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Darkling and ironclad beetles (Coleoptera: Tenebrionoidea: Tenebrionidae and Zopheridae) from Kenya, with descriptions of two new species

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Abstract: A total of 40 species of darkling beetles (Tenebrionidae) and one species of ironclad beetles (Zopheridae) have been collected in Kenya in 2003-2006. Two darkling beetle species are new: *Oplocheirus ngaii* sp. n. (tribe Amarygmini) and *Dysgena olapae* sp. n. (Amarygmini); their descriptions are presented. Three species, i.e. *Gonocephalum jeanneli* Chatanay, 1914, *Gonocephaum segne* (Thomson, 1855) and *Micrantereus variolosus* Gerstaecker, 1873, were validated. Four species (*Phrynocolus spinolai* Solier, 1843, *Menephilus distinguendus* Fairmaire, 1867, *Asthenochirus nigropunctatus* Fairmaire, 1885 and *Miltoprepes laetus* Gerstaecker, 1873) are recorded for first time from Kenya.

Key words: East Africa, Tenebrionidae, Zopheridae, *Ophocheirus*, *Dysgena*, new species, new records

Introduction

Despite numerous zoological expeditions to Kenya in the past, the number of species known from this region so far is certainly low in comparison with the actual number of arthropods and other animals inhabiting Kenya. At the turn of the 20th century, several species of animals new for science were collected by Baron Maurice de Rothschildt from the territory of present Ethiopia and Kenya. Seventeen years were necessary to find specialists, able to identify and describe only a part of the collected arthropods (Lesne 1922). Several arthropods collected during important scientific expeditions, such as the Smithsonian-Roosevelt East African Expedition of 1909-1910 and stored in the American Museum of Natural History, are still to be studied. This is the situation with many specimens collected in subsequent expeditions: the expedition of Dogiel and Sokolov (1914) to British East Africa and Uganda (Dogiel 1914), the British Museum East Africa Expedition (1924-1931) and the expedition of G. Scott Russell to Mount Kenya (1949-1950), organised together with the Oxford University and the British Museum of Natural History (Natural History Museum 2015).

The majority of the information about darkling and ironclad beetles (Coleoptera: Tenebrionoidea) of Kenya is presented in several old works. More recent contributions to the knowledge of species from these groups are given by Ferrer (1996, 1999) or have been included in some generic revisions (Ferrer 1993, 1995, 2000). The exact number of Tenebrionidae spp., inhabiting the whole Kenyan region, is unknown and certainly considerably higher than the actual number of described taxa established after the British expeditions and partial revisions. For this reasons each apportion to our knowledge is an important step towards the future Catalogue of Tenebrionidae of East African region in general and of Kenya in particular.

Material and Method

In 2003-2006, one of the present authors (VS) visited many regions in Central and Western Kenya (Elementaita Lake, Kakamega Forest, Nairobi National Park, Ngong Hills, Naivasha Lake, Nakuru Lake, Shimba Hills National Park, Taita Hills, Taveta, Tzavo National Park, Voi, etc.), as well as the Kenyan part of the coastal areas of Victoria Lake and the Indian Ocean. He collected different coleopteran species, mainly representatives of jewel beetles (Coleoptera: Buprestidae). However, among the other coleopterological samples, several darkling and ironclad beetles (Coleoptera: Tenebrionidae and Zopheridae) have been found. The results of their examination are presented here. These beetles were collected using traditional entomological methods: hand collection on soil, under stones and on plants during the day, and also hand-catching on soil during the night with torch.

The collected material was classified and identified by Julio Ferrer. It was compared with reference material deposited in the Natural History Museum in London, the Swedish Museum of Natural History in Stockholm and in his private collection. The tribal classification follows Bouchard *et al.* (2005, 2011).

The type specimens of the newly described species are deposited in the Swedish Museum of Natural History. The rest of the material is preserved in the collection of Vladimir Sakalian at the Institute of Biodiversity and Ecosystem Research in Sofia.

Results and Discussions

A total of 85 specimens, belonging to 40 species of darkling beetles and one species of ironclad beetle were identified from the analysed material. Two of them are previously unknown species, which we describe under the following names: *Oplocheirus ngaii* sp. n. and *Dysgenae olapae* sp. n. For the rest of the material we provide the exact label data in the list below.

Family Tenebrionidae

Tribe Zophosini

***Zophosis sulcata callosa* Gerstaecker, 1884**

Zophosis callosa Gerstaecker, 1884: 54

Kenya, Ngong Hills: Kiserian distr. (01°26'56" S; 36°38'19" E), 1940 m a.s.l., 10.06.2003, 2 ex., leg. V. Sakalian; habitat type: forest with domination of *Acacia lahai* Steud. & Hochst. ex Benth.

Geographic distribution: Kenya and Northern Tanzania (Penrith 1982).

Tribe Tentyriini

***Rythinota (Prorythinota) ventricosa* (Gerstaecker, 1873)**

Rythidonota ventricosa Gerstaecker, 1873: 58

Kenya: Voi: Wildlife lodge 600 m a.s.l., 4-6.11.2005, 1 ex., leg. V. Sakalian & G. Curletti; habitat type: ruderal place, covered mainly with grass vegetation, located inside the yard of the lodge. Lower Tana River: Sailoni Forest (02°09'18" S; 40°11'04" E), 22-23.04.2006, 1 ex., leg. V. Sakalian; habitat type: open area with cut *Acacia* sp. trees.

Geographic distribution: Kenya: from East Kilimanjaro to Mt Kenya, Tanzania (Koch 1943).

***Rythinota* (*Prorythinota*) *praelonga hirundo* Koch, 1943**

Rythinota (*Prorythinota*) *praelonga hirundo* Koch, 1943: 809

Kenya: Magadi Lake, 770 m a.s.l., 29.11.2003, 3 ex., leg. V. Sakalian; habitat type: ruderal area near the lake.

Geographic distribution: Ethiopia (Upper Galla territorium), Kenya, Uganda (Koch 1943).

Tribe Epitragini

***Imatismus (Curimosphena) triviale* Gerstaecker, 1873**

Himatismus triviale Gerstaecker, 1873: 63

NE Kenya: Malindi: Kepepeo farm (03°13' S; 40°06' E), 30 m a.s.l., 24.04.2006, 2 ex., leg. V. Sakalian; habitat type: ruderal places around the farm; Arabuko-Sokoke forest, 24-25.04.2006, 2 ex., leg. V. Sakalian; habitat type: one of the specific for the Eastern African Coast dry forests, very rich of different plant species, including high number of endemics.

Remarks: Koch (1950) did not refer to this species while revising the taxonomy of *Himatismus*. Julio Ferrer identified the above mentioned material as *H.* (*Curimosphena*) *triviale* based on the comparison with a specimen conserved in the Natural History Museum (London), determined by Hans Gebien labelled "Brit. East Africa/Tiede/ det. H. Gebien". Moreover, during this investigation Julio Ferrer examined material representing *H. (Curimosphena) triviale* from Ethiopia: Gamo, Gofa Province, Mombasa, Samburu National Reserve; Tanzania: Dar es Salaam.

Geographic distribution: Ethiopia, Kenya and Tanzania.

Tribe Moluriini

***Phrynocolus spinolai* Solier, 1843**

Phrynocolus spinolae (*sic*) Solier, 1843: 251, 39

Kenya: Nairobi, 04-05.2004, 1 ex., leg. V. Sakalian; habitat type: ruderal area.

Geographic distribution: Guinea, Niger, North Congo, Republic of Central Africa (Ubangui Chari), Senegal and Sudan (Koch 1951), Kenya (first record).

***Psammodes (Psammophanes) subplicatus* Gebien, 1910**

Psammodes (Psammophanes) subplicatus Gebien, 1910: 161

NE Kenya: Lower Tana River: Gamba guest house, 20-23.04.2006, 3 ex., leg. V. Sakalian; habitat type: ruderal places around the house.

Geographic distribution: East Africa (Gebien 1910).

***Psammodes (Psammophanes) guranicus* Lesne, 1922**

Psammophanes guranicus Lesne, 1922: 693: f. 7

Kenya: Voi: Wildlife lodge 600 m a.s.l., 4-6.11.2005, 3 ex., leg. V. Sakalian & G. Curletti; 27-28.04.2006, 2 ex., leg. V. Sakalian; habitat type: ruderal area, covered mainly with grass vegetation, located inside the yard of the lodge; Road Voi to Taveta: Border of Tsavo West National Park (03°30'10" S; 38°16'25" E), 28-30.04. 2006, 3 ex., leg. V. Sakalian; habitat type: mixed forest with *Acacia* sp. and other trees and bushes.

Geographic distribution: Kenya: previously only known from Mount Matthew (Lesne 1922).

Tribe Sepidiini

***Vieta muscosa* (Gerstaecker, 1873)**

Sepidium muscosum Gerstaecker, 1873: 60

Kenya: Road Voi to Taveta: Border of Tsavo West National Park (03°30'10" S; 38°16'25" E), 28-30.04.2006, 2 ex., leg. V. Sakalian; habitat type: mixed forest with *Acacia* sp. and other trees and bushes.

Geographic distribution: Kenya (Lesne 1922).

***Vieta dongolense* Laporte de Castenau, 1840**

Vieta dongolense Laporte de Castenau, 1840, 1: 205

Kenya: Nairobi, 04.05.2004, 1 ex., leg. V. Sakalian; habitat type: ruderal area.

Geographic distribution: Kenya and Somalia (Ferrer 1995a).

Tribe Pimeliini

***Pimelia hildebrandti* Harold, 1878**

Pimelia hildebrandti Harold, 1878: 221

Kenya: Voi Wildlife loge, 600 m a.s.l., 4-6.11.2005, 1 ex., leg. V. Sakalian & G. Curletti; 27-28.04.2006, 2 ex., leg. V. Sakalian; habitat type: ruderal place, covered mainly by grass vegetation, located inside the yard of the lodge.

Geographic distribution: Uganda (Lesne 1922), Kenya and Tanzania (Ferrer 1995a).

Tribe Pedinini

***Quadrideres femineus* (Lesne, 1922)**

Selinus femineus Lesne, 1922: 701, pl. 1, f. 2

Kenya: Voi Wildlife lodge 600 m a.s.l., 4-6.11.2005, 1 ex., leg. V. Sakalian & G. Curletti; habitat type: ruderal place, covered mainly by grass vegetation, located inside the yard of the lodge; Elementaita Lake, (0°28'31" S; 36°15'48" E), 1820 m a.s.l., 20.05.2004, 1 ex., leg. V. Sakalian; habitat type: *Acacia* sp. forest mixed with bushes and open areas, covered by grass vegetation.

Geographic distribution: Kenya (Lesne 1922; Koch 1956; Kamiński, Iwan 2013).

***Quadrideres interioris* (Gebien, 1911)**

Selinus interioris Gebien, 1911: 62

NE Kenya: Lower Tana River: Gamba guest house, 25-27.10.2005, 3 ex., leg. V. Sakalian & G. Curletti; 20-23.04.2006, 2 ex., leg. V. Sakalian; habitat type: ruderal places around the house.

Geographic distribution: Kenya: West Victoria-Nyansa (Gebien 1911), Congo and Uganda (Kamiński 2013).

***Zidalus latipes* (Sahlberg, 1823)**

Opatrinus latipes Sahlberg, 1823: 13

NE Kenya: Lower Tana River, 11-12.2005, 1 ex., leg. Lewi; habitat type: bushes and grass vegetation near the channel of Tana River.

Geographic distribution: Angola, Benin (Dahomey), Botswana, Burundi, Cameroon, Central Africa R., Ethiopia, Fernando Poo, Gabon, Ghana, Guinea, Guinea Bissau, Ivory Coast, Kenya, Kongo, Liberia, Mozambique, Nigeria, Rio Muni, Senegal, Sierra Leone, Sudan, Tanzania, Togo, Uganda, Upper Volta, Zaire (Iwan 1995).

Tribe Opatrini

***Gonocephalum angusticolle* Gerstaecker, 1855**

Gonocephalum angusticolle Gerstaecker, 1855: 635

Kenya: Road Nairobi to Scyabei, 1800 m a.s.l., 18.12.2003., 1 ex., leg. V. Sakalian; habitat type: ruderal area near the road.

Geographic distribution: Kenya (Ferrer 1995a).

***Gonocephalum jeanneli* Chatanay, 1914 stat. rest.**

Gonocephalum jeanneli Chatanay, 1914: 472

Gonocephalum simplex ssp. *jeanneli* Chatanay; Ferrer, 2000: 86.

NE Kenya: Lower Tana River, 11-12.2005, 1 ex., leg. Lewi; bushes and grass vegetation near the channel of Tana River.

Geographic distribution: East Africa: Molo (Chatanay 1814); Kenya, high altitude (Ferrer 2000).

Remarks: Ferrer (2000) indicated the presence of populations of *Gonocephalum jeanneli* living in Ethiopian mountains, which have some differences

in taxonomy. The author considered that the morphological differences in fact, suggest the evolutionary apparition of microraces of a species in status nascendi. The sympatric occurrence of *Gonocephalum segne* (Thomson, 1858) and *G. jeanneli* in Ethiopian Jima province indicates that the original interpretation of Chatanay (1914) of this species, described by Molo in Uganda, was correct.

***Gonocephlum segne* (Thomson, 1858) stat. rest.**

Opatrum segne Thomson, 1858: 85

Gonocephalum simplex ssp. *segne* (Thomson); Ferrer, 2000: 86

Kenya: Road Nairobi to Scyabei, 1800 m a.s.l., 18.12.3003., 7 ex., leg. V. Sakalian; habitat type: ruderal area near the road.

Geographic distribution: Tropical West Africa (Ferrer 2000).

Remarks: In the revision of African *Gonocephalum* Ferrer (1993, 1995, 2000) treated *Gonocephalum simplex* (F.) as a widely distributed species, composed of some geographically separated subspecies, despite conspicuous differences in the respective aedeagus. Ferrer (loc. cit.) interpreted these morphological variations as a result of synantropic dispersion, male sexual concurrence and female choice. However, unpublished observations (in situ) of Julio Ferrer's local collections in Mont Elgon, showed that populations assignable to *Gonocephalum segne* (Thomson, 1858) collected in the plain, froze to death at altitudes of about 1000 m a.s.l., but local populations of *Gonocephalum jeanneli* Chatanay, 1914 were perfectly acclimated. Moreover, in some regions of Ethiopia (Western Karsa, Oromiya, Jima province), *G. segne* and *G. jeanneli* were collected together using pitfalls traps (August 2011, D. Lemissa leg., coll. J. Ferrer). The possible conclusion is that the taxonomic status of both taxa must be revised, treating hereby *G. segne* and *G. jeanneli* as two valid species and not as geographical subspecies.

***Gonocephalum validum* Ferrer, 2000**

Gonocephalum validum Ferrer, 2000: 99

NE Kenya: Lower Tana River, 11.12.2005, 1 ex., leg. Lewi; habitat type: bushes and grass vegetation near the channel of Tana River.

Geographic distribution: Kenya, Somalia and Tanzania (Ferrer 1995b, 2000).

Tribe Ulomini

***Eutochia amaroides* Gestro, 1878**

Eutochia amaroides Gestro, 1878: 253

Kenya: Elementaita Lake, (0°28'31" S; 36°15'48" E), 1820 m a.s.l., 29.12.2005, 1 ex., leg. V. Sakalian & G. Curletti; habitat type: *Acacia* sp. forest mixed with bushes and open areas, which is covered by grass vegetation.

Geographic distribution: Exclusively Ethiopian. This species has been recently distinguished from the Afro-occidental species *Eutochia pulla* (Erichson, 1843) by Ferrer (2014).

***Uloma sjoestedti* Gebien, 1904**

Uloma sjoestedti Gebien, 1904: 5, 10, t. 1, Fig. 6

NE Kenya: Arabuko-Sokoke forest, 24-25.04.2006, 1 ex., leg. V. Sakalian; habitat type: one of the specific for the Eastern African Coast dry forests, very rich of different plant species, including high number of endemics.

Geographic distribution: Tropical Africa: Congo, Kenya (Gebien 1904).

Tribe Tenebrionini

***Tenebrio nitidulus* Gebien, 1911**

Tenebrio nitidulus Gebien, 1911: 68

Kenya: Naivasha Lake (00°49'3" S; 36°20'08" E), 1800 m a.s.l., 03.12.2003, 1 ex., leg. V. Sakalian; habitat type: meadows near the lake.

Geographic distribution: Central Africa (Gebien 1911).

Tribe Toxicini

***Cryphaeus taurus capreolus* Fairmaire, 1869**

Cryphaeus taurus capreolus Fairmaire, 1869: 228

NW Kenya: Victoria Lake: Ruma N.P., 1050 m a.s.l., 04.12.2003., 2 ex., leg. V. Sakalian; habitat type: forest savannah.

Geographic distribution: Comoros, Ethiopian, Malgache region, Seychelles (Grimm 2002).

Remarks: The taxonomic status of this species remains uncertain and under revision. Despite the pattern of distribution, it is not sure that the oriental *Cryphaeus capreolus* Fairmaire, 1869 is a geographical vicariant subspecies of the West African *Cryphaeus taurus* (Fabricius, 1801).

Tribe Alphitobiini

***Menephilus distinguendus* Fairmaire, 1869**

Menephilus distinguendus Fairmaire, 1869: 230

NE Kenya: Arabuko-Sokoke forest, 24-25.04.2006, leg. V. Sakalian, 1 ex., habitat type: one of the specific for the Eastern African Coast dry forests, very rich of different plant species, including high number of endemics.

Geographic distribution: Tropical Africa: Comoros (Mayotte) and La Reunion (Kolbe 1897). Madagascar, Tanzania, Kenya (new record).

Remarks: This species is toxic and exhibits warning colours (red, black and yellow).

Tribe Cossyphini

***Endustomus magnicollis* Fairmaire, 1887**

Endustomus magnicollis Fairmaire, 1887: 280

NE Kenya: Lower Tana River: Gamba guest house, 25-27.10.2005, 1 ex., leg. V. Sakalian & G. Curletti; habitat type: ruderal places around the

house; Lower Tana River, 11.12.2005, 1 ex., leg. Lewi; habitat type: bushes and grass vegetation near the channel of Tana River.

Geographic distribution: Tropical Africa: Kenya and Tanzania (Scupola 2006).

Tribe Cnodalonini

***Nannalcyon cylindricus* (Fairmaire, 1887)**

Nannocerus cylindricus Fairmaire, 1887: 293, t. 3, Fig. 3

NE Kenya: Malindi: Kepepeo farm (03°13' S – 40°06' E), 30 m, 24.04.2006, 1 ex., leg. V. Sakalian; habitat type: ruderal places around the farm.

Geographic distribution: Tropical Africa: Kenya (Ferrer 1996).

***Perichilus violaceipes* Fairmaire, 1887**.

Perichilus violaceipes Fairmaire, 1887: 292, t. 3, Fig. 2

NE Kenya: Arabuko-Sokoke forest, 24-25.04.2006, 1 ex., leg. V. Sakalian; habitat type: one of the specific for the eastern African Coast dry forests, very rich of different plant species, including high number of endemics.

Geographic distribution: Kenya (Ferrer 1996).

Tribe Pycnocerini

***Prioscelis tridens* Kolbe, 1894**

Prioscelis tridens Kolbe, 1894: 183

NE Kenya: Arabuko-Sokoke forest, 24-25.04.2006, 2 ex., leg. V. Sakalian; habitat type: one of the specific for the eastern African Coast only dry forests, very rich of different plant species, including high number of endemics.

Geographic distribution: Tropical Africa: Kenya, Mozambique, Nord East Congo, South Africa (Zululand), Tanzania, Uganda, Zambia (Koch 1953).

Tribe Helopinini

***Micrantereus femoratus* Gerstaecker, 1873**

Micrantereus femoratus Gerstaecker, 1873: 64

Kenya: Elementaita Lake (0°28'31" S; 36°15'48" E), 14-15.04.2006, 3 ex., leg. V. Sakalian; habitat type: *Acacia* sp. forest mixed with bushes and open areas, covered by grass vegetation.

Geographic distribution: Kenya, Tanzania (Gridelli 1939).

***Micrantereus variolosus* Gerstaecker, 1873 stat. rest.**

Micrantereus variolosus Gerstaecker, 1873: 64

Micrantereus femoratus ssp. *variolosus* Gerstaecker, 1873; Gridelli 1939:15

Kenya: Road Voi to Taveta: Border of Tsavo West National Park (03°30'10" S; 38°16'25" E), 28-30.04.2006, 3 ex., leg. V. Sakalian; habitat type: mixed forest with *Acacia* sp. and other trees and bushes.

Geographic distribution: Ethiopia, Tanzania, Uganda (Gridelli 1939).

Remarks: The geographical distribution area of both species living together in Tanzania, indicated that the treatment as geographic subspecies by Gridelli (1939) is not correct. Moreover, a comparative genital examination has not been done so far. For this reason we established the original rank of *Micrantereus variolosus* Gerstaecker, 1873 as a valid species.

Tribe Amarygmini

***Eupezus longipes* (Fabricius, 1781)**

Pimelia longipes Fabricius, 1781: 326

NE Kenya: Lower Tana River: Gamba guest house, 20-23.04.2006, 1 ex., leg. V. Sakalian; habitat type: ruderal places around the house.

Geographic distribution: Central Africa: forests of Cameroon and Uganda to Congo (Katanga) (Ardoin 1965).

***Asthenochirus nigropunctatus* Fairmaire, 1885**

Asthenochirus nigropunctatus Fairmaire, 1885: 8

Kenya: Road Voi to Taveta: Border of Tsavo West National Park (03°30'10" S; 38°16'25" E), 28-30.04.2006, 1 ex., leg. V. Sakalian; habitat type: mixed forest with *Acacia* sp. and other trees and bushes.

Geographic distribution: Coast of East Africa: Mozambique, Tanzania (Ardoin 1965), Kenya (first record).

***Paramarygmus zanzibaricus* Fairmaire, 1894**

Paramarygmus zanzibaricus Fairmaire, 1894: 669

SE Kenya: Shimba Hills N.P. 15-200 m a.s.l., 20.04.2004, 2 ex., leg. V. Sakalian; habitat type: forest savannah; NE Kenya: Lower Tana River Hewani village, 23.04.2006., 1 ex. leg. V. Sakalian; habitat type: ruderal area near the village; Malindi: Kepepeo farm (03°13' S; 40°06' E), 30 m a.s.l., 24-25.04.2006, 1 ex., leg. V. Sakalian; habitat type: ruderal places around the farm.

Geographic distribution: East Africa: from Southern Kenya to Northern Tanzania (Ardoin 1966).

***Hoplonyx kenyensis* Ardoin, 1963**

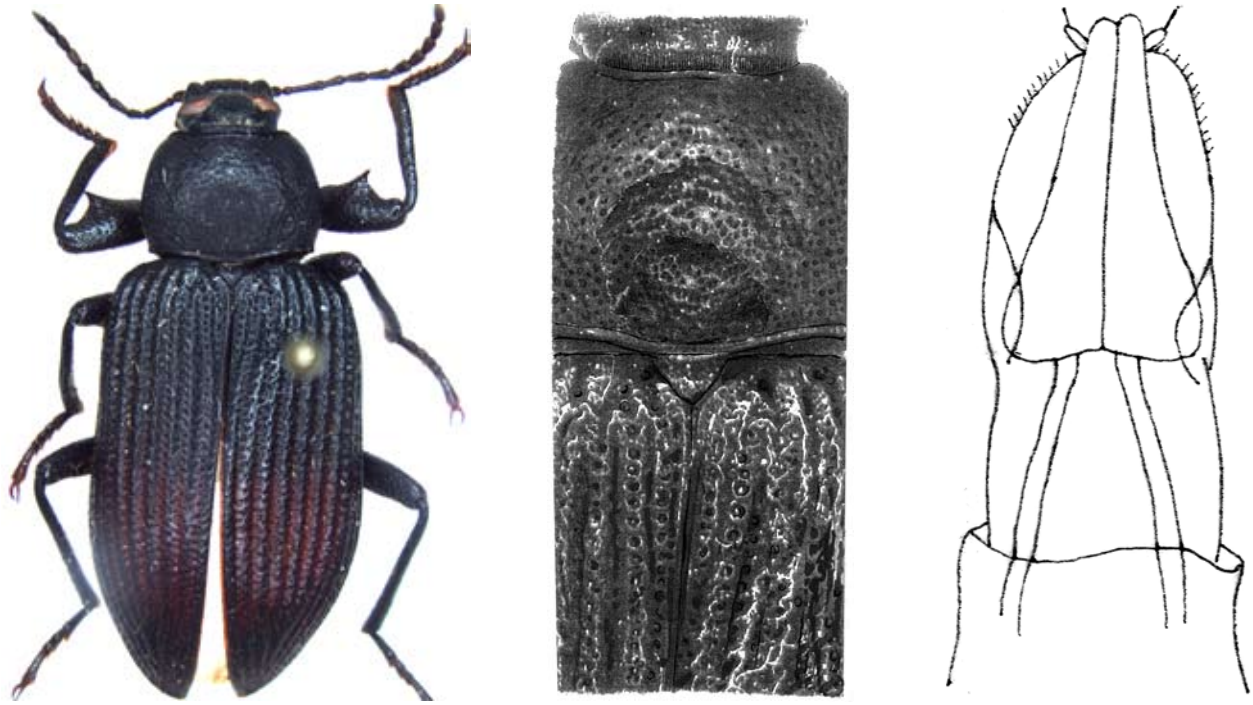
Hoplonyx kenyensis Ardoin, 1963: 739

NE Kenya: Malindi: Kepepeo farm (03°13' S – 40°06' E), 30 m a.s.l., 24-25.04.2006, 4 ex., leg. V. Sakalian; habitat type: ruderal places around the farm.

Geographic distribution: Tropical Africa: Kenya and Tanzania (Tanganyika) (Ardoin 1963).

***Oplocheirus ngaii* n. sp.** (Fig. 1)

Holotype: female, Kenya: Elmentaita Lake,



A B C

Fig. 1. *Oplocheirus ngaii* sp. n.: A - habitus; B - sculpture of pronotum and elytra; C - ovipositor

1800 m a.s.l., 14-15.04.2006, leg. V. Sakalian; habitat type: *Acacia* sp. forest mixed with bushes and open areas, covered by grass vegetation.

Paratype: male, Tanzania: Lobo, 03.01.1977 (at light), leg. O. Trottestam, coll. J. Ferrer.

Description: Body length: 18.1 mm; maximum width of elytra: 7.5 mm.

Similar in habitus to *Oplocheirus afer* Fåhraeus , 1870, entirely silky dull, blackish brown; elytra covered with fine, long erectile golden hairs, with normally developed wings. Epistoma truncate, strongly and irregularly punctured, with broad and smaller rugose punctures. Labrum subtruncate, separated from epitstomal board by membrane, finely margined anteriorly and posteriorly, slightly rounded with a fringe of short, dense, golden hairs protecting mouth. Supra-antennal zones moderately but conspicuously raised at each side; forehead convex, strongly punctured, with a conspicuous longitudinal ridge between eyes. Maximum width of inter-ocular distance greater than eye diameter measured dorsally; eyes subglobular, occupying the whole lateral head surface; vertex protected by a fringe of dense, short golden hairs. Antennae slender, length of third antennomer equal to the combined length of two preceding together and three times longer as broad.

Pronotum moderately transverse, about 1/4 longer as broad; anterior board finely margined, anterior angles acute, inconspicuous dorsally; posterior angles obtuse, lateral sides gently curved from base to apex and a little sinuated before base; posterior angles straight a little projected at sides, coinciding with the basal carina; perfectly sinuate at each side; the level of middle surpassing backwards level of sides. Sculpture of pronotum irregular punctured, not confluently rugose, the punctures placed between flattened spaces (Fig. 1B).

Elytra much broader than base of pronotum, a little more than 1.5 times longer as broad; shoulders obtusely rounded, without humeral callus; sides subparallel, becoming oval apically, tegument strongly sculpted (Fig. 1B) with deeply incised strong strias. All intervals convex and strongly punctured, each puncture with a microgranule at anterior board, carrying curved yellowish hairs, as broad as strial punctures, which are arranged in traceable, well-incised rows.

Ventral side: shiny, blackish-brown, except for genal appendages: more reddish tinted. Mentum strongly truncate, subtrapezoidal, strongly punctured and pubescent, with hirsute long, golden hairs in disorder; stripes cereous, triangular, anteriorly pointed and truncate at sides. Subocular zones concave, deeply excavated contouring the inferior board of the eye; gula transversally truncate, even so with a cereous tint; contrasting with the subgular shiny and black space, covered with strongly rugose punctures and shortly pubescent. Prosternal zones strongly

sculptured and punctured as subgular zone; apophyse of prosternum deeply sulcate anteriorly and subsinuated at apex, projected framwards and visible between procoxae on profile.

Mesoventrite deeply excavated at middle, strongly and irregularly punctured at anterior zone of the sides, the punctures replaced backwards by diagonal, transverse, superficial rides. Episterna dully and superficially punctured; elytral epipleura margined, dull with a silky aspect on the anterior zone, becoming shiny apically.

Metaventrite strongly crenate at middle; strongly punctured.

Abdominal ventrites finely punctured; apophyse of first ventrite triangular, broadly rounded and entirely margined; sternites 3-5 conspicuously depressed at sides.

Ovipositor (Fig. 1C).

Aedeagus is unknown because the abdomen of the male specimen was empty.

Differential diagnosis:

The species of the genus *Oplocheirus* Lacordaire, 1859 were recently revised by Ardoin (1963) and Ferrer (2006). We examined the syntypes of *Oplocheirus afer* (Fåhraeus, 1870).

This new species mostly resembles *O. afer*. However, *O. ngaii* is characterised by the following unique combination of characters: front with longitudinal ridge between eyes; body dully pubescent, with yellowish curved hairs; pronotum strongly and irregularly punctured (punctures not deeply incised); coarse anterior margin of pronotum entirely traceable (interrupted at middle in *O. afer*), crenulate lateral intervals (completely rounded in *O. afer*) and shorter semi-erectile pubescence of yellowish hairs. Elytra smaller, not so broad, strongly striate, with traceable, longitudinal rows carrying deeply incised and granulouse punctures with a yellowish, curved hair (the elytral punctures microgranular in *O. afer*).

Moreover, this new species differs from *Oplocheirus pilosus* (described as *Hoplonyx*, see Gebien 1911) from Kilimandjaro, having longitudinal frontal ridge between eyes (present in this new species) and larger punctures, not so strongly rugose pronotum.

Etymology: Latin, genitive, masc., belonging to Ngai, the Lord of Nature in the Bantu mythology (Kipiry 1983).

Geographic distribution: Kenya, Tanzania.

Tribe Stenochiini

***Strongylium mirabile* Linell, 1895** (Fig. 2)

Strongylium mirabile Linell, 1895: 699

Kenya: Road from Voi to Taveta, border of Tsavo West National Park, 28-30.04.2006, leg. V. Sakalian; habitat type: mixed forest with *Acacia* sp. and other trees and bushes.

Geographic distribution: Kenya (Ferrer 1996).

Remarks: Ferrer (1996) presented the habitus of the holotype (female) for the first time. The male remain unknown. This is the second record of this species. The ovipositor is presented for the first time (Fig. 2B).

***Praeugena abyssinica* Gestro, 1878**

Praeugena abyssinica Gestro, 1878: 321

NE Kenya: Lower Tana River: Gamba guest house, 20-23.04.2006, 1 ex., leg. V. Sakalian; habitat type: ruderal places around the house; Lower Tana River: Sailoni Forest (02°09'18" S; 40°11'04" E), 22-23.04.2006, 1 ex., leg. V. Sakalian; habitat type: open area with cuted *Acacia* sp. trees.

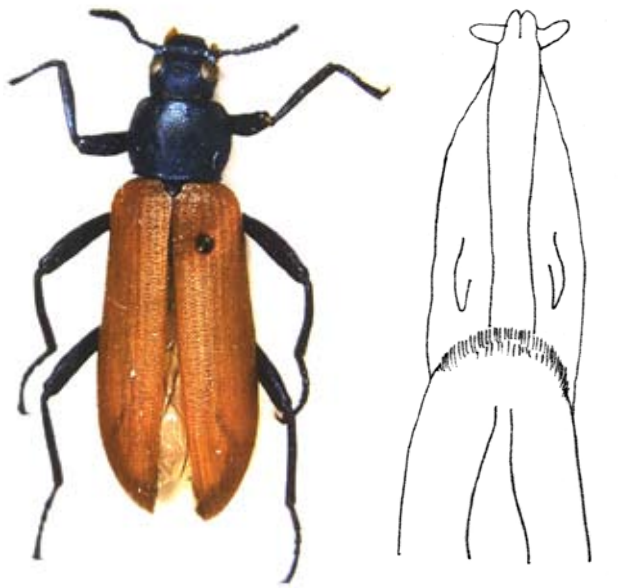
Geographic distribution: Ethiopia, Kenya, Tanzania and Somalia (De Moor 1970).

***Praeugena cupreipennis* Mäklin, 1863**

Praeugena cupreipennis Mäklin, 1863: 562

Kenya: Oltepesi distr. (01°34'33" S; 36°24'30" E), 10.04.2006, 2 ex., leg. V. Sakalian; habitat type: bush land; NE Kenya: Lower Tana River: Gamba guest house, 20-23.04. 2006, 1 ex., leg. V. Sakalian; habitat type: ruderal places around the house; Taita Hills: Chavia forest, 30.04.2006, 1 ex., leg. V. Sakalian; habitat type: remains of relict wet forest typical for Taita Hills, which is characterised by many endemic plant species.

Geographic distribution: Ethiopia, Kenya, Tanzania, South Africa and Zambia (De Moor 1970).



A B

Fig. 2. *Strongylium mirabile* Linell: A - habitus; B - ovipositor

***Miltoprepes laetus* Gerstaecker, 1873**

Miltoprepes laetus Gerstaecker, 1873: 65

NE Kenya: Lower Tana River: Sailoni Forest (02°09'18" S; 40°11'04" E), 22-23.04.2006, 1 ex., leg. V. Sakalian; habitat type: open area with cut *Acacia* sp. trees.

Geographic distribution: Ethiopia, Somalia (Gridelli 1939), Kenya (first record).

Remarks: This genus has been revised by Gridelli (1939) and recently by Ferrer (1995b, 2005).

***Dysgena olapae* n. sp.** (Fig. 3)

Holotype: male, NE Kenya: Lower Tana River: Gamba guest house, 25-27.10.2005, 1 ex., leg. V. Sakalian; habitat type: ruderal places around the house.

Description:

Body length: 20.1 mm; maximum width at elytra: 7.0 mm.

Body entirely silky dull, blackish brown with a reddish tint except the front, head and pronotum glabrous. Elytra covered by fine, sparsely disposed, long erectile golden hairs, with normally developed wings.

Head subquadratic, with convex eyes; supra-antennal zones raised; epistoma truncate, subtrapezoidal, broader anteriorly, strongly and irregularly punctured. Labrum subtruncate, separated from the epistomal board by a membrane, finely pubescent with a fringe of short, dense, golden hairs protecting the mouth; supra-antennal zones conspicuously raised at each side; front convex, separated from epistoma by a deep transversal ridge; tegument strongly punctured and pubescent, with conspicuous long, yellowish hairs; maximum width of the distance between eyes slightly inferior to the diameter of an eye, measured dorsally. Eyes subglobular, reniform on profile, occupying the whole of the lateral surface of the head. Tempora forming a straight angle with the contour of the eye and with the constricted vertex; tegument transversally sculpted and protected from friction by a fringe of dense, short golden hairs backwards.

Antenna slender, length of antennnomeres 3-11 subequal, about four times longer as broad; apical antennomere slightly curved and acuminate at apex.

Pronotum slightly transverse, about 1/4 longer as broad; lateral sides strongly constricted, obtusely curved from middle to apex; lateral sides nearly subparallel from middle to base; anterior angles completely rounded and inconspicuous dorsally, finely and entirely careened from apex to base, but the marginal carina invisible dorsally; anterior board straight and finely margined; tegument strongly and regularly punctured, the punctures rounded and small. Anterior angles right, inconspicuous dorsally; posterior angles much more obtuse, base straight, a little sinuated at each side. Posterior angles right and a little projected at sides, at the level of the broadly traced basal carina; the level of middle surpassing backwards the level of the sides; tegument irregular and densely punctured, not confluently rugose, punctures between flattened spaces rarely slightly superior to the diameter of a puncture.

Elytra elongate, much broader than the base of pronotum, a little more than 1.5 times longer as broad; more than four times the length of pronotum. Shoulders obtusely rounded, without humeral callus or epipleural carina; sides subparallel, rounded apically. Tegument strongly sculpted with deeply incised small punctures, densely disposed, nearly contiguous, forming longitudinal stries of small round punctures, with short scutellar stria; all intervals moderately convex and very superficially punctured. Punctures alternate (1-3) in each interval, carrying a curved yellow hair, as broad as the interval between two punctures of the striae.

Ventral side shiny, brown with reddish epipleura; maxilla deeply excavated and pointed apically. Mentum cordiform, strongly pubescent, deeply and longitudinally sulcate at middle; stripes subquadrate and truncate anteriorly, very finely punctured and glabrous. Submentum anteriorly truncate and pointed at each side; separated from the gular zone by a strongly marked transversal impression; tegument, except stripes, erectile pubescent, with long yellowish hairs and rudely punctured. Gula glabrous, stridulatory, finely covered of microgrooves; lateral subtemporal sides strongly and confluently punctured.

Prosternal lateral zones strongly punctured. Prosternal apophysis invisible anteriorly between coxae on profile, becoming apically much broader, strongly dilated and sinuated, forming a peculiar lingular dilatation (Fig. 3B);

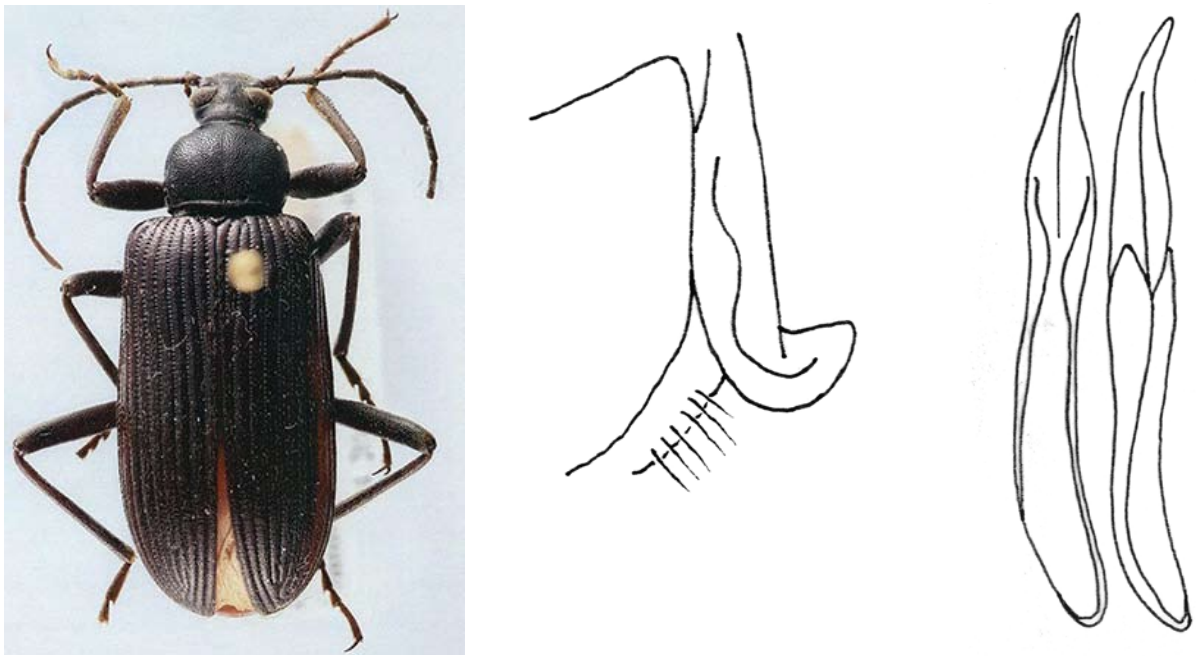
Epipleura reddish, finely carinate on the interior board. Episternum and mesoventrite, entirely glabrous and strongly punctured at the lateral zones, much finer at middle, flattened, without medial longitudinal impression.

Abdomen glabrous, very finely punctured, with only sternite 3 depressed at each side. Anal sternite without marginal board.

Aedeagus (Fig. 3C) abruptly narrowed subparalle, much smaller than the tubular, broad phallobase, presenting morphologic similarity with the aedeagus of *Dysgena nigrita* Mäklin, 1873.

Differential diagnosis:

The species of the genus *Dysgena* Mäklin, 1873 were revised by De Moore (1970) and Ferrer



A B C

Fig. 3. *Dysgena olapae* sp. n.: A - habitus; B - prosternal apophyse; C - aedeagus

(2005). This new species mostly resembles *Dysgena nigrita* Mäklin, 1873. *Dysgena olapae* sp. n. cannot be identified using the key given by De Moore (1970). It is characterised by the following unique combination of characters: elytra covering of hairs; stria indicated by rows of small punctures; pseudopleural crest obsolescent at the base of the elytron; gula entirely covered of transverse microgrooves; procoxal space shorter than diameter of procoxae. This step leads to *D. durbania* Péringuey, 1904 which present this character, but is a very different South African species, entirely pubescent and exhibiting a metallic greenish tint. The next step keys out two species exhibiting pubescent metepisternum (glabrous in the new species *D. olapae*). The final alternative leads to dark, blackish species with slightly convex intervals of elytra, as the new species, but both species *D. nigrita* and *D. luctuosa* Péringuey, 1904 are different. *Dysgena luctuosa* is entirely pubescent and the punctures of pronotum are separated by ridges. *Dysgena nigrita* is a widely distributed species inhabiting South Africa, Angola, Congo, Zimbabwe, Zambia, Botswana, Malawi, Tanzania (De Moor 1970).

Dysgena olapae sp. n. is similar in size and shape to *Dysgena fusca* (Kolbe, 1897), described from East Africa (Tanzania) overlooked by De Moore (1970), revising this genus.

Etymology: Latin, genitive, fem., belonging to Olapa, the goddess of the Moon and the Wife of Ngai (Kipiry 1983).

Geographic distribution: Only known from the type locality.

Tribe Lagriini

***Lagria cuprina* Thomson, 1858** (Fig. 4)

Lagria cuprina Thomson, 1858: 106

Kenya: Victoria Lake: Mbita Research Camp, 1050 m a.s.l., 4-5.07.2003, 1 ex., leg. V. Sakalian; habitat type: ruderal area inside the camp.

Remarks: Despite the monographic work of Borchmann (1910, 1915, 1936) our knowledge of the genus *Lagria* Fabricius, 1775 is in poor state. Fåhraeus (1870) described some African *Lagria* and the type material, preserved in the Swedish Museum of Natural History has been examined. This species agreed with specimens identified (in litt.) by Hans Gebien as *Lagria cuprina* Thomson, 1858 preserved in high numbers from Meru (Y. Sjöstedt exp.).

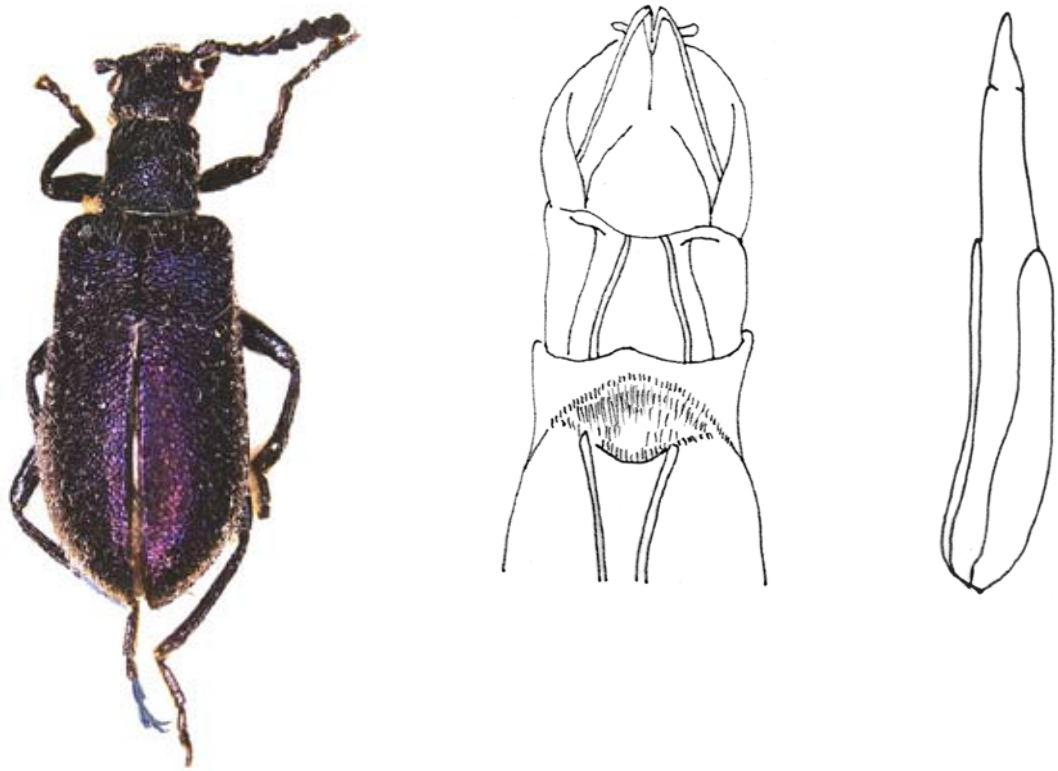
Tribe Lupropini

***Anaedus striatus* Gebien, 1921** (Fig. 5)

Anaedus striatus Gebien, 1921: 106

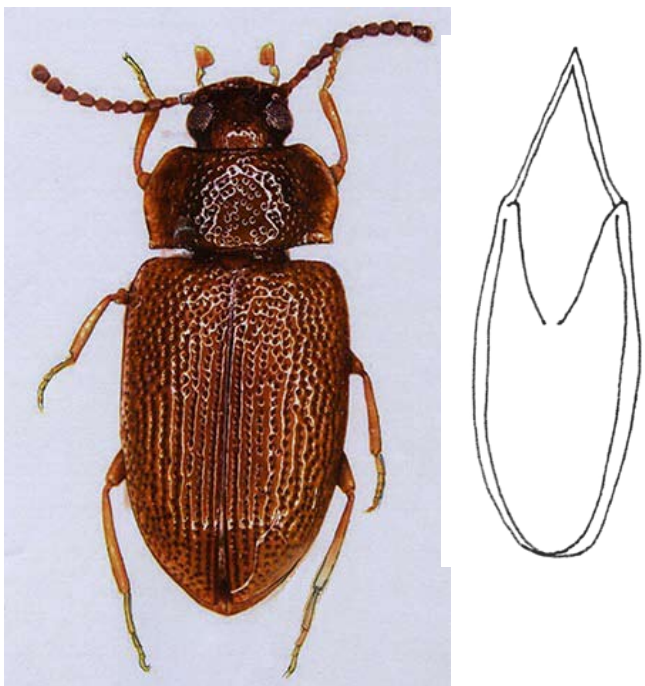
NE Kenya: Malindi: Kepepeo farm (03°13' S; 40°06' E), 30 m a.s.l., 24-25. 04.2006, 1 ex., leg. V. Sakalian; habitat type: ruderal places around the farm.

Remarks: As in the precedent genus, despite the considerable works of Gebien (1921), Ardoin (1973) and Schawaller (2011), our knowledge of the genus *Anaedus* Gebien, 1921 is still waiting for a systematic revision. Our specimen agreed with the diagnosis of *Anaedus striatus* Gebien, 1921 after Schawaller (2011). We present for first time the ae-



A B C

Fig. 4. *Lagria cuprina* Thomson: A - habitus; B - ovipositor; C - aedeagus



A B

Fig. 5. *Anaedus striatus* Gebien: A - habitus; B - aedeagus

deagus of this species.

Family Zopheridae

***Scoriaderma cordicolle* (Waterhouse, 1880)**

Nosoderma cordicolle Waterhouse, 1880: 214

Kenya: Taita Hills: Ngangao forest (03°21'59" S – 38°20'26" E), 1850 m a.s.l., 04.11.2005, 1 ex., leg. V. Sakalian & G. Curletti; habitat type: remains of relict wet forest typical for Taita Hills, which is characterised by many endemic plant species.

Geographic distribution: Comoros Islands, Zimbabwe, Tanzania and Kenya (Foley, Ivie 2008).

In conclusion, it could be noted that the present results are not representative for the species richness of darkling and ironclad beetles in Kenya because they were not collected systematically. However, despite the reduced number of collected specimens, two species (*Oplocheirus ngaii* sp. n. and *Dysgena olapae* sp. n.) were found as new for science. The original rank of *Gonocephalum jeanneli* Chatanay, 1914, *Gonocephaum segne* (Thomson, 1855) and *Micrantereus variolosus* Gerstaecker, 1873 as valid species is restituted (stat. restitutus). In addition, four species of darkling beetles (*Phrynocolus spinolai* Solier, 1843, *Menephilus distinguendus* Fairmaire, 1867, *Asthenochirus nigropunctatus* Fairmaire, 1885 and *Miltoprepes laetus* Gerstaecker, 1873) are recorded for the first time from Kenya.

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