



Biodiversity and notes on carabid beetles from Angola with description of new taxa (Coleoptera: Carabidae)

ARTUR R. M. SERRANO¹, RÚBEN A. CAPELA² & CARMEN VAN-DÚNEM NETO SANTOS²¹*cE3c—Centre for Ecology, Evolution and Environmental Changes, Departamento de Biologia Animal, Faculdade de Ciências da Universidade de Lisboa, R. Ernesto de Vasconcelos, Ed. C2, Campo Grande, 1749-016 Lisboa, PORTUGAL.**E-mail: aserrano@fc.ul.pt*²*Universidade Agostinho Neto, Faculdade de Ciências, Av. 4 de Fevereiro, 71, Luanda, ANGOLA.**E-mail: rcapela@uma.pt; camyvandunem@gmail.com*

Table of contents

Abstract	202
Resumo	203
Introduction	203
Material and methods	204
Results	205
Subfamily Brachininae Bonelli, 1810	205
<i>Brachinus</i> Weber, 1801	205
<i>Styphlomerus</i> Chaudoir in Putzeys, 1875	205
Subfamily Carabinae Latreille, 1802	205
<i>Calosoma</i> Weber, 1801	205
Subfamily Scaritinae Bonelli, 1810	206
<i>Distichus</i> Motschulsky, 1858	206
<i>Scarites</i> Fabricius, 1775	206
<i>Clivina</i> Latreille, 1802	208
Subfamily Pterostichinae Bonelli, 1810	208
<i>Morion</i> Latreille, 1810	208
<i>Stereostoma</i> Murray, 1857	208
<i>Caelostomus</i> MacLeay, 1825	209
<i>Strigomerus</i> Chaudoir, 1872	209
<i>Abacetus</i> Dejean, 1828	210
<i>Aristopus</i> LaFerté-Sénéctère, 1853	211
Subfamily Panagaeinae Bonelli, 1810	212
<i>Disphericus</i> Waterhouse, 1842	212
<i>Craspedophorus</i> Hope, 1838	212
Subfamily Licininae Bonelli, 1810	213
* <i>Brachyodes</i> Jeannel, 1949	213
<i>Systolocranius</i> Chaudoir, 1857	213
<i>Chlaenius</i> Bonelli, 1810	213
* <i>Callistomimus</i> Chaudoir, 1872	216
Subfamily Harpalinae Bonelli, 1810	217
<i>Notiobia</i> Perty, 1830	217
<i>Progonochaetus</i> G. Müller, 1938	217
<i>Stenolophus</i> Dejean, 1821	218
<i>Harpalus</i> Latreille, 1802	219
<i>Platymetopus</i> Dejean, 1829	219
<i>Parophonus</i> Ganglbauer, 1891	219
<i>Pseudoharpalus</i> Basilewsky, 1946	220
<i>Siopelus</i> Murray, 1859	221
* <i>Axinotoma</i> Dejean, 1829	223
Subfamily Orthogoniinae Schaum, 1857	224
<i>Orthogonius</i> MacLeay, 1825	224

Subfamily Ctenodactylinae Laporte de Castelnau, 1834	225
<i>Hexagonia</i> Kirby, 1825	225
Subfamily Platyninae Bonelli, 1810	225
<i>Agonidium</i> Jeannel, 1948	225
<i>Euleptus</i> Klug, 1833	226
* <i>Leptagonum</i> Kolbe, 1898	226
<i>Orthotrichus</i> Peyron, 1856	227
Subfamily Lebiinae Bonelli, 1810	228
<i>Perigona</i> Laporte de Castelnau, 1835	228
Key to the African <i>Perigona</i> (<i>s. str.</i>) species	232
* <i>Lasiocera</i> Dejean, 1831	232
Key to the Southern African species of <i>Lasiocera</i>	235
<i>Pentagonica</i> Schmidt-Goebel, 1846	236
<i>Graphipterus</i> Latreille, 1802	236
<i>laticollis</i> group	236
<i>trilineatus</i> group	237
<i>circumcinctus</i> group	237
<i>albomarginatus</i> group	237
<i>limbatus</i> group	238
<i>alternatus</i> group	238
<i>ellipticus</i> group	238
<i>Somoplatus</i> Dejean, 1929	239
<i>Tetragonoderus</i> Dejean, 1829	239
<i>Catascopus</i> Kirby, 1825	239
<i>Coptodera</i> Dejean, 1825	240
* <i>Arsinoe</i> Laporte de Castelnau, 1835	240
<i>Dontolobus</i> Basilewsky, 1970	240
<i>Thyreopterus</i> Dejean, 1831	241
<i>Cymindoidea</i> Laporte de Castelnau, 1833	241
* <i>Polyaulacus</i> Chaudoir, 1878	241
<i>Cylindrocranius</i> Chaudoir, 1878	242
Subfamily Dryptinae Bonelli, 1810	242
<i>Drypta</i> Latreille, 1796	242
<i>Dendrocellus</i> Schmidt-Göbel, 1846	243
<i>Galerita</i> Fabricius, 1871	243
Subfamily Anthiinae Bonelli, 1813	247
<i>Meladroma</i> Motschulsky, 1855	247
<i>Trianogenius</i> Chaudoir, 1877	248
<i>Netrodera</i> Chaudoir, 1850	248
<i>Atractonotus</i> Perroud, 1847	248
<i>Cypholoba</i> Chaudoir, 1850	249
<i>Termophilum</i> Basilewsky, 1950	250
<i>Anthia</i> Weber, 1801	250
Discussion	251
Acknowledgements	252
References	252

Abstract

An annotated list of species of carabids sampled in Angola during three entomological trips is presented. A total of 111 species/subspecies were identified and some ecological remarks as well as its known distribution in this country are provided. *Perigona liboloensis* **sp. n.**, *Lasiocera schuelelei* **sp. n.** and *Galerita procera capelai* **ssp. n.**, are described. New records of some genera and species previously unknown from Angola are given. Further, two dichotomic keys are made available for the identification of *Perigona* (*s. str.*) species of Africa and *Lasiocera* species of southern Africa, respectively.

Key words: Ground beetles, *Perigona*, *Lasiocera*, *Galerita*, new taxa, new records, distribution, Angola

Resumo

Uma lista anotada de espécies de carabídeos amostradas em Angola durante três expedições entomológicas é apresentada. Um total de 111 espécies/subespécies foram identificadas, sendo feitos para cada táxone alguns comentários ecológicos, assim como facultada a sua distribuição conhecida neste país. As espécies *Perigona liboloensis* sp. n. e *Lasiocera schuelei* sp. n., assim como a subespécie *Galerita procera capelai* ssp. n., são descritas de Angola. Alguns registos novos a nível de género e de espécie/subespécie são dados para Angola. Além disso, são disponibilizadas duas chaves dicotómicas para a identificação respectivamente de espécies do género *Perigona* (s. str.) Laporte de Castelnau, 1835 de África e de espécies do género *Lasiocera* Dejean, 1831 da África meridional.

Palavras chave: Carabídeos, *Perigona*, *Lasiocera*, *Galerita*, novos táxones, novos registos, distribuição, Angola

Introduction

The family Carabidae among the beetles is one of the largest in the world and is composed of over 34,000 extant species, including Paussinae, Cicindelinae and more 31 subfamilies (Lorenz 2005), a number which is surely underestimated and probably at least almost twice as many taxa remain to be described (e.g. Laroche & Larivière 2001). Carabids occupy most land habitats since xeric to very moist ones on nearly all continents and its diversity is connected with habitat and/or food preference specializations among many taxa (e.g. Pakeman & Stockan 2014). They are mostly active at night (except most tiger beetles; Serrano 1999a, Pearson & Vogler 2001), and have representatives in different feeding categories: zoophagus, spermophagus, etc. Habitat specialization of a number of tiger and ground beetles make them to be potential environmental and biodiversity indicators (e.g. Cassola & Pearson 2000, Martins da Silva *et al.* 2008, Avgin & Luff 2010, Koivula, 2011). Knowledge of old and current distributions of native species is also critical for understanding future changes in their distributions due to climate change (e.g. Schuldt & Assmann 2009, Brandmayr *et al.* 2013).

The knowledge of the ground beetles of Angola started in the middle of nineteenth century with the works of Erichson (1843), followed by the studies of Harold (1878, 1879) and mainly Putzeys (1880) and Quedenfeldt (1883, 1888). Harold (1878, 1879), and Quedenfeldt (1883, 1888) described about 40 species based on material collected by A. von Homeyer, P. Pogge and Major D. von Mechow. Putzeys (1880) studying the carabids of the Museu Nacional de Lisboa collections, collected by several explorers and naturalists (e.g. Anchieta, Bayão, Capelo e Ivens, Lobo D'Avila, Serpa Pinto, Welwitsch) (see Crawford-Cabral & Mesquitela 1989) described about 11 new species. Later, in the first quarter of the twentieth century, two Swiss expeditions led by A. Monard (1928-1929, 1932-1933), allowed to add some more carabid species to the fauna of Angola (e.g. Monard *et al.* 1956). The study of the thousand carabid specimens collected by A. de Barros Machado, M. de Petchkowsky and E. Luna de Carvalho, performed by Straneo (1952, 1959) and Basilewsky (1955, 1960a), of the Dundo Museum collections mainly from northeastern of Angola (Lunda Provinces) added many new species and records to the Angolan fauna. Until the independence of Angola in 1975, revisional works on some African carabid groups (e.g. Bänninger 1938, Liebke 1938, Müller 1940, 1944, Basilewsky 1948, 1950a, 1950b, 1951, 1959, 1960b, 1963, 1977, 1989, Kult 1959, Bruneau de Miré 1966, Hansen 1968) contributed sporadically to the carabid knowledge of Angola ground beetles. During the period of the Angola civilian war (1975-2002), practically no study on Angola's carabids has been published and only recently the knowledge on Angolan carabids restarted again throughout new taxa descriptions and new records (e.g. Kleinfeld & Puchner 2012, Facchini 2012a, 2016b, 2017b, Puchner 2013, Schüle 2015, Schüle & Bednářik 2015).

Some subfamilies within Carabidae were the target of more specific Angolan taxonomic and faunal works: The Pterostichinae was studied by Straneo (1952, 1959), ant nest beetles (Paussinae) were studied by Luna de Carvalho (1975) and Serrano & Capela (2015a) aimed to give new records and to compile all the species of this group of carabids known to Angola. The tiger beetles (Cicindelinae) were the main focus of Wellman & Horn (1908) and more recently of Serrano & Capela (2013, 2015b) and Serrano *et al.* (2015, 2017). A historical review for Angola concerning this group of carabids is available in Serrano & Capela (2013). Carabids of Angola were catalogued by Ferreira (1965) and lists of this group of beetles for Angola are available in Anichtchenko (2016) and Insectoid.info (2017) websites.

Taking into account these data, and that Angola is the seventh largest country of Africa with great diversity of habitats (see Serrano & Capela 2013), the carabid fauna of this country is still one of the less known in the Afrotropical Region. In comparison, the recorded number of Carabidae species in the Republic Democratic of Congo and Zambia, both neighboring countries, with nearly twice or the half of the area of Angola, respectively, have about almost four times more species and the same number of species than the Angola recorded species (RDC: 2440 species within 292 genera *vs.* 666 species within 149 genera; Zambia: 662 species within 132 genera *vs.* 666 species within 149 genera) (Insectoid.info 2017).

Three trips to Angola during the years 2014-2015 and some other sporadic collecting efforts allowed us to capture species of Carabidae. Part of the Paussinae (ant nest beetles) and Cicindelinae (tiger beetles) representatives has been the subject of previous works (Serrano & Capela 2015a, 2015b, Serrano *et al.* 2015, Serrano *et al.* 2017). The study of the ground beetles collected in these entomological trips and some additional specimens from Angola deposited in the first author and Peter Schüle collections, resulted in the identification of one hundred and eleven species/subspecies, two of them representing new species and one a new subspecies. Moreover, new records of genera and species previously unknown from Angola were obtained.

In this work we aim to: 1) present the description of the new species and the new subspecies and, 2) give an annotated list of species not listed in previous recent studies.

Material and methods

Field-work was carried out in Luanda, Kwanza Sul, Huambo, Cuando Cubango, Bié and Malanje Provinces of Angola during the years 2014 and 2015, mainly in the end and the beginning of the rainy season by means of direct observation (abbreviation “DO in the text) using sweep nets, light trapping (abbreviation “LT in the text) and pitfall trapping (abbreviation “PF in the text). Other sporadic trips were done by the second author (RC) in Cabinda, Benguela and Luanda Provinces, respectively in 2011, 2013 and 2016. Some specimens of ground beetles were collected by the first author (AS) in Luanda Province before the independence of Angola and by A. Neves near Lobito (Benguela Province) in 1998.

The morphological study of the adult specimens, including measurements of the new taxa, was performed with a Wild M5 stereomicroscope equipped with a dissecting microscope ocular micrometer. The photographs of adult specimens were taken by a Nikon D610FX equipped with an objective EX Sigma 105mm 1:2.8 DG MACRO and four Nikon flashes wireless remote speedlight SB-R200 and with a stereomicroscope Zeiss Stereo Lumar.V12.

The measurements done were body length (posterior margin of labrum to apex of elytron), labrum length (measured from anterior to basal margin along midline), labrum width (between the widest region of the lateral margins), head length (posterior margin of labrum to anterior margin of pronotum), head width (between the lateral region of the eyes), pronotum length (measured from anterior to basal margins along midline), pronotum width (between the widest region of the lateral margins), right elytron length (basal margin near scutellum to apex along the suture) and elytron width (measured across both elytra at their widest point).

We follow the nomenclature given in Lorenz (2005) with some additions/alterations which were provided later and referred in the proper cases. The species/subspecies names are organized by alphabetical order.

For each taxon geographical information on the Angolan provinces is provided, including both already recorded and new records. For each taxon it is also mentioned the sampling localities with geographic coordinates and altitude (when possible), including the number of the correspondent aerophotogrammetric survey maps of Angola (scale 1:100 000, edited by the Junta de Investigações do Ultramar & Governo Geral de Angola, 1948-1963), as noted in Fig. 1 in Serrano & Capela (2013), the Angolan Province (between parentheses), the date of capture, the number and sex of specimens and the sampling method are also provided. The new genera/species records are previously signalized with an asterisk.

Comments regarding the general distribution and ecological notes are included as available for each taxon.

Acronyms used for the entomological collections where the type material and the material here examined have been placed are:

ASC = Artur Serrano Collection, Portugal

PSC = Peter Schüle Collection, Germany

ZSM = Zoologische Staatssammlung Munich, Germany

Results

Subfamily Brachininae Bonelli, 1810

Brachinus Weber, 1801

There are a total of 4 species in this genus known from Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017). Three species belong to sg. *Metabrachinus* Jeannel, 1949 and one as *incertae sedis*.

Brachinus (sg. *incertae*) *apicalis* Erichson, 1843

Distribution in Angola (Provinces): 1) Benguela.

Material examined. Lobito (12° 21' S, 13° 33' E, 10 m alt., 227/8) (BENGUELA), 3.IV.1998, 1♀, PF, A. Neves leg., ASC.

Remarks. A species found in D. R. of the Congo, Zimbabwe and Angola (Liebke 1934). The singleton female adult was collected by pitfall trapping in open bush habitat with sparse grassy vegetation on sandy-clayey yellow-reddish soil in the outskirts of Lobito together with some other ground beetles [*Calosoma* (*Calosoma*) *senegalense* Dejean, 1831, *Parophonus* (*Hyparpalus*) *tomentosus* (Dejean, 1829), *Anthia* (s. str.) *cinctipennis actaeon* Erichson, 1843].

Styphlomerus Chaudoir in Putzeys, 1875

There is only one polytypic species in this genus known from Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017).

Styphlomerus (s. str.) *ludricus ludricus* (Erichson, 1843)

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Bié.

Material examined. Cachingues-Chipica (13° 10' 15.74'' S, 16° 45' 48.17'' E, 1649 m alt., 281) (BIÉ), 2.IV.2014, 1♂, 1♀, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A polymorphic species widely distributed throughout western and central Africa (see Serrano 2008, 2009 and references herein). Adults were sampled in a secondary open forest. It is a new record for the Bié Province.

Subfamily Carabinae Latreille, 1802

Calosoma Weber, 1801

This genus was not recorded in the catalogue by Ferreira (1965), but there are four species reported to Angola (Insectoid.info 2017). The nomenclature here adopted follows Häckel (2013) and Häckel *et al.* (2016).

Calosoma (*Calosoma*) *senegalense* Dejean, 1831

Distribution in Angola (Provinces): 1) Unknown; 2) Benguela.

Material examined. Lobito (12° 21' S, 13° 33' E, 10 m alt., 227/8) (BENGUELA), 3.IV.1998, 1♀, PF, A. Neves leg., ASC.

Remarks. A species widespread throughout Africa south of Sahara, Cape Vert Islands and Madagascar (Häckel *et al.* 2016). It was already cited to Angola (Häckel *et al.* 2016, Insectoid.info 2017), but without exact data. The single female adult was collected by pitfall trapping in an open bush habitat with sparse grassy vegetation on sandy-clayey yellow-reddish soil in the outskirts of Lobito together with some other ground beetles (see *B. apicalis* remarks).

***Calosoma (Calosoma) planicolle* Chaudoir, 1869**

Distribution in Angola (Provinces): 1) Unknown; 2) Luanda.

Material examined. Luanda (8° 50' S, 13° 15' E, 70 m alt., 89) (LUANDA), 27.IV.1974, 1♀, DO, A. Serrano leg., ASC; Luanda near Motor racing circuit (8° 59' S, 13° 05' E, 50 m alt., 89) (LUANDA), 12.VI.2016, 1♀, DO, R. Capela leg., ASC.

Remarks. A species widespread throughout central, southern and eastern Africa (Angola, Botswana, D. R. of the Congo, Zambia, R. of South Africa, Lesotho, Swaziland, Zimbabwe, Malawi, Uganda, Mozambique, Tanzania, Kenya, Ethiopia, Somalia) and Madagascar (Häckel *et al.* 2016). Like the precedent species it was already known to Angola (Häckel *et al.* 2016, Insectoid.info 2017), but without any recorded locality. The first female adult was found in an open bush habitat with sparse grassy vegetation on sandy-clayey yellow-reddish soil in the outskirts of Luanda and the second on ground during night near a public light.

Subfamily Scaritinae Bonelli, 1810

***Distichus* Motschulsky, 1858**

There is only one species in this genus known from Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017).

***Distichus (s. str.) picicornis* (Dejean, 1831)**

Distribution in Angola (Provinces): 1) Unknown; 2) Luanda.

Material examined. Barra do Cuanza (09° 18' 55.42'' S, 13° 09' 58.57'' E, 11 m alt., 107) (LUANDA), 28.IV.2014, 4♂, 1♀, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species widely spread throughout all Africa south of Sahara (e.g. Ferreira 1965). This author only refers to the presence of the species in Angola, without specifying localities. Adults were sampled close to River Cuanza by light trapping within a riparian forest. It is a new record for the Luanda Province.

***Scarites* Fabricius, 1775**

There are seven species in this genus, two of them polytypic [*Scarites (Orientolobus) lucidus* (Chaudoir, 1880) and *Scarites (Scarites) tenebricosus* Dejean, 1831] known from Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017). Four species belong to *Scarites (s. str.)*, two to sg. *Orientolobus* Dostal, 1996 and one to sg. *Parallelomorphus* Motschulsky, 1849.

***Scarites (Orientolobus) lucidus strigiceps* Quendenfeldt, 1883**

Distribution in Angola (Provinces): 1) Lunda Norte, Malanje; 2) Huambo, Bié.

Material examined. Bembua-Camenhe (12° 16' 53'' S, 15° 27' 01'' E, 1686 m alt., 231) (HUAMBO), 1.XI.2015, 3♂, 1♀, DO, A. Serrano & R. Capela leg., ASC; Chitembo (6 km SE) (13° 33' 23'' S, 16° 47' 22'' E,

1586 m alt., 302) (BIÉ), 9.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Chingueia-Mandongue (13° 35' 46'' S, 16° 58' 59'' E, 1648 m alt., 302) (BIÉ), 9.XI.2015, 2♂, 1♀, DO, A. Serrano & R. Capela leg., ASC; Mumbué (Cuanza riverhead) (13° 49' 41'' S, 17° 19' 26'' E, 1511 m alt., 303) (BIÉ), 8–17.XI.2015, 1♂, 1♀, PF, A. Serrano & R. Capela leg., ASC; Catota (2,5 km S) (14° 00' 37'' S, 17° 24' 00'' E, 1532 m alt., 323) (BIÉ), 8–17.XI.2015, 1♂, PF, 12.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species spread throughout Democratic Republic of the Congo, Zimbabwe, Angola, Tanzania and Mozambique (Basilewsky, 1955). Adults were found within secondary open forest on reddish soil together with some adults of tiger and ground beetles [Bembua-Camenhe: *Prothyma* (s. str.) *erythropyga erythropyga* (Putzeys, 1880), *Dromica* (*Foveodromica*) spp., *Prothymidia angusticollis angusticollis* (Boheman, 1848), *Cylindera agualusai* Serrano & Capela, 2015, *Graphipterus albomarginatus* Quedenfeldt, 1883] or on sandy whitish soil [Chitembo: *Trichotaenia nzingae* Oesterle, Serrano & Capela, 2015, *Lophyra* (*Stenolophyra*) *uncivittata* (Quedenfeldt, 1883); Chingueia-Mandongue: *Dromica fredericoi* Serrano & Capela, 2015, *T. nzingae*, *Elliptica muata* f. *parallelestriata* (W. Horn, 1923), *Graphipterus congoensis lundanus* Basilewsky, 1977 and *Cypholoba rohani* (Bénard, 1921); Mumbué: *Dromica pentheri* W. Horn, *E. muata* f. *parallelestriata*, *Graphipterus andersoni* Chaudoir, 1870, *Anthia* (*Odontanthia*) *convexipennis* Putzeys, 1880; Catota: *D. fredericoi*, *Trichotaenia pepetela* Serrano & Capela, 2015, *Chlaenius* (*Pachydinodes*) *bipustulatus* Boheman, 1848, *Abacetus pseudoangolensis*, *Siopelus* (*Neosiopelus*) *wrasei* Facchini, 2012, *Graphipterus andersoni* and *Atractonotus puncticollis* Schle & Heinz, 2013]. It is a new record for the Huambo and Bié Provinces.

***Scarites* (*Orientolobus*) *vilhenai* Basilewsky, 1955**

Distribution in Angola (Provinces): 1) Huambo; 2) Malanje.

Material examined. Catata-Nova Monção (13° 25' 59'' S, 15° 21' 22'' E, 1607 m alt., 279) (HUAMBO), 6.XI.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC; Kalandula (1,5 km N) (09° 03' 51'' S, 15° 58' 42'' E, 1126 m alt., 112) (MALANJE), 18.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Cambamba (Catoio-Quela) (09° 14' 42'' S, 17° 00' 33'' E, 1178 m alt., 115) (MALANJE), 20.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Mutubanzamba (Cangandala) (09° 47' 45'' S, 16° 31' 40'' E, 1136 m alt., 132) (MALANJE), 21.XI.2015, 2♂, 1♀, DO, A. Serrano & R. Capela leg., ASC; Carima (Cacuso-Pungandongo) (09° 35' 00'' S, 15° 42' 01'' E, 1117 m alt., 130) (MALANJE), 23.XI.2015, 2♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. An Angolan scaritid beetle endemic species whose description was based on one single female from Monte Moco (Huambo province). Our specimens conform well to the Basilewsky (1955) description. Adult specimens were found within secondary open forests on sandy whitish soil (first locality) or on reddish soil (Malanje localities) together with some adults of tiger and ground beetles [Catata-Nova Monção: *Euryarthron reticostatum* (Wellman & W. Horn, 1908), *Dromica* (*Foveodromica*) sp., *P. angusticollis*, *Trichodela nubifera* (Quedenfeldt, 1883), *Lophyra* (*Stenolophyra*) *saraliensis saraliensis* (Guérin-Méneville, 1849), *Lophyra* (*Bothryolophyra*) *wellmani* (W. Horn, 1907), *Chlaenius ovalipennis*, *Euleptus intermedius* Péringuey, 1896, *Orthotrichus patroboides* (Murray, 1859), *Orthogonius* sp. 1, *Netrodera vethi* (Bates, 1889), *Cypholoba graphipteroides monardi* Burgeon, 1935 and *Anthia* (*Odontanthia*) *kleinfeldi* Puchner, 2013; Malanje localities: *Dromica* (*Foveodromica*) spp., *P. angusticollis*, *T. nubifera*, *Epitrichodes villosus* (Putzeys, 1880), *Lophyra* (*Stenolophyra*) *infuscatula* (W. Horn, 1915), *L. saraliensis*, *L. wellmani*, *Graphipterus ellipticus* Burgeon, 1928]. It is a new record for the Malanje Province.

***Scarites* (s. str.) *tenebricosus fatalis* Harold, 1879**

Distribution in Angola (Provinces): 1) Lunda Norte, Bié.

Material examined. Satchijamba-Somakwanza (13° 44' 46.50'' S, 17° 11' 2.26'' E, 1611 m alt., 303) (BIÉ), 31.X.2014, 1♂, 2.XI.2014, 3♂, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A subspecies spread throughout Angola and D. R. Congo (Katanga) (Bäninger 1938). Adults were found in activity on sandy whitish soil within a secondary open forest during night together with other ground beetles (e.g. *Systolocranius tibialis* Lecordier, 1972, *C. bipustulatus*, *Termophilum massilicata* Guérin-Méneville, 1845).

***Clivina* Latreille, 1802**

There are nine species in this genus known from Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017), belonging seven to *Clivina* (*s.str.*) and two to sg. *Eoclivina* Kult, 1959.

****Clivina capensis* Kult, 1959**

Distribution in Angola (Provinces): 2) Bié.

Material examined. Satchijamba (10 km E) (13° 43' 38.76'' S, 17° 12' 17.74'' E, 1601 m alt., 283) (BIÉ), 7.IV.2014, 1♀, VM, A. Serrano & R. Capela leg., ASC.

Remarks. A species only reported to South Africa (Cape Province) (Kult 1959). The specimen was identified using Kult's (1959) key, taking into account that our specimen is dark ferruginous, shining (elytra without microsculpture), with frons impunctate, proepisternae finely punctate, protibiae sulcate with 3rd spine almost indistinct, prothorax with transverse wrinkles and group of punctures on each side and mesotibiae without denticle. The unique feature that does not agree with *C. capensis* description is the antennal antennomers 4 to 10: moniliform in *C. capensis*, but subelongate in our specimen. For the present, we consider that this specimen belongs to this species with some reserves. The single female specimen was found in open secondary forest and collected by means of light trapping. It is a new species record for Angola.

Subfamily Pterostichinae Bonelli, 1810

***Morion* Latreille, 1810**

There is one species in this genus known from Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017).

***Morion guineensis* Imhoff, 1843**

Distribution in Angola (Provinces): 1) Cunene; 2) Luanda, Bié.

Material examined. Barra do Cuanza (09° 18' 55.42'' S, 13° 09' 58.57'' E, 11 m alt., 107) (LUANDA), 28.IV.2014, 1♀, LT, A. Serrano & R. Capela leg., ASC; Satchijamba-Somakwanza (13° 44' 46.50'' S, 17° 11' 2.26'' E, 1611 m alt., 283) (BIÉ), 2.XI.2014, 1♀, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout almost all Africa south of Sahara, including S. Tomé Island (e.g. Straneo 1959, Ferreira 1965, Serrano 1995). Adults were collected by light trapping within a riparian forest (Barra do Cuanza) and an open secondary forest (Satchijamba-Somakwanza). In the later locality the adults were collected together with ant nest beetles [*Paussus* (*Shuckardipaussus*) *vanrooni* Wasmann, 1922, *Paussus* (*Katapaussus*) *chappuisi* Reichensperger, 1938] (see Serrano 2015a). It is a new record for the Luanda and Bié Provinces.

***Stereostoma* Murray, 1857**

There are five species in this genus known from Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017), belonging one to *Stereostoma* (*s.str.*) and four to sg. *Stereodema* Chaudoir, 1872.

***Stereostoma* (*Stereodema*) *angolense* Müller, 1940**

Distribution in Angola (Provinces): 1) Huambo; 2) Bi.

Material examined. Chitembo (18 km SE) (13° 36' 17.53'' S, 16° 54' 00.44'' E, 1538 m alt., 302) (BIÉ), 30.X.2014, 1♀, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species described on one specimen from Bailundo (Huambo province) (Müller 1940) and known also from D.R. of the Congo (Straneo 1952, 1991). The single adult was sampled within an open secondary forest by light trapping together with other ground beetles (e.g. *Stereostoma guineense* Müller, 1940, *Brachyodes pseudoguineensis* Lecordier, 1990, *Parophonus escheri* (Dejean, 1831), *Siopelus harpaloides* (Guérin-Méneville, 1847), *Siopelus natalicus* Péringuey, 1896, *Axinotoma latipalpis* Basilewsky, 1968 and *Meladroma informicollis* Liebke, 1928). It is a new record for the Bié Province.

Stereostoma (Stereodema) guineense Müller, 1940

Distribution in Angola (Provinces): 1) Huambo, Lunda Norte; 2) Bié, Kwanza Sul.

Material examined. Chitembo (13° 30' 55.22'' S, 16° 45' 20.34'' E, 1628 m alt., 302) (BIÉ), 8.IV.2014, 2♀, DO, A. Serrano & R. Capela leg., ASC; Chitembo (18 km SE) (13° 36' 17.53'' S, 16° 54' 00.44'' E, 1538 m alt., 302) (BIÉ), 30.X.2014, 1♂, LT, A. Serrano & R. Capela leg., ASC; Alto Hama (12° 13' 20'' S, 15° 32' 57'' E, 1512 m alt., 232) (HUAMBO), 31.X.2015, 3♂, 3♀, DO, A. Serrano & R. Capela leg., ASC; Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 4.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Calulo (12° 13' 20'' S, 15° 32' 57'' E, 1512 m alt., 232) (KWANZA SUL), 27.XI–5.XII.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species described on one specimen from Bailundo also (Huambo Province) (Müller 1940) and widespread throughout western and central Africa (Straneo 1952, 1991). The single male adult collected in the second locality was sampled by light trapping within an open secondary forest together with some other ground beetles (e.g. see *S. angolense* remarks). The remaining adults were found in activity on ground in the road edges during night, probably attracted to the public lights. It is a new record for the Bié and Kwanza Sul Provinces.

Caelostomus MacLeay, 1825

There are four species in this genus known from Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017), belonging two to the *Caelostomus* (*s.str.*) and the other two to sg. *Drimostomellus* Jeannel, 1948.

Caelostomus (Drimostomellus) intermedius (Chaudoir, 1878)

Distribution in Angola (Provinces): 1) Huíla, Huambo; 2) Malanje, Kwanza Sul.

Material examined. Alto Hama (12° 13' 20'' S, 15° 32' 57'' E, 1512 m alt., 232) (HUAMBO), 31.X–2.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Mutubanzamba (Cangandala) (09° 47' 45'' S, 16° 31' 40'' E, 1136 m alt., 132) (MALANJE), 21.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Alto Ventura (Colé-Calulo) (09° 59' 42'' S, 14° 50' 32'' E, 1116 m alt., 128) (KWANZA SUL), 4.XII.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC;

Remarks. A species with a distribution throughout Angola, D. R. of the Congo, Zimbabwe, Tanzania (Zanzibar) and Mozambique (Straneo 1942, 1952). In the first locality the adult specimen was found in a wall during night near a public light. In the second locality, the adult was collected within the litter which covered the soil and, in the third locality, the adults were found under bark of trees together with adults of other Coleoptera families (e.g. Endomychidae, Trogossitidae, Tenebrionidae). It is a new record for the Malanje and Kwanza Sul Provinces.

Strigomerus Chaudoir, 1872

There is one species until now known from Angola in this genus (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017).

***Strigomerus sulcipennis* (Dejean, 1831)**

Distribution in Angola (Provinces): 1) Lunda Norte, Moxico; 2) Bié.

Material examined. Satchijamba (10 km E) (13° 43' 38.76'' S, 17° 12' 17.74'' E, 1601 m alt., 283) (BIÉ), 7.IV.2014, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a distribution throughout Angola, D. R. of the Congo, Zimbabwe and South Africa (Straneo 1942, 1958, 1959). The singleton adult was collected under the bark of a decomposing trunk together with *Zygentoma*, Formicidae and Tenebrionidae adults and the ant beetle *Paussus* (*Klugipaussus*) *pseudoklugi* Luna de Carvalho, 1963 within an open secondary forest (see Serrano 2015a). It is a new record for the Bié province.

***Abacetus* Dejean, 1828**

A very speciose genus with thirty two species known from Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017). Within the genus there are two species belonging to sg. *Abacetillus* Straneo, 1942, six to the nominal genus, seven to sg. *Astigis* Rambur, 1838, one to sg. *Bisulcillus* Straneo, 1942, nine to sg. *Caricus* Motschulsky, 1866, four to sg. *Distrigodes* Motschulsky, 1864, one to sg. *Triaenabacetus* Straneo, 1942 and two as *Incertae sedis*.

***Abacetus* (s. str.) *distinctus* Chaudoir, 1878**

Distribution in Angola (Provinces): 1) Lunda Norte, Moxico; 2) Kwanza Sul.

Material examined. Alto Ventura (Faz. Monte Café) (Calulo) (9° 59' 15'' S, 14° 50' 12'' E, 1086 m alt., 128) (KWANZA SUL), 30.XI.2015, 2♀, DO, A. Serrano & R. Capela leg., ASC; Calulo (Faz. Klein) (10° 02' 14'' S, 14° 54' 38'' E, 1059 m alt., 147) (KWANZA SUL), 3.XII.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Calulo-Cabuta (9° 53' 59'' S, 14° 54' 26'' E, 831 m alt., 128) (KWANZA SUL), 29.XI–6.XII.2015, 6♂, 2♀, PF, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout Angola, D. R. of the Congo, Zimbabwe and South Africa (Straneo 1958, 1959). Adults were found in activity within the litter of secondary rainforests together with adults of some tiger and ground beetles [e.g. *Dromica* (*Foveodromica*) sp., *Hipparidium interruptum* (Fabricius, 1775), *Abacetus optimus* Péringuey, 1904, *Disphericus tarsalis* Bates, 1886, *Craspedophorus magnicollis discrepans* Basilewsky, 1987, *Galerita procera capelai* ssp. n.] and collected also by pitfall trapping in the same habitats. It is a new record for the Kwanza Sul Province.

***Abacetus* (s. str.) *natalensis* Chaudoir, 1869**

Distribution in Angola (Provinces): 1) Lunda Norte, Moxico; 2) Bié.

Material examined. Cachingues-Chipica (13° 10' 15.14'' S, 16° 45' 33.52'' E, 1668 m alt., 282) (BIÉ), 2.IV.2014, 1♂, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species widely spread in Africa (e.g. Cape Vert, Ivory Coast, Ethiopia, Mozambique, Nigeria, Angola, Congo, D. R. of the Congo, Zimbabwe and Rwanda) (Straneo 1956, 1958, 1959, 1968). The single male was collected by light trapping within a secondary open forest. It is a new record for the Bié Province.

***Abacetus* (*Caricus*) *pseudangulatus* Straneo, 1952**

Distribution in Angola (Provinces): 1) Cunene; 2) Bié.

Material examined. Mumbué (Cuanza riverhead) (13° 49' 41'' S, 17° 19' 26'' E, 1511 m alt., 303) (BIÉ), 8–17.XI.2015, 1♂, PF, A. Serrano & R. Capela leg., ASC; Catota (2,5 km S) (14° 00' 37'' S, 17° 24' 00'' E, 1532 m alt., 323) (BIÉ), 8–17.XI.2015, 2♀, PF, A. Serrano & R. Capela leg., ASC.

Remarks. An endemic ground beetle species of Angola from which is known so far the male and female types (Straneo 1952). Both adults were sampled through pitfall trapping. The Mumbué specimen was collected in sandy whitish soil within a mixed open herbaceous/bush habitat close to the riverhead together with adults of the tiger beetle *E. muata* f. *parallelestriata* and the ground beetles *S. lucidus strigiceps*, *E. intermedius*, *Systolocranius tibialis* and *Anthia convexipennis* Putzeys, 1880. The Catota specimens were collected through pitfall trapping in sandy clayish reddish soil within a secondary open forest together with adults of some ground beetles (see *S. lucidus* remarks). It is a new record for the Bié Province.

***Abacetus (Abacetillus) optimus* Péringuey, 1904**

Distribution in Angola (Provinces): 1) Moxico; 2) Kwanza Sul.

Material examined. Alto Ventura (Faz. Monte Café) (Calulo) (9° 59' 15'' S, 14° 50' 12'' E, 1086 m alt., 128) (KWANZA SUL), 30.XI.2015, 1♂, 2♀, 5.XII.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Mussende (Calulo) (9° 57' 00'' S, 14° 47' 36'' E, 905 m alt., 128) (KWANZA SUL), 28.XI–5.XII.2015, 3♀, PF, A. Serrano & R. Capela leg., ASC; Calulo-Cabuta (9° 53' 59'' S, 14° 54' 26'' E, 831 m alt., 128) (KWANZA SUL), 29.XI–6.XII.2015, 8♂, 9♀, PF, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout Angola, Zimbabwe, Mozambique and South Africa (Straneo 1958, 1959, 1991). Adults were found in activity within the litter of secondary rainforests together with adults of some tiger and ground beetles [e.g. *Dromica (Foveodromica)* sp., *A. distinctus*, *Disphericus tarsalis*, *C. magnicollis discrepans*, *G. procera capelai* **ssp. n.**] and collected also by pitfall trapping in the same habitats. It is a new record for the Kwanza Sul Province.

***Abacetus (Distrigodes) monardianus* Straneo, 1952**

Distribution in Angola (Provinces): 1) Benguela, Moxico; 2) Bié.

Material examined. Satchijamba-Somakwanza (13° 44' 46.50'' S, 17° 11' 2.26'' E, 1611 m alt., 303) (BIÉ), 2.XI.2014, 1♀, LT, A. Serrano & R. Capela leg., ASC.

Remarks. An endemic ground beetle species of Angola from which is known so far the male type (Straneo 1952) and a second specimen (unknown sex) from Calundo Lake (Straneo 1959). The specimen fits very well with the original description and was captured by light trapping within a secondary open forest together with ground and ant nest beetles (*M. guineensis*, *P. vanrooni*, *P. chappuisi*). It is a new record for the Bié Province.

***Aristopus* LaFerté-Sénéctère, 1853**

There are five species known from Angola in this genus (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017).

****Aristopus elisabethanus* (Burgeon, 1935)**

Distribution in Angola (Provinces): 2) Bié.

Material examined. Satchijamba-Somakwanza (13° 44' 46.50'' S, 17° 11' 2.26'' E, 1611 m alt., 303) (BIÉ), 2.XI.2014, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species only reported to D. R. of the Congo (Straneo 1983). The specimen was identified using Straneo's (1983) key and the specimen fits well the original description (Burgeon 1935). For the present, until the acquisition of new data, we consider that this specimen belongs to this species with some reserves. The single adult was collected under the bark of a decomposing trunk together with *Zygentoma*, Formicidae and Tenebrionidae adults. It is a new species record for Angola.

Subfamily Panagaeinae Bonelli, 1810

Disphericus Waterhouse, 1842

There are two species in this genus known from Angola (Ferreira 1965, Häckel & Farkač 2012, 2013a, Anichtchenko 2016, Insectoid.info 2017).

Disphericus tarsalis Bates, 1886

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Kwanza Sul.

Material examined. Mussende (Calulo) (9° 57' 00'' S, 14° 47' 36'' E, 905 m alt., 128) (KWANZA SUL), 28.XI.2015, 1♂, DO, 28.XI–5.XII.2015, 2♀, PF, A. Serrano & R. Capela leg., ASC; Alto Ventura (Faz. Monte Café) (Calulo) (9° 59' 15'' S, 14° 50' 12'' E, 1086 m alt., 128) (KWANZA SUL), 30.XI.2015, 1♂, 5.XII.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. An endemic ground beetle species of Angola from which is known so far the type (Bates 1886) and a second specimen (unknown sex) from Dundo (Basilewsky 1955). Adults were found in activity within the litter of secondary rainforests together with adults of some tiger and ground beetles (e.g. *Dromica* (*Foveodromica*) sp., *A. distinctus*, *A. optimus*, *C. magnicollis discrepans*) and also felt in pitfall traps in the same habitats. It is a new record for the Kwanza Sul Province.

Craspedophorus Hope, 1838

There are ten species in this genus known from Angola (Alves 1963, Ferreira 1965, Häckel & Farkač 2012, Anichtchenko 2016, Insectoid.info 2017).

Craspedophorus magnicollis discrepans Basilewsky, 1987

Distribution in Angola (Provinces): 1) Malanje, Huíla; 2) Kwanza Sul.

Material examined. Alto Ventura (Faz. Monte Café) (Calulo) (9° 59' 15'' S, 14° 50' 12'' E, 1086 m alt., 128) (KWANZA SUL), 2.XII.2015, 1♂, 4.XII.2015, 1♂, 5.XII.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. The nominal species was described from Angola (Malanje) (Quedenfeldt 1883) and has a distribution throughout Angola and D. R. of the Congo (Häckel & Farkač 2012). Basilewsky (1987) described two subspecies, *C. magnicollis discrepans* from the Lulua region (D. R. of the Congo) and Zambia and *C. magnicollis inquilinus* from Mayidi (D. R. of the Congo), giving the drawings of aedeagus apex (dorsal view) of the three taxa. Interestingly our Calulo specimens present the aedeagus apex similar to the *C. magnicollis discrepans* (Basilewsky 1987, Fig. 4c), enlarging its distribution to Angola. Adults were found in activity within the litter of secondary rainforests together with adults of some tiger and ground beetles [e.g. *Dromica* (*Foveodromica*) sp., *A. distinctus*, *A. optimus*]. It is a new record for the Kwanza Sul Province.

Craspedophorus rikatlensis (Péringuey, 1896)

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Huambo.

Material examined. Alto Hama (12° 13' 20'' S, 15° 32' 57'' E, 1512 m alt., 232) (HUAMBO), 31.X.–2.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 4.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout Angola, D. R. of the Congo, Burundi, Zambia and Mozambique (Basilewsky 1955, Häckel & Farkač 2012, 2013a, Insectoid.info 2017), presenting some variability on the elytra maculae. Adults were found during night near public lights together with other ground beetles [e.g. *S. guineense*,

Chlaenius cupreocinctus Reiche, 1847, *Ch. tenuicollis* (Fabricius, 1801), *Progonochaetus planicollis* (Putzeys, 1880), *Agonidium alacre* (Boheman, 1848), *Agonidium natalense* (Boheman, 1848), *E. intermedius*, *Euleptus peringueyi* Csiki, 1931]. It is a new record for the Huambo Province.

Subfamily Licininae Bonelli, 1810

****Brachyodes* Jeannel, 1949**

A speciose genus in Africa (Lorenz 2005) but never recorded for Angola.

****Brachyodes pseudoguineensis* Lecordier, 1990**

Distribution in Angola (Provinces): 2) Bié.

Material examined. Chitembo (18 km SE) (13° 36' 17.53'' S, 16° 54' 00.44'' E, 1538 m alt., 302) (BIÉ), 30.X.2014, 1♀, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a distribution throughout D. R. Congo and Burundi (Lecordier 1990). It can be segregated from *B. guineensis* (Chaudoir, 1882), to which is very close, by the smaller antennae and the unarmed mesosternum groove. The adult was sampled by light trapping within a secondary open forest together with some other ground beetles (see *S. angolense* remarks). It is a new genus/species record for Angola.

***Systolocranius* Chaudoir, 1857**

There are two species within this genus known for Angola (Ferreira 1965, Lecordier 1972, Insectoid.info 2017), of which one was sampled during our entomological trips.

***Systolocranius tibialis* Lecordier, 1972**

Distribution in Angola (Provinces): 1) Lunda Norte ; 2) Bié.

Material examined. Satchijamba-Somakwanza (13° 44' 46.50'' S, 17° 11' 2.26'' E, 1611 m alt., 303) (BIÉ), 2.XI.2014, 3♂, 3♀, DO, A. Serrano & R. Capela leg., ASC; Mumbué (Cuanza riverhead) (13° 49' 41'' S, 17° 19' 26'' E, 1511 m alt., 303) (BIÉ), 8–17.XI.2015, 1♂, PF, A. Serrano & R. Capela leg., ASC.

Remarks. A species spread throughout Angola and D. R. of the Congo (Katanga) (Lecordier 1972). Adults in the first locality were found in activity on sandy whitish soil within a secondary open forest during night together with other ground beetles [e.g. *S. tenebrosus fatalis*, *C. (Pachydinodes) bipustulatus*, *T. massilicata*] It is a new record for the Bié Province.

***Chlaenius* Bonelli, 1810**

A very speciose genus with fifty two species/subspecies known from Angola (Alves 1963, Ferreira 1965, Kirschenhofer 2007, Anichtchenko 2016, Insectoid.info 2017). Within this assemblage there are one species/subspecies belonging to sg. *Ocybatus* LaFerté-Sénéctère, 1851, four to sg. *Lissauchenius* MacLeay, 1825, three to sg. *Pachydinodes* Kuntzen, 1919, one to sg. *Agostenus* Waldheim, 1829, two to sg. *Epomis* Bonelli, 1810, two to sg. *Rhysotrachelus* Boheman, 1848, two to sg. *Tomochilus* LaFerté-Sénéctère, 1851, one to sg. *Pseudochlaeniellus* Jeannel, 1949, eight to sg. *Chlaeniostenus* Bates, 1892, four to sg. *Amblygenius* LaFerté-Sénéctère, 1851, six to the nominal genus, two to sg. *Leptorembus* Kolbe, 1889, one to sg. *Macrochlaenites* Kuntzen, 1919, seven to sg. *Homalolachnus* LaFerté-Sénéctère, 1851, one to sg. *Pleroticus* Péringuey, 1896, two to sg. *Paracallistoides* Basilewsky, 1965 and five to sg. *Callistoides* Motschulsky, 1865.

***Chlaenius (Ocybatus) deyrollei* (LaFerté-Sénéctère, 1851)**

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Huambo.

Material examined. Caála (12° 51' 11" S, 15° 33' 07" E, 1758 m alt., 256) (HUAMBO), 5.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout western and central Africa since Senegal to Angola (Basilewsky 1955, Insectoid.info 2017). The singleton adult male was found during night near a public light. It is a new record for the Huambo Province.

****Chlaenius (Lissauchenius) assecla* (Laferté-Sénéctère, 1851)**

Distribution in Angola (Provinces): 2) Luanda.

Material examined. Luanda near Motor racing circuit (08° 59' S, 13° 05' E, 50 m alt., 89) (LUANDA), 12.VI.2016, 1♂, 1♀, DO, R. Capela leg., ASC.

Remarks. A species with a scattered distribution throughout Africa south of Sahara (Mauritania, Senegal, Ivory Coast, Togo, Mali, Chad, Democratic Republic of the Congo, Eritrea, Ethiopia, Kenya, Tanzania, Zimbabwe, South Africa), but known from West Asia (Oman) and some Atlantic Islands (Cape Verde, Saint Helena and São Tomé and Príncipe) also (Insectoid.info 2017). Adult specimens were found on a wall during night near a public light. It is a new species record for Angola.

***Chlaenius (Lissauchenius) goryi* Gory, 1833**

Distribution in Angola (Provinces): 1) Lunda Norte ?; 2) Malanje, Kwanza Sul.

Material examined. Kibundi (15 km N Nambua) (8° 56' 15" S, 16° 03' 52" E, 1164 m alt., 95) (MALANJE), 19.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Alto Ventura (Faz. Monte Café) (Calulo) (9° 59' 15" S, 14° 50' 12" E, 1086 m alt., 128) (KWANZA SUL), 30.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout Africa south of Sahara (Senegal, Gambia, Guinea, Ivory Coast, Cameroon, Burkina Faso, Chad, Democratic Republic of the Congo, Burundi, Rwanda, Zambia, Zimbabwe, Uganda, Kenya, Tanzania, Ethiopia, Eritrea, Yemen) (Insectoid.info 2017), but not recorded to Mozambique, South Africa and Namibia. It was reported for Angola by Alves (1963). However, the data given in this work (locality, date) for the species seems similar to the specimen which was identified as *C. deyrollei* (see the precedent species) by Basilewsky (1955). The female adult specimen (first locality) was found in the edges of a countryside road within an open secondary forest while the male adult specimen (second locality) was collected within the litter of a secondary rainforest. Both adults were found together with adults of some tiger and ground beetles [first locality: e.g. *Dromica (Foveodromica)* sp., *A. optimus*, *A. distinctus*, *D. tarsalis*, *C. magnicollis discrepans*, *G. procera capelai* n. spp.; second locality: *Dromica (Foveodromica)* sp., *L. wellmani*]. These new data confirm this species' presence in Angola and extends its distribution to Malanje and Kwanza Sul Provinces.

***Chlaenius (Pachydinodes) bipustulatus* Boheman, 1848**

Distribution in Angola (Provinces): 1) Huíla, Huambo; 2) Bié.

Material examined. Cruzeiro (Pedra do Alemão) (12° 46' 41.14" S, 15° 54' 09.49" E, 1743 m alt., 232) (HUAMBO), 7.XI.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC; Satchijamba-Somakwanza (13° 44' 46.50" S, 17° 11' 2.26" E, 1611 m alt., 303) (BIÉ), 2.XI.2014, 3♀, DO, A. Serrano & R. Capela leg., ASC; Catota (2,5 km S) (14° 00' 37" S, 17° 24' 00" E, 1532 m alt., 323) (BIÉ), 8–17.XI.2015, 2♀, PF, A. Serrano & R. Capela leg., ASC.

Remarks. A polymorphic ground beetle species with a distribution throughout Africa south of Sahara. The nominal subspecies seems restricted to the southern countries of Africa (Angola, Namibia, Zimbabwe, South Africa and Mozambique) (Insectoid.info 2017). Adults were found beneath litter (first locality) or in activity on sandy whitish soil within a secondary open forest (second locality) during night together with other ground beetles

(e.g. *S. tenebrosus fatalis*, *S. tibialis*, *T. massilicata*). In the third locality the specimens were collected by pitfall trapping within a secondary open forest. It is a new record for the Bié Province.

***Chlaenius (Pachydinodes) ovalipennis* Quedenfeldt, 1883**

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Malanje, Bié, Huambo.

Material examined. Satchijamba-Somakwanza (13° 44' 46.50'' S, 17° 11' 2.26'' E, 1611 m alt., 303) (BIÉ), 2.XI.2014, 1♀, DO, A. Serrano & R. Capela leg., ASC; Catata-Nova Monção (13° 25' 59'' S, 15° 21' 22'' E, 1607 m alt., 279) (HUAMBO), 6.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Mutubanzamba (9° 47' 45'' S, 16° 31' 40'' E, 1136 m alt., 132) (MALANJE), 21.XI.2015, 2♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species described from Quango based on one male of collections by Mechow (Quedenfeldt 1883). Our specimens fit very well the original description, including the figure 10 of the plate 3. There is a report of this species to Lunda by Monard *et al.* (1956) (sub *Chlaenius ovalipennis* Gaf.?). Surprisingly the species is not reported for Angola in the Ferreira (1965)'s catalogue or even for the neighbouring countries (e.g. D. R. of the Congo, Zambia, Namibia) in Anichtchenko (2016) and Insectoid.info (2017) sites. Adults were found in all localities beneath litter within secondary open forests together with some tiger and ground beetles (Catata-Nova Monção and Mutubanzamba: see *S. vilhenai* remarks). It is a new record for Malanje, Huambo and Bié Provinces.

***Chlaenius (Tomochilus) cupreocinctus* Reiche, 1847**

Distribution in Angola (Provinces): 1) Huambo, Lunda Norte.

Material examined. Alto Hama (12° 13' 20'' S, 15° 32' 57'' E, 1512 m alt., 232) (HUAMBO), 31.X.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 3.XI.2015, 1♂, 1♀, 4.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a scattered distribution in Africa: Angola, Zimbabwe, Ethiopia and Eritrea (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017). Adults were found on ground during night near public lights together with other ground beetles (e.g. see *C. rikatlensis* and *P. incrassatus* remarks).

****Chlaenius (Chlaeniostenus) tenuicollis* (Fabricius, 1801)**

Distribution in Angola (Provinces): 2) Huambo.

Material examined. Alto Hama (12° 13' 20'' S, 15° 32' 57'' E, 1512 m alt., 232) (HUAMBO), 31.X–2.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 4.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a known scattered distribution throughout Africa: Ethiopia, D. R. of the Congo and South Africa (Anichtchenko 2016, Insectoid.info 2017). Adults were found also on ground during night near public lights (see comments on *C. rikatlensis* remarks). It is a new species record for Angola.

****Chlaenius (Chlaenius) obtusus tazieffi* Basilewsky, 1949**

Distribution in Angola (Provinces): 2) Huambo, Bié.

Material examined. Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 4.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Cachingues (13° 04' 54'' S, 16° 46' 08'' E, 1647 m alt., 282) (BIÉ), 11.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A subspecies known exclusively from D. R. of the Congo (Basilewsky 1949, Insectoid.info 2017). Our specimens fit very well the Basilewsky' description. Adults were found on ground during night near public lights (first locality) (see also *C. rikatlensis* remarks) and beneath litter on sandy whitish soil within an open secondary forest (second locality). It is a new species/subspecies record for Angola.

***Chlaenius (Homalolachnus) lineatus* Putzeys, 1880**

Distribution in Angola (Provinces): 1) Huíla, Malanje.

Material examined. Bicular, Parque Nacional (unknown) (HUÍLA), 21.II.2014, 2♂, PF, R. Capela leg., ASC.

Remarks. A species restricted to Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017). It seems a common species in the Huíla Province by the reported localities given (Ferreira 1965). Adults were collected by pitfall trapping within a corn field plantation.

***Chlaenius (Callistoides) maculiceps maculiceps* Boheman, 1848**

Distribution in Angola (Provinces): 1) Huambo; 2) Kwanza Sul.

Material examined. Calulo (Faz. Klein) (10° 02' 14'' S, 14° 54' 38'' E, 1059 m alt., 147) (KWANZA SUL), 1.XII.2015, 1♂, 3.XII.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. The species was reported for Angola by Basilewsky (1955) under the name *C. hessei* Basilewsky, 1949. The nominal species is widespread throughout Angola, D. R. of the Congo, Zambia, Zimbabwe, South Africa and Tanzania (Basilewsky 1955, Anichtchenko 2016, Insectoid.info 2017). Adults were found in the edges of small rain pounds, running quickly when disturbed. It is a new record for the Kwanza Sul Province.

***Chlaenius (Callistoides) pulchellus* Boheman, 1848**

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Huambo.

Material examined. Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 3.XI.2015, 1♀, 5.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout all Africa south of Sahara (Basilewsky 1955, Anichtchenko 2016, Insectoid.info 2017). Adults were found on ground during night near public lights (see also *C. rikatlensis* remarks). It is a new record for the Huambo Province.

****Chlaenius (Callistoides) pumilio* Kolbe, 1889**

Distribution in Angola (Provinces): 2) Malanje.

Material examined. Kibundi (15 km N Nambua) (8° 56' 15'' S, 16° 03' 52'' E, 1164 m alt., 95) (MALANJE), 19.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Cambamba (Catoio-Quela) (9° 14' 42'' S, 17° 00' 33'' E, 1178 m alt., 115) (MALANJE), 20.XI.2015, 3♂, 3♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a scattered known distribution in Africa (D.R. of the Congo and Sudan) (Anichtchenko 2016, Insectoid.info 2017). Adults were found in the edges of small rain pounds together with adults of the tiger beetle *C. agualusai*, running quickly when disturbed. It is a new species record to Angola.

Chlaenius (Callistoides) sp.

Distribution in Angola (Provinces): Malanje.

Material examined. Carima (Cacuso-Pungandongo) (9° 35' 00'' S, 15° 42' 01'' E, 1117 m alt., 130) (MALANJE), 23.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. It was not possible to ascribe the unique female specimen to any species. The adult was found in the edges of a small rain pound within a secondary open forest.

****Callistomimus* Chaudoir, 1872**

A genus very speciose in Africa (Lorenz 2005), but never recorded for Angola.

****Callistomimus convexicollis* Britton, 1937**

Distribution in Angola (Provinces): 2) Malanje.

Material examined. Cambamba (Catoio-Quela) (9° 14' 42'' S, 17° 00' 33'' E, 1178 m alt., 115) (MALANJE), 20.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a known distribution throughout D. R. of the Congo, Zambia and Mozambique (Alves 1963, Anichtchenko 2016, Insectoid.info 2017). The singleton adult was collected beneath litter in a countryside road together with adults of tiger beetles [*Dromica* (*Foveodromica*) sp., *L. wellmani*] and of ground beetles (*Lasiocera schuelei* sp. n., *G. ellipticus*). It is a new genus/species record for Angola.

Subfamily Harpalinae Bonelli, 1810

***Notiobia* Perty, 1830**

There is only one species reported for Angola within this genus (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017) which was sampled during our entomological trips also.

***Notiobia* (*Diatypus*) *picina* (Chaudoir, 1878)**

Distribution in Angola (Provinces): 1) Huambo, Cunene.

Material examined. Alto Hama (12° 13' 20'' S, 15° 32' 57'' E, 1512 m alt., 232) (HUAMBO), 31.X.–2.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Cachimbamba (12° 28' 11'' S, 15° 40' 56'' E, 1560 m alt., 232) (HUAMBO), 3.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A common species widespread throughout Africa south of Sahara (Ferreira 1965, Anichtchenko 2016), but also present in South America (Argentina, Brazil, Uruguay) (Insectoid.info 2017) where was introduced probably by means of the nautical slave trade held between Africa (e.g. Luanda) and Brazil (e.g. Salvador) during the XVI–XVII centuries. Adults were found on ground during night near public lights (first locality) together with some other ground beetles [e.g. *S. guineense*, *C. intermedius*, *C. rikatlensis*, *C. cupreocinctus*, *C. tenuicollis*, *Progonochaetus planicollis* (Putzeys, 1880), *Platymetopus pseudocrenulatus* Facchini, 2016, *Agonidium natalense* (Boheman, 1848), *Agonidium alacre* (Boheman, 1848), *E. peringuey*, *E. intermedius*] or on soil beneath litter (second locality).

***Progonochaetus* G. Müller, 1938**

A genus with five species known to Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017), of which were sampled two species.

***Progonochaetus incrassatus* (Boheman, 1848)**

Distribution in Angola (Provinces): 1) Lunda Norte, Benguela, Huambo, Huíla, Cunene, Cuando Cubango.

Material examined. Bembua-Camenhe (12° 16' 53'' S, 15° 27' 01'' E, 1686 m alt., 231) (HUAMBO), 1.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 3.XI.2015, 2♂, 4.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout central and southern Africa (Democratic Republic of the Congo, Angola, Namibia, Zambia, Zimbabwe, Burundi, Rwanda, Malawi, Mozambique and Tanzania) (Basilewsky 1950a, Anichtchenko 2016, Insectoid.info 2017). In Angola the species presents a wide distribution throughout the country. Adults were found on soil beneath litter (first locality, see *S. lucidus strigiceps* remarks) or on ground and walls during night near public lights (second locality) together with several other ground beetles [e.g. *S. guineense*, *C. rikatlensis*, *C. cupreocinctus*, *C. tenuicollis*, *P. planicollis* (Putzeys, 1880), *A. natalense*, *A. alacre*, *E. peringuey*, *E. intermedius*].

***Progonochaetus planicollis* (Putzeys, 1880)**

Distribution in Angola (Provinces): 1) Lunda Norte, Malanje; 2) Huambo.

Material examined. Alto Hama (12° 13' 20'' S, 15° 32' 57'' E, 1512 m alt., 232) (HUAMBO), 31.X.–2.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 3.XI.2015, 1♂, 1♀, 4.XI.2015, 2♂, 6♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species originally described from Angola (Putzeys 1880), but with a wide distribution throughout Africa south of Sahara (Senegal, Guinea-Bissau, Guinea, Mali, Burkina Faso, Chad, Ivory Coast, Cameroon, Ghana, Central African Republic, Nigeria, Equatorial Guinea, Gabon, Congo, D. R. of the Congo, Angola, Namibia, Zambia, Zimbabwe, Rwanda, Botswana, Saudi Arabia, Yemen, Djibouti, Eritrea, Ethiopia, Somalia, Kenya, Tanzania, Mozambique) (Serrano 1999b, Anichtchenko 2016, Insectoid.info 2017). Adults were collected in activity during night on ground and walls near public lights together with other ground beetles (see *N. picina* and *P. incrassatus* remarks). It is a new record for the Huambo Province.

***Stenolophus* Dejean, 1821**

A speciose genus with eleven species and two subspecies known to Angola, belonging to sg. *Egadroma* Motschulsky, 1855 (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017, Facchini, 2016a), of which were sampled three species, two of them new records to this country.

****Stenolophus (Egadroma) barbarae* Facchini, 2012**

Distribution in Angola (Provinces): 2) Malanje.

Material examined. Kibundi (15 km N Nambua) (8° 56' 15'' S, 16° 03' 52'' E, 1164 m alt., 95) (MALANJE), 19.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species known from Central African Republic, Cameroon, Burundi, Zambia and Malawi (Facchini 2012b). The single male fits well the original description, including the aedeagus features. It is a new species record for Angola.

****Stenolophus (Egadroma) humeralis* (Dejean, 1831)**

Distribution in Angola (Provinces): 2) Kwanza Sul.

Material examined. Alto Ventura (Faz. Monte Café) (Calulo) (9° 59' 15'' S, 14° 50' 12'' E, 1086 m alt., 128) (KWANZA SUL), 5.XII.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout western Africa (Senegal, Gambia, Guinea-Bissau, Guinea, Sierra Leone, Gabon, Mali, D. R. of the Congo) (Serrano 1999b, Anichtchenko 2016, Insectoid.info 2017). The single adult fits well the description and aedeagus of this species and was collected beneath litter together with adults of some tiger and ground beetles [e.g. *Dromica (Foveodromica)* sp., *A. distinctus*, *A. optimus*, *D. tarsalis*, *C. magnicollis discrepans*, *G. procera capelai* **ssp.n.**]. It is a new species record for Angola.

***Stenolophus (Egadroma)* sp.**

Distribution in Angola (Provinces): Bié.

Material examined. Satchijamba (10 km E) (13° 43' 38.76'' S, 17° 12' 17.74'' E, 1601 m alt., 303) (BIÉ), 7.IV.2014, 1♂, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species close to *S. barbarae* Facchini, 2012 as well as to *S. basirufus* (Basilewsky, 1948). However, a different shape of the median lobe of the aedeagus did not allow its inclusion on one of these species.

***Harpalus* Latreille, 1802**

A genus with two species recorded for Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017).

***Harpalus* sp.**

Distribution in Angola (Provinces): Benguela.

Material examined. Baixo Pundo (12° 20' 22.32'' S, 13° 50' 20.97'' E, 275 m alt., 227/8) (BENGUELA), 25–27.X.2013, 1♀, PF, R. Capela leg., ASC.

Remarks. The single female adult specimen was collected by pitfall trapping within an open bush habitat with sparse grassy vegetation and sandy soil, together with the ground beetle *Cypholoba brevivittis* Chaudoir, 1866.

***Platymetopus* Dejean, 1829**

A genus with nine species known for Angola (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017, Facchini 2016b), of which was sampled one species.

***Platymetopus pseudocrenulatus* Facchini, 2016**

Distribution in Angola (Provinces): 1) Huambo, Huíla, Bié.

Material examined. Chitembo (18 km SE) (13° 36' 17.53'' S, 16° 54' 00.44'' E, 1538 m alt., 302) (BIÉ), 1.IV.2014, 1♂, LT, A. Serrano & R. Capela leg., ASC; Chitembo (6 km SE) (13° 33' 23'' S, 16° 47' 22'' E, 1586 m alt., 302) (BIÉ), 9.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Alto Hama (12° 13' 20'' S, 15° 32' 57'' E, 1512 m alt., 232) (HUAMBO), 31.X.–2.XII.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Mutubanzamba (Cangandala) (9° 47' 45'' S, 16° 31' 40'' E, 1136 m alt., 132) (MALANJE), 21.XI.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species described recently by Facchini (2016b) with a wide distribution throughout central and southern Africa (Angola, Zambia, Zimbabwe, Rwanda, Burundi, Malawi, Tanzania, Mozambique and South Africa). Adults were collected by means of light trapping within an open secondary forest (Chitembo), on walls near public lights (Alto Hama) and beneath litter (Mutubanzamba) together with other ground beetles (Chitembo: *S. guineense*; Alto Hama: *C. intermedius*, *C. rikatlensis*, *C. cupreocinctus*, *C. tenuicollis*, *P. planicollis*) and tiger beetles [Mutubanzamba: *T. nubifera*, *E. villosus*, *L. saraliensis*, *L. uncivittata*, *L. wellmani*].

***Parophonus* Ganglbauer, 1891**

A genus with ten species known for Angola, belonging one to sg. *Heterohyparpalus* Basilewsky, 1946 and the remaining species to sg. *Hyparpalus* Alluaud, 1930, respectively (Ferreira 1965, Lecordier 1988, Anichtchenko 2016, Insectoid.info 2017).

***Parophonus (Hyparpalus) escheri* (Dejean, 1831)**

Distribution in Angola (Provinces): 1) Huíla; 2) Bié.

Material examined. Chitembo (18 km SE) (13° 36' 17.53'' S, 16° 54' 00.44'' E, 1538 m alt., 302) (BIÉ), 30.X.2014, 1♀, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout Africa south of Sahara (Serrano 1999c, Anichtchenko 2016, Insectoid.info 2017). The single adult was collected by means of light trapping within a secondary open forest together with some other ground beetles (see *S. angolense* remarks). It is a new record for the Bié Province.

***Parophonus (Hyparpalus) holosericus* (Dejean, 1829)**

Distribution in Angola (Provinces): 1) Huíla, Cuando-Cubango, Lunda Norte, Lunda Sul; 2) Huambo, Bié.

Material examined. Cachingues-Chipica (13° 10' 15.74'' S, 16° 45' 48.17'' E, 1649 m alt., 281) (BIÉ), 2.IV.2014, 1♂, LT, A. Serrano & R. Capela leg., ASC; Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 5.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A very common species widespread throughout all Africa south of Sahara, including Madagascar, Comoros and Seychelles islands (Serrano 1999c, Anichtchenko 2016, Insectoid.info 2017). Adults were collected by means of light trapping within an open secondary forest (Cachingues-Chipica) and on a wall near public lights (Caála) together with other ground beetles [Cachingues-Chipica: *S. ludricus*, *A. natalensis*; Caála: *C. deyrollei*, *C. pulchelus*, *Parophonus integer* (Péringuey, 1896)]. It is a new record for the Huambo and Bié Provinces.

***Parophonus (Hyparpalus) tomentosus* (Dejean, 1829)**

Distribution in Angola (Provinces): 1) Cunene; 2) Benguela.

Material examined. Lobito (12° 21' S, 13° 33' E, 10 m alt., 227/8) (BENGUELA), 3.IV.1998, 1♀, PF, A. Neves leg., ASC.

Remarks. A very common species widespread throughout all Africa south of Sahara (Serrano 1999c, Anichtchenko 2016, Insectoid.info 2017). It was firstly recorded to Angola under two names (Putzeys 1880): *Hypolithus tomentosus* Dejean, 1829 and *Hypolithus prolixus* Putzeys, 1880. Later Basilewsky (1960) confirmed the synonymy of the latter species with the former one. The single female adult was collected by pitfall trapping within an open bush habitat with sparse grassy vegetation on sandy-clayey yellow-reddish soil in the outskirts of Lobito together with some other ground beetles (see *B. apicalis* remarks). It is a new record for the Benguela Province.

***Parophonus (Heterohyparpalus) integer* (Péringuey, 1896)**

Distribution in Angola (Provinces): 1) Huíla, Cuando Cubango, Moxico; 2) Huambo, Bié, Malanje.

Material examined. Mumbué (Cuanza riverhead) (13° 49' 41'' S, 17° 19' 26'' E, 1511 m alt., 303) (BIÉ), 9.IV.2014, 1♂, DO, A. Serrano & R. Capela leg., ASC; Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 5.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Kakande (12° 42' 50'' S, 16° 45' 33'' E, 1716 m alt., 258) (BIÉ), 7.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Mutubanzamba (Cangandala) (09° 47' 45'' S, 16° 31' 40'' E, 1136 m alt., 132) (MALANJE), 21.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. Another species widespread throughout almost all Africa south of Sahara (Senegal, Guinea-Bissau, Mali, Ivory Coast, Chad, D. R. of the Congo, Angola, Zimbabwe, Rwanda, Eritrea, Sudan, Kenya, Tanzania, Mozambique, South Africa) (Serrano 1999c, Anichtchenko 2016, Insectoid.info 2017). Adults were found in countryside roads within savanah (Mumbué) or open secondary forest (Kakande and Mutubanzamba) with withish sandy soil beneath the marginal litter, and on a wall near public lights (Caála) with other ground beetles (see *P. holosericus* remarks). It is a new record for the Huambo, Bié and Malanje Provinces.

***Pseudohyparpalus* Basilewsky, 1946**

A genus with two species known for Angola (Ferreira 1965, Clarke 1981, Insectoid.info 2017), of which was sampled one species.

***Pseudohyparpalus elegans* Clarke, 1981**

Distribution in Angola (Provinces): 1) Huambo.

Material examined. Caála (12° 51' 11" S, 15° 33' 07" E, 1758 m alt., 256) (HUAMBO), 3.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. An Angolan ground beetle endemic species (Anichtchenko 2016, Insectoid.info 2017). The species was known until now by two type specimens from Luimbale, Mt. Moco at 1800-1900 m (Clarke 1981). The singleton male fits very well the original description, including the aedeagus. The adult was collected on a wall near public lights with other ground beetles (*C. cupreocinctus*, *C. pulchelus*, *P. incrassatus*, *P. planicollis*).

***Siopelus* Murray, 1859**

A genus with ten species known for Angola (Ferreira 1965, Insectoid.info 2017, Facchini 2017b), distributed by six subgenera [*Africobatus* Basilewsky, 1946, *Aulacoryssus* Alluaud, 1916, *Laparhetes* Jeannel, 1946 and *Siopelus* (*s. str.*) with one species each one, *Neosiopelus* Basilewsky, 1946 and *Pseudosiopelus* Alluaud, 1916 with two and four species, respectively] (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017, Facchini 2017b). A total of eight species were sampled within *Africobatus*, *Aulacoryssus*, *Laparhetes* (each one with one species), *Neosiopelus* (two species) and the remaining three within *Pseudosiopelus*.

***Siopelus* (*Laparhetes*) *gracilis* (Harold, 1879)**

Distribution in Angola (Provinces): 1) Lunda Norte, Kwanza Sul, Malanje, Moxico; 2) Huambo.

Material examined. Caála (12° 51' 11" S, 15° 33' 07" E, 1758 m alt., 256) (HUAMBO), 4.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species originally described from Angola (Harold 1879), but with a wide distribution throughout Africa (Guinea, Central African Republic, Congo, D. R. of the Congo, Angola, Zimbabwe, Burundi, Malawi, Mozambique, Sudan, Tanzania) (Ferreira 1965, Anichtchenko 2016, Insectoid.info 2017). The adult was collected on a wall near public lights with other ground beetles (see *P. elegans* remarks). It is a new record for the Huambo Province.

***Siopelus* (*Africobatus*) *harpaloides* (Guérin-Méneville, 1847)**

Distribution in Angola (Provinces): 1) Benguela, Huíla, Cuando Cubango, Moxico; 2) Huambo, Bié.

Material examined. Cachingues-Chipica (13° 10' 15.74" S, 16° 45' 48.17" E, 1649 m alt., 281) (BIÉ), 2.IV.2014, 1♂, 1♀, LT, A. Serrano & R. Capela leg., ASC; Satchijamba-Somakwanza (13° 43' 38.76" S, 17° 12' 17.74" E, 1601 m alt., 303) (BIÉ), 7.IV.2014, 1♂, 1♀, LT, A. Serrano & R. Capela leg., ASC; Chitembo (18 km SE) (13° 36' 17.53" S, 16° 54' 00.44" E, 1538 m alt., 302) (BIÉ), 30.X.2014, 1♂, LT, A. Serrano & R. Capela leg., ASC; Caála (12° 51' 11" S, 15° 33' 07" E, 1758 m alt., 256) (HUAMBO), 3.XI.2015, 1♂, 1♀, 5.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A common species known almost from all Africa south of Sahara (Senegal, Guinea, Togo, Ivory Coast, Cameroon, Central African Republic, Chad, Gabon, D.R. of the Congo, Burundi, Rwanda, Angola, Zambia, Zimbabwe, Eritrea, Somalia, Ethiopia, Kenya, Tanzania, Mozambique, Uganda, Malawi, South Africa) (Basilewsky 1950a, Ferreira 1965, Insectoid.info 2017). In the first three localities the adults were collected by light trapping within open secondary forests together with some other ground beetles (e.g. *S. ludricus*, *S. guineense*, *A. natalensis*). Adults in Caála were collected on a wall near public lights with other ground beetles also (see *P. elegans* remarks). It is a new record for the Huambo and Bié Provinces.

***Siopelus* (*Neosiopelus*) *punctatellus punctatellus* (Reiche, 1847)**

Distribution in Angola (Provinces): 1) Benguela, Huíla, Lunda Norte, Malanje; 2) Huambo.

Material examined. Caála (12° 51' 11" S, 15° 33' 07" E, 1758 m alt., 256) (HUAMBO), 4.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species present throughout Arabian Peninsula and eastern and central-southern Africa (Yemen, Eritrea, Somalia, Ethiopia, Kenya, Tanzania, Mozambique, Malawi, Rwanda, Burundi, D. R. of the Congo, Angola, Namibia, Zambia, Zimbabwe, Niger) (Basilewsky 1950a, Ferreira 1965, Insectoid.info 2017). It is with some reserve that we ascribe to this species the sampled female singleton. It should be necessary a male to confirm this identification because there are some species belonging to this sg. with similar habitus (see Facchini 2012c). The adult was found on ground during night near public lights together with several other ground beetles (see *P. incrassatus* remarks). It is a new record for the Huambo Province.

****Siopelus (Neosiopelus) wrasei* Facchini, 2012**

Distribution in Angola (Provinces): 2) Bié.

Material examined. Catota (2,5 km S) (14° 00' 37'' S, 17° 24' 00'' E, 1532 m alt., 323) (BIÉ), 8–17.XI.2015, 1♀, PF, A. Serrano & R. Capela leg., ASC.

Remarks. A species described from Zimbabwe and Botswana (Facchini 2012). The single female adult fits well the original description, but without a male specimen it is with some reserve that we ascribe it to this species. The singleton adult was collected by pitfall trapping within an open secondary forest together with other ground beetles (*S. lucidus strigiceps*, *C. bipustulatus*, *A. pseudoangolensis* and *Atractonotus puncticollis* Schle & Heinz, 2013). It is a new species record for Angola.

Siopelus (Neosiopelus) sp.

Distribution in Angola (Provinces): Malanje.

Material examined. Carima (Cacuso-Pungandongo) (9° 35' 00'' S, 15° 42' 01'' E, 1117 m alt., 130) (MALANJE), 23.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. The single female adult is quite similar to *S. punctatellus*, but with a shape of pronotum slightly different [anterior angles not protruding, anterior margin almost straight between angles and basal margin not sinuate at each side of the middle region]. The adult was found in a set aside country road beneath litter within an open secondary forest together with adults of tiger and ground beetles [e.g. *Dromica (Foveodromica) auropunctata* Quedenfeldt, 1883, *P. angusticollis*, *T. nubifera*, *E. villosus*, *G. ellipticus*].

***Siopelus (Pseudosiopelus) barbarae* Facchini, 2017**

Distribution in Angola (Provinces): Benguela, Bié, Huíla; 2) Huambo.

Material examined. Alto Hama (12° 13' 20'' S, 15° 32' 57'' E, 1512 m alt., 232) (HUAMBO), 31.X.–2.XI.2015, 2♀, DO, A. Serrano & R. Capela leg., ASC; Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 3.XI.2015, 1♂, 4.XI.2015, 1♂, 5.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species described recently with a scattered distribution in central, southern and eastern Africa (Nigeria, D. R. of the Congo, Angola, Zambia, Zimbabwe, Uganda) (Facchini 2017b). Adults were collected on walls during night near public lights together with several other ground beetles (e.g. see *N. picina* and *P. incrassatus* remarks). It is a new record for the Huambo Province.

***Siopelus (Pseudosiopelus) natalicus* Péringuey, 1896**

Distribution in Angola (Provinces): 1) Huambo, Huíla, Lunda Norte; 2) Bié.

Material examined. Satchijamba-Somakwanza (13° 43' 38.76'' S, 17° 12' 17.74'' E, 1601 m alt., 303) (BIÉ), 7.IV.2014, 2♀, LT, A. Serrano & R. Capela leg., ASC; Chitembo (18 km SE) (13° 36' 17.53'' S, 16° 54' 00.44'' E, 1538 m alt., 302) (BIÉ), 30.X.2014, 1♂, 2♀, LT, A. Serrano & R. Capela leg., ASC; Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 4.XI.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a scattered distribution throughout eastern, central and southern Africa (Kenya, Tanzania, Rwanda, D. R. of the Congo, Angola, Zimbabwe, South Africa) (Basilewsky 1950a, Ferreira 1965, Insectoid.info 2017). Adults were sampled by light trapping in Bié province within open secondary forests together with other ground beetles (see *S. angolense* remarks) and on walls during night (Caála) near public lights together with several other ground beetles (see *P. incrassatus* remarks). It is a new record for the Bié Province.

***Siopelus (Pseudosiopelus) pallidior* (Burgeon, 1936)**

Distribution in Angola (Provinces): 1) Huíla, Cuando Cubango; 2) Huambo.

Material examined. Caála (12° 51' 11" S, 15° 33' 07" E, 1758 m alt., 256) (HUAMBO), 3.XI.2015, 1♂, 5.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species known on western, eastern and central Africa (Guinea, Ivory Coast, Central African Republic, Equatorial Guinea, Gabon, D. R. of the Congo, Angola, Burundi, Rwanda, Zimbabwe, Ethiopia, Kenya, Tanzania, Mozambique) (Basilewsky 1950a, Ferreira 1965, Insectoid.info 2017). Adults were collected on walls during night near public lights together with several other ground beetles (e.g. see *N. picina* and *P. incrassatus* remarks). It is a new record for the Huambo Province.

****Siopelus (Pseudosiopelus) pulchelus* (Dejean, 1829)**

Distribution in Angola (Provinces): 2) Cabinda.

Material examined. Chipita (5° 43' 41" S, 12° 13' 07" E, 7 m alt., 7) (CABINDA), 11.II.2011, 1♂, DO, R. Capela leg., ASC.

Remarks. A species known on western, eastern and central Africa, including atlantic and indic islands (Mauritania, Senegal, Gambia, Guinea-Bissau, Guinea, Ivory Coast, Benin, Sierra Leone, Ghana, Togo, Burkina Faso, Mali, Chad, Cameroon, Central African Republic, Equatorial Guinea, Gabon, Niger, Nigeria, Democratic Republic of the Congo, Burundi, Rwanda, Tanzania, Mozambique, São Tomé and Príncipe, Comoros, Seychelles and Madagascar) (Basilewsky 1950a, Insectoid.info 2017). The single adult was collected under a stone. Surprisingly the species was never recorded for Angola.

****Axinotoma* Dejean, 1829**

A genus apparently without any species known to Angola (Facchini 2011a, 2017a, however see Insectoid.info 2017).

****Axinotoma latipalpis* Basilewsky, 1968**

Distribution in Angola (Provinces): 2) Bié.

Material examined. Chitembo (18 km SE) (13° 36' 17.53" S, 16° 54' 00.44" E, 1538 m alt., 302) (BIÉ), 30.X.2014, 1♂, LT, A. Serrano & R. Capela leg., ASC; Chitembo (13° 22' 40.78" S, 16° 41' 58.07" E, 1666 m alt., 281) (BIÉ), 1.XI.2014, 1♀, LT, A. Serrano leg., ASC.

Remarks. A species known only to Central African R. and Uganda (Basilewsky 1968, Facchini 2011a). Interestingly our male specimen fits very well the median lobe shape of aedeagus in lateral view of *A. latipalpis* Basilewsky, 1968 (Basilewsky 1968, Fig. 3, Facchini 2003, Fig. 18a) with the apex slightly bent up. However, in dorsal view the median lobe apex is similar to the drawing given in Facchini (2011a, Fig. 12b) for *A. dilatipalpis* Facchini, 2011. Despite this asymmetry we ascribe our identification to the Basilewsky's species by some morphological features (e.g. last labial palpomere only dilated, elytra striae crenulated, third interval with a discal setigerous puncture in the last third). However, our specimens do not present any small pubescence in apical margin, as was point out by Basilewsky (1968) for its species, and the labial palpi are clearly bicolored.

Unfortunately, Facchini (2011a) do not give in the affinities between both species any comment on the elytra apical pubescence. Probably in a near future the status of these two species will be reviewed. Adult specimens were collected by light trapping within open secondary forests together with some other ground beetles (e.g. see *S. angolense* and *S. guineense* remarks). It is a new genus/species record for Angola.

Subfamily Orthogoniinae Schaum, 1857

Orthogonius MacLeay, 1825

A genus with four species known for Angola (Ferreira 1965, Insectoid.info 2017). Nevertheless we had collected the same number of species during our entomological trips in Angola, we were not well succeeding to assign the specimens obtained to any known one (*Orthogonius alutaceus* Quedenfeldt, 1883, *Orthogonius brevilabris* H. Kolbe, 1889, *Orthogonius clarkei* Murray, 1858 and *Orthogonius impunctipennis* Quedenfeldt, 1883).

Orthogonius sp. 1

Distribution in Angola (Provinces): Huambo, Bié.

Material examined. Lumbanje (Morro Lubiri) (12° 07' 55'' S, 15° 30' 59'' E, 1424 m alt., 232) (HUAMBO), 30.X.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Catata-Nova Monção (13° 25' 59'' S, 15° 21' 22'' E, 1607 m alt., 279) (HUAMBO), 6.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Chitembo (6 km SE) (13° 33' 23'' S, 16° 47' 22'' E, 1586 m alt., 302) (BIÉ), 9.XI.2015, 1♂, DO, A. Serrano leg., ASC.

Remarks. Adult specimens were collected always within litter in open secondary forests together with a common tiger beetle (*P. angusticollis*). Further adult specimens of tiger and ground beetles were collected in the same habitats namely *L. uncivittata*, *L. saraliensis* and *L. wellmani* in Lumbanje, *Euryarthron reticostatum* (Wellman & W. Horn, 1908), *Dromica* (*Foveodromica*) sp., *T. nubifera*, *L. saraliensis*, *L. wellmani*, *S. villhenai*, *C. ovalipennis*, *E. intermedius*, *O. patroboides*, *N. vethi*, *C. graphipteroides monardi* and *A. (Odontanthia) kleinfeldi* in Catata-Nova Monção and *T. nzingae*, *Ophryodera rufomarginata poggei* (Harold, 1878) and *L. uncivittata* in Chitembo.

Orthogonius sp. 2

Distribution in Angola (Provinces): Bié.

Material examined. Bembua-Camenhe (12° 16' 53'' S, 15° 27' 01'' E, 1686 m alt., 302) (BIÉ), 2.XI.2015, 3♂, DO, A. Serrano leg., ASC.

Remarks. Adult specimens were collected within litter in open secondary forests together with some tiger and ground beetles (*Prothyma erythropyga erythropyga* (Putzeys, 1880), *Dromica* (*Foveodromica*) *soror* (W. Horn, 1935), *P. angusticollis*, *T. nubifera*, *O. rufomarginata distanti* (Heath, 1905), *L. uncivittata*, *L. saraliensis*, *L. wellmani*, *C. agualusai*, *S. lucidus strigiceps* and *A. kleinfeldi*).

Orthogonius sp. 3

Distribution in Angola (Provinces): Bié.

Material examined. Bembua-Camenhe (12° 16' 53'' S, 15° 27' 01'' E, 1686 m alt., 302) (BIÉ), 2.XI.2015, 2♂, DO, A. Serrano leg., ASC; Chingueia-Mandongue (13° 35' 46'' S, 16° 58' 59'' E, 1648 m alt., 302) (BIÉ), 9.XI.2015, 2♂, DO, A. Serrano leg., ASC.

Remarks. Like the precedent *Orthogonius*, these adult specimens were collected within litter in open secondary forests together with some tiger and ground beetles (for the first locality see *Orthogonius* sp. 2 remarks). Adult specimens in Chingueia-Mandongue were collected together with some different tiger and ground beetles (see *S. lucidus strigiceps* remarks).

***Orthogonius* sp. 4**

Distribution in Angola (Provinces): Bié.

Material examined. Chitembo (13° 30' 55'' S, 16° 45' 20'' E, 1628 m alt., 302) (BIÉ), 9.XI.2015, 2♀, DO, A. Serrano leg., ASC.

Remarks. Adult specimens were found in activity within the village on soil in the road edges during night, probably attracted to the public lights.

Subfamily Ctenodactylinae Laporte de Castelnau, 1834

***Hexagonia* Kirby, 1825**

A genus with two species known for Angola (Ferreira 1965, Insectoid.info 2017). This genus is surely poorly known in Angola when compared with the neighbouring country D. R. of the Congo with a total of nine recorded species (Anichtchenko 2016, Insectoid.info 2017).

***Hexagonia angustula* Péringuey, 1904**

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Malanje.

Material examined. Kibundi (15 km N Nambua) (8° 56' 15'' S, 16° 03' 52'' E, 1164 m alt., 95) (MALANJE), 19.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species known from Angola, D. R. of the Congo and Zimbabwe (Basilewsky 1948, Ferreira 1965, Insectoid.info 2017). The single adult was collected on the ground in a countryside road within an open secondary forest. It is a new record for the Malanje Province.

Subfamily Platyninae Bonelli, 1810

***Agonidium* Jeannel, 1948**

A genus with one species known for Angola (Ferreira 1965, Insectoid.info 2017).

****Agonidium alacre* ((Boheman, 1848)**

Distribution in Angola (Provinces): 2) Huambo.

Material examined. Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 3.XI.2015, 1♀, 4.XI.2015, 1♂, 5.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a distribution in southern and eastern Africa (Botswana, Namibia, South Africa, Zimbabwe and Mozambique), but recorded also to Yemen (Insectoid.info 2017). Adult specimens fit well the description of this species, including the aedeagus conformation (Basilewsky 1950b). Adults were found on ground during night near public lights (e.g. see comments on *C. rikatlensis* remarks). It is a new species record for Angola.

***Agonidium natalense* ((Boheman, 1848)**

Distribution in Angola (Provinces): 1) Unknown; 2) Huambo.

Material examined. Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 4.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species known already to Angola without known localities (Putzeys 1880, under the name *Platynus urens*) and with a distribution in southern and part of eastern Africa (Angola, Botswana, South Africa, Zimbabwe and Mozambique) (Basilewsky 1950b, Insectoid.info 2017). The singleton adult was found on ground during night near public lights (e.g. see *C. rikatlensis* remarks). It seems a new record for the Huambo Province.

***Euleptus* Klug, 1833**

A genus with one species recorded for Angola (Ferreira 1965, Insectoid.info 2017).

****Euleptus intermedius* Péringuey, 1896**

Distribution in Angola (Provinces): 2) Huambo, Bié.

Material examined. Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 4.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Catata-Nova Monção (13° 25' 59'' S, 15° 21' 22'' E, 1607 m alt., 279) (HUAMBO), 6.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Catota (2,5 km S) (14° 00' 37'' S, 17° 24' 00'' E, 1532 m alt., 323) (BIÉ), 8–17.XI.2015, 1♀, PF, A. Serrano & R. Capela leg., ASC.

Remarks. A species known from South Africa R. and Zimbabwe (Basilewsky 1950b, Insectoid.info 2017). Adult specimens fit well the original description (Péringuey 1896). Adults of the first locality were found on ground during night near public lights (e.g. see *C. rikatlensis* remarks) and in the second locality beneath litter within an open secondary forest (e.g. see comments on *S. vilhenai* remarks), respectively. The Catota adult specimen was collected by pitfall trapping together with other ground beetles (see *S. wrasei* remarks). It is a new species record for Angola.

****Euleptus peringueyi* Csiky, 1931**

Distribution in Angola (Provinces): 2) Huambo, Kwanza Sul.

Material examined. Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 3.XI.2015, 1♂, 6.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Calulo (9° 59' 55'' S, 14° 53' 35'' E, 999 m alt., 128) (BIÉ), 27.XI–5.XII.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a scattered known distribution (Cameroon, Ivory Coast, D. R. of the Congo, South Africa and Mozambique) (Basilewsky 1950b, Insectoid.info 2017). Adult specimens fit very well the original description (as *albicornis* Péringuey 1896), including the aedeagus (see Basilewsky 1950b, Fig. 6). Adults were found on ground during night near public lights (e.g. for the first locality see *C. rikatlensis* remarks). It is a new species record for Angola.

****Leptagonum* Kolbe, 1898**

A genus not yet recorded for Angola (Ferreira 1965, Insectoid.info 2017).

****Leptagonum elegans* (Péringuey, 1904)**

Distribution in Angola (Provinces): 2) Huambo.

Material examined. Bembua-Camenhe (12° 16' 53'' S, 15° 27' 01'' E, 1686 m alt., 231) (HUAMBO), 31.X.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Londuimbali-Tinguita (12° 18' 10'' S, 15° 21' 15'' E, 1633 m alt., 231) (HUAMBO), 2.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species known only from Zimbabwe and Mozambique (Basilewsky 1950b, Insectoid.info 2017). Adult specimens fit very well its description (Péringuey 1904, Basilewsky 1950b) and were found within litter in

open secondary forests together with some tiger and ground beetles (see *S. lucidus strigiceps* remarks). It is a new genus/species record for Angola.

***Orthotrichus* Peyron, 1856**

A genus with seven species recorded for Angola (Ferreira 1965, Insectoid.info 2017). Its representatives are all within *Metagonum* Jeannel, 1948 in Lorenz (2005). However, this genus was synonymized with *Orthotrichus* (Anichtchenko 2016).

***Orthotrichus gilvipes* (Boheman, 1848)**

Distribution in Angola (Provinces): 1) Unknown, 2) Kwanza Sul.

Material examined. Cateculo (Calulo) (9° 57' 19.75'' S, 14° 47' 31.37'' E, 872 m alt., 128) (KWANZA SUL), 5.XI.2014, 2♀, DO, A. Serrano & R. Capela leg., ASC; Mussende (Calulo) (9° 57' 00'' S, 14° 47' 36'' E, 905 m alt., 128) (KWANZA SUL), 28.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Alto Ventura (Faz. Monte Café) (Calulo) (9° 59' 15'' S, 14° 50' 12'' E, 1086 m alt., 128) (KWANZA SUL), 30.XI.2015, 4♂, 5♀, 2.XII.2015, 1♂, 5♀, 5.XII.2015, 1♂, 2♀, DO, A. Serrano & R. Capela leg., ASC; Calulo (Faz. Klein) (10° 02' 14'' S, 14° 54' 38'' E, 1059 m alt., 147) (KWANZA SUL), 1.XII.2015, 1♂, 1♀, 3.XII.2015, 2♂, 2♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout eastern, central and southern Africa (Ethiopia, Mozambique, Zimbabwe, Burundi, Rwanda, D. R. of the Congo, Angola, Botswana, South Africa R.) (Putzeys 1880, Insectoid.info 2017). The species was recorded for Angola by Putzeys (1880) without information on localities. Basilewsky (1960a) studying the 24 types described by this author did not pay attention to the other 117 species of carabids recorded for Angola in that work, referring that most of them were misinterpreted. Unfortunately we can not confirm the identification of the Putzeys study because all the material deposited in MLZA (Museu Bocage) was destroyed during a catastrophic fire in 1978. However, as the species is so well characterized, it seems to us that Putzeys identification was almost surely correct. Adult specimens were found within litter in secondary rainforests together with other tiger and ground beetles (see comments on *A. distinctus* remarks). It is a new record for the Kwanza Sul Province.

***Orthotrichus patroboides* (Murray, 1859)**

Distribution in Angola (Provinces): 2) Kwanza Sul, Huambo.

Material examined. Catata-Nova Monção (13° 25' 59'' S, 15° 21' 22'' E, 1607 m alt., 279) (HUAMBO), 6.XI.2015, 2♂, 1♀, DO, A. Serrano & R. Capela leg., ASC; Cruzeiro (Pedra do Alemão) (12° 46' 41.14'' S, 15° 54' 09.49'' E, 1743 m alt., 232) (HUAMBO), 7.XI.2015, 2♀, DO, A. Serrano & R. Capela leg., ASC; Calulo-Cabuta (9° 53' 59'' S, 14° 54' 26'' E, 831 m alt., 128) (KWANZA SUL), 29.XI.2015, 2♂, 4♀, 29.XI–6.XII.2015, 26♂, 20♀, PF, A. Serrano & R. Capela leg., ASC; Mussende (Calulo) (9° 57' 00'' S, 14° 47' 36'' E, 905 m alt., 128) (KWANZA SUL), 28.XI–5.XII.2015, 14♂, 9♀, PF, A. Serrano & R. Capela leg., ASC; Alto Ventura (Faz. Monte Café) (Calulo) (9° 59' 15'' S, 14° 50' 12'' E, 1086 m alt., 128) (KWANZA SUL), 5.XII.2015, 2♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout western, central and eastern Africa (Senegal, Guinea, Ivory Coast, Nigeria, D. R. of the Congo, Angola, Zambia, Burundi, Rwanda, Uganda) (Putzeys 1880, Insectoid.info 2017). The species was described by Putzeys (1880) from Angola under the name *Platynus calefactus* without information on localities. The species is very abundant in Calulo region and the adult specimens were found within litter or collected by pitfall trapping in secondary rainforests together with other tiger and ground beetles (see *A. distinctus* remarks). It is a new record for the Kwanza Sul and Huambo Provinces.

****Orthotrichus umtalianum* (Péringuey, 1904)**

Distribution in Angola (Provinces): 2) Kwanza Sul, Malanje.

Material examined. Cambamba (Catoio-Quela) (09° 14' 42'' S, 17° 00' 33'' E, 1178 m alt., 115) (MALANJE), 20.XI.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC; Calulo (Faz. Klein) (10° 02' 14'' S, 14° 54' 38'' E, 1059 m alt., 147) (KWANZA SUL), 1.XII.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species known from central, southern and part of eastern Africa (D. R. of the Congo, South Africa R., Burundi, Zimbabwe) (Basilewsky 1950b, Insectoid.info 2017). Adults fit very well its description, including the aedeagus features (Péringuey 1904, Basilewsky 1950b). Adult specimens were found within litter in an open secondary forest and in a secondary rainforest together with some other tiger and ground beetles (see *S. vilhenai* and *O. gilvipes* remarks for first and second localities, respectively). It is a new species record for Angola.

Subfamily Lebiinae Bonelli, 1810

***Perigona* Laporte de Castelnau, 1835**

A genus with five species recorded to Angola (Ferreira 1965, Insectoid.info 2017), distributed by two subgenera (*Euripogena* Basilewsky, 1989: one species; *Trechicus* LeConte, 1853: four species).

***Perigona* (s. str.) *liboloensis* Serrano & Capela sp. n.**

(Figs 1a, 2, 3)

Type series. Holotype, ♂; Angola (Kwanza Sul), Alto Ventura-Col (Calulo) (9° 59' 42'' S, 14° 50' 32'' E, 1116 m alt., 128), 4.XII.2015, DO, A. Serrano & R. Capela leg., ASC. Allotype, 1♀, same locality and date as holotype, ASC.

Derivatio nominis. This species is named after Libolo (noun in apposition), a municipality of the Kwanza Sul Province where the specimens were found and home of one of the most remarkable Angolan Sports Club: the Sports Club Recreativo do Libolo.

Diagnosis. Body elongate, sub-parallel, slightly convex and reddish-brown (Fig. 1a); integument with microreticulation, shiny; surface with sparse micropunctures visible at high magnification. Elytral color as *Perigona pallida* Castelnau, 1835. Internal sac of median lobe of aedeagus (Fig. 2) with a conspicuous twisted sclerite closer to the apex and a posterior bone shaped cut half sclerite (lateral view).

Description. Length of Holotype: 3.36 mm. Length of allotype: 3.16 mm.

Head. Slightly wider than long [length: 0.59 mm (holotype), 0.64 mm (allotype), width: 0.72 mm (holotype), 0.75 mm (allotype)], darker (black-brownish) than pronotum and elytra, clypeus, labrum, mouth parts and antennae piceous; surface with sparse fine punctuation, microreticulation distinct, isodiametric, rather glossy; eyes large, moderately protruding, labrum moderately notched; clypeal-frontal furrows distinct, oblique, extended to level of anterior supraorbital seta; frons and occiput slightly convex; antenna short just attaining base of pronotum, scape two times longer than wide, 3rd to 9th antennomeres as long as wide, slightly globulose, last antennomere 1.6–1.8 times longer than wide. Cephalic chaetotaxy (large setae): Labrum with three pairs of setae gradually shorter from exterior to inner sides, one pair on sides of clypeus and two pairs of supraocular setae present over each eye.

Thorax. Pronotum (Fig. 1a) 1.27–1.29 times wider than long [length: 0.66 mm (holotype), 0.74 mm (allotype), width: 0.85 mm (holotype), 0.94 mm (allotype)], reddish-brown dark, wider than head, barely subcordiform, widest at first third; surface sparsely micropunctate, with microreticulation distinct, consisting of isodiametric meshes in diskal area and transverse meshes and lines laterally, shiny; apical margin not margined, lateral margins with complete and distinct margination continuing in the two thirds of the basal margin after the posterior angle; apical margin arcuate, apical angles roundly acute, protruded; lateral margin slightly curved at first two thirds, followed by a slight sinuosity and ending straight obliquely before the roundly obtuse basal angles, posterior margin distinctly emarginated; median line distinct, not reaching anterior or posterior margins, anterior transverse sulcus indistinct, posterior transverse sulcus slightly conspicuous; anterior marginal setae situated close to the widest width, posterior marginal seta situated at basal angle, none short setae at disk or sides.

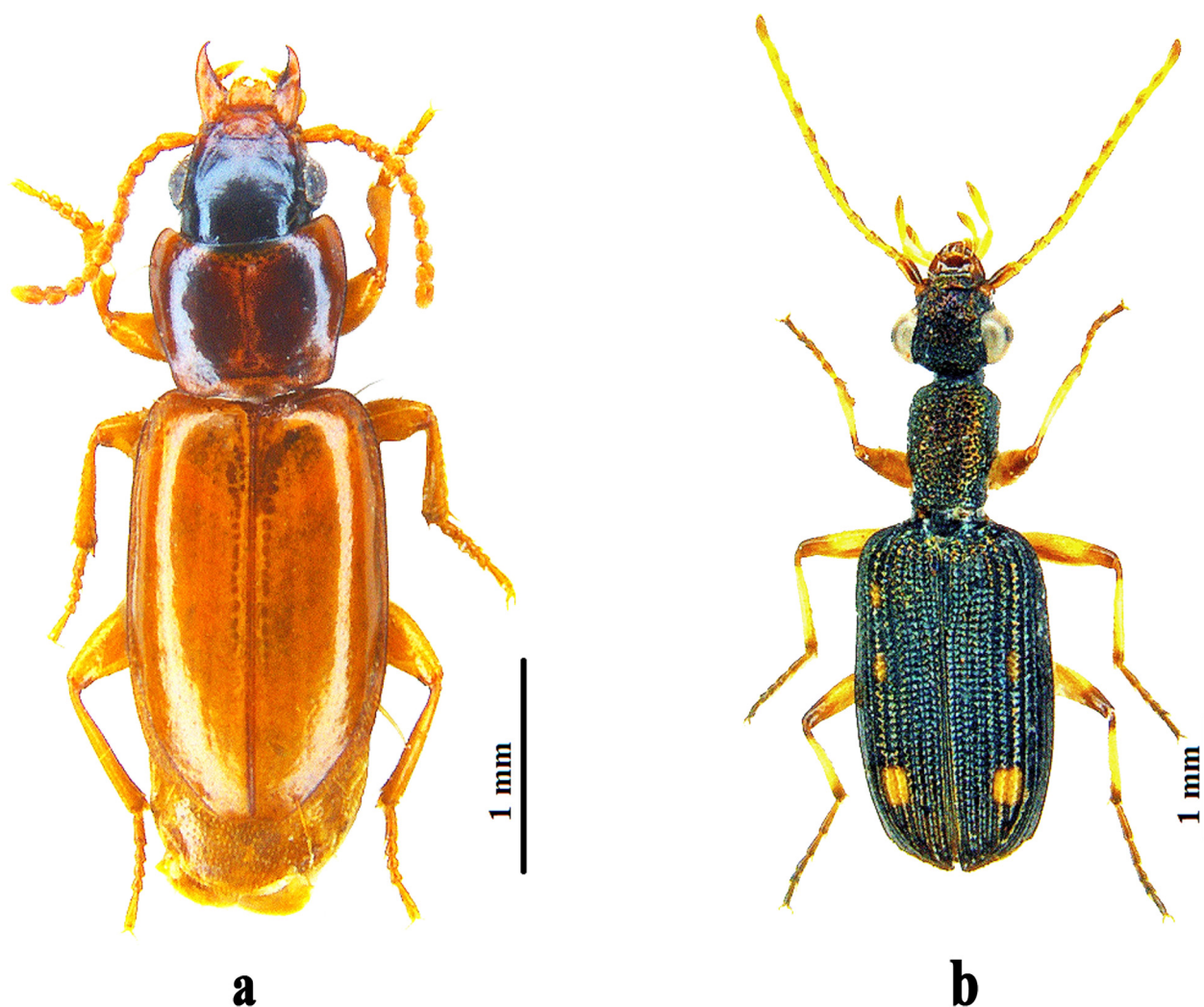


FIGURE 1. Facies of: a) *Perigona liboloensis* sp. n. male holotype, b) *Lasiocera schuelei* sp. n. male holotype.

Elytra (Fig. 1a) 1.61–1.62 times longer than wide [length: 1.90 mm (Holotype), 1.97 mm (allotype), width: 1.17 mm (holotype), 1.22 mm (allotype)], reddish-brown lighter than pronotum, sutural stripe slightly darker; surface glossy, with sparse very fine punctuation and superficial microreticulation of fine transverse meshes; narrow and elongate, sub-parallel, dorsally moderately convex, very slightly depressed on disk, widest at middle; humeral angles distinct but broadly rounded; median marginal punctures arranged in a straight line; marginal channel towards apex widened, depressed, first half sparsely pilose, second half densely pilose; only inner three striae recognizable at two thirds by inconspicuous sulci not marked by punctures, anterior setiferous puncture situated at 3rd striae and at basal quarter, median setiferous puncture situated in 3rd interval close to 2nd striae slightly behind middle, apical setiferous puncture (long setae) situated at 3rd striae just above sub-apical border.

Abdominal segments brown-yellowish, covered with dense dressed short hairs; last segment with 3 pairs (male) or 5 pairs (female) of setae near the posterior margin; terminal abdominal sternite in both sexes with fringe of short hairs. Legs brown-testaceous.

Aedeagus (Figs 2 a, b, c) with median lobe short and stout, ventral margin slightly curved, apex downwards (lateral view); internal sac with a conspicuous twisted sclerite and a bone shaped cut in half sclerite at right and left sides, respectively; genital ring (Fig. 2 d) rather asymmetric, with wide, obliquely rounded apex, rather parallel, base evenly rounded.

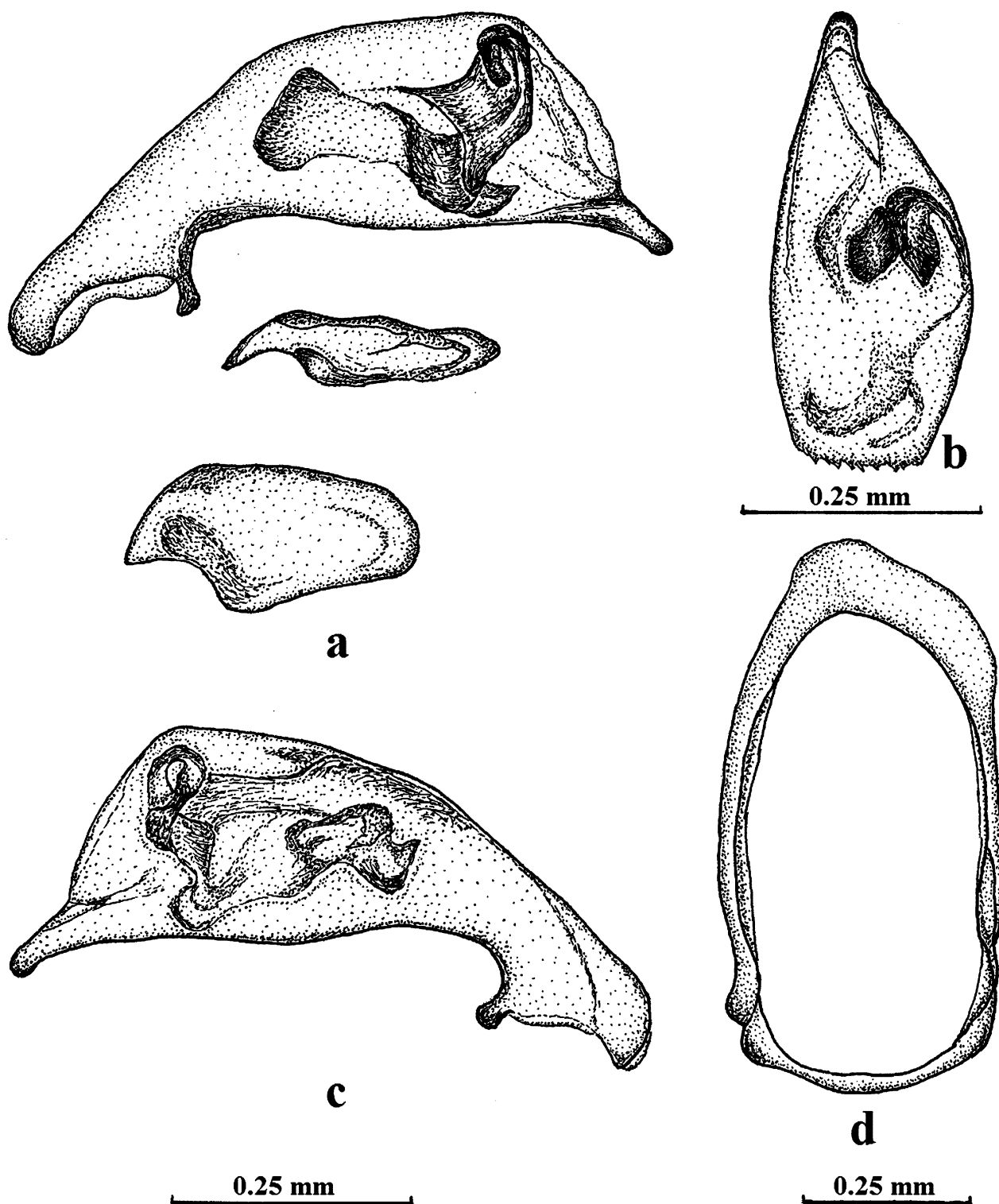


FIGURE 2. *Perigona liboloensis* sp. n.: a) Aedeagus, median lobe and parameres (left lateral view), b) apex of median lobe (dorsal view), c) median lobe (right lateral view) and, d) genital ring.

Female genitalia (Fig. 3) with the ordinary pattern shape of the genus. Stylomere 1 with two ventral large setae on subapical margin. Stylomere 2 with two medium sized ensiform ventro-lateral setae, one quite large ensiform dorso-median seta located about in middle of stylomere, and a single nematiform ventro-seta originating from a groove in apical third of stylomere. Some sensillae (probably chemoreceptors) are dispersed over ventral latero-apical margins of stylomere 1, and other sensillae over basal, medial and sub-apical areas of ventral, lateral and dorsal sides of stylomere 2.

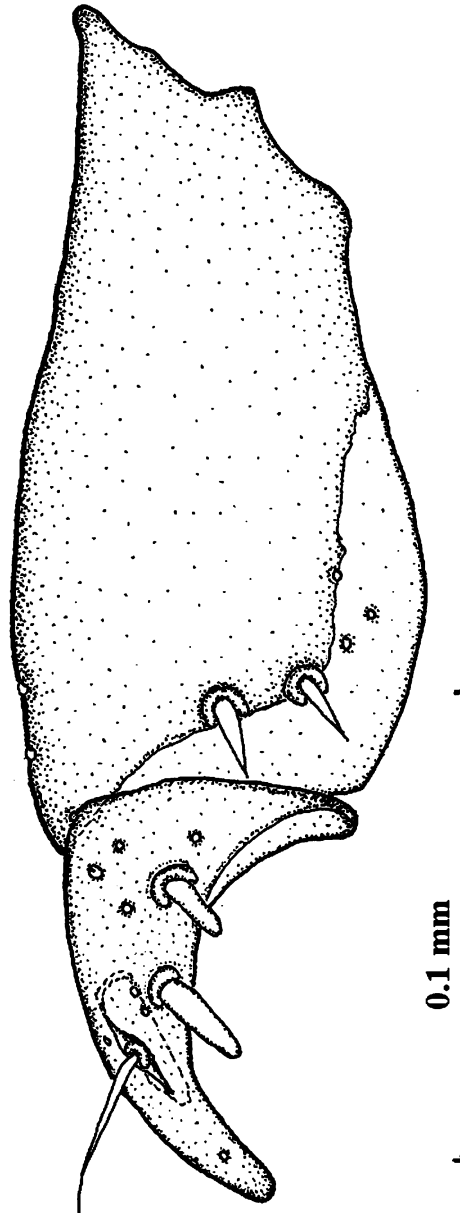


FIGURE 3. *Perigona liboloensis* sp. n., female genitalia: stylomeres 1 and 2 (ventral view).

Remarks. The new species belongs to the subgenus *Perigona s.str.* based on the arrangement of the three lateral marginal elytral pores in a straight line and by the presence of distinct clypeo-orbital sulci. Until now there are six species known for continental Africa belonging to this subgenus (Basilewsky 1989, Baehr 2004 and Serrano 2008). *Perigona liboloensis* sp. n. is easily segregate from *P. parallela* Chaudoir, 1878, *P. nigrociliata* Basiewsky, 1953, *P. mediornata* Basilewsky, 1989, *P. wachтели* Baehr, 2004 and *P. principensis* Serrano, 2008, among other characters, by the quite dissimilar aedeagi of all these species. Certainly the new species is next related to *P. pallida* Laporte de Castelnau, 1835 with which it shares the general color, the elongate, almost parallel body shape and male median lobe general shape, though differs in its general body length (3.16–3.36 mm vs. 2.30–2.70 mm), pronotum conformation (slightly sinuouse before the posterior angles vs. not sinuouse before the posterior angles), elytral index (1.61–1.62 vs. 1.47–1.55), and in the shape of the sclerotized plates in the internal sac of the median lobe of aedeagus (cf. Figs 2a, b vs. Fig. 5b in Basilewsky 1989). Moreover, *P. pallida* presents the pronotal widest situated in the middle while in the new species is in the first third. In the former species the elytral striae are conspicuous with punctuation well marked while in the latter the elytral striae are almost indistinct and without

marked punctuation. By the *Perigona pallida* previous records (e.g. Basilewsky 1989) and the new species known locality, the two taxa seem to be sister species with vicariant (allopatric) distribution, a fact referred already for tiger beetle and ant nest beetle species of Angola also (Serrano *et al.* 2015, Serrano & Capela 2015a).

Ecological notes. A species known until now only from Angola. Adults were found under the bark of a fallen tree within an abandoned coffee plantation (Fig. 9a) with *Catascopus beauvoisi* Laporte de Castelnau, 1835 and *Coptodera* (*Coptoderina*) *congolensis* Burgeon, 1937. Further adults of Dermaptera [*Apachyus depressus* (Palisot de Beauvois, 1805 and *Echinosoma afrum* (Palisot de Beauvois, 1805)] and Coleoptera Endomychidae, Trogossitidae, Tenebrionidae (several species) were found together (syntopic) with the new species.

Key to the African *Perigona* (s.str.) species

For identification, a new key of the nominate subgenus *Perigona* Laporte de Castelnau s. str. is provided that is modified from the keys to the African species by Baehr (2004) and Serrano (2008).

1. Elytra narrow and elongate, >1.4x as long as wide, subparallel; pronotum narrow, not cordiform, widest diameter less close to apex; eyes large and prominent; macropterous, with elongate metepisternum (c. 3x as long as wide); aedeagus with shorter apex 2
- Elytra wide and short, <1.3x as long as wide, laterally convex; pronotum fairly wide, subcordiform, widest diameter close to apex; eyes smaller and little prominent; brachypterous, with short metepisternum (c. 1.5x as long as wide); aedeagus with elongate apex (Fig. 5d in Basilewsky 1989). Central Africa *nigrociliata* Basilewsky
2. Smaller species, length <3.9 mm; elytra either uniformly dark yellowish to light brown, or not either uniformly of the same color; terminal abdominal sternite in both sexes with fringe of short hairs; aedeagus short and stout, with rather thin apex of variable length (Fig. 1 in Baehr 2004) 3
- Larger species, length >4.6 mm; elytra black with light sutural stripe that is enlarged behind middle to a wide spot; terminal abdominal sternite only in female with fringe of short hairs; aedeagus elongate and more depressed, with short, thick apex (Fig. 5c in Basilewsky 1989). Eastern Central Africa *mediornata* Basilewsky
3. Elytra and pronotum uniformly dark yellowish to light brown 4
- Elytra not uniformly of the same color 5
4. Smaller species, length <2.7 mm; pronotum narrower, little narrowed towards base, lateral margin not sinuate near base, anterior angles not produced; aedeagus with fairly elongate apex (Fig. 5b in Basilewsky 1989). West Africa *pallida* Castelnau
- Larger species, length >3.25 mm; pronotum wider, with narrower base, lateral margin gently sinuate near base, anterior angles slightly produced; aedeagus with very short apex (Fig. 5a in Basilewsky 1989). Tropical Africa from Senegal to Mozambique *parallela* Chaudoir
5. Elytra and pronotum reddish-brown dark or lighter 6
- Elytra black with narrow reddish sutural stripe; pronotum black, sometimes with indistinct dark reddish discal spot; anterior sclerite in internal sac large, characteristically dentate at upper margin (Fig. 1 in Baehr 2004,). Zambia, southern Africa *wachteli* Baehr
6. Elytra reddish-brown dark with light sutural stripe, enlarged behind middle to apex; pronotum reddish-brown dark homogeneous; Elytrae less long (1.50–1.60 times longer than wide); Aedeagus with short apex (Fig. 3 in Serrano 2008). Principe Island, Gulf of Guinea *principensis* Serrano
- Elytra reddish-brown lighter than pronotum, sutural stripe slightly darker; Elytrae slightly longer (1.61–1.62 times longer than wide). Aedeagus with fairly elongate apex (Figs 2a, c, this work). Angola *liboloensis* sp. n.

**Lasiocera* Dejean, 1831

A genus not recorded for Angola yet (Ferreira 1965, Insectoid.info 2017).

Lasiocera schuelei Serrano sp. n.

(Figs 1 b, 4, 5)

Type series. Holotype, ♂; Angola (KWANZA SUL), Munenga 35 km W Calulo (unknown, 147), 3.XII.2012, DO, P. Schüle leg., PSC. Allotype 1♀: same data as Holotype, P. Schüle leg., ASC. Paratypes: Angola (HUÍLA) 3.5 km SW Negola (14° 08' 53" S, 14° 28' 16" E, 1615 m, 317), 8.XII.2012, 2♀, DO, P. Schüle leg., PSC, ZSM; Cambamba (Catoio-Quela) (09° 14' 42" S, 17° 00' 33" E, 1178 m alt., 115) (MALANJE), 20.XI.2015, 1♀, DO, A. Serrano leg., ASC.

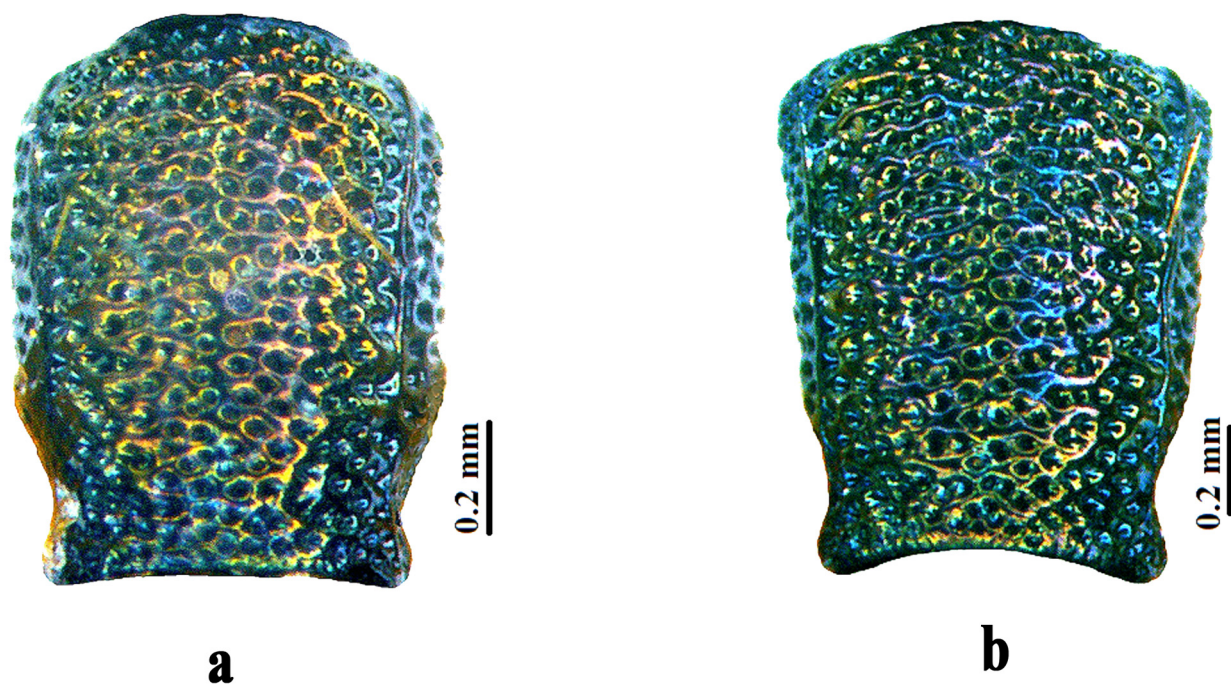


FIGURE 4. *Lasiocera schuelei* sp. n., pronotum (dorsal view): a) male holotype, Munenga, b) female paratype, Cambamba.

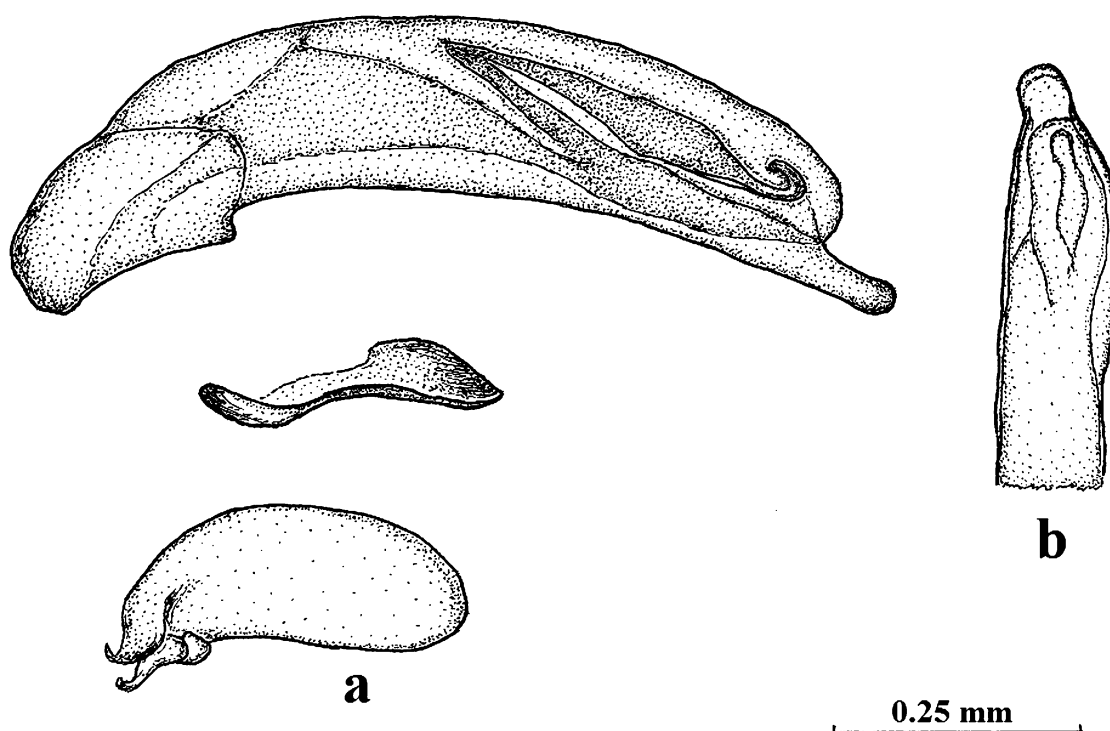


FIGURE 5. *Lasiocera schuelei* sp. n., Aedeagus: a) Median lobe and parameres (left lateral view), b) apex of median lobe (dorsal view).

Derivatio nominis. This species is cordially dedicated to Peter Schüle, from Herrenberg, a specialist on tiger and ground beetles of Africa which has deeply collaborated with us and kindly provided most of the specimens of this new species.

Diagnosis. Body elongate, parallel, slightly convex and greenish-bronze (Fig. 1 b); integument densely and deeply punctate, shagrened; surface among punctures with micropunctures visible at high magnification. Pronotum subrectangular or subtrapezoidal shaped (Fig. 4). Four reduced elytral spots. Internal sac of median lobe of aedeagus (Fig. 5) with tangled membranes, the dorsal twisted one closer to the apex (lateral view), this slightly bent to the left (dorsal view) (Fig. 5).

Description. Length of Holotype: 4.82 mm. Length of paratypes (all females): 4.95–5.74 mm.

Head. Triangular (Fig. 1 b), 1.2–1.3 times wider than long [length: 0.77 mm (holotype), 0.83–0.88 mm (female allotype and paratypes), width: 0.99 mm (holotype), 1.02–1.14 mm (female allotype and paratypes)], greenish bronze, shagreened, closely and deeply punctate, surface intervals distinctly micropunctate; mandibles and labrum brownish dark; eyes large, prominent; palpi light yellowish, apical half of the last articles darker, last article of both palpi fusiform, sharp at the tip; labrum with anterior margin triangularly emarginated; frontal furrows distinct, subparallel, extended to level of anterior supraorbital seta, joining to the inner ocular suture; frons slightly convex or depressed, occiput slightly concave; antennae flavescent, brown dark in inner side of 1st to 10th antennomers, surpassing the posterior margin of pronotum by the last two-three antennomers, 3rd to 10th with 4–5 long bristles just below the joints, scape 2.5 times (holotype) and 2.3–2.7 times (female allotype and paratypes) longer than wide [length: 0.32 mm (holotype), 0.31–0.38 mm (female allotype and paratypes), width: 0.13 mm (holotype), 0.13–0.14 mm (female allotype and paratypes)], pedicel 1.3 times (holotype) and 1.1–1.4 times (female allotype and paratypes) longer than wide [length: 0.10 mm (holotype), 0.10–0.11 mm (female allotype and paratypes), width: 0.08 mm (holotype), 0.08–0.10 mm (female allotype and paratypes)], 3rd to 4th antennomers 2.1 times (holotype) and 2.1–2.5 times (female allotype and paratypes) longer than wide [length: 0.21 mm (holotype), 0.19–0.21 mm (female allotype and paratypes), width: 0.10 mm (holotype and female allotype and paratypes)], 5th to 10th 2.3–2.6 times (holotype) and 2.2–3.2 times (female allotype and paratypes) longer than wide [length: 0.21–0.24 mm (holotype), 0.22–0.32 mm (female allotype and paratypes), width: 0.09–0.10 mm (holotype), 0.09–0.10 mm (female allotype and paratypes)], and 11th 2.7 times (holotype) and 3–3.4 times (female allotype and paratypes) longer than wide [length: 0.27 mm (holotype), 0.27–0.31 mm (female allotype and paratypes), width: 0.10 mm (holotype), 0.09 mm (female allotype and paratypes)]. Cephalic chaetotaxy (large setae): Labrum with three pairs of setae gradually shorter from external to inner sides, one pair on sides of clypeus and two pairs of supraocular setae present over each eye.

Thorax. Pronotum (Fig. 4) 1.36 times (holotype) and 1.23–1.35 times (female allotype and paratypes) longer than wide [length: 0.99 mm (holotype), 1.01–1.18 mm (female allotype and paratypes), width: 0.73 mm (holotype), 0.75–0.91 mm (female allotype and paratypes)], greenish bronze, shiny, closely and deeply punctate, surface intervals distinctly micropunctate; wider than head, slightly subrectangular or inverted subtrapezoidal shaped, concussively widest at first third or close to the anterior angles; apical and basal margins not margined, lateral margins with complete and distinct margination in the two first thirds since the anterior angles, reaching the posterior angles, proepisterna well visible from above in the two first thirds; apical margin slightly emarginated, apical angles largely rounded, not protruded; lateral margins slightly subparallel or oblique at first two thirds, followed by a slight sinuosity before the roundly right basal angles, posterior margin slightly but distinctly arcuate; median line absent or very superfluous, not reaching anterior or posterior margins, anterior transverse sulcus indistinct, posterior transverse sulcus slightly conspicuous; one marginal setae situated in the end of first third, the posterior marginal seta absent.

Elytra (Fig. 1 b) 1.76 times (holotype) and 1.71–1.82 times (female allotype and paratypes) longer than wide [length: 2.78 mm (holotype), 2.88–3.36 mm (female allotype and paratypes), width: 1.58 mm (holotype), 1.68–1.87 mm (female allotype and paratypes)], greenish bronze, shiny and with punctual metallic reflections; wider than pronotum, humeral angles broadly rounded; elongate and parallel, dorsally moderately convex, truncated obliquely behind, posterior obtuse angle sometimes slightly produced in a short spine, apical margin with 7 to 10 small denticles since the posterior angle to the sutural angle; striae deeply punctate, intervals narrow and convexes, transversely strongly rugose, surface distinctly micropunctate; yellowish patches: one sub-basal and other sub-median on 6th interval, more or less rounded or in a small longitudinal line, and two joint small longitudinal sub-apicals, respectively on 5th and 6th intervals; three setiferous punctures situated at 3rd interval, one at basal quarter, other at median region and the last one at beginning of the last quarter.

Ventral surface. Bluish-bronze, shiny; genae sparsely finely punctate, glabrous; proepisterna closely and deeply alveolo-punctate in the upper sides, becoming less densely punctate towards the ventral region; sternum

glabrous; elytral epipleura smooth with some sparse and deeply punctures at first half; abdominal segments sparsely micropunctate, the first two covered laterally with sparse dressed short hairs; last segment with 1 pair (male) or 2 pairs (female) of setae near the posterior margin;

Legs. Slender, yellowish, almost transparent; knees, apical region of tibiae and tarsi brownish dark; trochanters black.

Aedeagus (Fig. 5). Slender, median lobe slightly curved and apex slightly upwards (lateral view); internal sac with tangled membranes very weakly sclerotized twisted in a pre-dorso-apical position; apex slightly bent to left (dorsal view); parameres like figure 5a.

Intraspecific variation. The range of variability observed in *L. schuelei* **sp. n.** (5 specimens) affects the pronotum shape (see description), the elytral yellow pattern and the number of teeth in apical elytrae margin (see description).

Concerning the variability within the elytral yellow patches, sometimes the sub-basal patch is absent in one elytron or on both, other times both the sub-basal and the median ones are also absent, remaining solely the subapicals. Asymmetries in the length of left and right elytron are common too.

Remarks. The species of this genus are characterized, among other features (see Péringuey 1896), by the convex pronotum inflated laterally in the median region and, consequently, presenting an oblong-ovate or fusiform shape more or less developed. The new species by the singular pronotum shape (subrectangular or even subtrapezoidal), presenting the lateral margins parallel or slightly oblique convergently backwards, is easily segregate from the remaining species. It seems closer to *L. egregia* Péringuey, 1896 by the reduced elytral patches, the elongate body, parallel elytra and the posterior elytral angle slightly denticled.

Ecological notes. Adult specimens from Munenga (Calulo) were found during day on open, moist patches with sparse vegetation within a meadow with a few single trees. Adult specimens from Negola were found also during day, walking on a sunshine loamy path after rain, within an open secondary forest. The single female specimen from Cambamba (Catoio-Quela) was found beneath litter in the edges of a countryside road with sandy soil within a secondary open forest (Fig. 9b) together with the tiger beetle *L. wellmani* and the ground beetles *C. convexcollis* and *G. ellipticus*.

Key to the Southern African species of *Lasiocera*

An identification key for the southern African species, including the new species, is provided.

1. Elytra punctato-striate, intervals more or less plain, not transversely rugose 2
- Elytra punctato-striate, intervals transversely rugose 3
2. Pronotum elongate-ovatum; elytrae depressed, intervals larger, an elongated sub-basal yellow patch on the 5th interval, a small dot below it on the 4th, three adjoining one another in the median region on 5th, 6th and 7th intervals respectively, two in the posterior region on the 3rd and 4th, two more a little lower down on the 5th and 6th and a supra-apical one close to the suture; legs yellowish, knees and tarsi brownish (Botswana, Namibia and South Africa) *peringueyi* Kuntzen
- Pronotum more transverse-ovatum; elytrae sub-convex, intervals narrower, three yellowish, arched transverse patches composed of elongated spots, the first in the basal region on the 3rd, 4th, 5th and 6th intervals respectively, the second middle stripe on the 2nd, 3rd, and 4th intervals, and the last from the 3rd to the 7th interval forming an arch, the last spot of which is somewhat separate and no longer elongated but round and a single standing small spot on the 7th interval close to the tip of the elytra; legs with femora, tibia tip and tarsi brown-blackish, tibia yellowish (Kenya, Tanzania, Mozambique, Zimbabwe and South Africa) *tesselata* Klug
3. Pronotum subrectangular or trapezoidal inverted; elytrae yellowish patches: one sub-basal, other sub-median, both on 6th interval, more or less rounded or in a small longitudinal line, and two joint small longitudinal sub-apicals, respectively on 5th and 6th intervals (Fig. 1 b) (Angola) *schuelei* **sp. n.**
- Pronotum oblong-ovate or fusiform 4
4. Pronotum oblong-ovate; elytrae depressed, parallel, deeply and closely punctato-striate, intervals narrow, sub-convex, an elongated longitudinal pale-yellow patch slightly notched in the middle on both sides situated in the first half near the lateral margin; another post-median, moderately large, transverse, and uneven one of the same color (South Africa R.) *gracilis* Boheman
- Pronotum fusiform; elytrae a little convex, sub-parallel, deeply and broadly punctato-striate, intervals very narrow, convex; four round, rather indistinct, yellowish patches: a sub-basal median and a post-median one in a longitudinal line, a nearly juxtaputural round dot close to the post-median patch a little lower down (Mozambique, Zimbabwe) *egregia* Péringuey

***Pentagonica* Schmidt-Goebel, 1846**

A very speciose genus with three species known for Angola (Ferreira 1965, Insectoid.info 2017).

***Pentagonica* sp.**

Distribution in Angola (Provinces): Huambo.

Material examined. Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 6.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A singleton female specimen was found on a wall near public lights (Caála) with other ground beetles (see *E. peringueyi* remarks). It was not possible to ascribe the specimen to any species.

***Graphipterus* Latreille, 1802**

A very speciose genus with nineteen species and ten subspecies known for Angola (Ferreira 1965, Basilewsky 1977, Insectoid.info 2017). The genus was split in two super-groups (*similitarsi* and *diversitarsi*), each one with several groups (Basilewsky 1977).

***laticollis* group**

***Graphipterus congoensis lundanus* Basilewsky, 1977**

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Bié.

Material examined. Chingueia-Mandongue (13° 35' 46'' S, 16° 58' 59'' E, 1648 m alt., 302) (BIÉ), 9.XI.2015, 2♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A subspecies known only from Angola and described on the basis of Caluango specimens (Basilewsky 1977). Our specimens fit very well this subspecies. Adult specimens were found within an open secondary forest together with the tiger beetle *E. muata parallelestriata*, among other tiger and ground beetles (see *S. lucidus strigiceps* remarks). Interestingly, both species present a similar pattern of elytral bands (Figs 6a, 6b) suggesting a possible mimicry. Moreover, both species resemble in the running behaviour also, thus being difficult to segregate them *in situ* without its capture. Similar observations were already reported to other Graphipterini/Cicindelini associations in Africa (Cassola & Taglianti 1988). It is a new record for the Bié Province.

***trilineatus* group**

***Graphipterus andersoni* Chaudoir, 1870**

Distribution in Angola (Provinces): 1) Huíla, Cunene; 2) Bié.

Material examined. Mumbué (Cuanza riverhead) (13° 49' 41'' S, 17° 19' 26'' E, 1511 m alt., 303) (BIÉ), 3.IV.2014, 1♀, 12.XI.2015, 4♀, DO, A. Serrano & R. Capela leg., ASC; Catota (2,5 km S) (14° 00' 37'' S, 17° 24' 00'' E, 1532 m alt., 323) (BIÉ), 8.XI.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. Basilewsky (1977) referred to this species as a synonymous of *G. amabilis* Boheman, 1860. Lorenz (2005) reestablished *G. andersoni* as a good species and considers the subspecies *ovipennis* Péringuey, 1892 as well as *subovipennis* Basilewsky, 1977 as synonymous, both with the status of subspecies of *G. amabilis* in Basilewsky (1977). Here we follow Lorenz (2005) criterium. The species is known from Angola, Botswana, Namibia and Zimbabwe (Basilewsky 1977, Insectoid.info 2017). Adults were found on sandy whitish soil or on reddish soil together with some adults of tiger and ground beetles (see *S. lucidus strigiceps* remarks). It is a new record for the Bié Province.

circumcinctus group

Graphipterus erychssoni erychssoni Péringuey, 1892

Distribution in Angola (Provinces): 1) Cunene; 2) Bié.

Material examined. Chitembo (6 km SE) (13° 33' 23'' S, 16° 47' 22'' E, 1586 m alt., 302) (BIÉ), 9.XI.2015, 2♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species known from Angola and Namibia (Basilewsky 1977, Insectoid.info 2017) with two subspecies (*jambanus* Basilewsky, 1977 and *ornatissimus* Basilewsky, 1977), both restricted to the southern territory of Angola (Basilewsky 1977, 1986a). Adults were found within an open secondary forest on sandy whitish soil together with some adults of tiger and ground beetles (see *S. lucidus strigiceps* remarks). The comments given to *G. congoensis lundanus* on mimicry associations between Cicindelini and Graphipterini can be reported also to this species (Figs 6a, 6c). It is a new record for the Bié Province.

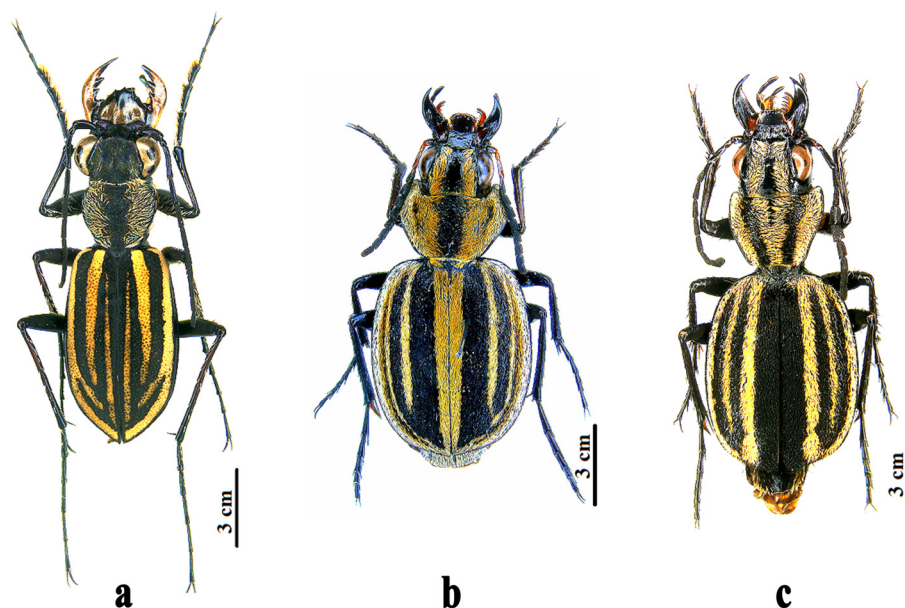


FIGURE 6. Facies of: a) *Elliptica muata parallelestriata*, Chingueia–Mandongue, b) *Graphipterus congoensis lundanus*, Chingueia–Mandongue, c) *Graphipterus erichssoni*, Chitembo.

albomarginatus group

Graphipterus albomarginatus albomarginatus Quedenfeldt, 1883

Distribution in Angola (Provinces): 1) Lunda Norte, Malanje, Benguela, Huambo, Huíla, Bié; 2) Kwanza Sul.

Material examined. Cruzeiro (Pedra do Alemão) (12° 46' 41.14'' S, 15° 54' 09.49'' E, 1743 m alt., 232) (HUAMBO), 4.XI.2014, 2♀, 7.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Calulo-Cabuta (9° 55' 16.84'' S, 14° 54' 53.08'' E, 826 m alt., 128) (KWANZA SUL), 5.XI.2014, 3♂, 1♀, DO, A. Serrano & R. Capela leg., ASC; Calulo-Cabeba (10° 02' 18'' S, 14° 55' 49'' E, 1061 m alt., 147) (KWANZA SUL), 5.XI.2014, 3♀, DO, A. Serrano & R. Capela leg., ASC; Londuimbali-Tinguita (12° 18' 10'' S, 15° 21' 15'' E, 1633 m alt., 231) (HUAMBO), 2.XI.2015, 5♂, 21♀, DO, A. Serrano & R. Capela leg., ASC; Longonjo-Catabola (13° 01' 15'' S, 15° 13' 18'' E, 1528 m alt., 279) (HUAMBO), 4.XI.2015, 3♂, 5♀, DO, A. Serrano & R. Capela leg., ASC; Cuima-Cusse (13km) (13° 20' 45'' S, 15° 34' 22'' E, 1633 m alt., 280) (HUAMBO), 5.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Ceilunga (Kuito) (12° 13' 40'' S, 17° 00' 20'' E, 1683 m alt., 235) (BIÉ), 10.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Kinglês (Lombe-Kalandula) (9° 23' 00'' S, 16° 0' 7' 46'' E, 1121 m alt., 113) (MALANJE), 18.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Santa Maria (=Quiluanje) (8° 55' 14'' S, 15° 58' 42'' E, 1157 m alt., 94) (MALANJE), 19.XI.2015, 2♂, DO, A. Serrano & R. Capela leg., ASC; Calulo

(Faz. Klein) (10° 02' 14'' S, 14° 54' 38'' E, 1059 m alt., 147) (KWANZA SUL), 3.XII.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC; Calulo (N. Faz. Belo Horizonte) (9° 56' 41'' S, 14° 56' 35'' E, 882 m alt., 128) (KWANZA SUL), 3.XII.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. The nominal species is known only from Angola (Basilewsky 1977, 1986b). Probably is the most common and widespread *Graphipterus* species in Angola. Adults were found in footpaths and country roads within open secondary forests running quickly when disturbed to hide beneath the litter. They are syntopic with some tiger and ground beetles, changing the species in accordance with the locality.

limbatus group

Graphipterus limbatus Laporte de Castelnau, 1840

Distribution in Angola (Provinces): 1) Cunene; 2) Bié, Cuando Cubango.

Material examined. Chitembo (6 km SE) (13° 33' 23'' S, 16° 47' 22'' E, 1586 m alt., 302) (BIÉ), 9.XI.2015, 2♂, DO, A. Serrano & R. Capela leg., ASC; Munquengue (14° 42' 01'' S, 17° 24' 14'' E, 1440 m alt., 343) (CUANDO CUBANGO), 14.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout southern Africa (Namibia, South Africa, Botswana, Zambia, Zimbabwe) (Basilewsky 1977, 1986b). Putzeys (1880) recorded already the species for Angola (Humbe, Cunene Province), but Basilewsky (1977) considered erroneous this report. However, our specimens fit very well the species description, confirming the species presence in Angola. Moreover, their presence in the southeastern territory of Angola is very plausible, according to the known distribution in the northern territory of Namibia close to the Cunene River. Adult specimens were found on whitish sandy soil near Chitembo within an open secondary forest together with some tiger and ground beetles (*T. nzingae*, *O. rufomarginata poggei*, *L. uncivittata*, *G. erikssoni*) and near Munquengue within shrub savannah together with some tiger beetles (*Dromica pentheri* W. Horn, 1899 and *Ophryodera rufomarginata bradshawi* Péringuey, 1888). It is a new record for the Bié and Cuando Cubango Provinces.

alternatus group

Graphipterus alternatus Burgeon, 1928

Distribution in Angola (Provinces): 1) Huambo, Huíla, Cuando Cubango; 2) Bié.

Material examined. Cachingues-Chipica (13° 10' 15.74'' S, 16° 45' 48.17'' E, 1649 m alt., 281) (BIÉ), 1.XI.2014, 6♂, 4♀, DO, A. Serrano & R. Capela leg., ASC; Cachingues (2 km E) (13° 04' 54'' S, 16° 46' 08'' E, 1647 m alt., 282) (BIÉ), 11.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Cuima-Cusse (13km) (13° 20' 45'' S, 15° 34' 22'' E, 1633 m alt., 280) (HUAMBO), 5.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. An endemic species of Angola (Basilewsky 1977). In Bié Province the adult specimens were found within secondary meadows on sandy whitish soil together with some tiger and ground beetles [Cachingues-Chipica: *P. angusticollis*, *Dromica similis* Cassola, 1980, *T. nubifera*, *L. infuscatula*; Cachingues: *P. angusticollis*, *D. similis*, *D. (Foveodromica)* sp., *L. infuscatula*, *L. saraliensis*, *Lophyra sumlini* Cassola, 1976, *Trianogenius ferox* (Erichson, 1843), *A. convexipennis*]. In the Huambo locality the adult specimen was collected together with *L. saraliensis* and *G. albomarginatus*. It is a new record for the Bié Province.

ellipticus group

**Graphipterus ellipticus ellipticus* Burgeon, 1928

Distribution in Angola (Provinces): 2) Malanje.

Material examined. Cambamba (Catoio-Quela) (09° 14' 42'' S, 17° 00' 33'' E, 1178 m alt., 115) (MALANJE), 20.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC; Santa Maria (=Quiluanje) (8° 55' 14'' S, 15° 58' 42'' E, 1157 m alt., 94) (MALANJE), 19.XI.2015, 1♂, 2♀, DO, A. Serrano & R. Capela leg., ASC; Carima

(Cacuso-Pungandongo) (09° 35' 00'' S, 15° 42' 01'' E, 1117 m alt., 130) (MALANJE), 23.XI.2015, 3♂, 12♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. The nominal species is known from D. R. of the Congo and Zambia (Basilewsky 1977, 1986b) and the subspecies *G. ellipticus upembanus* Basilewsky, 1977 from the same countries plus Tanzania (Basilewsky *op. cit.*). Adult specimens collected in Malanje province fit well the nominal species description. Adults were found within open secondary forests together with tiger and ground beetles [Cambamba (Catoio-Quela) and Carima: see *S. villhenai* and *C. convexicollis* remarks, respectively]. It is a new species record for Angola.

***Somoplatus* Dejean, 1829**

A genus with three species known from Angola (Basilewsky 1986a, Insectoid.info 2017), of which was collected one in our entomological trips.

***Somoplatus fulvus* Mulsant & Godart, 1867**

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Bié.

Material examined. Satchijamba (10 km E) (13° 43' 38.76'' S, 17° 12' 17.74'' E, 1601 m alt., 283) (BIÉ), 7.IV.2014, 1♀, VM, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout western, central, southern and eastern Africa (Senegal, Gambia, Guinea, Burkina Faso, Ivory Coast, Nigeria, Cameroon, D. R. of the Congo, Angola, South Africa R., Malawi, Kenya) (Basilewsky 1986a, Schüle 2009, Insectoid.info 2017). It was imported to France also (Basilewsky 1986a). The only record for Angola was reported by Basilewsky (1986a) apparently to Lunda Norte province, but without any exact locality. The species seems associated with vacated termite nests of *Macrotermes* sp. (Isoptera) (Basilewsky 1986a). The single adult female was collected by light trapping within an open secondary forest with other ground beetles (see *S. harpaloides* remarks). It is a new record for the Bié Province.

***Tetragonoderus* Dejean, 1829**

***Tetragonoderus quadrimaculatus* Gory, 1833**

Distribution in Angola (Provinces): 1) Lunda Norte ?; 2) Bié.

Material examined. Chitembo (10 km N) (13° 22' 40.78'' S, 16° 41' 58.07'' E, 1666 m alt., 282) (BIÉ), 1.XI.2014, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout western, central and southern Africa (Mauritania, Senegal, Gambia, Guinea-Bissau, Guinea, Chad, Ivory Coast, Mali, Angola, D. R. of the Congo, South Africa R.) (Serrano 2009, Insectoid.info 2017). It is with some reserve that we ascribe the singleton male adult specimen to this species. The apex of median lobe of aedeagus is slightly different of *T. quadrimaculatus* and more similar to the same organ of *T. quadrum* (Fabricius, 1792). However, this species is distributed on northern territories of Africa. The adult specimen was found in a country road within an open secondary forest. It is a new record for the Bié Province.

***Catascopus* Kirby, 1825**

A speciose genus with three species known for Angola (Alves 1963, Ferreira 1965, Insectoid.info 2017). One species was collected during our entomological trips.

***Catascopus beauvoisi* Laporte de Castelnau, 1835**

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Kwanza Sul.

Material examined. Alto Ventura (Colé-Calulo) (09° 59' 42'' S, 14° 50' 32'' E, 1116 m alt., 128) (KWANZA SUL), 4.XII.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout western, central and eastern Africa (Guinea, Ivory Coast, Togo, Liberia, Benin, Cameroon, Angola, D. R. of the Congo, Malawi, Tanzania) (Alves 1963, Insectoid.info 2017). The species was recorded for Angola by Alves (1963) (Dundo, Lunda Norte Province), but it was not given in Ferreira's catalogue (1965). The single male collected near Calulo confirms its presence in Angola. The adult specimen was found under tree bark together with *C. congolensis* (see also *C. intermedius* remarks). It is a new record for the Kwanza Sul Province.

***Coptodera* Dejean, 1825**

A genus with four species known for Angola (Ferreira 1965, Hansen 1968, Insectoid.info 2017) distributed by three subgenera (*Coptoderina* Jeannel, 1949, *Coptoderinella* Hansen, 1968 and *Haplocrepis* Jeannel, 1949).

****Coptodera (Coptoderina) congolensis* Burgeon, 1937**

Distribution in Angola (Provinces): 2) Kwanza Sul.

Material examined. Alto Ventura (Colé-Calulo) (09° 59' 42'' S, 14° 50' 32'' E, 1116 m alt., 128) (KWANZA SUL), 4.XII.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout western, central and eastern Africa (Senegal, Togo, Cameroon, Equatorial Guinea, Gabon, D. R. of the Congo, Rwanda, Uganda) (Hansen 1968, Insectoid.info 2017). Adult specimens were found under tree bark together with *P. liboloensis* sp. n. and *C. beauvoisi* (see also *C. intermedius* remarks). It is a new species record for Angola.

****Arsinoe* Laporte de Castelnau, 1835**

A genus not recorded until now for Angola (Ferreira 1965, Facchini 2011b, Insectoid.info 2017).

****Arsinoe laevigata* Basilewsky, 1970**

Distribution in Angola (Provinces): 2) Bié.

Material examined. Cachingues-Chipica (13° 10' 15.74'' S, 16° 45' 48.17'' E, 1649 m alt., 281) (BIÉ), 2.IV.2014, 1♀, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species known to western and central Africa (Guinea-Bissau, Guinea, Ivory Coast, Central African Republic, D. R. of the Congo) (Basilewsky 1970, Serrano 2009, Insectoid.info 2017). The single female specimen fits well with the original description and with specimens from Guinea-Bissau. The adult specimen was collected by light trapping together with other ground beetles (see *P. holosericus* remarks). It is a new genus/species record for Angola.

***Dontolobus* Basilewsky, 1970**

A genus recently recorded for Angola (Facchini 2012a).

***Dontolobus aemiliae* Facchini, 2012**

Distribution in Angola (Provinces): 1) Lunda Norte, Huambo, Bié.

Material examined. Satchijamba-Somakwanza (13° 44' 46.50" S, 17° 11' 2.26" E, 1611 m alt., 303) (BIÉ), 2.XI.2014, 2♂, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a scattered known distribution in Africa (Angola, Zambia, Tanzania) (Facchini 2012a). It was described recently by Facchini (2012a) and our adult specimens fit very well its description, including the aedeagus features. Adult specimens were collected by light trapping within an open secondary forest together with some other ground and ant nest beetles (e.g. *P. vanrooni*, *P. chappuisi*, *M. guineensis*, *A. monardianus*, *Stenolophus* sp.).

***Thyreopterus* Dejean, 1831**

A genus with tree species known for Angola (Ferreira 1965, Insectoid.info 2017) distributed by two subgenera [*Thyreopterus* (two species) and *Thyreopterinus* Alluaud, 1932 (one species)].

***Thyreopterus flavosignatus* Dejean, 1831**

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Bié.

Material examined. Satchijamba (10 km E) (13° 43' 38.76" S, 17° 12' 17.74" E, 1601 m alt., 283) (BIÉ), 7.IV.2014, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout western, central, southern and eastern Africa (Senegal, Gambia, Guinea-Bissau, Cameroon, Central African Republic, D. R. of the Congo, Angola, Namibia, South Africa R., Kenya) (Basilewsky 1955, Ferreira 1965, Serrano 2009, Insectoid.info 2017). Adult specimens were collected under the bark of decomposing trunks together with Zygentoma, Formicidae and Tenebrionidae adults and the ant nest beetle *P. pseudoklugi* within an open secondary forest. It is a new record for the Bié Province.

***Cymindoidea* Laporte de Castelnau, 1833**

A genus with one species reported for Angola (Basilewsky 1961, Ferreira 1965).

***Cymindoidea virgulifera* Chaudoir, 1875**

Distribution in Angola (Provinces): 1) Lunda Norte; 2) Huambo.

Material examined. Alto Hama (12° 13' 20" S, 15° 32' 57" E, 1512 m alt., 232) (HUAMBO), 31.X–2.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a large distribution in Africa south of Sahara (Senegal, Guinea-Bissau, Ivory Coast, Mali, Chad, D. R. of the Congo, Angola, Zambia, Zimbabwe, Uganda, Mozambique, Tanzania, Kenya, Ethiopia, Sudan) (Basilewsky 1961, Ferreira 1965, Serrano 2009, Insectoid.info 2017). The single female specimen was collected in a wall near a public light together with other ground beetles (see *C. rikatlensis* remarks). It is a new record for the Huambo Province.

****Polyaulacus* Chaudoir, 1878**

A genus not recorded until now for Angola (Ferreira 1965, Insectoid.info 2017).

****Polyaulacus brunneus* Chaudoir, 1878**

Distribution in Angola (Provinces): 2) Bié.

Material examined. Chitembo (10 km N) (13° 22' 40.78'' S, 16° 41' 58.07'' E, 1666 m alt., 282) (BIÉ), 1.XI.2014, 1♀, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout western, central, southern and eastern Africa (Guinea-Bissau, Guinea, Ivory Coast, D. R. of the Congo, South Africa R., Rwanda, Zambia, Zimbabwe, Mozambique, Tanzania) (Serrano 2009, Insectoid.info 2017). The singleton female specimen fits well the original description and is similar to Guinea-Bissau specimens (see Serrano 2009). The adult specimen was collected by light trapping within an open secondary forest together with a tiger beetle (*L. sumlini*) and ant nest beetles [*Heteropaussus trapezicollis* (Wasmann, 1922), *Paussus* (*Spinicoxipausus*) *cridae* Gestro, 1915] (see Serrano & Capela 2015a, 2015b). It is a new species record for Angola.

***Cylindrocranius* Chaudoir, 1878**

A genus with one species reported for Angola (Insectoid.info 2017).

****Cylindrocranius errans* Péringuey, 1896**

Distribution in Angola (Provinces): 2) Luanda.

Material examined. Barra do Cuanza (09° 18' 55.42'' S, 13° 09' 58.57'' E, 11 m alt., 107) (LUANDA), 28.IV.2014, 2♀, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species known until now from Botswana and Namibia (Insectoid.info 2017). Adult specimens fit very well the original description and are similar to a specimen from Namibia [South of Walvis Bay, "Musée Royal de l'Afrique Centrale (Belgium, Tervuren)"] and determined by P. Basilewsky (in Anichtchenko 2016). Adults were collected by light trapping close to River Cuanza within a riparian forest together with one ant nest beetle [*Carabidomemnus* (*Carabidodoxus*) sp.] and two ground beetles (*D. picicornis* and *M. guineensis*). It is a new species record for Angola.

Subfamily Dryptinae Bonelli, 1810

***Drypta* Latreille, 1796**

There are two species in this genus known from Angola (Ferreira 1965, Insectoid.info 2017). We collected two species not recorded to Angola yet.

****Drypta* (*Deserida*) *disctincta* (Rossi, 1792)**

Distribution in Angola (Provinces): 2) Huambo.

Material examined. Caála (12° 51' 11'' S, 15° 33' 07'' E, 1758 m alt., 256) (HUAMBO), 6.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species widespread throughout the Mediterranean Region, West Asia and Africa (Basilewsky 1960b, Insectoid.info 2017). Curiously, it was never recorded for Angola. A singleton female specimen was found on a wall near public lights with other ground beetles (see *E. peringueyi* remarks). It is a new species record for Angola.

****Drypta* (*Drypta*) *thoracica* Boheman, 1848**

Distribution in Angola (Provinces): 2) Bié.

Material examined. Chitembo (18 km SE) (13° 36' 17.53'' S, 16° 54' 00.44'' E, 1538 m alt., 302) (BIÉ), 1.IV.2014, 1♂, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species with a scattered distribution throughout western, central, southern and eastern Africa (Guinea, Ivory Coast, Cameroon, D. R. of the Congo, South Africa R., Rwanda, Tanzania, Kenya) (Basilewsky 1960b, Insectoid.info 2017). The single male was collected by light trapping within an open secondary forest

together with *P. pseudocrenulatus*. It is a new species record for Angola.

***Dendrocellus* Schmidt-Göbel, 1846**

A genus considered a synonymous of *Desera* Dejean 1825 by Lorenz (2005). However, it was reestablished before as a valid genus by Liang *et al.* (2004). There are three species known from Angola (Liang & Kavanaugh 2007, Serrano 2008–2009).

***Dendrocellus micropectinatus* Liang & Kavanaugh, 2007**

Distribution in Angola (Provinces): 1) Malanje; 2) Huambo.

Material examined. Alto Hama (12° 13' 20'' S, 15° 32' 57'' E, 1512 m alt., 232) (HUAMBO), 31.X–2.XI.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species known for Angola, Zambia and D. R. of the Congo (Liang & Kavanaugh 2007, Serrano 2008–2009). It was recorded for the first time to Angola based on one male specimen collected in “Parque Nacional da Cangandala, a protected area for the emblematic giant sable antelope *Hippotragus niger variani* Thomas, 1916. The new adult specimens collected in Huambo confirm its presence in Angola. Adult specimens were found at a wall during night near a public light together with other ground beetles (see *C. rikatlensis* remarks). It is a new record for the Huambo Province.

***Galerita* Fabricius, 1871**

A speciose genus with six species and one subspecies known from Angola (Basilewsky 1963, Ferreira 1965, Insectoid.info 2017).

***Galerita procera capelai* Serrano ssp. n.**

(Figs 7a, 7c, 8a, 8b, 8c)

Type series. Holotype, ♂; Angola (Kwanza Sul), Calulo-Cabuta (9° 53' 59'' S, 14° 54' 26'' E, 831 m alt., 128) (KWANZA SUL), 29.XI–6.XII.2015, PF, A. Serrano & R. Capela leg., ASC. Allotype 1♀: Mussende (Calulo) (9° 57' 00'' S, 14° 47' 36'' E, 905 m alt., 128) (KWANZA SUL), 28.XI–5.XII.2015, PF, A. Serrano & R. Capela leg., ASC; Paratypes, 2♂, same locality and date as Holotype, A. Serrano & R. Capela leg., ASC, PSC; 1♀, same locality and date as Allotype, A. Serrano & R. Capela leg., ASC.

Derivatio nominis. This subspecies is named in honour of Rúben Capela, a specialist on Diptera Culicidae and Ceratopogonidae, which has collaborated with the first author (AS) in the Angola entomological trips.

Diagnosis. Similar in form and color to *G. procera* Gerstaecker, 1867; five pairs of impar elytral carinae well developed, the 2nd par carinae (4th carinae) only slightly distinct in the first quarter, 3rd par carinae (6th carinae) distinct in the first and last thirds of elytrae, remaining par carinae almost indistinct, scutellar carina almost indistinct joining the first carina; median lobe of aedeagus with a hooked apex ventrally backwards (Figs 8a, 8b).

Description. Length of Holotype: 25.5 mm. Length of paratypes (without labrum): 25.32–25.33 mm (males), 25.89–26.30 mm (females).

Head (Fig. 7a) 1.2–1.3 times longer than wide [length: 4.62 mm (holotype and male paratypes), 4.62–4.82 mm (female allotype and paratype), width: 3.68 mm (holotype), 3.62–3.68 mm (male paratypes), 3.71–3.81 mm (female allotype and paratype)], black, eyes small, slightly wider than temples; front longitudinally protruded in the median region, almost smooth, two short deeply furrows laterally; occiput surface largely rugose-punctate, covered with very sparse blackish semierect pubescence, surface intervals smooth; mandibles and labrum blackish; palpi blackish, apical region of the last articles brownish, last article of both palpi strongly securiform; labrum with anterior margin straight or slightly arcuate; antennae prominent, densely pubescent, decreasing in thickness towards apex, first four antennomeres blackish, gradually brown dark to lighter brown since the 5th to the 11th, reaching or slightly surpassing the middle of elytra; Cephalic chaetotaxy (large setae, all brown-

yellowish): Labrum with three submarginal pairs of long setae, two pairs of long setae in a transversal middle line throughout the first half of clypeus disk, one pair on sides behind this anterior series and two pairs of very long supraocular setae present over each eye; some other not so long setae dispersed over the sides of clypeus and frons.

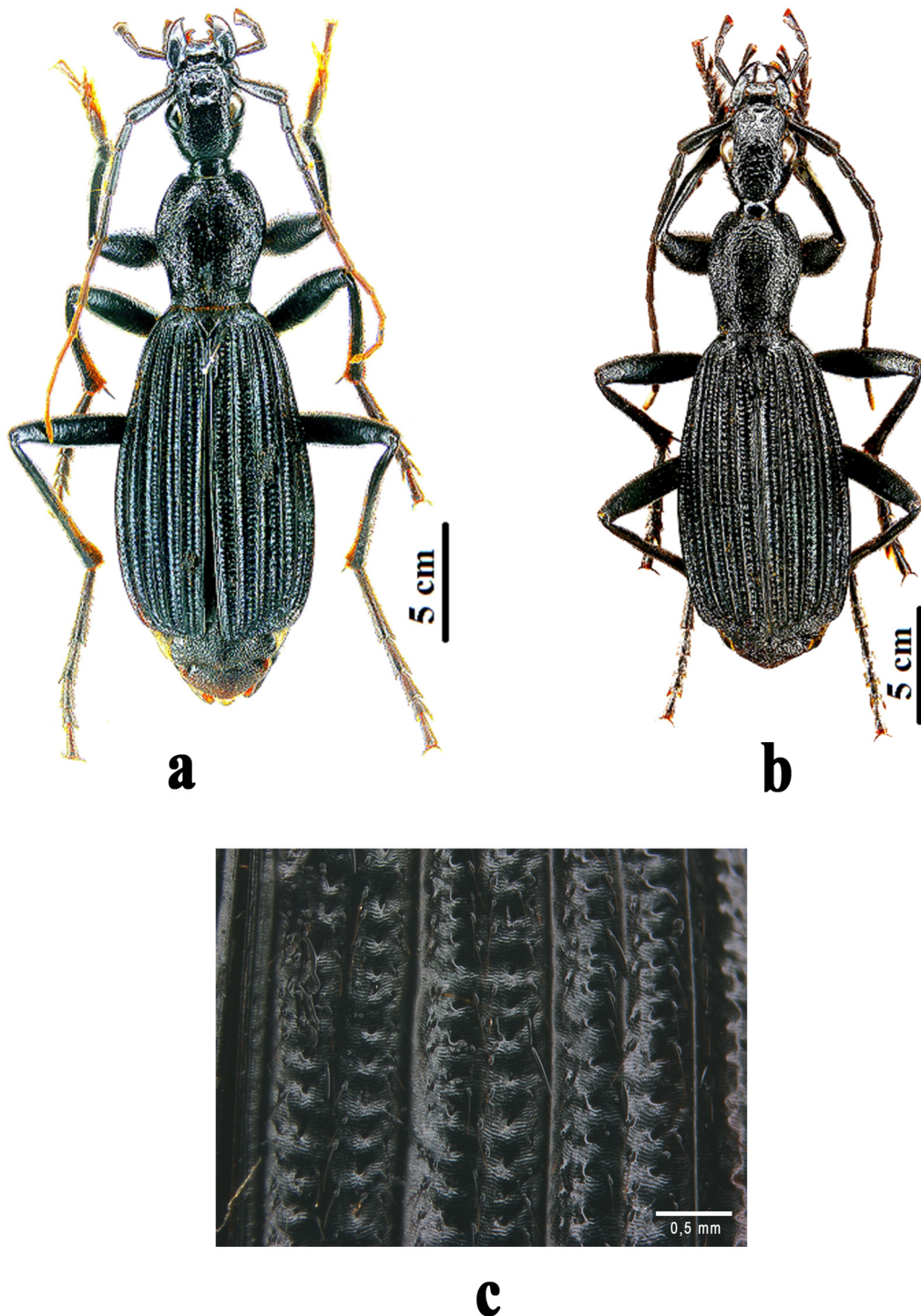


FIGURE 7. Facies of: a) *Galerita procera capelai* **ssp. n.**, male holotype and, b) *Galerita procera angolana*, Caconda-Cuima. *Galerita procera capelai* **ssp. n.**, male holotype: c) magnification of discal third region of right elytron.

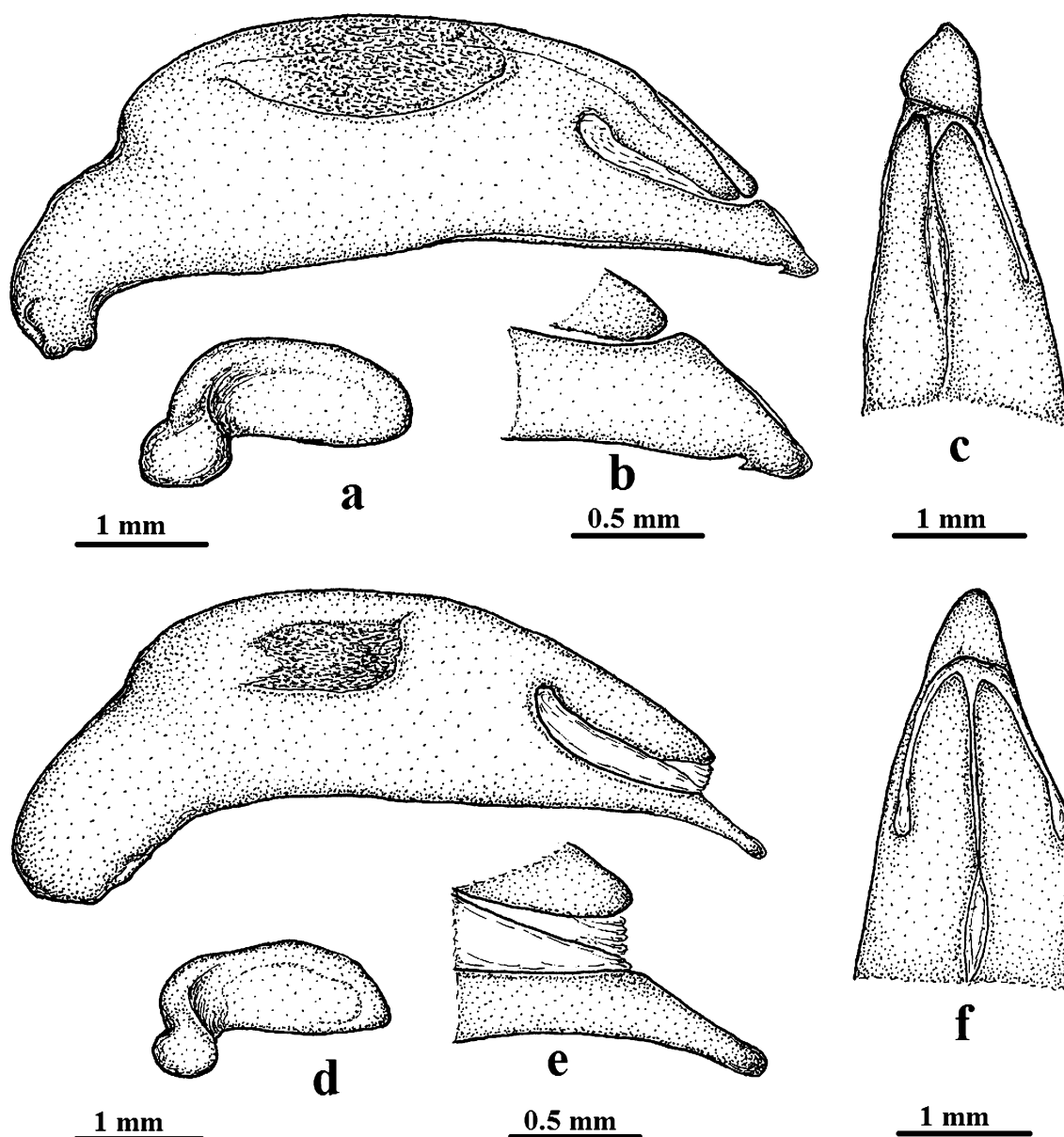


FIGURE 8. Median lobe of aedeagus and left paramere (lateral view), median lobe apex in higher magnification (lateral view) and median lobe apex (dorsal view), respectively: a), b) and c) *Galerita procera capelai* ssp. n, male holotype and, d), e) and f) *Galerita procera angolana*, male, Caconda-Cuima.

Thorax (Fig. 7a) Pronotum 1.13–1.21 times longer than wide [length: 5.68 mm (holotype), 5.71–5.74 mm (male paratypes), 5.68–5.87 mm (female allotype and paratype), width: 5.02 mm (holotype), 4.82–4.95 mm (male paratypes), 4.69–4.88 mm (female allotype and paratype)], black, wider than head, barely subcordiform, widest near the middle; lateral margins slightly raised, narrow, regularly round in the first two thirds, slightly subparallel or sinuate before the rectangular basal angles, round at tip; apical angles roundly acute, slightly protruded; apex and base finely margined, the former arcuate, the latter almost straight; disk gently convex; median line in middle slightly more impressed than anteriorly and posteriorly, neither reaching apex nor base; anterior transverse sulcus indistinct, posterior transverse sulcus slightly conspicuous in males, absent in females; basal grooves barely indicated; lateral margin with two elongate setae, one situated slightly before the middle, the other before the basal angle, two–three short setae near the anterior angles, a fringe of brown-reddish hairs at anterior and posterior margins (shorter in the former); surface strongly transversely punctate-rugose in sides and base, slighter in the disk, covered with sparse blackish semierected pubescence, microreticulation distinct, extremely fine, consisting of transverse meshes, shiny.

Elytra (Fig. 7a) 1.66–1.79 times longer than wide [length: 14.36 mm (holotype), 14.23–14.36 mm (male paratypes), 14.90–15.30 mm (female allotype and paratype), width: 8.65 mm (holotype), 8.05–8.11 mm (male paratypes), 8.31–8.91 mm (female allotype and paratype)], blackish, shiny, sometimes with violet reflections; wider than pronotum, broadly elongate-ovate, humeral angles not distinct, widest point behind the middle; dorsally very slightly convex, truncated obliquely at apex; each elytron with five distinct impair carinae, the 2nd par carinae (4th carinae) only slightly distinct in the first quarter, 3rd par carinae (6th carinae) distinct in the first and last thirds of elytrae, remaining par carinae almost indistinct, scutellar carina almost indistinct joining the first carina; intervals between two consecutive impair carinae with two longitudinal deep punctate rows, each flanked laterally by a row of brownish setae from base to apex, totalizing three rows; 4th interval narrower than others, by this with only one longitudinal punctate row flanked laterally by a row of brownish setae from base to apex; apical truncature with blackish pubescence; surface intervals covered with distinct, dense, transversely punctate-granulate meshes (Fig. 7c); hind wings absent.

Ventral surface. Black to brown dark, shiny in the head and thorax, dull in abdomen; genae sparsely punctate, sides covered with sparse black semierect setae; proepisterna smooth, not punctate in the upper sides, becoming sparsely punctate towards the ventral region; metaepisterna, pro, meso and metasterna densely punctate and pubescent (brownish color); elytral epipleura moderately punctate; abdominal segments densely punctate and pubescent like thoracic sterna; posterior margin of last segment deeply (males) or slightly (females) truncate in the middle region, one pair (males and females) of setae near the posterior margin.

Legs are conformed to the genus morphological pattern. Male forelegs with the three basal tarsomeres of tarsi more dilated in the inner region than in the outer (asymmetrical dilated), the 4th lesser asymmetrical, bilobed, presenting two rows of elongate, sensorial phaneres beneath.

Aedeagus (Figs 8a, 8b, 8c). Median lobe short, robust, apex hooked ventrally backwards (Fig. 8b). Endophallos with a large postero-latero-dorsal scaly plate. Left paramere large, round at apex, right atrophied.

Intraspecific variation. The range of variability observed in *G. procera capelai* **ssp. n.** (5 specimens) affects the median region of frons, more or less longitudinally protruded and the pronotum shape (more or less subcordiform). Asymmetries in the length of left and right elytron are common too. The pronotum is partially pubescent or almost glabrous, accordingly with the presence/absence of decumbent setae.

Remarks. The subspecies of *G. procera*, including the nominal one, are easily segregated by the apical conformation of the median lobe of aedeagus than by external morphological characters (see Basilewsky 1963). The representants of this complex (eight subspecies including the nominal one) are distributed from Angola to Kenya and Tanzania, throughout D. R. of the Congo, Zambia, Burundi, Rwanda and Uganda. *Galerita procera angolana* Basilewsky, 1963 was the unique subspecies known until now from Angola. By the recorded localities given (Basilewsky 1963, Ferreira 1965) it seems distributed in the central and eastern territories of Angola (Huambo, Lunda Norte and Moxico Provinces). Interestingly, *G. procera capelai* **ssp. n.** by the external morphological characters and shape of apical median lobe of aedeagus seems closer to the nominal subspecies than the already known Angolan subspecies. The nominal subspecies is proper of eastern Africa (Kenya and Tanzania), very faraway of the new subspecies locality. The other seven subspecies are distributed between the two taxa. In southern Africa this singular relationship in which species closer morphologically are strongly allopatric (western vs eastern) seems more common than expected (e.g. Serrano 1995). The new subspecies by the singular apical shape of median lobe (ventrally hooked backwards) (Fig. 8b) is easily segregate from the remaining subspecies (see Fig. 20, in Basilewsky 1963). *Galerita procera capelai* **ssp. n.** can be separated also from *G. procera angolana*, the subspecies closer territoriality of the new subspecies, by a very different shape of the median lobe apex (cf Figs 8b vs 8e) and further by the elytral carinae less elevated, the intervals slightly larger and less excavated, the rows between impair carinae shallower punctate and surface intervals covered with more distinct and dense transversely punctate-granulate meshes.

Ecological notes. Adult specimens were collected by means of pitfall trapping within secondary rainforest patches with moist soils, covered with dense and high litter (Fig. 9c), together with adults of some tiger and ground beetles [*Dromica* (*Foveodromica*) sp., *A. optimus*, *A. distinctus*, *D. tarsalis*, *C. magnicollis discrepans*, *O. gilvipes* and *O. patroboides*]. As happens with some carabid species living mainly at moist habitats (e.g. Rossi & Santamaria 2001) the adult specimens of the new species were more or less infected with ectoparasitic fungi of the order Laboulbeniales on pronotum as well on elytra. Some study cases were already reported to other African carabid species (e.g. Santamaria & Faille 2009).



FIGURE 9. Habitats of: a) *Perigona liboloensis* sp. n., Alto Ventura, Kwanza Sul, b) *Lasiocera schueleii* sp. n., Cambamba, Malanje, c) *Galerita procera capelai* ssp. n., Calulo-Cabuta, Kwanza Sul, d) *Habrodera nilotica* and *Lophyra neglecta intermediola* destroyed by sand removal (arrow) before Cambambe dam, Kwanza Sul, e) and f) *Dromica fredericoi* and *Trichotaenia pepetela* in November 2014 and 2015, well preserved and destroyed by fire, respectively, Catota, Bié.

Subfamily Anthiinae Bonelli, 1813

Meladroma Motschulsky, 1855

There is one species recorded to Angola (Basilewsky 1962).

**Meladroma informicollis* Liebke, 1928

Distribution in Angola (Provinces): 2) Bié.

Material examined. Chitembo (18 km SE) (13° 36' 17.53'' S, 16° 54' 00.44'' E, 1538 m alt., 302) (BIÉ), 30.X.2014, 1♂, LT, A. Serrano & R. Capela leg., ASC.

Remarks. A species known from Cameroon, Ivory Coast and D. R. of the Congo (Basilewsky 1962, Insectoid.info 2017). Curiously *M. katangensis* Burgeon, 1937, the species reported to Angola by Basilewsky (1962), is referred neither in Ferreira catalogue (1965) nor in Insectoid.info (2017). The singleton male adult specimen of *M. informicollis* was collected by light trapping within an open secondary forest together with some other ground beetles (see *S. angolense* remarks). It is a new species record for Angola.

***Trianogenius* Chaudoir, 1877**

There are eight species reported to Angola (Basilewsky 1959, Ferreira 1965, Insectoid.info 2017).

***Trianogenius ferox* (Erichson, 1843)**

Distribution in Angola (Provinces): 1) Benguela, Namibe, Huambo; 2) Bié.

Material examined. Cachingues (2 km E) (13° 04' 54'' S, 16° 46' 08'' E, 1647 m alt., 282) (BIÉ), 11.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species spread in Angola and Namibia (Basilewsky 1959, Insectoid.info 2017). Basilewsky (1959) reported that the species was distributed in the western and southwestern Angolan areas. The singleton male adult was found on sandy whitish soil within an open secondary forest together with some tiger beetles (see *G. alternatus* remarks). It is a new record for the Bié Province enlarging its distribution to the eastern territory of Angola.

***Netrodera* Chaudoir, 1850**

There are three species recorded for Angola (Ferreira 1965, Kleinfeld & Puchner 2012, Häckel & Farkač 2013b).

***Netrodera vethi* (Bates, 1889)**

Distribution in Angola (Provinces): 1) Benguela, Huíla; 2) Huambo.

Material examined. Cuima-Cusse (13° 22' 52'' S, 15° 30' 15'' E, 1583 m alt., 280) (HUAMBO), 5.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Catata-Nova Monção (13° 25' 59'' S, 15° 21' 22'' E, 1607 m alt., 279) (HUAMBO), 6.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. An endemic species of Angola described originally from Benguela (Kleinfeld & Puchner 2012). Adult specimens were found beneath litter within open secondary forests together with some tiger and other ground beetles (see *Orthogonius* sp. 1 remarks). It is a new record for the Huambo Province.

***Atractonotus* Perroud, 1847**

There is one species reported to Angola (Kleinfeld & Puchner 2012, Häckel & Farkač 2013b).

****Atractonotus puncticollis* Schüle & Heinz, 2013**

Distribution in Angola (Provinces): 2) Bié.

Material examined. Catota (2,5 km S) (14° 00' 37'' S, 17° 24' 00'' E, 1532 m alt., 323) (BIÉ), 8–17.XI.2015, 1♀, PF, A. Serrano & R. Capela leg., ASC.

Remarks. A species described and known only from Zambia (Schüle & Heins 2013). The single female specimen was checked with one female paratype of this species. There is another species within this genus reported to Angola (*A. mulsanti mulsanti* Perroud, 1847) which presents a larger distribution throughout central, southern and eastern Africa (Háva & Hovorka 2007, Kleinfeld & Puchner 2012). The adult was collected through pitfall trapping within an open secondary forest and is syntopic with some tiger and ground beetles (see *S. lucidus strigiceps* remarks). It is a new species record for Angola, enlarging its distribution to southwestern Africa.

***Cypholoba* Chaudoir, 1850**

A genus very well represented in Angola with fifteen species and two subspecies known within its territory (Ferreira 1965, Kleinfeld & Puchner 2012, Häckel & Farkač 2013b, Schüle 2015, Insectoid.info 2017).

***Cypholoba brevivittis* Chaudoir, 1866**

Distribution in Angola (Provinces): 1) Benguela, Namibe.

Material examined. Baixo Pundo (12° 20' 22.32'' S, 13° 50' 20.97'' E, 275 m alt., 227/8) (BENGUELA), 25–27.X.2013, 1♂, 2♀, PF, R. Capela leg., ASC.

Remarks. An endemic species of Angola originally described from Benguela (Kleinfeld & Puchner 2012). Adult specimens were collected within bush habitat with sparse grassy vegetation and sandy soil by pitfall trapping, together with the ground beetle *Harpalus* sp.

****Cypholoba gracilis* (Dejean, 1831)**

Distribution in Angola (Provinces): 2) Benguela.

Material examined. Chamume (12° 41' 38'' S, 13° 08' 51.9'' m E, 6 m alt., 251) (BENGUELA), 28.X.2013, 1♀, PF, R. Capela leg., ASC.

Remarks. The species is polymorphic with four recognized subspecies distributed mainly throughout southern and eastern Africa (Kleinfeld & Puchner 2012, Insectoid.info 2017). The nominal subspecies occurs in several South Africa Provinces, Botswana and Namibia (Kleinfeld & Puchner 2012). We do not ascribe our singleton female to any known subspecies, but she looks like the nominal form with the gray-whitish haired longitudinal median pronotal sulcus and the elytra totally glabrous. It could be ascribed to *Cypholoba edax* Péringuey, 1892 also, but our specimen does not present any whitish pubescence at the elytral base and the elytrae are more domed. It is a new species record for Angola.

***Cypholoba graphipteroides monardi* Burgeon, 1935**

Distribution in Angola (Provinces): 1) Huíla, Cunene; 2) Huambo.

Material examined. Cuima-Cusse (13° 22' 52'' S, 15° 30' 15'' E, 1583 m alt., 280) (HUAMBO), 5.XI.2015, 7♂, 3♀, 6.XI.2015, 1♂, 2♀, DO, A. Serrano & R. Capela leg., ASC; Catata-Nova Monção (13° 25' 59'' S, 15° 21' 22'' E, 1607 m alt., 279) (HUAMBO), 6.XI.2015, 2♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. The species is very polymorphic (differences in the setal patterns of the elytra), with fifteen recognized subspecies distributed mainly throughout central and eastern Africa (Lorenz 2005, Kleinfeld & Puchner 2012, Insectoid.info 2017). As referred by Mawdsley *et al.* (2012) “Many of these taxa are doubtfully distinct from the nominate form and the whole group is in need of a careful revision”, which is not the scope of this work. *Cypholoba graphipteroides monardi* seems proper to the south of Angola (Ferreira 1965). Adults were found in diurnal activity beneath litter and patches within open secondary forests together with other tiger and ground beetles (see *S. vilhenai* remarks). It is a new record for the Huambo Province.

***Cypholoba rohani* (Bénard, 1921)**

Distribution in Angola (Provinces): 1) Cuando Cubango; 2) Bié.

Material examined. Chingueia-Mandongue (13° 35' 46'' S, 16° 58' 59'' E, 1648 m alt., 302) (BI), 9.XI.2015, 1♂, 2♀, DO, A. Serrano & R. Capela leg., ASC; Munquengue (14° 42' 01'' S, 17° 24' 14'' E, 1440 m alt., 343) (CUANDO CUBANGO), 14.XI.2015, 2♀, DO, A. Serrano & R. Capela leg., ASC.

Remarks. An endemic species of Angola described on the basis of one specimen from the Menongue region (not Huíla District, but Cuando Cubango Province) (Bénard 1921 *in* Kleinfeld & Puchner 2012). Ferreira (1965) reported “distrito do Moxico, Menong (=Menongue) (MP)”, which is not correct also. Adults were found in activity in open secondary forest (first locality) and bush savannah (second locality) on sandy withish soil together with some tiger and ground beetles (see *S. lucidus strigiceps* and *G. limbatus* remarks, respectively).

***Termophilum* Basilewsky, 1950**

There are six species and three subspecies recorded for Angola (Ferreira 1965, Kleinfeld & Puchner 2012). Lorenz (2005) considers this genus as a subgenus of *Anthia* Weber, 1801. Here we follow Kleinfeld & Puchner (2012) systematic.

***Termophilum massilicatum* Guérin-Ménéville, 1845**

Distribution in Angola (Provinces): 1) Unknown; 2) BIÉ.

Material examined. Satchijamba-Somakwanza (13° 44' 46.50'' S, 17° 11' 2.26'' E, 1611 m alt., 303) (BIÉ), 31.X.2014, 1♂, 1♀, 2.XI.2014, 1♀, DO, A. Serrano & R. Capela leg., ASC; Catota (2,5 km S) (14° 00' 37'' S, 17° 24' 00'' E, 1532 m alt., 323) (BI), 2.XI.2014, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. A species spread throughout southern, central and part of eastern Africa (Angola, Namibia, South Africa, Zambia, Bostwana, Zimbabwe, Mozambique) (Ferreira 1965, Kleinfeld & Puchner 2012). The species was recorded for Angola without any reference to a known locality (Ferreira 1965). Adult specimens were found in nocturnal activity (first locality) and diurnal activity (second locality) within open secondary forests together with other ground beetles (first locality: see *S. tenebricosus fatalis* remarks) and the tiger beetles *P. angusticollis*, *D. fredericoi*, *D. pentheri*, *Dromica serietuberculata* W. Horn, 1929, *T. pepetela*, *L. uncivittata* and *C. agualusai* (second locality) (see also Serrano *et al.* 2015). It is a new record for the Bi Province.

***Anthia* Weber, 1801**

There are three species and one subspecies known for Angola (Ferreira 1965, Kleinfeld & Puchner 2012).

***Anthia* (*s.str.*) *cinctipennis actaeon* Erichson, 1843**

Distribution in Angola (Provinces): 1) Namibe; 2) Benguela.

Material examined. Lobito (12° 21' S, 13° 33'E, 10 m alt., 227/8) (BENGUELA), 20.III.1998, 2♀, 10.V.1998, 1♂, 1♀, PF, A. Neves leg., ASC; Biópio–Benguela (12° 27' 38.17'' S, 13° 44' 02.92'' E, 148 m alt., 228) (BENGUELA), 27.X.2013, 1♂, PF, R. Capela leg., ASC.

Remarks. The nominal species has a wide distribution throughout central, southern and eastern Africa (Angola, Namibia, South Africa, Zambia, Bostwana, Zimbabwe, Mozambique), but this subspecies is proper to South Angola and North Namibia (Kleinfeld & Puchner 2012). Adult specimens were collected by pitfall trapping in the outskirts of Lobito (see also *B. apicalis* remarks) and near Biópio within open xeric bush in sandy soil. It is a new record for Benguela Province.

Anthia (Odontanthia) convexipennis Putzeys, 1880

Distribution in Angola (Provinces): 1) Huíla; 2) Bié .

Material examined. Cachingues (2 km E) (13° 04' 54'' S, 16° 46' 08'' E, 1647 m alt., 282) (BIÉ), 11.XI.2015, 1♂, 1♀, DO, A. Serrano & R. Capela leg., ASC; Mumbué (Cuanza riverhead) (13° 49' 41'' S, 17° 19' 26'' E, 1511 m alt., 303) (BIÉ), 8–17.XI.2015, 1♀, PF, A. Serrano & R. Capela leg., ASC.

Remarks. An endemic species of Angola (Puchner 2013). It was synonymized with *Anthia calida* Harold, 1878 by Basilewsky (1960), but re-established as a good species by Puchner (2013). Our specimens fit very well this species, presenting the typical subhumeral band (Puchner 2013, figs 9, 10). Adult specimens were found within secondary meadows on sandy whitish soil together with some tiger and ground beetles (see *G. alternatus* and *S. lucidus strigiceps* remarks for the first and second localities, respectively). The species was known only for the south of Angola (Huíla Province), but the new localities enlarges its distribution for the eastern territory (Bié Province).

Anthia (Odontanthia) kleinfeldi Puchner, 2013

Distribution in Angola (Provinces): 1) Huambo, Huíla.

Material examined. Bembua-Camenhe (12° 16' 53'' S, 15° 27' 01'' E, 1686 m alt., 231) (HUAMBO), 1.XI.2015, 1♀, DO, A. Serrano & R. Capela leg., ASC; Catata-Nova Monção (13° 25' 59'' S, 15° 21' 22'' E, 1607 m alt., 279) (HUAMBO), 6.XI.2015, 1♂, DO, A. Serrano & R. Capela leg., ASC.

Remarks. Another endemic species of Angola localized in the Huambo and Huíla Provinces (Puchner 2013). Adult specimens fit very well the Puchner (2013) description, including the aedeagus. Adults were found beneath litter within an open secondary forest (first locality) and in an open secondary bush savannah (second locality) together with some other tiger and ground beetles (see *S. lucidus strigiceps* and *S. villhenai* remarks for the first and second localities, respectively).

Discussion

A total of around 510 ground beetles (species+subspecies) were recorded to Angola until this work (Ferreira 1965, Insectoid.info 2017). This is a relatively low number when compared with the neighbouring countries (see Introduction and Insectoid.info 2017). In this work 111 species/subspecies of ground beetles were listed and commented, two of them representing new species and one a new subspecies. Moreover, within this assemblage we recorded seven genera (*Arsinoe*, *Brachyodes*, *Callistomimus*, *Leptagonum* and *Polyaulacus*) and twenty seven species/subspecies (*Agonidium alacre*, *Aristopus elisabethanus*, *Arsinoe laevigata*, *Atractonotus puncticollis*, *Axinotoma latipalpis*, *Brachyodes pseudoguineensis*, *Callistomimus convexicollis*, *Chlaenius (Callistoides) pumilio*, *Chlaenius (Chlaeniostenus) tenuicollis*, *Chlaenius obtusus tazieffi*, *Chlaenius (Lyssauchenius) assecla*, *Coptodera (Coptoderina) congolensis*, *Cylindrocranius errans*, *Cypholoba gracilis*, *Drypta (Deserida) distincta*, *Drypta (Drypta) thoracica*, *Euleptus intermedius*, *Euleptus peringueyi*, *Graphipterus ellipticus*, *Graphipterus limbatus*, *Leptagonum elegans*, *Meladroma informicollis*, *Orthotrichus umtalianum*, *Polyaulacus brunneus*, *Siopelus (Neosiopelus) wrasei*, *Stenolophus (Egadroma) barbarae* and *Stenolophus (Egadroma) humeralis*) for the first time to Angola. The sum of all these results (Insectoid.info 2017, this work) allows us updating to 537 the total number of species/subspecies of ground beetles recorded for the fauna of Angola. Taking into account that our sampling effort was not directed restrictively toward the capture of carabids and were done only in a few regions of the country, these results showed that the Angolan carabid fauna is surely badly known. It is reinforced here, as was pointed out in a previous work concerning the tiger beetles of Angola (Serrano *et al.* 2015), that will be necessary a great effort during several years to gain a better full idea of the Angola ground beetle fauna and its distribution also. Further it is necessary urgently the implementation of biodiversity studies in the more pristine areas of Angola. These areas such as the afro-montane cloud forests or the semi-deciduous humid forests of Angola's northwestern highland (Uíge, Cuanza Norte, and Bengo) are suffering great threats connected with deforestation and fragmentation (see Serrano & Capela 2013 and references herein). Its precious entomofauna and

even vertebrate fauna, which are badly known too (e.g. Dijkstra *et al.* 2015, Ernst *et al.* 2014, Ernst *et al.* 2015), are under great risk of depauperation or even local extinction. Ideally these studies should be done on some insect target groups (e.g. Odonata, Carabidae, Lepidoptera) and, if possible, in association with botanic and vertebrate experts, to allow integrative recommendations and proposal measures which surely would contribute to a better protection/management of Angola's biodiversity. While programs toward the safeguard of habitats were not implemented and/or improved also, we will continue to assist to the gradual destruction of very important areas and consequently to the extinction of local populations. A case study of this situation, observed *in situ*, was for example, the sand removal of one beach in the edges of the Cuanza River before the Cambambe dam (9° 45' 27.15'' S, 14° 30' 38.15'' E, 111 m alt., Kwanza Sul Province), without a previous environmental impact assessment. This beach was the unique local until now known for the occurrence of the tiger beetle *Habrodera nilotica* (Dejean, 1825) (see Serrano *et al.* 2015) in the northern territory of Angola. Its total destruction led to the local extinction of this population (*cf.* Fig. 9d in Serrano *et al.* 2015 vs Fig. 9d in this work). Another case study connected with fire was checked in the Catota study station (coord: 14° 00' 37'' S, 17° 24' 00'' E, 1532 m alt, Bié Province). This station was the original homeland of two new described tiger beetle species (*D. fredericoi* and *T. pepetela*) (see Serrano & Capela 2015b, Serrano *et al.* 2015). The local was covered with a well developed secondary forest in November 2014 (the occurrence month of these tiger beetles as adults). One year later this forest was partially destroyed by fire to get charcoal (*cf.* Figs 9e vs. 9f) and no more individuals of *D. fredericoi* were observed or collected by pitfall trapping during our stay in 2015 November. The severe deforestation as a result of charcoal production and fuelwood extraction, by our direct observations, are common daily survival population activities, but surely with immediate or medium-term negative impacts on the Angolan biodiversity (fauna and flora), including vulnerability consequences due to climate changes also (e.g. Beaumont *et al.* 2011).

Acknowledgements

We are deeply grateful to Peter Schüle and Sergio Facchini by relevant support and information on ground beetles of Angola from their collections. We acknowledge Stéphane Hanot, Curator of Musée royal de l'Afrique centrale, Tervuren, for the precious informations on ground beetles deposited in its collection. We acknowledge Telmo Nunes and Maria de Lurdes Saramago for the valuable photographic assistance and bibliographic support, respectively. We thank A. Bivar de Sousa for the Dermaptera identification. We are also grateful to anonymous referees for the improvements over the original manuscript. This work is part of the project "Inventory of inshore and freshwater invertebrates and small vertebrates (Task ID 208) funded by Southern African Science Service Centre for Climate Change and Adaptive Land Management Integrated Science Plan (SASSCAL).

References

- Alves, M.L.G. (1956) Contribuição para o conhecimento dos Coleoptera de Angola. *Anais da Junta de Investigações do Ultramar*, 11 (3), 201–218.
- Alves, M.L.G. (1963) Carabídeos de Angola e Moçambique. *Memórias da Junta de Investigações do Ultramar*, 2 Série, 43, 31–74.
- Anichtchenko, A.V. (2016) Carabidae of the world. Available from: <http://carabid.org> (accessed 9 October 2017)
- Avgin, S. S. & Luff, M. L. (2010) Ground beetles (Coleoptera: Carabidae) as bioindicators of human impact. *Munis Entomology & Zoology*, 5 (1), 209–215.
- Baher, M. (2004) A new species of the genus *Perigona* Castelnau *s. str.* from southern Africa (Insecta, Coleoptera, Carabidae, Perigoninae). *Mitteilungen der Münchner Entomologischen Gesellschaft*, 94, 131–135.
- Bänninger, M. (1938) Monographie der Subtribus Scaritina (Col. Carab.). II. *Deutsche Entomologische Zeitschrift*, 1938, 41–181.
- Basilewsky, P. (1948) Contributions a l'étude des Coléoptères Carabidae du Congo Belge : III : Révision des Hexagoniidae d'Afrique. *Bulletin du Musée royal d'Histoire naturelle de Belgique*, 24 (52), 1–15.
- Basilewsky, P. (1950a) Révision générale des Harpalinae d'Afrique et de Madagascar (Coleoptera Carabidae). 1ère partie. *Annales du Musée du Congo Belge Tervuren*, In-8, Zoology, 6, 9–283.
- Basilewsky, P. (1950b) Révision des Anchomeninae (Coleoptera Carabidae) de l'Afrique du Sud. *Arkiv för Zoologi*, 1 (20), 275–299.
- Basilewsky, P. (1951) Révision générale des Harpalinae d'Afrique et de Madagascar (Coleoptera Carabidae). 2ème partie.

- Annales du Musée du Congo Belge Tervuren*, In-8, Zooligy, 6, 7–333.
- Basilewsky, P. (1953) *Exploration du Parc National de l'Upemba. Mission G.F. de Witte*. 10. Carabidae (Coleoptera Adephaga). Institut des Parcs Nationaux du Congo Belge, Bruxelles, 252 pp.
- Basilewsky, P. (1955) Carabidae (Coleoptera) de l'Angola (première partie). *Publicações Culturais da Companhia de Diamantes de Angola*, 27, 91–137.
- Basilewsky, P. (1959) Le genre *Triaenogenius* Chaudoir (Coleoptera Carabidae Helluoninae). *Revue Zoologique et Botanique d'Afrique*, 60 (3–4), 257–282.
- Basilewsky, P. (1960a). Carabidae (Coleoptera) de l'Angola (deuxième partie). *Publicações Culturais da Companhia de Diamantes de Angola*, 51, 41–50.
- Basilewsky, P. (1960b). Étude des Dryptinae d'Afrique (Coleoptera Carabidae). *Bulletin et Annales de la Société royale d'Entomologie de Belgique*, 96 (5–8), 133–182.
- Basilewsky, P. (1961) Contribution la connaissance des Lebiinae d'Afrique (Coleoptera Carabidae). *Revue Zoologique et Botanique d'Afrique*, 64 (1–2), 153–171.
- Basilewsky, P. (1962) *Exploration du Parc National de la Garamba. Mission H. de Saeger. Carabidae I (Coleoptera Adephaga). Vol. 29*. Institut des Parcs Nationaux du Congo et du Rwanda, Bruxelles, 152 pp.
- Basilewsky, P. (1963) Révision des Galeritiniinae d'Afrique et de Madagascar (Coleoptera Carabidae). *Annales du Musée Royale de l'Afrique Centrale*, In-8, Zooligy, 120, 1–93.
- Basilewsky, P. (1968) Descriptions de trois Coléoptères Carabidae nouveaux de la République Centrafricaine. *Revue de Zoologie et Botanique Africaines*, 78, 350–356.
- Basilewsky, P. (1970) Descriptions de Coléoptères Carabidae africains nouveaux de la sous-famille des Pericalinae. *Revue de Zoologie et Botanique Africaines*, 82 (1–2), 47–64.
- Basilewsky, P. (1977) Révision du genre *Graphipterus* Latreille (Coleoptera Carabidae). *Annales du Musée Royale de l'Afrique Centrale*, In-8, Zoology, 221, 1–472.
- Basilewsky, P. (1986a) Sur quelques genres de Masoreini africains (Coleoptera Carabidae). *Revue de Zoologie Africaine*, 100, 237–258.
- Basilewsky, P. (1986b) Notes sur le genre *Graphipterus* Latreille. II (Coleoptera, Carabidae). *Revue de Zoologie Africaine*, 100, 275–288.
- Basilewsky, P. (1987) Descriptions de quelques espèces africaines nouvelles du genre *Craspedophorus* Hope et notes synonymiques (Coleoptera Carabidae Panagaeini). *Bulletin et Annales de la Société royale d'Entomologie de Belgique*, 123, 185–201.
- Basilewsky, P. (1989) Révision des Perigonini d'Afrique (Coleoptera Carabidae). *Revue de Zoologie Africaine*, 103, 413–452.
- Beaumont, L.J., Pitman, A., Perkins, S., Zimmermann, N.E., Yoccoz, N.G. & Thuiller, W. (2011) Impacts of climate change on the world's most exceptional ecoregions. *Proceedings of the National Academy of Sciences of the United States of America*, 108 (6), 2306–2311.
<https://doi.org/10.1073/pnas.1007217108>
- Brandmayr, P., Giorgi, F., Casale, A., Colombetta, G., Mariotti, L., Vigna Taglianti, A., Weber, F. & Pizzolotto, R. (2013) Hypogean carabid beetles as indicators of global warming? *Environmental Research Letters*, 8, 1–11.
<https://doi.org/10.1088/1748-9326/8/4/044047>
- Britton, E.B. (1937) New african species of the genus *Callistomimus* (Coleoptera: Carabidae). *Proceedings of the Royal Entomological Society of London (B)*, 6 (2), 17–25.
<https://doi.org/10.1111/j.1365-3113.1937.tb00286.x>
- Bruneau de Miré P. (1966) Révision des *Tachylopha* Motschulsky d'Afrique. *Revue de Zoologie et de Botanique Africaines*, 73, 59–100.
- Burgeon, L. (1935) Catalogues raisonnés de la faune entomologique du Congo Belge. Coléoptères Carabides (première partie). *Annales du Musée du Congo Belge*, Zoology, Série 3 (2), 2 (3), 133–257.
- Cassola, F. & Pearson, D.L. (2000) Global patterns of tiger beetle species richness (Coleoptera: Cicindelidae). *Biological Conservation*, 95, 197–208.
[https://doi.org/10.1016/S0006-3207\(00\)00034-3](https://doi.org/10.1016/S0006-3207(00)00034-3)
- Cassola, F. & Taglianti, A.V. (1988) Mimicry in Cicindelini e Graphipterini africani (Coleoptera, Caraboidea). *Biogeographia*, 14, 229–233.
- Chaudoir, M. (1871) Essai monographique sur les Orthogoniens. *Annales de la Société entomologique Belgique*, 14, 95–130.
- Clarke, R.O.S. (1972) A new african genus of Harpalinae (Col. Carabidae), resulting from a revision of *Axinotoma posticalis* Péringuey and *A. pseudornata* Basilewsky. *Revue Zoologique et Botanique d'Afrique*, 86 (1–2), 109–115.
- Clarke, R.O.S. (1981). A revision of the african genus *Pseudoharpalus* Basilewsky with the description of a new genus, and notes on their phylogeny and historical zoogeography (Coleoptera Carabidae Harpalini). *Revue de Zoologie Africaine*, 95 (4), 848–922.
- Crawford-Cabral, J. & Mesquitela, L.M. (1989) Índice toponímico de colheitas zoológicas em Angola. *Estudos, Ensaios e Documentos*, 151, 1–206.
- Dijkstra, K.-D.B., Kipping, J. & Mézière, N. (2015) Sixty new dragonfly and damselfly species from Africa (Odonata). *Odonatologia*, 44 (4), 447–678.
- Erichson, W.F. (1843) Beiträge zur Insecten – Fauna von Angola, in besonderer Beziehung zur geographischen Verbreitung der

Insecten in Africa. *Archiv für Naturgeschichte*, 9, 199–267.

- Ernst, R., Nianguesso, A.B.T., Lautenschläger, T., Barej, M.F., Schmitz, A. & Hölting, M. (2014) Correspondence. Relicts of a forested past: Southernmost distribution of the hairy frog genus *Trichobatrachus* Boulenger, 1900 (Anura: Arthroleptidae) in the Serra do Pingano region of Angola with comments on its taxonomic status. *Zootaxa*, 3779 (2), 297–300. <https://doi.org/10.11646/zootaxa.3779.2.10>
- Ernst, R., Schmitz, A., Wagner, P., Branquima, M.F. & Hölting, M. (2015) A window to Central African forest history: distribution of the *Xenopus fraseri* subgroup south of the Congo Basin, including a first country record of *Xenopus andrei* from Angola. *Salamandra*, 51 (2), 147–155.
- Facchini, S. (2011a) Nine new species of *Axinotoma* Dejean, 1829 from Africa (Insecta Coleoptera Carabidae Harpalinae). *Quaderno di Studi e Notizie di Storia Naturale della Romagna*, 34, 75–103.
- Facchini, S. (2011b) Descrizione di sei nuovi taxa del genere *Arsinoe* Laporte de Castelnau, 1835 dell’Africa continentale (Coleoptera, Carabidae, Lebiini). *Giornale italiano di Entomologia*, 12, 301–313.
- Facchini, S. (2012a) Nuove specie di *Pericalina* Hope, 1838 della Regione Afrotropicale (Coleoptera, Carabidae, Lebiini). *Giornale italiano di Entomologia*, 13 (57), 39–52.
- Facchini, S. (2012b) Ten new taxa of the Subgenus *Egadroma* Motschulsky, 1855 of the Genus *Stenolophus* Dejean, 1821 from the Afrotropical Region and notes on some other species of the subgenus (Coleoptera Carabidae, Harpalinae). *Giornale italiano di Entomologia*, 13 (57), 69–96.
- Facchini, S. (2012c) Notes on the genus *Siopelus* Murray, 1859, with descriptions of seventeen new species from Africa (Coleoptera Carabidae, Harpalinae). *Giornale italiano di entomologia*, 13 (57), 117–154.
- Facchini, S. (2016a) Notes on the Subgenus *Egadroma* Motschulsky, 1855 of the Genus *Stenolophus* Dejean, 1821, with descriptions of nine new taxa from the Afrotropical Region (Coleoptera Carabidae, Harpalinae). *Giornale italiano di Entomologia*, 14 (61), 299–328.
- Facchini, S. (2016b) *Platymetopus pseudocrenulatus* new species from Africa (Coleoptera Carabidae, Harpalinae). *Giornale italiano di Entomologia*, 14 (61), 515–524.
- Facchini, S. (2017a) Two new species of *Axinotoma* Dejean, 1829 from Africa (Coleoptera: Carabidae, Harpalinae). *Giornale italiano di Entomologia*, 14 (62), 715–722.
- Facchini, S. (2017b) Notes on the Subgenus *Pseudosiopelus* Alluaud, 1916 of the Genus *Siopelus* Murray, 1859, with descriptions of three new species from Africa (Coleoptera Carabidae, Harpalinae). *Giornale italiano di Entomologia*, 14 (62), 813–826.
- Ferreira, M.C. (1965) Catálogo dos Coleópteros de Angola. *Revista de Entomologia de Moçambique*, 8 (2), 415–1317.
- Häckel, M. (2013) *Kritický náhled na současnou infragenerickou systematiku rodu krajník Calosoma, Carabini, Carabidae* [A critical overview on the recent infrageneric taxonomy of the caterpillar hunter (Calosoma, Carabini, Carabidae)]. *Diploma’s Work*. Czech University of Life Sciences Prague, Faculty of Environmental Sciences, Department of Ecology, Prague, 86 pp., 2 appendices. [in Czech with English abstracts]
- Häckel, M. & Farkač, J. (2012) A check-list of the subfamily Panagaeinae Hope, 1838 of the World (Coleoptera: Carabidae). *Taxonomical Series*, 8 (1–2), 67–116.
- Häckel, M. & Farkač, J. (2013a) Addenda and corrigenda to Checklist of the subfamily Panagaeinae Hope, 1838 of the World (Coleoptera: Carabidae). *Taxonomical Series*, 9 (2), 249–256.
- Häckel, M. & Farkač, J. (2013b) A checklist of the subfamily Anthiinae Bonelli, 1813 of the World (Coleoptera: Carabidae). *Studies and Reports. Taxonomical Series*, 9 (2), 261–384.
- Häckel, M., Farkač, J. & Sehnal, R. (2016) *Calosoma aethiops* (Jeannel, 1940) as a new synonym of *Calosoma imbricatum hottentotum* Chaudoir, 1852, a new status of *Calosoma roeschkei* Breuning, 1927, and a revision of the *Calosoma senegalense* group sensu Häckel, 2012 (Coleoptera, Carabidae, Carabini). *Zookeys*, 609, 11–28. <https://doi.org/10.3897/zookeys.609.6822>
- Hansen, W. (1968) Revision des Coptoderines d’Afrique (Coleoptera Carabidae Coptoderinae). *Bulletin & Annales de la Société Royale d’Entomologie de Belgique*, 104 (7–8), 277–363.
- Harold, E. von (1878) Diagnosen neuer Coleopteren aus dem inneren Afrika. *Mittheilungen des Münchner Entomologischen Vereins*, 2, 99–111.
- Harold, E. von (1879) Bericht über die von den Herren A. von Homeyer und P. Pogge in Angola und in Lunda – Reiche gesammelten Coleopteren. *Coleopterologische Hefte*, 16, 1–224.
- Háva, J. & Hovorka, O. (2007) Contribution to the knowledge of the genus *Atractonotus* Perroud, 1846 (Coleoptera: Carabidae: Anthiini). *Veröffentlichungen Naturkundemuseum Erfurt*, 26, 229–232.
- Insectoid.info - Insects and other Arthropoda - Insecta. Available from: URL: <http://insectoid.info/checklist/carabidae/angola/>. (accessed 9 October 2017)
- Junta de Investigações do Ultramar & Governo Geral de Angola (Eds.) (1948–1963) *Cartas do levantamento aerofotogramétrico de Angola*. Escala 1: 250 000, 118 folhas.
- Kirschenhofer, E. (2007) Über neue und wenig bekannte *Chlaenius* Arten der Untergattung *Lissauchenius* MacLeay, 1825 der äthiopischen Region (Coleoptera: Carabidae). *Acta Coleopterologica*, 23 (3), 21–32.
- Kleinfeld F. & Puchner A. (2012) *Anthiinae*. Monographischer Bildatlas, Eigenverlag Frank Kleinfeld, Fürth, 273 pp.
- Koivula, M.J. (2011) Useful model organisms, indicators, or both? Ground beetles (Coleoptera, Carabidae) reflecting environmental conditions. *Zookeys*, 100, 287–317.

<https://doi.org/10.3897/zookeys.100.1533>

- Kult, K. (1959) Revision of the African species of the old genus *Clivina* Latr. (Col. Carabidae). *Revue Zoologique et Botanique d'Afrique*, 60 (1–2), 172–225.
- Larochelle, A. & Larivière, M.-C. (2001) Carabidae (Insecta: Coleoptera): catalogue. *Fauna of New Zealand*, 43, 1–281.
- Lecordier, C. (1972) Note sur les Oodinae (Coleoptera Carabidae) d'Afrique Noire. *Revue Zoologique et Botanique d'Afrique*, 86 (1–2), 1–16.
- Lecordier, C. (1988) Le genre *Hyparpalus* Alluaud en Afrique (Coleoptera: Carabidae, Harpalinae). *Annales de la Société entomologique de France*, New Series, 24 (1), 1–38.
- Lecordier, C. (1990) Oodinae (Coleoptera Carabidae) nouveaux du Musée royal de l'Afrique centrale. 1^{ère} partie. *Journal of African Zoology*, 104, 265–273.
- Liang, H. & Kavanaugh, D.H. (2007) Review of the genus *Dendrocellus* Schmidt-Göbel (Coleoptera: Carabidae: Dryptini), with descriptions of seven new species. *The Coleopterists Bulletin*, 61 (1), 1–39.
<https://doi.org/10.1649/934.1>
- Liang, H., Kavanaugh, D.H. & Tian, M.-Y. (2007) Notes on *Drypta longicollis* MacLeay and the status of the genus-group name *Desera* Dejean, 1825 (Coleoptera: Carabidae: Dryptini). *Proceedings of the California Academy of Sciences*, Series 4, 55, 377–383.
- Liebke, M. (1938) Denkschrift über die Carabiden-Tribus Colliurini. Festschrift zum 60. Geburtstag von Professor Dr. Embrik Strand, 4, 37–141.
- Lorenz, W. (2005) *Systematic list of extant ground beetles of the world. (Insecta Coleoptera "Geodephaga: Trachypachidae and Carabidae incl. Paussinae, Cicindelinae, Rhysodinae)*. Privately published, Tutzing, 530 pp.
- Luna de Carvalho, E. (1975) Paussideos de Angola (Coleoptera, Carabidae, Paussinae). *Arquivos do Museu Bocage*, Série 2, 5 (2), 383–477.
- Martins da Silva, P., Aguiar, C.A.S., Niemela, J., Sousa, J.P. & Serrano, A.R.M. (2008) Diversity patterns of ground-beetles (Coleoptera: Carabidae) along a gradient of land-use disturbance. *Agriculture, Ecosystems and Environment*, 124, 270–274.
<https://doi.org/10.1016/j.agee.2007.10.007>
- Mawdsley, J.R., Erwin, T.L., Sithole, H. & Mawdsley, A.S. (2012) A synopsis of the genus *Cypholoba* Chaudoir (Coleoptera, Carabidae, Anthiini) known to occur in the Republic of South Africa. *Zookeys*, 181, 23–43.
<https://doi.org/10.3897/zookeys.181.2984>
- Monard, A. (1956) *Compendium Entomologicum Angolae*. I. *Anais Junta de Investigações do Ultramar*, 11 (3), 9–147.
- Müller, G. (1940) *Synopsis specierum generis Stereostoma* (Coleop. Carabidae). *Atti del museo civico di storia naturale di Trieste*, 14, 243–249.
- Müller, G. (1944) Monografia del gen. *Stereostoma* Murray (Coleopt. Carabidae). *Atti del museo civico di storia naturale di Trieste*, 15, 147–198.
- Pakeman, R.J. & Stockan, J.A. (2014) Drivers of carabid functional diversity: abiotic environment, plant functional traits, or plant functional diversity? *Ecology*, 95 (5), 1213–1224.
<https://doi.org/10.1890/13-1059.1>
- Pearson, D.L. & Vogler, A.P. (2001) *Tiger beetles. The evolution, ecology, and diversity of the cicindelids*. Comstock Publishing Associates, Cornell University Press, Ithaca, 333 pp.
- Péringuey, L. (1896) A descriptive catalogue of the Coleoptera of South Africa. Part II. Carabidae. *Transactions of the South African Philosophical Society*, 7, 125–623, pls. III–X.
- Péringuey, L. (1904). Description of new species of Coleoptera in the collection of the South African Museum. *Annals of the South African Museum*, 3, 16–206.
- Puchner, A. (2013). Beschreibung einer neuen *Anthia* (*Odontanthia*)-Art (Coleoptera: Carabidae: Anthiinae) als Ergebnis einer entomologischen Sammelreise nach Angola. *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen*, 65, 37–49.
- Putzeys, J. (1880) Études sur les insectes de l'Afrique que se trouvent au Museum National de Lisbonne. Fam. Cicindelidae et Carabidae. *Jornal de Ciencias Mathematicas, Physicas e Naturaes*, 1 Sér., 8 (24), 21–48.
- Rossi, W. & Santamaria, S. (2001) Laboulbeniales (*Ascomycetes*) in the Mediterranean area. *Boccone*, 13, 125–130.
- Quedenfeldt, G. (1883) Verzeichniss der von Herrn Major a. D. von Mechow in Angola und am Quango-Strom gesammelten Cicindeliden und Carabiden. *Berliner entomologische Zeitschrift*, 17, 241–268.
- Quedenfeldt, G. (1888) Beiträge zur Kenntniss der Koeopteren-Fauna von Central – Afrika nach den Ergebnissen der Lieutenant Wissmann'schen Kassai-Expedition 1883 bis 1886. *Berliner entomologische Zeitschrift*, 32 (1), 155–219.
- Santamaria, S. & Faille, A. (2009) New species of *Laboulbenia* and *Rhachomyces* (Laboulbeniales, Ascomycota), some of them polymorphic, parasitic on termiticolous ground beetles from tropical Africa. *Nova Hedwigia*, 89 (1–2), 97–120.
<https://doi.org/10.1127/0029-5035/2009/0089-0097>
- Schuldt, A. & Assmann, T. (2009) Environmental and historical effects on richness and endemism patterns of carabid beetles in the western Palaearctic. *Ecography*, 32 (5), 705–714.
<https://doi.org/10.1111/j.1600-0587.2009.05763.x>
- Schüle, P. (2015) A new species of the *Cypholoba divisa*-group from Angola (Coleoptera, Carabidae). *Entomologia Africana*, 20 (1), 2–6.

- Schüle, P. & Bednařík, M. (2015) A new species of the genus *Paussus* Linnaeus, 1775 from Angola (Coleoptera, Carabidae). *Entomologia Africana*, 20 (1), 29–34.
- Schüle, P. & Heinz, W. (2013) Two new species of Anthini from Southern Africa (Coleoptera: Carabidae). *Entomologische Zeitschrift*, 123 (4), 169–172.
- Serrano, A.R.M. (1995) Coléoptères caraboidea de l'Île de São Tomé (Golfe de Guinée). Faunistique et description d'espèces nouvelles (Coleoptera, Caraboidea). *Nouvelle Revue d'Entomologie*, Nouvelle Série, 12 (4), 281–296.
- Serrano, A.R.M. (1999a) Chapter 7. Are tiger beetles (Coleoptera: Cicindelidae) well studied? A myth or a reality. In: Sobti, R.C. & Yadav, J.S. (Eds.), *Some aspects on the insight of insect biology*. Narendra Publishing House, Dehli, pp. 69–89.
- Serrano, A.R.M. (1999b) Estudo de coleópteros carabídeos (Coleoptera; Carabidae) da Guiné-Bissau. II. Harpalinae (1 parte). *Boletim da Sociedade portuguesa de Entomologia*, 7 (9), 89–110.
- Serrano, A.R.M. (1999c) Estudo de coleópteros carabídeos (Coleoptera; Carabidae) da Guiné-Bissau. III. Harpalinae (2 parte). *Boletim da Sociedade portuguesa de Entomologia*, 7 (11), 117–139.
- Serrano, A.R.M. (2008) A new species of the genus *Perigona* Castelnau, 1835 and new records of tiger and ground beetles for S. Tomé e Príncipe Islands (Coleoptera: Caraboidea, Cicindelidae, Carabidae). *Lambillionea*, 108 (3), 323–328.
- Serrano, A.R.M. (2008-2009) Biodiversity and notes on carabid beetles from Guinea-Bissau. VII. Dryptinae (Coleoptera: Carabidae). *Elytron*, 22–23, 3–14.
- Serrano, A.R.M. (2009) Biodiversity and notes on Carabid beetles from Guinea-Bissau. VI. Lebiinae (Coleoptera, Carabidae). *Nouvelle Revue d'Entomologie*, Nouvelle Série, 26 (1), 27–46.
- Serrano, A.R.M. & Capela, R.A. (2013) The tiger beetles (Coleoptera: Carabidae, Cicindelinae) of Angola: a descriptive catalogue and designation of neotypes. *Zootaxa*, 3731 (4), 401–444.
<https://doi.org/10.11646/zootaxa.3731.4.1>
- Serrano, A.R.M. & Capela, R.A. (2015a) Scientific note. New records of ant nest beetles (Coleoptera: Carabidae: Paussinae: Paussini) in Angola and an annotated list of species known from the country. *The Coleopterists Bulletin*, 69 (3), 525–528.
<https://doi.org/10.1649/0010-065X-69.3.525>
- Serrano, A.R.M. & Capela, R.A. (2015b) Tiger beetles of Angola: a new species of the genus *Dromica* Dejean, 1826 and new data on other species (Coleoptera: Cicindelidae). *Boletim da Sociedade portuguesa de Entomologia*, 8 (16), 313–323.
- Serrano, A.R. M., Capela, R.A. & Oesterle, A. (2015) Three new species of tiger beetles and new data on Cicindelina species from Angola (Coleoptera: Carabidae: Cicindelinae). *Zootaxa*, 4032 (2), 151–178.
<https://doi.org/10.11646/zootaxa.4032.2.1>
- Serrano, A.R. M., Capela, R.A. & Santos, C.V.-D.N. (2017) Scientific note. *Cylindera* (*Eugrapha*) *dissimilis* (Péringuey, 1893) (Coleoptera: Carabidae: Cicindelinae), a new tiger beetle record for Angola, and new data on species known from the country. *The Coleopterists Bulletin*, 71 (2), 368–371.
<https://doi.org/10.1649/0010-065X-71.2.368>
- Straneo, S.L. (1952) I Pterostichini dell'Angola (Coleop. Carabidae). *Publicações Culturais da Companhia de Diamantes de Angola*, 15, 101–136.
- Straneo, S.L. (1956) Contributions à l'étude de la faune entomologique du Ruanda-Urundi (Mission P. Basilewsky 1953). 81. Coleoptera Carabidae Pterostichinae. *Annales du Musée du Congo Tervuren*, In-8, Zool., 51, 158–171.
- Straneo, S.L. (1958) Chapter 12. Coleoptera Carabidae: Pterostichinae. A revision of the South African Pterostichinae. In: Hanström, B., Brinck, P. & Rudebeck, G. (Eds.), *South African Animal Life*. V. Almqvist & Wiksell, Stockholm, pp. 318–455.
- Straneo, S.L. (1959) I Pterostichini e Melanchitonini dell'Angola (Coleop. Carabidae). I nota supplementare. *Publicações Culturais da Companhia de Diamantes de Angola*, 45, 43–52.
- Straneo, S.L. (1968) Contributions à la connaissance de la faune entomologique de la Côte-D'Ivoire (J. Decelle, 1961–1964). V. Coleoptera Carabidae Pterostichinae. *Annales du Musée Royal de l'Afrique Centrale*, In-8, Zool., 165, 127–136.
- Straneo, S.L. (1991) Le sous-genre *Stereodema* Chaudoir (genre *Stereostoma* Murray) et description d'une nouvelle espèce (Coleoptera Carabidae). *Journal of African Zoology*, 105, 3–10.
- Straneo, S.L. (1983) Revisione del genere *Aristopus* Lafert (Coleoptera, Carabidae). *Revue de Zoologie Africaine*, 97, 313–336.
- Straneo, S.L. (1991) Revisione del subgenere *Abacetillus* Straneo del genere *Abacetus* Dejean (Coleoptera: carabidae: Pterostichinae). *Elytron*, 5, 85–102.
- Wellman, F.C. & Horn, W. (1908) On the Cicindelinae of Angola. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 1908, 504–512.