

A cladistically based reinterpretation of the taxonomy of two Afrotropical tenebrionid genera *Ectateus* Koch, 1956 and *Selinus* Mulsant & Rey, 1853 (Coleoptera, Tenebrionidae, Platynotina)

Marcin Jan Kamiński^{1,†}

¹ Museum and Institute of Zoology, Polish Academy of Sciences, Wilcza 64, 00-679 Warsaw, Poland

† <http://zoobank.org/967D4DC1-36D9-47DB-96F8-C06214F93C19>

Corresponding author: Marcin Jan Kamiński (mkaminski@miiz.waw.pl)

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Abstract

On the basis of a newly performed cladistic analysis a new classification of the representatives of two Afrotropical tenebrionid genera, *Ectateus* Koch, 1956 and *Selinus* Mulsant & Rey, 1853 *sensu* Iwan 2002a, is provided. *Eleoselinus* is described as a new genus. The genus *Monodius*, previously synonymized with *Selinus* by Iwan (2002), is redescribed and considered as a separate genus. Following new combinations are proposed: *Ectateus calcaripes* (Gebien, 1904), *Monodius laevistriatus* (Fairmaire, 1897), *Monodius lamottei* (Gridelli, 1954), *Monodius plicicollis* (Fairmaire, 1897), *Eleoselinus villiersi* (Ardoin, 1965) and *Eleoselinus ursynowiensis* (Kamiński, 2011). Neotype for *Ectateus calcaripes* and lectotypes for *E. crenatus* (Fairmaire, 1897), *E. ghesquierei* Koch, 1956 and *Monodius malaisei malaisei* Koch, 1956 are designated to fix the taxonomic status of these taxa. The following synonymies are proposed: *Selinus monardi* Kaszab, 1951 and *Ectateus latipennis* Koch, 1956 with *E. crenatus* (Fairmaire, 1897). Identification keys are provided to all known species of *Ectateus sensu novum*, *Eleoselinus*, *Monodius* and *Selinus sensu novum*.

Keywords

Africa, ecoregions, cladistics, identification key, new genus, taxonomy, Pedinini

Introduction

Pursuant to the classification of the family Tenebrionidae presented by Bouchard et al. (2005, 2011) Platynotina Mulsant & Rey, 1853 is one of the eight subtribes within the tribe Pedinini Eschscholtz, 1829. At present Platynotina consists of over 60 genera distributed in Afrotropical, Indomalayan, Nearctic and Neotropical realms (Iwan 2002b; Kamiński 2013c; Kamiński and Raś 2012).

According to the results of a cladistic analysis performed by Iwan (2002a), *Ectateus* Koch, 1956 and *Selinus* Mulsant & Rey, 1853 are the members of the platynotoid evolutionary lineage within the subtribe Platynotina Mulsant & Rey, 1853. The representatives of both genera are distributed in the western parts of Central Africa (Iwan 2004a).

The current taxonomic concept of the genus *Ectateus* was proposed by Iwan (2002a) and modified by Kamiński and Raś (2011) to: circular depressions on the lateral sides of clypeus and genae, pronotum with anterior angles distinctly protruding anteriorly, elytral humeri not protruding outwards, apical part of epipleuron and fifth ventrite unbordered. The taxonomic concept of *Selinus* was also established by Iwan (2002a) and is as follows: upper edge of elytral base fused with humerus, anterior pronotal angles distinctly protruding anteriorly, short metasternum and bursa copulatrix with two sacs. Unfortunately both of the above mentioned taxonomic concepts were based only on a few representatives of their genera. The preliminary study of the entomological material has shown that some of the representatives of *Ectateus* shares many morphological characters and distributional pattern with certain species of the *Selinus* and *vice versa*.

According to the results of a cladistic analysis performed by Iwan (2002a) *Ectateus* and *Selinus* are members of two sister clades. In the key to the genera of World Platynotina they are distinguished by the structure of 5th abdominal ventrite (*Selinus* – with bordering or border interrupted; *Ectateus* – without bordering) (Iwan 2002a). Unfortunately, this feature is no longer relevant which may easily lead to misidentification (five of seven species of *Selinus* do not match this character). Additionally, *Ectateus* and *Selinus* shares some unique (within whole subtribe) morphological features (e.g. slender antennomeres, specific clavae structure) and similar distributional pattern (Iwan 2002a, 2002b, Kamiński and Raś 2011). All this suggests that both of the mentioned genera can be more closely related than it was implied by Iwan (2002a).

The aim of this paper was to test the monophyly of *Ectateus* and *Selinus* and propose a stable classification for the representatives of these genera.

Material and methods

Morphological studies. The descriptive sequence used in this study is in accordance with Kamiński (2013b). Morphological terms follow Matthews et al. (2010); with additional specialized terms used for the male (Iwan 2001b, 2004b) and female genitalia (Banaszkiewicz 2006).

Measurements, taken using a filar micrometer, were as follows: width of anterior elytral margin (from humeral angle to scutellum); body length (from anterior margin of labrum to elytral apex); body width (maximum elytral width).

For examination of internal structures, specimens were dissected and whole abdomens were cleared in 10% cold potassium hydroxide overnight (Iwan 2000).

Images were taken using a Canon 1000D body with accordion bellows and Industar 61L/3 MC 50 mm f/2.8 lens, and with a Hitachi S-3400N SEM in MIIZ. Chosen SEM photographs were colored using Photoshop CS5.

Entomological material. This study was based on the material from the following collections:

BMNH	Natural History Museum, London, Great Britain
HNHM	Hungarian Natural History Museum, Budapest, Hungary
JFCS	Julio Ferrer Collection, Haninge, Sweden
MHNG	Muséum d'histoire naturelle de la Ville de Genève, Geneva, Switzerland
MIIZ	Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw, Poland
MNB	Museum für Naturkunde, Germany, Berlin
MNHN	Muséum National d'Histoire naturelle, Paris, France
MHNL	Centre de Conservation des Collections, Muséum d'Histoire Naturelle, Lyon, France
MRAC	Royal Museum for Central Africa, Tervuren, Belgium
RBINS	Royal Belgian Institute of Natural Sciences, Brussels, Belgium
TMNH	Ditsong National Museum of Natural History, Pretoria, Republic of South Africa
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany
ZMAS	Zoological Museum, Academy of Sciences, Sankt Petersburg, Russia

Phylogenetic analysis. Based on the results of a comparative analysis of the morphology of available material, including the type specimens, I propose a following synonymy: *Selinus monardi* Kaszab, 1951 and *Ectateus latipennis* Koch, 1956 with *Ectateus crenatus* (Fairmaire, 1897). Also, I disagree with the synonymy of *Selinus calcaripes* Gebien, 1904 with *Ectateus curtulus* (Fairmaire, 1893) proposed by Koch (1956) and I propose to treat this taxon as an independent species – not as a synonym of *E. curtulus*. For detailed information see the descriptions of these taxa included in the results section of this publication.

The operational taxonomic units (OTUs) representing the genus *Ectateus* consists of all (8) known species (considering above mentioned nomenclatural acts): *E. crenatus* (Fairmaire, 1897), *E. curtulus* (Fairmaire, 1893), *E. ghesquierei* Koch, 1956, *E. laevistriatus* (Fairmaire, 1897), *E. lamottei* (Gridelli, 1954), *E. modestus* (Fairmaire, 1887), *E. ursynowiensis* Kamiński, 2011 and *E. villiersi* Ardoin, 1965. Also, all (7) known species of *Selinus* were included in the phylogenetic analysis: *S. convexipennis* Gebien, 1904, *S. gravis* Koch, 1956, *S. malaisei* Koch, 1956, *S. medius* Fairmaire,

1897, *S. planus* (Fabricius, 1792), *S. plicicollis* Fairmaire, 1897 and *S. striatus* (Fabricius, 1794). The above mentioned taxa form the ingroup.

Zidalus latipes (Sahlberg, 1823) was used as the most distant outgroup on which the character polarization process was performed. According to Iwan's (2002a) hypothesis the genus *Zidalus* Mulsant & Rey, 1853 is a sister clade to all afrotropical platynotoid genera.

Lechius abacoides (Fairmaire, 1902), *Pseudoselinus punctatostriatus* (Gerstaecker, 1854), *Upembarus upembaensis* Koch, 1956 were used to test the monophyly of the clade *Ectateus*+*Selinus*. According to the results of Iwan's (2002a) cladistic analysis the genus *Lechius* Iwan, 1995 together with *Pseudoselinus* Iwan, 2002 and *Upembarus* Koch, 1956 form a sister clade to the *Ectateus* generic group (which includes *Ectateus* and *Selinus*). This hypothesis was supported by more recent studies (Iwan and Kamiński 2012, Kamiński 2012, Raś and Kamiński 2013).

The data matrix originated in Mesquite (Maddison and Maddison 2011). Parsimony analysis was conducted under equal weights in TNT (Goloboff et al. 2003). Most parsimonious tree was obtained by the "Implicit enumeration". Jackknife support (absolute frequencies) was calculated with 36 removal probability using 2000 replicates. Consistency index (CI) and retention index (RI) were used to assess the fit of data to the cladograms (Farris 1989). The results were illustrated using WinClada (Nixon 2002).

Species distribution. The distribution of species was illustrated using DIVA-GIS version 7.5 (Hijmans et al. 2012). The raster layer used in Figs 41–44 was downloaded from naturalearthdata.com ("Made with Natural Earth. Free vector and raster map data"). The division of Afrotropical Realm into ecoregions was adopted after Olson et al. (2001).

Results

Character matrix. A matrix of 40 characters was constructed for 20 operational taxonomic units (Table 1). Characters used for phylogenetic analyses have been treated as unordered. The missing data for *Ectateus curtulus* are caused by the fact that this species is only known from one specimen (holotype, female). The character states are presented in this section.

Head (characters 1–7)

1. Antenna: (0) slender, longer than pronotum; (1) robust, shorter than pronotum.
2. Antennomeres from 7 to 11: (0) widened, their width greater than the length; (1) elongated, their length greater than the width (Fig. 3).
3. Circular depressions on the lateral sides of clypeus and genae: (0) absent (Fig. 1); (1) present (Fig. 2).
4. Fronto-clypeal suture: (0) fine (Fig. 1); (1) coarse, clearly visible (Fig. 2).
5. Indentation between frons and clypeus on the lateral edge: (0) shallow (Fig. 1); (1) deep (Fig. 2).
6. Anterior tentorial pit: (0) shallow; (1) deep, clearly visible (Fig. 4).
7. Anterior part of mentum: (0) not elongated; (1) elongated.

Table 1. Character matrix for the cladistic analysis of the species of *Ectateus* and *Selinus* (sensu Iwan 2002a), with selected outgroup taxa: *Z. latipes*, *L. abacooides*, *P. punctatostritatus*, *U. upembaensis* (see also text).

Taxon / character	1	6	11	16	21	26	31	36
<i>Zidalus latipes</i>	00000	00000	01000	10000	00000	00100	00000	00000
<i>Lechius abacooides</i>	00000	10000	01000	00000	00000	00000	00000	00000
<i>Pseudoselinus punctatostritatus</i>	00000	01000	01000	00101	00000	01100	00000	00000
<i>Upembarus upembaensis</i>	00000	01000	01000	00100	00000	00100	00000	00000
<i>Ectateus crenatus</i>	00111	00110	10211	10011	11100	00001	00100	10001
<i>Ectateus curtulus</i>	0?010	00100	10211	00011	10100	00???	?????	??000
<i>Ectateus ghesquierei</i>	00111	00110	10211	00011	11100	00001	00100	10001
<i>Ectateus laevistriatus</i>	01001	10000	00101	10001	00000	10110	01011	01100
<i>Ectateus lamottei</i>	01001	10000	00101	00001	00000	10110	01011	01100
<i>Ectateus modestus</i>	01111	00110	10211	10011	10100	00001	00100	10000
<i>Ectateus ursynowiensis</i>	10000	00000	00100	01000	00101	00001	00100	00000
<i>Ectateus villiersi</i>	10000	00001	00100	01000	00001	00001	00100	00000
<i>Selinus calcaripes</i>	01111	00110	10211	10011	10000	00001	00100	10000
<i>Selinus convexipennis</i>	01001	10000	00101	00001	00000	10110	01010	01100
<i>Selinus gravis</i>	01000	10000	00100	00001	00000	10110	01010	01100
<i>Selinus malaisei</i>	01000	10000	00100	00000	00010	10110	11010	02100
<i>Selinus medius</i>	01000	10000	00100	00000	00010	10110	11010	02100
<i>Selinus palmus</i>	01000	10001	00100	00001	00000	01100	00010	00010
<i>Selinus plicicollis</i>	01000	10000	00100	00000	00010	10110	11010	02100
<i>Selinus striatus</i>	01000	10001	00100	00001	00000	01100	00010	00010

Prothorax (characters 8–18)

- 8. Anterior pronotal angles: (0) straight; (1) curved outwards (Fig. 5).
- 9. Lateral pronotal sides: (0) rounded; (1) sinusoidal (Fig. 5).
- 10. Pronotum: (0) widest at the middle (Fig. 5); (1) widest at the base (Fig. 6).
- 11. Pronotal margins: (0) not erected upwards; (1) strongly erected upwards (Raś and Kamiński 2013, Kamiński 2013c).
- 12. Ratio of prothorax width (tw) and pronotal disc height (dh): (0) < 5; (1) > 6 (Raś and Kamiński 2013, Kamiński 2013c).
- 13. Apophyseal depressions: (0) absent; (1) trapezoidal (Fig. 6); (2) rounded (Fig. 5).
- 14. Pronotal base: (0) the same width as elytral base; (1) narrower than elytral base.
- 15. Posterior pronotal angles: (0) not protruding towards elytra; (1) strongly protruding towards elytra.
- 16. Punctures on pronotal disc: (0) fine, the intervals between the punctures are greater than the 2 diameters of the puncture; (1) coarse, the intervals between the punctures are smaller than the diameter of the puncture.
- 17. Intercostal process of prosternum: (0) flat or dented (Fig. 12); (1) bellied (Kamiński and Raś 2011: 650).
- 18. Intercostal process of prosternum: (0) not widened at the apex; (1) strongly widened at the apex.

Mesothorax (characters 19–24)

19. Scutellum: (0) situated at the level of elytra; (1) impressed.
20. Elytral surface: (0) dull; (1) shiny.
21. Elytral intervals with transverse sculpture: (0) no; (1) yes (Fig. 8, 27).
22. Elytral intervals: flat (0); strongly convex (1).
23. Elytral striae: (0) impressed on whole length, with fine punctures (Fig. 9); (1) impressed mainly near conspicuous punctures (Fig. 8).
24. Margins of elytra in basal part: (0) rounded; (1) subparallel (elytral humeri slightly protruding outwards).

Metathorax (character 25)

25. Metaventrite: (0) without a coarse longitudinal depression; (1) with a coarse longitudinal depression.

Abdomen (characters 26–27)

26. 5th abdominal ventrite: (0) relatively narrow; (1) strongly widened (Fig. 10).
27. 5th abdominal ventrite: (0) unbordered (Fig. 10); (1) bordered (Fig. 11).

Legs (character 28–31)

28. Male protarsi widened: (0) no; (1) yes (Fig. 13).
29. Female protarsi widened: (0) no; (1) yes.
30. Male profemora (0) relatively wide (length/width = 3.2–3.6); (1) relatively slender (length/width = 4.0–5.6).
31. Denticle at the apex of the inner face of male mesotibia: (0) small, sometimes absent; (1) large (Fig. 7).

Male and female genitalia (character 32–39)

32. Penis wide: (0) no (Figs 20–21); (1) yes, at least 4 times wider than clavae (Figs 14–19).
33. Clavae: (0) straight (Figs 14–19, 21); (1) curved, hook-shaped (Fig. 20).
34. Clavae: (0) short, their length less than half of the length of parameres; long, their length more than half of the length of parameres (1).
35. Parameres strongly extended apically: (0) no; (1) yes (Fig. 18).
36. Parameres narrowest in the half of their length (0) no; (1) yes (Fig. 20).
37. Apex of parameres: (0) not fused (Fig. 20); (1) fused, not emarginated at apex (Figs 14, 16); (2) fused, emarginated at apex (Figs 15, 17).
38. Bursa copulatrix: (0) without additional sacs; (1) with 2 additional sacs (Fig. 23).
39. Paraproct longer than coxites: (0) no (Fig. 22); (1) yes.

Other (character 40)

40. Body size: (0) more than 10.0 mm; (1) less than 9.0 mm.

Phylogenetic analysis. The cladistic analysis yield a single most parsimonious cladogram (Fig. 25) with a length of 57 steps, a consistency index (CI) of 74 and a re-

tention index (RI) of 90. According to the obtained cladogram the genera *Ectateus* and *Selinus*, in their current interpretations, are paraphyletic (Fig. 25). The *Ectateus* clade is supported by two synapomorphies: male protibia slender (length/width = 4.0-5.6) (char. 30:1) and clavae curved, hook-shaped (char. 33:1). Also one homoplasy was recovered for this clade – male protarsi relatively narrow (char. 28:0). The *Selinus* clade is supported by single synapomorphy – clavae long, their length more than half of the length of parameres (char. 34:1) – and two homoplasies: antennomeres from 7 to 11 elongated (their length greater than the width), anterior tentorial pit deep, clearly visible (char. 2:1, 6:1). The monophyly of the *Ectateus*+*Selinus* clade was supported during the analysis by the following two synapomorphies: ratio of prothorax width (tw) and pronotal disc height (dh) greater than 5 (char. 12: 0) and apophyseal depressions on pronotal disc present (char. 13:1).

Two main species groups were recovered within the *Ectateus* clade – *modestus* group and *villiersi* group. The branch support reported for these groups was relatively high (Fig. 25). The phylogenetic relationships within the *modestus* group were supported unequally. Relatively low Jackknife values were reported within the clade composed of *E. modestus*, *S. calcaripes*, *E. ghesquierei* and *E. crenatus*.

According to the results of a cladistic analysis the *modestus* group is characterized by following synapomorphies: fronto-clypeal suture coarse, clearly visible (char. 4:1), anterior pronotal angles curved outwards (char. 8:1), pronotal margins strongly erected upwards (char. 11:1), apophyseal depressions rounded (char. 13:2), pronotal base narrower than elytral base (char. 14:1), scutellum impressed (char. 19:1) and elytral intervals with transverse sculpture (char. 21:1). Additionally, one homoplasy was recovered: posterior pronotal angles strongly protruding towards elytra (char. 15:1).

Despite the fact that the species aggregated in the *modestus* group (Fig. 25) are homogeneous in their morphology the cladistic analysis revealed some species groups. According to the results *E. curtulus* is a sister taxon to all other *modestus* group species. This relationship is supported highly supported (Jackknife support = 91; char. 3:1, 6:1, 9:1). Unfortunately, *E. curtulus* is known only from a single specimen (holotype, female), therefore the above mentioned phylogenetic hypothesis should be reconsidered once the male specimen will be found.

The four remaining species occurred in two separate clades (Fig. 25). The first clade which consists of *E. ghesquierei* and *E. crenatus* is defined by the following synapomorphies: convex elytral intervals (char. 22:1) and a small body size (char. 40:1). The other clade composed of *E. modestus* and *E. calcaripes* comb. n. is only supported by a single homoplasy - antennomeres from 7 to 11 elongated (char. 2:1). However, these two species are very similar in general morphology – the females are almost impossible to separate or distinguish (Figs 45, 49).

According to the results of a cladistic analysis the *villiersi* group is characterized by following synapomorphies: antenna robust, shorter than pronotum (char. 1:1), intercoxal process of prosternum bellied (char. 17:1) and metaventrite with coarse longitudinal depression (char. 25: 1).

Taking into consideration other significant morphological differences between *modestus* and *villiersi* groups (char. 1, 4, 8, 11, 13–15, 17, 19, 21, 25) it is reasonable to treat them as two separate genera.

Two main highly supported species group were recovered within the *Selinus* clade – *convexipennis* group and *planus* group (Fig. 25). The first group contains the type species (*convexipennis*) of *Monodius* Koch, 1956 (genus synonymized with *Selinus* by Iwan in 2002a).

According to the results of a cladistic analysis the *convexipennis* group is characterized by following synapomorphies: 5th abdominal ventrite strongly widened (char. 26:1), female protarsi widened (char. 29:1), penis wide, at least 4 times wider than clavae (char. 32:1), apex of parameres fused (char. 37:1) and bursa copulatrix with 2 additional sacs (char. 38:1).

S. gravis occurred as a sister taxon to all other *convexipennis* group species, however this relationship is not highly supported (Fig. 25). The remaining species of the above mentioned group were divided into two separate clades (Fig. 25). The first one which consists of *S. malisei*, *S. medius* and *S. plicicollis* is defined by the following synapomorphies: margins of elytra in basal part subparallel (elytral humeri slightly protruding outwards) (char. 24:1), denticle at the apex of the inner face of male mesotibia large (char. 31:1), apex of parameres fused and emarginated at apex (char. 37:2). This clade is also supported by a single homoplasy – elytral surface shiny (char. 20:0). The second clade (*S. convexipennis*, *S. laevistriatus* and *S. lamottei*) is defined by two homoplasies: indentation between frons and clypeus on the lateral edge deep (char. 5:1) and posterior pronotal angles strongly protruding towards elytra (char. 15:1).

According to the results of a cladistic analysis the *planus* group is characterized by a following synapomorphy: paraproct longer than coxites (char. 39:1). Additionally, two homoplasies were recovered: pronotum widest at the base (char. 10:1) and 5th abdominal ventrite bordered (char. 27:1).

Because of significant morphological differences between *convexipennis* group and *planus* group, especially the ones concerning the male (char. 32, 37) and female genitalia (char. 38, 39), I propose to consider them as two separate genera.

On the basis of the aforementioned results I propose to classify the analyzed in-group species in four genera: *Ectateus* (based on *modestus* group), *Monodius* stat. r. (based on *convexipennis* group), *Eleoselinus* gen. n. (based on *villiersi* group) and *Selinus* (based on *planus* group).

A new classification and diagnostic characters of the analyzed ingroups species are presented below.

Genus *Ectateus* Koch, 1956

<http://species-id.net/wiki/Ectateus>

Ectateus Koch, 1956: 230.– Iwan 2001b: 352, 2002a: 66, 2002b: 265, 2004a: 541, 2004b: 739; Iwan and Banaszekiewicz 2007: 725; Kamiński and Raś 2011: 647; Kamiński 2013a: 85; Raś and Kamiński 2013: 381.

Type species. *Anchophthalmus modestus* Fairmaire, 1887; by original designation.

Diagnosis. The following character combination is unique for *Ectateus* within the whole subtribe Platynotina: (1) fronto-clypeal suture coarse, clearly visible, (2) anterior pronotal angles curved outwards, (3) pronotal margins strongly erected upwards, (4) apophyseal depressions rounded, (5) pronotal base narrower than elytral base, (6) posterior pronotal angles strongly protruding towards elytra, (7) scutellum impressed, (8) elytral intervals with transverse sculpture (9) male protarsi relatively narrow, (10) male protibia slender (length/width = 4.0–5.6) and (11) clavae curved, hook-shaped.

Distribution. *Ectateus* specimens have been collected in the following ecoregions of Central Africa (Cameroon, Central African Republic, Democratic Republic of the Congo, Equatorial Guinea, Gabonese Republic, Republic of Rwanda, Republic of the Congo, South Sudan): Albertine Rift montane forests, Angolan Miombo woodlands, Atlantic Equatorial coastal forests, East Sudanian savanna, Mount Cameroon and Bioko montane forests, Northeastern Congolian lowland forests, Northwestern Congolian lowland forests, Northern Congolian forest-savanna mosaic, Southern Congolian forest-savanna mosaic, Western Congolian forest-savanna mosaic (Fig. 41).

Species included (5). *Ectateus calcaripes* (Gebien, 1904), comb. n., *E. crenatus* (Fairmaire, 1897), *E. curtulus* (Fairmaire, 1893), *E. ghesquierei* Koch, 1956 and *E. modestus* (Fairmaire, 1887).

Key to the species of *Ectateus*

- 1 Clypeus and genae without depressions. Pronotal margins rounded. Elytral intervals with conspicuous punctures..... ***Ectateus curtulus***
- Circular depressions on the lateral sides of clypeus and genae (Fig. 2). Pronotal margins sinusoidal (Fig. 5). Elytral intervals without punctures or punctures very fine (Fig. 8, 27)..... **2**
- 2 Body size: 7.0–9.0 mm. Antennomeres form 7 to 11 transverse. Elytral striae with deep punctures; intervals convex (Fig. 8) **3**
- Body size: 11.5–14.0 mm. Antennomeres form 7 to 11 elongated. Elytral striae with superficial punctures; intervals flat (Fig. 27) **4**
- 3 Pronotal disc with a longitudinal groove in the middle (Fig. 5). Male protibiae as in Fig. 33; mesofemorae simple ***Ectateus ghesquierei***
- Pronotal disc without longitudinal groove. Male protibiae as in Fig. 34; mesofemorae with a large denticle on the posterior face (Fig. 35) ***Ectateus crenatus***
- 4 Intercoxal process protruding towards mesoventrite; peaked at the apex. Male protibiae as in Fig. 31 ***Ectateus calcaripes***
- Intercoxal process not protruding towards mesoventrite; rounded at the apex. Male protibiae as in Fig. 32 ***Ectateus modestus***

***Ectateus calcaripes* (Gebien, 1904), comb. n.**

http://species-id.net/wiki/Ectateus_calcaripes

Figs 3, 20, 27, 31, 41, 45

Selinus calcaripes Gebien, 1904: 3.– Gebien 1910: 277, 1938: 297; Koch 1956: 238; Kulzer 1963: 425, Iwan 2002b: 265.

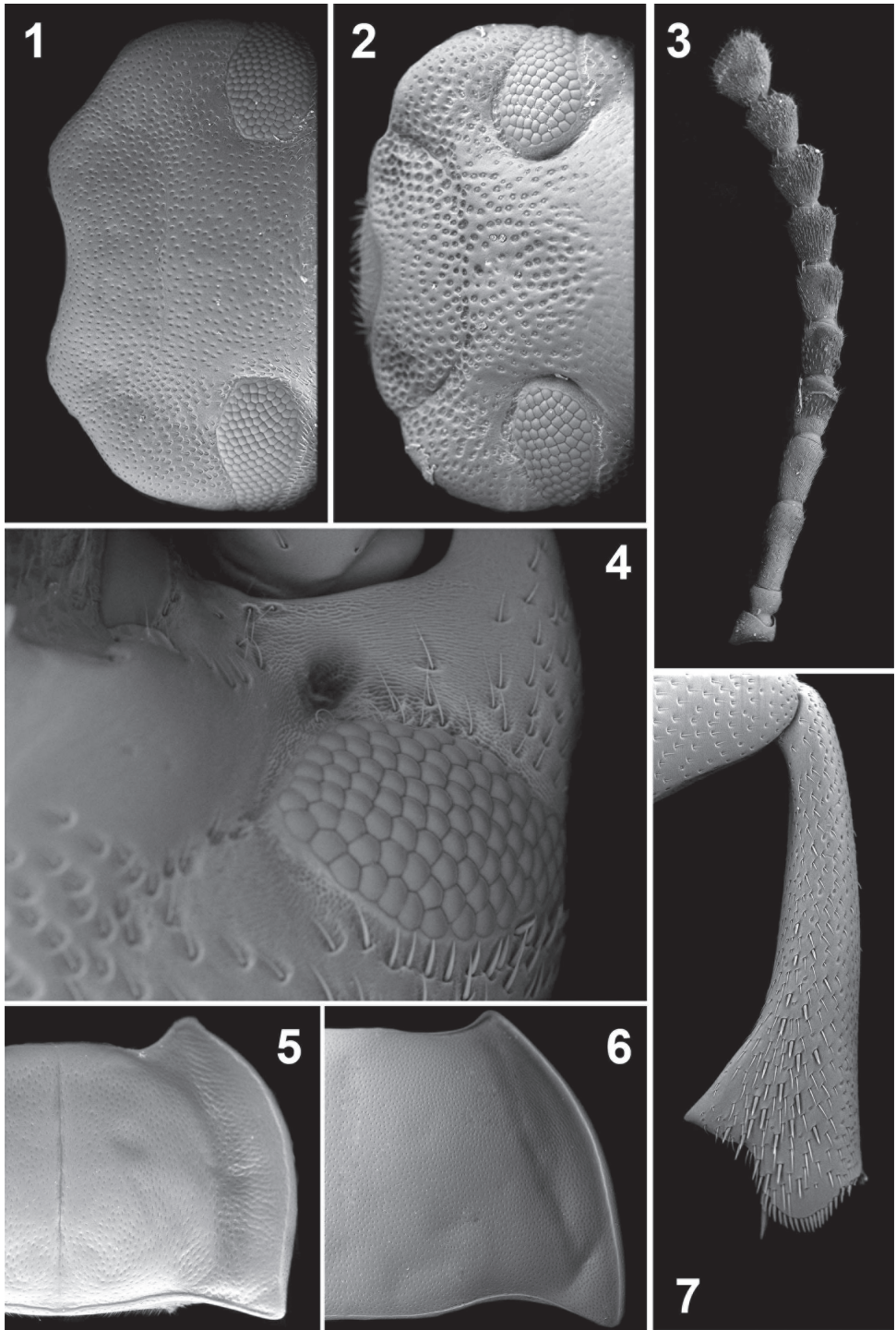
Notes. The types of *Selinus calcaripes* seems to be lost. According to the information provided by Iwan (2002b) they should be deposited in Naturhistorisches Museum collection (Basel, Switzerland). Unfortunately, the curators do not confirm this statement. Additionally, during the preparation of my recent scientific project – Phylogeny, biogeography and generic classification of the *Ectateus* generic group (Coleoptera: Tenebrionidae: Platynotina) – I have studied diverse entomological material concerning the subtribe Platynotina from several collections across the World and I did not managed to locate these specimens.

Based only on the original species descriptions Koch (1956) proposed to consider *Selinus calcaripes* as a synonym of *Ectateus curtulus* (Fairmaire, 1893). Unfortunately, the morphology of the holotype of *Ectateus curtulus* (damaged female – Fig. 47) do not correspond to Gebien's (1904) description of *Selinus calcaripes* and Koch's (1956) interpretation of *Ectateus curtulus*. Both publications refer rather to a morphological form that is very closely to *Ectateus modestus* and differs from it mainly by the structure of male protibiae (Figs 31–32). A consistent to the above mentioned descriptions morph was found in the studied material. It was included in the cladistic analysis as *Selinus calcaripes*.

The results of a cladistic analysis confirmed the aforementioned assumption that *Ectateus curtulus* and *Selinus calcaripes* represent two distinct morphological forms (Fig. 25). They can be easily distinguished by the structure of head (char. 3, 5), pronotum (char. 9) and elytra (elytral intervals with conspicuous punctures in *E. curtulus*). Additionally, the results shows that *Selinus calcaripes* is very closely related to *Ectateus modestus* – which is consistent with Gebien's (1904) description and Koch's (1956) interpretation.

Taking into consideration the difficulties associated with *Selinus calcaripes* I propose to designate a neotype to clarify the taxonomic status of this species. Additionally, on the basis of the results of a cladistic analysis I propose to treat this taxon as a independent species – not as a synonym of *Ectateus curtulus*.

Studied material. Neotype designated here, male (MNHN): “Rep. Centrafric., La Maboke, 2.IX.1967, L. Matile rec.”. **Other material:** male (MNHN): “Musée du Congo, Haut-Uele: Yebo moto, VII-1926, L. Burgeon”, male (MRAC): “Musée du Congo, Haut-Uele: Yebo moto, V-1926, L. Burgeon”, male (MRAC): “Musée du Congo, Bambesa, 15-X-1933, J. V. Leroy”, male and 3 females (MRAC): “Coll. Mus. Tervuren, Oubanghi-Chari: Bangui I/III.1968, ex. coll. Breuning”, male and female (RBINS): “R.I.Sc.Nat. Belg., I.G. 16.364”, 4 females (MNHN): “Calcaripes, Geb., det. Dr. Kaszab”, male and female (MNHN): “Boukoko, Rep. Centr Afric.”,



Figures 1–7. Head, dorsal view (1, 2), ventral view (4); antenna (3); pronotal disc (5, 6); mesotibia (7). *E. calcaripes* (3), *E. crenatus* (2), *E. ghesquierei* (5), *M. medius* (7), *M. plicicollis* (4), *S. planus* (1, 6).

male and female (MNHN): “La Maboke, Rep. Centr Afric.”, 2 males and female (MNHN): “Lamaboké, 10.XI.1965”, male and female (MNHN): “Lamaboké, 20–21.XI.1966”, male (MNHN): “Lamaboké, 18.XI.1965”, 2 females (HNHM): “Cameroon, Dja Reserve, Ekom, 21–26.XII. 1996, G. Hác & G. Köszegi”, 3 males (MNB): “Kamerun Buea, 1–7.III.1912, v. Rothkirch S.G.”, female (MNB): “Kamerun, Brea 1000m, 2. - 7. III- 1912; v. Rothkirch S.G.”, female (MNB): “Kamerun, Soppo 25. II. 1912, v. Rothkirch S.G.”, 2 males (MNHN): “Lamaboké, Rep. Centrafric., V-1964, J. Carayon”, female (MNHN): “1968–69, La Maboké, Rép. Centre Afr., P. Teochhi leg.”, male (MNHN): “21.VIII.1969, La Maboké, Rép. Centre Afr., P. Teochhi leg.”, female (RBINS): “Coll. R. I. Sc. N. B., congo belge Beni, crottes d' éléphants, 18-I-1952 Ch. Verbeke”, female (MNHN): “Muséum Paris, La Maboké, Rép. Centrafric.”, male (MRAC): “Musée du Congo, Région de Sassa, 1895–96, Colmant”, male and female (MNHN): “Cameroun, Dr. G. Nonveiller”, female (MNHN): “Muséum Paris, Congo Moyen, Rég. de M' Baiki, (D Fidao), Pitard 1919”, male (MNHN): “Uganda Prot., Mabira Forest, Chagwe., 3,500–3,800 ft.”, female (MNHN): “Uganda, Nimuli to, Murchison Falls”, male (MNB): “Neu-Kamerun, No. 3360–71, Tessmann S.G.”

Redescription. Habitus as in Fig. 45. Body length = 11.5–14.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / the middle of pronotum = 2.4–2.6).

Dorsal side of head dull, with punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture coarse. Clypeal emargination relatively deep (clypeal emargination width / depth ratio = 8.0–8.6). Mentum with median part narrow. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.0–1.1). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.1–1.2). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.8–3.0).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.4–0.5); dull, with coarse punctures (the intervals between the punctures are smaller than the diameter of the puncture). Anterior pronotal angles sharp and protruding outwards. Lateral margins of pronotal disc sinusoidal. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions rounded. Pronotal hypomera dull; without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with fine punctures; intervals non-convex, with transverse sculpture (Fig. 27). Elytral base slightly rounded. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum triangular; situated in a depression.

Intercostal process protruding towards mesoventrite; peaked at the apex. Metaventricle reduced (length ratio cavity of hind coxa / metaventricle between the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles; relatively narrow (process of 1st abdominal ventrite / process of metaventricle = 2.1–2.2). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Male legs. Protarsi slightly narrow. Protibiae as in Fig. 31. Mesotibiae and mesofemorae with large denticle. Metafemorae with an hair fringe. Female legs simple.

Male genitalia. Parameres narrowest in the half of their length; length equal to the 0.2 of the rest of aedeagal tegmen (Fig. 20). Clavae hook-shaped (Fig. 20). Female genitalia. Paraproct equal to coxites. Bursa copulatrix with a sclerite in the distal part. Spermatheca with narrow ducts.

Distribution. This species has been collected in the following ecoregions of Central Africa (Cameroon, Central African Republic, Democratic Republic of the Congo, South Sudan): Atlantic Equatorial coastal forests, East Sudanian savanna, Mount Cameroon and Bioko montane forests, Northeastern Congolian lowland forests, Northwestern Congolian lowland forests (Fig. 41).

***Ectateus crenatus* (Fairmaire, 1897)**

http://species-id.net/wiki/Ectateus_crenatus

Figs 2, 8, 12, 34–36, 41, 46

Selinus crenatus Fairmaire, 1897: 121.– Gebien 1910: 277, 1938: 297.

Ectateus crenatus (Fairmaire, 1897).– Koch 1956: 235, Iwan 2002b: 265; Iwan and Banaszkiwicz 2007: 728.

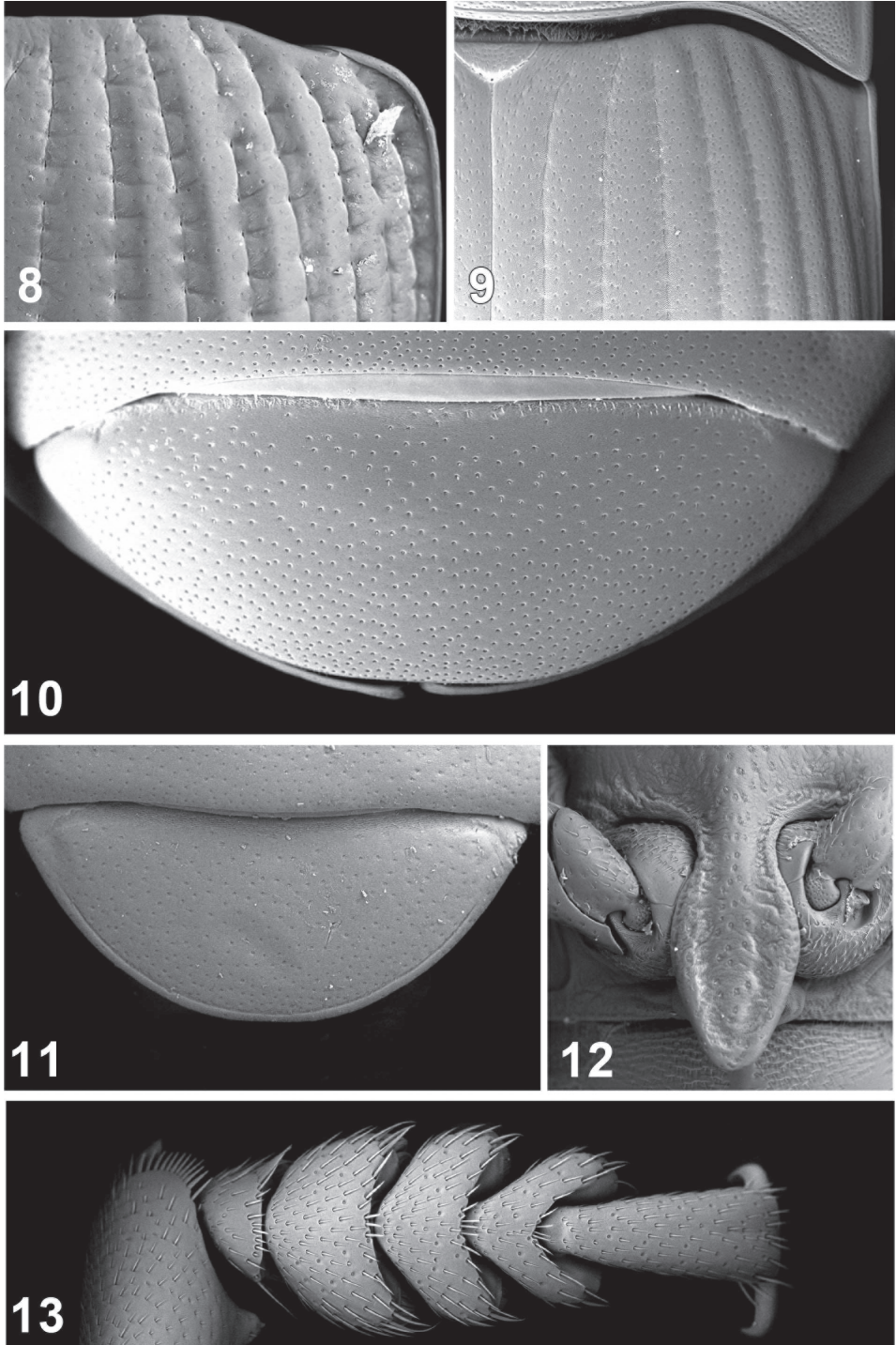
Selinus monardi Kaszab, 1951: 2 (syn. nov.)

Ectateus latipennis Koch, 1956: 234 (syn. nov.).– Iwan 2002a: 67, 2002b: 266.

Notes. While describing *Ectateus latipennis*, Koch has noted that types of *Ectateus crenatus* were unknown to him. The characters used by Koch to separate those two species (body size, pronotum structure) were based only on the Fairmaire (1897) description. During the examination of available material I have not found any consistent morphological characters to separate those two species. Therefore, I propose to consider *E. latipennis* as a synonym of *E. crenatus*.

The examination of the type material representing *Selinus monardi* resulted in similar conclusions – there are no consistent morphological characters to separate it from *E. crenatus*.

Studied material. Three specimens with “type” labels are available. Fairmaire (1897) do not specify the number of individuals on which he described this species. Lectotype designation is needed to fix the taxonomic status of the genus and the species. **Lectotype** designated here, male (MNHN): “TYPE”, “Museum Paris, 1906, Coll. L. Fairmaire”, “*Selinus crenatus*”; **Paralectotypes**, male (MNHN), female (MNHN): “TYPE”, “Museum Paris, 1906, Coll. L. Fairmaire”, “*Selinus crenatus* Farim 1896, Congo”, female (MNHN): “*Selinus crenatus* Fm n. sp.”, “TYPE”, “Museum Paris, 1906, Coll. L. Fairmaire”, “Congo”. **Other material:** male (MRAC): “Musée du Congo, Barumbu - VIII-1925, (J. Ghesquière), S.A.R. Prince Léopold” (Holotype of *Ectateus latipennis* Koch, 1956), female (RBINS): “Ibembo, Itimbiri” (Allotype of *Ectateus latipennis* Koch, 1956), male (MNHN): “Kamerun, Joko”



Figures 8–13. Elytral disc (8, 9); 5th abdominal ventrite (10, 11), intercoxal process of prosteronum (12), male protarsi (13). *E. crenatus* (8, 12), *M. convexipennis* (10), *M. malaisei* (9), *M. plicicollis* (13), *S. striatus* (11).

(Holotype of *Selinus monardi* Kaszab, 1951), male and female (MNHN): “Joko, Kamerun” (Paratype and allotype of *Selinus monardi* Kaszab, 1951), male and female (MNHN): “Cameroun, Dr. G. Nonveiller”, male and female (MNHN): “Muséum Paris, Cameroun, B. de Miré”, 3 males and 2 females (MNHN): “Ogooué, Lambaréné, R. Ellenberger 1913”, male (MNHN): “Congo Français, region D’ouesso, Bassin N`Gokko-Sanga, Dr. J. Gravot 1906”, male (MNHN): “Congo Français, Talagouga Prés N`Jolé, legit R. Ellenberger, E. Haug 1906”, male and female (MNHN): “Ogooué, Sam-Kita”, 3 females (MNHN): “Congo, Ogooué, Sam Kita, R. Ellenberger 1910”, 2 males and 2 females (MNHN): “Gabon, Libreville et env.”, male and female (MNB): “Span. Guinea, Nkolentangan, XI. 07-V.08, G. Teßmann S.G.”, female (MNHN): “Benito, Congo Franc.”, female (MNHN): “Gabon, Tholon”, male and female (MNHN): “XII.1970, Mbalmayo, CAMEROUN, Mbarga leg.”, female (MNHN): “Congo belge Centr., Kassai, Edm. Taymans, 1904”, male (MHNG): “CAMEROUN VII.83, Etoubi Assok, à la lumière, F. Notari”, female (MNB): “Neu-Kamerun, No. 3337-52, Tessmann S.G.”, female (MRAC): “Coll. Mus. Congo, Mayumbe: Terr. Tshela, rég. de Mabuba VI-1958, Dr R. Laurent”, male (MRAC): “Mus. Roy. Afr. Centr., Guinée Esp: Bata, Rév. P. Basilio”, male (MNHN): “Kuilu, Fr. Congo., Mocquerys, 1892”, male (RBINS): “Chutes de Samlia, Riv N. Gamie, Mocquereys”.

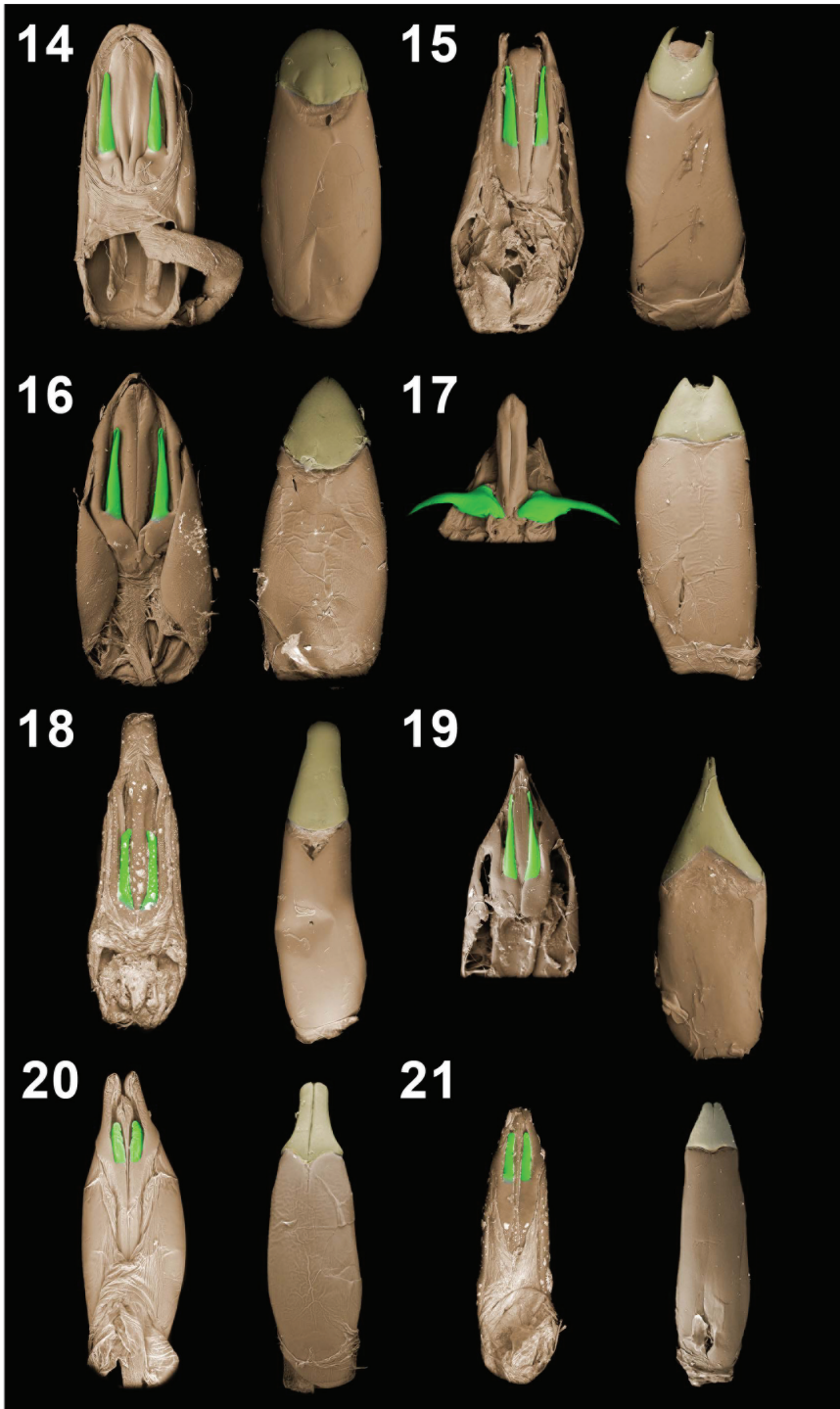
Redescription. Habitus as in Fig. 46. Body length = 7.0–9.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / the middle of pronotum = 2.4–2.6).

Dorsal side of head shiny, with punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture coarse. Clypeal emargination relatively deep (clypeal emargination width / depth ratio = 5.7–6.5). Mentum with median part narrow. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.0–1.2). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.1–1.3). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.8–3.0).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.5–0.6); shiny, with coarse punctures (the intervals between the punctures are smaller than the diameter of the puncture). Anterior pronotal angles sharp and protruding outwards. Lateral margins of pronotal disc sinusoidal. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions rounded. Pronotal hypomera dull; without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with coarse punctures (Fig. 8); intervals convex, with transverse sculpture and fine puncturation (Fig. 8). Elytral base slightly rounded. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum triangular; situated in a depression.

Intercoxal process protruding towards mesoventrite, peaked at the apex, slightly saddle-like. Metaventrite reduced (length ratio cavity of hind coxa / metaventrite between the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles; relatively narrow (process of 1st abdominal ventrite / process of



Figures 14–21. Aedeagal tegmina (dorsal and ventral views). *M. gravis* (14), *M. plicicollis* (15), *M. convexipennis* (16), *M. malaisei* (17), *M. lamottei* (18), *M. laevistriatus* (19), *E. calcaripes* (20), *S. striatus* (21).

metaventricle = 2.1–2.2). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Male legs. Protarsi slightly narrow. Protibiae as in Fig. 34. Mesotibiae and mesofemorae with large denticle (Figs 35–36). Metafemorae with an hair fringe. Female legs simple.

Male genitalia. Parameres narrowest in the half of their length; length equal to 0.2 of the rest of aedeagal tegmen. Clavae hook-shaped. Female genitalia. Paraproct equal to coxites. Bursa copulatrix without sclerites. Spermatheca with narrow ducts.

Distribution. This species has been collected in the following ecoregions of Central Africa (Cameroon, Democratic Republic of the Congo, Equatorial Guinea, Gabonese Republic, Republic of the Congo): Atlantic Equatorial coastal forests, Northern Congolian forest-savanna mosaic, Northwestern Congolian lowland forests, Southern Congolian forest-savanna mosaic, Western Congolian forest-savanna mosaic (Fig. 41).

***Ectateus curtulus* (Fairmaire, 1893)**

http://species-id.net/wiki/Ectateus_curtulus

Fig. 47

Selinus curtulus Fairmaire, 1893: 143.– Gebien 1910: 277, 1938: 297.

Ectateus curtulus (Fairmaire, 1893).– Koch 1956; Iwan 2002a: 67, 2002b: 265.

Studied material. Holotype (Fig. 47), female (MNHN): „l'Oubanghi”.

Redescription. Habitus as in Fig. 47. Body length ca. 12.5 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum ca. 1.2; length ratio elytra / the middle of pronotum ca. 2.6).

Dorsal side of head dull, with punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture coarse. Clypeal emargination relatively deep (clypeal emargination width / depth ratio ca. 8.1). Mentum with median part wide. Submentum with short base. 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd ca. 3.0).

Pronotal disc transverse (middle of pronotum length / width ratio ca. 0.5); dull, with coarse punctures (the intervals between the punctures are smaller than the diameter of the puncture). Anterior pronotal angles sharp and protruding outwards. Lateral margins of pronotal disc rounded. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions rounded. Pronotal hypomera dull, without punctures.

Elytra oblong (elytra length / width ratio ca. 1.2). Elytral striae with conspicuous punctures; intervals non-convex, with transverse sculpture and conspicuous punctuation (2 diameters apart). Elytral base slightly rounded. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum triangular; situated in a depression.

Intercoxal process protruding towards mesoventrite, peaked at the apex, slightly saddle-like. Metaventricle reduced (length ratio cavity of hind coxa / metaventricle be-

tween the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles; relatively narrow (process of 1st abdominal ventrite / process of metaventrite ca. 2.1). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Female legs simple.

Female genitalia. Paraproct equal to coxites. Bursa copulatrix without sclerites. Spermatheca unknown.

Distribution. The only known specimen was collected in the Oubanghi (Central Africa). Because of the general character of the geographical reference it can not be translated into ecoregions.

Ectateus ghesquierei Koch, 1956

http://species-id.net/wiki/Ectateus_ghesquierei

Figs 5, 33, 41, 48

Ectateus ghesquierei Koch, 1956: 232.– Iwan 2002a: 67, 2002b: 265.

Studied material. Six syntypes of *Ectateus ghesquierei* are available. Lectotype designation is needed to fix the taxonomic status of the genus and the species. **Lectotype** designated here, (MRAC): “Musée du Congo Belge, Kasai: Kondué, E. Luja”; **Paralectotypes**, 3 females (MRAC): same data, 2 females (MRAC): “Coll. Mus. Congo, Mayidi, 1943, Rév. P. Van Eyen”. **Other material:** female (MNHN): “Voka Congo, X.1977”, male and female (MNHN): “2.11.1963., No 78, sifted litter, leg. Endrøy-Younga” “Soil-Zoological Exp., Congo-Brazzaville, Kindamba, Méya, Louolo river”.

Redescription. Habitus as in Fig. 48. Body length = 8.0–9.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / the middle of pronotum = 2.5–2.6).

Dorsal side of head dull, with punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture coarse. Clypeal emargination relatively deep (clypeal emargination width / depth ratio = 9.0–9.3). Mentum with median part narrow. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.0–1.1). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.1–1.2). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.7–3.0).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.4–0.5); dull, with coarse punctures (the intervals between the punctures are smaller than the diameter of the puncture). Anterior pronotal angles sharp and protruding outwards. Lateral margins of pronotum sinusoidal. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions rounded (Fig. 5). Pronotal hypomera shiny; without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.3). Elytral striae with conspicuous punctures; intervals convex, with transverse sculpture. Elytral base slightly rounded. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum triangular, situated in a depression.

Intercoxal process protruding towards mesoventrite, peaked at the apex, slightly saddle-shaped. Metaventrite reduced (length ratio cavity of hind coxa / metaventrite between the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles; relatively narrow (process of 1st abdominal ventrite / process of metaventrite = 2.0–2.2). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Male legs. Protarsi slightly narrow. Protibiae as in Fig. 33. Mesotibiae with large denticle. Metafemorae without fringe of hairs. Female legs simple.

Male genitalia. Parameres narrowest in the half of their length; length equal to the 0.2 of the rest of aedeagal tegmen. Clavae hook-shaped. Female genitalia. Paraproct equal to coxites. Bursa copulatrix without sclerites. Spermatheca with narrow ducts.

Distribution. This species has been collected in the following ecoregions of Central Africa (Democratic Republic of the Congo, Republic of the Congo): Southern Congolian forest-savanna mosaic, Western Congolian forest-savanna mosaic (Fig. 41).

***Ectateus modestus* (Fairmaire, 1887)**

http://species-id.net/wiki/Ectateus_modestus

Figs 32, 41, 49

Anchophthalmus modestus Fairmaire, 1887: 282.– Gebien 1910: 278, 1938: 298.

Ectateus modestus (Fairmaire, 1887).– Koch 1956: 241; Ardoin 1965: 964; Iwan 2001b: 359, 2002a: 67, 2002b: 266, 2003: 181, 2004a: 548; Kamiński and Raś 2011: 648.

Studied material. Lectotype (designated by Kamiński in Kamiński and Raś 2011), male (MNHN): “Type”, “Muséum Paris, 1906, Coll. L. Fairmaire”; **Paralectotype**, female (MNHN): “Type”, “Muséum Paris, 1906, Coll. L. Fairmaire”, “*Anchophthalmus modestus* (Fairmaire) 1887 [unreadable]”. **Other material:** male and females (MNHN): “Kangu, Mayombe, Congo Belge Dr. Peregł”, 2 males and 2 females (MNHN): “Sibiti, Congo, XI-1963”, 2 males (MNHN): “Franz. Congo”, male and female (MNHN): “2.11.1963., No 78, sifted litter, leg. Endrőy-Younga” “Soil-Zoological Exp., Congo-Brazzaville, Kindamba, Méya, Louolo river”, 2 females (MRAC): “Musée du Congo, Mayumbe: Luali, -IX-1937, Dr. Dartevelle”, female (MRAC): “Coll. Mus. Congo, Mayidi, 1942, Rév. P. Van Eyen”, male (MNHN): “Muséum Paris, Loango, Rochut & Perraudin, 161-96”, male (JFCS): “Luvulu, Kouilau, Congo”, female (JFCS): “Luvulu, Kipanga, Kouilau”, 3 females (JFCS): “Congo, Luvulu, Kipanga, Kouilau”, male (MNHN): “9.XI.1974, Voka près Boko, Rép. Pop. CONGO, Fr. Giov. Onore”, male (MNHN): “10-15.XI.1974, Voka près Boko, Rép. Pop. CONGO, Fr. Giov. Onore”,

female (MNHN): “X.1976, Voka près Boko, Rép. Pop. CONGO, Fr. Giov. Onore”, male (RBINS): “Kuimba-Diambo, 15-XI-25, A. Collart”, male (RBINS): “I.R.Sc.N.B. I.G. 25.041, Coll. & det. J. Delève”, 2 females (MRAC): “Coll. Mus. Congo, Mayumbe: T. Kipanzu, de, Singa à Mbomba V/VI-58, Dr R. Laurent”, female (MNHN): label unreadable, male (MRAC): “Coll. Mus. Tervuren, Angola: Benguela, ex. coll. Breuning”, male (SMNS): “Kongo, Voka, XI. 1974, W. Heinkel”, male (MNHN): “Tschiloengo, Congo”, male (RBINS): “R. I. Sc. Nat. Belg., I.G. 16.364”.

Redescription. Habitus as in Fig. 49. Body length = 12.0–14.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / the middle of pronotum = 2.4–2.6).

Dorsal side of head dull, with punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture coarse. Clypeal emargination relatively deep (clypeal emargination width / depth ratio = 8.0–8.4). Mentum with median part narrow. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.0–1.1). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.2–1.3). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.7–3.0).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.4–0.5); dull, with coarse punctures (the intervals between the punctures are smaller than the diameter of the puncture). Anterior pronotal angles sharp and protruding outwards. Lateral margins of pronotum sinusoidal. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions rounded. Pronotal hypomera dull; without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with fine punctures; intervals non-convex, with transverse sculpture. Elytral base slightly rounded. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum triangular; situated in a depression.

Intercoxal process not protruding towards mesoventrite, rounded at the apex. Metaventrite reduced (length ratio cavity of hind coxa / metaventrite between the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles; relatively narrow (process of 1st abdominal ventrite / process of metaventrite ca. 2.0. 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Male legs. Protarsi slightly narrow. Protibiae as in Fig. 32. Mesotibiae and mesofemora with large denticle. Metafemora with an hair fringe. Female legs simple.

Male genitalia. Parameres narrowest in the half of their length; length equal to 0.2 of the rest of aedeagal tegmen. Clavae hook-shaped. Female genitalia. Paraproct equal to coxites. Bursa copulatrix with a sclerite in distal part. Spermatheca with narrow ducts.

Distribution. This species has been collected in the following ecoregions of Central Africa (Angola, Democratic Republic of the Congo, Republic of Rwanda, Republic of the Congo): Albertine Rift montane forests, Angolan Miombo woodlands, Atlantic Equatorial coastal forests, Western Congolian forest-savanna mosaic (Fig. 41).

Genus *Eleoselinus* gen. n.

<http://zoobank.org/D78C17B9-5607-472D-BE6F-D28B8C33E23F>

<http://species-id.net/wiki/Eleoselinus>

Type species. *Ectateus villiersi* Ardoin, 1965; here designated.

Diagnosis. The presence of the basal depressions on the pronotal disc place *Eleoselinus* near to (Kamiński 2013c): *Anchophthalmops* Koch, 1956, *Anchophthalmus* Gerstaecker, 1854, *Kochogaster* Kamiński & Raś, 2011, *Ectateus*, *Glyptopteryx* Gebien, 1910, *Microselinus* Koch, 1956, *Monodius*, *Nesopatrum* Gebien, 1920, *Phallocentrion* Koch, 1956, *Phymatoplata* Koch, 1956, *Platykochius* Iwan, 2002, *Platymedvedevia* Iwan & Banaszkiwicz, 2007, *Quadrideres* Koch and *Selinus*.

Non-dimorphic legs distinguish *Eleoselinus* from: *Anchophthalmops*, *Anchophthalmus*, *Ectateus*, *Microselinus*, *Monodius*, *Phymatoplata*, *Platykochius*, *Platymedvedevia* and *Selinus*. From *Kochogaster* it can be easily distinguished by a triangular submentum and lack of sclerites in bursa copulatrix (Kamiński and Iwan 2013). Not parallel body sides separates *Eleoselinus* from *Quadrideres* and *Glyptopteryx*. Additionally, from the latter it can be distinguished by flat elytral intervals and slightly sinusoidal base of pronotum (Iwan 2002). Fine hairs covering the body surface, narrow apical segments of maxillary palps and long basal apophyses of aedeagal tegmen separates *Eleoselinus* from *Phallocentrion* (Iwan 2001a).

The following character combination is unique for *Eleoselinus* within the whole subtribe Platynotina: (1) antenna robust, shorter than pronotum, (2) shallow anterior tentorial pits, (3) presence of apophyseal and basal depressions on pronotal disc, (4) intercoxal process of prosternum bellied, (5) metaventrite with coarse longitudinal depression, (6) 5th abdominal ventrite unbordered, (7) non dimorphic legs and maxillary palps, (8) elytral intervals with fine punctures, (9) curved, hook-shaped clavae and (10) longitudinal coxites of ovipositor.

Description. Body length = 10.5–13.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / the middle of pronotum = 2.4–2.9).

Dorsal side of head dull, with fine punctures (the intervals between the punctures are greater than the 2 diameters of the puncture). Frontoclypeal suture fine. Clypeal emargination relatively deep (clypeal emargination width / depth ratio = 5.5–5.7). Mentum with median part wide. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.0–1.2). Length of antennae slightly greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle ca. 0.9). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 3.2–3.5).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.5–0.6); dull, with fine punctures (the intervals between the punctures are greater than the 3 diameters of the puncture). Lateral margins of pronotum narrowing towards apex. Apophyseal and basal depressions on pronotal disc present. Pronotal hypomera dull, without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.3). Elytral striae with fine punctures (the intervals between the punctures are greater than the 2 diameters of the puncture). Elytral intervals dull, non-convex, without punctures of with very fine punctuation. Elytral base slightly sinusoidal. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum triangular.

Intercoxal process of prosternum bellied. Metaventricle reduced (length ratio cavity of hind coxa / metaventricle between the insertions of mid and hind coxae ca. 2), with longitudinal depression. In both sexes abdominal process without tubercles, relatively narrow (process of 1st abdominal ventrite / process of metaventricle = 2.1–2.2). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Legs. Protarsi narrow. Other leg segments simple.

Male genitalia. Parameres narrowing towards apex; length equal to the 0.2 of the rest of aedeagal tegmen. Clavae hook-shaped. Female genitalia. Paraproct equal to coxites. Coxites narrow and long. Bursa copulatrix without sclerites.

Etymology. The name is derived from the combination of *Eleo* (prefix indicating the genus *Eleodes* Eschscholtz, 1829 – a poster beetle genus of the Third International Tenebrionoidea Symposium in Tempe, Arizona) and *Selinus*. This genus is named to thank the Steering Committee of the Third International Tenebrionoidea Symposium: Aaron Smith (lead organizer), Rolf Aalbu, Patrice Bouchard, Kojun Kanda, Nico Franz, Warren Steiner and Quentin Wheeler.

Distribution. *Eleoselinus* gen. n. specimens have been collected in the following ecoregion of Central Africa (Republic of the Congo): Western Congolian forest-savanna mosaic (Fig. 42).

Species included (2). *Eleoselinus villiersi* (Ardoin, 1965), comb. n. and *E. ursynowiensis* (Kamiński, 2011), comb. n.

Key to the species of *Eleoselinus* gen. n.

- 1 Pronotal sides evenly narrowing towards apex. Elytral striae impressed on whole length (see Kamiński and Raś 2011: 651). Intercoxal process of prosternum strongly protruding towards mesosternum (see Kamiński and Raś 2011: 650) *Eleoselinus villiersi*
- Pronotal sides rounded. Elytral striae impressed only near the punctures (see Kamiński and Raś 2011: 651). Intercoxal process of prosternum slightly protruding towards mesosternum (see Kamiński and Raś 2011: 650)
..... *Eleoselinus ursynowiensis*

***Eleoselinus villiersi* (Ardoin, 1965), comb. n.**

http://species-id.net/wiki/Eleoselinus_villiersi

Fig. 58

Ectateus villiersi Ardoin, 1965: 964.– Iwan 2002b: 266; Iwan and Banaszekiewicz 2007: 729; Kamiński 2011: 648 (in Kamiński and Raś 2011).

Studied material. Holotype, male (MNHN): “Brazzaville, Congo, V-1963”, “Muséum Paris, Mission A. Descarpentries et A. Villiers, 1963-1964”. **Other specimens**, female (MNHN): “Allotype” same data as holotype, 7 males and 9 females (MNHN): “Juil 1959, Brazzaville, Congo. L. Vincent”, male “Kimpoko, Kongo”, female (MNHN): “Muséum Paris, Congo, Brazzaville, Mission Chari-Tchad, Dr J. Decorse 1904”.

Redescription. Habitus as in Fig. 58. Body length = 10.5–12.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / the middle of pronotum = 2.7–2.9).

Dorsal side of head dull, with fine punctures (the intervals between the punctures are greater than the 4 diameters of the puncture). Frontoclypeal suture fine. Clypeal emargination relatively deep (clypeal emargination width / depth ratio = 5.5–5.7). Mentum with median part wide. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.0–1.2). Length of antennae slightly greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle ca. 0.9). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 3.2–3.5).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.5–0.6), dull, with fine punctures (the intervals between the punctures are greater than the 3 diameters of the puncture). Anterior pronotal angles rounded and slightly protruding towards apex. Lateral margins of pronotal disc narrowing towards apex. Apophyseal and basal depressions on pronotal disc present. Pronotal hypomera dull, without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.3). Elytral striae with fine punctures (the intervals between the punctures are greater than the 4 diameters of the puncture). Elytral intervals dull, non-convex, without punctures. Elytral base slightly sinusoidal. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum triangular.

Intercoxal process of prosternum bellied. Metaventricle reduced (length ratio cavity of hind coxa / metaventricle between the insertions of mid and hind coxae ca. 2); with longitudinal depression. In both sexes abdominal process without tubercles; relatively narrow (process of 1st abdominal ventrite / process of metaventricle = 2.1–2.2). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Legs. Protarsi slightly narrow. Legs simple.

Male genitalia. Parameres narrowing towards apex; length equal to the 0.2 of the rest of aedeagal tegmen. Clavae hook-shaped. Female genitalia. Paraproct equal to coxites. Coxites narrow and long. Bursa copulatrix without sclerites.

Distribution. This species has been collected in the following ecoregion Central Africa (Republic of the Congo).

***Eleoselinus ursynowiensis* (Kamiński, 2011), comb. n.**

http://species-id.net/wiki/Eleoselinus_ursynowiensis

Fig. 59

Ectateus ursynowiensis Kamiński, 2011: 648 (in Kamiński and Raś 2011).

Studied material. Holotype, male (MNHN): “Juil 1959, Brazzaville, Congo. L. Vincent”, male “Kimpoko, Kongo”; **Paratypes**, 10 males and 9 females (MNHN and MIIZ): same data as holotype; female (MNHN): “Muséum Paris, Congo et Oubanghi, Decaux 1896”; male (MNHN): “Muséum Paris, Congo Franc., Env. De Brazzaville, E. Roubaud et A. Weiss, 1907”.

Morphological data. Because the original description (Kamiński and Raś 2011) of this species is relatively recent and consistent with the description style adopted in this study the morphology of this species was not redescribed.

Distribution. This species has been collected in the following ecoregion Central Africa (Republic of the Congo).

Genus *Monodius* Koch, 1956, stat. r.

Monodius Koch, 1956: 181.– Iwan 2001b: 352, 2002a: 100 (syn. with *Selinus*).

Type species. *Selinus convexipennis* Gebien, 1904; by original designation.

Diagnosis. The following character combination is unique for *Monodius* within the whole subtribe Platynotina: (1) antennomeres from 7 to 11 elongated (their length greater than the width), (2) anterior tentorial pit deep, clearly visible, (3) 5th abdominal ventrite strongly widened, (4) female protarsi widened, (5) penis wide, at least 4 times wider than clavae, (6) clavae long, their length more than half of the length of parameres, (7) apex of parameres fused and (8) bursa copulatrix with 2 additional sacs.

Distribution. *Monodius* specimens have been collected in the following ecoregions of West and Central Africa (Burkina Faso, Cameroon, Federal Republic of Nigeria, Ivory Coast, Republic of Benin, Republic of Ghana, Republic of Liberia, Republic of Niger, Sierra Leone, Togolese Republic): Cross-Sanaga-Bioko coastal forests, Atlantic Equatorial coastal forests, Central African mangroves, Eastern Guinean forests, Guinean forest-savanna mosaic, Mount Cameroon and Bioko montane forests, Northern Congolian forest-savanna mosaic, Northwestern Congolian lowland forests, West Sudanian savanna, Western Guinean lowland forests (Figs 42–43).

Species included (7). *Monodius convexipennis* (Gebien, 1904), *M. gravis* Koch, 1956, *M. laevistriatus* (Fairmaire, 1897), comb. n., *M. lamottei* (Gridelli, 1954), comb. n., *M. malaisei* Koch, 1956, *M. medius* (Fairmaire, 1897), *M. plicicollis* (Fairmaire, 1897), comb. n.

Key to the species of *Monodius*

- 1 Elytral surface dull. Margins of elytra in the basal part subparallel (elytral humeri slightly protruding outwards). Denticle at the apex of the inner face of male mesotibia large (Fig. 7). Apex of parameres emarginated at the apex (Figs 15, 17) **2**
- Elytral surface shiny. Margins of elytra in the basal part rounded. Denticle at the apex of the inner face of male mesotibia small or absent (e.g. Fig. 29). Apex of parameres connected (Figs 14, 16) **4**
- 2 Pronotal apophyseal depressions coarse. Male mesofemorae with a denticle (similar to the one in *E. laevistriatus*, Fig. 40). Parameres strongly emarginated at the apex (Fig. 15) ***Monodius plicicollis***
- Pronotal apophyseal depressions fine. Male mesofemorae without denticles. Parameres slightly emarginated at the apex (Fig. 17) **3**
- 3 Male protibiae with median dilatation on the inner face (similar to the one in *M. convexipennis*, Fig. 37) ***Monodius medius***
- Male protibiae almost straight (Fig. 38) ***Monodius malaisei***
- 4 Body size: 16.0–19.0 mm. Elytral intervals with fine punctures (Fig. 26). Male protibiae as in Fig. 30 ***Monodius gravis***
- Body size: 12.0–14.5 mm. Elytral intervals with conspicuous punctures. Male protibiae as in Fig. 37 **5**
- 5 Pronotal disc with two circular depressions in the middle. Aedeagal tegmen as in Fig. 19 ***Monodius laevistriatus***
- Pronotal disc without circular depressions. Aedeagal tegmen as in Fig. 16, 18 ... **6**
- 6 Elytral intervals with conspicuous punctures. Elytral apex as in Fig. 51. Aedeagal tegmen as in Fig. 16 ***Monodius convexipennis***
- Elytral intervals with very coarse punctures (Fig. 28). Elytral apex rounded. Aedeagal tegmen as in Fig. 18 ***Monodius lamottei***

***Monodius convexipennis* (Gebien, 1904)**

http://species-id.net/wiki/Monodius_convexipennis

Figs 10, 16, 37, 42, 50, 51

Selinus convexipennis Gebien, 1904: 2.– Gebien 1910: 277, 1938: 297; Iwan 2001b: 360, 2002a: 101, 2002b: 302.

Monodius convexipennis (Gebien, 1904).– Koch 1956: 181; Iwan 1990: 430.

Studied material. 45 males and 41 females (MIIZ): “Mus. Zool. Polonicum Warszawa 12/45”, “Kamerun, Barombi, Conradt”, “*Selinus convexipennis* H. Gebien 1939”, 20 males and 12 females (MNHN): “Muséum Paris”, “Kamerun, L. Conradt, 1898-1899”, 3 males and female (MRAC): “Coll. Mus. Tervuren Cameroun, Mt Balmayo (M. Barga), XII 1972, Ex. Coll. Breuning”, female (MRAC): “Coll. Mus. Tervuren, Oubanghi-

Chari”, “ex. Coll. Breuning”, 4 females (MNHN): “Muséum Paris, 1952, coll. R. Oberthur”, “Afriq Occid, Johann-Albrechts Höhe, Station Kamerun, L.Conradt, 1896”, male (MNHN): “Muséum Paris, coll. P. Ardoin, 1978”, “Cameroun Yaoundé Vadon!”, 3 males and 4 females (MNB): “Kamerun, John.Albreschtshöhe, 8.11.1898-10.3.1899, leg Conradt”, 6 males and 4 females (MNB): “N.W.Kamerun, Moliwe b. Victoria, 10-20.12.07, Frfr. v. Maltzan G.”, male and 6 females (MNB): “N.-Kamerun, Joh.-Albrechtshöhe, III.96, L.Conradt S. ”, 2 males (MNB): “S.-Kamerun, Bipindi, IX.1898, Zenker S. V.”, 2 females (MNB): “Kamerun, Bascho, Adamatz S.G.”, male and females (MNB): “Kamerun, Nokundange, 16-30 VI 05, G. Leßmann S. G.”, “1908-09.”, male (MNB): “Neu-Kamerun, Dengdeng Station, 26.III.1914, Mildbraed S.G.”, male (MNB): “Kamerun, Duala, Schäfer S.G.”, 3 males (MNHN): “Muséum Paris ex. Coll. P. Ardoin 1978”, “Duala Bothkiych”, 3 males and female (SMNS): “Malimba Pahl 91”.

Redescription. Habitus as in Fig. 50. Body length = 13.0–14.5 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / the middle of pronotum = 2.4–2.6).

Dorsal side of head dull, with punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture fine. Clypeal emargination relatively deep (clypeal emargination width / depth ratio = 7.0–7.5). Mentum with median part wide. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.1–1.2). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.2–1.3). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.8–2.9).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.5–0.6), dull, with fine punctures (the intervals between the punctures are smaller than the diameter of the puncture). Anterior pronotal angles sharp and strongly protruding towards front. Lateral margins of pronotal disc subparallel at their basal half. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions trapezoidal. Pronotal hypomera dull; without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with fine punctures, impressed on the whole length. Elytral intervals shiny, non-convex, with conspicuous punctures (the intervals between the punctures are smaller than the diameter of the puncture). Elytral base slightly sinusoidal. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum rounded.

Intercoxal process slightly protruding towards mesoventrite. Metaventrite reduced (length ratio cavity of hind coxa / metaventrite between the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles, relatively narrow (process of 1st abdominal ventrite / process of metaventrite = 2.1–2.3). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Male legs. Protarsi slightly widened. Protibiae as in Fig. 37. Mesofemorae with a small denticle at the apex. Metatibiae and Metafemorae with a hair fringe. Female legs. Protarsi slightly widened. Other leg parts simple.

Male genitalia. Parameres narrowing towards apex; length equal to the 0.3 of the rest of aedeagal tegmen (Fig. 16). Clavae straight (Fig. 16). Female genitalia. Paraproct equal to coxites. Bursa copulatrix with two sacs. Spermatheca with narrow ducts.

Distribution. This species has been collected in the following ecoregions of Central Africa (Cameroon): Atlantic Equatorial coastal forests, Central African mangroves, Cross-Sanaga-Bioko coastal forests, Mount Cameroon and Bioko montane forests, Northern Congolian forest-savanna mosaic, Northwestern Congolian lowland forests (Fig. 42).

***Monodius gravis* Koch, 1956**

http://species-id.net/wiki/Monodius_gravis

Figs 14, 24, 26, 29, 30, 42, 52

Monodius gravis Koch, 1956: 184.

Selinus gravis (Koch, 1956).– Iwan 2002a: 101, 2002b: 302.

Studied material. Female (MNHN): “Schantung, Tsingtau, Miss. Mus. Steyl”, 3 males and 2 females (MNHN): “Muséum Paris, Bas Dahomey, Torricada E. Poisson 1902”, “Novembre”, female (MNB): “Süd Togo zw. Haho u. Shioftuss Laadschaften Gamme u. Gaohe Smend S.”, 2 females (MIIZ): “Museum Zool. Polonicum, Warszawa, 12/45”, “*Selinus* n.sp. H. Gebien det. 1939”, “Guinea”, male (MNHN): “Wydah R. P. Ménager”.

Redescription. Habitus as in Fig. 52. Body length = 16.0–19.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / middle of pronotum = 2.2–2.4).

Dorsal side of head dull, with fine punctures (the intervals between the punctures are greater than the 2 diameters of the puncture). Frontoclypeal suture fine. Clypeal emargination relatively deep (clypeal emargination width / depth ratio = 7.1–7.5). Mentum with median part wide. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.1–1.2). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.2–1.3). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.8–2.9).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.5–0.6), dull, with fine punctures (the intervals between the punctures are greater than the 3 diameters of the puncture). Anterior pronotal angles sharp and strongly protruding toward the front. Lateral margins of pronotal disc rounded. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions trapezoidal. Pronotal hypomera dull; without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with fine punctures; impressed on the whole length. Elytral intervals shiny, non-convex, with fine punctures (the intervals between the punctures are smaller than the diameter of the



Figures 22–24. Female genitalia. Ovipositor of *M. plicicollis* (**22**); bursa copulatrix of *M. medius* (**23**), spermatheca of *M. gravis* (**24**).

puncture). Elytral base slightly sinusoidal. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum rounded.

Intercoxal process slightly protruding towards mesoventrite. Metaventrite reduced (length ratio cavity of hind coxa / metaventrite between the insertions of mid and

hind coxae ca. 2). In both sexes abdominal process without tubercles; relatively narrow (process of 1st abdominal ventrite / process of metaventrite = 2.1–2.3). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Male legs. Protarsi widened. Protibiae as in Fig. 30. Mesofemorae with a small denticle at the apex. Metafemorae with an hair fringe. Female legs. Protarsi slightly widened. Other leg parts simple.

Male genitalia. Parameres narrowing towards apex; length equal to the 0.3 of the rest of aedeagal tegmen (Fig. 14). Clavae straight (Fig. 14). Female genitalia. Paraproct equal to coxites. Bursa copulatrix with two sacs. Spermatheca with narrow ducts (Fig. 24).

Distribution. This species has been collected in the following ecoregions of West Africa (Republic of Benin, Togolese Republic): Guinean forest-savanna mosaic (Fig. 42).

***Monodius laevistriatus* (Fairmaire, 1897), comb. n.**

http://species-id.net/wiki/Monodius_laevistriatus

Figs 19, 40, 42, 53

Selinus laevistriatus Fairmaire, 1897: 122. – Gebien 1910: 278, 1921: 21, 1938: 297.

Ectateus laevistriatus (Fairmaire, 1897).– Koch 1956: 237; Ardoin 1969: 143, 1971: 284; Iwan 2002a: 67, 2002b: 265.

Studied material. Holotype, female (MNHN): “TYPE”, “Sierra-Leone”, “*Selinus laevistriatus* Frm [unreadable] Type”, “Muséum Paris, 1906, Coll. L. Fairmaire”. **Other material**: males and 2 female (MNHN): “Fort Camp, 1070m, 26-V-1963”, “Mission ENS-IFAN, aux Monts LOMA, Sierra Leone”, “Muséum Paris, coll. P. Ardoin, 1978”, “*Monodius laevistriatus*, Fairm., P. Ardoin det. 1966”.

Redescription. Habitus as in Fig. 53. Body length = 12.0–14.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / the middle of pronotum = 2.2–2.4).

Dorsal side of head dull, with fine punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture fine. Clypeal emargination relatively deep (clypeal emargination width / depth ratio = 7.1–7.5). Mentum with median part wide. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.1–1.2). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.2–1.3). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.8–2.9).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.5–0.6); dull, with fine punctures (the intervals between the punctures are greater than the 2 diameters of the puncture); with two circular depressions in the middle. Anterior pronotal angles sharp and strongly protruding towards front. Lateral margins of pronotal

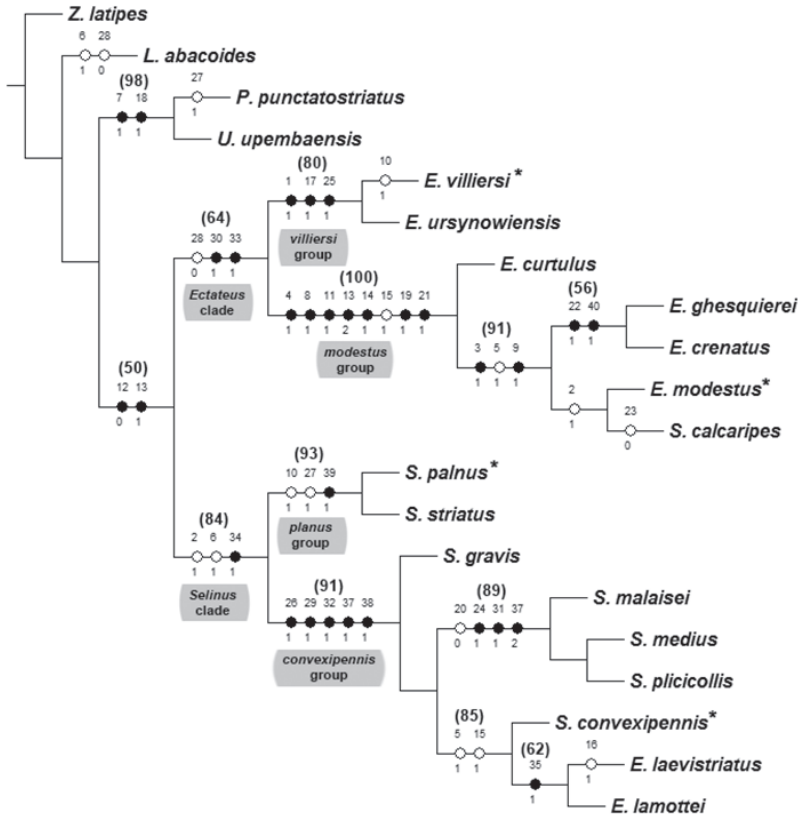


Figure 25. Phylogeny of the species of *Ectateus* and *Selinus sensu* Iwan 2002. Most parsimonious tree (L=57, CI=74, RI=90). Black circles represent single, non-homoplasious character state transformations, and white circles represent multiple, homoplasious character state transformations. The numbers above and below each circle correspond to character numbers and states, respectively. Additional numbers displayed at the top of branches represent Jackknife values (support below 50 was not illustrated). * – type species.

disc rounded. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions trapezoidal. Pronotal hypomera dull; without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with fine punctures; impressed on the whole length. Elytral intervals shiny, non-convex, with conspicuous punctures (the intervals between the punctures are smaller than the diameter of the puncture). Elytral base slightly sinusoidal. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum rounded.

Intercostal process not protruding towards mesoventrite. Metaventrite reduced (length ratio cavity of hind coxa / metaventrite between the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles, relatively narrow (process of 1st abdominal ventrite / process of metaventrite = 2.1–2.3). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Male legs. Protarsi slightly widened. Protibiae as in *M. convexipennis*. Mesofemorae with a large denticle at the apex, mesotibia with a small denticle at the apex. Metafemorae with an hair fringe. Female legs. Protarsi slightly widened. Other leg parts simple.

Male genitalia. Parameres strongly narrowed toward apex; length equal to the 0.5 of the rest of aedeagal tegmen (Fig. 19). Clavae straight (Fig. 19). Female genitalia. Para-proct equal to coxites. Bursa copulatrix with two sacs. Spermatheca with narrow ducts.

Distribution. This species has been collected in the following ecoregions of West Africa (Sierra Leone): Western Guinean lowland forests (Fig. 42).

***Monodius lamottei* (Gridelli, 1954), comb. n.**

http://species-id.net/wiki/Monodius_lamottei

Figs 18, 28, 42, 54

Selinus lamottei Gridelli, 1954: 127.

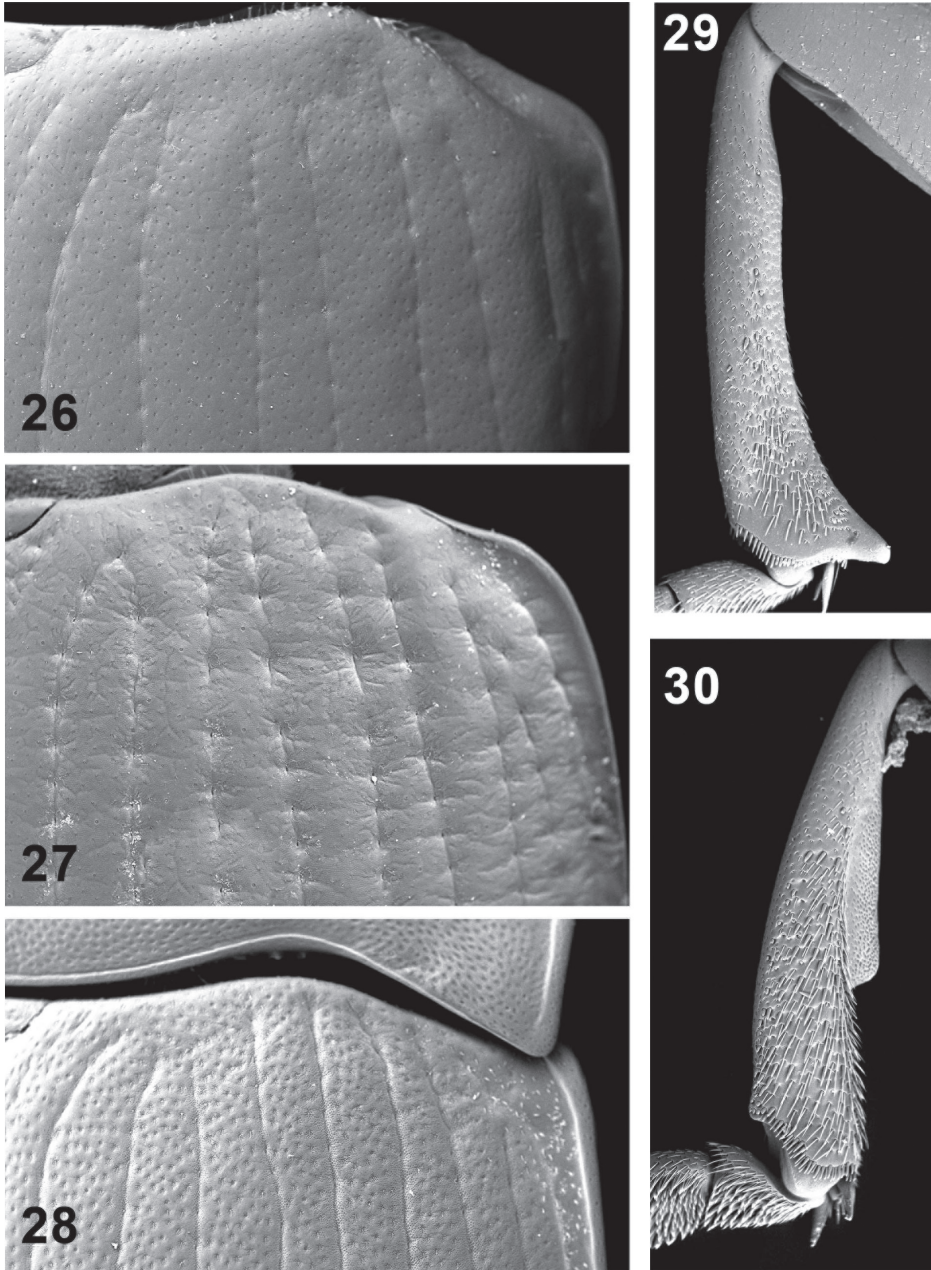
Ectateus lamottei (Gridelli, 1954).— Ardoin 1963: 222; Iwan 2002b: 266.

Studied material. Holotype, male (MNHN): “Muséum Paris, Nimba (Guinée), M. Lamotte II. VI. 42”, “Typus”, “Keoulenta”; **Paratypes**, male and female (MNHN): same data as holotype. **Other material**: 3 females (MNHN): “Muséum Paris, Côte d’Ivoire, Réserve du Banco, R. Paulian & C. Delamare”, 2 males and 2 females (MNHN): “Coll Mus. Tervuren, Côte d’Ivoire: Bingervillie, X.1961, J. Decelle”, “Muséum Paris Coll. P. Ardoin, 1978”, female (MRAC): “Coll Mus. Tervuren, Côte d’Ivoire: Korea, S. de Daloa, J. Decelle, VII / IX.1962”, “*Ectateus laevistriatus*, det. Ardoin 1965”, female (MRAC): “Coll Mus. Tervuren, Côte d’Ivoire: Adlapoté, 80 km. W. Abidjan, J. Decelle, II-1962”, “*Ectateus laevistriatus*, det. Ardoin 1965”, males (TMNH): “Adiopodoumé, B. Côte d’Ivoire, Ledoux”, female (MNHN): “Côte d’Ivoire”, “Muséum Paris Coll. P. Ardoin, 1978”.

Redescription. Habitus as in Fig. 54. Body length = 12.0–14.5 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / the middle of pronotum = 2.2–2.4).

Dorsal side of head dull, with fine punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture fine. Clypeal emargination relatively shallow (clypeal emargination width / depth ratio = 10.0–11.5). Mentum with median part wide. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.1–1.2). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.2–1.3). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.8–2.9).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.5–0.6), dull, with fine punctures (the intervals between the punctures are smaller than the diameter of the puncture). Anterior pronotal angles sharp and strongly protruding towards



Figures 26–30. Elytral disc (**26, 27, 28**); male mesotibia (**29**); male protibia (**30**). *M. gravis* (**26, 29, 30**), *E. calcaripes* (**27**), *E. lamottei* (**28**).

front. Lateral margins of pronotal disc rounded. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions trapezoidal. Pronotal hypomera dull; without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with fine punctures, impressed on the whole length. Elytral intervals shiny, non-convex, with coarse punctures (the intervals between the punctures are smaller than the diameter of the puncture). Elytral base slightly sinusoidal. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum rounded.

Intercoxal process protruding towards mesoventrite. Metaventrite reduced (length ratio cavity of hind coxa / metaventrite between the insertions of mid and hind coxa ca. 2). In both sexes abdominal process without tubercles, relatively narrow (process of 1st abdominal ventrite / process of metaventrite = 2.1–2.3). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Male legs. Protarsi slightly widened. Protibiae as in *M. convexipennis*. Mesotibiae with a small denticle at the apex. Metafemorae with an hair fringe. Female legs. Protarsi slightly widened. Other leg parts simple.

Male genitalia. Parameres extended towards apex; length equal to the 0.5 of the rest of aedeagal tegmen (Fig. 18). Clavae straight (Fig. 18). Female genitalia. Paraproct equal to coxites. Bursa copulatrix with two sacs. Spermatheca with narrow ducts.

Distribution. This species has been collected in the following ecoregions of West Africa (Ivory Coast, Republic of Liberia): Eastern Guinean forests, Western Guinean lowland forests (Fig. 42).

Monodius malaisei Koch, 1956

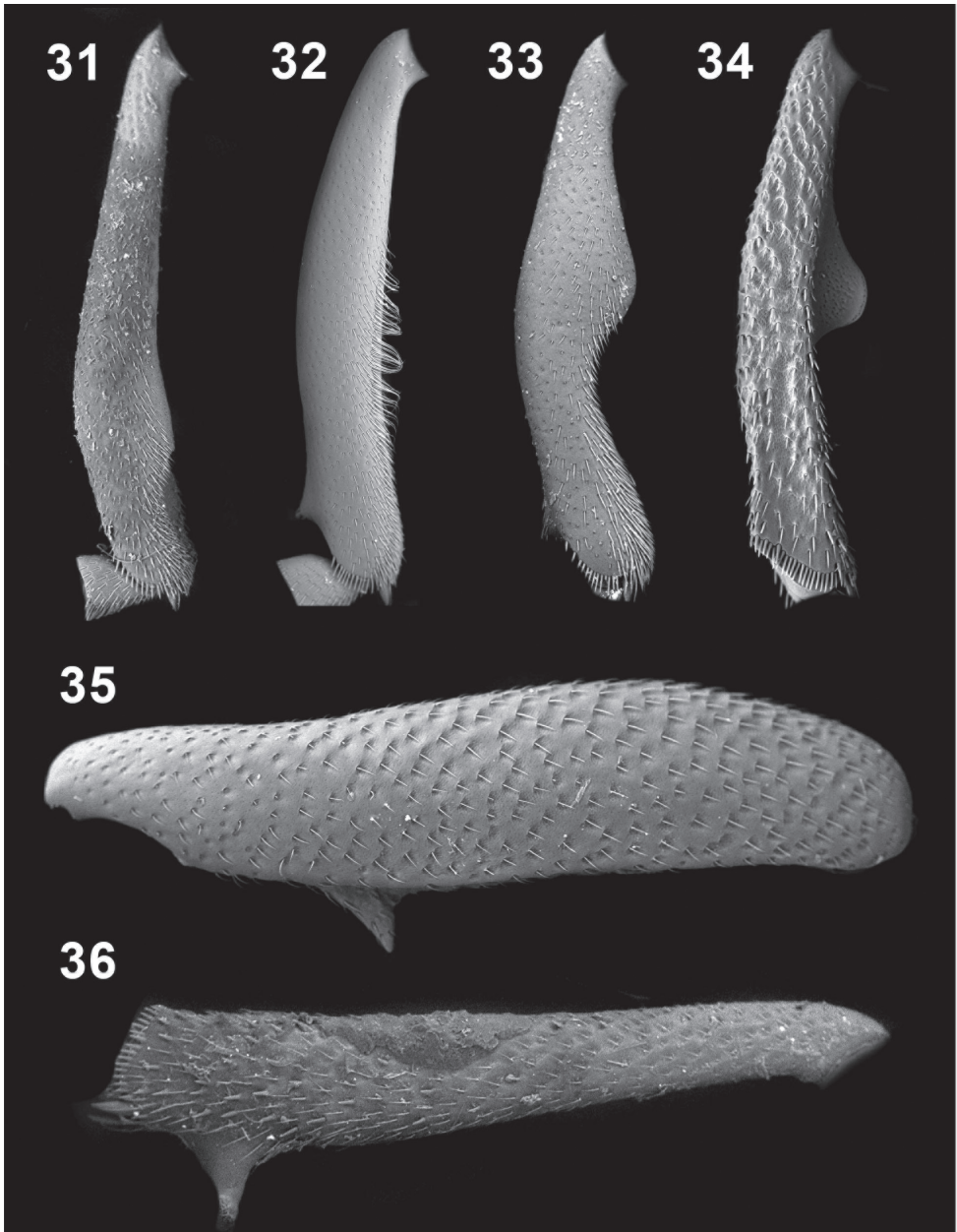
http://species-id.net/wiki/Monodius_malaisei

Figs 9, 17, 38, 43, 55

Monodius malaisei Koch, 1956: 188.

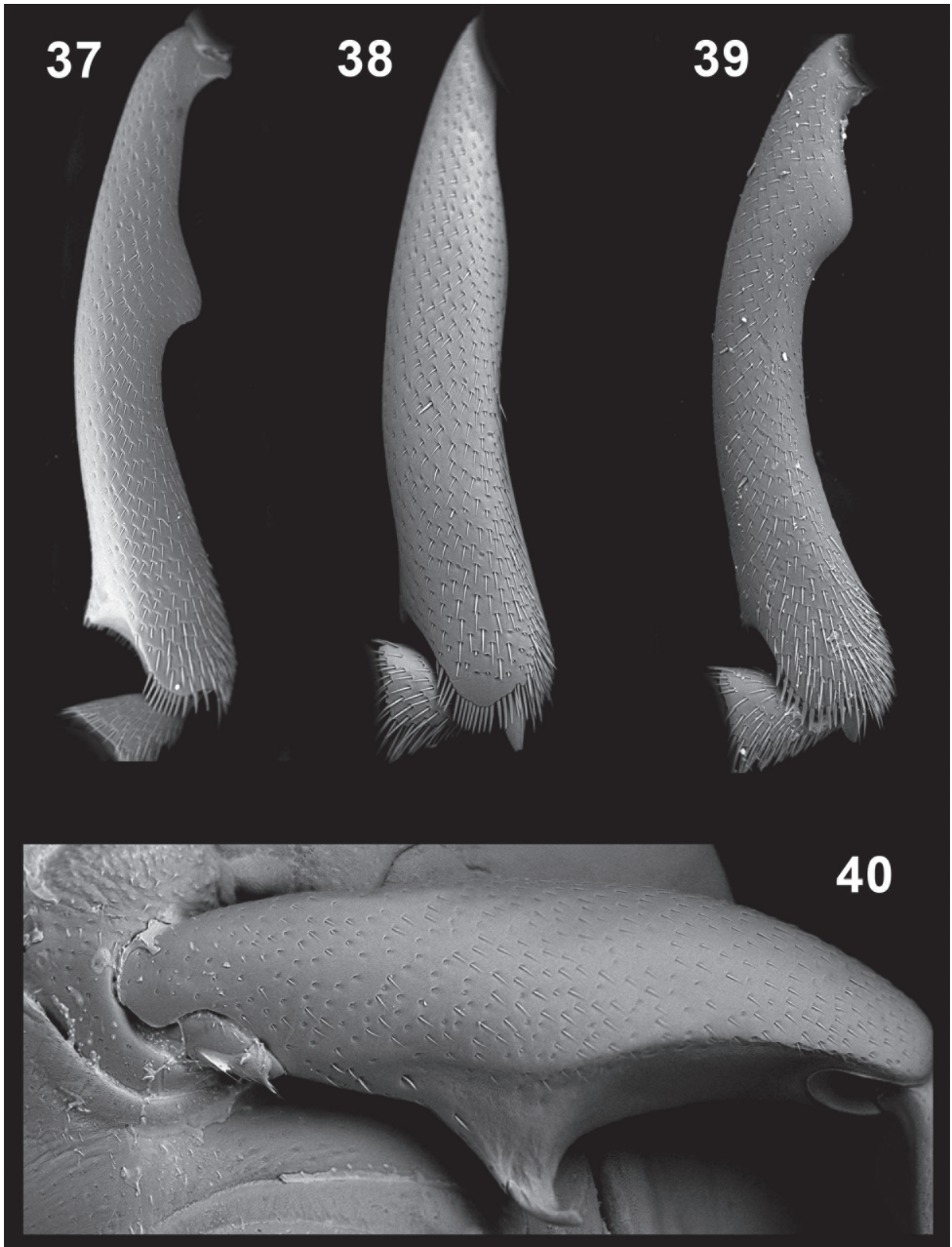
Selinus malaisei (Koch, 1956).— Iwan 2002a: 101, 2002b: 302.

Studied material. Twelve syntypes of *Monodius malaisei malaisei* are available. Lectotype designation is needed to fix the taxonomic status of the species and the subspecies. **Lectotype** designated here, male (TMNH): “Paratype No: 3224, *Monodius malai-*, *sei* Koch”, “Ob. Volta, Pundu, Olsufiew”; **Paralectotypes**, male (TMNH): same data as holotype, except the number referring to paratype (3226, 3227). **Other material:** 12 males and 15 females (MNHN): “Muséum Paris, Haute Volta, Gaoua, H. Labouret 1924”, 2 males and 2 females (ZMAS): “Poundou, Hante, Volta, Afr. Occ. Fr., Олсуфьев 927”, male and female (ZMAS): “Ouagadougou, Afrique Occ. Fr. Олсуфьев VII. VIII 927”, 3 males and 4 females (MRAC): “Coll. Mus. Tervuren, Haute Volta: Bobo-Dioulasso, 10.V.1964, R. Siffointe”, 2 males (MNHN): “Oyo Yoruba P. François”, “Muséum Paris, Coll. L. Fairmaire”, 2 males (MNHN): “Abétifi, Côte d’Ivoire”, “Muséum Paris”, 2 males (MNHN): “Tortiya, Cte Ivoire, II.59, R. Villemain”, “Muséum Paris”, 2 males (MNB): “Togo, Station Ho, Schroder S.”, male (MNHN): “Muséum Paris Soudan Franc Région Volta Sikasso- Bobo-San A.



Figures 31–36. Male protibiae (31–34); male mesofemora (35); male mesotibia (36). *E. calcaripes* (31), *E. modestus* (32), *E. ghesquieriei* (33), *E. crenatus* (34–36).

Chevalier 1900”, “Mai-Juin”, 2 males (MNHN): “Muséum Paris coll. P.Ardoin 1978”, “*Monodius Selinus malaisei* Koch ssp. *nigeriensis* Koch P. Ardoin det.1972”, “Niamey-Niger Leg. Loups”, 2 males and 2 females (MNHN): “Muséum Paris, Coll. P. Ardoin, 1978”, “IX.1971, Pabré, Haute Volta, R.P. Fernandez”.



Figures 37–40. Male protibiae (37–39); male mesofemora (40). *M. convexipennis* (37), *M. malaisei* (38), *S. planus* (39), *E. laevistriatus* (40).

Redescription. Habitus as in Fig. 55. Body length = 13.0–14.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.2–1.3; length ratio elytra / the middle of pronotum = 2.2–2.4).

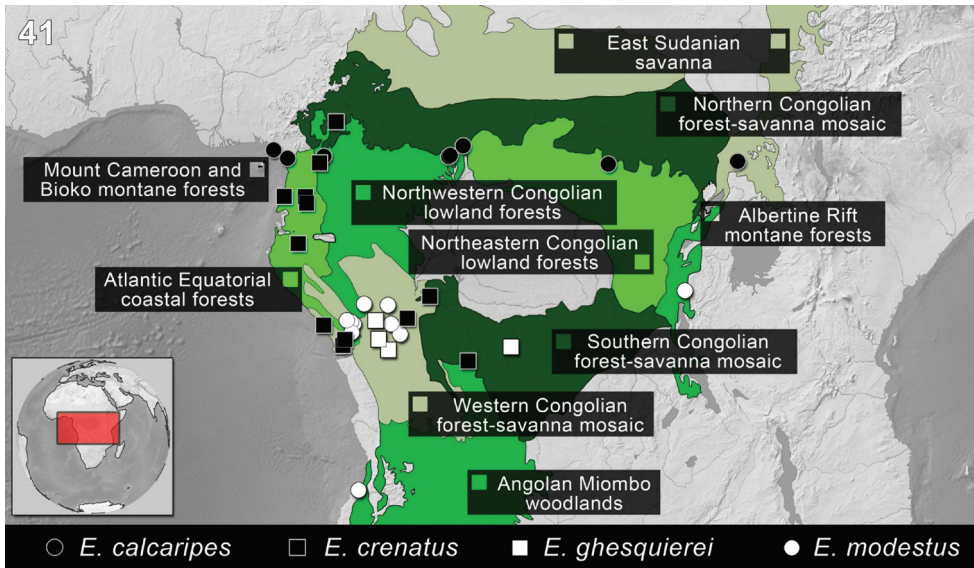


Figure 41. Distribution of the species of *Ectateus sensu novum*. The division of Afrotropical Realm into ecoregions was adopted after Olson et al. 2001. Different colors were used to distinguish the adjacent ecoregions.

Dorsal side of head dull, with fine punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture fine. Clypeal emargination relatively shallow (clypeal emargination width / depth ratio = 10.0–11.5). Mentum with median part wide. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.1–1.2). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.2–1.3). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.8–2.9).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.5–0.6), dull, with fine punctures (the intervals between the punctures are smaller than the diameter of the puncture). Anterior pronotal angles sharp and strongly protruding towards front. Lateral margins of pronotal disc rounded. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions trapezoidal. Pronotal hypomera dull, without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with fine punctures; impressed on the whole length. Elytral intervals dull, non-convex, with fine punctures (the intervals between the punctures are greater than the 4 diameters of the puncture). Elytral base slightly sinusoidal. Elytral humeri slightly protruding laterad. Wings absent. Scutellum rounded.

Intercoxal process protruding towards mesoventrite. Metaventrite reduced (length ratio cavity of hind coxa / metaventrite between the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles, relatively narrow (process of 1st abdominal ventrite / process of metaventrite = 2.1–2.3). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Male legs. Protarsi slightly widened. Protibiae as in Fig. 38. Mesotibiae with a large denticle at the apex. Metafemorae with an hair fringe. Female legs. Protarsi slightly widened. Other leg parts simple.

Male genitalia. Parameres extended towards apex; length equal to the 0.2 of the rest of aedeagal tegmen (Fig. 17). Clavae straight (Fig. 17). Female genitalia. Paraproct equal to coxites. Bursa copulatrix with two sacs. Spermatheca with narrow ducts.

Distribution. This species has been collected in the following ecoregions of West Africa (Republic of Ghana, Ivory Coast, Burkina Faso, Federal Republic of Nigeria, Republic of Niger): Eastern Guinean forests, Guinean forest-savanna mosaic, West Sudanian savanna (Fig. 43).

Key to the subspecies of *Monodius malaisei*

- 1 Male metatibiae curved and slightly dilated on distal half
..... *Monodius malaisei malaisei* Koch, 1956
- Male metatibiae straight..... *Monodius malaisei nigeriensis* Koch, 1956

Monodius medius (Fairmaire, 1897)

http://species-id.net/wiki/Monodius_medius

Figs 7, 23, 43, 56

Selinus medius Fairmaire, 1897: 122.– Gebien 1910: 278, 1938: 297; Iwan 2001b: 360, 2002a: 101, 2002b: 303.

Monodius medius (Fairmaire, 1897).– Koch 1956: 185; Girard 1975: 342.

Selinus angulatipes Gebien, 1921: 21.– Gebien 1938: 297; Koch 1956: 185 (syn); Kulzer 1963: 425.

Studied material. Holotype, male (MNHN): “Type”, “Muséum Paris, Paris, Collection Leon Fairmaire, 1906”, “*Selinus medius* Fm guinea, Acut. det.”. **Other material:** 6 males and 2 females (RBINS): “*Selinus, angulatipes*, det. H. Gebien 1913, n. sp.”, “Type”, “Asenté Akem, (Ashanti), Guinée” (Syntypes of *Selinus angulatipes* Gebien, 1921), 11 males and 6 females (MNHN): “Lamto, Pacobo, V. 1968”, “Côte d’Ivoire, CL. Girard Col.”, male (MRAC): “Coll. Mus. Tervuren, Côte d’Ivoire, Kossou 18.2.1975, R. Jocque”, 2 males (MRAC): “Coll. Mus. Tervuren, Côte d’Ivoire: Bouaké, VII-, 1977, P. M. Elsen”, male and female (MRAC): “Coll. Mus. Tervuren, Togo: Missahoué 650 m., VI.1963, Mme Y. Schach”.

Redescription. Habitus as in Fig. 56. Body length = 12.0–15.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.2–1.3; length ratio elytra / the middle of pronotum = 2.2–2.4).

Dorsal side of head dull, with fine punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture fine. Clypeal emargination relatively shallow (clypeal emargination width / depth ratio = 10.0–11.5). Mentum with median part wide. Submentum with short base. Maxillary palp

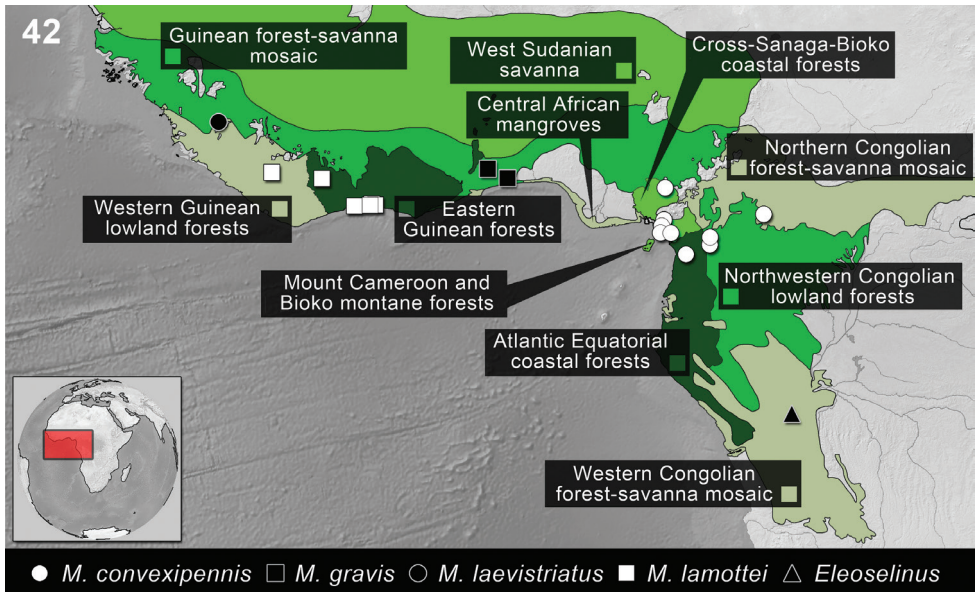


Figure 42. Distribution of the species of *Monodiuss convexipennis*, *M. gravis*, *M. laevistriatus*, *M. lamottei* and *Eleoselinus* gen. n. The division of Afrotropical Realm into ecoregions was adopted after Olson et al. 2001. Different colors were used to distinguish the adjacent ecoregions.

not widened (width of maxillary palp / length of 3rd antennomere = 1.1–1.2). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.2–1.3). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.8–2.9).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.5–0.6); dull, with fine punctures (the intervals between the punctures are greater than the 2 diameters of the puncture). Anterior pronotal angles sharp and strongly protruding towards front. Lateral margins of pronotal disc rounded. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions trapezoidal. Pronotal hypomera dull, without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with fine punctures, impressed on the whole length. Elytral intervals dull, non-convex, with fine punctures (the intervals between the punctures are greater than the 4 diameters of the puncture). Elytral base slightly sinusoidal. Elytral humeri slightly protruding laterad. Wings absent. Scutellum rounded.

Intercostal process not protruding towards mesoventrite. Metaventrite reduced (length ratio cavity of hind coxa / metaventrite between the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles, relatively narrow (process of 1st abdominal ventrite / process of metaventrite = 2.1–2.3). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 3 diameters of the puncture).

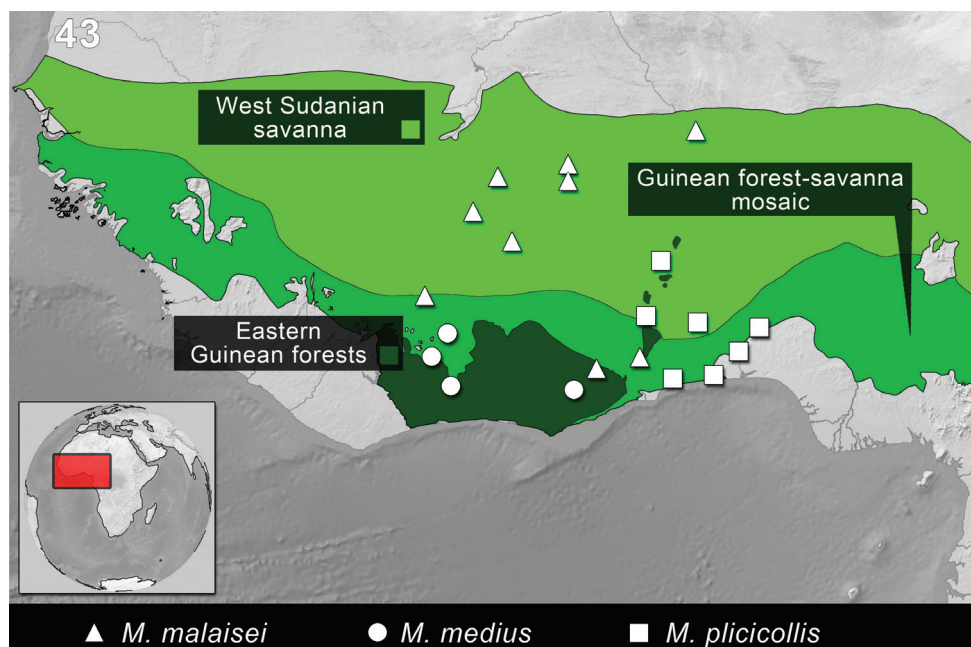


Figure 43. Distribution of the species of *Monodius malaisei*, *M. medius* and *M. plicicollis*. The division of Afrotropical Realm into ecoregions was adopted after Olson et al. 2001. Different colors were used to distinguish the adjacent ecoregions.

Male legs. Protarsi slightly widened. Protibiae as in *M. convexipennis*. Mesotibiae with a large denticle at the apex. Metafemorae with an hair fringe. Female legs. Protarsi slightly widened. Other leg parts simple.

Male genitalia. Similar as in *M. malaisei*. Female genitalia. Paraproct equal to coxites. Bursa copulatrix with two sacs (Fig. 23). Spermatheca with narrow ducts.

Distribution. This species has been collected in the following ecoregions of West Africa (Republic of Ghana, Ivory Coast): Eastern Guinean forests, Guinean forest-savanna mosaic (Fig. 43).

***Monodius plicicollis* (Fairmaire, 1897), comb. n.**

http://species-id.net/wiki/Monodius_plicicollis

Figs 4, 13, 15, 22, 43, 57

Selinus plicicollis Fairmaire, 1897: 123.– Gebien 1910: 278, 1938: 297; Koch 1956: 244; Iwan 2002a: 101, 2002b: 303.

Studied material. Holotype, male (MNHN): “*Selinus plicicollis*, Fairm, Togo”, “Togoland L. Conradt 1892-1893”, “Muséum Paris, 1906, Coll. L. Fairmaire”; **Paratype**, male (MNHN): same data as holotype. 11 males and 10 females

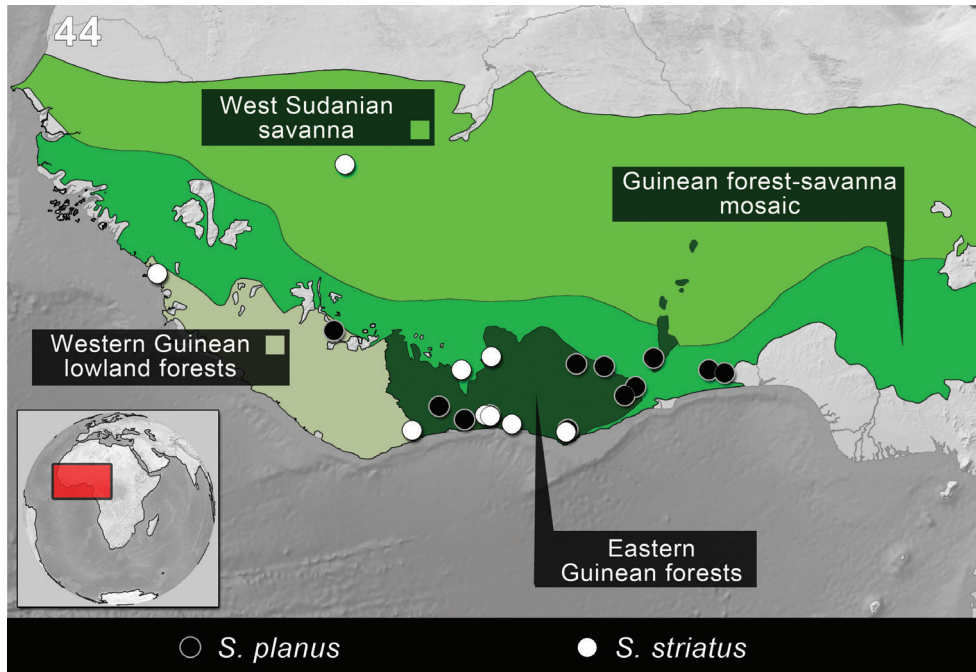


Figure 44. Distribution of the species of *Selinus sensu novum*. The division of Afrotropical Realm into ecoregions was adopted after Olson et al. 2001. Different colors were used to distinguish the adjacent ecoregions.

(MRAC): “Coll. Mus. Tervuren Togo: Niamtougou, 21/24-VII-1969, F. Puy-laert”, female (MIIZ): “Mus. Zool. Polonicum Warszawa 12/45”, “*Selinus plicicollis* H.Gebien det.1939”, “Dahomey”, male and female (MNHN): “Museum Paris, Moyen-Dahomey, Plateau de Zaganado, Saison des Drages te. Des Tornades P. Ducorps 1910”, female (MNB): “Togo Bismarckburg, 12-14.IV.93, L. Conradt S.”, male and female (MNHN): “Abboekuta, P. Francois”, “Museum Paris, Coll. Ch. Alluaud, coll. L.Fairmaire 1906”, female (TMNH): “Oyo Yoruba P. François”, “*Selinus plicicollis*”, 7 males and 10 females (MNHN): “Togoland L. Conradt 1892-1893”, “Muséum Paris, 1906, Coll. L. Fairmaire”, 2 females (MNHN): “26. XII.1975, Akoumapé, Togo, J.-Cl. Martin”, “Museum Paris, coll. P. Ardoin, 1978”, 6 males and 7 females (MNHN): “Museum Paris Dahomey env. De Porto-Novo, Waterlot 1910”.

Redescription. Habitus as in Fig. 57. Body length = 13.0–18.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.2–1.3; length ratio elytra / the middle of pronotum = 2.2–2.4).

Dorsal side of head dull, with fine punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture fine. Clypeal emargination relatively shallow (clypeal emargination width / depth ratio = 10.0–11.5). Mentum with median part wide. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.1–1.2). Length

of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.2–1.3). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.8–2.9).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.5–0.6); dull, with fine punctures (the intervals between the punctures are greater than the 2 diameters of the puncture). Anterior pronotal angles sharp and strongly protruding towards front. Lateral margins of pronotal disc rounded. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions trapezoidal; very coarse. Pronotal hypomera dull; without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with fine punctures; impressed on the whole length. Elytral intervals dull, non-convex, with fine punctures (the intervals between the punctures are greater than the 4 diameters of the puncture). Elytral base slightly sinusoidal. Elytral humeri slightly protruding laterad. Wings absent. Scutellum rounded.

Intercoxal process not protruding towards mesoventrite. Metaventricle reduced (length ratio cavity of hind coxa / metaventricle between the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles; relatively narrow (process of 1st abdominal ventrite / process of metaventricle = 2.1–2.3). 5th abdominal ventrite without bordering; punctures fine (the intervals between the punctures are greater than the 3 diameters of the puncture).

Male legs. Protarsi slightly widened. Protibiae straight. Mesotibiae and mesofemora with a large denticle at the apex. Metafemora with an hair fringe. Female legs. Protarsi slightly widened. Other leg parts simple.

Male genitalia. Parameres extended towards apex; length equal to the 0.2 of the rest of aedeagal tegmen (Fig. 15). Clavae straight (Fig. 15). Female genitalia. Paraproct equal to coxites (Fig. 22). Bursa copulatrix with two sacs. Spermatheca with narrow ducts.

Distribution. This species has been collected in the following ecoregions of West Africa (Togolese Republic, Republic of Benin, Federal Republic of Nigeria): Eastern Guinean forests, Guinean forest-savanna mosaic, West Sudanian savanna (Fig. 43).

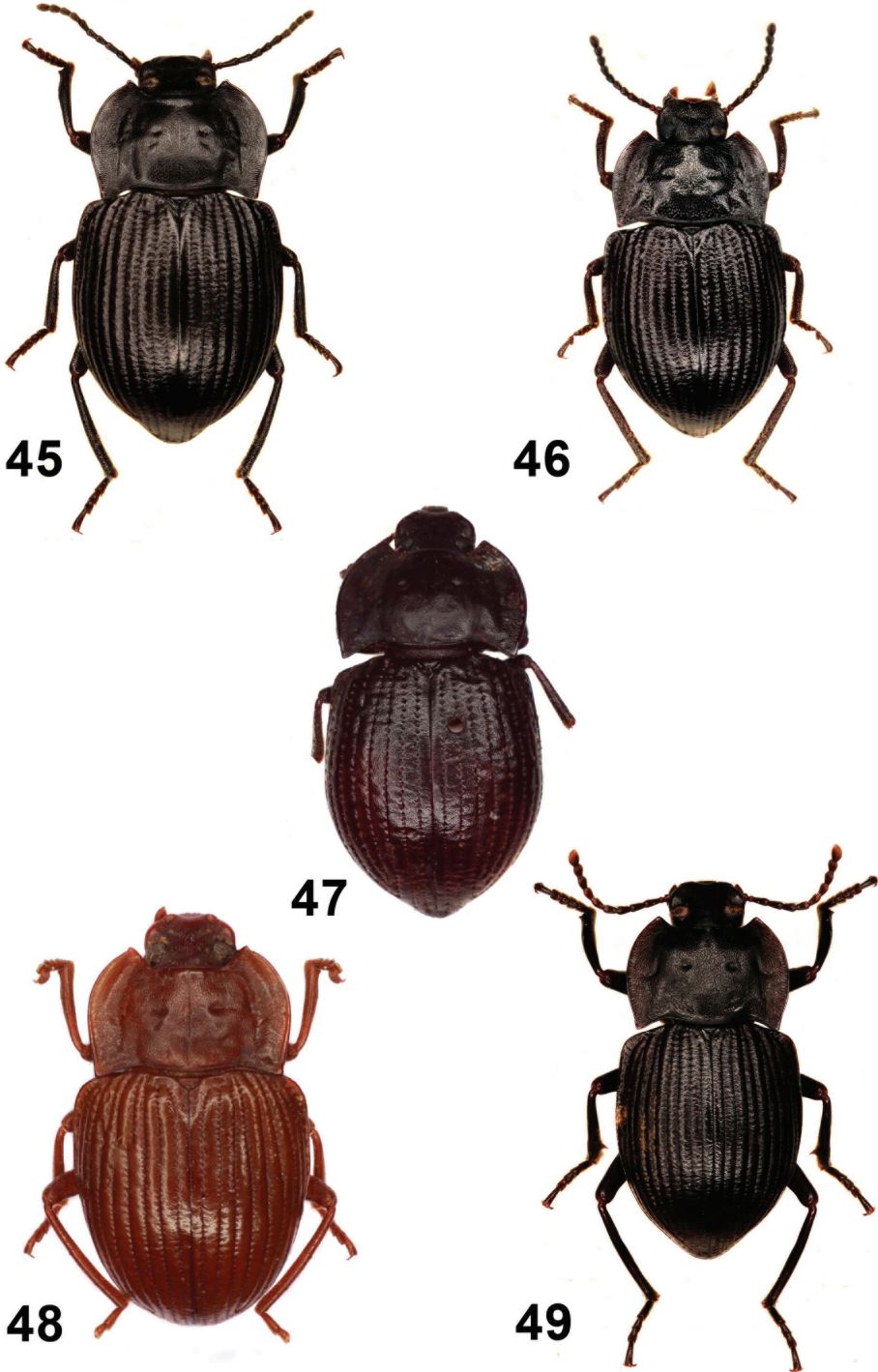
Genus *Selinus* Mulsant & Rey, 1853

<http://species-id.net/wiki/Selinus>

Selinus Mulsant & Rey, 1853a: 322.– Lacordaire 1859: 241, Gemminger and de Harold 1870: 1915; Gebien 1910: 277, 1938: 297; Koch 1956: 242; Iwan 2001b: 352, 2002a: 100, 2002b: 302, 2004a: 541, 2004b: 739, 2005: 615; Iwan and Banaszkiwicz 2005: 603, 2007: 725.

Type species. *Opatrum planum* Fabricius, 1792; designated by Gebien (1938).

Diagnosis. The following character combination is unique for *Selinus* within the whole subtribe Platynotina: (1) anterior tentorial pit deep, clearly visible, (2) antennomeres from 7 to 11 elongated (their length greater than the width), (3) pronotum wid-



Figures 45–49. Body habitus: *Ectateus calcaripes* (45), *E. crenatus* (46), *E. curtulus* (47), *E. ghesquierei* (48) and *E. modestus* (49).

est at the base, (4) 5th abdominal ventrite bordered, (5) paraproct longer than coxites, (6) clavae long, their length more than half of the length of parameres.

Distribution. Specimens of this genus have been collected in the following ecoregions of West Africa (Ivory Coast, Republic of Benin, Republic of Ghana, Republic of Guinea, Republic of Mali, Togolese Republic): Eastern Guinean forests, Guinean forest-savanna mosaic, West Sudanian savanna, Western Guinean lowland forests (Fig. 44).

Species included (2). *Selinus planus* (Fabricius, 1792) and *S. striatus* (Fabricius, 1794).

Key to the species of *Selinus*

- 1 Body size: 12.0–14.0 mm. Pronotal sides evenly narrowing towards apex. Pronotal and elytral surface with fine punctures (the intervals between the punctures are greater than the 3 diameters of the puncture). Male protibiae as in Fig. 39 *Selinus planus*
- Body size: 10.0–11.0 mm. Pronotal sides parallel in their basal half. Pronotal and elytral surface with conspicuous punctures (the intervals between the punctures are smaller than the diameter of the puncture). Male protibiae with very shallow dilatation near the middle *Selinus striatus*

Selinus planus (Fabricius, 1792)

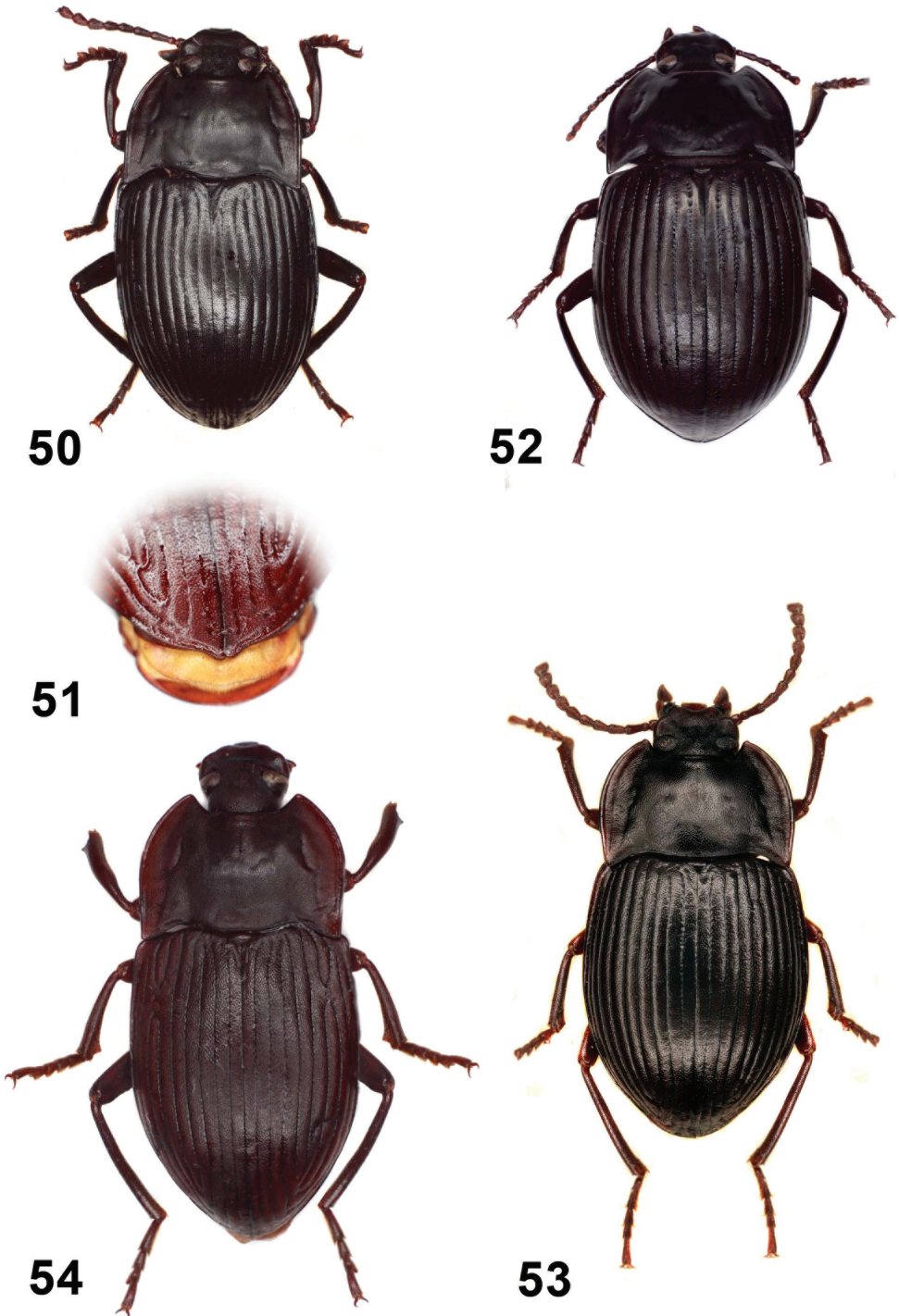
http://species-id.net/wiki/Selinus_planus

Figs 1, 6, 39, 44, 60

Opatrum planum Fabricius, 1792: 118.– Herbst 1793: 215; Fabricius 1801: 90.

Selinus planus (Fabricius, 1792).– Mulsant and Rey 1853a: 324; Gemminger and de Harold 1870: 1915; Péringuey 1892: 56; Gebien 1906: 211, 1910: 278, 1938: 297; Koch 1956: 251; Iwan 1990: 430, 2001b: 360, 2002a: 101, 2002b: 303; Iwan and Banaszkiwicz 2005: 605.

Studied material. Paratype, female (MNHN): “Guinée, coll. R. Oberthür, ex coll. Deyrolle”. **Other material**: 10 males and 9 females (MNHN): “Muséum Paris, Bas Dahomey, Torricada E. Poisson 1902”, “Novembre”, 6 males and 5 females (MNHN): “Muséum Paris Dahomey env. De Porto-Novo, Waterlot 1910”, 3 males (MNHN): “Muséum Paris coll. P. Ardoin 1978”, “15/20.X.1967, Takoradi, Ghana, Cl. Besnard leg.”, “♂”, female (MNHN): “Ashanti”, “Muséum Paris, (Coll. Ch. Alluaud), coll. L.Fairmaire 1906”, 2 males and 3 females (MNB): “Togo Amedzowe”, 2 males and female (MRAC): “Coll. Mus Tervuren, Togo: Misahoué 650 m., VI.1963, Mme Y. Schach”, female (MNHN): “Under log, river bank”, “Akuse, Gold Coast, 23-II-29”, “Museum Paris”, male (MNHN): “Abétifi, Côte d’Ivoire”, “Muséum Paris”, 2 females (MRAC): “Coll. Mus. Tervuren, Ghana: Volta River, 12.VII.1964, G. Marlier”, 2 males (MNHN): “Togo, Palime, Forêt de Klouto, 20-24-IV-74 S. Vit”, female (MRAC): “Coll. Mus. Tervuren,



Figures 50–54. Body habitus: *Monodius convexipennis* (50), *M. gravis* (52), *M. laevistriatus* (53) and *M. lamottei* (54). Apex of elytra of *M. convexipennis* (51).

Côte d'Ivoire: Eremankono, S. de Divo, J. Decelle VII-1962", male and female (MNHN): "Goldküste, Ostertag", 2 males (MNHN): "Addah.", "Muséum Paris", male (MNHN): "Gold Coast", "Koumassi", 3 males and female (MNHN): "Dahomey, Athieme, J. M. Renou 1898", female (BMNH): "Aburi, Gold Coast, W. H. Patterson., 1914-29", female (MNHN): "Talanzoa", "Muséum Paris, Nimba (Guinée), M. Lamotte II. VI. 42".

Redescription. Habitus as in Fig. 60. Body length = 12.0–14.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / the middle of pronotum = 2.7–3.0).

Dorsal side of head dull, with punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture fine. Clypeal emargination relatively deep (clypeal emargination width / depth ratio = 4.0–4.5). Mentum with median part wide. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.0–1.1). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.2–1.3). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.8–3.0).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.4–0.5); dull, with fine punctures (the intervals between the punctures are greater than the 3 diameters of the puncture). Anterior pronotal angles sharp and slightly protruding towards apex. Lateral margins of pronotum narrowing towards apex. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions trapezoidal. Pronotal hypomera dull; without punctures.

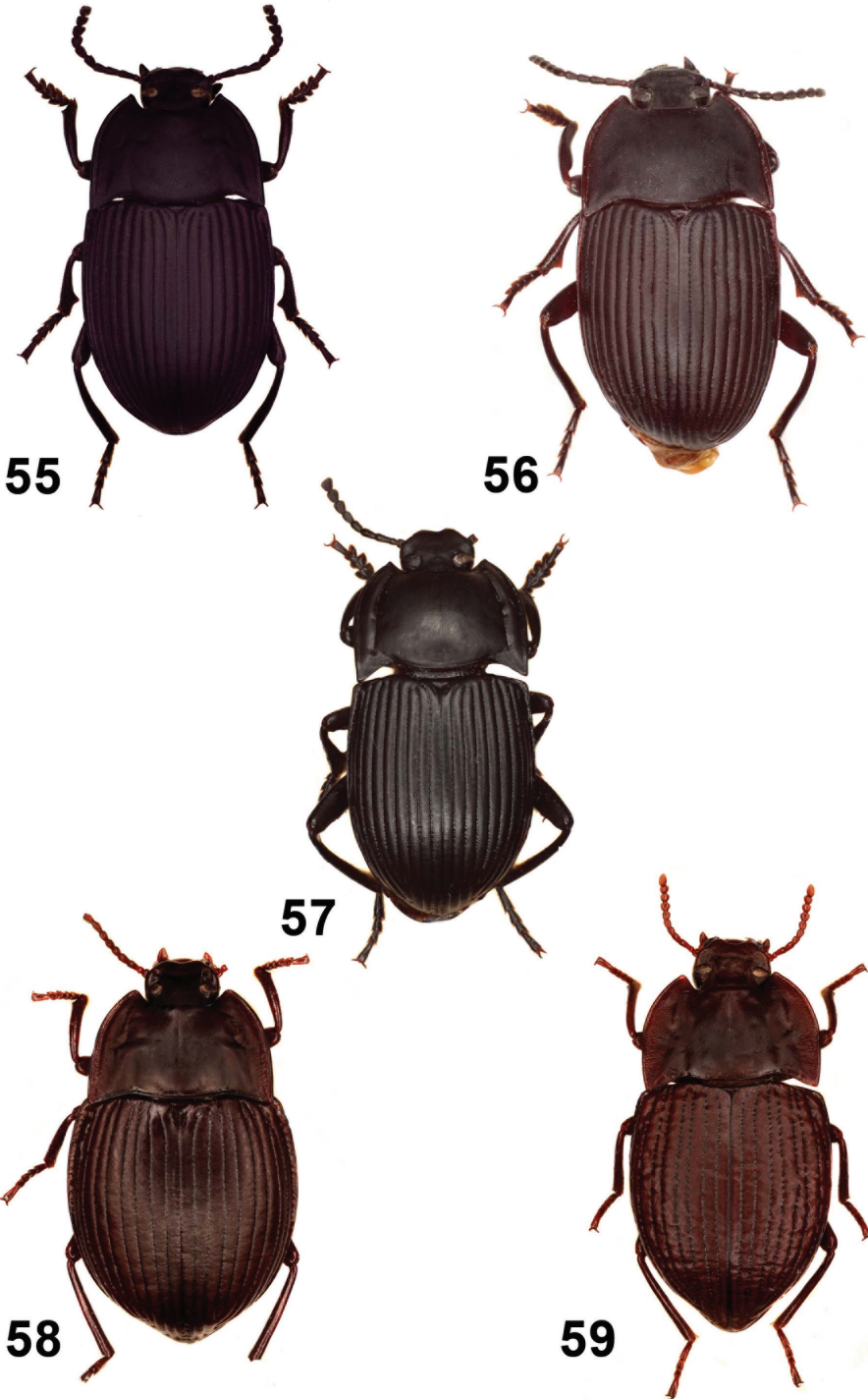
Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with fine punctures (sometimes absent). Elytral intervals shiny, non-convex; with conspicuous punctures (the intervals between the punctures are greater than the 3 diameters of the puncture). Elytral base slightly sinusoidal. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum triangular.

Intercoxal process protruding towards mesoventrite. Metaventrite reduced (length ratio cavity of hind coxa / metaventrite between the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles; relatively narrow (process of 1st abdominal ventrite / process of metaventrite = 2.1–2.2). 5th abdominal ventrite with complete bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Male legs. Protarsi slightly widened. Protibiae as in Fig. 39. Metafemorae with an hair fringe. Female legs. Protarsi slightly widened. Other leg parts simple.

Male genitalia. Parameres narrowing towards apex; length equal to the 0.2 of the rest of aedeagal tegmen. Clavae straight. Female genitalia. Paraproct longer than coxites. Spermatheca with narrow ducts.

Distribution. This species has been collected in the following ecoregions of West Africa (Ivory Coast, Republic of Benin, Republic of Ghana, Republic of Guinea, Togolese Republic): Eastern Guinean forests, Guinean forest-savanna mosaic, West Sudanian savanna (Fig. 44).



Figures 55–59. Body habitus: *Monodius malaisei* (55), *M. medius* (56), *M. plicicollis* (57), *Eleoselinus villiersi* (58) and *E. ursynowiensis* (59).

***Selinus striatus* (Fabricius, 1794)**

http://species-id.net/wiki/Selinus_striatus

Figs 11, 21, 44, 61

Helops striatus Fabricius, 1794: 440.– Fabricius 1801: 161.

Selinus striatus (Fabricius, 1794).– Gebien 1906: 211, 1910: 278, 1938: 298; Koch 1956: 254; Ardoin 1963: 223, 1969: 143; Iwan 2002b: 303.

Studied material. 3 females (MNHN): “Muséum Paris, Côte d’Ivoire, Reserve du Banco, R. Paulian & C. Delamare”, 2 males and female (MNHN): “Muséum Paris (coll. Ch. Alluaud) coll. L. Fairmaire 1906”, “Assinie Côte occid. Afrique Ch. Alluaud 1886”, male and female (MNHN): “Coll Mus. Tervuren, Côte d’Ivoire: Bingerville, X.1961, J. Decelle”, “Muséum Paris Coll. P. Ardoin, 1978”, female (MRAC): “Cerole de Sassandra, Cote d’Ivoire 4.1962, J.Hamon Orstom Rec.”, “*Selinus striatus* Fab. P. Ardoin det.1963”, “♀”, female (MRAC): “Coll. Mus. Tervuren Côte d’Ivoire: Amanikro, 50 km. N.W. Abengourou J.Decelle V/VI.1961, “Récolté sur cacaoyer”, “*Selinus striatus* Fab. P.Ardoin det.1965”, male and female (MNHN): “Muséum Paris (coll. Ch.Alluaud) coll. L. Fairmaire 1906”, “Rhubomp, Sierra Leone”, male (MNHN): “Muséum Paris, Iles se Los, Tamara, J. Serand 1913”, male (MHNL): “Dimbokru, Côte d’Ivoire, G. Skibiski, Lyon”, male (MNHN): “Muséum Paris coll. P. Ardoin 1978”, “3.V.1967, Takoradi, Ghana, Cl.Besnard leg.”, “♂”.

Redescription. Habitus as in Fig. 61. Body length = 10.0–11.0 mm. Elytra wider and longer than pronotum (width ratio elytra / pronotum = 1.1–1.2; length ratio elytra / the middle of pronotum = 2.7–2.9).

Dorsal side of head dull, with punctures (the intervals between the punctures are smaller than the diameter of the puncture). Frontoclypeal suture fine. Clypeal emargination relatively deep (clypeal emargination width / depth ratio = 4.0–4.4). Mentum with median part wide. Submentum with short base. Maxillary palp not widened (width of maxillary palp / length of 3rd antennomere = 1.1–1.3). Length of antennae greater than pronotal length (ratio antenna / pronotum from tip of anterior pronotal angle to tip of posterior pronotal angle = 1.2–1.3). 3rd antennomere relatively long (length ratio of antennomere 3rd / 2nd = 2.8–3.0).

Pronotal disc transverse (middle of pronotum length / width ratio = 0.4–0.5); dull, with fine punctures (the intervals between the punctures are smaller than the diameter of the puncture). Anterior pronotal angles sharp and slightly protruding towards apex. Lateral margins of pronotal disc narrowing towards apex. Apophyseal and basal depressions on pronotal disc present; apophyseal depressions trapezoidal. Pronotal hypomera dull; without punctures.

Elytra oblong (elytra length / width ratio = 1.1–1.2). Elytral striae with fine punctures (sometimes absent). Elytral intervals shiny, non-convex, with conspicuous punctures (the intervals between the punctures are smaller than the diameter of the puncture). Elytral base slightly sinusoidal. Elytral humeri rounded, not protruding laterad. Wings absent. Scutellum triangular.



Figures 60–61. Body habitus: *Selinus planus* (60) and *S. striatus* (61).

Intercoxal process protruding towards mesoventrite. Metaventrite reduced (length ratio cavity of hind coxa / metaventrite between the insertions of mid and hind coxae ca. 2). In both sexes abdominal process without tubercles; relatively narrow (process of 1st abdominal ventrite / process of metaventrite = 2.1–2.2). 5th abdominal ventrite with complete bordering; punctures fine (the intervals between the punctures are greater than the 2 diameters of the puncture).

Male legs. Protarsi slightly slightly widened. Male protibiae with very shallow dilatation near the middle. Metafemorae with an hair fringe. Female legs. Protarsi slightly widened. Other leg parts simple.

Male genitalia. Parameres narrowing towards apex; length equal to the 0.2 of the rest of aedeagal tegmen (Fig. 21). Clavae straight (Fig. 21). Female genitalia. Paraproct longer than coxites. Spermatheca and bursa copulatrix as in *S. planus*.

Distribution. This species has been collected in the following ecoregions of West Africa (Ivory Coast, Republic of Ghana, Republic of Guinea, Republic of Mali): Eastern Guinean forests, Guinean forest-savanna mosaic, West Sudanian savanna, Western Guinean lowland forests (Fig. 44).

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