**. *Pseudelmidolia umbrina* (Fairmaire, 1898) [non-type, BMNH]. **C**. *Pseudomacronychus intermedius* Delève, 1963 [non-type, BMNH]. **D**. *Sphragidelmis atomaria* (Fairmaire, 1898) [non-type, IRSNB]. **E**. *Stenelmis laeticollis* Delève, 1966 [non-type, IRSNB]. **F**. *Trachelminthopsis terrifera* Delève, 1965 [non-type, BMNH]. **G**. *Tropidelmis hintoni* Delève, 1964 [paratype, BMNH]. Scale bars = 1.0 mm.

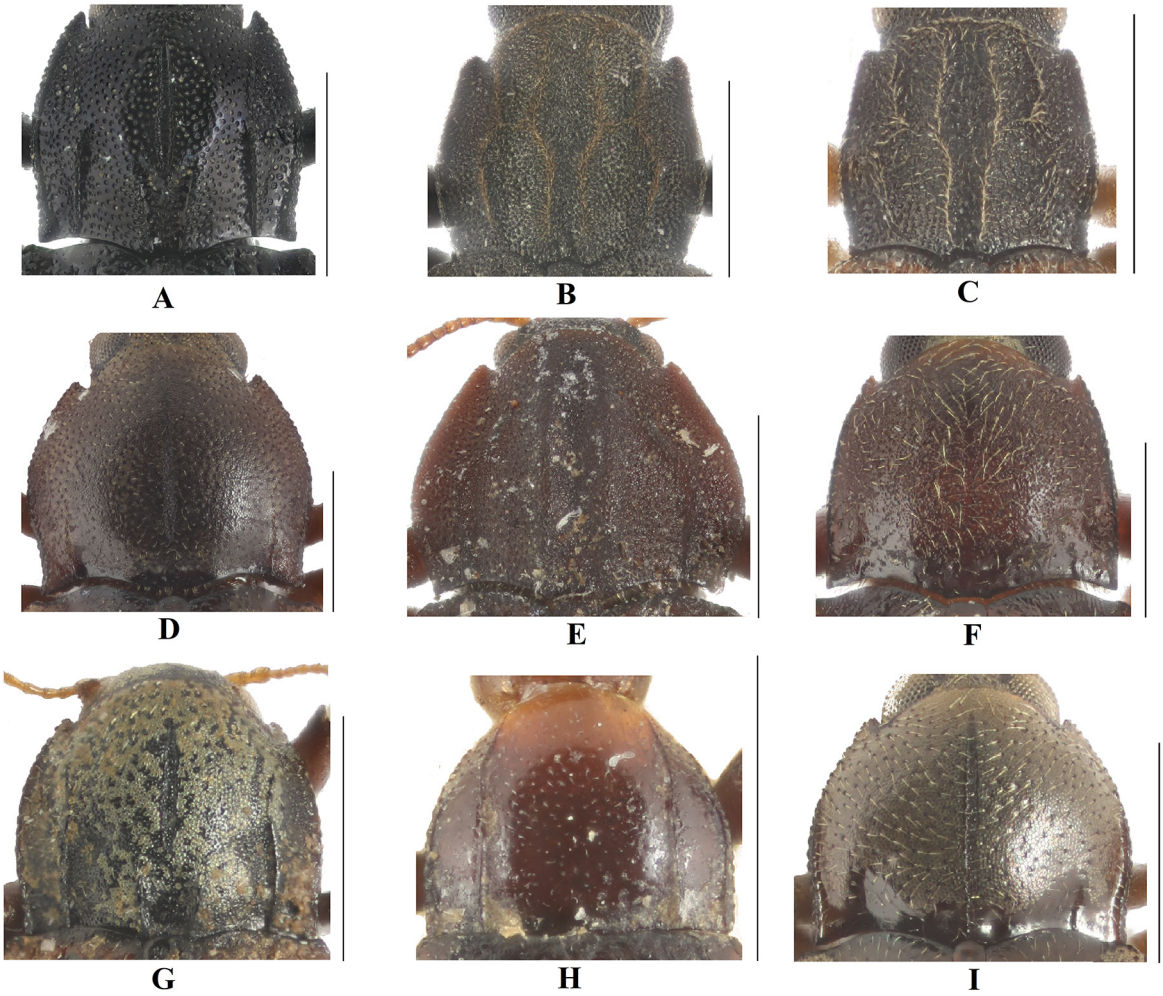

Fig. 4. Pronotum of Afrotropical Elmidae. **A**. *Aspidelmis scutellaris* Delève, 1954 [non-type, BMNH]. **B**. *Ctenelmis* (*Ctenelmis*) *harrisoni* Delève, 1964 [non-type, BMNH]. **C**. *Ctenelmis* (*Paractenelmis*) *discrepans* Delève, 1964 [non-type, BMNH]. **D**. *Elmidolia binervosa binervosa* (Grouvelle, 1899) [non-type, BMNH]. **E**. *Elpidelmis capensis* (Grouvelle, 1890) [syntype, BMNH]. **F**. *Eumicrodinodes bipustulatus* Delève, 1965 [non-type, BMNH]. **G**. *Exolimnius lateritius* (Fairmaire, 1902) [non-type, BMNH]. **H**. *Helminthocharis abdominalis nigra* Delève, 1967 [syntype, BMNH]. **I**. *Helminthopsis* (*Helminthopsis*) sp. [non-type, BMNH]. Scale bars = 0.5 mm.

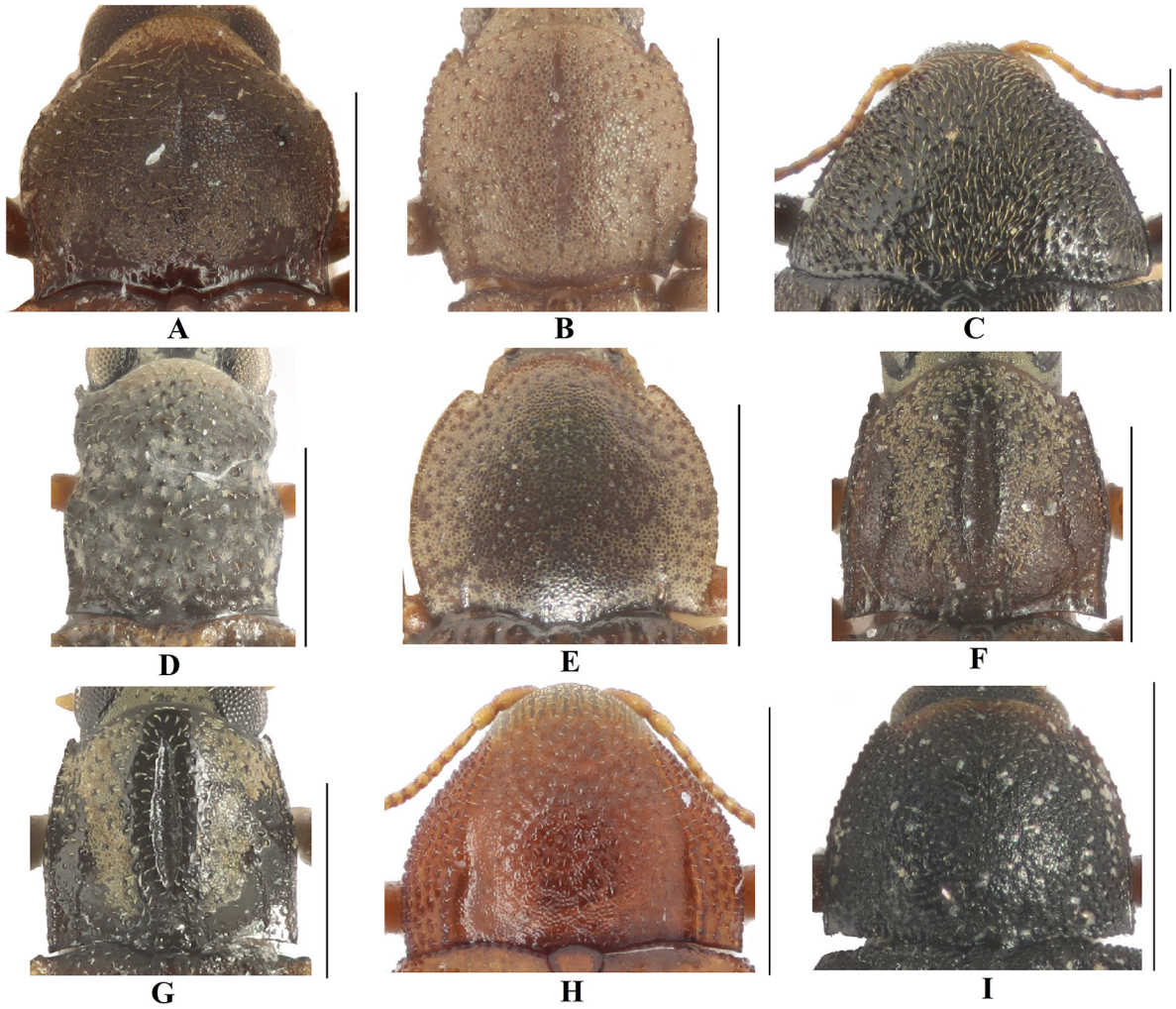

Fig. 5. Pronotum of Afrotropical Elmidae. **A**. *Helminthopsis* (*Elmidoliana*) *luteopicta luteopicta* Delève, 1938 [paratype, IRSNB]. **B**. *Lathridelmis crenicollis* Delève, 1965 [non-type, BMNH]. **C**. *Leielmis georyssoides* (Grouvelle, 1890) [non-type, BMNH]. **D**. *Leptelmis* sp. [non-type, BMNH]. **E**. *Lobelmis subnigra* Grouvelle, 1906 [syntype, BMNH]. **F**. *Microdinodes* (*Microdinodes*) *quadrifasciatus* Grouvelle, 1906 [syntype, BMNH]. **G**. *Microdinodes* (*Paramicrodinodes*) *vaalensis* Delève, 1965 [non-type, BMNH]. **H**. *Pachyelmis*.sp. [non-type, BMNH]. **I**. *Peloriolus granulosus* Delève, 1964 [non-type, BMNH]. Scale bars = 0.5 mm.

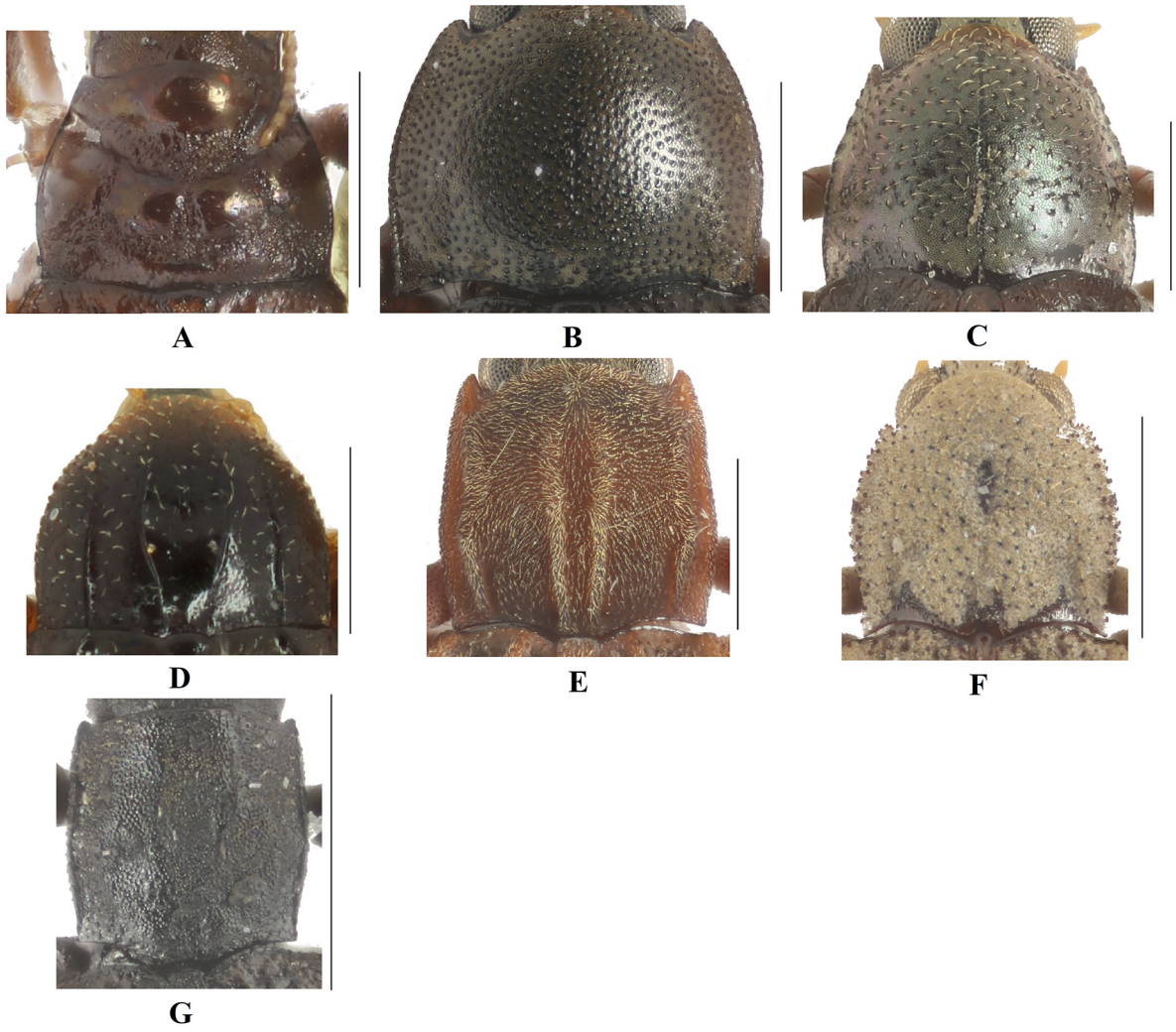

Fig. 6. Pronotum of Afrotropical Elmidae. **A**. *Pseudancyronyx quadriguttatus* (Delève, 1937) [paratype, IRSNB]. **B**. *Pseudelmidolia umbrina* (Fairmaire, 1898) [non-type, BMNH]. **C**. *Pseudomacronychus intermedius* Delève, 1963 [non-type, BMNH]. **D**. *Sphragidelmis atomaria* (Fairmaire, 1898) [non-type, IRSNB]. **E**. *Stenelmis laeticollis* Delève, 1966 [non-type, IRSNB]. **F**. *Trachelminthopsis terrifera* Delève, 1965 [non-type, BMNH]. **G**. *Tropidelmis hintoni* Delève, 1964 [paratype, BMNH]. Scale bars = 0.5 mm.

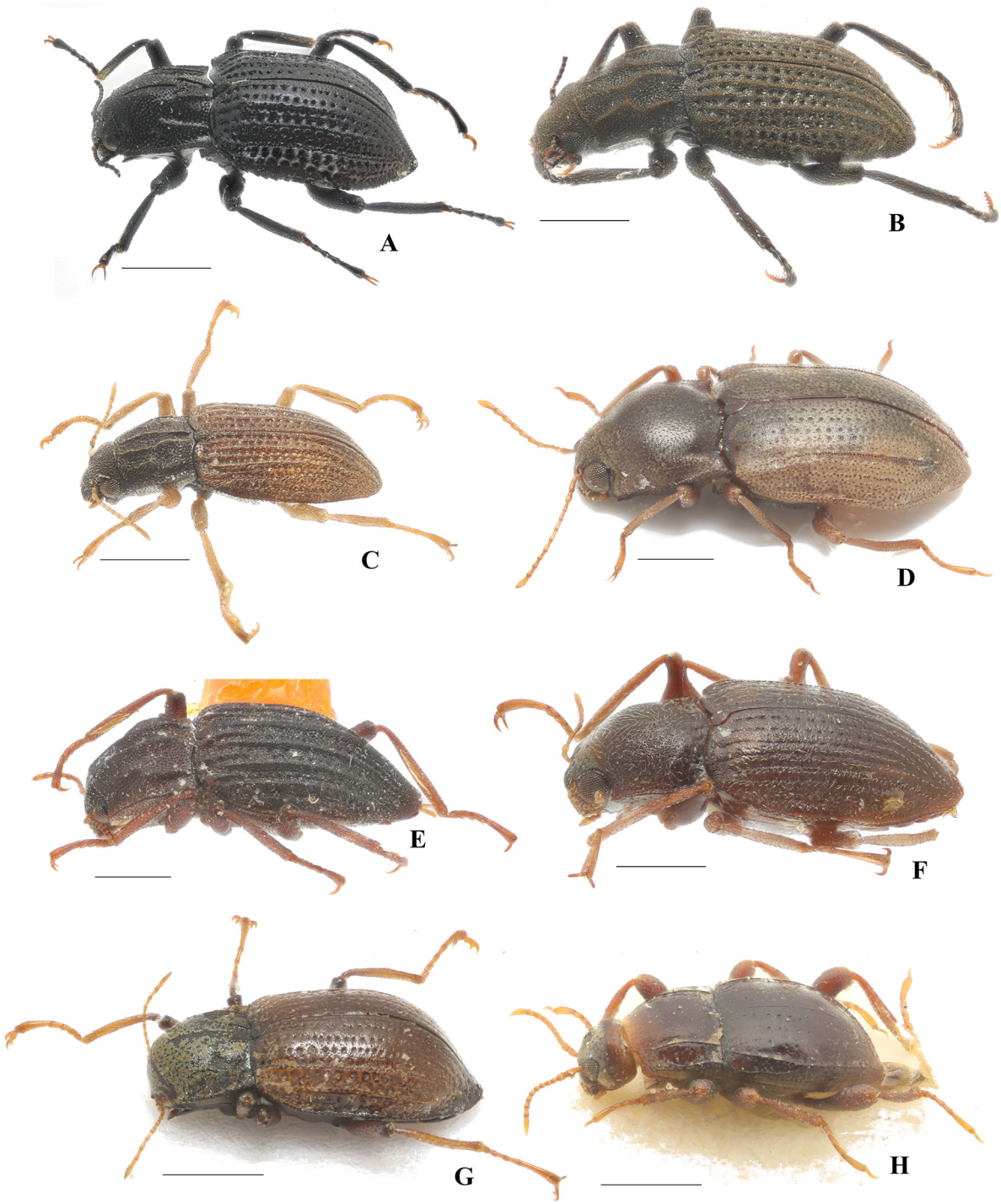

Fig. 7. Dorsolateral habitus of Afrotropical Elmidae. **A**. *Aspidelmis scutellaris* Delève, 1954 [non-type, BMNH]. **B**. *Ctenelmis* (*Ctenelmis*) *harrisoni* Delève, 1964 [non-type, BMNH]. **C**. *Ctenelmis* (*Paractenelmis*) *discrepans* Delève, 1964 [non-type, BMNH]. **D**. *Elmidolia binervosa binervosa* (Grouvelle, 1899) [non-type, BMNH]. **E**. *Elpidelmis capensis* (Grouvelle, 1890) [syntype, BMNH]. **F**. *Eumicrodinodes bipustulatus* Delève, 1965 [non-type, BMNH]. **G**. *Exolimnius lateritius* (Fairmaire, 1902) [non-type, BMNH]. **H**. *Helminthocharis abdominalis nigra* Delève, 1967 [syntype, BMNH]. Scale bars = 0.5 mm.

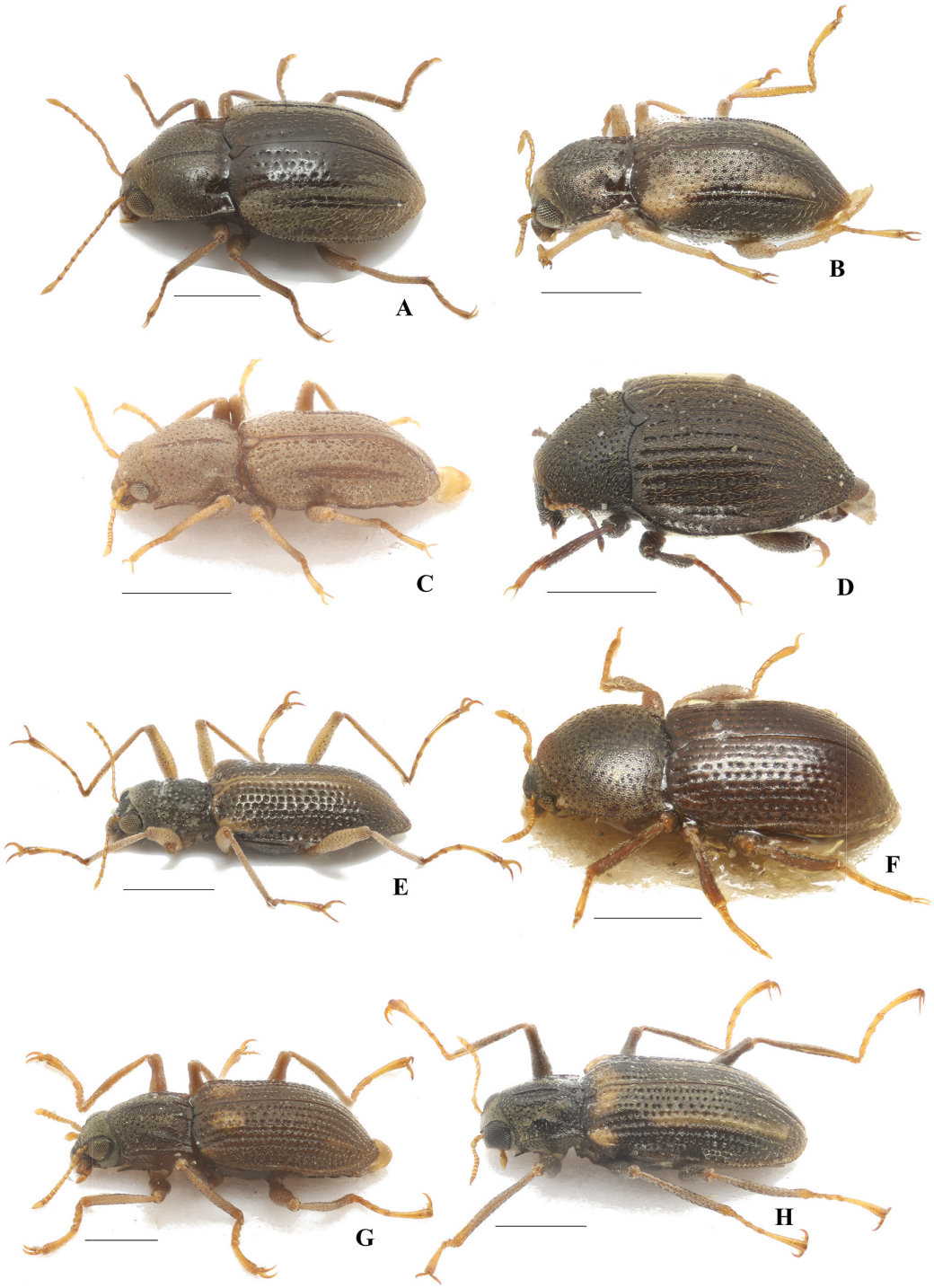

Fig. 8. Dorsolateral habitus of Afrotropical Elmidae. **A**. *Helminthopsis* (*Helminthopsis*) sp. [non-type, BMNH]. **B**. *Helminthopsis* (*Elmidoliana*) sp. [non-type, BMNH]. **C**. *Lathridelmis crenicollis* Delève, 1965 [non-type, BMNH]. **D**. *Leielmis georyssoides* (Grouvelle, 1890) [non-type, BMNH]. **E**. *Leptelmis* sp. [non-type, BMNH]. **F**. *Lobelmis subnigra* Grouvelle, 1906 [syntype, BMNH]. **G**. *Microdinodes* (*Microdinodes*) *quadrifasciatus* Grouvelle, 1906 [syntype, BMNH]. **H**. *Microdinodes* (*Paramicrodinodes*) *vaalensis* Delève, 1965 [non-type, BMNH]. Scale bars = 0.5 mm.

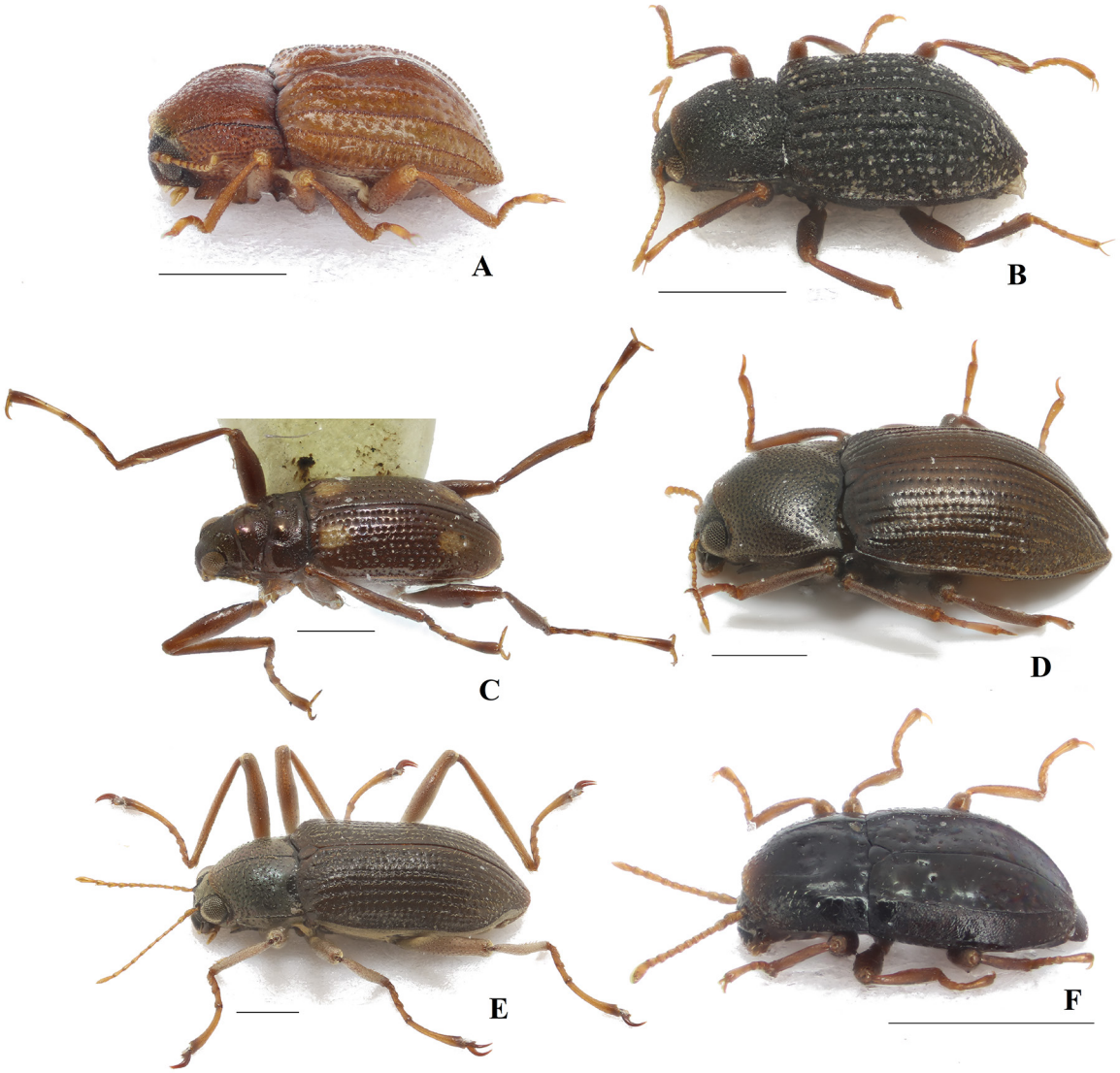

Fig. 9. Dorsolateral habitus of Afrotropical Elmidae. **A**. *Pachyelmis* sp. [non-type, BMNH]. **B**. *Peloriolus granulosus* Delève, 1964 [non-type, BMNH]. **C**. *Pseudancyronyx quadriguttatus* (Delève, 1937) [paratype, IRSNB]. **D**. *Pseudelmidolia umbrina* (Fairmaire, 1898) [non-type, BMNH]. **E**. *Pseudomacronychus intermedius* Delève, 1963 [non-type, BMNH]. **F**. *Sphragidelmis* sp. [non-type, NHMW]. Scale bars = 0.5 mm.

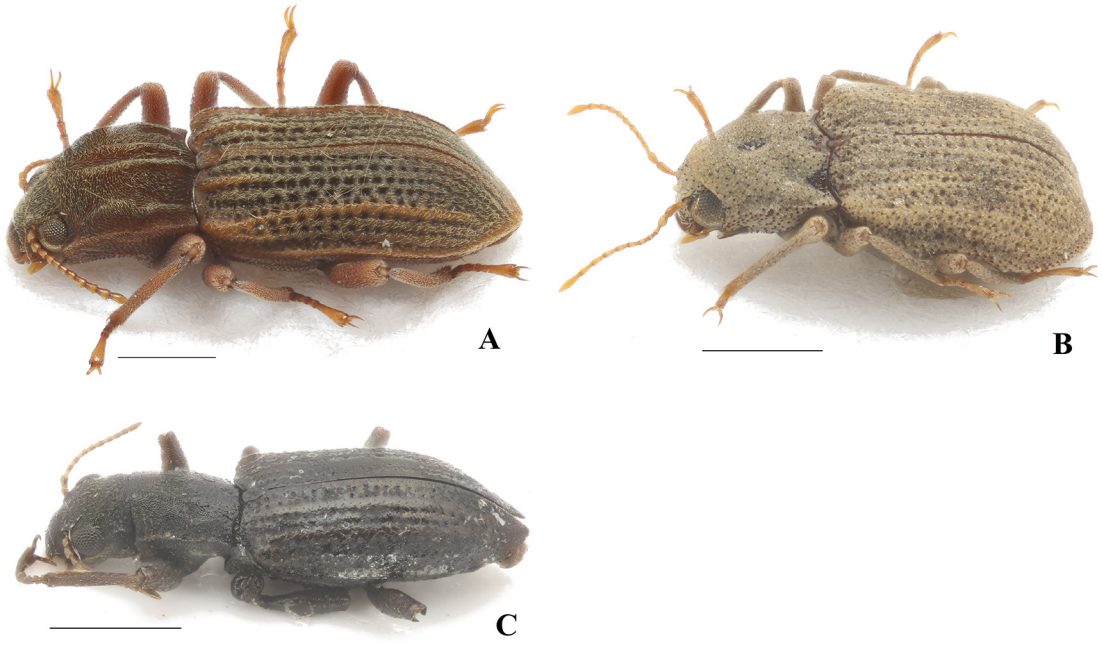

Fig. 10. Dorsolateral habitus of Afrotropical Elmidae. **A**. *Stenelmis laeticollis* Delève, 1966 [non-type, IRSNB]. **B**. *Trachelminthopsis terrifera* Delève, 1965 [non-type], BMNH. **C**. *Tropidelmis hintoni* Delève, 1964 [paratype, BMNH]. Scale bars = 0.5 mm.

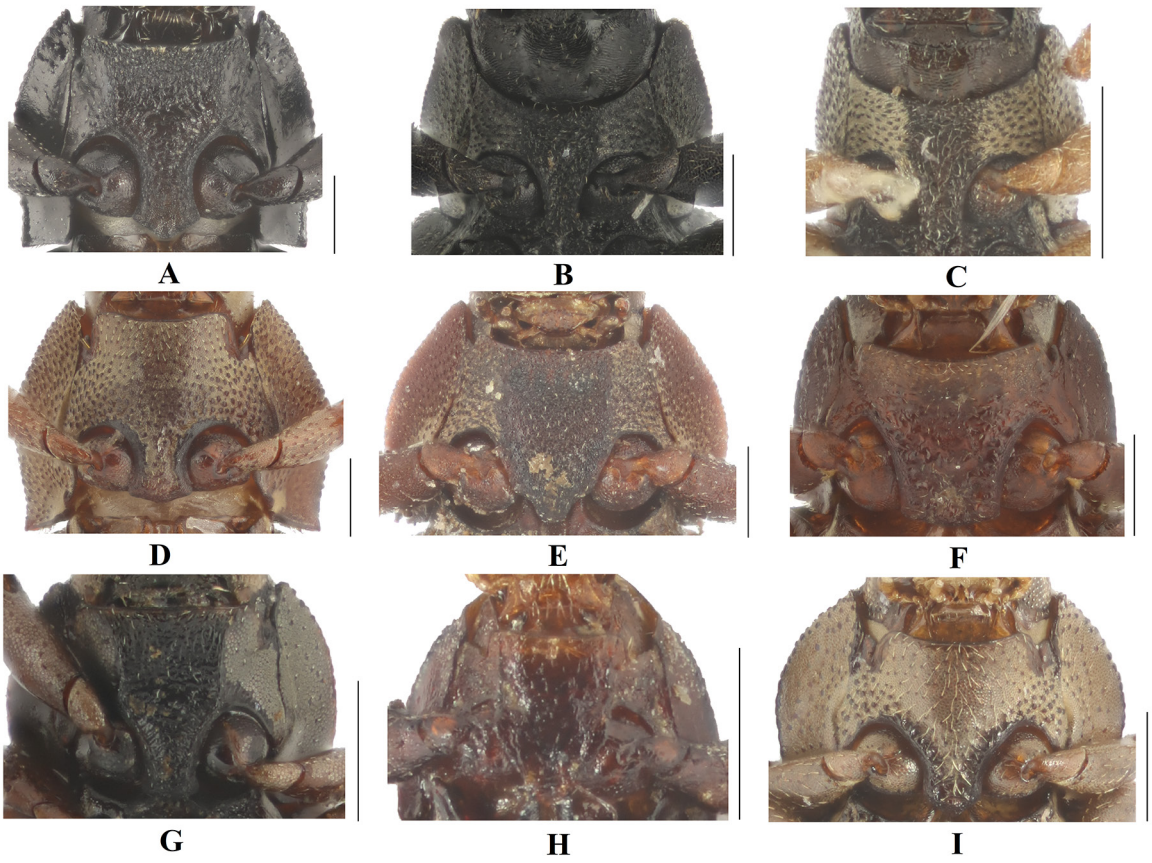

Fig. 11. Prosternum of Afrotropical Elmidae. **A**. *Aspidelmis scutellaris* Delève, 1954 [non-type, BMNH]. **B**. *Ctenelmis* (*Ctenelmis*) *harrisoni* Delève, 1964 [non-type, BMNH]. **C**. *Ctenelmis* (*Paractenelmis*) *discrepans* Delève, 1964 [non-type, BMNH]. **D**. *Elmidolia binervosa binervosa* (Grouvelle, 1899) [non-type, BMNH]. **E**. *Elpidelmis capensis* (Grouvelle, 1890) [syntype, BMNH]. **F**. *Eumicrodinodes bipustulatus* Delève, 1965 [non-type, BMNH]. **G**. *Exolimnius lateritius* (Fairmaire, 1902) [non-type, BMNH]. **H**. *Helminthocharis abdominalis nigra* Delève, 1967 [syntype, BMNH]. **I**. *Helminthopsis* (*Helminthopsis*) sp. [non-type, BMNH]. Scale bars = 0.25 mm.

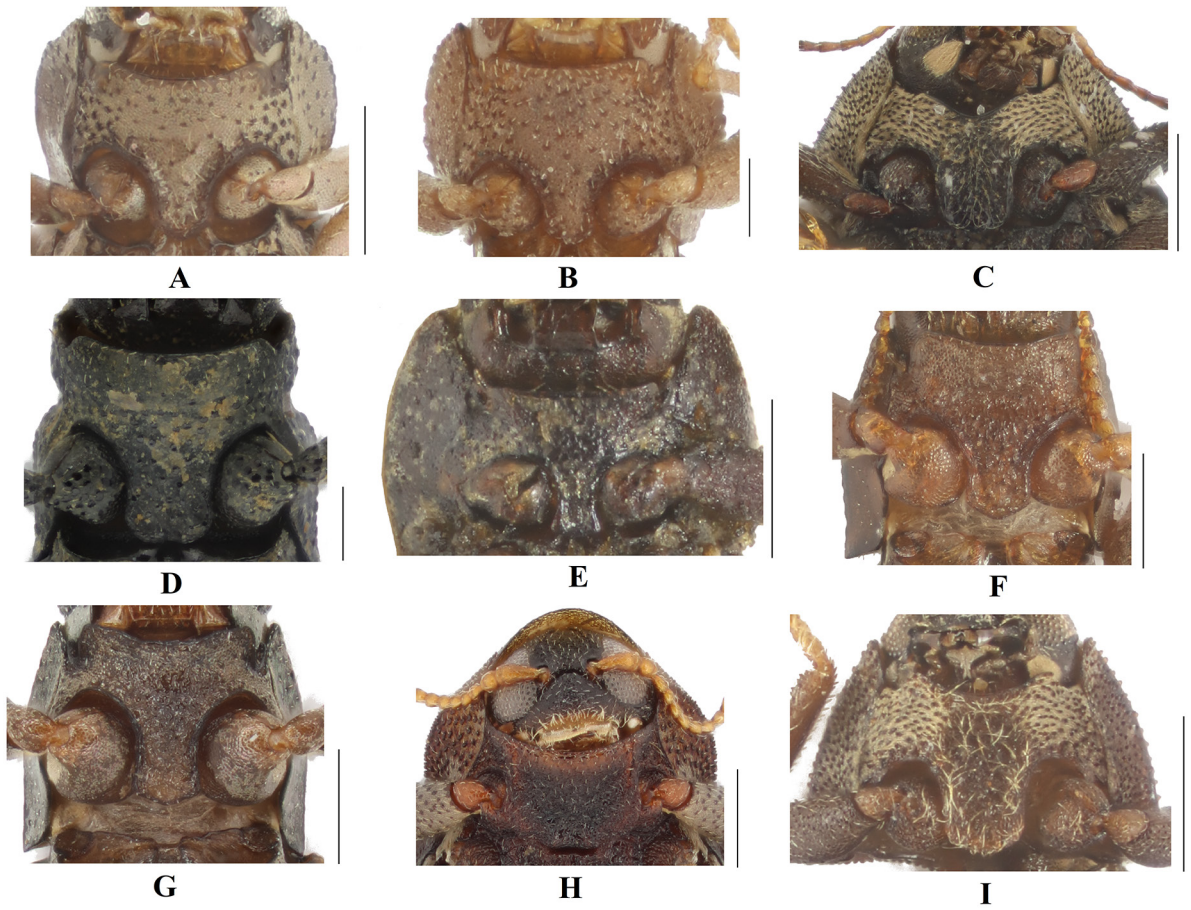

Fig. 12. Prosternum of Afrotropical Elmidae. **A**. *Helminthopsis* (*Elmidoliana*) sp. [non-type, BMNH]. **B**. *Lathridelmis crenicollis* Delève, 1965 [non-type, BMNH]. **C**. *Leielmis georyssoides* (Grouvelle, 1890) [non-type, BMNH]. **D**. *Leptelmis* sp. [non-type, BMNH]. **E**. *Lobelmis harrisoni* Delève, 1967 [paratype, BMNH]. **F**. *Microdinodes* (*Microdinodes*) *quadrifasciatus* Grouvelle, 1906 [syntype, BMNH]. **G**. *Microdinodes* (*Paramicrodinodes*) *vaalensis* Delève, 1965 [non-type, BMNH]. **H**. *Pachyelmis* sp. [non-type, BMNH]. **I**. *Peloriolus granulosus* Delève, 1964 [non-type, BMNH]. Scale bars = 0.25 mm.

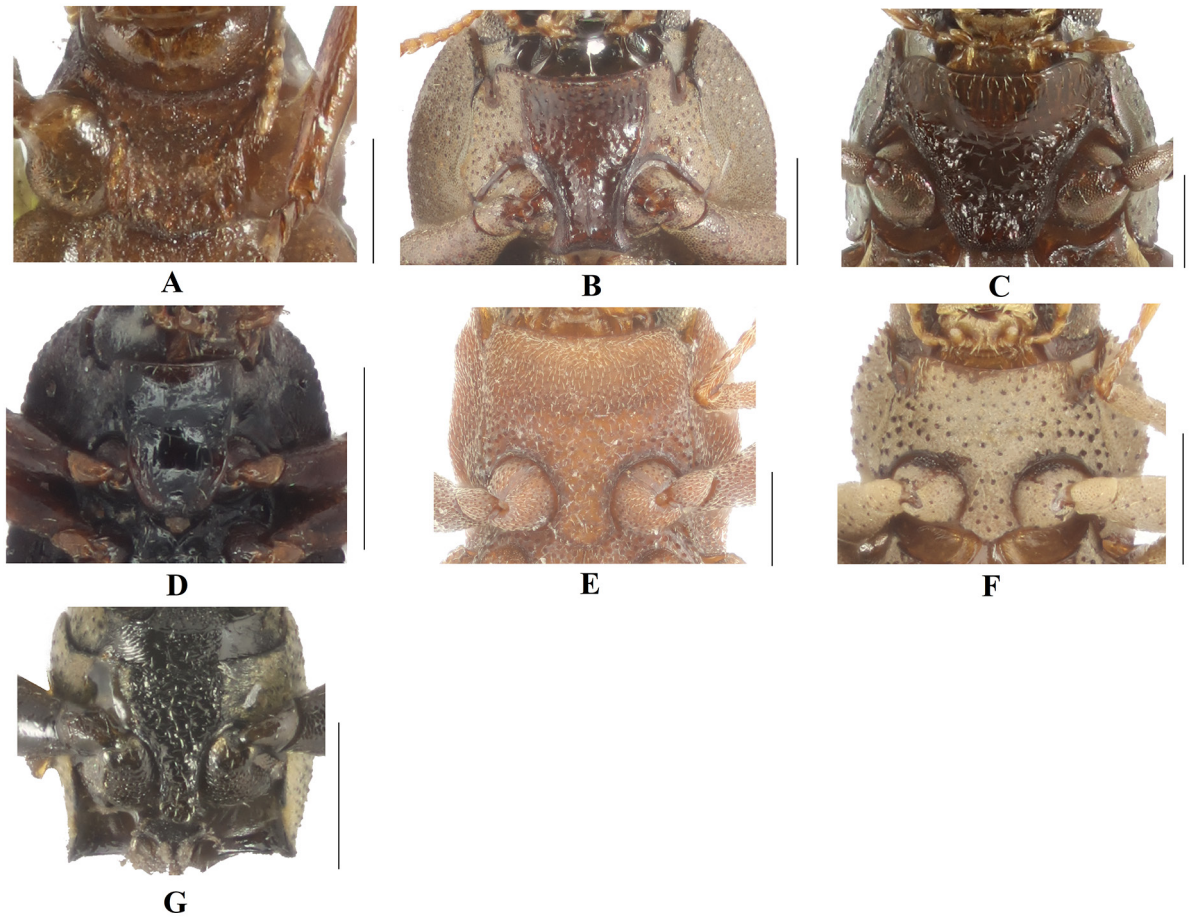

Fig. 13. Prosternum of Afrotropical Elmidae. **A**. *Pseudancyronyx quadriguttatus* (Delève, 1937) [paratype, IRSNB]. **B**. *Pseudelmidolia umbrina* (Fairmaire, 1898) [non-type, BMNH]. **C**. *Pseudomacronychus intermedius* Delève, 1963 [non-type, BMNH]. **D**. *Sphragidelmis* sp. [non-type, NHMW]. **E**. *Stenelmis laeticollis* Delève, 1966 [non-type, IRSNB]. **F**. *Trachelminthopsis terrifera* Delève, 1965 [non-type, BMNH]. **G**. *Tropidelmis hintoni* Delève, 1964 [paratype, BMNH]. Scale bars = 0.25 mm.

Fig. 14. 5th tarsal segment and tarsal claw of Afrotropical Elmidae. **A**. *Aspidelmis scutellaris* Delève, 1954 [non-type, BMNH]. **B**. *Ctenelmis* (*Ctenelmis*) *harrisoni* Delève, 1964 [non-type, BMNH]. **C**. *Ctenelmis* (*Paractenelmis*) *discrepans* Delève, 1964 [non-type, BMNH]. **D**. *Elmidolia binervosa binervosa* (Grouvelle, 1899) [non-type, BMNH]. **E**. *Elpidelmis capensis* (Grouvelle, 1890) [syntype, BMNH]. **F**. *Eumicrodinodes bipustulatus* Delève, 1965 [non-type, BMNH]. **G**. *Exolimnius lateritius* (Fairmaire, 1902) [non-type, BMNH]. **H**. *Helminthocharis abdominalis nigra* Delève, 1967 [syntype, BMNH]. **I**. *Helminthopsis* (*Helminthopsis*) sp. [non-type, BMNH]. **J**. *Helminthopsis* (*Elmidoliana*) *luteopicta luteopicta* Delève, 1938 [paratype, IRSNB]. **K**. *Lathridelmis crenicollis* Delève, 1965 [non-type, BMNH]. **L**. *Leielmis georyssoides* (Grouvelle, 1890) [non-type, BMNH]. **M**. *Leptelmis* sp. [non-type, BMNH]. **N**. *Lobelmis subnigra* Grouvelle, 1906 [syntype, BMNH]. **O**. *Microdinodes* (*Microdinodes*) *quadrifasciatus* Grouvelle, 1906 [syntype, BMNH]. **P**. *Microdinodes* (*Paramicrodinodes*) *vaalensis* Delève, 1965 [non-type, BMNH]. **Q**. *Pachyelmis* sp. [non-type, BMNH]. **R**. *Peloriolus granulosus* Delève, 1964 [non-type, BMNH]. **S**. *Pseudancyronyx quadriguttatus* (Delève, 1937) [paratype, IRSNB]. **T**. *Pseudelmidolia umbrina* (Fairmaire, 1898) [non-type, BMNH]. **U**. *Pseudomacronychus intermedius* Delève, 1963 [non-type, BMNH]. **V**. *Sphragidelmis atomaria* (Fairmaire, 1898) [non-type, IRSNB]. **W**. *Stenelmis laeticollis* Delève, 1966 [non-type, IRSNB]. **X**. *Trachelminthopsis terrifera* Delève, 1965 [non-type, BMNH]. **Y**. *Tropidelmis hintoni* Delève, 1964 [paratype, BMNH]. Not to scale.

Fig. 15. Antennae of Afrotropical Elmidae. **A**. *Lobelmis subnigra* Grouvelle, 1906 [syntype, BMNH]. **B**. *Microdinodes* (*Microdinodes*) *quadrifasciatus* Grouvelle, 1906 [syntype, BMNH]. **C**. *Pseudomacronychus intermedius* Delève, 1963 [non-type, BMNH]. Scale bars: 0.1 mm.

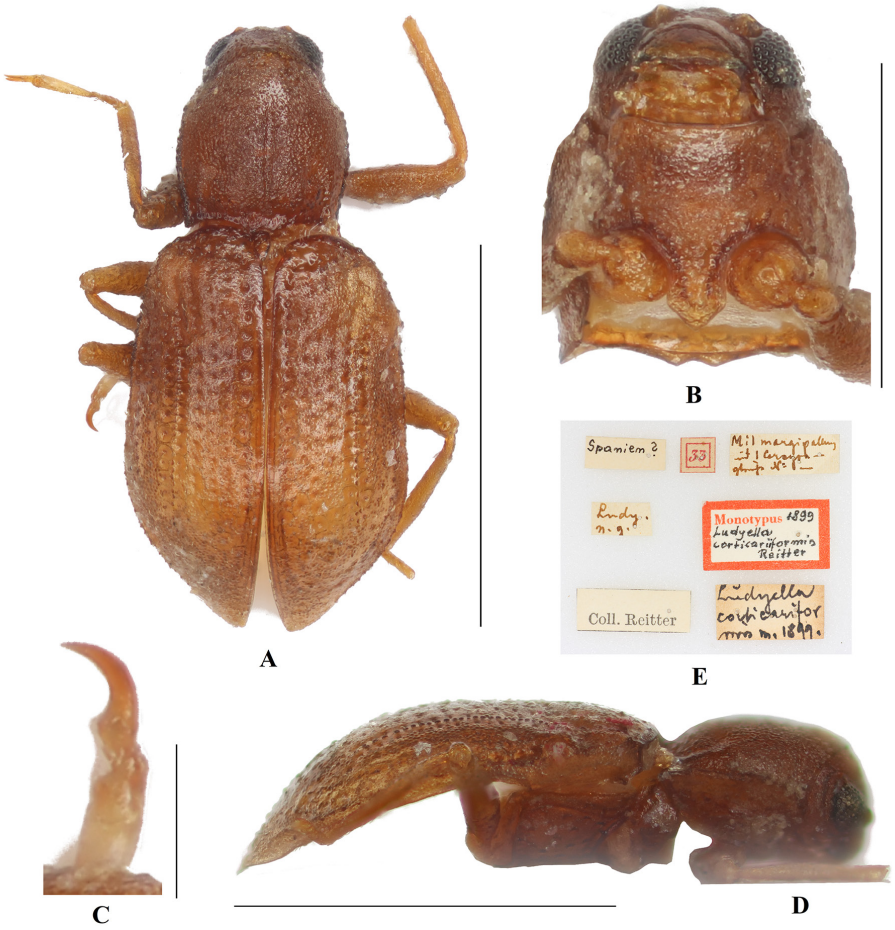

Fig. 16. *Ludyella corticariiformis* Reitter, 1899 [holotype, HNMH]. **A**. Dorsal habitus. **B**. Prosternum. **C**. Tarsi. **D**. Lateral habitus. **E**. Labels. Scale bars: A, D = 1.0 mm; B = 0.5 mm; C = 0.1 mm.

Fig. 17. *Peloriolus brunneus* (Waterhouse, 1879) [syntype, BMNH]. **A**. Dorsal habitus. **B**. Dorsolateral habitus. **C**. Ventral habitus. **D**. Labels. Scale bars: 1.0 mm.

Fig. 18. Ovipositor of Afrotropical Elmidae. **A**. *Microdinodes* (*Microdinodes*) *nigrolineatus* Delève, 1937 [non-type, BMNH]. **B**. *Microdinodes* (*Paramicrodinodes*) *vaalensis* Delève, 1965 [non-type, BMNH]. Scale bar: 0.25 mm.

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