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**Revision of the Xantholinini from Madagascar,
Mascarenes, Comoros and Seychelles,
with description of four new genera
and one hundred forty-nine new species
(Coleoptera, Staphylinidae)**

A revision of the staphylinids Xantholinini (Coleoptera) of the Madagascar and the neighboring islands is presented including a historical review, a discussion of diagnostic characters, morphology and some conclusive remarks mostly on the zoogeography of this group in Madagascar. The number of genera known from Madagascar amounts to 16 (4 of which new to science: *Elea* gen.n., *Edrisia* gen.n., *Qumuria* gen.n. and *Malgalinus* gen.n.) and the number of the species to 204 of which 149 are new for the science. *Platydromus* is placed in synonymy with *Gauropterus*. Lectotypes and - sometimes - paralectotypes are designed for *Elea magniceps*, *Paulianella innocua*, *P. obsoleta*, *P. insularis*, *Thyrecephalus silvaticus*, *T. goudoti*, *T. madagascarensis*, *Gauropterus umbilicatus*, and *G. claviger*. New combination are designed for *Elea scalabrei*, *E. ganglbaueri*, *E. puncticollis*, *E. magniceps*, *E. vinsoni*, *E. quadriceps*, *E. mauritiana*, *E. jarrigei*, *E. infima*, *Edrisia angustata*, *Paulianella innocua*, *P. insularis*, *P. obsoleta*, *Chaetocinus jarrigei*, *Thyrecephalus nossibeanus*, *T. mirabilis*, *T. silvaticus*, *T. goudoti*, *T. sexpunctatus*, *T. madagascarensis*, *T. heterocephalus*, *Qumuria bordonii*, *Microleptus microphthalmus*, *Gauropetrus nigripennis*, *G. erosus*, *Malgalinus politus*, and *Heterocinus dieganus*. A key of the Xantholinini and a key of the species of all genera of this tribe of the Madagascar are also provided. Each species is described and originally illustrated, all distributional and available bionomic data are presented and presence records of some species are mapped.

Keywords: Coleoptera, Staphylinidae, Xantholinini, taxonomic revision, Madagascar, Mascarenes, Comoros, Seychelles.

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HISTORICAL OUTLINE

The first Xantholininae from Madagascar was described in 1832 by Klug as *Xantholinus limbatus* (now *Thyreocephalus madagascarensis* Steel, 1949, nom. nov.). In 1839 Erichson described *Xantholinus gagatinus* (now *Gauropterus*: type missing), some pages before *Leptacinus tenellus* (now *Heterocinus*). Subsequently some species have been described by Fairmaire in 1893: *Pachycorynus inflatipes* and *P. sparsipennis* (both now *Elea* gen.n.), by Brancsik again in 1893: *Xantholinus coloratus* (now *Thyreocephalus*), by Bernhauer in 1902: *Eulissus diabolicus* (now *Gauropterus*) and in 1904: *Xantholinus insularis* (now *Paulianella*), *Eulissus silvaticus* (now *Thyreocephalus*) and *Pachycorynus ganglbaueri* (now *Elea*).

In 1905 Fauvel described several species: *Xantholinus albocinctus*, *X. claviger*, *X. hova*, *X. umbilicatus* (now all belonging to the genus *Gauropterus*), *Leptacinus dieganus*, *L. microphthalmus*, *L. politus* (now all included in *Heterocinus*), *Pachycorynus puncticollis*, *P. scalabrei* (both now *Elea*), *Platydromus erosus* (now *Gauropterus*), *Xantholinus heterocephalus*, *X. sexpunctatus*, *X. goudoti* (all now *Thyreocephalus*), *X. innocuus* (now *Paulianella*). Schubert in 1911 described *Xantholinus obsoletus* (now *Paulianella*), and in 1922 Bernhauer described *Leptacinus magniceps* (now *Elea*), in 1936 Cameron described *Pachycorynus quadriceps*, in 1947 *Xantholinus vinsoni* (both now *Elea*). From 1948, Jarrige began studying staphylinids of Madagascar (*Xantholinus subcylindricus* and *Platydromus nigripennis*, now both *Gauropterus*) and *Eulissus mirabilis* (now *Thyreocephalus*); in 1951 described *Leptacinus microps* (now *Paulianella*). In that year he described the new genus *Paulianella* and in 1963 the new genus *Microleptus* and the species *M. vadoni*. He dedicated later two contributions to the Xantholinini of the island, in particular. In 1970 he published the description of the new genus *Heterocinus* for the species *Leptacinus tenellus* (Erichson) and the species *H. pauliani* and *Paulianella tristis*, *P. monticola*, *P. subaenea*, *P. turficola*. In the 1978 contribution he described *Paulianella subnitida*, *P. longiceps*, *P. angustata*, and *P. aethiops*, unfortunately in some cases on the basis of females, and *Heterocinus andringitranus*, *H. betschi*, *H. descarpentriesi*.

More recently, Lecoq has also dedicated part of his contributions to the Xantholinini of Madagascar. In 1990 he described the new genus *Dactylaptatus* for the species *D. insularis*, *Microleptus gomyi* and *Leptacinus gomyi* (the second now syn. of *Erymus gracilis* (Fauvel, 1895)), *Pachycorynus jarrigei* and *P. mauritanus* (both now *Elea*). In 1996 he described *Heterocinus jarrigei* and *Thyreocephalus bordonii* (now *Qumuria* gen.n.) The last author to deal with this tribe before the present revision was Janák who already in 1989 had designated the lectotype of *Leptacinus tenellus* Erichson and who published in 2014 *Dactylaptatus taborskyi*, the synonymy between *Laptacinus gomyi* Lecoq and *Erymus gracilis* and in 2017 *Thyreocephalus banari* and *T. flavoviolaceus*. Recently (2019) this author describes *Arnaldolinus* for the species *bordonii*.

In this paper I revised all the available staphylinids from Madagascar, Seychelles, Comoros and Mascarenes. I analysed specimens housed in natural

history museums and private collections. In a few cases I was not able to check the original material, mainly due to unaccessibility of collections.

Here I provide a revision of the known staphylinids. A key of the Xantholinini and a key of the species of all genera of this tribe of Madagascar are also provided. Each species is described and illustrated with original illustrations, all distributional and available bionomic data are presented and presence records of some species are mapped. In total the species described before the present revision was 46. Some of these have been placed to different genera, often new. At the end of my revision in May 2022 the number of genera known from Madagascar amounts to 16 (4 of which new to the science) and the number of the species to 202 of which 149 are new for the science.

GEOGRAPHICAL OVERVIEW

Madagascar is the fourth largest island in the world, with around 600 thousand square Km of surface emerged in the southern hemisphere, separated from Africa by around 300 Km of the Mozambique Channel. It consists mainly of a large plateau with mountains at most 2700 m high (Jolly *et al.*, 1984). During the Jurassic period the island was connected, together with South America, Antarctica and Australia to Africa and India, probably with northern Tanzania. Madagascar was separated from Africa at the end of the Jurassic and remained united with India until the late Cretaceous. The island and India therefore remained isolated for around 60 million years. From the biogeographical point of view, Madagascar is a microcontinent that has progressively been isolated from other lands with fauna and flora that evolved differently from the rest of the globe for millions of years. This complete isolation has given rise to the extraordinary biological biodiversity that characterizes this island (Swaney & Willox, 1994).

Madagascar is located within the tropical zone. The greatest influence on temperature and rainfall is due to the presence of large mountain ranges from north to south that interrupt the humid winds coming from the Indian Ocean. Temperatures vary as a function of latitude and altitude but generally range between 19° and 27°. The highest rainfall occurs in the north-eastern areas, exposed to the monsoons and the humid currents of the Indian Ocean, while the lowest rainfall occurs in the southern part.

From the vegetational point of view, only 18% of the surface of the island was covered by primary vegetation in the seventies of the last century (Faramalala, 1988, 1995; Du Puy & Moat, 1996). After all, only 6% of primary vegetation comes under protected areas, equal to 1.17% of the total area of the island, while 40% of the vegetation of protected areas is represented by secondary vegetation. In fact, most of Madagascar, especially in the central plateau, is largely deforested. The original forests are currently reduced to small areas in sunken valleys, since the valleys have been transformed into rice fields and the hills suffer frequent erosion

phenomena that have been tried to limit with the introduction of alien plants, such as pines and eucalyptus.

Thus, it follows that the entire Malagasy ecosystem can be said to be largely definitively compromised. It is therefore of the utmost importance to collect the naturalistic data that can still be seen and, as far as the sector in question is concerned, illustrate the species that still live on the island. Still Faramalala (l.c.) has identified 11 areas indicative of primary vegetation, divided into two groups, evergreen formations and deciduous formations. The evergreen formations are located east to the center of the island and include coastal forests, humid evergreens of low altitude, medium altitude (800-1800 m) and mountains (1800-2000 m), mountain steppe with *Erica* and *Philippia* and woods sclerophylles with *Uapaca*. Deciduous forests are found in the west and south and include coastal forests, dry forests and steppes. On the basis of the collections carried out, the author is especially interested in the ever-green humid forests from 0 to 1800 m which represent the remains of the primary forests of Madagascar. These rainforests are mainly found on metamorphic and igneous rocky bases, as in the northern part of the island or on outcrops of ultrabasic rocks in the central area of Andasibe-Périnet. and evergreen mountain forests from 1800 to 2000 m are also found on metamorphical and igneous rock bases mainly located on the northern mountains such as Tsaratanana Massif and on the edge of the central mountain ranges southeast of Antananarivo. Western seasonally deciduous dry forests are found on unconstrained sands, particularly around Morondava and sandstones like in the Zombitse forest, while south of the Tsaratanana there is a small area of deciduous forest on a base of metamorphic rocks. Although Madagascar is not on the world list of countries with mega-diversity in the plant realm (they have about 12.000 species compared to 23.000 species in neighboring South Africa) they do have a very high percentage of endemic plants.

Seychelles are located north-east of Madagascar, 1600 Km east of Kenya. This archipelago is home to rainforests which are an ecoregion of the afro-tropical ecozane. Below 600 meters the forest is composed of palm trees, *Pandanus* and angiosperms, while above 600 meters the forest predominates with tree ferns and mosses. The archipelago consists of 155 mainly granite tropical islands, formed by the separation of India from Africa and the action of underwater volcanoes, like Mauritius and Réunion. The 115 islands of the Seychelles are divided into two groups: the granite islands, called mountainous neighboring islands, are located on the relatively shallow ocean shelf, located approximately 1800 Km from the East African coast, while the coral islands, called the islands' distant, they are all somewhat flat and low, located mostly beyond the ocean shelf. The 72 "distant" islands are in turn divided into five groups: the Amirantes group, located 230 Km from Mahè, the Southern Coral Group, the Alphonse group, the Farquhar group and the Aldabra group which is about 1150 Km from Mahè (Friedel, 1995).

Mascarenes include the islands Mauritius, Réunion and Rodriguez and a number of volcanic remnants. The islands have a volcanic origin and tropical climate. They form the Mascarenes forest ecoregion (Blanchard, 2000). The lowland

forests are characterized from dense evergreen forest (*Mimusops*, *Hernandia*, bomboos). The cloud forest are evergreen rainforest found on mountain slopes. The archipelago comprises three large islands, Mauritius, Réunion, and Rodrigues, plus a number of volcanic remnants in the tropics of the southwestern Indian Ocean, generally between 700 and 1500 kilometres east of Madagascar. The terrain includes a variety of reefs, atolls, and small islands. They present various topographical and edaphic regions. On the largest islands these gave rise to unusual biodiversity. The climate is largely oceanic and tropical. The Mascarene islands form a distinct ecoregion known as the Mascarene forests (Strahm, 1996).

The archipelago of Comoros includes four volcanic islands (Grande Comoros, Mohéli, Anjouan, Mayotte) located between the African coast and Madagascar. Anthropization has considerably impoverished the vegetation in the absence of protected areas. Among the main environmental problems that the Comoros islands have to face, the most serious are represented by deforestation and soil degradation. 59.2% (2003) of the territory is cultivated and the impoverishment and erosion of the soil are the result of cultivation on the slopes without the appropriate creation of terraces. Even the original rainforest is now limited to a small part of the territory. A rather high percentage of the island's already limited biodiversity is compromised; fishing and tourism are damaging coral reefs. The government has ratified international agreements on the environment on biodiversity, desertification, especially endangered species, protection of the ozone layer and wetlands (Pitcher & Wright, 2004).

MAIN MADAGASCAR'S COLLECTING AREAS

Here I shortly describe some collecting areas, providing at the same time a rough description and a few supplementary notes. Photographs of landscapes of some of these sites are reported in Figs. 648-653.

Réserve Spéciale d'Ambohitantely

Ambohitantely a protected natural area of central-northern Madagascar. It includes a mountain-hilly area (altitudinal range 1050-1650 m), rich in watercourses that contribute to supply the water catchment area of the Betsiboka River to the east and the west Ikopa River. About half of the reserve's territory is occupied by the rainforest, which is one of the few fragments that survived the deforestation of the central highland region of Madagascar. In the remaining part of the territory the savannah prevails. The canopy of the rain forest reaches a height of about 15 m and is mainly composed of some species of *Weinmannia*, *Cussonia*, *Kaliphora*, *Gymnosporia*, *Rhus*, *Canarium*, *Ravensara*, and *Diospyros*. Many are the epiphytes among which there are many species of orchids. In the valleys there is a large population of the palm *Dypsis* and some *Pandanus* trees (Ratsirarson & Goodman, 2000).

Réserve Spéciale d'Anjanaharibe-Sud

It is a protected natural area of north-eastern Madagascar. This reserve is located in the north-eastern part of Madagascar, about 25 Km south-west of the town of Andapa. It covers an area of about 180 Km² including the Anjanaharibe-Sud Massif, 2,064 m high. The reserve hosts a variety of ecosystems ranging from the humid forest, present in the altitudinal belt between 600 and 1200 m, to the mountain sclerophyllous forest, up to 1400 m. For example, 300 different species of ferns have been surveyed (Goodman, 1998).

Parc National d'Andasibe-Mantadia

This is a protected natural area located in the eastern part of Madagascar, not far from Antananarivo. It includes two distinct areas of the Province of Toamasina: including the Mantadia N.P., with an area of over 15,500 ha of rainforest, which houses a vast sample of biodiversity including many endemic species in danger of extinction and some epiphytic species including the *Asplenium* fern and numerous species of orchids (*Aerangis*, *Angraecum*, and *Bulbophyllum*) that made the circuit Mantadia famous (Bradt, 2002).

Parc National de la Montagne d'Ambre

This national park is located at the far north of the island, in the province of Antsiranana, 40 Km south of Antsiranana (Diégo Suarez). The park has an area of 18, 200 hectares that develops around the homonymous volcanic massif (1474 m), covered, above all on the northern slope, by a luxuriant rainforest, with areas, on the southern slope, of dry deciduous forest. In the luxuriant rainforest where the rains are abundant, over 1000 plant species have been surveyed, including *Dalbergia*, *Canarium*, *Chrysophyllum*, *Pandanus*, arborescent ferns, and various species of palms. Numerous epiphytic species including the *Asplenium* fern and numerous species of orchids (i.e., *Aerangis*, *Angraecum*, and *Bulbophyllum*) that made the "circuit Mantadia" well-known (Preston-Mafham, 1991). See Fig. 652.

Parc National de Ranomafana

Located in central Madagascar, around 60 Km from Fianarantsoa. Located in a mountainous area (600-1400 m) it occupies an area of 410 Km² covered by dense rainforest, characterized by numerous tree species of the families Apocynaceae, Euphorbiaceae, Rubiaceae and Arecaceae, including *Dalbergia*, *Weinmania*, and *Ocotea*. Numerous species of epiphytic plants including the pteridophyte *Asplenium nidus* and several species of orchids of the genera *Bulbophyllum* and *Eulophiella*. The wildlife of the park reflects the tropical rainforest landscape. There are 43 mammal species with lemurs accounting for close to 20 of those (Nicoll & Langrand, 1989).

Parc National de l'Andringitra

Located in the Haute Matsiatra Region, 47 kilometres south of Ambalavao. The reserve covers about 31,000 hectares covering much of the granite massif of the Andringitra mountains. The altitude of the reserve varies from 700 metres to the

peak of the second highest mountain in the country, at 2658 metres. The park is one of the most biologically diverse places in Madagascar, with many endemic species. The eastern flank of the massif is covered with humid forest, and humid grassland and scrub in the higher areas. On the western flank there is relatively dry forest. The park is one of the most biologically diverse places in Madagascar, with many endemic species. The eastern flank of the massif is covered with humid forest, and humid grassland and scrub in the higher areas. On the western flank there is relatively dry forest (Nicoll & Langrand, 1989). See Fig. 653.

MATERIAL AND METHODS

The descriptions are indicative since each species provides some variability of the exoskeletal characters. In particular, body measurements are indicative. For this reason I stress the measure of the forebody which is assumed to be more constant. In the “Examined Material” paragraph I faithfully report the information copied from the accompanying label, including original graphics.

Some specimens belonging to Janák’s collection bears a label with the genitalia in Canada balsam. In some cases I could find the tergite or the sternite of the genital segment, or both these parts.

The references of the widespread species contain only the citations related to the studied area. Maps were prepared using Arc GIS 10.3”. The examination of the specimens was done through a Wild M5A binocular and Optika B-293 tri-ocular microscope.

Descriptions include reference to figures, referring to original drawings, protographs of the whole specimens of anatomical details, and quoted distributions (Figs. 1-647).

USED ABBREVIATIONS AND ACRONYMS

comb. syn. n. = new synonym; ex. = specimen; DAP = D.A. Pollock (collector); exx. = specimens; fig. = figure; figs = figures; GD = G. Dunay (collector); gen.n. = new genus; IJ = I. Jenis (collector); JJ = J. Janák (collector); JS = J. Stolarczyk (collector); Km = kilometer; m = meter; MAI = M.A. Ivie (collector); mm = millimeters; m (in the figures) = membranous part; n. = new combination; N.P. = National Park; OH = O. Hovorka (collector); PB = P. Bulirsk (collector); PM = P. Moravec (collector); RK = R. Kmeco (collector); R.N. = Route Nationale (national road); SM = S. Murzin (collector); sp.n. = new species; S.R. = Special Reserve. The symbol ▲ refers to a campsite(s), followed by a defined altitude.

Analysed collections are as follows:

cB	Bordoni’s Collection, Firenze, Italy
cJ	Janák’s Collection, Rtyne nad Bilinou, Czech Republic
CAS	California Academy of Sciences, San Francisco, USA

DEI	Deutsches Entomologisches Institut, Müncheberg, Germany
FMNH	Field Museum of Natural History, Chicago, USA
KUNHM	Kansas University, Natural History Museum, Lawrence, USA
MHNG	Musée d'Histoire naturelle Genève, Switzerland
MMB	Moravian Museum, Brno, Czech Republic
MNHN	Muséum national d'Histoire Naturelle, Paris, France
MRAC	Muséum Royal de l'Afrique Central, Tervuren, Belgium
NHML	The Natural History Museum, London, UK
NHMO	Natural History Museum, Oxford, UK
NMB	Naturhistorisches Museum, Berlin, Germany
RBIN	Institut royal des Sciences naturelles, Bruxelles, Belgium
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany
ZMF	Museo Zoologico "La Specola", Firenze, Italy

MAIN QUOTED LOCALITIES OF MADAGASCAR

Here we report the main Malagasy localities where the new examined specimens were collected. They mainly refer to six expeditions led by J. Janák and colleagues. This list is given here, with the toponyms and other information provided by J. Janák. The altitude where the specimens were collected is purely indicative. Collectors' abbreviations are given as well:

Ambanimaso (21°27'30"S, 47°04'00"E): 4 Km S of Fianarantsoa, ~ 1200-1300 m a.s.l., IV.2001.

Ambatofitorahana 1 (20°46'15"S, 47°10'45"E): S of Ambositra, Route Nationale Km 293 from Ambatofitorahana, ~ 1700 m a.s.l., I.1999 JJ.

Ambatofitorahana 2 (20°47'50"S, 47°10'35"E): S of Ambositra, Route Nationale Km 295, 5 Km from Ambatofitorahana, ~ 1700 m a.s.l., I.1999 JJ.

Ambatombe (16°59'00"S, 48°37'50"E): Andilamena, ~ 900 m a.s.l., I.1995 JJ.

Amboditafonana (21°29'36"S, 47°21'11"E): Toamasina District, 1.5 Km direction ESE from Amboditafonana, I.2000 OH.

Ambondrombe 1 (21°52'10"S, 47°12'30"E): Ambondrombe Massif, Amboasa crest, Ikoka surroundings, Camp 1, ~ 1100-1200 m a.s.l., III.1996 JJ / PM.

Ambondrombe 2 (21°52'30"S, 47°13'40"E): Ambondrombe Massif, Amboasa crest, Ikoka surroundings, Camp 3, ~ 1300-1400 m a.s.l., II.1996 JJ / PM.

Ambondrombe 3 (21°52'40"S, 47°14'20"E): Ambondrombe Massif, 1 Km W of slope 1579, Camp 4, ~ 1300-1400 m; Ambondrombe Massif, 1 Km W of ▲ 1579 m a.s.l., Camp 4, 1300-1400 m a.s.l. III.2001 JJ.

Ambondrombe 4 (21°52'38"S, 47°14'47"E): Ambondrombe Massif, "slope 1579", Camp 5, ~ 1500-1600 m a.s.l., III.1996 JJ / PM.

Ambondrombe 5 (21°52'40"S, 47°14'54"E): Ambondrombe Massif, "slope 1579" surroundings, Camp 6, 1500-1600 m; Ambondrombe Massif, ▲ 1579 m a.s.l. Camp 6, ~ 1500-1600 m a.s.l., III.IV.2001 JJ.

Ambondrombe 6 (21°52'38"S, 47°15'07"E): Ambondrombe Massif, slope SW, 1600-1700 m; Ambondrombe Massif, SW slope and ridge, ~ 1600-1800 m a.s.l., III-IV.2001 JJ.

Ambondrombe 7 (21°52'50" S, 47°15'40"E): Ambondrombe Massif, S slope and ridge, 1 Km southward of ▲, 1936 m a.s.l., ~ 1800-1850 m a.s.l., II-IV.2001 JJ.

Ambondrombe 8 (21°52'37" S, 47°15'52" E): Ambondrombe Massif, surroundings of the peak, ~ 1900-1936 m a.s.l., III.2001 JJ.

Ambohimahasina (21°55'50"S, 47°11'25"E): Ambohimahasina, ~ 1000 m a.s.l., III.1996 JJ / PM.

Ambohimahasoa 1 (21°05'00"S, 47°13'15"E): 4 Km N of Ambohimahasoa, ~ 1200-1300 m a.s.l., III.1996 JJ / PM.

Ambohimahasoa 2 (21°04'35" S, 47°12'50"E): Ambohimahasoa surroundings, R.N. 7, Km 344, ~ 1300-1400 m a.s.l., III.1996 JJ / PM.

Ambohimanarivo (21°21'10"S, 47°36'25"E): Ambohimanarivo, S of Ifanadiana, ~ 450-550 m a.s.l., II.1995 JJ.

Ambohitantely (18°10'S, 47°17'E): Ankazobe Massif, Ambohitantely S.R., ~ 1600 m a.s.l., XII.1999 M. Bednařík.

Ambohitra (12°31'S, 49°10'E): Antsiranana Province, Ambohitra, no altitude data, XII.1996 JJ.

Ampamoho (17°06'00"S, 48°33'45"E): 5 Km S of Ampamoho, ~ 950-1000 m a.s.l.

Ampatika (15°52' S, 47°16'E): Mahajanga Province, Mahajamba River, Ampatika surroundings, no altitude data, XII.1996 JJ.

Analamazaotra see Andasibe.

Andasibe (18°56' S, 48°26'E): Andasibe, 930-1150 m a.s.l.; Andasibe surroundings, ~ 900 m a.s.l., XII.1997 JS, XII.2000 SM.

Andranobe (23°23'30"S, 46°23'20"E): 35 Km ESE of Betroka, 2 Km N of Andranobe, ~ 1450 m a.s.l., XII.1998 JJ.

Andranokobaka (18°04'S, 48°15'E): Andranokobaka (N. of Moramanga), ~ 800 m a.s.l. I.1995 GD / JJ.

Anjanaharibe-Nord 1 (14°36'20"S, 49°27'30"E): Anjanaharibe-Nord Massif, along the path Ambodihasina-Ambalarombe, ~ 500-600 m a.s.l., II-III.1996 JJ / PM.

Anjanaharibe-Nord 2 (14°36'20"S, 49°26'25"E): Anjanaharibe-Nord Massif, along the path path Ambodihasina-Ambalarombe, River Andramonta surroundings, ~ 600-700 m a.s.l., II.1996 JJ / PM.

Anjanaharibe-Nord 3 (14°36'20"S, 49°25'30"E): Anjanaharibe-Nord Massif, along the path Ambodihasina-Ambalarombe, River Andramonta, ~ 600-800 m a.s.l., II-III.1996 JJ / PM.

Anjanaharibe-Nord 4 (14°35'30"S, 49°24'40"E): Anjanaharibe-Nord Massif, along the path Ambodihasina-Ambalarombe, River Andramonta surroundings, ~ 750-850 m a.s.l., II.1996 JJ / PM.

Anjanaharibe-Nord 5 (14°35'33"S, 49°22'56"E): Anjanaharibe-Nord Massif, along the path Ambodihasina-Ambalarombe, Andramonta River surroundings, ~ 1100-1200 m a.s.l., II.1996 JJ / PM.

Anjanaharibe-Nord 6 (14°35'40"S, 49°22'45"E): Anjanaharibe-Nord Massif, along the path Ambodiharina-Ambalarombe, River Andramonta surroundings, crest, ~ 1250-1300 m a.s.l., II.1996 JJ / PM.

Ankingameloka (13°50' S, 48°17'E): Antsiranana Province Ankingameloka (Ambanja), no altitude data, XI.1996 JJ.

Anosibe Ifody (18°54'45"S, 48°02'45"E) Anosibe Ifody, Moramanga, ~ 1000-1200 m a.s.l., I-II.1993 JJ.

Antananarivo (18°55'20"S, 47°31'40"E): Antananarivo, Ambondrona, ~ 1250-1350 m a.s.l., I.1995 JJ.

Antsahatsaka (18°57'30"S, 48°16'35"E): Toamasina District, Antsahatsaka surroundings, no altitude data, XII.1997 JS.

Betroka 1 (23°09'48"S, 45°58'07"E): Tuléar Peak, 18 Km NNW Betroka, ~ 825 m a.s.l., XI-XII.1994 MAI / DAP.

Betroka 2 (23°14'40"S, 46°06'30"E): Betroka surroundings, ~ 800-850 m a.s.l., XII.1998 JJ.

Didy (18°04'20" S, 48°33'00"E): Ambatondrazaka, 5 Km N of Didy, ~ 1100-1200 m a.s.l., I.1999 JJ.

Iankira (23°29'20"S, 46°14'50"E): 30 Km SSE of Betroka, 2.5 Km N of Iankira, ~ 1394 m a.s.l., I.1999 JJ.

Ilalana (22°52'00"S, 46°08'40"E): Road Betroka-Ihosy, ford of Ilalana River, ~ 1000 m a.s.l., I.1999 JJ.

Ivahona (23°27'20"S, 46°11'05"E): 23 Km SSE of Betroka, 1 Km E. of Ivahona, ~ 800-850 m a.s.l., I.1999 JJ.

Kalambatritra 1 (23°24'25"S, 46°24'55"E): 38 Km ESE of Betroka, Kalambatritra Forest, 3 Km E. of Andranobe, ~ 1600-1670 m a.s.l., XII.1998 PB / JJ.

Kalambatritra 2 (23°22'30"S, 46°25'45"E): 38 Km ESE of Betroka, Kalambatritra Forest, 3 Km SSE of Ambaro, ~ 1400 m a.s.l., XII.1998.

Katsepy (15°47'S, 46°14'E): Katsepy (Mahajanga), no altitude data., II.2002 JJ.

Lembonibona (14°40'20"S, 49°40'30"E): 5 Km at the E. of Andapa Lembonibona (1265 m), ~ 800-1000 m a.s.l., III.1996 JJ / PM.

Maheriara (17°45'25"S, 47°58'20"E): 10 Km W of Maheriara, Route Morarano Chrome-Ambakireny, 1200-1300 m a.s.l., I.1995 PM.

Manankazo (18°10'S, 47°17'E): Antananarivo Province, Manankazo surroundings; Ankazobe Massif, no altitude data, XII.1996 JS.

Mandraka (18°54'20"S, 47°54'30"E): Mandraka, ~ 1300-1400 m a.s.l., I.1995 JJ.

Mandritsara (19°33'S, 47°03'E): Ankaratra, Mandritsara, Route Antanifotsy-Faratsiho, ~ 1800-2000 m a.s.l., I.1995 JJ.

Manindray (22°46'30"S, 44°50'30"E): Manindray, E. of Sakaraha, 700-800 m a.s.l., I.1995 GD / JJ.

Maromizaha (18°58'S, 48°27'E): ~ 950-1150 m a.s.l., I.1995 JJ, XI-XII 1995 II.; about 1200 m a.s.l.; XII.1998 JM.

Marovato (13°57'S, 48°33'E): Sambirano River, Marovato ville, no altitude data, XII.2001 JR.

Mavogiso (23°26'30"S, 46°16'10"E): 28 Km SE of Betroka, Mavogiso, ~ 850 m a.s.l., XII.1998 JJ / PB.

Menabe (23°26'55"S, 46°15'05"E): 25 Km SE of Betroka, Menabe, ~ 900 m a.s.l., XII.1998 JJ.

Moramanga (18°57'30"S, 48°16'35"E): Toamasina District, Moramanga surroundings, II-III.1995 IJ, XII.1995 IJ, XII.1996 IJ; East Moramanga, XII.1997 JM; Moramanga surroundings, no altitude data., XII.1998 JM.

Ranohira (22°33'S, 45°23'E): Fianarantsoa Province, Ranohira (Isalo) XII.1995 IJ; Isalo Massif, Ranohira XI.1996 RK; Madagascar, Ranohira-Isalo, no altitude data, XI.1995 JM.

Ranomafana (21°15'S, 47°25'E) Fianarantsoa Province, Ranomafana surroundings, I-II.1995 IJ~ 900 m a.s.l., I.2001 SM.

Sahavondrona (21°16'00"S, 47°21'20"E): Ranomafana N.P., surroundings, Sahavondrona, ~ 1150-1250 m a.s.l., II.1995 / JJ.

Sambava 1 (14°15'30"S, 50°09'00"E): Sambava, Anovona River surroundings, ~ 0-20 m a.s.l., II-III.1996 JJ / PM.

Sambava 2 (14°15'10"S, 50°09'30"E): Sambava, ~ 0-20 m a.s.l., II-III.1996 JJ / PM.

Satria (23°22'30"S, 44°19'50" E): Satria, Tongobory, ~ 150-200 m a.s.l., I.1995 JJ.

Sendrisoa (22°01'25"S, 46°56'55"E): Sendrisoa, S of Ambalavao, Manambolo River, ~ 1200 m a.s.l., IV.2001 JJ.

Toliara 1 (23°27'S, 43°46'E): 15-30 Km S of Toliara, ~ 50 m a.s.l., XI.1996 M. Bednarik.

Toliara 2 (23°20'S, 43°41'E): Toliara surroundings, no altitude data, XI.1996 JS.

Tsanerena 1 (23°26'25"S, 46°18'45"E): 30 Km SE of Betroka, 2 Km NE of Tsanerena, ~ 900 m a.s.l., XII.1998 JJ.

Tsanerena 2 (23°25'55"S, 46°19'10"E): 30 Km SE of Betroka, 3 Km NE of Tsanerena, ~ 900 m a.s.l., XI.1998 JJ / PB.

Vohidray 1 (22°04'10"S, 46°57'00"E): N Andringitra: Vohidray Ridge., 3 Km SSE of Amboarafibe, ~ 1500-1600 m a.s.l., IV.2001 JJ.

Vohidray 2 (22°04'15"S, 46°58'10"E): N Andringitra: Vohidray Ridge., 3-4 Km SSE of Amboarafibe, ~ 1600-1700 m a.s.l., IV.2001 JJ.

Vohidray 3 (22°05'00"S, 46°57'40"E): N Andringitra: Vohidray Ridge 3-5 Km SE of Amboarafibe, ~ 1750-1850 m a.s.l., IV.2001 JJ.

Vohidray 4 (22°04'10"S, 46°57'25"E): N of Andringitra: Vohidray Ridge., ▲ 1920 m a.s.l., northern part, ~ 1900-1920 m a.s.l., IV.2001 JJ.

Vohidray 5 (22°03'52"S, 46°58'10"E): N of Andringitra: Vohidray Ridge., 2 Km S of Ambondro, ~ 1350-1500 m a.s.l., IV.2001 JJ.

Vohiparara (21°14'10"S, 47°23'45"E): Ranomafana N.P., Vohiparara, ~ 1100-1200 m a.s.l., I.1993 JJ / GD.

Vohitrosa 1 (23°22'25"S, 46°20'10"E): 30 Km SE of Betroka, Vohitrosa Forest, 2 Km SE of ▲ 1825 m a.s.l., ~ 1400-1500 m a.s.l., XII.1998 JJ.

Vohitrosa 2 (23°21'20"S, 46°20'40"E): 30 Km SEE of Betroka, Vohitrosa Forest, 2 Km E of ▲ 1825 m a.s.l., ~ 1400-1670 m a.s.l., XII.1998 PB / JJ.

Vohitrosa 3 (23°20'25"S, 46°20'35"E): 30 Km ESE of Betroka, Vohitrosa Forest, 2 Km NEE of ▲ 1825 m a.s.l., ~ 1600-1650 m a.s.l., XII.1998 JJ.

Vohitrosa 4 (23°20'55"S, 46°20'35"E): 30 Km ESE of Betroka, Vohitrosa Forest, 3 Km N.E. of ▲ 1825 m a.s.l., ~ 1600-1650 m a.s.l., XII.1998 JJ.

Vohitrosa 5 (23°22'35"S, 46°23'10"E): 32 Km ESE of Betroka, Vohitrosa Forest, 0.5 Km S. of ▲ 1798 m a.s.l., 1650-1700 m a.s.l., XII.1998 PB / JJ.

Zombitsy (22°52'00"S, 44°41'30"E): Zombitsy Forest, Sakaraha, ~ 700-850 m a.s.l., I.1995 JJ.

KEYS TO THE GENERA

1. Upper epipleural line of pronotum absent; body flat; ocular grooves absent; dorsal series of pronotum of 8-9 punctures; anterior tarsi squat 1. *Elea* gen.n.
- Upper epipleural line of pronotum present 2
2. Upper epipleural line of pronotum present for a distal portion only 3
- Upper epipleural line of pronotum entire and not joint with the lower line 4
- Upper epipleural line of pronotum entire and joint with the lower line 7
3. Upper epipleural line of pronotum short; apterous species; ocular grooves absent; dorsal series of pronotum of 8-9 punctures; anterior tarsi squat; aedeagus with long, very narrow parameres, move left 2. *Edrisia* gen.n.
- Upper epipleural line of pronotum vanished forward; anterior tarsi dilated; two ctenidia; frontal grooves very short; ocular grooves absent; aedeagus with one or two lobules between the parameres 3. *Paulianella* Jarrige
- Upper epipleural line of pronotum gradually disappearing anteriorly and therefore detectable only on posterior half of pronotum; head and pronotum elongated and covered with dense, deep punctation; ocular and frontal grooves absent; anterior tarsi dilated 4. *Stenistoderus* Jacq. du Val
4. Anterior tarsi dilated 5
- Anterior tarsi not dilated; pronotum with dorsal and lateral series of punctures 6
5. Ocular and frontal grooves absent; pronotum with dorsal and lateral series of punctures; head elongate; gular groove parallel; anterior tarsi squat; brachypterous species 5. *Dactylaptatus* Lecoq
- Ocular grooves almost indistinct; frontal grooves deep; pronotum with dorsal and lateral series of punctures; anterior tarsi dilated; aedeagus shaped like a sunflower seed, flat and with a dark distal area 6. *Metolimus* Cam.

6. Frontal and ocular grooves well visible, deep, folded part of the temples delimited ventrally by a longitudinal carina followed by a groove; pronotum with dorsal and lateral series of punctures; anterior tarsi not dilated; aedeagus totally devoid of parameres
 7. *Phacophallus* Coiffait

-. Frontal and ocular grooves superficial, not very visible; pronotum with dorsal and lateral series of punctures; sternite of the male genital segment normally reduced to a very narrow tape; aedeagus with long parameres 8. *Erymus* Bordoni

-. Frontal grooves deep, ocular grooves almost absent; aedeagus with large, thick parameres with long, numerous setae on the internal sides 9. *Chaetocinus* Clark *et al.*

7. Body large sized (12-23 mm) 8

-. Body of smaller size 9

8. Head large, with only some setiferous punctures; labrum transverse with some denticulation or rounded; ocular and frontal grooves evident; pronotum with only one puncture near the anterior angles 10. *Thyrecephalus* Guér. de Mén.

-. Head and pronotum elongated with sub-parallel sides; labrum bilobed, with the usual median emargination; ocular and frontal grooves evident; head with two longitudinal series of punctures in the median part; micropunctures behind the eyes; pronotum with one setiferous puncture near the anterior angles 11. *Qumuria* gen.n.

-. Body elongate, slender; ocular grooves absent; labrum with two denticulation; pronotum with deep, closed punctation on all the surface; pronotum with similar punctation on the lateral portion 12. *Arnaldolinus* Janák

9. Anterior tarsi squat but not dilated 10

-. Anterior tarsi long 11

10. Body yellowish pale, apterous; eyes composed of a few ommatidia; pronotum with fine, scattered punctation; body very small (2.6 mm long) 13. *Microleptus* Jar.

-. Body brown / black, winged; eyes of normal shape; epistoma with median emargination; head with deep punctation forming a lateral groove or covered with dense punctation; pronotum with only one puncture near the anterior angles 14. *Gauropterus* Thoms.

11. Head sub-rounded or of normal shape, in the first case with a lateral carina; ocular grooves absent; frontal grooves short; head with scattered punctation; pronotum with dorsal and lateral series of punctures; body medium sized (4-6 mm long) 15. *Malgalinus* gen.n.

-. Head ovoid or sub-rectangular; ocular grooves absent or very superficial; frontal grooves deep, subparallel; two converging series of punctures behind the eyes; posterior margin of tergite of male genital segment normally emarginated, sometimes with lobules in the posterior corners; body small or medium sized (4-8) 16. *Heterocinus* Jar.

TAXONOMIC DESCRIPTIONS

1. Genus *Elea* gen.n.

Type species: *Pachycorynus ganglbaueri* Bernhauer, 1904

DESCRIPTION. The genus differs from *Pachycorynus* Motschulsky, 1859, genus with which it has always been confused, by the contemporary presence of the following characters: body flat, not particularly small, mandibles with lateral groove, 2nd-3rd antennomeres globular, the second slightly larger than third, maxillary and labial palpi as in Figs 1-2, eyes normally small and flat, gular sutures gathered throughout their length, head with more or less evident lateral grooves, antesternal plate divided, short sternum with posterior, long median protrusion, superior epipleural line of pronotum absent but pleura thick, ocular and frontal grooves present, anterior tarsi as in Fig. 3, aedeagus membranous, more or less long, with very peculiar parameres (Figs 7, 10h). Female genital segment as in Fig. 4.

ETYMOLOGY. Another name for the goddess Diana, feminine gender.

DISTRIBUTION. Madagascar, Comoros, Mascarene, Seychelles.

REMARKS. The sixth abdominal visible segment is very narrow so the genital segment stretches with difficulty. Furthermore, the pleurae of this segment are closely related to the genital segment, so it is difficult to detach the latter from the abdomen. Furthermore, the aedeagus is very difficult to detect and extract, so it is clear that the study of these staphylinids is complicated. *Pachycorynus* occurs in the Oriental Region with numerous species (Bordoni, 2002), New Guinea (Bordoni, 2010), Australia (Bordoni, 2005b) and Pacific Islands (Bordoni, 2013). *Elea* gen.n. differs from *Pachycorynus* by maxillary and labial palpi, labrum, different antesternal plate, aedeagus, female genital segment. *Elea* includes subcortical species that live under the bark of trees or in woody debris, perhaps accidentally. As I found, for example, in the Pacific islands (Bordoni, 2013), this is the only exploitable habitat, given the scarce presence of debris on the ground. This is confirmed by the flat body and the small eyes. The basal bulb of these species is exceptionally long and membranous so I only provide the measure of the distal portion where the parameres are.

KEY TO THE SPECIES

- | | |
|--|---------------------------------|
| 1. Body over 8 mm in length..... | 2 |
| -. Body at more than 6.8 mm in length..... | 7 |
| 2. Body brown with red elytra..... | 1. <i>E. toliaraensis</i> sp.n. |
| -. Body black with reddish posterior half of elytra..... | 3 |
| -. Body brown dark..... | 4 |

3. Body 9 mm long 5
 -. Body 8.3 mm long 2. *E. clivia* sp.n.
4. Body 10 mm long; dorsal series of pronotum of 10-11 punctures 3. *E. complicita* sp.n.
 -. Body 8-11 mm long 6
5. Body slender, narrower; head sub-rectangular; pronotum narrower 4. *E. diegana* sp.n.
 -. Body stronger; head sub-quadrangular; pronotum more large 5. *E. flavoelytrata* sp.n.
6. Body 8 mm long; dorsal series of pronotum of 11-12 punctures 6. *E. scalabrei* (Fvl.)
 -. Body 9 mm long; dorsal series of pronotum of 6-7 punctures 7. *E. ganglbaueri* (Bh.)
 -. Body 11 mm long 8. *E. nigra* sp.n.
7. Body 6.3-6.8 mm long 8
 . Body 2.4-4 mm long 9
8. Body 6.3 mm long, yellowish orange; pronotum with three series of punctures 9. *E. puncticollis* (Fvl.)
 -. Body 6.8 mm, brown with posterior edge of elytra yellowish 10. *E. tsaratanaensis* sp.n.
9. Body 4 mm long, yellowish brown 11. *E. magniceps* (Bh.)
 -. Body 4 mm long, reddish brown dark with reddish posterior margin of elytra 12. *E. nossibeana* sp.n.
- 13. *E. gomyi* Lecoq
 -. Body 2.4 mm long, brown lighter, with dense punctation on the forebody

1. *Elea toliaraensis* sp.n.

EXAMINED MATERIAL. Holotype ♂: SW Madagascar, 15-30 Km S Toliara, 50 m, Bednariak 23-27.XI.1996 (cJ); paratypes: same data, 1 ♂, 3 ♀ (cJ), 1 ♂, 1 ♀ (cB).

DESCRIPTION. Length of body 7-9.6 mm; from anterior margin of head to posterior margin of elytra: 5.6 mm. This species is the only *Elea* with totally reddish elytra with black scutellum. Body reddish brown very dark; antennae and legs brown. Head sub-rectangular, moderately narrow anteriorly, with slightly rounded sides and widely rounded posterior angles. Eyes small and flat. Surface of head with fine, dense, transverse micro-striation and fine, scattered punctation. Pronotum as long as head, narrower than it, very dilated anteriorly, with widely rounded anterior angles and sinuate sides. Surface with dorsal series of 11-12 punctures and lateral, irregular series of 6-7 punctures, between other punctures. Elytra longer than pronotum, more or less as wide as it, with marked humeral angles. Surface with fine, superficial, very dense punctation, arranged in numerous series. Abdomen with very fine, dense, transverse micro-striation and fine, sparse punctation, arranged in 3-4 series on each segment. Tergite and sternite of male genital segment as in Figs 5-6.

Aedeagus (Fig. 7) membranous, with the distal portion 0.7 mm long, with peculiar parameres and distal portion exceptionally long; inner sac apparently not visible.

ETIMOLOGY - The specific epithet refers to the type locality.

DISTRIBUTION. The species is known only from the type locality.

REMARKS. This species differs from *Elea flavoelytrata* sp.n. from the same locality by colour, punctuation and structure of the aedeagus.

2. *Elea clivia* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Antsiranana Prov. (Diégo Suarez), Djangoa env., I. Jenis 13.XII.2002 (cJ).

DESCRIPTION. Length of body 8.3 mm; from anterior margin of head to posterior margin of elytra: 4 mm. Similar to *E. diegana* sp.n. but slightly smaller; head dilated, narrow anteriorly, with widely rounded sides and denser punctuation; eyes smaller; pronotum with moderately sinuate sides; different aedeagus. Tergite and sternite of male genital segment as in Figs 8-9. Aedeagus (Fig. 10) small, membranous, narrow and very long, with distal portion 0.37 mm long, with peculiar and large parameres; inner sac with some rounded, light scales in the distal, very diaphanous portion.

ETYMOLOGY. The specific epithet comes from the Latin “clivius-a-um” (difficult).

DISTRIBUTION. The species is known only from the type locality.

3. *Elea complicata* sp.n.

EXAMINED MATERIAL. Holotype ♂: Madagascar, Sikora, Antananarivo (DEI).

DESCRIPTION. Length of body 10 mm; from anterior margin of head to posterior margin of elytra: 5 mm. Similar to *Elea ganglbaueri* (Bh.) but broader and longer; head more narrow anteriorly; pronotum with more rounded anterior angles; elytra proportionately shorter; surface of head with more dense punctuation; pronotum with dorsal series of 10-11 and lateral series of 6-7 punctures; elytra with very broad and deep punctuation; different aedeagus (Fig 13). Inner sac very long, evaginated, with an inner tape covered with very fine scales; distal portion 0.55 mm long; parameres of peculiar shape. Tergite of the male genital segment as in Fig 12. Sternite of the same missing.

ETYMOLOGY. The specific epithet comes from the Latin term “complicatus-a-um” (accomplice), since it is very similar in colouration to *E. ganglbeuri*, which is very dark.

DISTRIBUTION. Madagascar.

REMARKS. The specimen bears the label “C. Schaufus dedit 1922, Bernhauer det., *Pachycorynus ganglbaueri* Bh.”.

4. *Elea diegana* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Mt. d'Ambre, Ambohitra env., I. Jenis 20-26.XII.2002 (cJ).

DESCRIPTION. Length of body 9 mm; from anterior margin of head to posterior margin of elytra: 4 mm. Similar to *E. flavoelytrata* sp.n. in size and colour but body very slender; head smaller, sub-quadrangular and moderately dilated, with slightly rounded sides; pronotum narrower, with more sinuate sides; elytra narrower, with a narrow posterior, yellowish band and with more dense punctation; different aedeagus. Tergite and sternite of male genital segment as in Figs 13-14. Aedeagus (Fig. 15) membranous, narrow and very long, with distal portion 0.44 mm long, with peculiar distal portion and parameres; inner sac apparently not visible.

ETYMOLOGY. The specific epithet refers to Diégo Suarez, old name of Antsiranana town.

DISTRIBUTION. The species is known only from the type locality.

5. *Elea flavoelytrata* sp.n.

EXAMINED MATERIAL. Holotype ♂: SW Madagascar, 15-30 Km S Toliara, 50 m, Bednariak 23-27.XI.1996 (cJ); paratypes: same data, 1 ♂, 1 ♀ (cJ).

DESCRIPTION. Length of body 9 mm; from anterior margin of head to posterior margin of elytra: 5 mm. Body black with yellowish posterior half of elytra and paratergites partially; antennae and legs brown. Head quadrangular, very narrow anteriorly, with rounded sides and strictly rounded posterior angles. Eyes small and almost flat. Surface of head with very fine, more or less polygonal micro-reticulation and fine, sparse punctation on the sides and on the posterior portion of head. Pronotum shorter and narrower than head, slightly dilated anteriorly, with oblique anterior margins, rounded anterior angles and moderately sinuate sides. Surface with fine, dense, transverse micro-striation and micro-punctation, between which is hardly visible a dorsal series of 5-6 fine punctures. Elytra sub-rectangular, longer and wider than pronotum, with sub-rectilinear and sub-parallel sides, and rounded humeral angles. Surface with some spaced series of very fine punctures. Abdomen with very fine, dense, transverse micro-striation and fine, sparse punctation, arranged in spaced series. Tergite and sternite of male genital segment as in Figs 16-17. Aedeagus (Fig. 18) membranous, narrow and long, with distal portion 0.44 mm long, with peculiar parameres; inner sac apparently not visible.

ETYMOLOGY. The specific epithet comes from the Latin “flavus-elytratus” (with yellowish elytra).

DISTRIBUTION. SW Madagascar.

6. *Elea scalabrei* (Fauvel, 1905) comb.n.

Pachycorynus scalabrei Fauvel, 1905: 170; Bernhauer & Schubert, 1914: 296; Herman, 2001a: 3734.

TYPE MATERIAL. The Institut royal d'Histoire naturelle of Bruxelles preserves 4 specimens: 1 male labelled "Suberbieville", "*scalabrei* / Fv." (handwritten by Fauvel), "Ex-Typis" (red printed on with the label); 1 female, labelled "Madagascar Sud / Pays Androy (Nord) / Alluaud 1900-36", "Ex-Typis" (red printed on with the label); 1 female, labelled "Madagascar / Isarasastra / 2e semestre 1895 / Lieuf *scalabrei*", "Ex-Typis"; 1 female with the same label of the second specimen. I choose the first as lectotype of the species. It bears the label "Lectotypus *Pachycorynus scalabrei* Fvl., Bordoni des. 2014", "*Elea scalabrei* (Fvl.), Bordoni det. 2014". I choose the other three specimens as paralectotypes of the species. They are labelled "Paralectotypus *Pachycorynus scalabrei* Fvl., Bordoni des. 2014". All are labelled "*Elea scalabrei* (Fvl.), Bordoni det. 2014".

EXAMINED MATERIAL. Madagascar, Antananarivo, Sikora, 1 ♀ (DEI).

DESCRIPTION. Length of body 8 mm; from anterior margin of head to posterior margin of elytra: 4.5 mm. Entirely reddish brown, more or less dark. Head sub-quadrangular, with rounded sides and widely rounded posterior angles. Eyes small and almost flat. Surface of head with fine and dense polygonal micro-reticulation and fine, scattered punctation, more dense on the sides. Pronotum dilated anteriorly, shorter and narrower than head, with oblique anterior margins and emarginate sides. Surface with more or less transverse micro-striation; dorsal series of 11-12 punctures and lateral series of 5-6 irregular punctures; all the punctures fine. Elytra dilated posteriorly, longer and wider than pronotum, with rounded humeral angles. Surface with very fine and dense punctation, arranged in numerous series. Abdomen with fine, transverse micro-striation and fine punctation on the sides. Tergite and sternite of male genital segment as in Figs 19-20. Aedeagus (Fig. 21) membranous, broad and proportionately short, with distal portion 0.37 mm long; parameres large, symmetric and long; inner sac apparently not visible.

DISTRIBUTION. Madagascar.

7. *Elea ganglbaueri* (Bernhauer, 1904) comb.n.

Pachycorynus ganglbaueri Bernhauer, 1904: 234; Bernhauer & Schubert, 1914: 295; Herman, 2001a: 3733.

TYPE MATERIAL. The Naturhistorisches Museum of Wien preserves 5 specimens. The first is labelled "Tananarive / Madagascar / leg. Sikora / det. Bernhauer", "*corticinus* Fvl." (in litt.), "Typus" (printed on red label); I choose this specimen,

male, as lectotype of the species, labelled “Lectotypus *Pachycorynus ganglbaueri* Bh., Bordoni des. 2016” and “*Elea ganglbaueri* (Bh.), Bordoni det. 2016”. The other are 2 females “Tananarive / Madagascar / *ganglbaueri* / det. Bernhauer”, “Cotypus” (printed on red label); 1 male “Madagascar / Sikora / *ganglbaueri* / det. Bernhauer”, “Dr. M. Bernhauer / 12.III.1932 donavit”, “coll. Scheerpeltz”, “*Pachycorynus* / Cotypus / *ganglbaueri* / Bernhauer” (on pink label); 1 male “Madagascar / Sikora 1896”, “*ganglbaueri* / Bernh. / Typus”, “Cotypus” (handwritten on red label). I choose these specimens as paralectotypes of the species. They are labelled “Paralectotypus *Pachycorynus ganglbaueri* Bh., Bordoni des. 2016” and “*Elea ganglbaueri* (Bh.), Bordoni det. 2016”. The Field Museum of Natural History of Chicago preserves 1 specimen, female, labelled “Madagascar / Sikora 1896”, “*Ganglbaueri* / Bernh. / Typus”. I choose also this specimen as paralectotype of the species. It bears the labels “Paralectotypus *Pachycorynus ganglbaueri* Bh.” and “*Elea ganglbaueri* (Bh.), Bordoni det. 2016”.

EXAMINED MATERIAL. Madagascar, 3 exx. (NMW); Madagascar, Tananarive, 1 ex. (NMW); Madagascar, Enakara, 10 Km NW, Rés. Andohahela, 430 m, 24.34S, 46.49E, B. L. Fisher 25.XI.1992, 1 ex. (FMNH), 1 ex. (cB): same data, 800 m, 17.XI.1992, 2 exx. (FMNH); Madagascar, Antananarivo Prov., 7 Km SE Andasibe N.P. headquarter, 1050 m, 18°57.76'S, 48°27.16'E, tropical forest, R. Arin'Hala 7-22.I.2001, 3 exx. (CAS), 2 exx. (cB); Central E Madagascar, Andasibe, forest litter, unknown coll. 12.X.1970, 2 exx. (NHML); S Madagascar, Enakara, 10 Km NW, Andohahela, 24.34S, 46.49E, 400 m, rotting tree stump, in rainforest, L. Fisher 25.XI. 1992, 1 ex. (FMNH).

DESCRIPTION. Length of body 9 mm; from anterior margin of head to posterior margin of elytra: 4.5 mm. Entirely reddish brown very dark. Body flat. Head sub-quadrangular, with barely rounded sides and widely rounded posterior angles. Eyes small and almost flat. Surface of head with fine and dense, polygonal micro-reticulation, sparse and small punctation, and some setiferous punctures. Pronotum dilated anteriorly, moderately shorter and evidently narrower than head, with widely rounded anterior angles and sinuate sides. Surface with more or less transverse micro-striation, dorsal series of 6-7 punctures and lateral series of 5 punctures. Elytra large, longer and wider than pronotum, dilated posteriorly, with marked humeral angles. Surface with dense, fine punctation, arranged in numerous series. Abdomen with very fine and dense, more or less transverse micro-striation and fine, very sparse punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 22-23. Aedeagus (Fig. 24) membranous, with the distal portion 0.4 mm long, with peculiar parameres; inner sac filiform, covered with fine scales.

DISTRIBUTION. Madagascar.

8. *Elea nigra* sp.n.

EXAMINED MATERIAL. Holotype ♂: Madagascar, Sikora (NMB); paratype: same data, 2 ♀♀ (NMB).

DESCRIPTION. Length of body 11 mm; from anterior margin of head to posterior margin of elytra: 6 mm. Body brown black; antennae and legs brown. Head dilated, narrow anteriorly, with moderately rounded sides and very narrowly rounded posterior angles. Eyes small and almost flat. Surface of head with fine, dense, longitudinal micro-striation and superficial, elongated punctation, forming laterally a groove. Pronotum very narrow posteriorly, shorter and narrower than head. Surface with dorsal series of 7 fine punctures and lateral series of 7-8 irregular punctures; other punctures on the sides. Elytra sub-rectangular, with slightly rounded sides and marked humeral angles. Surface with very numerous, fine punctures, arranged in numerous series. Abdomen with transverse micro-striation and visible punctation, arranged in numerous, regular series on each segment. Tergite and sternite of male genital segment as in Figs 25-26. Aedeagus (Fig. 27) membranous, very narrow, not particularly long, with distal portion 0.44 mm long, with peculiar parameres; inner sac apparently not visible.

ETYMOLOGY. The specific epithet comes from the Latin “niger-a-um” (black).

DISTRIBUTION. Madagascar.

9. *Elea puncticollis* (Fauvel, 1905) comb.n.

Pachycorynus puncticollis Fauvel, 1905: 169; Bernhauer & Schubert, 1914: 296; Herman, 2001a: 3734.

TYPE MATERIAL. The Institut royal d’Histoire naturelle of Bruxelles preserves one female labelled “Madagascar / Diégo Suarez / C. Alluaud 1893“, “*puncticollis* / Fvl.,” “Ex-Typis” (red printed on white label). I choose this specimen as lectotype of the species. It bears the labels “Lectotypus *Pachycorynus puncticollis* Fvl., Bordoni des. 2016” and “*Elea puncticollis* (Fvl.), Bordoni det. 2016”.

EXAMINED MATERIAL. Madagascar, Antananarivo, Sikora, C. Schaufus dedit 1922, Bernhauer det., *Pachycorynus puncticollis* Fvl., 1 ♂ (DEI); Central Madagascar, Andasibe, unknown coll. 12.X.1970, under bark of coniferous, 1 ♂ (NHML), 1 ♀ (cB).

DESCRIPTION. Length of body 6.3 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Body yellowish orange, flat. Head and pronotum with more or less longitudinal micro-striation. Head sub-quadrangular, moderately narrow anteriorly, with sub-rectilinear sides and narrowly rounded posterior angles. Eyes small and almost flat. Surface of head with scattered punctation. Pronotum very dilated anteriorly, longer and narrower than head, with oblique anterior margins,

rounded anterior angles and not sinuate sides. Surface with some series of irregular punctures, except for a wide median stripe. Elytra sub-rectangular, very longer and wider than pronotum, with marked humeral angles. Surface with fine, superficial, closed punctation, arranged in numerous series. Abdomen with fine, transverse micro-striation and fine, very sparse punctation. Tergite and sternite of male genital segment as in Figs 28-29. Aedeagus (Fig. 30) very small, diaphanous; distal portion 0.29 mm long, with basal bulbus short and wide, apparently without scales.

DISTRIBUTION. Madagascar.

10. *Elea tsaratananaensis* sp.n.

EXAMINED MATERIAL. Holotype ♂: NW Madagascar, Tsaratanana Antsirasilira-Moravato env., I. Andreev, V. Dolin & R. Andreeva 24-30.XI.2001 (cJ).

DESCRIPTION. Length of body 6.8 mm; from anterior margin of head to posterior margin of elytra: 3.3 mm. Similar to *E. diegana* sp.n. in colour and punctation but elytrafeebly yellowish on the posterior half, with reddish portion on the sides of the scutellum and yellowish paratergites; body very smaller, narrower; head with sub-rectilinear and sub-parallel sides, with sparser punctation and narrowly rounded posterior angles; lateral groves of head very evident; pronotum very dilated anteriorly; elytra proportionally longer, with rounded humeral angles; different aedeagus. Tergite and sternite of male genital segment as in Figs 31-32. Aedeagus (Fig. 33) small, membranous, narrow and very long, with distal portion 0.3 mm long, with peculiar and very long parameres; inner sac with some fine scales in the distal portion.

ETYMOLOGY. The specific epithet refers to the type locality.

DISTRIBUTION. The species is known only from the type locality.

11. *Elea magniceps* (Bernhauer, 1922) comb.n.

Leptacinus magniceps Bernhauer, 1922: 175; Scheerppeltz, 1933: 1302; Herman, 2001a: 3677.

TYPE MATERIAL. The Field Museum of Natural History of Chicago preserves one specimen labelled “SiIhouette 1908 / Seychelles Exp.”, “Mare aux Cochons / Wald. IX.1903 / ... (unreadable)”, “Leptacinus / magniceps / Bernh. Typus”, “Syntype / teste D. J. Clarke 2014 / GDI Imagine Project”, “FMNHINS 2819246 Field Museum”, “Photographed / Dave Clark 2014 / Emu Catalog”. I choose this specimen, male, as lectotype of the species. It bears the labels “Lectotypus *Leptacinus magniceps* Bh., Bordoni des. 2017” and “*Elea magniceps* (Bh.), Bordoni det. 2017”.

DESCRIPTION. Length of body 4 mm; from anterior margin of head to posterior margin of elytra: 2 mm. Body entirely yellowish brown, flat. Head sub-

quadrangular, moderately narrow anteriorly, with widely rounded posterior angles. Eyes medium-sized and slightly protruding. Surface of head with transverse micro-striation, and deep, not scattered punctation, apart from a median stripe. Pronotum moderately dilated anteriorly, shorter and narrower than head, with oblique anterior margins, widely rounded anterior angles. Surface with dorsal series of 8 irregular punctures and lateral series of 4-5 anterior punctures. Elytra long, sub-rectangular, much longer and narrower than pronotum, with sub-parallel sides, marked humeral angles. Abdomen with transverse micro-striation and fine punctation, arranged in some series. Tergite and sternite of male genital segment as in Figs 34-35. Aedeagus (Fig. 36) membranous, narrow and short; distal portion 0.44 mm long; parameres symmetric, narrow and long. Female genital segment as in Fig.4.

DISTRIBUTION. Seychelles.

REMARKS. In the original description, after "Cochons" it is written "about 1000 ft and coconut planted country near sea-level at Pointe Étienne".

12. *Elea nossibeana* sp.n.

EXAMINED MATERIAL. Holotype ♂: Madagascar, Nossi Be Isl., Foret Lokobe, E. S. Ross 17.XI.1959 (CAS); paratype: same data 1 ♂ (cB).

DESCRIPTION. Length of body 4 mm; from anterior margin of head to posterior margin of elytra: 1.9 mm. Body reddish brown with reddish posterior margin of elytra. Similar to *E. flavoelytrata* sp.n. with the same fine and dense, polygonal micro-reticulation on the head, but smaller body, with smaller head, less dilated, less narrow anteriorly, with widely rounded posterior angles and less visible lateral groove; pronotum less dilated, with more oblique anterior margins, visibly narrow posteriorly, with more rounded anterior angles; elytra narrower, proportionally longer; different aedeagus. Tergite and sternite of male genital segment as in Figs 37-38. Aedeagus (Fig. 39) membranous, narrow and very long, with distal portion 0.40 mm long, with peculiar parameres; inner sac apparently not visible.

ETYMOLOGY. The specific epithet refers to the island of Nosy Be.

DISTRIBUTION. The species is known only from Nosy Be Archipelago in NW Madagascar.

REMARKS. Lokobe forest is the last primary forest of Nosy Be.

13. *Elea gomyi* (Lecoq, 1990) comb.n.

Microleptus gomyi Lecoq, 1990: 187; Herman, 2001a: 3704.

TYPE MATERIAL. The Muséum national d'Histoire naturelle de Paris preserves 31 specimens from La Réunion, the holotype labelled "La Réunion, Saint Gilles les

Bains, Y. Gomy 21.VII.1965”, the paratypes with the same label and some labelled “Étang Salé, parc départemental, Y. Gomy 22.XI.1972” (Lecoq, 1990).

EXAMINED MATERIAL. La Réunion: Saint Gilles les Bains, Étang Salé les Bains (Gomy *et al.*, 2016).

DESCRIPTION. Length of body 2, 4 mm; from anterior margin of head to posterior margin of elytra: 1 mm. Brown with head and elytra lighter; eyes normal but not protruding; ocular grooves deep; surface of head with evident punctation except for a median stripe; pronotum barely narrower than head, with similar punctation except for a median stripe; elytra as long as pronotum, with finer punctation; abdomen with fine, sparse punctation and trasverse micro-striation. Aedeagus as in the figures of Lecoq (1990: pag. 186).

DISTRIBUTION. Mascarene islands: La Réunion.

REMARKS. I can not study these specimens, so I refers to the description and to the figures (Figs) of Lecoq (l.c.). I believe that the species should be included in the genus *Elea* gen.n.

KEY TO THE SPECIES

NOTE: Due to the provisions imposed by the museum management of Paris, I was unable to examine the type material of the following species to which Lecoq (1990) has dedicated a part of his contribution with the description of the taxa of the islands of Mauritius, La Réunion and Seycelles, attributing them to the genus *Pachycorymus* Motschulsky, 1858, including the two described by Cameron, proposing a key for their identification. I transcribe this key, however attributing those species to the genus *Elea*.

1. Body more than 5 mm long, brown-black, with reddish elytra..... 2.
 -. Body about 4 mm long, of light ferruginous colour..... 1. *E. seychellensis* sp.n.
 -. Body less than 3 mm long, brown 4
2. Pronotum longer than head and elytra shorter than pronotum..... 2. *E. vinsoni* (Cameron)
 -. Pronotum a little longer than head, elytra more or less long as the pronotum..... 3
3. Surface of head with longitudinal micro-striation; head sub-quadrate, with more large eyes, sides of head less than three and half a times of the eyes..... 3. *E. quadriceps* (Cameron)
 -. Surface of head with transverse micro-striation; head longer than wide; smaller eyes, with sides of head more than three and a half times longer than the eyes..... 4. *E. mauritiana* (Lecoq)
4. Elytra longer than pronotum, covered with more dense punctation; sides of head about two time longer than the eyes..... 5. *E. jarrigei* (Lecoq)
 -. Elytra as long as the pronotum, covered with sparser punctation; sides of head three time longer than eyes..... 6. *E. infima* (Lecoq)

1. *Elea seychellensis* sp.n.

TYPE MATERIAL. Holotype ♂: Seychelles, Mahé island, Mont d'Or, 200-300 m, 4°38'58"S, 55°24'55"E, under bark in degraded indigenous forest, J. Janák 8.XII.2007 (cJ); paratypes: same data, 1 ♂, 4 ♀♀ (cJ), 1 ♂, 1 ♀ (cB); same data, Praslin, Fond B'Offay River valley, 4°19'47"S, 55°44'36"E, J. Janák 3.XII.2007, 3 ♀♀ (cJ).

DESCRIPTION. Length of body 4.1 mm; from anterior margin of head to posterior margin of elytra: 1.8 mm. Body of light ferrugineous colour, with barely darker head; antennae and legs yellowish. Head sub-quadrangular, not particularly flat, a little narrow anteriorly, with weakly rounded sides and narrowly rounded posterior angles. Posterior margin of head sub-rectilinear. Surface with very fine, not sparse punctation (the distance between the punctures equal to 3 times their diameter). Pronotum narrow, longer and narrower than head, with oblique anterior margins, rounded anterior angles and sub-rectilinear sides. Surface with numerous, fine punctures on the sides of an unpunctured median stripe. Elytra a little dilated posteriorly, large, longer and wider than pronotum, with rounded humeral angles. Surface with numerous fine punctures, arranged in some series. Abdomen with fine punctation on the sides of the segments. Tergite and sternite of male genital segment as in Figs 40-41. Aedeagus (Fig. 42) 0.25 mm long, with long parameres and apparently without scales.

ETYMOLOGY. The specific epithet refers to Seychelles.

DISTRIBUTION. The species is known only from the type locality.

REMARKS. The study of this species is rather complicated due to the small size of the genitalia. The aedeagus is so diaphanous, consisting of an extremely thin membrane, that it can be identified with difficulty even at high magnification. The aedeagus is also closely connected with the male genital segment and the membranes that connect the pleura with tergite and sternite are confused with those that connect the aedeagus itself above all to sternite.

2. *Elea vinsoni* (Cameron, 1947) comb.n.

Xantholinus vinsoni Cameron, 1947: 115.

Pachycorynus vinsoni: Lecoq, 1990: 182; Herman, 2001a: 3735.

TYPE MATERIAL. The British Museum of Natural History in London preserves 1 specimen labelled "Mauritius / Mt. Cocotte / X.XII.1943 / J. Vinson", "Type" (on round label with red edge), "*Xantholinus / vinsoni / Type (in red) Cam.*", "Brit. Mus / 1952-381". It is a female that bears the labels "Lectotypus / *Xantholinus vinsoni* Cam., des Bordonis, 2019" and "*Elea vinsoni* (Cam.), Bordonis det. 2019.

EXAMINED MATERIAL. Mauritius, Mt Cocotte (holotype) (Lecoq, 1990, sub *Pachycorynus*): Mascareignes (Vinson, 1967, sub *Xantholinus*).

DESCRIPTION. Length of body 5.3 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Similar to *E. quadriceps* (Cam.) but shorter, narrower; head more convex, with smaller eyes; surface of head with more punctures and more or less transverse micro-striation. Pronotum smaller, barely longer than head, with more evidently sinuate sides. Surface with transverse micro-striation, dorsal series of 9-10 punctures and other punctures near the anterior angles. Elytra proportionally shorter and narrower, with marked humeral angles. Surface with a much smaller number of punctures, mostly on the sides. Abdomen with traces of transverse micro-striation and fine punctation, except for a median stripe. Male unknown.

DISTRIBUTION. Mauritius Island.

3. *Elea quadriceps* (Cameron, 1936), comb.n.

Pachycorynus quadriceps Cameron, 1936: 202; Lecoq, 1990: 182; Herman, 2001a: 3734.

TYPE MATERIAL. The British Museum of Natural History in London preserves 1 specimen, male, labelled “Mauritius / Les Mares / J. Vinson 7.XII.1935”, “*P. quadriceps* / Type (in red) Cam.”, “M. Cameron / Bequest. / B. M. 1955-147”, Type (on white label with red edge)”. The specimen bears the label “*Elea quadriceps* (Cam.), Bordoni det. 2019”.

EXAMINED MATERIAL. Mascareignes (Vinson, 1967, sub. *Pachycorynus*). Mauritius, Moka, 26 m, J, Vinson 1950 (Lecoq, 1990). La Réunion: Saint-André, Bras des Chevrettes (Janák, 2014; Gomy *et al.*, 2016).

DESCRIPTION. Length of body 5.4 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Body evenly reddish brown; antennae and legs brown light. Head sub-quadrangular with sub-rectilinear and sub-parallel sides and rounded posterior angles. Eyes medium-sized, not protruberant. Surface of head with more or less longitudinal micro-striation, very long and deep frontal grooves and punctation moderately fine, umbilicate, moderately closed, except for a median stripe. Pronotum dilated anteriorly, as long as head, narrower than it, with oblique anterior margins, rounded anterior angles and sinuate sides. Surface with dorsal series of 6-7 irregular punctures; other punctures near the anterior angles. Elytra dilated posteriorly, longer and wider than pronotum, with rounded humeral angles. Surface with fine, dense punctation, arranged in numerous series, provided with pale setae. Abdomen shiny, without micro-sculpture, with very fine punctation mostly on the sides. Tergite and sternite of male genital segment as in Figs 43-44. Aedeagus (Fig. 45) very small, diaphanous; distal portion 0.3 mm long, with basal bulbus short and narrow, apparently without scales.

DISTRIBUTION. Mauritius and La Réunion islands.

4. *Elea mauritiana* (Lecoq, 1990), comb.n.

Pachycorynus mauritianus Lecoq, 1990: 182; Herman, 2001a: 3734.

TYPE MATERIAL. Mauritius: Mt Cocotte, J. Vinson 16.IV.1955 (holotype and paratype females).

DESCRIPTION. Length of body 6.5 mm; head, pronotum and scutellum blackish, elytra reddish, abdomen brown; antennae and legs reddish. Forebody as in Fig. (ex Lecoq, 1990); head with sparse punctation; pronotum with scattered and irregular punctation at the sides of an unpunctured median stripe. Elytra with fine and sparse punctation; abdomen with transverse micro-striation. Male unknown.

DISTRIBUTION. Mauritius Island.

5. *Elea jarrigei* (Lecoq, 1990), comb.n.

Pachycorynus jarrigei Lecoq, 1990: 184; Herman, 2001a: 3733.

TYPE MATERIAL. La Réunion, Grand Matarum, Cilaos, Y. Gomy 1.XI.1969 (holotype and one paratype); Saint Philippe Baril; Petite Plaine, Plaine des Palmistes, Y. Gomy V.1967; piste forestière de la Plaine d’Affouches, Y. Gomy 19.X.1969.

EXAMINED MATERIAL. Les Maches, Bon Accueil forest (Gomy *et al.*, 2016).

DESCRIPTION. Length of body 2.7 mm; reddish with darker elytra. Forebody as in Lecoq (1990, p. 183); head with deep and sparse punctation. Pronotum with sparse but well visible punctation at the sides of an unpunctured median stripe. Elytra with fine punctation, denser than that of pronotum. Aedeagus in Lecoq (1990, pag. 186).

DISTRIBUTION. La Réunion Island.

REMARKS. Some specimens collected in “tamisage *Pandanus*”, “dans un tronc de *Cordemoya integrifolia*, tronc en décomposition”.

6. *Elea infima* (Lecoq, 1990), comb.n.

Pachycorynus infimus Lecoq, 1990: 184; Herman, 2001a: 3733.

TYPE MATERIAL. Mauritius: Macabe, J. Vinson 10.XII.1956 (holotype); Mt Cocotte, J. Vinson 25.IV.1995- 8.XII.1956; Le Pouce (Lecoq, 1990).

DESCRIPTION. Length of body 2.7 mm; reddish with darker elytra. Forebody as in Lecoq (1990, p. 183); head with deep and sparse punctation. Pronotum with sparse but well visible punctation at the sides of an unpunctured median stripe. Elytra with fine punctation, denser than that of pronotum. Aedeagus in Lecoq (1990, pag. 186).

DISTRIBUTION. Mauritius Island.

REMARKS. Many specimens collected in “bois et Aloes pourris”.

2. Genus *Edrisia* gen.n.

TYPE SPECIES. *Paulianella angustata* Jarrige, 1978

DESCRIPTION. This genus differs from the others Xantholinini by the simultaneous presence of the following characters: upper epipleural line of pronotum short and not joint the lower line; maxillary palpi with the last article very short and narrower than the previous one (Fig. 46); labial palpi with the last article longer than previous (Fig. 47); anterior tarsi as in Fig. 48; antisternal plate entire; ocular grooves absent; eyes small and flat; gular sutures separated along their entire length (Fig. 49); aedeagus with very narrow parameres, located to the left of the basal bulb. Female genital segment as in Fig. 56. Gender feminine.

ETYMOLOGY. The generic name refers to al Idrisi, cartographer and traveler, who at the court of Ruggero II of Sicily also drew up a map that included Madagascar.

DISTRIBUTION. Madagascar.

KEY TO THE SPECIES

1. Body 7.4 mm long, brachypterous, red yellowish; pronotum with dorsal series of 10-11 punctures.....1. *E. angustata* (Jar.)
 -. Body 6.4 mm long, apterous, reddish brown; pronotum with dorsal series of 8-9 punctures.....
2. *E. elegantissima* sp.n.
 -. Body 7.3 mm long, apterous, orange yellowish; pronotum with fine punctuation laterally.....
3. *E. septentrionalis* sp.n.

1. *Edrisia angustata* (Jarrige, 1978) comb.n.

Paulianella angustata Jarrige, 1978: 272; Hermann, 2001: 3736.

TYPE MATERIAL. The Museum national d'Histoire naturelle de Paris preserves one male labelled “Andringitra Centre / zone sommitale / Circque Boby, 2500 m / R. Paulian I.1958”.

EXAMINED MATERIAL. E Madagascar, N Andringitra, Vohidray rdg, 3-5 Km SE Amboarafibe, 1750-1850, J. Janák 12-18.IV.2001, rainforest, 10 ♂♂, 4 ♀♀ (cJ), 3 (cB); same data but 2 Km S Ambondro, 1350-1500 m, J. Janák 17-18.IV.2001, 1 ♀ (cJ); Fianarantsoa, Rés. Andringitra, 8.5 Km SE Antanifotsy, 1990 m, B. L. Fisher 6.III.1997, 3 ♂♂, 3 ♀♀ (FMNH), 1 ♂ (cB).

DESCRIPTION. Length of body 7.6 mm; from anterior margin of head to posterior margin of elytra: 3.6 mm. Apterous, body reddish yellowish shiny, without micro-sculpture apart from the postero-lateral portion of head and the abdomen with

transverse micro-striation. Head oblong, ovoid, narrow, moderately dilated anteriorly, with slightly rounded sides and almost obsolete posterior angles. Eyes very small and flat. Surface of head with very fine and spaced punctation, apart from a median stripe. Pronotum oblong, as long as head, very few dilated forward where it is narrower than it, with very oblique anterior margins, widely rounded angles, not sinuate sides. Surface with dorsal series of 10-11 punctures and very irregular lateral series, between other punctures. Elytra short, dilated posteriad with obsolete humeral angles. Surface wrinkled, with traces of more or less polygonal micro-reticulation and 5 series on each elytra of fine, spaced punctures. Abdomen with fine, sparse punctation. Tergite and sternite of male genital segment as in Figs 50-51. Aedeagus (Fig. 52) 1.5 mm long, with a large distal lobe, parameres narrow, located to the left of basal bulb; inner sac covered with two series of different scales.

DISTRIBUTION. Madagascar.

REMARKS. Some specimens have been collected “terre sous végétation éricoidale” and “litter montane rainforest”.

2. *Edrisia elegantissima* sp.n.

TYPE MATERIAL. Holotype ♂: Madagascar, Mt Ambondrombe, W slope and ridge, 1600-1800 m, J. Janák 26.III-2.IV.2001 (cJ); paratypes, same data, 3 ♀♀ (cJ), 1 ♂ (cB); Mt Ambondrombe, ▲ 1579, Camp 6, 1500-1600 m, rain forest litter, 25.III-3.IV.2001, 1 ♂ (cJ).

DESCRIPTION. Length of body 6.4 mm; from anterior margin of head to posterior margin of elytra: 3.1 mm. Body reddish brown with antennae and legs brown light, barely dilated forward, with rounded sides and almost obsolete posterior angles. Eyes very small and flat. Surface of the head with fine and scattered punctation. Pronotum longer and narrower than head, narrow, with oblique anterior margins, rounded anterior angles and moderately emarginated sides. Surface with dorsal series of 8-9 punctures and lateral series of 5 punctures; numerous punctures between these series. Elytra dilated posteriad where is a little wider than pronotum, and shorter than it, with almost obsolete humeral angles. Surface with very fine, sparse punctation, arranged in numerous series; scutellum large, with transverse micro-striation, without punctures. Abdomen with transverse micro-striation and fine, sparse punctation. Tergite and sternite of male genital segment as in Figs 53-54. Aedeagus (Fig. 55) large, 1.62 mm long, with short distal lobe, parameres very narrow, moved left; inner sac long, covered with numerous different scales. Female genital segment as in Fig. 56.

ETYMOLOGY. The specific epithet comes from the Latin “elegans” (elegant).

DISTRIBUTION. E Madagascar.

3. *Edrisia septentrionalis* sp.n.

TYPE MATERIAL. Holotype ♂: Madagascar, Mt d'Ambre, unknown coll. 16.X.1970, litter forest (MHML).

DESCRIPTION. Length of body 7.3 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Apterous. Body shiny, orange yellowish, with antennae and legs lighter. Head sub-rectangular, with almost rectilinear sides and rounded posterior angles. Eyes very small and flat. Surface of head with few, very fine and scattered punctures. Pronotum massive, longer and wider than head, with not oblique anterior margins, sub-rectilinear sides and narrowly rounded anterior angles. Surface with fine, not closed punctation laterally. Elytra short, shorter than pronotum, as wide as it, obsolete humeral angles and rectilinear sides. Surface with fine punctation arranged in some series. Abdomen with fine, dense more or less polygonal micro-reticulation and very fine punctation on each segment. Male unknown.

ETYMOLOGY. The specific epithet comes from the Latin *septentrionalis* (northern).

DISTRIBUTION. N Madagascar.

3. Genus *Paulianella* Jarrige, 1951

Paulianella Jarrige, 1951: 335 (subgen. of *Leptacinus*); Jarrige, 1970: 40 (valid genus); Herman, 2001a: 3736.

TYPE SPECIES. *Paulianella microps* Jarrige, 1951 by original designation and monotypy.

DESCRIPTION. This genus differs from the other Xantholinini for the contemporary presence of the following characters: body winged or sub-apterous; maxillary palpi ovoid elongated, with 3rd article longer than 2nd and the last shorter than 3rd, wide at the base like the previous one and sub-acute apex (Fig. 56); labial palpi similar (Fig. 57); mandible with lateral groove; ocular groove absent; frontal grooves very short and superficial; eyes small and flat; third antennomere longer than the 2nd; gular sutures reunited in a weak groove; antesternal plate entire; sternum with protruding, thin median carina, sometimes ending in a bristly spine; pronotum with dorsal and lateral series of punctures; upper epipleural line of pronotum thin, antieriad almost obsolete, not join with the lower line; anterior tarsi dilated (Fig. 58); posterior tarsi short, apart from the last segment that is as long as the previous three together; posterior legs with 2 ctenidia; aedeagus of peculiar shape, membranous, transparent, sometimes long and narrow, in few cases with the bulbus prolonged in a proximal narrow and long portion tube-like (Fig. 62). It is provided with comb of setae on the distal margin, and with one-two median, distal lobules of different shape in the species; more or less symmetrical and narrow

parameres; inner sac apparently not visible or tape-like with scales. Female genital segment as in Fig. 59.

DISTRIBUTION. Endemic to Madagascar.

REMARKS. *Paulianella* is similar to *Notolinopsis* Casey, 1906 (sensu Bordon, 2016) from Ethiopia, Kenya and South Africa, especially for the shape of the body, micro-sculpture of head, shape of maxillary and labial palpi and for the general structure of the aedeagus, but differs by the following characters: maxillary and labial palpi shape, entire antesternal plate, upper epipleural line of pronotum anteriorly almost obsolete, gular sutures reunited in a weak groove, Jarrige in 1970 again designated *P. aethiops* as type species of the genus *Paulianella* that is synonym of *Xantholinus insularis* Bernhauer, 1904.

KEY TO THE SPECIES-GROUPS

- | | |
|--|---------|
| 1. Head and pronotum smooth, without micro-sculpture..... | Group A |
| - Head and pronotum with transverse micro-striation..... | Group B |
| - Head and pronotum with polygonal micro-reticulation..... | Group C |

GROUP A

KEY TO THE SPECIES

- | | |
|--|--------------------------------|
| 1. Male genital segment with usually separated pleurae..... | 2 |
| - Male genital segment entire..... | 4 |
| 2. Body about 6 mm long..... | 3 |
| - Body 5.2 mm long; head narrow, very dilated forward and with posterior angles almost obsolete; aedeagus ovoid narrow with long median lobe; inner sac of the aedeagus (Fig. 62) tube-like rolled on itself one time, covered with fine opposed spinules..... | 1. <i>P. singularis</i> sp.n. |
| 3. Body 6 mm long, reddish brown; inner sac of the aedeagus (Fig. 65) with a long series of short spines under fine spinules and a distal group of large spines..... | 2. <i>P. ambositrana</i> sp.n. |
| - Body 6.2 mm long, reddish orange; inner sac of the aedeagus (Fig. 69) rolled up on itself two times, covered with short spines; lobule between the parameres of peculiar shape..... | 3. <i>P. cincinnata</i> sp.n. |
| 4. Male genital segment entire; body 4.6 mm long, yellow orange; aedeagus (Fig. 72) small; inner sac apparently not visible; median lobe very long..... | 4. <i>P. pallida</i> sp.n. |
| - Body 4 mm long, narrow, apterous, elytra shorter than pronotum; aedeagus small, with short median lobe; inner sac apparently not visible (Fig. 75)..... | 5. <i>P. newtoni</i> sp.n. |

1. *Paulianella singularis* sp.n.

EXAMINED MATERIAL. Holotype ♂: NW Madagascar, Antsiranana, Manongarivo S.R., 20.4 Km SW Antanabao, 1860 m, 14°2.72'S, 48°24.06'E, litter in montane rainforest, B. L. Fisher 3.XI.1998 (FMNH); paratypes: same data, 1 ♀ (FMNH); Antsiranana, Befingotra, 6.5 Km SSW, Rés. Anjanaharibe Sud, 875 m, 14.45S, 49.30E, litter in rainforest, B. L. Fisher 19.X.1994, 1 ♀ (cB).

DESCRIPTION. Length of body 5.2 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Body reddish brown, with yellowish antennae and legs. Characterized by the shape of the body: head narrow posteriad, with almost obsolete posterior angles, and very dilated anterior, at eye level. Eyes large and slightly protruding; pronotum narrow anterior and dilated posterior. Ocular grooves very deep, evident. Surface of head smooth, with scattered punctation on the sides. Pronotum as long as head, posteriad as wide as it, with sub-rectilinear sides, scarcely oblique anterior margins, rounded anterior angles. Surface smooth, with dorsal series of 9-10 fine punctures and lateral series of 4-5 punctures. Elytra large, longer and wider than pronotum, with narrowly rounded humeral angles. Surface with some series of scattered punctures. Abdomen with transverse micro-striation and fine punctation, arranged in some series, with long reclined setae. Tergite and sternite of male genital segment as in Figs 60-61. Aedeagus (Fig. 62) 0.77 mm long, small, ovoid elongate, with peculiar long parameres and distal lobule of the same length as those; inner sac tape-like, long and narrow, folded one time on itself, covered with opposing series of fine spinulae.

ETYMOLOGY. The specific epithet comes from the Latin “singularis-e” (peculiar).

DISTRIBUTION. The species is known only from the type localities in NW Madagascar.

2. *Paulianella ambositrana* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, S Ambositra, R.N., Km 293 by Ambatofitorahana, ca 1700 m, rainforest, leaves, litter on tree foot, J. Janák 5-6.I.1999 (cJ).

DESCRIPTION. Length of body 6 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Body shiny, reddish brown with testaceous light antennae and legs. Head sub-rectangular, with slightly rounded sides and very widely rounded posterior angles. Eyes small and protruding. Surface of head smooth, with very fine, sparse punctation. Pronotum dilated anterior, scarcely longer than head and anterior as wide as it, with very oblique anterior margins, rounded anterior angles and emarginate sides. Surface smooth, with dorsal series of 8-9 fine, irregular punctures and lateral series of 6-7 very fine, irregular punctures. Elytra large, sub-rectangular, longer and wider than pronotum, with rounded humeral angles. Surface with 4-5 series of fine punctures on each elytra. Scutellum large, without punctation.

Abdomen with fine, spaced punctuation on the sides. Tergite and sternite of male genital segment as in Figs 63-64. Aedeagus (Fig. 65) 1.22 mm long, ovoid, dilated, with short, asymmetric and robust parameres; distal lobule long; inner sac with a distal group of big spines, followed by a series of large scales, covered with wavy setae; proximal portion with fine scales.

ETYMOLOGY. The specific epithet refers to the type locality.

DISTRIBUTION. The species is known only from the type locality in E Madagascar (Fig. 76).

3. *Paulianella cincinnata* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Fianarantsoa, 29 Km SSW Ambositra, 1600 m, 20°46.2'S, 47°11.2'E, litter in disturbed montane rainforest, B. L. Fisher 15.I.1998 (FMNH); paratypes: same data, 5 ♀♀ (FMNH), 1 ♂, 2 ♀♀ (cB); same data, 20°46.6'S, 47°09, 9'E, 1700 m, B. L. Fisher 7.I.1998, 1 ♀ (FMNH); N Madagascar, Antsiranana, R. S. Manongarivo, 20.4 Km SE 219^h Antanambo, 1860 m, 14°2.72'S, 48°24.06'E, litter in montane rainforest, B. L. Fisher 3.XI.1998, 1 ♂ (FMNH).

DESCRIPTION. Length of body 6.2 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Body shiny, reddish orange, with darker elytra and abdomen; antennae brown, legs yellowish pale. Head sub-ovoid, with rounded sides from the eyes to the neck. Eyes medium-sized and almost flat. Surface of head smooth, with fine, spaced punctuation. Pronotum sub-rectangular, as long and wide as head, with moderately oblique anterior margins, narrowly rounded anterior angles and slightly emarginate sides. Surface smooth, with dorsal series of 7-8 very fine punctures and lateral series of 5-6 irregular punctures; other punctures on the lateral margins. Elytra sub-rectangular, longer and wider than pronotum, with moderately rounded humeral angles. Surface with fine and sparse punctuation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with very fine and very sparse punctuation, arranged in 1-2 series on each segment. Tergite and sternite of male genital segment as in Figs 67-68. Aedeagus (Fig. 69) 1.30 mm long, ovoid dilated, with more or less symmetrical parameres and sinuous distal lobule with acute apex; inner sac tape-like, folded on itself, covered with large scales in the distal portion, with 3 big spines in the median portion, followed by a arched series of short, close spines.

ETYMOLOGY. The specific epithet comes from the Latin “cincinnatus-a-um” (curly), in relation to the inner sac of aedeagus.

DISTRIBUTION. The species is known only from the type localities in Central Madagascar (Fig. 76).

4. *Paulianella pallida* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Massif Anjanaharibe Nord, sentier Ambodihasina-Ambalarombe, 600-700 m, Riv. Andramonta env., forêt humide, J. Janák & P. Moravec 24-29.II.1996 (cJ).

DESCRIPTION. Length of body 4.6 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Body shiny, yellow orange. Head narrow, elongate, dilated anteriorly, with sub-rectangular sides and widely rounded posterior angles. Eyes proportionally large, protruding. Surface of head smooth, with very scattered, fine punctation on the sides and between the eyes. Pronotum sub-rectangular, not dilated anteriorly, a little longer than head, as wide as it, with very oblique anterior margins, very widely rounded anterior angles and rounded sides. Surface smooth, with dorsal series of 6-7 punctures and lateral series of 5-6 irregular punctures. Elytra sub-rectangular, with sub-rectilinear and sub-parallel sides, scarcely wider than pronotum, as long as it, with rounded humeral angles. Surface with some series of fine punctures. Abdomen with few, fine punctures on the sides. Male genital segment with pleurae welded together in a single sclerite and tergite small, sub-triangular (Figs 70); sternite of the same as in Fig. 71. Aedeagus (Fig. 72) 0.5 mm long, small, ovoid, with very long distal lobule; parameres thin and long; inner sac apparently not visible.

ETYMOLOGY. The specific epithet comes from the Latin “pallidus-a-um” (pale).

DISTRIBUTION. The species is known only from the type locality in N Madagascar.

5. *Paulianella newtoni* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Antsiranana, Befingotra, 6.5 Km SSW, Rés. Anjanaharibe Sud, 875 m, 14.45S, 49.30E, litter in rainforest, B. L. Fisher 19.X.1994 (FMNH); paratypes: same data, 2 ♀♀ (FMNH), 1 ♀ (cB).

DESCRIPTION. Length of body 4 mm; from anterior margin of head to posterior margin of elytra: 1.9 mm. Body apterous, shiny, reddish brown with yellowish brown antennae and legs. Characterized by narrow body, by broad pronotum in relation to the rest of the body, and by short elytra, narrower than pronotum. Head sub-rectangular, scarcely narrow anteriorly, with rounded sides and narrowly rounded posterior angles. Eyes very small and flat, with few ommatidia. Surface smooth, with scattered, fine punctation. Pronotum longer and wider than head, with very oblique anterior margins, almost obsolete anterior angles and sub-rectilinear sides. Surface smooth, with dorsal series of 8-9 very fine punctures and lateral series of 4-5 very fine punctures. Elytra sub-rectangular, short, shorter and narrower than pronotum, with scarcely rounded sides, almost obsolete humeral angles. Surface with very fine, sparse punctation, arranged in some series. Abdomen with fine, dense punctation, arranged in numerous series, with golden, reclined setae. Male

genital segment with pleurae welded together in a single sclerite and tergite sub-triangular and long (Fig. 73); sternite of the same as in Fig. 74. Aedeagus (Fig. 75) 0.62 mm long, small, ovoid elongate, with short, thin parameres and distal lobule more or less of the same length; inner sac apparently not visible.

ETYMOLOGY. Dedicated with pleasure to Dr. Alfred Newton of the Field Museum of Natural History of Chicago, for his influential and helpful collaboration.

DISTRIBUTION. The species is known only from the type locality in N Madagascar (Fig.76).

REMARKS. This is one of the few species of *Paulianella* with sub-edaphic characteristics.

GROUP B

KEY TO THE SUB-GROUPS

1. Body less than 8 mm long *microps* Sub-group
 -. Body 10-11 mm long *nigra* Sub-group

microps SUB-GROUP

KEY TO THE SPECIES

1. Body about 8 mm long 2
 -. Body about 7 mm long; aedeagus (Fig. 79) 1 mm long, very long and narrow; median lobe long; inner sac very tight, covered with fine spinules 1. *P. depauperata* sp.n.
 -. Body about 6 mm long 3
 . Body 5 mm long 4
 -. Body 4.6 mm long 6
2. Body 7.7 mm long, reddish black very dark; pronotum with numerous series of punctures; aedeagus (Fig. 82) 1 mm long, very narrow and long 2. *P. kalambatritra* sp.n.
 . Body 8 mm long, brown with lighter abdomen; pronotum with dorsal and lateral series of punctures; aedeagus (Fig. 85) 1.14 mm long, ovoid elongated; inner sac very narrow and short, covered with fine spinules 3. *P. ankazobaensis* sp.n.
 -. Body 7.8-8 mm long, reddish brown; pronotum with dorsal and lateral series of punctures; aedeagus (Fig. 88) 1.36 mm long, sub-ovoid, large 4. *P. vohitrosa* sp.n.
3. Body 6.5 mm long; aedeagus (Fig. 91) 0.85 mm long, narrow, with proximal portion prolonged in a short, arked lobule 5. *P. differens* sp.n.
 -. Body 6.6 mm long; aedeagus (Fig. 94) large, 1.48 mm long, ovoid with proximal portion prolounged in a long lobule 6. *P. incredenda* sp.n.
 -. Body 6.7 mm long, 0.92 mm long; aedeagus (Fig. 97) 0.92 mm long, narrow; parameres asymmetrical, median lobe short; inner sac very narrow, covered with light spinules 7. *P. superlata* sp.n.

4. Body yellowish orange.....5
 -. Body brown light, brachypterous; pronotum with dorsal series of 8 punctures; elytra with numerous series of punctures.....8. *P. turficula* Jar.
5. Body 5.3 mm long; elytra with three series of punctures, one near the suture, one median and one lateral; aedeagus (Fig. 100) 0.7 mm long, ovoid, with large lobule 9. *P. tenerella* sp.n.
 -. Body 5.4 mm long, elytra with numerous series of punctures; aedeagus (Fig. 104) 0.92 mm long, with short median lobe; inner sac narrow and long, covered with a series of spinules next to a series of triangular scales.....10. *P. betroka* sp.n.
6. Body apterous, brown light; anterior tarsi not dilated; aedeagus (Fig. 107) 0.66 mm long, ovoid, dilated in the proximal portion; lobule large, inflated.....11. *P. microps* Jar.
 - Body winged, brown very dark; aedeagus (Fig. 110) large, 1.37 mm long, rounded with short lobule; inner sac with fine scales in the medioproximal portion and with three distal spines.....12. *P. subaenea* Jar.

1. *Paulianella depauperata* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Andasibe-Mantadia N.P., Mantadia, "Circuit *Eulophia*", 955 m, 18°47'53"S, 48°25'40"E, P. Banar 19-22.I.2017 (MMB)

DESCRIPTION. Length of body 7.6 mm; from anterior margin of head to posterior margin of elytra: 4.1 mm. Body reddish brown more or less dark, with reddish brown light antennae and legs. Similar to *P. ankazobaensis* sp.n. for the structure of the aedeagus but very different for the external characters: lighter colour, body narrow, very slender and shorter; head proportionally shorter, more dilated posteriad; surface of head with very finer and sparser punctuation; pronotum proportionally shorter, with more marked anterior angles and surface without micro-sculpture. Elytra missing. Tergite and sternite of male genital segment as in Figs 77-78. Aedeagus (Fig. 79) 1 mm long, ovoid, long and narrow, with long parameres and ovoid distal lobule; inner sac covered with very fine spinules.

ETYMOLOGY. The specific epithet comes from the Latin verb "*depaupero*" (to deprive), for the lack of elytra.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar (Fig. 101).

REMARKS. The holotype is devoid unfortunately of elytra and in bad conditions.

2. *Paulianella kalambatritra* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, 38 Km ESE Betroka, Kalambatritra forest, 3 Km SSE Ambaro, 1400 m, leaves, litter on tree foot in rainforest, J. Janák 29.XII.1998 (cJ).

DESCRIPTION. Length of body 7.7 mm; from anterior margin of head to posterior margin of elytra: 4 mm. Body reddish black very dark; antennae and legs brown dark. Head sub-rectangular, just longer than wide, with moderately rounded sides and narrowly rounded posterior angles. Eyes small and protruding. Surface of head with more or less evident transverse micro-striation; punctation very evident, rounded, moderately sparse, apart from the lateral portions with only one setiform puncture. Pronotum a little narrower and longer than head, dilated anteriorly, with moderately oblique anterior margins, widely rounded anterior angles and not sinuate sides. Surface with transverse micro-striation and fine, dense punctation, arranged in numerous series. Abdomen with transverse micro-striation and fine punctation on the sides. Tergite and sternite of male genital segment as in Figs 80-81. Aedeagus (Fig. 82) 1 mm long, ovoid, long and very narrow, with long parameres, narrow in the distal portion; sub-ovoid and long distal lobule; inner sac apparently not visible.

ETYMOLOGY. The specific epithet refers to the type locality, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar (Fig. 101).

3. *Paulianella ankazobaensis* sp.n.

TYPE MATERIAL. Holotype ♂: Madagascar, Ankazobe Mts, Manankazo env., J. Stolarczyk 29.XI-4.XII.1996 (cJ).

DESCRIPTION. Length of body 8 mm; from anterior margin of head to posterior margin of elytra: 4.6 mm. Body brown dark with lighter abdomen, antennae and legs. Head ovoid, narrow forward, almost rectilinear sides and widely rounded posterior angles. Eyes small and a little protruding. Surface of head with more or less transverse micro-striation, with deep, rounded punctures. Pronotum longer and narrower than head, with oblique anterior margins, widely rounded anterior angles, almost not emarginate sides. Surface with transverse micro-striation, dorsal series of 7 irregular punctures and lateral series of 4 punctures. Elytra sub-rectangular, moderately dilated posteriorly, with sub-rectilinear sides and slightly rounded humeral angles. Surface with fine but deep punctation, arranged in numerous series. Abdomen with traces of transverse micro-striation and fine, sparse punctation. Tergite and sternite of male genital segment as in Figs 83-84. Aedeagus (Fig. 85) 1.14 mm long, ovoid very elongated, with long distal lobe; inner sac very narrow, apparently without scales.

ETYMOLOGY. The specific epithet refers to the type locality.

DISTRIBUTION. Madagascar.

4. *Paulianella vohitrosa* sp.n.

TYPE MATERIAL. Holotype ♂: E Madagascar, 32 Km ESE Betroka, 1650-1700 m, Vohitrosa forest, 0.5 Km S ▲ 1798 m, litter in tree foot in rainforest, J. Janák 25-28.XII.1998 (cJ); paratypes: same data, 1 ♀ (cJ), 1 ♀ (cB); same data, 30 Km ESE Betroka, 1600 m, 2 Km NNE ▲ 1825 m, Vohitrosa forest, J. Janák 19-23.XII.1998, 3 ♀ ♀ (cJ); same data, 1400-1500 m, J. Janák 17-18.XII.1998, 1 ♀ (cJ), 1 ♀ (cB); 38 Km ESE Betroka, 1600-1670 m, Kalambatritra forest, 3 Km E Andranobe, J. Janák 28-29.XII.1998, 1 ♀ (cJ).

DESCRIPTION. Length of body 7.8-8 mm; from anterior margin of head to posterior margin of elytra: 3-3.2 mm. Body reddish brown. Head sub-rectangular elongate, narrow, with rounded sides and posterior angles. Eyes very small and almost flat. Surface of head with transverse micro-striation and fine, scattered punctation. Pronotum dilated forward, moderately shorter and narrower than head, with oblique anterior margins, narrowly rounded anterior angles and almost emarginate sides. Surface with transverse micro-striation, dorsal series of 6-7 deep punctures and lateral series of 3-4 irregular punctures. Elytra sub-rectangular, dilated posteriad, with sub-rectilinear sides and rounded humeral angles. Surface with fine, sparse punctation, arranged in some sparse series. Abdomen with transverse micro-striation and very fine punctation on the sides of each segment. Tergite and sternite of male genital segment as in Figs 86-87. Aedeagus (Fig. 88) 1.36 mm long, ovoid dilated, with robust distal lobe; inner sac apparently not visible.

ETYMOLOGY. The specific epithet refers to the type locality as a noun in apposition.

DISTRIBUTION. The species is known only from the type localities (Fig. 101).

5. *Paulianella differens* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Ranomafana N.P. env., Sahavondrona, 1150-1250 m, for. humide, J. Janák 3-4.II.1995 (cJ); paratypes: same data, 1200 m, Vohiparara, J. Janák 21-24.I.1993, 1 ♀ (cJ).

DESCRIPTION. Length of body 6.5 mm; from anterior margin of head to posterior margin of elytra: 3.4 mm. Similar to *P. betroka* sp.n. in colour, transverse micro-striation on head and pronotum and shape of the body. Body slender, narrower, head with more rounded sides, with more evident punctation, eyes moderately larger, pronotum more dilated forward, dorsal series of 6-8 punctures and lateral series of 4 very spaced punctures; elytra longer and narrower, not dilated posteriad, with more rounded humeral angles. Tergite and sternite of male genital segment as in Figs 89-90. Aedeagus (Fig. 91) 0.85 mm long, ovoid elongated with a proximal conspicuous folded extension; distal lobe enlarged; inner sac very narrow, apparently without scales.

ETYMOLOGY. The specific epithet comes from the Latin “differens-te” (different) in relation to the shape of the aedeagus.

DISTRIBUTION. Est Madagascar.

6. *Paulianella incredenda* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, 30 Km ESE Betroka, 1600 m, Vohitrosa forest, 2 Km NEE ▲ 1825 m, litter on tree foot in raiforest, J. Janák 19-23.XII.1998 (cJ).

DESCRIPTION. Length of body 6.6 mm; from anterior margin of head to posterior margin of elytra: 3.4 mm. Body reddish brown with darker head and pronotum; antennae and legs brown light. Head ovoid, narrow anteriorly, with moderately rounded sides and widely rounded posterior angles. Eyes very small and almost flat. Surface of head with transverse micro-striation and fine scattered punctation, denser on the disc. Pronotum dilated forward, shorter and narrower than head, with oblique anterior margins, rounded anterior angles and not emarginated sides. Surface with transverse micro-striation, dorsal series of 7-8 irregular punctures and lateral series of 3 median punctures; few other punctures on the anterior angles, some of these wider and deeper. Elytra sub-rectangular, moderately dilated posteriorly, as long and wide as pronotum, with sub-rectilinear sides, and marked humeral angles. Surface with very fine, not dense punctation, arranged in some spaced series. Abdomen with transverse micro-striation and fine punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 92-93. Aedeagus (Fig. 94) 1.48 mm long, large, with a proximal tube shaped extension, ovoid dilated, with proportionally short parameres; distal margin of the bulbous with a long comb of spines, under which is the short distal lobule; inner sac tape-like, long and narrow, covered with minute spinules and scales.

ETYMOLOGY. The specific epithet comes from the Latin “incredendus-a-um” (unbelievable).

DISTRIBUTION. The species is known only from the type locality in E Madagascar (Fig. 101).

7. *Paulianella superlata* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Andasibe-Mantadia N.P., Mantadia, “Circuit *Eulophia*”, 968 m, 18°48'16”S, 48°25'43”E, P. Banar 17-19.I.2017 (MMB).

DESCRIPTION. Length of body 6.7 mm; from anterior margin of head to posterior margin of elytra: 3.2 mm. Body reddish brown very dark, with head and pronotum almost black; antennae and legs brown light. Similar to *P. kalambatritra* sp.n. but with shorter and slender body, with lighter colouration; longer and narrower head,

with finer and sparser punctation; shorter pronotum; longer and less rectangular elytra, with very less marked humeral angles and finer, sparser punctures, arranged in less closed series. Aedeagus different. Tergite and sternite of male genital segment as in Figs 95-96. Aedeagus (Fig. 97) 0.92 mm long, very membranous, long and narrow, with peculiar distal portion and very long parameres; inner sac scarcely visible, long and very narrow, covered with very fine and light spinules.

ETYMOLOGY. The specific epithet derives from the Latin “superlatus-a-um” (brought up), in relation to the length of the basal bulb.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar (Fig. 101).

8. *Paulianella turficola* Jarrige, 1970

Paulianella turficola Jarrige, 1970: 44; Herman, 2001a: 3736.

TYPE SPECIES. The Muséum national d'Histoire naturelle de Paris preserves 1 specimen, female, labelled “Mt Tsaratanana, 2300 m”, “sphaignes / II.51 RP”, “Paratype” (on red label) (other 2 females from the same locality were not found).

DESCRIPTION. Length of body 5.5 mm; from anterior margin of head to posterior margin of elytra: 2.3 mm. Body micropterous, shiny, brown light. Head ovoid, with rounded sides and widely rounded posterior angles. Eyes small and almost flat. Surface of head with transverse micro-striation and very fine punctation. Pronotum dilated anteriorly, as long and wide as head, with oblique anterior margins, widely rounded anterior angles and emarginated sides. Surface with transverse micro-striation, dorsal series of 8 punctures and lateral series of 5-6 punctures; other punctures near the anterior angles. Elytra moderately dilated posteriorly, shorter than pronotum, posteriorly as wide as it, with sub-rectilinear sides and obsolete humeral angles. Surface wrinkled, with numerous series of fine punctures. Abdomen with transverse micro-striation and fine, sparse punctation on the sides. Male unknown.

DISTRIBUTION. The species is known from N Madagascar.

9. *Paulianella tenerella* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central E Madagascar, Maromiza pr., Périnet, 950-1150 m, forêt humide, J. Janák 8-10.I.1995 (cJ).

DESCRIPTION. Length of body 5.3 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Juvenile specimen, entirely orange yellowish. Head ovoid, narrow anteriorly and posteriorly, with rounded sides from the eyes to the neck. Eyes very small and flat. Surface of head with transverse micro-striation and very scattered, fine punctation. Pronotum moderately dilated anteriorly, a little longer and narrower than head, with very oblique anterior margins, very widely rounded

anterior angles and not emarginated sides. Surface with transverse micro-striation; dorsal series of 6-7 superficial, spaced punctures and lateral series of 4 fine punctures. Elytra dilated posteriad, shorter than pronotum, as wide as it, with almost obsolete humeral angles. Surface wrinkled, with very spaced and superficial punctation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with traces of transverse micro-striation and fine punctation, arranged in two series on each segment. Tergite and sternite of male genital segment as in Figs 98-99. Aedeagus (Fig. 100) 0.7 mm long, ovoid elongate, with parameres dilated in the middle, and large distal lobule, with acute apex; inner sac apparently not visible.

ETYMOLOGY. The specific epithet is an arbitrary derivation from the Latin “tenera-um” (delicate), in relation to the appearance of the body.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

10. *Paulianella betroka* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, 30 Km ESE Betroka, 1400-1500 m, Vohitrosa forest, 2 Km E ▲ 1825 m, leaves, litter on tree foot in rainforest, J. Janák 17-18.XII.1998 (cJ); paratype: same data, 1 ♀ (cJ).

DESCRIPTION. Length of body 5.4 mm; from anterior margin of head to posterior margin of elytra: 3.2 mm. Body entirely reddish orange, with moderately infuscate elytra. Head sub-rectangular, slightly narrow anteriorly, with moderately rounded sides and widely rounded posterior angles. Eyes small and flat. Surface of head with transverse micro-striation and fine, spaced punctation. Pronotum dilated anteriorly, as long as head, narrower than it, with oblique anterior margins, moderately rounded anterior angles, and not emarginated sides. Surface with transverse micro-striation; dorsal series of 10-12 irregular punctures and lateral series of 5-6 punctures; other punctures near the anterior angles. Elytra sub-rectangular, dilated posteriad, as long as pronotum, wider than it, with sub-rectilinear sides and scarcely rounded humeral angles. Surface with very fine, spaced punctures, arranged in numerous series. Abdomen with transverse micro-striation and fine punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 102a-103a. Aedeagus (Fig. 104a) 0.92 mm long, ovoid elongate, with thin parameres in the distal portion, and long distal lobule; inner sac tape-like, very narrow, covered with fine scales.

ETYMOLOGY. The specific epithet refers to the type locality, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in E Madagascar (Fig. 101).

11. *Paulianella microps* Jarrige, 1951

Leptacinus microps Jarrige, 1951: 335.

Paulianella microps; Jarrige, 1970: 40; Herman, 2001a: 3736.

TYPE SPECIES. The Muséum national d'Histoire naturelle de Paris preserves 1 specimen of "indistinct sex" (sic) labelled "Tsiafajavona, Ankaratra, R. Paulian VIII.1949", collected under sunken stone. I can not study this specimen.

EXAMINED MATERIAL. Central Madagascar, Tsiafajavona, Ankaratra, R. Paulian XI.1950-X.1951, 3 exx. (MNHN), 1 ex. (cB); Central Madagascar, Manjakatampo, 2000 m, L. Bartolozzi & S. Taiti 5.X.1989, 12 exx. (MZP), 5 exx. (cB).

DESCRIPTION. Length of body 4-4.6 mm; from anterior margin of head to posterior margin of elytra: 2-2.2 mm. Body apterous, small, entirely red yellowish. Head sub-ovoid, moderately narrow anteriorly, with rounded sides and widely rounded posterior angles. Eyes very small, flat, composed by few ommatidia. Surface of head with transverse micro-striation and fine, very sparse punctation. Pronotum sub-rectangular, not dilated anteriorly, with oblique anterior margins, rounded anterior angles and almost rectilinear sides. Surface with transverse micro-striation, dorsal series of 6 punctures and lateral series of 4 finer and more superficial punctures. Elytra narrow, short, shorter and almost narrower than pronotum, with rectilinear sides and almost obsolete humeral angles. Surface wrinkled, with few, fine, spaced punctation, arranged in few series. Abdomen with transverse micro-striation and fine punctation on the sides. Tergite and sternite of male genital segment as in Figs 105a-106a. Aedeagus (Fig. 107a) 0.77 mm long, ovoid elongated, narrow, with long parameres; distal lobule of peculiar shape, large; inner sac apparently not visible.

DISTRIBUTION. The species is known from Central Madagascar.

REMARKS. The specimens were collected on stones sunken into the ground and at light. I can not study the type of this species but I found some topotypes.

12. *Paulianella subaenea* Jarrige, 1970

Paulianella subaenea Jarrige, 1970: 42; Herman, 2001a: 3736.

TYPE MATERIAL. The Muséum national d'Histoire naturelle de Paris preserves 2 specimens, one, male, labelled "Mt Tsaratanana / Ft. à mousses, 1800 m", "Paratype" (on red label), "Ft. à mousses, X.49 R. Paulian"; the second, female, labelled "Mt Tsaratanana / F. t. à mousses 1500 m", "X.49 / R. Paulian", "Paratype" (on red label).

DESCRIPTION. Length of body 4.6-5 mm; from anterior margin of head to posterior margin of elytra: 2.8-3 mm. Body shiny, brown very dark, with antennae

and legs brown yellowish. Head sub-rectangular, elongate, slightly narrow posteriorly, with moderately rounded sides and rounded posterior angles. Surface with transverse micro-striation and scattered punctation. Pronotum as long and wide as head, with oblique anterior margins and rounded anterior angles. Surface with traces of transverse micro-striation, dorsal series of 5-7 irregular punctures and lateral series of 3-4 irregular punctures. Elytra sub-rectangular, longer and wider than pronotum, with slightly rounded sides and rounded humeral angles. Surface with some, spaced series of superficial punctures. Abdomen with more or less evident, transverse micro-striation and fine, sparse punctation on the sides. Tergite and sternite of male genital segment as in Figs 102-103. Aedeagus (Fig. 104) 1.37 mm long, ovoid, large, with peculiar parameres; distal lobule short, with acute apex; inner sac with some, distal spines, followed by an area of difficult delimitation, covered with fine, spaced scales.

DISTRIBUTION. The species is known from N Madagascar (Fig. 178).

REMARKS. In the description are cited 3 specimens but the third is untraceable.

nigra SUB-GROUP

KEY TO THE SPECIES

- | | |
|---|------------------------------|
| 1. Body black..... | 2 |
| - . Body reddish brown..... | 3 |
| | |
| 2. Body 12.5 mm; dorsal series of pronotum of 5-6 punctures; aedeagus (Fig. 113) large, 1.6 mm long, with arched parameres and short median lobe; distal lobule very short, facing left | |
| | 1. <i>P. janaki</i> sp.n. |
| . Body 10 mm long; dorsal series of pronotum of 1-11 punctures; aedeagus (Fig. 116) very large, 1.85 mm long, with median lobe more or less in the shape of a spoon; parameres very narrow; inner sac long and narrow, covered with fine scales..... | 2. <i>P. nigra</i> sp.n. |
| | |
| 3. Body apterous, brown amaranth, 11 mm long; dorsal series of pronotum of 9-10 fine punctures; male genital segment entire, without suture; aedeagus (Fig. 119) very large, 1.73 mm long, ovoid elongated; parameres narrow and short; inner sac narrow and long, folded up on itself, covered with triangular, minute scales..... | 3. <i>P. mirabilis</i> sp.n. |
| - . Body winged, reddish brown, 10 mm long; dorsal series of pronotum of 5 punctures; aedeagus (Fig. 122) 1.14 mm long, ovoid narrow with lobule directed to the right; inner sac barely visible, short, covered with very fine scattered scales..... | 4. <i>P. punctata</i> sp.n. |

1. *Paulianella janaki* sp.n.

EXAMINED MATERIAL – Holotype ♂. E Madagascar, 30 Km ESE Betroka, 1400-1500 m, Vohitrosa forest, 2 Km E ▲ 1825, leaves, litter on tree foot in rainforest, J. Janák 17-18.XII.1998 (cJ).

DESCRIPTION. Length of body 12.5 mm; from anterior margin of head to posterior margin of elytra: 6.8 mm. Body black with brown dark antennae and legs. Head sub-rectangular, a little dilated anteriorly, with moderately rounded sides and widely rounded posterior angles. Eyes small and almost flat. Surface of head with transverse micro-striation and scattered punctation, denser on the anterior half. Pronotum small and narrow, shorter and narrower than head, with very oblique anterior margins, narrowly rounded anterior angles and emarginated sides. Surface with transverse micro-striation; dorsal series of 5-6 very spaced punctures and lateral series of 2 anterior, fine punctures; 2 evident punctures near the anterior angles. Elytra sub-rectangular, slightly longer and wider than pronotum, with sub-rectilinear a sub-parallel sides and rounded humeral angles. Surface with fine, dense punctation, arranged in numerous series. Abdomen with traces of transverse micro-striation and fine punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 105-106. Aedeagus (Fig. 107) 1.6 mm long, ovoid, elongate and narrow, large, with long and thin parameres; distal margin of the bubus with short comb of setae on the sides of a short, acute additional lobule; distal lobule ovoid with acute apex; inner sac apparently not visible.

ETYMOLOGY. The species is dedicated to the friend Jiří Janák that collected many of the specimens discussed in these pages.

DISTRIBUTION. The species is known only from the type locality in E Madagascar (Fig. 144).

2. *Paulianella nigra* sp.n.

EXAMINED MATERIAL. Holotype ♂: SW Madagascar, 1 Km NW Enakara, Rés. Andohahela, 800 m, 24°34'S, 46°49'E, rotten log in rainforest, B. L. Fisher 20.XI.1992 (FMNH); paratype: Toliara Prov., Andohahela Nat. Park, Manampanihy, 5.4 Km 113th ESE Mahamavo, 650 m, 24.46S, 46.46E, Fisher *et al.* 24.I.2002, 1 ♂ (cB).

DESCRIPTION. Length of body 10 mm; from anterior margin of head to posterior margin of elytra: 6.5 mm. Body black, with reddish black elytra and abdomen; antennae and legs brown dark. Head sub-rectangular, moderately narrow anteriorly, with sub-rectilinear sides and rounded posterior angles. Eyes small and almost flat. Surface of head with transverse micro-striation and rounded, deep punctation, scattered on lateral and posterior portions. Pronotum small, shorter and narrower than head, dilated anteriorly, with oblique anterior margins, rounded anterior angles and almost not emarginated sides. Surface with superficial, very fine, transverse

micro-striation, dorsal series of 10-11 very fine and scattered punctures and lateral series of 6-7 irregular punctures. Elytra large, dilated posteriad, longer and wider than pronotum, with rounded humeral angles. Surface with very fine and very dense transverse micro-striation and fine, sparse punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 108-109. Aedeagus (Fig. 110) 1.85-1.96 mm long, ovoid, very large, narrow distally, with proportionally short parameres and distal lobule; inner sac tape-like, narrow and long, covered with fine scales, here and there more dense.

ETYMOLOGY. The specific epithet comes from the Latin “nigrus-a-um” (black).

DISTRIBUTION. The species is known only from the type locality in SW Madagascar.

REMARKS. The paratype is 13.6 (5.7) mm long and in poor conditions.

3. *Paulianella mirabilis* sp.n.

EXAMINED MATERIAL. Holotype ♂: NE Madagascar, Antsiranana, Befingotra, 9.2 Km WSW, Rés. Anjanaharibe Sud, 1280 m, 14.45S, 49.28E, litter in montane rainforest, B. L. Fisher 5.XI.1994 (FMNH); paratypes: same data, 2 ♂♂, 3 ♀♀ (FMNH), 1 ♂, 1 ♀ (cB).

DESCRIPTION. Length of body 11 mm; from anterior margin of head to posterior margin of elytra: 3.8 mm. Body apterous, brown amaranth; antennae and legs brown yellowish. Head sub-ovoid, slightly narrow anteriad, with rounded sides and almost obsolete posterior angles. Eyes very small and flat. Surface of head with transverse, fine and very dense micro-striation, and sparse punctation. Pronotum sub-ovoid, almost of the same width anteriad and posteriad, longer and wider than head, with rounded margin from the neck to the sides that are moderately rounded. Surface with transverse micro-striation, dorsal series of 9-10 fine punctures and lateral series of 5-6 irregular punctures. Elytra sub-rectangular, short, markedly shorter and narrower than pronotum, with sub-rectilinear and sub-parallel sides and obsolete humeral angles. Surface with numerous, fine punctures, arranged in numerous series. Abdomen with more or less polygonal micro-reticulation and fine, dense punctation, arranged in some series on each segment. Male genital segment particularly long and narrow, with pleura long combined in one sclerite (Fig. 111); sternite of the same as in Fig. 112. Aedeagus (Fig. 113) 1.73 mm long, very large, long and narrow, ovoid elongate, with proportionally very short and thin parameres; distal lobule very short; inner sac with a very long and narrow spine, proximally divided in two lobules, combined with a narrow, folded portion, tape-like, covered with opposing fine spinules.

ETYMOLOGY. The specific epithet comes from the Latin “mirabilis-e” (to be admired).

DISTRIBUTION. The species is known only from the type locality in NE Madagascar (Fig. 76).

4. *Paulianella punctata* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Andassibe, L. Bartolozzi 7-8.IX.1989 (MZF); paratypes: Central Madagascar, Ambohitantely Spec. Rés., 1617 m, 18°11'44.5"S, 47°17'14.9"E, ABT / Jan 2016, P. Banar 26-28.I.2016, 1 ♂ (MMB); Central Madagascar, Fianarantsoa, 2 Km E Vohiparara, 1100 m, Shuh 27.X.2001, 1 ♂ (NMW), 1 ♀ (cB); Central Madagascar, Toamasina, Sta. Ecol. Mandraka, 1200 m, 20 Km W Moramanga, Shuh 2.XI.2001, 1 ♀ (NMW).

DESCRIPTION. Length of body 10 mm; from anterior margin of head to posterior margin of elytra: 4.8 mm. Body reddish brown very dark; antennae and legs brown. Head sub-rectangular, with scarcely rounded sides and narrowly rounded posterior angles. Eyes small and almost flat. Surface of head with transverse micro-striation and deep, not dense punctation, apart from a narrow median stripe and the posterior half of head. Pronotum as long as head, anteriorly moderately dilated, where is narrower than it, with oblique anterior margins, narrowly rounded anterior angles and slightly emarginated sides. Surface with transverse micro-striation, dorsal series of 5 punctures and lateral series of 3 fine punctures. Elytra sub-rectangular, a little dilated posteriorly, as long as pronotum, wider than it, with rounded humeral angles. Surface with fine, spaced punctation, arranged in some series. Abdomen with traces of transverse micro-striation and fine, sparse punctation. Tergite and sternite of male genital segment as in Figs 114-115. Aedeagus (Fig. 116) 1.14 mm long, ovoid, elongate and very narrow, with sinuous parameres; inner sac just visible, with minute, sparse scales.

ETYMOLOGY. The specific epithet comes from the Latin “punctatus-a-um” (with punctures).

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

REMARKS. This species is similar to *P. insularis* (Bh.) but differs by the following characters: body larger, darker colour, different punctation and especially by the micro-sculpture on head and pronotum. Also the aedeagus is similar but in *P. punctata* the distal lobule is shorter and the inner sac scarcely visible.

GROUP C

1. Body 4-7 mm long *rougemonti* Sub-group
 -. Body 8-14 mm long *insularis* Sub-group

rougemonti SUB-GROUP

KEY TO THE SPECIES

1. Body 7 mm long; dorsal series of pronotum of 8-9 punctures; aedeagus (Fig. 125) 0.96 mm long, with narrow parameres 1. *P. subrutula* sp.n.
 -. Body about 6 mm long 2
 -. Body 5.3 mm long; dorsal series of pronotum of 7 punctures; aedeagus (Fig. 140) 0.92 mm long, ovoid, with very narrow parameres; inner sac very short, covered with fine spinules
 2. *P. ikakoensis* sp.n.
2. Body 6.7 mm long; aedeagus (Fig. 122) 1.11 mm long, ovoid elongated, with symmetric parameres; distal lobule ovoid and short 3. *P. subcorticalis* sp.n.
 -. Body 6.5 mm long; dorsal series of pronotum of 8-9 punctures; aedeagus (Fig. 125) 1.14 mm long, ovoid; distal lobule very short 4. *P. imaha* sp.n.
 -. Body 6.3 mm long; dorsal series of pronotum of 6-7 punctures; aedeagus (Fig. 128) 0.96 mm long, ovoid, with narrow and long distal lobule 5. *P. amboasa* sp.n.
 -. Body 6 mm long 3
3. Dorsal series of pronotum of 9-10 punctures; body reddish brown; head sub-rectangular
 6. *P. innocua* (Fvl.)
 -. Dorsal series of pronotum of 7 punctures; aedeagus (Fig. 131) 0.94 mm long ovoid; distal lobule ovoid 7. *P. polygonalis* sp.n.
 . Dorsal series of pronotum of 6-7 punctures; aedeagus very large, 1.66 mm long, with sub-rectangular distal lobule; inner sac short and narrow, covered with fine spinules (Fig. 134)
 8. *P. lutulenta* sp.n.
 -. Dorsal series of pronotum of 5 punctures; aedeagus (Fig. 137) 0.92 mm long, ovoid; distal lobule very large, dilated; inner sac narrow, covered with very fine, pale scales
 9. *P. rougemonti* sp.n.

1. *Paulianella subrutula* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, 30 Km ESE Betroka, 1600 m, Vohitrosa forest, 3 Km NEE ▲ 1825 m, under tree bark, rainforest, J. Janák 24.XII.1998 (cJ).

DESCRIPTION. Length of body 7 mm; from anterior margin of head to posterior margin of elytra: 3.5 mm. Body reddish brown; antennae and legs brown light. Head and pronotum with polygonal micro-recticulation. Head ovoidal, dilated posteriad, with moderately rounded sides and widely rounded posterior angles. Eye small and protruding. Surface of head with fine, sparse punctation, except for a large lateral and posteriad top. Pronotum shorter and narrower than head, dilated anteriorly, with oblique anterior margins, sub-rectilinear sides and rounded anterior angles. Surface with dorsal series of 8-9 irregular punctures and lateral series of 5-6 punctures. Elytra sub-rectangular, dilated posteriad, with sub-rectilinear sides and moderately rounded humeral angles. Surface with very fine, closed punctures, arranged in numerous series. Abdomen with traces of transverse micro-striation and few fine

punctures on the sides of the segments. Tergite and sternite of male genital segment as in Figs 117-119. Aedeagus (Fig. 119) 0.96 mm long, ovoid, long, narrow distally, with the distal portion turned backward; distal lobule short; parameres long and narrow; inner sac apparently not visible.

ETYMOLOGY. - The specific epithet comes from the Latin “subrutilus-a-um” (reddish).

DISTRIBUTION. The species is known only from the type locality in E Madagascar (Fig. 144).

REMARKS. I preferred to illustrate the aedeagus in side view to show its peculiar conformation.

2. Paulianella ikokaensis sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Massif Ambondrombe, Ikoka env., 1400 m, sous écorce crête Amboasa, forêt humide, J. Janák & P. Moravec 11-12.III.1996 (cJ); paratype: Andasibe, unknown coll. 12.X.1970, 1 ♂ (NHML).

DESCRIPTION. Length of body 5.3 mm; from anterior margin of head to posterior margin of elytra: 2.7 mm. Body shiny, reddish brown. Head sub-rectangular, moderately dilated anteriorly, with sub-rectilinear sides and narrowly rounded posterior angles. Eyes small and barely protruding. Surface with polygonal micro-reticulation and fine, regular, not dense punctation. Pronotum dilated anteriorly, longer than head, anteriorly as wide as it, with very oblique anterior margins, beveled anterior angles and not emarginated sides. Surface with superficial, polygonal micro-reticulation, dorsal series of 6-7 spaced and fine punctures and lateral series of 4-5 anterior punctures. Elytra sub-rectangular, barely longer than pronotum, as wide as it, with sub-rectilinear and sub-parallel sides and rounded humeral angles. Surface wrinkled, with some series of fine, spaced punctures. Abdomen with transverse micro-striation and fine and very spaced punctation. Tergite and sternite of male genital segment as in Figs 138-139. Aedeagus (Fig. 140) 0.92 mm long, ovoid, with peculiar distal portion, concave, and large distal lobule; parameres narrow and short; inner sac just visible, tape-like, very narrow and short, covered with few, minute scales, not visible in the paratype.

ETYMOLOGY. The specific epithet refers to the type locality.

DISTRIBUTION. The species is known only from the type locality in E Madagascar (Fig. 178).

REMARKS. The holotype is in poor condition.

3. *Paulianella subcorticalis* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, 30 Km ESE Betroka, 1600 m, Vohitrosa forest, 2 Km NEE ▲ 1825 m, under tree bark, J. Janák 19-23.XII.1998 (cJ); paratypes: same data, 4 ♂♂, 9 ♀♀ (cJ), 3 ♂♂, 1 ♀ (cB).

DESCRIPTION. Length of body 6.7 mm; from anterior margin of head to posterior margin of elytra: 4 mm. Body robust, reddish brown, with darker head and pronotum; antennae and legs brown light. Head sub-rectangular, scarcely longer than wide, moderately narrow anteriorly, with a little rounded sides and widely rounded posterior angles. Eyes small and scarcely protruding.

Surface of head with polygonal micro-reticulation and fine, scattered punctation, apart from a median stripe. Pronotum massive, dilated anteriorly, moderately longer than head, as wide as it, with oblique anterior margins, scarcely sinuate sides. Surface with polygonal micro-reticulation; dorsal series of 7 fine punctures and lateral series of 6-7 irregular punctures. Elytra dilated posteriorly, longer and wider than pronotum, with rounded humeral angles. Surface with very fine punctation, arranged in numerous series. Abdomen with traces of transverse micro-striation and fine punctation on the sides. Tergite and sternite of male genital segment as in Figs 120-121. Aedeagus (Fig. 122) 1.1 mm long, ovoid, long, narrow distally, with long parameres and ovoid distal lobule; inner sac long, tape-like, folded on itself some times and covered with fine spinulae and scales.

ETYMOLOGY. The specific epithet comes from the Latin “sub” and “corticalis-e” (under bark).

DISTRIBUTION. The species is known only from the type locality in E Madagascar (Fig.144).

4. *Paulianella imaha* sp.n.

EXAMINED MATERIAL. Holotype ♂: SE Madagascar, Chaînes Anosyennes, 6 Km S of Imaha (Toliara), 1350-1500 m, 24°16'S, 46°57'E, litter in raiforest, J. Janák 5-12.II.2004 (cJ).

DESCRIPTION. Length of body 6.5 mm; from anterior margin of head to posterior margin of elytra: 3.3 mm. Head and pronotum with polygonal micro-reticulation. Body reddish brown very dark; antennae and legs reddish brown. Head sub-rectangular, narrow anteriorly, with widely rounded posterior angles. Eyes medium-sized and flat. Surface of head with fine, deep, sparse punctation, except for the posterior unpunctured half. Pronotum convex, as long as head, barely narrower than it., with oblique anterior margins, widely rounded anterior angles and not emarginated sides. Surface with dorsal series of 8-9 superficial punctures and lateral series of 5-6 irregular punctures. Elytra sub-rectangular, slightly dilated posteriorly, with marked humeral angles, longer and wider than pronotum. Surface with fine, closed punctures, arranged in numerous series. Abdomen with traces of transverse

micro-striation and fine, very sparse punctation on the sides of each segment. Tergite and sternite of male genital segment as in Figs 123-124. Aedeagus (Fig. 125) 1.14 mm long, ovoid, with narrow parameres; distal lobule short to cover another even shorter lobule; inner sac apparently not visible.

ETYMOLOGY. The specific epithet refers to the type locality, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in South E Madagascar.

5. *Paulianella amboasa* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Massif Ambondrombe, Ikoka env., 1400 m, sous écorces crête Amboasa, forêt humide, J. Janák & P. Moravec 11-12.III.1996 (cJ); paratypes: same data, 8 ♀ (cJ), 2 ♂♂, 2 ♀♀ (cB); E Madagascar, 30 Km ESE Betroka, 1600 m, Vohitrosa forest, 2 Km NEE ▲ 1825 m, under tree bark in rainforest, J. Janák 19-23.XII.1998, 1 ♂ (cJ); E Madagascar, Moromiza pr., Périnet, 950-1150 m, sous écorces forêt humide, J. Janák 8-10.I.1995, 1 ♂ (cJ).

DESCRIPTION. Length of body 6.3 mm; from anterior margin of head to posterior margin of elytra: 3.3 mm. Body reddish brown; antennae and legs brown light. Head sub-rectangular, slightly narrow anteriorly, with sub-rectilinear sides and narrowly rounded posterior angles. Eyes small and barely protruding. Surface of head with polygonal micro-reticulation and scattered, fine punctation. Pronotum scarcely dilated anteriorly, as long as head, a little narrower than it, with oblique anterior margins, widely rounded anterior angles and not emarginated sides. Surface with polygonal micro-reticulation; dorsal series of 6-7 fine punctures and lateral series of 4-5 fine punctures. Elytra sub-rectangular, with sub-rectilinear sides, longer and wider than pronotum, with marked humeral angles. Surface with fine, very dense punctation, arranged in numerous series. Abdomen with traces of transverse micro-striation and fine punctation on the sides of each segment. Tergite and sternite of male genital segment as in Figs 126-127. Aedeagus (Fig. 128) 0.96 mm long, ovoid dilated, with long and thin parameres; ovoidal, long distal lobule and very narrow, long additional lobule; inner sac apparently not visible.

ETYMOLOGY. The specific epithet refers to the type locality, as a noun in apposition.

DISTRIBUTION. The species is known only from the type localities in E Madagascar.

6. *Paulianella innocua* (Fauvel, 1905) comb.n.

Xantholinus innocuus Fauvel, 1905: 174; Bernhauer & Schubert, 1914: 304; Herman, 2001a: 3800.

TYPE MATERIAL. The Institut royal des Sciences naturelles of Bruxelles preserves 2 specimens, one labelled “Forêt de Maramanga / Madag. Est”, and the other labelled “Antananarive / 1889 / Sikora”, “Forêt de Maramanga / Madag. Sud”, “*innocuus* / Fvl.”. Both, females, are also labelled “Ex-typis” (red printed on white label), “*Paulianella innocua* (Fauvel), J. Janák det. 2007” (in litt.). I choose the first as lectotype of the species and the second as paralectotype. The first is labelled “Lectotypus *Xantholinus innocuus* Fvl., Bordoni des. 2014”; the second is labelled “Paralectotypus *Xantholinus innocuus* Fvl., Bordoni des. 2014”; both with the determination “*Paulianella innocua* (Fvl.), Bordoni det. 2014”.

EXAMINED MATERIAL. Madagascar, 1 ♀ (DEI); Central Madagascar, Antananarivo, Sikora, 2 exx. (one without abdomen) (DEI); Central Madagascar, Antananarivo, Sikora, C. Schaufuss dd, 1 ♀ (DEI).

DESCRIPTION. Length of body 6 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Body reddish brown. Head sub-rectangular, very slightly narrow anteriorly, with sub-rectilinear sides and rounded posterior angles. Eyes small, barely protruding. Surface of head with superficial, polygoal micro-reticulation and fine, sparse punctation. Pronotum dilated anteriorly, as long and wide as head, with oblique anterior margins, narrowly rounded anterior angles and not emarginated sides. Surface with polygonal micro-reticulation, dorsal series of 9-10 fine punctures and lateral series of 4-5 punctures; between these a series of 5-6 punctures. Elytra sub-rectangular, moderately dilated posteriorly, longer and wider than pronotum, with marked humeral angles. Surface with very fine punctation, arranged in some series. Abdomen with fine and dense, transverse micro-striation and fine, sparse punctation. Male unknown.

DISTRIBUTION. The species is known from NE Madagascar (Fig. 178).

7. *Paulianella polygonalis* sp n.

EXAMINED MATERIAL. Holotype ♂: Central E Madagascar, PN de Ranomafana, 1000 m, L. Bartolozzi, C. Raharimina & S. Taiti 11-12.V.1991 (MZP); paratypes: Central E Madagascar, Fianarantsoa, 2 Km E, Vohiparara, 1100 m, PN de Ranomafana, Schuh 27.X.2009, 1 ♂ (NMW), 1 ♂ (cB).

DESCRIPTION. Length of body 6 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Body brown very dark, with brown abdomen, antennae and legs. Head sub-rectangular, with sub-parallel sides and narrowly rounded posterior angles. Eyes small, barely protruding. Surface of head with polygonal micro-reticulation and deep, dense punctation, apart from a narrow median stripe. Pronotum as long as head, anteriorly dilated where it is as wide as it, with oblique

anterior margins, widely rounded anterior angles and slightly sonuate sides. Surface with polygonal micro-reticulation, dorsal series of 7 punctures and lateral series of 5-6 irregular punctures; other punctures between these series. Elytra dilated posteriad, longer and wider than pronotum, with narrowly rounded humeral angles. Surface with fine, dense punctation, arranged in some series. Abdomen with very fine, superficial, transverse micro-striation and fine, sparse punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 129-130. Aedeagus (Fig. 131) 0.94 mm long, ovoid, narrow distally, with long, robust parameres and sub-ovoid distal lobule; inner sac just visible, almost indistinct, tube-like, very narrow.

ETYMOLOGY. The specific epithet comes from the Latin “polygonalis-e” (polygonal).

DISTRIBUTION. The species is known only from the type localities in Central E Madagascar.

8. *Paulianella lutulenta* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Antananarivo distr., Manankazo env., J. Stolarczyk 9-13.XII.1995 (cJ).

DESCRIPTION. Length of body 6 mm; from anterior margin of head to posterior margin of elytra: 3.4 mm. Body reddish brown with lighter abdomen; antennae and legs brown light. Head sub-rectangular, not narrow anteriorly, with sub-parallel sides and narrowly rounded posterior angles. Eyes medium-sized and barely protruding. Surface of head with polygonal micro-reticulation and deep, fine punctation, arranged in some regular, longitudinal series, apart from a median stripe and the posterior portion of head. Pronotum massive, as long and wide as head, very dilated anteriorly, with oblique anterior margins, marked anterior angles and almost not emarginated sides. Surface with polygonal micro-reticulation, dorsal series of 6-7 punctures and lateral series of 4-5 irregular, anterior punctures; other punctures near the anterior angles. Elytra large, dilated posteriad, with barely rounded sides and marked humeral angles. Surface with numerous fine and dense punctures, arranged in numerous series. Abdomen with transverse micro-striation and very fine, sparse punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 132-133. Aedeagus (Fig. 134) 1.66 mm long, ovoid, very elongate, particularly large in relation to the body size; parameres short, distal lobule sub-rectangular; inner sac tape-like, short, covered with fine spinulae.

ETYMOLOGY. The specific epithet comes from the Latin “lutulentus-a-um” (muddy), due to its muddish colour.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar (Fig.144).

9. *Paulianella rougemonti* sp.n.

Examined material. Holotype ♂: Central Madagascar, Anjozorobe, Soa Camp, 1300 m, primary montane forest, G. de Rougemont 10-11.IV.2006 (cB); paratypes: same data, 1 ♂ (NHMO); E Madagascar, Massif Ambondrombe, 1300-1400 m, Ikoka env., sous écorces forêt humide crête Amboasa, J, Janák & P. Moravec 11-12.III.1996, 2 ♂♂ (cJ).

DESCRIPTION. Length of body 6 mm; from anterior margin of head to posterior margin of elytra: 3.5 mm. Similar to *P. insularis* (Bh.) but body smaller and darker; head sub-rectangular; pronotum shorter, less dilated anteriorly, with more oblique anterior margins and emarginated sides; elytra with less marked humeral angles and with more dense punctation. Tergite and sternite of the male genital segment as in Figs 135-136. Aedeagus (Fig. 137) 0.92 mm long, ovoid, elongate and narrow, with peculiar parameres (proportionally very long) and distal lobule (very large); inner sac tape-like, short and narrow, covered with minute, very pale, scales.

ETYMOLOGY. Dedicated to my friend and colleague Guillaume de Rougemont (Oxford), in memoriam.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

insularis SUB-GROUP

KEY TO THE SPECIES

1. Body 13-14 mm long, black; dorsal series of pronotum of 5 punctures; aedeagus (Fig. 147) very large, 3 mm long, ovoid; inner sac long, narrow, folded one time, covered with triangular, small scales..... 1. *P. tristis* Jar.
- Body less than 12 mm long..... 2
2. Body 11 mm long; dorsal series of pronotum of 5 punctures; aedeagus (Fig. 150) ovoid elongate, large, 1.55 mm long; distal lobule very narrow and long..... 2. *P. parcepunctata* sp.n.
- Body about 10 mm long..... 3
3. Body 10.5 mm long; dorsal series of pronotum of 5-6 punctures; aedeagus (Fig. 153) ovoid, narrow in the distal portion; distal lobule long and very narrow..... 3. *P. monticola* Jar.
- Body 10 mm long, black; dorsal series of pronotum of 5-6 punctures; aedeagus (Fig. 156) ovoid, diaphanous, very narrow and long..... 4. *P. oblonga* sp.n.
- Body less than 10 mm long..... 4
4. Body 9.5 mm long..... 5
- Body about 8 mm long, brown amaranth; dorsal series of pronotum of 7 punctures; aedeagus (Fig. 159) ovoid, 1.3 mm long; distal lobule narrow; inner sac narrow, covered with fine spinules..... 5. *P. ignota* sp.n.
5. Body 9.5 mm long..... 6

- . Body 9 mm long7
 -. Body 8 mm long; dorsal series of pronotum of 6-7 punctures; aedeagus (Fig. 162) very narrow, 1 mm long; median lobe with acute apex6. *P. ambohitra* sp.n.
6. Body brown amaranth; dorsal series of pronotum of 7 punctures; aedeagus (Fig. 165) ovoid elongated, 1.22 mm long; inner sac dilated in the proximal portion, covered with fine spinules7. *P. insularis* (Bh.)
- . Body reddish brown; dorsal series of pronotum of 5 punctures; aedeagus (Fig. 168) ovoid narrow in the distal portion, with distal lobule large, facing left8. *P. opaca* sp.n.
- . Body reddish brown very dark; dorsal series of pronotum of 6 punctures; aedeagus (Fig. 171) ovoid, 1.4 mm long9. *P. grossula* sp.n.
7. Body reddish brown with black head; dorsal series of pronotum of 5-6 superficial punctures; aedeagus (Fig. 174) ovoid, 1.7 mm long; inner sac very short, covered with fine spinules10. *P. abdominalis* sp.n.
- . Body reddish brown very dark; dorsal series of pronotum of 5-6 punctures; aedeagus (Fig. 177) 1.37 mm long, ovoid, narrow in the distal portion11. *P. obsoleta* (Schub.)

1. *Paulianella tristis* Jarrige, 1970

Paulianella tristis Jarrige, 1970: 42; Herman, 2001a: 3736.

TYPE MATERIAL. The Muséum national d'Histoire naturelle of Paris preserves 1 specimen, male, labelled "Paratype" (on red label), "Inst. Scient. Madagascar / Mt Tsaratanana / 2000 m X.49 RP", "Lisière supérieure / de la Ft. à mousses".

EXAMINED MATERIAL. Central Madagascar, Antananarivo, Sikora, 1 ♀ (DEI); E Madagascar, Massif Ambondronbe, Ikoka env., 1300-1400, sous écorces, crête Ambosa, forêt humide, J. Janák & P. Moravec 11-12.III.1996, 1 ex. (cJ); E Madagascar, 30 Km ESE Betroka, Vohitrosa forest, 1600 m, 2 Km NEE ▲ 1825 m, under tree bark in rainforest, J. Janák 19-23.XII.1998, 4 exx. (cJ), 1 ex. (cB).

DESCRIPTION. Length of body 13-14 mm; from anterior margin of head to posterior margin of elytra: 7-8 mm. Body black with brown genital segment, antennae and legs. Head ovoid, narrow anteriorly, with slightly rounded sides and widely rounded posterior angles. Eyes small and almost flat. Mandibles long. Surface of head with polygoal micro-reticulation and more or less scattered punctation. Pronotum short, small, shorter and narrower than head, with very oblique anterior margins, marked anterior angles and very scarcely emarginated sides. Surface with very fine, polygonal micro-reticulation, dorsal series of 5 superficial punctures and lateral series of 3 spaced, very superficial punctures. Elytra sub-rectangular, much longer and wider than pronotum, barely dilated posteriorly, with sub-rectilinear sides and marked humeral angles. Surface with fine and less regular micro-reticulation, as on the head, with some, spaced series of very superficial punctation. Abdomen with micro-reticulation similar to that on elytra, and fine, spaced punctation, only on the sides of each segment. Tergite and sternite

of male genital segment as in Figs 145-146. Aedeagus (Fig. 147) 3 mm long, ovoid, very large, narrow distally, with short, thin parameres and short distal lobule; inner sac tape-like, long and wide, folded on itself one time, covered with triangular scales.

DISTRIBUTION. The species is known from E Madagascar (Fig. 178).

REMARKS. In the original description Jarrige cited only one specimen. A paratype is not mentioned.

2. *Paulianella parcepunctata* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Massif Ambondrombe, Ikoka env., 1400 m, sous écorces, crête Amboasa, forêt humide, J. Janák & P. Moravec 11-12.III.1996 (cJ); paratypes: same data, 2 ♀♀ (cJ), 1 ♂ (cB).

DESCRIPTION. Length of body 11.5 mm; from anterior margin of head to posterior margin of elytra: 6.5 mm. Body reddish brown with lighter abdomen; antennae and legs brown light. Similar to *P. grossula* sp.n. but larger, longer; head very long, evidently narrow anteriorly, with sub-rectilinear sides from the eyes up to half its length and widely rounded posterior angles; posterior half of surface with very scattered and fine punctation; pronotum more dilated anteriorly, with less oblique anterior margins and sub-rectilinear sides; elytra wider and longer than pronotum, with rounded sides and more marked humeral angles; abdomen with only traces of transverse micro-striation. Tergite and sternite of male genital segment as in Figs 148-149. Aedeagus (Fig. 150) 1.55 mm long, ovoid, very long and narrow; parameres proportionally short, proximally robust; distal lobule ovoid with acute apex; an other lobule, apparently shaped like a stick, under the first; inner sac tape-like, long, covered with very fine, striolae.

ETYMOLOGY. The specific epithet comes from the Latin “parce” and “punctatus-a-um” (with a few spots).

DISTRIBUTION. The species is known only from the type locality in Eastern Madagascar.

3. *Paulianella monticola* Jarrige, 1970

Paulianella monticola Jarrige, 1970: 42; 1978: 273; Herman, 2001a: 3736.

TYPE SPECIES -The Muséum national d'Histoire naturelle of Paris preserves 1 specimen (probably male but without aedeagus), labelled “Paratype” (on red label), “Mt Tsaratanana / 2000 m X.49 R.P.”, “Lisière supérieure / de la Ft. à mousses”.

EXAMINED MATERIAL. NW Madagascar, Andasibe-Mantadia, Analamazaotra forest, M. Tryzna 2-14.III.2007, 1 ♂ (cJ); Central Madagascar, Andringitra centre, plat. Andohariana, 2000-2100 m, 9.XI-10.XII.1970, 1 ♂ (MNHN).

EXAMINED MATERIAL. Andringitra Centre; plateau Soahindrana, Andohariana, 2090 m; plateau Andohariana, 2000-2100 m; Andringitra Est, forêt Imitso, Anjavidilava, 2300 m; Marositry, Est rivière Antsifotra, 2000 m; Andringitra Sud, Andrianony, cirque Manjarivolo, 1650 m (Jarrige, 1978).

DESCRIPTION. Length of body 10.5 mm; from anterior margin of head to posterior margin of elytra: 5.5 mm. Body brown amaranth. Head sub-rectangular, slightly narrow anteriorly, with sub-rectilinear and sub-parallel sides and narrowly rounded posterior angles. Eyes small and almost flat. Surface of head with polygonal micro-reticulation and sparse punctation. Pronotum shorter and narrower than head, with oblique anterior margins, rounded anterior angles and scarcely emarginated sides. Surface with polygonal micro-reticulation, dorsal series of 5 punctures and irregular lateral series of 3-6 punctures. Elytra as long as pronotum, wider than it, with sub-rectilinear sides and marked humeral angles. Surface with irregular micro-sculpture and some series of superficial punctures. Abdomen with superficial transverse micro-striation and fine, spaced punctures on the sides of each segment. Tergite and sternite of male genital segment as in Figs 151-152. Aedeagus (Fig. 153) 1.37-1.48 mm long, ovoid, large, narrow distally, with proportionally short parameres and ovoidal distal lobule; inner sac tape-like, long and narrow, covered with fine, longitudinal spinules.

DISTRIBUTION. The species is known from Madagascar (Fig. 178).

REMARKS. In the original description, very short, Jarrige cite only one specimen, male, collected by Paulian to "1800 m". A paratype is not mentioned. He wrote also that the body is black.

4. *Paulianella oblonga* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Manankazo, R. Kmeco 1.XII.1996 (cJ).

DESCRIPTION. Length of body 10 mm; from anterior margin of head to posterior margin of elytra: 6.8 mm. Body entirely black; antennae and legs brown black. Head massive, with moderately rounded sides and narrowly rounded posterior angles. Eyes very small but barely protruding. Surface of head with polygonal micro-reticulation, apart from a large lateral portion and posterior angles; punctation deep, rounded, scattered. Pronotum short and narrow, shorter and narrower than head, dilated anteriorly, with very oblique anterior margins, marked anterior angles and emarginated sides. Surface with fine, transverse micro-striation; dorsal series of 5-6 spaced punctures and lateral, oblique series of 3 anterior punctures. Elytra sub-rectangular, a little dilated posteriorly, more or less as long as pronotum, wider than it, with marked humeral angles. Surface with fine punctation, arranged in some, spaced series. Abdomen with transverse micro-striation and fine, sparse punctation. Tergite and sternite of male genital segment as in Figs 154-155. Aedeagus (Fig. 156) 1.48

mm long, ovoid, very long and narrow, with long parameres with thin distal portion; distal lobule long, of peculiar shape; inner sac apparently not visible.

ETYMOLOGY. The specific epithet comes from the Latin “oblongus-a-um” (long), in relation to the shape of the aedeagus.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

5. *Paulinella ignota* sp.n.

EXAMINED MATERIAL. Holotype ♂: Madagascar (FMNH).

DESCRIPTION. Length of body 8.5 mm; from anterior margin of head to posterior margin of elytra: 5 mm. Body entirely brown amaranth. Head sub-rectangular, moderately narrow anteriorly, with sub-rectilinear sides and widely rounded posterior angles. Eyes small and slightly protruding. Surface of head with polygonal micro-reticulation and rounded, deep, not sparse punctation, scattered on lateral margins. Pronotum dilated anteriorly, shorter and narrower than head, with oblique anterior margins, rounded anterior angles and moderately emarginated sides. Surface with polygonal micro-reticulation and dorsal series of 7 evident punctures and lateral series of 5-6 punctures. Elytra narrow, sub-rectangular, as long and wide as pronotum, with sub-rectilinear and sub-parallel sides and less evident humeral angles. Surface with numerous, fine punctures, arranged in numerous series. Abdomen with traces of transverse micro-striation and fine, very sparse punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 157-158. Aedeagus (Fig.159) 1.3 mm long, ovoid, of peculiar shape, with sub-rectilinear distal margin, long parameres, peculiar distal lobule; inner sac tape-like, very narrow, short, covered with minute scales.

ETYMOLOGY. The specific epithet comes from the Latin “ignotus-a-um” (unknown).

DISTRIBUTION. Madagascar.

6. *Paulianella ambohitra* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Mt d'Ambre N.P., upper Camp near Ambohitra, 12°31'37.7"S, 49°10'19.1"E, 1042 m, M. Tryzna 7-16.I.2015 (cJ).

DESCRIPTION. Length of body 8 mm; from anterior margin of head to posterior margin of elytra: 4.4 mm. Body reddish brown very dark; antennae and legs brown. Head and pronotum with polygonal micro-reticulation; anterior half of pronotum with traces of transverse micro-striation. Head sub-rectangular with widely rounded posterior angles. Eyes medium-sized and barely protruding. Surface of head with

sparse punctation on the anterior half, some larger and very sparse punctures laterally and on the posterior half. Pronotum as long as head and anterior as wide as it, with emarginated sides and widely rounded anterior angles. Surface with dorsal series of 6-7 punctures and lateral oblique series of 3 punctures. Elytra sub-rectangular, as long and wide as pronotum, with rounded humeral angles and slightly rounded sides. Surface with numerous punctures, arranged in some series, except for the surface near the suture. Abdomen with transverse micro-striation and fine punctures on the sides of each segment. Tergite and sternite of male genital segment as in Figs 160-161. Aedeagus (Fig. 162) 1 mm long, very narrowly elongated, with arched parameres; inner sac apparently not visible.

ETYMOLOGY. The specific epithet is the type locality, as a noun in opposition.

DISTRIBUTION. The species is known only from the type locality in N Madagascar.

7. *Paulianella insularis* (Bernhauer, 1904) comb.n.

Xantholinus insularis Bernhauer, 1904: 232; Bernhauer & Schubert, 1914: 304; Herman, 2001a: 3801.

Paulianella aethiops Jarrige, 1978: 273; Herman, 2001a: 3736, syn. n.

TYPE SPECIES. The Field Museum of Natural History of Chicago preserves 1 specimen, male, labelled "Madagascar / Sikora 1896", "*insularis* / Brnh. Type". I choose this specimen as lectotype of the species that bears the labels "Lectotypus *Xantholinus insularis* Bh., Bordoni des. 2017" and "*Paulianella insularis* (Bh.), Bordoni det. 2017". *Paulianella aethiops* Jarrige, 1978 was described from a male from Andringitra Est, 2000 m (MNHN). Due to the provisions imposed by the museum management of Paris, I was unable to examine this specimen. Fortunately the author proposed a drawing of the aedeagus which is the same as that of *P. insularis*, so I place *P. aethiops* in synonymy with *P. insularis*.

EXAMINED MATERIAL. Madagascar, 3 exx. (NMW), 1 ex. (NMB); Madagascar, Sikora, 1896, 3 exx. (NMW), 1 ex. (cB); Madagascar, don. Varendorff, 3 exx. (NMW); Madagascar, Antananarivo, Schubert, 32 exx. (NMB), 1 ex. (cB); Madagascar, Antananarivo, 8 exx. (NMB), 1 ex. (cB), 1 ex. (cJ); same data, Sikora, C. Schaufuss, 2 exx. (DEI); Sikora, C. Schaufuss 1922, 2 exx. (DEI); Ananarivo, 1 ex. (FMNH); Ananarivo, Sikora, 1 ex. (FMNH); Madagascar, Tananarivo, 1 ex. (FMNH); 5 exx. (NMW), 2 exx. (cB); Madagascar, Antananarivo, Sikora, 5 exx. (NHML); E Madagascar, 10 Km W Maheriara, Route Morarano Chrome-Ambakireni, 1200-1500 m, écorces for. humide, J. Janák 21.I.1995, 1 ex. (cJ); E Madagascar, P. N. Ranomafana, Vohiparara, 1100-1200 m, J. Janák 21-24.I.1993, 2 exx. (cJ); E Madagascar, S of Ambositra, R N Km 295.5 by Ambatofitorahana, 1700 m, forest litter, J. Janák 5-6.I.1999, 2 exx. (cJ); E Madagascar, Massif Ambondrombe, SW slope, 1600-1700 m, écorces, for. humide, J. Janák & P.

Moravec 17.III.1998, 2 exx. (cJ), 1 ex. (cB); E Madagascar, 30 Km ESE Betroka, Vohitrosa forest, 1600 m, 2 Km NEE ▲ 1825, J. Janák 19-23.XII.1998, 1 ex. (cJ); E Madagascar, 30 Km ESE Betroka, Vohitrosa forest, 1650-1700 m, 0.5 Km S ▲ 1798, J. Janák 25-28.XII.1998, 1 ex. (cJ); E Madagascar, 5 Km S of Ampamoho pr., Andilamena, 950-1000 m, for. humide, J. Janák 18-20.I.1995, 1 ex. (cJ); E Madagascar, Rég. Ambovondrazaka, 5 Km N Didy, 1100-1200 m, écorces, for. humide, J. Janák 14-16.I.1995, 1 ex. (cJ).

DESCRIPTION. Length of body 8.5-9.5 mm; from anterior margin of head to posterior margin of elytra: 4.5-5 mm. Body brown amaranth to brown dark. Head sub-rectangular, moderately narrow anteriorly, with slightly rounded sides and rounded posterior angles. Eyes small and barely protruding. Surface with polygonal micro-reticulation and deep, dense punctation. Pronotum scarcely dilated anteriorly, longer and narrower than head, with oblique anterior margins, rounded anterior angles and not emarginated sides. Surface with polygonal micro-reticulation and dorsal series of 6-8 punctures and lateral series of 4-5 anterior punctures. Elytra scarcely dilated posteriorly, with not marked humeral angles. Surface with some series of very fine, spaced punctures. Abdomen with more or less transverse micro-striation and very fine, scarce punctation on the sides. Tergite and sternite of male genital segment as in Figs 163-164. Aedeagus (Fig. 165) 1-1.2 mm long, ovoid, with narrow parameres; distal lobule short; inner sac scarcely visible, with some, fine scales.

DISTRIBUTION. The species is known from Central E Madagascar (Fig. 178, 179).

REMARKS. This is probably the most widespread *Paulianella*, so this species is variable in size, colour and punctation.

8. *Paulianella opaca* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, N Andringitra, Vohidray rdg, 2 Km S Ambondro, 1350-1500 m, J. Janák 17-18.IV.2001 (cJ); paratype: same data, 1 ♂ (cJ).

DESCRIPTION. Length of body 9.5 mm; from anterior margin of head to posterior margin of elytra: 5.5 mm. Body reddish brown dark with lighter abdomen; antennae and legs brown. Similar to *P. monticola* sp.n. but smaller body, shorter head, smaller eyes; sparser punctation of head; shorter pronotum, less dilated anteriorly, with dorsal series of 5 spaced, regular punctures and lateral series of 3 anterior punctures; shorter elytra, with sparser punctation. Tergite and sternite of male genital segment as in Figs 166-167. Aedeagus (Fig. 168) 1.44 mm long, ovoid, very elongate; long and proximally sub-triangular parameres; distal lobule under a supplementary lobule covered partially by fine scales; inner sac short and narrow, very membranous, with very few, sparse minute scales.

ETYMOLOGY. The specific epithet comes from the Latin “opacus-a-um” (opaque).

DISTRIBUTION. The species is known only from the type locality in Eastern Madagascar (Fig. 178).

9. *Paulianella grossula* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Massif Ambondrombe, Ikoka env., 1300-1400 m, sous écorces, crête Amboasa, forêt humide, J. Janák & P. Moravec 11-12.III.1996 (cJ); paratypes: same data, 1 ♂, 3 ♀♀ (1 ex. without genital segment) (cJ), 1 ♂ (cB).

DESCRIPTION. Length of body 9.5 mm; from anterior margin of head to posterior margin of elytra: 5 mm. Body reddish brown dark; antennae and legs brown. Similar to *E. insularis* (Bh.) in size, colour, general punctuation and polygonal micro-reticulation on head and pronotum, but head more sub-rectangular, barely narrow anteriorly, with sub-rectilinear sides and sparser punctuation; pronotum less dilated anteriorly, narrower, with dorsal series of more numerous punctures; elytra very long, sub-rectangular, not dilated posteriorly. Tergite and sternite of male genital segment as in Figs 169-170. Aedeagus (Fig. 171) 1.4 mm long, ovoid, dilated in the middle, with long and distally very narrow parameres; distal lobule long, with acute apex and laterally thickened; inner sac extremely narrow and short, with few, minute scales.

ETYMOLOGY. The specific epithet comes from the Latin “grossulus-a-um” (large), in relation to the body size.

DISTRIBUTION. The species is known only from the type locality in Eastern Madagascar (Fig. 178).

10. *Paulianella abdominalis* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Ambohimahasoa env. (Fianantsoa), RN7, pk 344, 1300-1400 m, forêt humide, J. Janák & P. Moravec 21-23.III.1996 (cJ).

DESCRIPTION. Length of body 9 mm; from anterior margin of head to posterior margin of elytra: 5 mm. Head black, pronotum and elytra reddish brown dark, abdomen brown light, antennae and legs brown. Head sub-rectangular, slightly narrow forward, with sub-rectilinear sides. Eyes small and almost flat. Surface of head with sparse, deep punctures only on the disk; surface from the eyes to the posterior margin of head and almost all the posterior half without punctuation; the surface near the posterior margin with a horizontal series of some finer punctures. Pronotum dilated anteriorly, as long and anteriorly a little narrower than head, with oblique anterior margins and moderately emarginated sides. Surface with dorsal series of 5-6 punctures; lateral series of 3 anterior punctures. Elytra sub-rectangular, barely dilated posteriorly. Surface with fine, sparse punctuation, arranged in some series. Abdomen glossy, without micro-sculpture, with very fine and sparse

punctures only on the sides of each segment. Tergite and sternite of male genital segment as in Figs 172-173. Aedeagus (Fig. 174) 1.7 mm long, ovoid, with long asymmetrical parameres, distally very narrow; distal median lobe short, with acute apex; inner sac tube-like, scort on left portion of the basal bulb, covered with fine spinulae.

ETYMOLOGY. The specific epithet comes from the Latin “abdominalis-e” (abdominal), for the colour brown light of the abdomen.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

11. *Paulianella obsoleta* (Schubert, 1911) comb.n.

Xantholinus obsoletus Schubert, 1911: 16; Bernhauer & Schubert, 1914: 306; Herman, 2001a: 3815.

TYPE MATERIAL. The Naturhistorisches Museum of Berlin preserves 1 specimen, male, labelled “Type” (on red label), “Madagascar / Antananarivo”, “*obsoletus* m”, “Lectotypus *Xantholinus obsoletus* Schubert, J. Janák des. 1991”, “*Paulianella obsoleta* (Schub.), J. Janák det. 1991” (in litt.). I choose this specimen as lectotype of the species. It is labelled “Lectotypus *Xantholinus obsoletus* Schub., Bordoni des. 2014” and “*Paulianella obsoleta* (Schub.), Bordoni det. 2014”.

EXAMINED MATERIAL. Central Madagascar, Fianarantsoa, Rés. Andringitra, 8.5 Km SE Antanifotsy, litter in montane rainforest, 1990 m, 22.10S, 46.58E, B. L. Fisher 6.III.1997, 2 ♂♂, 4 ♀♀ (FMNH), 1 ♂, 1 ♀ (cB).

DESCRIPTION. Length of body 9 mm; from anterior margin of head to posterior margin of elytra: 5 mm. Body reddish brown very dark. Head ovoid, with slightly rounded sides and widely rounded posterior angles. Eyes small and barely protruding. Surface of head with polygonal micro-reticulation and dense punctation; the distance between the punctures is equal to their diameter. Pronotum as long as head, anterior dilated where is scarcely narrower than it, with oblique anterior margins, narrowly rounded anterior angles and emarginated sides. Surface with fine and dense, polygonal micro-reticulation, dorsal series of 5-6 spaced, broad punctures and lateral series of 2-3 irregular punctures, Elytra sub-rectangular, slightly dilated posteriad, longer and wider than pronotum, with marked humeral angles. Surface almost wrinkled, with dense, deep and proportionally broad punctation, arranged in numerous series. Abdomen with very fine and superficial transverse micro-striation, and fine, sparse punctation on the sides on each segment. Tergite and sternite of male genital segment as in Figs 175-176. Aedeagus (Fig. 177) 1.37 mm long, ovoid, large, narrow distally, with long parameres and long, robust distal lobule; inner sac apparently not visible.

DISTRIBUTION. The species is known from Central Madagascar (Fig. 178).

1. *Paulianella subnitida* Jarrige, 1978

Paulianella sub nitida Jarrige, 1978: 275; Herman, 2001a: 3736.

DISTRIBUTION. Andringitra, forêt de Andromovaha.

REMARKS. This species (7.5 mm long) was described from a female from Andringitra, forêt de Andromovaha, 2200 m, A. Robinson 6.XI.1949 (MNHN). Due to the provisions imposed by the museum management of Paris, I was unable to examine this specimen. The original description, at which command, can be applied to any *Paulianella* of that size.

2. *Paulianella longiceps* Jarrige, 1978

Paulianella longiceps Jarrige, 1978: 275; Herman, 2001a: 3736.

This species (6 mm long) was described from a female from Andringitra Sud, Andrianoy, cirque Manjarivolo, 1600 m (MNHN). Due to the provisions imposed by the museum management of Paris, I was unable to examine this specimen. The original description, at which command, can be applied to any *Paulianella* of that size.

4. Genus *Stenistoderus* Jaquelin du Val, 1856

Stenistoderus Jaquelin du Val, 1856: 33; Herman, 2001a: 3751; Bordoni, 2016: 436.

DESCRIPTION. Form very elongate, flat and parallel-sided. Head with very dense longitudinally confluent punctation. Ocular and frontal grooves absent. Eyes small. Maxillary palpi with penultimate segment longer than second, apical segment aciculate, much shorter than penultimate and at base much narrower than width of apex of penultimate segment. Labial palpi with first two segments sub-equal in length, last segment shorter and narrower than penultimate segment. Gular sutures fused. Pronotum densely punctate apart from a median band. Upper epipleural line gradually disappearing anteriorly and therefore detectable only on posterior half of pronotum. Antesternal plate divided. Anterior tarsi dilated. Meso- and metatibia with apical and two subapical ctenidia. Sternite of male genital segment modified. Aedeagus with parameres; inner sac covered with scales and spines

DISTRIBUTION. The genus is mostly represented in the western portion of the Palaearctic Region; one species only occurs in North America (Smetana, 1982). Conversely in Africa south of Sahara (Bordoni, 2016) occurs with 17 taxa, especially in the central regions.

1. *Stenistoderus mahajanga* sp.n.

EXAMINED MATERIAL. Holotype ♂: NW Madagascar, Mahajanga prov., Mahajanga River, Ampatika env., I. Jenis 10-12.XII.1996 (cJ); paratypes: same data, 1 ♂, 1 ♀ (cJ).

DESCRIPTION. Length of body 6.5 mm; from anterior margin of head to posterior margin of elytra: 3.3 mm. Body slender, narrow, yellowish brown. Head very long, sub-rectangular, with sub-rectilinear and sub-parallel sides and narrowly rounded posterior angles. Eyes medium-sized and protruding. Surface of head totally covered with fine and deep punctation, with the usual micro-sculpture in longitudinal lines. Pronotum dilated anteriorly, moderately longer and narrower than head, with very oblique anterior margins, almost obsolete anterior angles, rounded from the neck to the emarginated sides. Surface with dense punctation, similar to that of the head, apart from a median, wide stripe. Elytra sub-rectangular, very long, longer than pronotum, as wide as it, with sub-rectilinear and sub-parallel sides, and marked humeral angles. Surface with fine punctation, arranged in numerous series. Abdomen with traces of transverse micro-striation and fine, dense, superficial punctation, arranged in numerous series on each segment. Tergite and sternite of male genital segment as in Figs 180-181. Aedeagus (Fig. 182) 1.18 mm long, ovoid, narrow distally; parameres short and narrow; inner sac long, dilated medially, covered with spines and scales.

ETYMOLOGY. The specific epithet refers to the type locality, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in NW Madagascar.

REMARKS. The taxa of *Stenistoderus* are sub-corticole.

5. Genus *Dactylaptatus* Lecoq, 1990

Dactylaptatus Lecoq, 1990: 189; Herman, 2001a: 3623; Janák, 2014: 479.

TYPE SPECIES. *Dactylaptatus insularis* Lecoq, 1990

DESCRIPTION. This genus differs from the other Xantholinini for the contemporary presence of the following characters: body winged or brachypterous, slender, narrow; head sub-rectangular, elongate; ocular grooves visible; frontal grooves very superficial; labrum as in Fig. 183; eyes small and flat; maxillary palpi as in Fig. 184; labial palpi as in Fig. 185; gular sutures separated along almost all their length (Fig. 186); pronotum with more or less evident dorsal and lateral series of punctures between other punctures; antesternal plate with suture; upper epipleural line of the pronotum entire and not joint with the lower line; prosternum with posterior margin almost rectilinear, with a short intercoxal apophysis protruding; anterior tarsi short

and moderately broad but not dilated. Aedeagus membranous, elongate, with short parameres. Female genital segment as in Fig. 187.

DISTRIBUTION. This genus seems endemic to La Réunion.

KEY TO THE SPECIES

1. Body about 5 mm long, pronotum with 5-6 series of punctures, elytra longer.....
 1. *D. insularis* (Lecoq)
 .- Body about 6 mm long, pronotum provided of 15-18 punctures, elytra shorter.....
 2. *D. taborskyi* Janák

1. *Dactylaptatus insularis* Lecoq, 1990

Dactylaptatus insularis Lecoq, 1990: 189; Herman, 2001a: 3623.

TYPE MATERIAL. The Institut royal des Sciences naturelles of Bruxelles preserves 1 specimen, female, labelled “La Réunion”, “*Platydactylus / insularis* Fvl.”, “Type” (on red label), “*Dactylaptatus* n. g. / *insularis* n. sp. / J. Jarrige det.” (in litt.), “*Dactylaptatus / insularis* Lecoq 1987”.

EXAMINED MATERIAL. La Réunion (holotype) (Gomy et. al., 2016).

DESCRIPTION. Length of body 5.2 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Body slender, narrow, reddish brown, with reddish pale antennae and legs. Head sub-rectangular, narrow and long, with moderately rounded sides and narrowly rounded posterior angles. Eyes small and almost flat. Surface of head with traces of transverse micro-striation and deep, scattered punctation, apart from a median stripe without micro-sculpture. Pronotum massive although narrow, longer than head, as wide as it, more or less wide anteriorly and posteriorly, with sub-rectilinear sides, oblique anterior margins, almost obsolete anterior angles, not emarginated sides. Surface with dorsal series of 8-9 deep, broad punctures and lateral series of 5-6 irregular punctures; other punctures near the lateral margins. Elytra sub-rectangular, as long as pronotum, moderately wider than it, with sub-rectilinear sides and marked humeral angles. Surface wrinkled, with dense, deep punctation, arranged in numerous series. Abdomen with polygonal micro-reticulation and very dense punctation, arranged in numerous series on each segment. Male unknown.

DISTRIBUTION. The species is known only from the type locality (La Réunion).

2. *Dactylaptatus taborskyi* Janák, 2014

Dactylaptatus taborskyi Janák, 2014: 479.

TYPE MATERIAL. The Janák's collection preserves the holotype of the species, labelled "La Réunion: Route de Maïdo, 7-12.I.1992, 1600-1700 m, J. Janák leg.". Paratypes from the same locality are preserved also in MNHN and NMB.

EXAMINED MATERIAL. La Réunion: Saint Paul (holotype) (Gomy *et al.*, 2016)

DESCRIPTION. Length of body 5.9-7.1 mm; from anterior margin of head to posterior margin of elytra: 3.1-3.4 mm. Body elongate, reddish brown; legs and first three segments of antennae brownish yellow, remaining segments brown. Head elongate with widely rounded posterior angles. Eyes small and flat. Surface of head with traces of transverse micro-striation and fine, sparse punctation. Pronotum elongate, longer than head and as wide as it, with oblique anterior margins, narrowly rounded anterior angles, and emarginated sides. Surface with traces of transverse micro-striation and dorsal series of 15-18 punctures on the sides of which is densely punctured. Elytra trapezoidal, shorter and slightly wider than pronotum. Surface with dense micro-sculpture, and dense, coarse punctation. Abdomen with fine, transverse micro-striation and fine, dense punctation. Tergite and sternite of male genital segment in Janák, l.c. Aedeagus (Fig. 188) 1.32-1.57 mm long, elongate, with short parameres; inner sac with a distal series of fine spines and scales in the proximal portion.

DISTRIBUTION. La Réunion.

REMARKS. This species was collected in rotten leaves of bamboo *Nastus borbonicus*, on a bank of a periodical stream at the border of indigenous forest of *Acacia heterophylla* and *Nastus borbonicus*.

6. Genus *Metolinus* Cameron, 1920

Metolinus Cameron, 1920: 147; Herman, 2001a: 3703; Bordoni, 2002: 337.

DESCRIPTION. Body (Fig. 189) 3-6 mm long, frontal grooves absent, maxillary palpi with first article shorter than 2nd, that is very shorter than 3rd, the last very short and very narrow; labial palpi with 2nd article very long, the last very short and narrow; pronotum with dorsal and lateral series of punctures; upper epipleural line not joint with the lower; aedeagus lenticular, flat, with a distal brown plate; inner sac with spines and spinulae.

DISTRIBUTION. The genus *Metolinus* is very widespread in the Oriental Region, with more than 100 species (Bordoni, 2002) and occurs also in Japan (Bordoni, 2002), China (Bordoni, 2013), New Guinea (Bordoni, 2010), and with one species in North Australia (Bordoni, 2005b).

1. *Metolinus mauritianus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Mascarene, Mauritius, Lake la Nicolière, K. Link 25.IX.2007 (NMW).

DESCRIPTION. Length of body 3.5 mm; from anterior margin of head to posterior margin of elytra: 1.8 mm. Body entirely brown light. Head sub-quadrangular, with moderately rounded sides and narrowly rounded posterior angles. Eyes small and protruding. Surface of head with very fine, scattered, lateral punctation. Pronotum sub-rectangular, slightly dilated anteriorly, longer and narrower than head, with sub-rectilinear sides. Surface with dorsal series of 4-5 punctures and lateral series of 3 punctures. Elytra dilated posteriorly, longer and wider than pronotum, with moderately rounded humeral angles. Surface with very fine and sparse punctation, arranged in three series, one juxtasternal, one median and one lateral. Abdomen with fine punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 190-191. Aedeagus (Fig. 192) 0.7 mm long, ovoid, narrow distally, with sub-triangular distal, dark plate; parameres short and narrow; inner sac with 5 very large spines and a right, short series of scales.

ETYMOLOGY. The specific epithet refers to the Mauritius Island.

DISTRIBUTION. The species is known only from the type locality in Mauritius.

REMARKS. The collection site is inside of Mauritius, in the northern part of the island, surrounded by the Black River Gorge forest. *Metolinus* live under bark or in rotten wood

7. Genus *Phacophallus* Coiffait, 1956

Phacophallus Coiffait, 1956: 50; Smetana, 1982: 106; Bordoni, 1982: 194; Herman, 2001a: 3736.

DESCRIPTION. Body (Fig. 196) small to medium sized (4–6 mm). Fully winged species. Head with frontal and ocular grooves very obvious, deep, much deeper than in *Leptacinus* and related genera; folded part of the temples sub-depressed, delimited ventrally by a longitudinal carina followed by a groove. Maxillary palpi with last segment about as long as and narrower than the preceding one. Last segment of labial palpi much narrower than the preceding one; ligula undivided. Labrum bilobed, with a short median emargination. Neck wide, about 1 / 3rd the breadth of head. Gular sutures juxtaposed over a half their length. Pronotum with some dorsal and lateral series of 5, 6 punctures. Antesternal plate with a suture. Upper epipleural line of the pronotum bent towards the prosternum a little before the anterior angles and not meeting the lower line. Elytra a little dilated posteriorly where they are semi-transparent, very weakly sclerotized, with several series of sparse very small punctures. Legs with anterior tarsi not dilated. Male sixth visible sternite not prolonged on its posterior margin into a very peculiar sub-rectangular median apophysis with sub-rectilinear margins, as in Palaearctic species, but modified,

asymmetrical, more or less as in *Leptacinus*. Aedeagus totally devoid of parameres, of an almost spherical shape, swollen, with the introflected plate subcircular and the internal sack ribbon-shaped, folded more or less regularly on itself and covered with scales and spines (Figs. 197), sometimes almost invisible, with few scales only. Female genital segment cf. Bordoni (2002: figure 82).

DISTRIBUTION. Oriental Region (Bordoni, 2002), Australia (Bordoni, 2005b), Africa (Bordoni, 2016).

REMARKS. *Phacophallus* lives in domestic cattle and goat droppings in the straw of the stables, in vegetable litter, often near human settlements. This explains their passive introduction outside their usual distribution area, by human activities. Some specimens were collected in dung of cow, debris, rotting fruit.

KEY TO THE SPECIES

1. Body about 5 mm long 2.
 -. Body about 6.3-6.5 mm long, narrow and slender, reddish brown with dark head and lighter elytra; head sub-rectangular with scattered punctation; dorsal series of pronotum of 5 punctures and lateral series of 4-5 punctures; elytra with three series of punctures; aedeagus sub-spherical, inner sac tube-like, covered with scales among which we note three spines
 1. *P. madescassianus* sp.n.
2. Body 5 mm long, smaller and slender; head less narrow anteriorly, proportionally with barely bigger eyes; surface of head with more punctures, pronotum very smaller, with more rounded anterior angles and less dilated anteriorly; elytra shorter. inner sac of the aedeagus tube-like, folded on itself some times, covered with fine scales in the proximal portion; the middle part with very fine and closed spinulae; the distal portion with large scales under fine, closed scales 2. *P. kali* sp.n.
 -. Body 5- 6 mm long, head black, pronotum red, elytra yellowish, abdomen reddish brown; aedeagus with inner sac in the shape of a sling, covered with fine scales
 3. *P. pallidipennis* (Mot.)
- . Body 4.45 mm, stronger, head more narrow anteriorly, surface of head with less punctures, pronotum stronger; aedeagus with three spines 4. *P. flavipennis* (Kraatz)

1. *Phacophallus madescassianus* sp.n.

EXAMINED MATERIAL. Holotype ♂: S Madagascar, Ambatoveve, Route Betioky-Beheloka, 150 m, forêt épineaux, G. Dunay & J. Janák 26.I.1995 (cJ); paratypes: same data, 2 ♀♀ (cJ); SW Madagascar, Toliara distr., Ranohira (Isalo), I. Jenis 8-11.II.1995, 3 ♂♂, 1 ♀ (cJ), 2 ♂♂ (cB); Toliara prov., Forêt de Tsinjoriaky, 6.2 Km 84th E Tsifota, 70 m, 22°48'8" S, 43°25'14" E, light-spiny forest, Fisher, Griswold *et al.*, 6-10.III.2002, 1 ♂ (CAS); CW Madagascar, Morondava dist., Maronfandilia, J. Stolarczyk 4-5.I.1995, 1 ♀ (cJ); Central Madagascar, Mahamasina vill. env., AKR / Jan 2016, P. Banar 26.I.2016, 1 ♂, 5 ♀♀ (MMB), 1 ♂ (cB); Tananarivo, Friederichs, 1 ♂ (damaged specimen) (NMB); Tananarivo, Fort

Duchesne, Friederichs, 1 ♂ (without head and pronotum) (NMB); Fianaratsoa, Ranomafana, I. Jenis 28.I-6.II.1995, 1 ♂ (cJ); Ranomafana N.P. env., Sahavondrona, 1150-1250 m, J. Janák 3-4.II.1995, 1 ♀ (cJ); W Madagascar, Katsepy (Majunga), J. Basta 5.II.2002, 1 ♀ (cJ), 1 ♂ (cB); forêt Zombitsy pr. Sakahara, J. Janák 29.I.1995, 1 ♂ (cJ); Zombitse N.P., Ambakintany forest, 816 m, 22°53'11"S, 44°41'31"E, M. Tryzna 24-27.I.2013, 1 ♂, 1 ♀ (NHML), 1 ♂ (cB); E Madagascar, Andranokobaka, N Moramanga, J. Janák 14.I.1995, 1 ♂ (cJ); Ambatondrazaka reg., 5 Km N Didy, 1100-1200 m, forêt humide, J. Janák 14-16.I.1995, 1 ♀ (cJ); Moramanga env., J. Moravec 19-20.XII.1997, 1 ♀ (cJ); Andranokobaka, N Moramanga, 800 m, excrément vache, G. Dunay & J. Janák I.1995, 2 ♀♀ (cJ); Andasibe, Central Plateau, Andasibe, 950 m, V. Dolin & R. Andreeva 19-31.XII.2001, 1 ♀ (cJ); NW Madagascar, Marovasa, G. de Rougemont 7-8.IV.2006, 2♂♂, 2 ♀♀ (cR), 1♂, 1 ♀ (cB); Kap Diego, S. G. Friederichs 1916, 1 ♀ (NMB); Antsiranana prov., Ankarana, Ambondromifehy, I. Jenis 5-6.XII.19916, 1 ♂ (cJ); Antsiranana prov., Ambodidimaka env., I. Jenis 15-16.XII.2002, 1 ♂ (cJ).

DESCRIPTION. Length of body 6.3-6.5 mm; from anterior margin of head to posterior margin of elytra: 3-3.5 mm. Body narrow, slender, shiny, without micro-sculpture; reddish brown with darker head and lighter elytra, posteriad yellowish; antennae and legs brown light. Head sub-rectangular, moderately narrow anteriorly, with slightly rounded sides and rounded posterior angles. Eyes small and protruding. Surface of head with scattered punctation, except for the median portion; some sparse, deeper, lateral punctures. Pronotum dilated anteriorly, as long and wide as head, with very oblique anterior margins, slightly rounded anterior angles and not emarginated sides. Surface with dorsal series of 5 punctures and lateral series of 4-5 irregular punctures. Elytra dilated posteriad, longer and wider than pronotum, with moderately rounded humeral angles. Surface with fine punctation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with fine, very sparse punctation. Sixth visible male sternite with concave posterior margin; tergite and sternite of male genital segment as in Figs 193-194. Aedeagus (Fig. 195) 0.74-0.81 mm long, sub-spherical; inner sac tube-like, narrow and very long, folded on itself some times, covered with scales among which we note three spines, a proximal, median and distal one; the middle portion is covered with parallel and slightly curved spinulae.

ETYMOLOGY. The specific epithet refers to the other name of Madagascar ("Pays de Madécasse", as it was called in the past by French people).

DISTRIBUTION. The species is known almost from all the Madagascar (Fig. 198).

2. *Phacophallus kali* sp.n.

EXAMINED MATERIAL. Holotype ♂: Rodriguez Isl., (Mauritius Islands), Mt Kali, 6 m, 19.42S, 63.24E, cattle dung, C. Turner 17.XII.2005 (NHML); paratypes: same data, 1 ♂, 2 ♀♀ (NHML), 2 ♂♂ (cB).

DESCRIPTION. Length of body 5 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Similar to *P. flavipennis* (Kr.) but smaller and slender; head less narrow anteriorly, proportionally with barely bigger eyes; surface of head with more punctures, except for a wide median stripe; pronotum very smaller, with more rounded anterior angles and less dilated anteriorly; elytra shorter. Posterior margin of sixth visible male sternite with a median protrusion; tergite and sternite of male genital segment as in Figs 199-200. Aedeagus (Fig. 201) 0.74 mm long, sub-spherical; inner sac tube-like, folded on itself some times, covered with fine scales in the proximal portion; the middle part with very fine and closed spinulae; the distal portion with large scales under fine, closed scales.

ETYMOLOGY. The specific epithet refers to the type locality, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality (Rodrigues island)

REMARKS. The Rodrigues island is isolated in the middle of the Indian Ocean, very far from other lands and also from the Mauritius Islands to which it belongs. It may be that this isolation has led to the formation of this species which has an inner sac of the aedeagus closer to any other species of the genus.

3. *Phacophallus pallidipennis* (Motschulsky, 1858)

Phacophallus pallidipennis; Lecoq, 1990: 197 (sub. *P. tricolor* Kraatz, 1859); Bordoni, 2002: 534; Janák, 2014: 482.

EXAMINED MATERIAL. Mascarene, La Réunion, Ravine de St. Gilles, Bassin Cormoran env. J. Janák 13-14.I.1992, numerous exx. (cJ, NHB), 1 ex. (cB).

EXAMINED MATERIAL. Mascareignes (Vinson 1967, sub *parumpunctatus* (Gyll.))

La Réunion: Sainte Therese; Saint Paul; Ravine Trois Bassins; Saint Gilles; Plaine des Makes (Lecoq, 1990, sub *tricolor* (Kraatz, 1859)). Mauritius: Moka; Flic en Flac (Lecoq, 1990, sub *tricolor* (Kraatz, 1859)); La Réunion: Ravine de St. Gilles, Bassin Cormoran env. (cJ, NHB); Saint Paul, Ravine de Bernica (NHB); St. Gilles les Bains (cJ) (Janák, 2014). La Réunion: Saint Gilles les Bains; Saint Paul; Ravine des Trois Bassins; Plaine des Makes; Sainte Thérèse; Salazie; Sainte Marie; Ravine Saint Gilles, Bassin des Cormorans (Gomy et. al., 2016).

DISTRIBUTION. Oriental Region, introduced by human activities in Europe and North America (Bordoni, 2002). Introduced also in La Réunion and Mauritius.

4. *Phacophallus flavipennis* (Kraatz, 1859)

Phacophallus flavipennis; Smetana, 1980: 54; Lecoq, 1990: 188; Bordoni, 2002: 538.

EXAMINED MATERIAL. Mascarene: Mauritius, 5 Km SE Le Morne village, Black River, Le Cap, 20.29S, 57.21E, M. Langer 21.VI.2003, 1 ex; Point d'Esny, A. Link 25.IX.2007, 3 exx. (NMW). La Réunion, Saint Paul, Ravine de Bernica, J. Janák 29.XII.1991-1.I.1992, numerous exx. (cJ, NHB, cB).

EXAMINED MATERIAL. La Réunion: Saint André; Saint Joseph; Ravine Trois Bassin; Mauritius: Baie du Tombeau; Bel Ombre; Flic en Flac; Albion (MNHN); Rodrigues: La Ferme; Port Sud-Est (MHNG) (Lecoq, 1990). La Réunion: Saint André; Saint Joseph; Ravine Trois Bassin; Fleurimont; Ravine de Saint Gilles les Bains; Sant Paul, Ravine Bernica; Saint Gilles les Bains; Mafate, Plaine aux sables; Ravine Manapany; Manapany; Petite Île, Grand Anse; Saint Benoit; Etang Salé les Bains; Massif du Piton de la Fournaise (Gomy *et al.*, 2016).

DESCRIPTION. Body 4.4-5 mm long, brown yellowish, head with deep punctation, dorsal series of 5-6 thin punctures and lateral series of 4-5 superficial punctures, elytra longer and wider than pronotum with thin punctures in some series, aedeagus with three series of spinulae.

DISTRIBUTION. Oriental Region, Taiwan (Bordoni, 2002). Introduced in Mascarene.

REMARKS. Many specimens were collected in dung of cow, in plant debris, at light.

8. Gen. *Erymus* Bordoni, 2002

Erymus Bordoni, 2002: 549.

DESCRIPTION. Body shiny, 3-6 mm long; head rounded, frontal and ocular grooves indistinct, maxillary palpi less long and closer than the previous one that is similar to the 2nd, labial palpi with very close last article, short and close than the previous that is longer than the first, dorsal series of pronotum of 5 punctures and lateral series of 3 anterior punctures, upper epipleural line of the pronotum entire and not joint with the lower line, long elytra with superficial punctation, posterior tarsi long, sixth sternite reduced to a tight webbing, aedeagus sub-ovoid with showy parameres.

KEY TO THE SPECIES

1. Pronotum with dorsal series of 10-11 punctures.....1. *E. gracilis* (Fvl.)
 -. Pronotum with dorsal series of 5 punctures.....2. *E. seycellensis* sp.n.

1. *Erymus gracilis* (Fauvel, 1895)

Leptacinus gracilis Fauvel, 1895: 240; Bernhauer & Schubert, 1914: 293; Cameron, 1932b: 9; Herman, 2001a: 3675.

Erymus gracilis; Bordoni, 2002: 560.

Leptacinus gomyi Lecoq, 1990: 188; Janák, 2014: 481 (syn. of *Erymus gracilis*).

EXAMINED MATERIAL. La Réunion, Ravine de St. Gilles, Bassin Cormoran, J. Janák 13-14.I.1992, 1 ex. (NMB), 1 ex. (cB).

EXAMINED MATERIAL. Réunion: Saint Paul, Saint André, Saint Denis; Saint Benoit, Hauts de Saint Denis (16 exx.) (Lecoq, 1990, holotype and paratypes of *Leptacinus gomyi*, in MHNP, MHNG); La Réunion: Bras de Chèvrettes; Ravine de Saint Gilles, Bassin Cormorans; Saint Paul, Ravine Bernica (Janák, 2014). La Réunion: Saint Gilles les Bains; Saint Paul; Saint Denis; Hauts de Saint Denis; Saint André; Saint Benoit; Ravine de Saint Gilles les Bains; Saint Paul, Ravine Bernica (Gomy *et al.*, 2016).

DESCRIPTION. Body 3.5-5 mm long, reddish brown, eyes prominent, head with scattered punctation, except for a median stripe, dorsal series of pronotum of 10-11 punctures, aedeagus with short rounded basal bulb and broad distal pore and very long parameres (see Bordoni, 2002, Fig. 1624).

DISTRIBUTION. Widespread species, from Turkmenistan, Azerbaijan, Iran to all the Oriental Region (from Sri Lanka and India to Lombok and Sumba), and in China (Bordoni, 2002); La Réunion island.

REMARKS. The species were collected in dead leaves of bamboo and rotting fruit.

2. *Erymus seycellensis* sp.n.

EXAMINED MATERIAL. Holotype ♂: Seychelles, Mahé island, Mont d'Or, 200-300 m, 4°38'58"S, 55°24'55"E, *Cinnamon* forest, failed fruit, J. Janák 8.XII.2007 (cJ); paratypes: same data, 1 ♀ (cJ), 1 ♀ (cB),

DESCRIPTION. Length of body 3.7 mm; from anterior margin of head to posterior margin of elytra: 1.8 mm. Body shiny, without micro-sculpture except for the abdomen, reddish brown with a little darker head and elytra; antennae and legs yellow. Head sub-rectangular, with widely rounded posterior angles. Eyes very large, barely protruberant. Surface of head with fine, sparse punctation, except for a wide median stripe. Pronotum as long as head, dilated forward where is as wide as pronotum, with oblique anterior margins, widely rounded anterior angles and emarginate sides. Surface with dorsal series of 3 anterior and 2 posterior punctures; lateral series of 3 anterior punctures. Elytra dilated posteriad, longer and wider than pronotum, with moderately rounded humeral angles. Surface with very fine, scattered punctation, arranged in some series. Abdomen with traces of transverse

micro-striation and very fine, sparse punctation on the sides of the segments. Tergite and sternite of male genital segment as in Figs 202-203. Aedeagus (Fig. 204) 0.40 mm long, ovoid, with long and narrow parameres; inner sac tube-like, apparently without scales.

ETYMOLOGY. The specific epithet refers to the Seychelles islands.

DISTRIBUTION. The species is known only from the type locality.

9. Gen. *Chaetocinus* Clark *et al.*, 1972

Chaetocinus Clark *et al.*, 1972: 483; Coiffait, 1968: 130 and 135 (subgen. of *Leptacinus*: nom. nudum); Herman, 2001b: 3665 (all as subgen. of *Leptacinus*).
Chaetocinus: Bordoni, 2016.

DESCRIPTION. Similar in external features to *Leptacinus* from which it differs in a few external characters: eyes usually very large and prominent, tergite of the male genital segment with concave posterior margin, female genital segment with longer sternite and smaller additional sclerites. It differs from *Leptacinus* especially in the shape of the aedeagus, which is furnished large, thick parameres, with long, numerous setae on the internal sides; inner sac normally shaped, with large spines and scales. The distal portion of the basal bulb is devoid of the particular sclerites of different shape present in the species of *Leptacinus* that, in my opinion, is confined to the Palearctic Region. *Chaetocinus* includes both apterous and fully winged species.

DISTRIBUTION. Africa south of Sahara (Bordoni, 2016), Comoros.

KEY TO THE SPECIES-GROUPS

- | | |
|---|---------|
| 1. Inner sac more or less narrow, shaped like a longitudinal tube, covered with two denser series of fine spinulae or small spines, united in a single dark mass, sometimes with a group of distal spines | Group A |
| - Inner sac wrapped one or more times | Group B |
| .- Inner sac with a single strip of spinulae | Group C |
| - Inner sac with large spines | Group D |
| - Inner sac of different shape | Group E |

GROUP A

- | | |
|--|-----------------------------------|
| 1. Body about 7 mm long, inner sac of the aedeagus (Fig. 207) with a long median spine, located between a series of spinules on the right and two series of sub-oval scales on the left; body 7.2 mm long, reddish brown | 1. <i>C. fulvoelytratus</i> sp.n. |
| - Body about 6 mm long | 2. <i>C. primarius</i> sp.n. |
| - Body less than 6 mm long | 2 |

2. Body 5 mm long; inner sac of the aedeagus (Fig. 213) long and narrow, with two series of round scales.....3. *C. interaneus* sp.n.
 .- Body 4.8 mm long; tergite of male genital segment with posterior margin prominent laterally; inner sac of the aedeagus (Fig. 216) with a medio-proximal portion covered with long ovoid scales, a group of distal spines.....4. *C. corticolus* sp.n.
- Body about 4 mm long.....3
 - Body 3.8 mm long.....4
3. Body 4.2 mm long; inner sac of the aedeagus (Fig. 219) with two closed series of large opposed scales; body 4.2 mm long.....5. *C. avaratra* sp.n.
 -. Body 4.3 mm long; inner sac of the aedeagus (Fig. 222) covered with two series or rectangular opposed scales; body 4.3 mm long.....6. *C. talatakely* sp.n.
4. Body 3.8 mm long.....5
5. Body reddish brown with darker head; inner sac of the aedeagus (Fig. 225) sinuous, covered with small spinulae and small spines.....7. *C. lacustris* sp.n.
 -. Pronotum and abdomen reddish brown clearer; inner sac of the aedeagus covered with spinulae, longer in the proximal portion (Fig. 228).....8. *C. minor* sp.n.
 -. Body brown with darker had; inner sac with a large spines in the distal portion, near a group of smaller spines (Fig. 240).....9. *C. jarrigei* Lecoq

1. *Chaetocinus fulvoelytratus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Antananarivo Prov., 7 Km SE Andasibe N.P., Headquarters, 18°57.76'S, 48°27.16'E, 1050 m, R. Harin'Hala 22.I-23.III.2001, tropical forest (CAS); paratypes: same data, 2 ♂♂, 6 ♀♀ (CAS), 1 ♂, 5 ♀♀ (cB); same data, 7-22.IV.2001, 1 ♀ (CAS), 1 ♂ (cB); same data, botanical garden near the entrance to Andasibe N.P., 18°55.58'S, 48°24.47'E, R. Harin'Hala 14.VI-18.VIII.2001, 7 ♂♂, 10 ♀♀ (CAS), 3 ♂♂, 1 ♀ (cB).

DESCRIPTION. Length of body 7.1-7.3 mm; from anterior margin of head to posterior margin of elytra: 3.7-3.8 mm. Body reddish brown more or less dark, elytra predominantly reddish dark, with yellowish suture; head with barely emarginated sides before the eyes, slightly wider elytra, different tergite and sternite of male genital segment, parameres and inner sac of the aedeagus. Tergite of male genital segment of peculiar shape (Fig. 205); sternite as in Fig. 206. Aedeagus (Fig. 207) 1.3 mm long, sub-ovoid, with protrusive median lobe, large parameres; inner sac wide, with two spaced series of spines, from the proximal portion gradually smaller; among these series there are two series of evident scales, a rectilinear and narrow dark area and a long distal spine with a little hooked apex.

ETYMOLOGY. The specific epithet comes from the Latin "fulvus" and "elytra" in relation to the colour of the elytra.

DISTRIBUTION. The species is known only from the type localities in Central Madagascar.

2. *Chaetocinus primarius* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Montagne d'Ambre N.P., 12°30'51.5"S, 49°11'007"E, primary forest, M. Tryzna 26-30.X.2010 (cJ).

DESCRIPTION. Length of body 6.3 mm; from anterior margin of head to posterior margin of elytra: 3.5 mm. Similar to *C. interaneus* sp.n. but robustior, broader; elytra brown with more lighter suture; head narrower anteriorly, with more evident posterior angles; eyes larger and more protruding; punctation of head more evident; dorsal series of pronotum of 5 very spaced punctures; elytra longer and wider than pronotum, with more large scutellum and smaller punctation. Tergite and sternite of male genital segment as in Figs 208-209. Tergite of peculiar shape. Aedeagus (Fig. 210) 1.14 mm long, sub-rectangular, with acute distal portion; parameres long and narrow; inner sac wide, looks like a compact, dark mass of very thick spinulae, with 4 rounded, internal areas without spinulae.

ETYMOLOGY. The specific epithet comes from the Latin "primarius-a-um", in relation to the environment of collection (primary forest).

DISTRIBUTION. The species is known only from the type locality in N Madagascar (Fig. 284).

3. *Chaetocinus interaneus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Antananarivo Prov., 7 Km SE Andasibe N.P., Headquarters, 18°57.76'S, 48°27.16E, 1050 m, tropical forest, R. Harin'Hala 7-9.IV.2001 (CAS); paratypes: same data, 7-23.I.2001, 2 ♀♀ (CAS); 9-23.III.201, 3 ♀♀ (CAS), 1 ♂, 1 ♀ (cB); 22.I-9.III.2001, 3 ♀♀ (CAS); 8.III-7.IV.2001, 2 ♀♀ (CAS); 30.IV-19.X.2001, 1 ♂, 11 ♀♀ (CAS), 1 ♂, 4 ♀♀ (cB); same data, garden near Andasibe N.P., 1025 m, tropical forest, R. Harin'Hala 21.V-4.VI.2001, 2 ♀♀ (CAS); 14.V-21.VI.2001, 2 ♀♀ (CAS), 1 ♂ (cB); 18-29.VI.2001, 1 ♀ (CAS); 14-31.VI.2001, 2 ♀♀ (cB).

DESCRIPTION. Length of body 5.1-5.2 mm; from anterior margin of head to posterior margin of elytra: 2.9-3 mm. Similar to *C. sucineus* sp.n. in the general appearance, but wider body, larger head, smaller eyes, surface of head with very few and small punctures, wider and shorter elytra, different tergite and sternite of male genital segment and inner sac of the long and narrow aedeagus. Tergite and sternite of male genital segment as in Figs 211-212. Aedeagus (Fig. 213) 1 mm long, sub-ovoid but very long and very narrow; parameres of peculiar shape; inner sac long and narrow, covered with two series of small, globose scales; the distal portion present also a short, left series of small spines.

ETYMOLOGY. The specific epithet comes from the Latin *interaneus-a-um*, in relation to the internal position in Madagascar of the type locality.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

4. *Chaetocinus corticolus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Andasibe, unknown coll. 12.X.1970, under bark of coniferous (NHML); Ambohitantely Spec. Res., 1497 m, 18°10'52.6"S, 47°17'22.5"E, L. S. Rahanitriniaina 18.XI.2011 (MMB).

DESCRIPTION. Length of body 4.8 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Body shiny, robust, with sub-ovoid, wide head; eyes very large and protruding; pronotum dilated anteriorly; elytra with rounded humeral angles. Tergite and sternite of male genital segment as in Figs 214-215. Aedeagus (Fig. 216) 0.77 mm long, sub-rectangular; parameres with acute proximal portion; inner sac like two compact, dark masses composed of very closed spines, more evident in the distal part.

ETYMOLOGY. The specific epithet comes from the Latin "corticolus-a-um" (related to bark).

DISTRIBUTION. The species is known only from the type locality in Central N Madagascar (Fig. 284).

5. *Chaetocinus avaratra* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Diégo Suarez Prov., 7 Km N Joffreville, 360 m, 12.20S, 49.15E, R. Harin'Hala 7-27.IV. 2001 (CAS); paratypes: same data, 1 ♀ (CAS), 1 ♀ (cB).

DESCRIPTION. Length of body 4.2 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Similar to *C. talatakely* sp.n. but with smaller and wider body, lighter colour (reddish brown), wider head, not narrow anteriorly; smaller eyes, more massive and less narrow posteriorly pronotum, with marked anterior angles; proportionately shorter and wider elytra. Tergite and sternite of male genital segment as in Figs 217-218. Aedeagus (Fig. 219) 0.92 mm long, sub-ovoid, with longer parameres; inner sac similar to that of the named species but covered with different structures.

ETYMOLOGY. The specific epithet refers to the Malagasy word for "North", "northern". It is a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in N Madagascar (Fig. 560).

6. *Chaetocinus talatakely* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Fianarantsoa Prov., Ranomafana N.P., Talatakely area. 900 m, 21.25041°S, 47.41945°E, D. H. & K. M. Kavanaugh, R. L. Brett, E. Elsom & F. Vargas 4-16.I.2001, mixed tropical forest (CAS).

DESCRIPTION. Length of body 4.3 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Reddish brown with lighter antennae and legs. Head sub-rectangular with widely rounded posterior angles. Eyes medium-sized and moderately protruberant. Surface of head with fine, sparse punctation on the disc and sides. Pronotum dilated anteriorly, as long as head, narrower than it, with oblique anterior margins and rounded anterior angles. Surface with dorsal series of 6-7 irregular punctures and lateral series of 3 anterior punctures. Elytra sub-rectangular, longer and wider than pronotum, with marked humeral angles. Surface with fine punctation, arranged in three irregular series, one juxtasternal, one median and one lateral; only the lateral series well visible. Abdomen with fine punctation, arranged in 3-4 series on each segment. Tergite and sternite of male genital segment as in Figs 220-221. Aedeagus (Fig. 222) 0.96 mm long, ovoid, with short parameres; inner sac tube-like, long and narrow, covered with dense structures that burn like a dark mass, sometimes with an acute apex, sometimes with a squared apex, clearly visible only on the lateral margins and with some medium-sized spines at the end of the distal portion.

ETYMOLOGY. The specific epithet refers to the type locality, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar (Fig. 285).

7. *Chaetocinus lacustris* sp.n.

EXAMINED MATERIAL. Holotype ♂: SW Madagascar, Toliara Prov., Sept Lacs, 70 m, 23°31'39"S, 44°9'16"E, gallery forest, Frontier Project 7-9.III.2002 (CAS); paratypes: same data, 1 ♀ (CAS), 1 ♀ (cB); Antananarivo Prov., botanic garden near Andasibe N.P., 1025 m, 18°55.58'S, 48°24.47'E, R. Harin'Hala 23-30.IV.2001, 4 ♀♀ (CAS), 1 ♂ (cB); 14.V-29.VI.2001, 2 ♀♀ (CAS), 1 ♀ (cB); 14-31.VII.2001, 1 ♂ (cB); Fianarantsoa, 29 Km SSW Ambositra, Ankazomivady, 1700 m, 20°46.6'S, 47°9.9"E, litter in disturbed montane forest, B. L. Fisher 7.II.1998, 1 ♂ (FMNH), 1 ♂ (cB).

DESCRIPTION. Length of body 3.8 mm; from anterior margin of head to posterior margin of elytra: 2.1 mm. Small body, with narrow head, and dense punctation; pronotum with dorsal series of 11-12 punctures. Reddish brown with dark head; antennae and legs brown light; head sub-rectangular, slightly narrow forward and with narrowly rounded posterior angles. Eyes small and almost flat. Tergite and

sternite of male genital segment as in Figs 223-224. Aedeagus (Fig. 225) 0.74 mm long, sub-ovoid rounded distally, with short and robust parameres; inner sac covered with fine spinulae, protruding from a dark mass composed of similar spines and with short distal spines.

ETYMOLOGY. The specific epithet refers to one of the the type localites in SW Madagascar, area full of lakes.

DISTRIBUTION. The species is known from the type localites in Central and SW Madagascar.

REMARKS. Despite the different altitude and the considerable distance between the two mentioned localities, the specimens belong to the same species, especially for the structure of the inner sac of the aedeagus.

8. *Chaetocinus minor* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central N Madagascar, Andasibe-Mantadia N.P., 959 m, 18°56'24.3"N, 48°25'12.4"E, P. Banar 25-31.I.2019 (MMB).

DESCRIPTION. Length of body 3.8 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Reddish brown with lighter pronotum and elytra. Small species with large eyes. Head sub-rectangular with sub-rectilinear sides and widely rounded posterior angles. Eyes large and protruding. Surface of head with some fine punctures on the sides. Pronotum as long as head and wider than it, with very oblique anterior margins, widely rounded anterior angles and barely emarginate sides. Surface with dorsal series of 6-7 punctures and lateral series of 3 anterior punctures. Elytra large, longer and wider than pronotum, with marked humeral angles. Surface with some series of superficial punctures. Abdomen shiny, with some series of fine punctures on the sides of each segment. Tergite and sternite of male genital segment as in Figs 226-227. Aedeagus (Fig. 228) 0.66 mm long, ovoid, with short parameres; inner sac long and narrow, covered with short spines very close to each other so that it appears as a single mass.

ETYMOLOGY. The specific epithet comes from the Latin "minor" (smaller).

DISTRIBUTION. The species is known only from the type locality in Central N Madagascar.

9. *Chaetocinus jarrigei* (Lecoq, 1996), comb. nov.

Heterocinus jarrigei Lecoq, 1996: 152; Herman, 2001a: 3652.

TYPE MATERIAL. The Musée royal de l'Afrique centrale of Tervuren preserves the holotype of Comoros, Mohéli, Miringoni, 500 m, and the Muséum national d'Histoire naturelle of Paris preserves the paratype male of the same locality.

EXAMINED MATERIAL. Comoros Arch., Mohéli, S. Voeltzkow, 1 ♂ (NMW), 1 ♂ (cJ).

DESCRIPTION. Length of body 3.6 mm; from anterior margin of head to posterior margin of elytra: 2.3 mm. Body brown with darker head. Head sub-rectangular, with moderately rounded sides, strictly rounded posterior angles. Eyes small and protruding. Surface of head with fine punctation on the sides. Pronotum narrow, dilated anteriorly, as long as head, narrower than it, with little oblique anterior margins and sinuate sides. Surface with dorsal series of 7 deep punctures and lateral series of 3-4 irregular punctures. Elytra large, dilated posteriorly, longer and wider than pronotum, with marked humeral angles. Surface with superficial, broad, scattered punctation, arranged in some series. Abdomen with traces of transverse micro-striation and fine, scattered punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 229-230. Aedeagus (Fig. 231) 0.66 mm long, sub-rectangular; parameres robust; inner sac sub-triangular, covered with dense spinulae and with a distal group of spines.

DISTRIBUTION. The species is known only from the type locality in Comoros.

GROUP B

1. Body 9 mm long; inner sac of male genital segment (Fig. 234) very long, narrow, wound several times on itself and covered with minute scales.....1. *C. voluptuosus* sp.n.
- . Body 8 mm long; tergite of male genital segment moderately concave posteriorly; inner sac of the aedeagus (Fig. 237) narrow, covered with minute spines and some proximal scales.....
-2. *C. oblongus* sp.n.
- . Body about 4 mm long.....2

2. Body 4.7 mm long; dorsal series of pronotum of 3-4 punctures; inner sac of the aedeagus (Fig. 240) narrow, wound several times on itself, with 4 short spines in the distal portion, and triangular scales in the proximal portion.....3. *C. iugatus* sp.n.
- . Body 4.4 mm long, reddish amaranth; inner sac of aedeagus (Fig. 243) folded one time, covered with large spines near to a short series of minute scal.....4. *C. ivohibe* sp.n.
- . Body 4 mm long; inner sac of aedeagus (Fig. 244) folded on itself, covered with minute scale and with a large median spine.....5 *C. deterius* sp.n.
- . Body 4.2 mm long; inner sac of the aedeagus (Fig. 247) narrow, covered with thin spinules; pronotum.....6. *C. rufus* sp.n.

1. *Chaetocinus voluptuosus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Anjozorobe Sud, 958 m, 14.7403S, 44.4976E, V. Grebennikov 18.X.2018 (cJ).

DESCRIPTION. Length of body 9.5 mm; from anterior margin of head to posterior margin of elytra: 5.6 mm. Body reddish brown dark. Head sub-rectangular with protruding eyes. Similar to *H. iugatus* sp.n. for the structure of the inner sac of the aedeagus, but very larger, pronotum longer and narrower, with very oblique anterior

margins, widely rounded anterior angles, finer punctation on pronotum, elytra dilated posteriad, with marked humeral angles. Tergite and sternite of male genital segment as in Figs 232-233. Aedeagus (Fig. 234) ovoid elongated, 1.48 mm long, with strong parameres; inner sac with two distal structure, followed by a very long tape, wrapped several times around itself and covered with minute scales.

ETYMOLOGY. The specific epithet comes from the Latin *voluptuosus- a-um* (enjoyable).

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

2. *Chaetocinus oblongus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Anjozorobe Sud, 958 m, 14.7403S, 44.4976E, V. Grebennikov 18.X.2018 (cJ).

DESCRIPTION. Length of body 8 mm; from anterior margin of head to posterior margin of elytra: 4.8 mm. Body reddish brown with pale brown legs. Head sub-rectangular with sub-rectilinear and sub-parallel sides, eyes small and slightly protruding, oblique anterior margins of pronotum, different aedeagus. Tergite and sternite of male genital segment as in Figs 235-236. Aedeagus (Fig. 237) ovoid elongated, 1.48 mm long, with strong parameres; inner sac tape-like, narrow and long, with a distal spine and some irregular proximal scales.

ETYMOLOGY. The specific epithet comes from the Latin “oblongus-a-um” (oblong), in relation to the structure of the aedeagus.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

3. *Chaetocinus iugatus* sp.n.

EXAMINED MATERIAL. Holotype ♂: SE Madagascar, Chaînes Anosyennes, 6 Km S of Imaha, 1350-1500 m, 24°16'S, 46°57'E, J. Janák 5-12.II.2004 (cJ).

DESCRIPTION. Length of body 4.7 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Body shiny, without micro-sculpture, narrow, reddish brown with darker head; antennae and legs brown. Head ovoid, barely narrow anteriorly, with widely rounded posterior angles. Eyes large and protruberant. Surface of head with few, sparse punctation mixed with broader punctures. Pronotum convex, long and narrower than head, with very oblique anterior margins, widely rounded anterior angles and not emarginated sides. Surface with dorsal series of 3-4 spaced, superficial punctures and lateral series of 3-4 finer punctures. Elytra dilated posteriad, large and long, longer and wider than pronotum, with rounded humeral angles. Surface with 2-3 series of superficial punctures on each elytra. Abdomen

with fine, sparse punctures on the sides of each segment. Tergite and sternite of male genital segment as in Figs 238-239. Aedeagus (Fig. 240) 0.9 mm long, sub-rectangular, with large parameres about half of their width with short setae. Inner sac narrow and long, one time folded on itself, covered with different spinulae and with 4 long distal spines.

ETYMOLOGY. The specific epithet comes from the Latin “iugatus-a-um” (conjunct) in relation to the chain of mountains linked to each other, where the species was collected.

DISTRIBUTION. The species is known only from the type locality in South E Madagascar.

4. *Chaetocinus ivohibe* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Fianarantsoa, R. S. Ivohibe, 7.5 Km ENE Ivohibe, Camp I, 900 m, 22°28.2'S, 46°57.6'E, litter in rainforest, B. L. Fisher 7-12.X.1997 (FMNH); paratypes: same data, 1 ♂, 3 ♀♀ (FMNH), 1 ♂, 1 ♀ (cB).

DESCRIPTION. Length of body 4.4 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Similar to *C. rufus* sp.n. but with broader and lighter body (reddish brown amaranth); head more rectangular, wider; eyes more protruding; pronotum shorter with dorsal series of 5 punctures; elytra broader, not dilated posteriad, with more marked humeral angles; abdomen with less evident and less deep punctation. Tergite and sternite of male genital segment as in Figs 241-242. Aedeagus (Fig. 243) 0.85 mm long, sub-rectangular, with concave posterior margin; parameres of very peculiar shape, at a right angle, very closed to each other; inner sac with a distal group of small, fine spinulae, followed by a larger series of closed spines to the left and by a smaller and shorter series of scales to the right.

ETYMOLOGY. The specific epithet refers to the type locality, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

5. *Chaetocinus deterius* sp.n.

EXAMINED MATERIAL. Holotype ♂: Madagascar, Sikora (NMW).

DESCRIPTION. Length of body 4 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Body reddish brown with darker head and abdomen. Head sub-rectangular, narrow anteriorly, with moderately rounded sides and widely rounded posterior angles. Eyes large and protruding. Surface of head with deep, evident, lateral punctation. Pronotum dilated anteriorly, slightly shorter than head, as

wide as it, with very rounded anterior angles. Surface with dorsal series of 5 spaced punctures and lateral series of 4 punctures. Elytra dilated posteriad, as long as pronotum, wider than it, with moderately rounded humeral angles. Surface with fine punctation, arranged in some series. Abdomen with fine punctures in some series on each segment. Tergite and sternite of male genital segment missing. Aedeagus (Fig. 244) about 0.85 mm long, ovoid; parameres missing; inner sac tube-like, narrow and long, folded some times on itself, with a big, median spine and covered with small, sub-triangular scales.

ETYMOLOGY. The specific epithet comes from the Latin “deterius-a-um” (frail).

DISTRIBUTION. The species is known only from Central Madagascar.

REMARKS. This old specimen is in very poor conditions, with body and genital segment partially damaged. Franz Sikora (1863–1902) was an Austrian collector and dealer. During seven years from end of 1880s, he was entrusted with a scientific mission by the Austrian government; he lived in Antananarivo and he frequented the Protestant mission based in Andrangoloaka from where he brought back important collects (insects, plants, shells, etc.). He worked with some museums (e.g. Wien, Berlin, London, and Turin) (Battistini & Richard-Vindard, 1972). Consequently, I believe that all the citations “Madagascar, Sikora” refer to the surroundings of Antananarivo.

6. *Chaetocinus rufus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central N Madagascar, Andasibe-Mantadia N.P., 946 m, 18°56'18"S, 48°25'04"E, P. Banar 25-31.I.2019 (MMB); paratypes: same data, 2 ♀♀ (MMB), 1 ♀ (cB).

DESCRIPTION. Length of body 4.2 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Reddish brown with darker head and red pronotum. Head sub-rectangular, with sub-parallel sides. Eyes medium-sized and barely protruding. Surface of head with some scattered and deep punctures. Pronotum shorter and narrower than head, with moderately oblique anterior margins, rounded anterior angles and not emarginated sides. Surface with dorsal series of 6 punctures and lateral series of 3 punctures. Elytra large, slightly dilated posteriad, longer and wider than pronotum, with rounded humeral angles. Surface with three series of punctures, one juxtatural, one median and one lateral, with some punctures between these series. Tergite and sternite of male genital segment as in Figs 245-246. Aedeagus (Fig. 247) 0.85 mm long, ovoid, elongate, with thin parameres; inner sac tube like, long and narrow, covered with spinulae and scales.

ETYMOLOGY. The specific epithet comes from the Latin “rufus-a-um” (red).

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

GROUP C

1. Body 5.7 mm long, reddish brown light; inner sac of the aedeagus (Fig. 250) with few spinules.....1. *C. sabulosus* sp.n.
 -. Inner sac of the aedeagus (Fig. 253) with a series of spinules; parameres of usual shape; dorsal series of pronotum of 7-8 punctures.....2. *C. lutens* sp.n.

1. *Chaetocinus sabulosus* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Diégo Suarez Prov., Sakalava Beach, 10 m, 12°15'46"S, 49°23'51"E, R. Harin'Hala 15.II-6.III.2001, swarf littoral forest (CAS); paratypes: same data, 1 ♀ (cB).

DESCRIPTION. Length of body 5.7 mm; from anterior margin of head to posterior margin of elytra: 3.1 mm. Body shiny, reddish orange. Head sub-rectangular, with slightly rounded sides and widely rounded posterior angles. Eyes small and protruberant. Surface of head with few, fine punctures on the sides. Pronotum shorter and evidently narrower than head, with oblique anterior margin, rounded anterior angles and slightly emarginated sides posteriad. Surface with the usual dorsal series of 5 punctures and lateral series of 3 spaced punctures. Elytra dilated posteriad, evidently wider and longer than pronotum, with marked humeral angles. Surface with three series of punctures, one juxtasutural, one median and one lateral; all the punctures very fine. Abdomen with traces of fine, transverse micro-striation and few, fine punctures on the sides. Tergite and sternite of male genital segment as in Figs 248-249. Aedeagus (Fig. 250) ovoid, narrow distally and proximally, with short parameres; inner sac narrow, covered with spinules.

ETYMOLOGY. The specific epithet comes from the Latin "sabulosus-a-um" (sandy), in relation to the coastal habitat.

DISTRIBUTION. The species is known only from the type locality in N Madagascar (Fig. 284).

2. *Chaetocinus lutens* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central N Madagascar, Ambohitantely Spec. Rés., 1497 m, 18°10'52.6"S, 47°17'22.5"E, litter, ABT / Nov. 2011, L.S. Rahanitriniaina 18.XI.2011 (MMB); paratypes: same data, 7 ♂♂, 3 ♀♀ (MMB), 2 ♂♂ (cB); same data, 18°10'52.5"S, 47°17'21.2"E, 1476 m, litter under big rock by stream, L.S. Rahanitriniaina 2.IX.2011, 1 ♀ (cJ), 1 ♀ (cB).

DESCRIPTION. Length of body 4.8 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Body reddish orange, with darker head. Head and pronotum sub-rectangular. Head with moderately rounded sides and widely rounded posterior angles. Eyes large and very protruding. Surface of head with fine, evident, sparse punctation. Pronotum slightly longer and narrower than head, not dilated

anteriad, with sub-rectilinear sides. Surface with dorsal series of 8 fine punctures and lateral series of 7-8 closed punctures. Elytra dilated posteriad, longer and wider than pronotum, with rounded humeral angles. Surface with very fine and sparse punctation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with fine, scattered punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 251-252. Tergite narrow, with moderately concave posterior margin and very short latero-posterior lobules. Aedeagus (Fig. 253) 0.81 mm long, sub-ovoid, of peculiar shape; parameres large and sub-rectilinear; inner sac, similar to that of *H. paramerum* sp.n. from the same locality (at different altitude), covered with fine spinulae, differently shaped.

ETYMOLOGY. The specific epithet comes from the Latin “lutens-is” (yellow orange).

DISTRIBUTION. The species is known only from Central N Madagascar (Fig. 284).

GROUP D

- | | |
|---|-----------------------------|
| 1. Body about 5 mm long..... | 2 |
| -. Body less than 5 mm long..... | 3 |
| | |
| 2. Body 5.4 mm long; pronotum with dorsal series of 5-6 punctures; inner sac of the aedeagus (Fig. 256) with a series of spinules and a long distal spine..... | 1. <i>C. fisheri</i> sp.n. |
| -. Body 5.1 mm long; inner sac of the aedeagus (Fig. 259) with 5 spines..... | 2. <i>C. novus</i> sp.n. |
| | |
| 3. Body 4.6 mm long; dorsal series of pronotum of 5 punctures; pronotum of usual length; inner sac of the aedeagus (Fig. 262) compound of a large surface, covered with numerous spinules and with 5 large distal spines..... | 3. <i>C. armatus</i> sp.n. |
| -. Body 3.8 mm long; inner sac of the aedeagus (Fig. 265) with two areas, proximal and distal, covered with minute scales and a long median spine..... | 5. <i>C. spinosus</i> sp.n. |

1. *Chaetocinus fisheri* sp.n.

EXAMINED MATERIAL. Holotype ♂: NE Madagascar, Toamasina, 6.9 Km NE Ambanizana, Ambohitsitondroina, 825 m, 15°34.37'S, 50°0.46'E, rainforest, B.L. Fisher 2.XII.1993 (FMNH); paratype: same data, 1 ♂ (cB).

DESCRIPTION. Length of body 5.4 mm; from anterior margin of head to posterior margin of elytra: 2.8 mm. Body shiny, without micro-sculpture, reddish brown with darker head; antennae brown; legs yellowish. Head sub-rectangular, with slightly rounded sides and narrowly rounded posterior angles. Eyes medium-sized and protruding. Surface of head with scattered, fine punctation, except for a median stripe. Pronotum narrow, longer and narrower than head, with oblique anterior margins, narrowly rounded anterior angles and emarginated sides. Surface with dorsal series of 5-6 superficial, spaced punctures and lateral series of 3-4 finer punctures. Elytra

sub-rectangular, shorter and wider than pronotum, with rounded humeral angles. Surface with fine, sparse punctation, arranged in three series, one juxtatural, one median and one lateral. Abdomen with very spaced, fine punctation, arranged in 2-3 series on each segment. Tergite and sternite of male genital segment as in Figs 254-255. Tergite with concave posterior margin. Aedeagus (Fig. 256) 1.14 mm long, sub-ovoid; parameres thin; inner sac with three closed, medio-distal, long spines, followed by a very narrow, long surface, covered with short spines.

ETYMOLOGY. Dedicated to B. L. Fisher who collected almost all the Malagasy Xantholinini preserved in the Field Museum of Natural History of Chicago.

DISTRIBUTION. The species is known only from the type locality in NE Madagascar (Fig. 285).

2. *Chaetocinus novus* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Antsiranana, Antsahampono, Montagne d'Ambre, 1049 m, 12.53S, 49.17E, D. Lees 15-19.XII.2004 (NHML); paratypes: same data, 2 ♀♀ (NHML), 1 ♂, 1 ♀ (cB).

DESCRIPTION. Length of body 5.1 mm; from anterior margin of head to posterior margin of elytra: 3.1 mm. Body shiny, similar to *C. planitalis* sp.n. but shorter and slender, with lighter colour; head with more punctures; pronotum larger, with smaller punctation. Tergite and sternite of male genital segment as in Figs 257-258. Aedeagus (Fig. 259) 1.1 mm long, sub-ovoid, narrow in the proximal portion, with short parameres; inner sac with light structure in form of narrow spaced spines.

ETYMOLOGY. The specific epithet comes from the Latin "novus-a-um" (new).

DISTRIBUTION. The species is known only from the type locality in N Madagascar (Fig. 284).

3. *Chaetocinus armatus* sp.n.

EXAMINED MATERIAL. Holotype ♂: NE Madagascar, Toamasina, road to Anosibe Anala. Km 18, S Moramanga, Shuh 31.X.2001 (NMW).

DESCRIPTION. Length of body 4, 6 mm; from anterior margin of head to posterior margin of elytra: 2.7 mm. Body reddish brown with darker head. Head sub-rectangular, moderately narrow anteriorly, with rounded sides and narrowly rounded posterior angles. Eyes small and protruding. Surface of head with deep, evident punctation, except for a wide median stripe. Pronotum slightly dilated anteriorly, as long as head, narrower than it, with not emarginated sides. Surface with dorsal series of 5 superficial punctures and lateral series of 3 spaced punctures. Elytra long, sub-rectangular, with sub-rectilinear and sub-parallel sides and marked humeral angles. Surface with fine, very spaced punctation, arranged in few series. Abdomen with

fine, scattered punctation, arranged in 2-3 series on each segment. Tergite and sternite of male genital segment as in Figs. 260-261 Tergite with concave posterior margin. Aedeagus (Fig. 262) 0.81 mm long, sub-ovoid; parameres sub-rectilinear; inner sac with a distal group of big spines, followed by a wide surface covered by spinulae and scales.

ETYMOLOGY. The specific epithet comes from the Latin “armatus-a-um” (armed), in relation to the big spines of the inner sac of the aedeagus.

DISTRIBUTION. The species is known only from NE Madagascar (Fig. 285).

5. *Chaetocinus spinosus* sp.n.

EXAMINED MATERIAL. Holotype ♂: SW Madagascar, Zombitse-Vohibasia N.P., Andalabiby, 772 m, 22°53'04.6"S, 44°42'25.6"E, litter, L.S. Rahanitriniaina & E.M. Rabotoson 26.I.2013, ZOM / Jan 2013 (MMB); paratype: same data 1 ♀ (MMB).

DESCRIPTION. Length of body 3.8 mm; from anterior margin of head to posterior margin of elytra: 2.1 mm, small body; short and broad head; eyes small; surface of head with fine punctation; pronotum with much oblique anterior margins and widely rounded anterior angles; dorsal series of pronotum composed by fine punctures; elytra with marked humeral angles and with deep punctation. Tergite and sternite of male genital segment as in Figs 263-264 Tergite of peculiar shape. Aedeagus (Fig. 265) 0.8 mm long, sub-rectangular, with evident median lobe; parameres of peculiar shape; inner sac with a distal surface covered with corrugated striae, followed to the left by a big spine and followed by an indistinct surface, with sparse, very fine scales.

ETYMOLOGY. The specific epithet comes from the Latin “spinosus-a-um” (with spines), in relation to the inner sac of aedeagus.

DISTRIBUTION. The species is known only from the type locality in SW Madagascar.

GROUP E

1. Body 7 mm long; yellow legs; inner sac of the aedeagus (Fig. 268) with a proximal area covered with spinules and scales, and a small distal spine.....1. *C. camurus* sp.n.
- Body 5.4 mm long, elytra with numerous series of punctures; body yellowish near the suture; inner sac of the aedeagus (Fig. 274) very wide, covered with fine, scattered scales and small spines.....2. *C. planitalis* sp.n.
- . Body 44.7 mm long.....2
- Body 3.6 mm long, brown amaranth; dorsal series of pronotum of 8-9 punctures; inner sac of the aedeagus (Fig. 271) with extremely fine scales in the medio-distal portion and with a peculiar scale in the proximal portion.....3. *C. amandus* sp.n.

2. Body 4 mm long, reddish amaranth; inner sac of the aedeagus (Fig. 280) with some series of short spines and minute spinulae 4. *C. succineus* sp.n.
 -. Body 4.1 mm long, reddish brown; inner sac of the aedeagus (Fig. 283) narrow, covered with spinulae 5. *C. ornatus* sp.n.
 -. Body 4.7 mm long; inner sac of the aedeagus (Fig. 277) with some series of minute spinulae 6. *C. sinuosus* sp.n.

1. *Chaetocinus camurus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Beforona, Vohidrazana, 1130 m, 18°58'30.6"S, 48°30'53.4"E, L. S. Rahamitrianiaina & E. M. Rabotoson 6.VI.2012 (MMB).

DESCRIPTION. Length of body 7 mm; from anterior margin of head to posterior margin of elytra: 3.5 mm. Body reddish brown with yellowish legs. Small body, head with rounded sides, small eyes, pronotum dilated anteriorly, elytra with fine punctation arranged in three series, one juxtatural, one median and one lateral, instead with numerous series of punctures. Tergite and sternite of male genital segment as in Figs 266-267. Aedeagus (Fig. 268) ovoid, 0.82 mm long, proximally dilated, with strong parameres; inner sac tape-like, very diaphanous in the distal portion, wrapped one time on itself, covered with small scales in the proximal portion.

ETYMOLOGY. The specific epithet comes from the Latin "camurus-a-um" (bent), in relation to the structure of the inner sac of the aedeagus.

DISTRIBUTION. The species is known only from the type locality.

2. *Chaetocinus planitalis* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Antsiranana, PN de Marojejy, a long tributary of Manantenina R., 8 Km NW Manantenina, 450 m, 14°26.2'S, 49°46.5'E, rel. undisturbed lowland forest, S.M. Goodman 4-13.X.1996 (FMNH); paratype: same data, 1 ♀ (cB).

DESCRIPTION. Length of body 5.4 mm; from anterior margin of head to posterior margin of elytra: 3.2 mm. Body shiny, black with brown elytra and abdomen; suture of elytra yellowish; antennae and legs brown. Head sub-rectangular, with sub-rectilinear sides and narrowly rounded posterior angles. Eyes medium-sized and very protruding. Surface of head with scattered, fine punctation, except for a median stripe. Pronotum sub-rectangular, dilated anteriorly, moderately longer and narrower than head, with sub-rectilinear and sub-parallel sides, oblique anterior margins and rounded anterior angles. Surface with dorsal series of 5-6 fine punctures and lateral series of 4 punctures. Elytra large, sub-rectangular, slightly dilated posteriorly. Surface with very superficial punctation, arranged in three series, one juxtatural, one median and one lateral. Abdomen with transverse micro-striation and fine, very

sparse punctation. Tergite and sternite of male genital segment as in Figs 272-273. Aedeagus (Fig. 274) 1 mm long, sub-rectangular, with prominent median lobe; parameres very robust; inner sac broad, sub-ovoid, covered with fine, sparse scales, among which some short black spines stand out.

ETYMOLOGY. The specific epithet come to the Latin “planitis-ei” (lowland).

DISTRIBUTION. The species is known only from the type locality in N Madagascar.

3. *Chaetocinus amandus* sp.n.

EXAMINED MATERIAL. Holotype ♂: SW Madagascar, Toliara Prov., Andohahela N.P., Col du Sedro, 3.8 Km ESE Mahamavo, 37.6 Km 341st NNW Tolagnaro, 900 m, 24°45'50”S, k 46°45'6”E, montane raiforest, Fisher, Griswold *et al.* 21-25.I. 2002 (CAS); paratypes: same data, 2 ♂♂, 2 ♀♀ (CAS), 2 ♂♂, 2 ♀♀ (cB).

DESCRIPTION. Length of body 3.6 mm; from anterior margin of head to posterior margin of elytra: 2. mm. Body shiny, except for the abdomen with traces of transverse micro-striation; brown amaranth with slightly darker elytra and brown light antennae and legs. Head proportionally large, sub-rectangular, with narrowly rounded posterior angles. Eyes medium-sized and very protruberant. Surface of head with fine, scattered punctures, except for a wide median stripe. All the punctures with long, light setae. Pronotum narrower and shorter than head, with very oblique anterior margins, widely rounded anterior angles and emarginate sides. Surface with dorsal series of 8-9 fine punctures and lateral series of 5-6 finer punctures. Elytra large, sub-rectangular, much longer and wider than pronotum, moderately dilated posteriad, with marked humeral angles. Surface with fine, sparse punctures, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with fine, scattered punctation, with setae converging towards the median axis. Tergite and sternite of male genital segment as in Figs 269-270. Tergite of peculiar shape. Aedeagus (Fig. 271) 0.74 mm long, sub-ovoid, with short parameres; inner sac large, covered with very fine, diaphanous structures, arranged in three narrow stripes; proximal portion narrow, with a peculiar structure.

ETYMOLOGY. The specific epithet comes from the Latin “amandus-a-um” (admirable).

DISTRIBUTION. The species is known only from the two listed locality in SW Madagascar.

4. *Chaetocinus succineus* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Diégo Suarez prov., Montagne Francais, 150 m, 12°18'8"S, 49°38'51"E, forested limestone ridge, R. Harin'Hala 30.I-15.II.2001 (CAS); paratype: same data, 1 ♀ (cB).

DESCRIPTION. Length of body 4 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Reddish amaranth, small body, large eyes; short pronotum, with very oblique anterior margin and with deep punctation; short elytra, with rounded humeral angles. Surface with three series of punctures, one juxtatural, one median and one lateral, with some punctures between these series. Tergite and sternite of the male genital segment as in Figs 278-279. Aedeagus (Fig. 280) 0.85 mm long, ovoid, elongate, with thin parameres; inner sac tube like, long and narrow, covered with spinule and scales.

ETYMOLOGY. The specific epithet comes from the Latin "succineus-a-um" (of amber), in relation to the type locality.

DISTRIBUTION. The species is known only from the type locality in N Madagascar (Fig. 284).

REMARKS. As compared to *H. septentrionalis* this species was collected at a much lower altitude.

5. *Chaetocinus ornatus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Ranomafana N.P., 987 m, 21°15'46"S, 47°25'14"E, P. Banar 10-14.I.2017 (MMB).

DESCRIPTION. Length of body 4.1 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Body reddish brown with darker head. Head sub-rectangular with barely rounded sides and widely rounded posterior angles. Eyes large and moderately protruding. Surface of head with few, scattered punctures on the sides. Pronotum longer and as wide as head, with very oblique anterior margin and widely rounded anterior angles. Surface with dorsal series of 5 medio-posterior punctures and lateral series of 3 punctures; all the punctures very superficial. Elytra longer and wider than pronotum with rounded humeral angles. Surface with fine punctures, arranged in three series, one juxtatural, one median and one lateral. Abdomen with fine punctation on the sides of each segment. Tergite and sternite of male genital segment as in Figs 281-282. Aedeagus (Fig. 283), 0.92 mm long, sub-ovoid, with short parameres; inner sac with three areas covered with fine scales.

ETYMOLOGY. The specific epithet comes from the Latin "ornatus-a-um" (ornate).

DISTRIBUTION. The species is known only from Central Madagascar (Fig. 285).

6. *Chaetocinus sinuosus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Fianarantsoa, 29 Km SSW Ambositra, Ankazomivady, 1700 m, 20°46.6'S, 47°9.9'E, disturbed montane forest, B. L. Fisher 7.I.1998 (FMNH).

DESCRIPTION. Length of body 4.7 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Body (in poor conditions) reddish brown. Characterized by the peculiar shape of the pronotum, dilated anteriorly, with very oblique anterior margins, widely rounded anterior angles and very narrow posterior (Fig.). Head sub-rectangular, with sub-parallel sides and widely rounded posterior angles. Eyes medium-sized and very protruding. Surface of head with fine, scattered punctation. Pronotum longer and narrower than head, with dorsal series of 6-7 very minute punctures and lateral series of 3 posterior punctures. Elytra dilated posteriorly, slightly longer and evidently wider than pronotum, with rounded humeral angles. Surface with superficial and irregular punctation, arranged in three series, one juxtatural, one median and one lateral. Abdomen with fine, scattered punctation, arranged in some series on each segment. Tergite and sternite of male genital segment (missing in laboratory) as in Figs. Aedeagus (Fig.) small, 0.62 mm long, sub-ovoid, with sub-acute posterior margin; parameres thin, very close to each other; inner sac with 2 distal, sub-parallel series of small spines, one shorter at left and one longer at right; one other similar series is at left, on the proximal portion, next to a surface covered with fine, sinuous filiform spinules.

ETYMOLOGY. The specific epithet comes from the Latin "sinuosus-a-um" (sinuous), in relation to the shape of the pronotum.

DISTRIBUTION. The species is known only from Central Madagascar.

10. Gen. *Thyrecephalus* Guérin-Ménéville, 1844

Thyrecephalus Guérin-Ménéville, 1844: 10; Coiffait, 1968: 128 and 152; Smetana, 1982: 66; Bordoni, 2002: 210; 2005: 478; 2005a: 354; 2010: 318; 2016: 520; Janák, 2010: 130; Janák & Bordoni, 2015: 14.

DESCRIPTION. Body (Fig. 286) of big or very big size (12–25 mm), rarely of medium size (9–12 mm). Winged. Head in some species very big, posteriorly dilated, in others smaller, subovoid, normally with a sparse punctation, but sometimes with a dense punctation, at times with the folded surface of the temples covered with small and dense punctures; frontal grooves short; the ocular ones sometimes poorly obvious within the big punctation, very short and ending with a puncture. Eyes generally big and a little protruding. Labrum sclerotized, transverse, with some big denticulations, differing from one species to the other, and with long setae, generally protruding in the middle, with a slight median emargination. Maxillary palpi with the 2nd article longer than the 3rd one and the last one longer than the one before, having a subtruncate apex; labial palpi with the 2nd article a

little longer than the 1st one and the last one longer than all the others, having a subtruncate apex. Gular sutures generally joint along almost all their length, sometimes only juxtaposed. Pronotum without any dorsal series, generally only with one big puncture close to the anterior angles; antesternal plate with a suture; upper epipleural line of the pronotum directed towards the prosternum much before the anterior angles of the pronotum and joint with the lower one. Male genital segment elongated, with the sternite generally asymmetrical. Aedeagus subovoid of a small, big and very big size. Inner sack generally with the shape of a more or less long and wide ribbon, usually folded irregularly several times on itself, with a copulatory armour made of scales of different sizes. Female genital segment with the sternite proportionally short, made of two big supplementary sclerites that cover its proximal part (Bordoni, 2002: Fig. 67).

DISTRIBUTION. This genus is present with several species in central America, and with two species in North America. It is characteristic of warm regions of the earth and is well represented in the Oriental Region from India and Nepal to Sulawesi, Sunda islands, and Moluccas (Bordoni, 2002). This genus is particularly represented in the Australian Region and that it is composed of a great number of species, some of which distinguishable, despite the size of these staphylinids, above all by examining their microsculpture and sometimes their aedeagus (Bordoni, 2005b, 2010). The few species of New Zealand are introduced (Bordoni, 2005b). In Africa south Sahara occurs with numerous species (Bordoni, 2016).

KEY TO THE SPECIES

1. Labrum without denticulations..... 2
- Labrum with denticulations..... 3
- Labrum without denticulation but with an median emargination; elytra and abdomen brown; body 12 mm long..... 1. *T. labiosus* sp.n.

2. Body yellowish orange, 15 mm long; head with punctuation only between the eyes..... 2. *T. nossibeanus* Bh. & Schub.
- Body black with reddish yellow elytra and abdomen with distincte violaceous shine; head totally covered by dense, wrinkled punctures; body 20.3 mm long..... 3. *T. flavoviolaceus* Janák

3. Abdomen blue metallic; body 18 mm long..... 4. *T. mirabilis* (Fvl.)
- Abdomen brown to black..... 4

4. Head almost totally covered by dense punctuation; elytra with three series of punctures, one juxstasutural, one median and one lateral; body 19.5 mm long..... 6. *T. silvaticus* Bh.
- Head with punctuation only behind the eyes..... 5

5. Head with only one setiferous puncture behind the eyes; elytra red; body 23 mm long..... 6. *T. goudoti* (Fvl.)
- Head with two setiferous punctures behind the eyes..... 6

- . Head with four punctures behind the eyes; black with fine micropunctuation. Elytra with some series of punctures; body 16.5 mm long.....7. *T. sexpunctatus* (Fvl.)
6. Elytra brown with the lateral margin yellowish; body 14 mm long
.....8. *T. helvomarginatus* sp.n.
- . Elytra yellowish pale; body 13 mm long.....9. *T. jocheni* Bord.
- . Elytra unicolor.....7
7. Black with brown dark elytra; body 15 mm long.....10. *T. madagascarensis* (Steel)
- . Brown to reddish black; body 16.5 mm long.....11. *T. heterocephalus* (Flv.)
- . Black with reddish elytra; head small; body 22.3 mm long.....12. *T. banari* Janák

1. *Thyreocephalus labiosus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Madagascar, Beforona Commune, Vohidrazana, 1130 m, 18°58'30.6"S, 48°30'53.4"E, VOH / Jun. 2012 / 02, L.S. Rahanitriaina & E.M. Rabotosan 6.VI.2012 (MMB).

DESCRIPTION. Length of body 12 mm; from anterior margin of head to posterior margin of elytra: 8.5 mm. Body shiny, without micro-sculpture, except for the abdomen with traces of transverse micro-striation. Black with brown elytra and abdomen. Head and pronotum and related punctuation as in Fig 287. Labrum with rounded anterior margin (Fig. 288). Elytra longer and wider than pronotum, moderately dilated posteriad, with sub-rectilinear sides and marked humeral angles. Surface with two series of fine and very spaced punctures one near the suture, one median and one lateral. Abdomen with some, spaced series of very fine and spaced punctures on each segment. Tergite and sternite of male genital segment as in Figs 289-290. Aedeagus (Fig. 291) 1.48 mm long, ovoid elongate, with evident median lobe; inner sac long and narrow, tape-like, covered with fine opposed spinulae.

ETYMOLOGY. The specific epithet comes from the Latin "labiosus-a-um" (with big labrum).

DISTRIBUTION. NE Madagascar (Fig. 293).

2. *Thyreocephalus nossibeanus* (Bernhauer & Schubert, 1914) comb.n.

Xantholinus nossibeanus Bernhauer & Schubert, 1914; 306, nom. nov. for *Xantholinus coloratus* Brancsik, 1893: 220, nom. preocc. by *Xantholinus coloratus* Karsch, 1881 (now *Megalinus*); Herman, 2001a: 3814

Xantholinus coloratus Brancsik, 1893: 220; Bernhauer & Schubert, 1914: 306.

TYPE MATERIAL. The Field Museum of Natural History of Chicago preserves 1 specimen, male, labelled "Fauna / Ins. Nossibé", "Typus" (printed on orange label), "Typ." (handwritten), "Holotypus / *Xantholinus* / *coloratus* / Brancsik 1893 / teste

Newton" (on red label), "*coloratus* Brancsik" (handwritten), "*Xantholinus / coloratus* Brancsik / →*nossibeanus* B + S / det. A. F. Newton 1991".

DESCRIPTION. Length of body 15 mm; from anterior margin of head to posterior margin of elytra: 9 mm. Forebody, last 3 abdominal segments, antennae and legs yellowish orange; abdomen infuscate. Characterized by colour, wrinkled, dense punctation on head, dense micro-punctation on pronotum and by the peculiar shape of labrum (Fig. 295). Head and pronotum and related punctation as in Fig. 294. Elytra large, dilated posteriad, longer and wider than pronotum, with marked humeral angles. Surface with some series of superficial punctures. Abdomen without evident micro-sculpture, with fine and sparse punctation, arranged in two series on each segment. Male genital segment very long and narrow. Tergite and sternite of male genital segment as in Figs. 296-297; sternite with membranous distal portion. Aedeagus (Fig. 298) 2.4 mm long, sub-ovoid elongate, with very prominent, ovoid median lobe; parameres long and narrow; inner sac tape-like, foldend some time on itself, covered with fine, filiform scales.

DISTRIBUTION. The species is known only from the type locality. Nosy Be is an island in the NW Madagascar, Antsiranana province (Fig. 292).

3. *Thyreocephalus flavioilaceus* Janák, 2017

Thyreocephalus flavioilaceus Janák, 2017: 5.

TYPE MATERIAL. The Janák collection preserves the holotype male of the species labelled Madagascar, Tamatave distr., Moramanga env., J. Jenis 14-18.XII.1995; paratypes from Madagascar, h = 900 m, 135 Km E Antananarivo, Andasibe env., S. Murzin 26.XI-10.XII.2000 are preserved in Janák collection and Bordoni collection; a female from Central Madagascar, Andasibe-Mantadia N.P., Mantadia, "Circuit *Eulophia*", 18°48'14"S, 48°25'43"E, P. Banar 19-22.I.2017 is in the Moravian Museum, Brno.

EXAMINED MATERIAL. Madagascar, Toamasina, Moramanga, Analamazoatra, Piste Aventura, 1000 m, 18.9415°S, 48.431°E, malaise trap, unknown coll. 11.XII.2004, 1 ♂ (NHML).

DESCRIPTION. Length of body 18.5-20.5 mm; from anterior margin of head to posterior margin of elytra: 8.6-10.6 mm. Head and pronotum black, elytra reddish orange with black scutellum, abdomen with distinct violaceous shine; antennae and legs brown. Labrum rounded as in Fig.; head and pronotum and related punctation as in Fig. In particular head covered with very dense and coarse punctation. Elytra with three series of superficial punctures, one juxtasutural, one median and one lateral. Tergite and sternite of male genital, with symmetric parameres, median lobe evident; inner sac tape-like, long and narrow, covered with dense spinules.

DISTRIBUTION. Central Madagascar.

4. *Thyrecephalus mirabilis* (Jarrige, 1948) comb.n.

Eulissus mirabilis Jarrige, 1948: 19; Herman, 2001a: 3628; Newton, 2017.

TYPE MATERIAL. The Muséum national d'Histoire naturelle of Paris preserves "plusieurs" specimens of *Eulissus mirabilis* Jarrige and the type, labelled "Bekily / région S / Seyrig", "*Eulissus mirabilis* Jarr.", "Type" (on red label).

DESCRIPTION. Length of body 18 mm; from anterior margin of head to posterior margin of elytra: 6 mm. Reddish brown with the first five visible abdominal segment blue; three first antennomeres reddish brown, the following black.

DISTRIBUTION. South Madagascar.

REMARKS. I was not able study this species, recognizable by the colouring of the abdomen, so I refer to the figures and distribution of Jarrige (1948, pag. 19).

5. *Thyrecephalus silvaticus* (Bernhauer, 1904) comb.n.

Eulissus silvaticus Bernhauer, 1904: 230; Bernhauer & Schubert, 1914: 311; Herman, 2001a: 3629; Newton, 2017.

TYPE MATERIAL. The Field Museum of Natural History of Chicago preserves 1 specimen, male, labelled "*silvaticus* Bh. / Madagascar / Bang Haas / det. Bernhauer", "*silvaticus* / Bernh. / Typus". I choose this specimen as lectotype of the species. It bears the labels "Lectotypus *Eulissus silvaticus* Bh., Bordoni des. 2017" and "*Thyrecephalus silvaticus* (Bh.), Bordoni det. 2017".

EXAMINED MATERIAL. Madagascar, 1 ex. (FMNH); 1 ex. (DEI); E Madagascar, 30 Km SE Betroka, 3 Km E ▲1656 m, Ambolando, 1200 m, J. Janák 16.XII.1998, savanna, zebu droppings, various exx. (cJ); 2 exx. (cB); 30 Km SW Ihosy plat., Ihorombe, Ankazotela, 22°22'01.4", E 045°54'.9", 1050 m, F. Pavel 10.I.2010, 1 ex. (SMNS).

DESCRIPTION. Length of body 19.5 mm; from anterior margin of head to posterior margin of elytra: 9 mm. Body shiny, black with brown dark antennae and legs. Head and pronotum and related punctuation as in Fig. 299. Head with very deep, dense punctuation. Labrum as in Fig. 300. Pronotum with more or less evident micro-punctuation. Elytra dilated posteriad, shorter than pronotum and anteriad wider than it, with rounded humeral angles. Surface with broad but superficial punctuation, arranged in three series, one near the suture, one median and one lateral. Abdomen with fine, dense, transverse micro-striation and deep, dense punctuation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 301-302. Aedeagus (Fig. 303) 3.7 mm long, large, sub-ovoid, with sub-triangular median lobe; inner sac tape-like, long and very narrow, covered with very fine scales.

DISTRIBUTION. E Madagascar (Fig. 292).

6. *Thyrecephalus goudoti* (Fauvel, 1905) comb.n.

Eulissus goudoti Fauvel, 1905: 171; Bernhauer & Schubert, 1914: 311; Herman, 2001a: 3627; Newton, 2017.

TYPE MATERIAL. The Institut royal d'Histoire naturelle of Bruxelles preserves 1 male labelled "Suberbieville", "Goudoti / Fvl.", "Ex-Typis" (printed on red label), "Lectotypus ♂ *Eulissus goudoti* Fauvel, J. Janák des. 1991" (in litt.), "*Thyrecephalus goudoti* (Fauv.), J. Janák det. 1991" (in litt.). I choose this specimen as lectotype of the species. It bears the labels "Lectotypus *Eulissus goudoti* Fvl., Bordoni des. 2017" and "*Thyrecephalus goudoti* (Fvl.), Bordoni det. 2017".

DESCRIPTION. Length of body 23 mm; from anterior margin of head to posterior margin of elytra: 13 mm. Big species, black with red elytra, black scutellum, brown black abdomen and red posterior margin of 5th visible segment, 6th segment and genital segment; antennae and legs brown. Head and pronotum and related punctuation as in Fig. 304. Labrum as in Fig. 305. Elytra sub-rectangular, as long and wide as pronotum, with sub-rectilinear and sub-parallel sides and rounded humeral angles. Surface with three series of punctures, one near the suture, one median and one lateral; some smaller and denser punctures between the first and the second series. Abdomen with very fine and very dense, transverse micro-striation and some series of evident punctuation on each segment. Tergite and sternite of male genital segment as in Figs 306-307. Aedeagus (Fig. 308) 1.8 mm long, than the length of the body proportionately small, ovoid elongate, narrow and long, with long median lobe with rounded apex; inner sac tape-like, narrow and long, folded one time on itself, covered with fine spinulae.

DISTRIBUTION. N Madagascar (Fig. 292).

7. *Thyrecephalus sexpunctatus* (Fauvel, 1905) comb.n.

Xantholinus sexpunctatus Fauvel, 1905: 171; Bernhauer & Schubert, 1914: 308; Herman, 2001a: 3822.

TYPE MATERIAL. The Institut royal d'Histoire naturelle of Bruxelles preserves 1 female labelled "Madagascar", "*sexpunctatus* / Fvl.", "Type" (printed on pink label), "*Thyrecephalus sexpunctatus* (Fauvel), J. Janák det. 2007" (in litt.).

DESCRIPTION. Length of body 16.5 mm; from anterior margin of head to posterior margin of elytra: 11 mm. Body shiny, black, with very fine micro-punctuation. Head and pronotum and related punctuation as in Fig. 309a. Labrum as in Fig. 309b. Elytra large, longer and wider than pronotum, dilated posteriad, with narrowly rounded humeral angles. Surface with fine and superficial punctuation, arranged in some series. Abdomen with fine, very dense, transverse micro-striation and superficial, scattered punctuation, arranged in 1-2 series on each segment. Male unknown.

DISTRIBUTION. Madagascar.

8. *Thyrecephalus helvomarginatus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Antananarivo prov., 7 Km SE Andasibe Nat. Park headquarter, 1050 m, 18°57.76'S, 48°27.16'E, tropical forest, R. Harin'Hala 9-23.IV.2001 (CAS); paratype: NE Madagascar, (Toamasina prov.), Maroansetra, 1 ♀ (NMW).

DESCRIPTION. Length of body 14 mm; from anterior margin of head to posterior margin of elytra: 8 mm. Body shiny (Fig. 618), black, with brown elytra; the lateral margins of elytra bordered in yellowish from the humeral angles to the posterior angles; antennae and legs brown dark. Head and pronotum and related punctuation as in Fig. 310, 619. Labrum as in Fig. 311. Surface of head without micro-punctuation. Elytra sub-rectangular, barely dilated posteriad, longer than pronotum, as wide as it, with rounded humeral angles. Surface with three series of fine, sparse punctures, one juxtatural, one median and one lateral. Abdomen with very fine and dense, transverse micro-striation and fine, sparse punctuation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs. 312-313, both with membranous distal portion. Aedeagus (Fig. 314, 620) 1.85 mm long, sub-ovoid, with prominent median lobe; parameres of peculiar shape; inner sac tape-like, covered with fine, filiform scales.

ETYMOLOGY. The specific epithet comes from the Latin “helvus-a-um” (yellow) and “marginatus-a-um” (borderer).

DISTRIBUTION. The species is known only from the type localities (Fig. 311).

9. *Thyrecephalus jocheni* Bordoni, 2002

Thyrecephalus jocheni Bordoni, 2002: 225.

EXAMINED MATERIAL. Central Madagascar, Moramanga env., 18°57'11.1"S, 048°16'13.0"E, E. Pavel 13-16.I.2007, 1 ♀ (cJ).

EXAMINED MATERIAL. Mascareignes (Vinson, 1967 (sub *anachoreta* (Erichson, 1839)) taxon divided into several species including *jocheni* (Bordoni, 2002).

La Réunion: Saint Gilles les Bains; Plane de Makes; Salazie; Mauritius: Curepipe; Rose Belle; Trou d'Eau Douce; Maccabé; Flic en Flac (Lecoq, 1999, sub *Thyrecephalus anachoreta* (Erichson, 1839)). La Réunion: Saint Gilles les Bains; Plane de Makes; Salazie; Saint Benoit (Gomy *et al.*, 2016).

DESCRIPTION. Body 13 mm long, black shiny with yellowish pale elytra, abdomen brown dark with posterior margin of five visible segment, sixth segment and genital segment brown ligh. Head with two punctures behind the eyes, pronotum very dilated forward, elytra with three series of punctures. Labrum and aedeagus in Bordoni, 2002, pag. 224.

DISTRIBUTION. Known from Nepal, North India, Sikkim, Assam, and Meghalaya (Bordoni, 2002). Probably introduced in the named islands by the human activities (collected in decaying vegetables and dung).

10. *Thyrecephalus madagascarensis* (Steel, 1949) comb.n.

Xantholinus madagascarensis Steel, 1949: 270, nom. nov. for *Xantholinus limbatus* Klug, 1832, nom. preocc. by *Xantholinus limbatus* Waltl, 1835 (syn. of *Megalinus hesperius* (Erichson, 1839)); Erichson, 1839: 310; Bernhauer & Schubert, 1914: 311; Scheerpeltz, 1961: 238 (all sub *limbatus*).

Eulissus madagascarensis; Herman, 2001a: 3628; Newton, 2017.

TYPE MATERIAL. The Naturhistorisches Museum of Berlin preserves 2 specimens labelled “Madagascar / Goudot / nr. 5811”, one “Lectotypus *Xantholinus limbatus* Klug, J. Janák des. 1991”, the other “Paralectotypus *Xantholinus limbatus* Klug, J. Janák des. 1991”, both in litteris. The first bears the label “Lectotypus *Xantholinus limbatus* Klug, Bordoni des. 2017”, the other “Paralectotypus *Xantholinus limbatus* Klug, Bordoni des. 2017” and both the determination “*Thyrecephalus madagascarensis* (Steel), Bordoni det. 2017”.

EXAMINED MATERIAL. Madagascar, Fairmaire, 2 exx. (NMB); Madagascar, Tamatave, 1 ex. (cB); Madagascar, 1 ex. (DEI).

DESCRIPTION. Length of body 15 mm; from anterior margin of head to posterior margin of elytra: 9 mm. Body black with brown black elytra; antennae and legs brown dark. Head and pronotum and related punctuation as in Fig. 315. Head with fine, deep, very dense and small punctuation, broader on the sides. Labrum as in Fig. 316. Elytra dilated posteriad were are slightly wider than pronotum, moderately longer than it, with rounded humeral angles. Surface with broad but superficial punctuation, arranged in three series, one near the suture, one median and one lateral. Abdomen with fine, dense transverse micro-striation and deep, dense punctuation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 317-318. Aedeagus (Fig. 319) 2.33 mm long, sub-ovoid, with prominent median lobe; inner sac long and very narrow, tape-like, folded on itself some times, covered with very fine scales.

DISTRIBUTION. Madagascar.

12. *Thyrecephalus heterocephalus* (Fauvel, 1905) comb.n.

Xantholinus heterocephalus Fauvel, 1905: 171; Bernhauer & Schubert, 1914: 304; Herman, 2001a: 3798.

TYPE MATERIAL. The Institut royal d’Histoire naturelle of Bruxelles preserves 2 specimens, the first, male, labelled “ex typis” (printed on pink label), “Alluaud”;

“Diégo Suarez”, “*Thyrecephalus heterocephalus* (Fauvel), J. Janák det. 2007” (in litt.); the second, female, is labelled “Madagascar / Diégo Suarez / Ch. Alluaud 1893”, “*heterocephalus* / Fvl.”.

DESCRIPTION. Length of body 16.5 mm; from anterior margin of head to posterior margin of elytra: 8.5 mm. Body shiny, reddish brown to brown. Head and pronotum and related punctuation as in Fig. 320. Labrum as in Fig. 321. Elytra as long as pronotum, moderately dilated posteriad where is barely wider than it, with very rounded humeral angles. Surface with broad, superficial, spaced punctuation, arranged in two series near the suture, one median and one lateral. Abdomen with fine, very dense, transverse micro-striation and deep, sparse punctuation on the sides of each segment. Tergite and sternite of male genital segment as in Figs 322-323. Aedeagus (Fig. 324) 1.92 mm long, sub-ovoid, with narrow median lobe; inner sac very short, narrow, covered with fine scales.

DISTRIBUTION. N. Madagascar (Fig. 293).

13. *Thyrecephalus banari* Janák, 2017

Thyrecephalus banari Janák, 2017: 2.

TYPE MATERIAL. The Moravian Museum of Brno preserves the holotype male, labelled Madagascar, Ankarana N.P., 12°57'S, 49°07'E, 113 m, in dark forest, P. Banar 23-25.I.2016; paratypes same data as holotype are preserved in Moravian Museum, British Museum of Natural History of London, Janák collection and Bordoni collection. A male paratype from N Madagascar, Montagne d'Ambre N.P. 1035 m, P. Banar 13-18.I.2016 and a female from N Madagascar, Ankarana N.P., 113 m, 12°57S, 49°07'E, P. Banar 23-25.I.2016 are preserved in the Moravian Museum, Brno.

DESCRIPTION. Length of body 21-26.4 mm; from anterior margin of head to posterior margin of elytra: 11-11.8 mm. Body shiny (Fig. 621), black with reddish elytra and black scutellum, reddish brown very dark abdomen; antennae and legs brown. Labrum rounded. Head and pronotum and related punctuation as in Fig. 622. Elytra with three series of fine punctures, one juxtasutural, one median and one lateral. Surface of abdomen with dense, fine punctuation, arranged in numerous series on each segment. Aedeagus (Fig. 623) 1.64-1.76 mm long; median lobe elongate, parameres moderately long and slender; inner sac very narrow, long, covered with very weakly sclerotized fine scales.

DISTRIBUTION. N Madagascar.

11. Gen. *Qumuria* gen.n.

TYPE SPECIES. *Thyrecephalus* (?) *bordonii* Lecoq, 1996

DESCRIPTION. Body narrow (Fig. 325), covered with very fine and dense polygonal micro-reticulation; labrum bilobed (Fig. 326); mandibles without lateral groove, with minute prosthema and very evident, rounded tooth (Fig. 327); 3rd antennomere longer than 2nd; maxillary palpi as in Fig. 327; labial palpi as in Fig. 328; frontal grooves long and converging; ocular grooves absent; gular sutures gathered in a single groove for their entire length (Fig. 330); antesternal plate with suture; sternum almost flat; upper epipleural line of the pronotum joint with the lower line; pronotum with a lateral series of 6-7 setiferous punctures more or less to form a furrow; all the tarsi short, barely dilated (Fig. 331); aedeagus similar to that of *Thyrecephalus* (Fig.).

ETYMOLOGY. The generic epithet refers to the Arabic name (Guizor-al-Qumur: islands of the moon) given to the Comoros.

DISTRIBUTION. Endemic to the Comoros islands.

1. *Qumuria bordonii* (Lecoq, 1996) comb.n.

TYPE MATERIAL. The Museum royal de l'Afrique centrale of Tervuren preserves 2 specimens, labelled "Coll. Mus. Tervuren / Comores: Mohéli Miri / ngon: 500 m, 2 / 12.XI / R. Jocqué 1983", "*Thyrecephalus* (?) / *bordonii* n. sp. / J. C. Lecoq det. 1994", the first, male, "Holotype" (printed on red label), the second, female, "Paratype" (on red label). I could not study another male from the same locality, preserved in the Muséum national d'Histoire naturelle of Paris.

DESCRIPTION. Length of body 11.5 mm; from anterior margin of head to posterior margin of elytra: 6 mm. Body totally covered with extremely fine, dense, polygonal micro-reticulation, so as to appear silky, reddish brown; antennae and legs brown. Head and pronotum and related punctation as in Fig. 325. Elytra sub-rectangular, barely dilated posteriad, longer and wider than pronotum, with rounded humeral angles. Surface with three series of punctures, one juxtatural, one median and one lateral, Abdomen with fine, sparse punctation on the margins of the segments. Male genital segment missing. Aedeagus (Fig. 332) 1.1 mm long, sub-ovoid, very narrow distally, similar to that of the *Thyrecephalus*, with very short parameres; inner sac ribbon-shaped, narrow, covered with sparse, minute scales.

DISTRIBUTION. Comoros.

REMARKS. The male genital segments of the studied material are missing. I think they do not presented particular characters since the author doesn't even mention them.

12. Genus *Arnaldolinus* Janák, 2019

TYPE SPECIES. *Arnaldolinus bordonii* Janák, 2019

DESCRIPTION. Head sub-rectangular, convex, punctation very dense and coarse with some setiferous punctures (Fig. 624). Eyes small, barely protrudent; labrum quadrilobate; maxillary palpi with segment 3 shorter than segment 2, segment 4 slightly longer and narrower than segment 3; labial palpi with last segment longer than segment 2; frontal grooves moderately long, ocular grooves absent; epistoma short, slightly rounded; pronotum with densely and coarsely punctation, except for a large median surface (Fig. 625); elytra sub-rectangular, with dense, fine punctation, arranged in numerous series.

DISTRIBUTION. N Madagascar.

Arnaldolinus bordonii Janák, 2019: 96.

TYPE MATERIAL. Holotype ♂: Madagascar, Montagne d'Ambre N.P., 1035 m, 12°31'37.8"S, 49°10'16.7"E, by big tree, P. Banar 13-18.I.2016 (MMB); paratype: same data, 1 ♂ (cJ).

DESCRIPTION. Length of body 17.5-18.5 mm; from anterior margin of head to posterior margin of elytra: 8.5-8.7 mm. Body (Fig. 624) black, shoulders narrowly yellowish, elytra epipleura with yellowish backwards narrowed band; second antennomeres base of tibiae and tarsi reddish. Head covered with dense, deep punctures, also in ventral view. Pronotum with similar punctation laterally with a wide median surface without punctures (Fig. 625). Elytra trapezoidal, markedly longer than wide, barely longer and narrower than head, with marked humeral angles. Abdomen with transverse micro-striation and fine punctures. Tergite and sternite of male genital segment as in Figs. Aedeagus (Fig. 626) 2.5 mm long, sub-ovoid, with broad median lobe with long and slender parameres; inner sac tape-like, long and narrow, covered with fine spinulae.

DISTRIBUTION. N Madagascar.

13. Genus *Microleptus* Jarrige, 1963

Microleptus Jarrige, 1963: 122; Lecoq, 1990: 187; Herman, 2001a: 3704.

TYPE SPECIES. *Microleptus vadoni* Jarrige, 1963, by original designation and monotypy.

DESCRIPTION. This genus differs from the other Xantholinini for the contemporary presence of the following characters: body very small, depigmented, apterous or winged, pubescent; maxillary palpi with first and second articles very short, third very long and broad, the last very short and thin (Fig. 334); labial palpi with first article very short, second very long and broad, the last very short and thin

(Fig. 335); labrum as in Fig. 333; mandible as in Fig. 336, with lateral groove; eyes very small, composed with few ommatidia in a species and normal in the other; frontal grooves short; ocular grooves long, deep, arched; gular sutures juxtaposed in the medio-distal portion; anterosternal plate large, entire; prosternum convex with moderate median apophysis; upper epipleural line of pronotum entire, joint with the lower line near the anterior angles; anterior tarsi dilated; aedeagus more or less ovoidal with thin parameres (Fig. 341). Female genital segment as in Fig. 343.

DISTRIBUTION. Mascarene: La Réunion island, Madagascar.

KEY TO THE SPECIES

1. Body apterous, 2.6-3.3 mm long, yellowish.....1. *M. microphthalmus* (Fvl.)
 -. Body winged, 2.4 mm long, reddish brown.....2. *M. gomyi* Lecoq

1. *Microleptus microphthalmus* (Fauvel, 1905) comb.n.

Leptacinus microphthalmus Fauvel, 1905: 169; Bernhauer & Schubert, 1914: 293; Herman, 2001a: 3678.

Microleptus vadoni Jarrige, 1963: 122; Herman, 2001a: 3704, syn. n.

TYPE MATERIAL. The Institut royal des Sciences naturelles of Bruxelles preserves 1 specimen, female, labelled "Suberbieville", "*microphthalmus* / Fvl.", "Type" (on pink label), "*Microleptus* / *microphthalmus* / Fauv. / J. Jarrige det.", "*Microleptus* / *microphthalmus* / Fauv. / J. Janák det. 1992" (in litt.). The Muséum national d'Histoire naturelle de Paris preserves 2 specimens of *Leptacinus vadoni*, the first, female, labelled "Paratype" (on red label), "Andapa / Mdg. IV.55 J. V.", "Muséum Paris / ex collection / J. Jarrige / 1976"; the second, male, labelled "Andapa / Mazoantotu / IV.55 Nob. J. V.", "Muséum Paris / ex collection / J. Jarrige / 1976". In the same museum are preserved other specimens from the same locality that I can not study.

EXAMINED MATERIAL. Madagascar, Makirovana, 14.1714S, 49.9497E, 581 m, V. Grebennikov 25.XII.2018 (cJ).

DESCRIPTION. Length of body 2.6-3.3 mm; from anterior margin of head to posterior margin of elytra: 1.3-1.5 mm. Body apterous, entirely yellowish. Head sub-rectangular, with narrowly rounded posterior angles and moderately rounded sides. Eyes very small and flat. Surface of head with traces of transverse micro-striation and sparse, broad punctures, between fine, sparse punctation. Pronotum moderately dilated anteriorly, shorter and narrower than head, with slightly oblique anterior margins, rounded anterior angles and barely emarginated sides. Surface with transverse micro-striation and fine, sparse punctation, apart from a wide median stripe. Elytra sub-rectangular, narrow, slightly shorter and narrower than pronotum, with obsolete humeral angles. Surface wrinkled, with some series of very fine and

sparse punctures. Abdomen with traces of transverse micro-striation and fine, more or less dense punctation on the sides. Posterior margin of elytra and abdomen with dense, yellowish pubescence. Tergite and sternite of male genital segment as in Figs 339-340. Aedeagus (Fig. 341-342) 0.44 mm long, small, sub-ovoid, with narrow distal portion; parameres thin and short; inner sac long, dilated proximally, covered with very fine, sparse scales.

DISTRIBUTION. N Madagascar.

2. *Microleptus gomyi* Lecoq, 1990

Microleptus gomyi Lecoq, 1990: 187; Herman, 2001a: 3704.

TYPE MATERIAL. The Muséum national d'Histoire naturelle de Paris preserves 31 specimens from La Réunion, the holotype labelled "La Réunion, Saint Gilles les Bains, Y. Gomy 21.VII.1965", the paratypes with the same label and some labelled "Étang Salé, parc départemental, Y. Gomy 22.XI.1972" (Lecoq, 1990).

EXAMINED MATERIAL. La Réunion: Saint Gilles les Bains, Étang Salé les Bains (Gomy *et al.*, 2016).

DESCRIPTION. Body winged, reddish ferruginous, 2.4 mm long; head elongated with rounded posterior angles; eyes of normal shape, not protruding; frontal grooves short, ocular grooves short and deep; surface with evident punctation except for a median stripe; pronotum barely narrower than head, with similar punctation than head, except for a median stripe; elytra as long as pronotum with a similar but finer punctation; abdomen with transverse micro-striation and fine scattered punctures.

DISTRIBUTION. Mascarene: La Réunion.

REMARKS. I was not able to analyse these specimens, so I directly refer to the description and figures of Lecoq (*l.c.*).

14. Genus *Gauropterus* Thomson, 1860

Gauropterus Thomson, 1860: 187; Smetana, 1982: 71; Bordoni, 1982: 164; 2002: 184; 2016: 508.

Platydomus Fauvel, 1905: 174; Bernhauer & Schubert, 1914: 309; Herman, 2001a: 3743, *syn. n.*

Type species of *Gauropterus*: *Staphylinus fulgidus* Fabricius, 1787: 220, by action of the Commission in Opinion 1250 (ICZN, 1983).

Type species of *Platydomus*: *Platydomus erosus* Fauvel, 1905: 174, by monotypy.

DESCRIPTION. Body (Fig. 348) of medium to large size (6–16 mm long), fully winged. Characterized by head sub-rectangular, sub-parallel sided, with numerous

coarse punctures forming sub-impressed longitudinal lateral rows; frontal grooves distinct, ocular grooves obsolete; eyes small; tempora limited usually by sub-impressed longitudinal series of coarse punctures and posteriorly by punctate groove with a small denticle; mandibles robust, devoid of deep lateral groove but with a feeble basal impression; epistome sub-rectangular protruding, with flat back; gular sutures fused; pronotum without dorsal series of punctures and lateral series situated in impressed grooves; upper epipleural line joining lower line just in front of procoxal cavities; antesternal plate divided; anterior tarsi not dilated; metatibiae with apical ctenidium only (for all these characters cf. Bordoni, 2002). Sternite of male genital segment asymmetrical (Fig. 351); aedeagus normally small, with symmetrical parameres (Fig. 356); inner sac long tube-like, sometimes folded on itself, diaphanous or with little scales. Female genital segment (Bordoni, 2002: Figs. 63, 64).

DISTRIBUTION. This genus seems to occur all over the world except Australia, but in North America (Smetana, 1982) it is represented only by the type species, probably introduced from Europe. In Africa south of Sahara it occurs especially in central regions but also in Ethiopia and South Africa (Bordoni, 2016).

REMARKS. The genus *Platydomus* was described by Fauvel (1905) for the species *erosus*, In the short description the characters that would distinguish this genus from the other genera of the tribe are not indicated and there is no comparison with other genera of the same tribe. The data provided are scarce and almost useless. In fact, *Platydomus* differs from *Gauropterus* only for the following characters: epistoma protruberant, with concave superior surface; very short labrum, without true protrusions (as instead in *Gauropterus* from other countries); surface of head without the usual deep grooves and ovoidal punctures in series, but with dense, normal punctuation. In my opinion these characters are not sufficient to describe a genus. The important characters (mandibles, maxillary and labial palpi, gular sutures, antennae, antesternal plate, upper epipleural line of pronotum, tarsi, male and female genitalia) are the same of *Gauropterus*.

KEY TO THE SPECIES-GROUPS

1. Head with broad, usually ovoid, sparse or very sparse punctuation on the medio-posterior surface, often confluent to form grooves, and with lateral portion covered with finer, denser punctuation 2
 - . Head with dense punctuation almost on all the surface, usually except for the clypeus 5. *erosus* Group
2. At least the genital segment reddish 3
 - . Last abdominal segments dark; elytra black 3. *subcylindricus* Group
3. Elytra reddish brown, sometimes dark 1. *umbilicatus* Group
 - . Elytra orange or red 2. *albocinctus* Group
 - . Elytra black 4. *banari* Group

1. *umblicatus* GROUP

KEY TO THE SPECIES

1. Smaller body (about 11 mm long).....2
 -. Larger body (12-13 mm long).....3
2. Head with denser punctation, epistoma with more evident median emargination, wider pronotum; aedeagus as in Fig. 347.....1. *G. umblicatus* (Fvl.)
 -. Head with denser punctation, epistoma with less evident median emargination, narrower pronotum; aedeagus as in Fig. 352.....2. *G. anjanaharibe* sp.n.
- . 3. Broader body.....4
 -. Slender body; rectangular, narrow, long elytra, with reddish portion near the scutellum; aedeagus as in Fig. 356.....3. *G. janaki* sp.n.
- . 4. Punctation of head in the median surface composed by few punctures in a more or less horizontal series; elytra shorter; aedeagus as in Fig. 360.....4. *G. eulophiaensis* sp.n.
 -. Punctation of head in the median surface composed by two horizontal series of punctures; elytra longer; aedeagus as in Fig. 364.....5. *G. esiranus* sp.n.

1. *Gauropterus umblicatus* (Fauvel, 1905)

Xantholinus umblicatus Fauvel, 1905: 173.

Gauropterus umblicatus; Bernhauer & Schubert, 1914: 310; Herman, 2001a: 3636.

TYPE MATERIAL. The Institut royal des Sciences naturelles of Bruxelles preserves 3 specimens “Ex-Typis” (red printed on white label), “*Gauropterus umblicatus* (Fvl.), J. Janák det. 2007”. One is labelled “forêt de Moramanga / Madag. Est”, the second “Antanambe / baie de Antongil / III-IV.97 / CA. Mocquerys”, the third “Tananarive”. The first is a male that I choose as lectotype of the species. It bears the label “Lectotypus *Xantholinus umblicatus* Fvl., Bordoni des. 2014”. The others are female that I choose as paralectotypes of the species. They bear the label “Paralectotypus *Xantholinus umblicatus* Fvl., Bordoni des. 2014”. All are determinated as “*Gauropterus umblicatus* (Fvl.), Bordoni det. 2014”.

EXAMINED MATERIAL. Madagascar, coll. Kraatz, 1 ex. (NMB); N Madagascar, Amber Gb. (Amber Mountain Nat. Park), 1 ex. (NMB); Central Madagascar, Ambositra, 1 ex. (NMW); Central Madagascar, Ankaratra G., coll. Scheerpeltz, 1 ex. (NMW); W Madagascar, Manindray, W of Sakahara, 200-800 m, bord ruisseau, *Pandanus*, bambous, J. Janák 30.I.1995, 6 exx. (cJ), 1 ex. (cB).

DESCRIPTION. Length of body 11 mm; from anterior margin of head to posterior margin of elytra: 6 mm. Body shiny, reddish brown to brown black, with red last 2 abdominal segments. Elytra with yellowish lateral margins. Head sub-rectangular,

slightly narrow anteriorly, with narrowly rounded posterior angles. Eyes small and flat. Surface of head with large, not deep punctation, arranged in a lateral groove; some other similar punctures on the median portion; numerous, dense, smaller punctures on the tempora. Labrum and epistoma as in Fig. 344. Epistoma with evident, median concavity. Pronotum a little longer and wider than head, dilated anteriorly, with emarginated sides. Surface with a superficial, lateral groove in which are some punctures. Elytra sub-rectangular, more or less as long as pronotum, narrower than it, with less marked humeral angles. Surface with fine punctation, arranged in some series. Abdomen with fine micro-striation and fine punctation, arranged in some series. Tergite and sternite of male genital segment as in Figs 345-346. Aedeagus (Fig. 347) 0.85 mm long, small, narrow, sub-ovoid, with sub-ovoid median lobe; parameres proportionally very long, robust, bent at a right angle; inner sac, very narrow, short, covered with fine scales.

DISTRIBUTION. The species occurs in Central N Madagascar.

REMARKS. Fauvel (l.c.) cites the species also from Diégo Suarez (Alluaud), specimen that I can not study.

2. *Gauropterus anjanaharibe* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Massif Anjanaharibe Nord, sentier Ambodiharina-Ambalarombe, 500-600 m, Riv. Andramonta env., forêt dégradée, J. Janák & P. Moravec 23.II-1.III.1996 (cJ).

DESCRIPTION. Length of body 11 mm; from anterior margin of head to posterior margin of elytra: 6 mm. Body shiny, reddish brown with black head; antennae and legs testaceous. Head sub-rectangular, narrow anteriorly, with sub-rectangular sides and narrowly rounded posterior angles. Eyes small and almost flat. Surface with 2 big setiferous punctures between the eyes and frontal grooves; a series of deep, oblong punctures forming a groove from the inner margin of eyes to the posterior angles; a similar series of finer punctures forming a groove on the posterior half of head; few, deep punctures between these grooves, and numerous fine, deep punctures on the lateral margins. Labrum and epistoma as in Fig. 349. Epistoma broad, with superficial median emargination. Pronotum dilated anteriorly, as long and a little narrower than head, with oblique anterior margins, rounded anterior angles and emarginated sides. Surface with 3 closed punctures near the anterior angles; one big setiferous puncture near the anterior margin; few lateral punctures. Elytra narrow, scarcely dilated posteriorly, as long and wide as pronotum, with marked humeral angles. Surface with punctation arranged in 2 series of punctures near the suture, one median and one lateral. Abdomen with some series of punctures on each segment. Tergite and sternite of male genital segment as in Figs 350-351. Aedeagus (Fig. 352) 0.85 mm long, sub-spheric, with very large median lobe; parameres proportionally short, narrow; inner sac tube-like, very narrow, covered with fine scales.

ETYMOLOGY. The specific epithet refers to the type locality, as a noun in apposition

DISTRIBUTION. The species is known only from the type locality in N Madagascar.

3. *Gauropterus janaki* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, 30 Km SE Betroka, 3 Km NE Tsanerena, 900 m, Ivahona River alluvions, J. Janák 15.XII.1998 (cJ); paratypes: same data, 2 ♀♀ (cJ).

DESCRIPTION. Length of body 12 mm; from anterior margin of head to posterior margin of elytra: 5.5 mm. Body shiny, slender, narrow, brown very dark, with black head; 5th, 6th abdominal segments and genital segment red; antennae and legs brown. Head sub-rectangular, slightly narrow anteriorly, with sub-rectilinear sides and narrowly rounded posterior angles. Eyes small and barely protruding. Surface of head with a series of rounded, setiferous, deep punctures below the eyes; some deep, scattered punctures on the median portion; numerous fine punctures on the sides. Labrum and epistoma as in Fig. 353. Epistoma narrow, with superficial median concavity. Pronotum narrow, scarcely longer than head, dilated anteriorly where is narrower than it, with oblique anterior margins, narrowly rounded anterior angles and moderately emarginated sides. Surface with sparse micro-punctuation and one puncture near the anterior angles, followed by 2 other finer punctures; few, scattered punctures on the lateral margins. Elytra long, sub-rectangular, with sub-rectilinear and sub-parallel sides, as long and wide as pronotum, with rounded humeral angles. Surface with some series of very fine and spaced punctures. Abdomen with some series of fine punctures, more or less dense, on the sides of each segment. Tergite and sternite of male genital segment as in Figs 354-355. Aedeagus (Fig. 356) 0.92 mm long, ovoid, with very large, sub-triangular median lobe; parameres very long, narrow, arched; inner sac difficult to define, covered with fine spinulae and scales.

ETYMOLOGY. Dedicated to my friend Ing. Jiří Janák, a well-known specialist of staphylinids.

DISTRIBUTION. The species is known only from the type locality in E Madagascar (Fig. 435).

4. *Gauropterus eulophiaensis* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Andasibe-Mantadia N.P., Mantadia, "Circuit *Eulophia*", 958 m, 78°48'16S, 48°25'43E, MTD / Jan 2017, P. Banar 19-22.I.2017 (MMB); paratypes: same data, 1 ♀ (MMB), 1 ♀ (cB).

DESCRIPTION. Length of body 12 mm; from anterior margin of head to posterior margin of elytra: 6.5 mm. Body shiny; head and pronotum black; elytra and

abdomen reddish brown dark; antennae and legs brown. Elytra with yellowish anterior margins, near the humeral angles. Head sub-rectangular, slightly narrow anteriorly, with sub-rectilinear and sub-parallel sides and widely rounded posterior angles. Eyes small and protruding. Surface of head with 2 punctures between the eyes and the frontal grooves; 4-5 oblong punctures in a median, horizontal series; 2 series of few punctures below the previous series; a series of ovoid, setiferous punctures closed below the eyes; numerous, rounded, deep punctures on the sides. Labrum and epistoma as in Fig. 357. Epistoma with narrow median concavity. Pronotum longer and narrower than head, with oblique anterior margins, widely rounded anterior angles and moderately emarginated sides. Surface with one big puncture near anterior angles. Elytra dilated posteriorly, longer and wider than pronotum, with rounded humeral angles. Surface with punctation arranged in three series, one near the suture, one median and one lateral. Abdomen with dense, deep punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 358-359. Aedeagus (Fig. 360) 1.25 mm long, sub-rectangular, with very massive median lobe; parameres long and robust, bent at a right angle; inner sac very narrow, short, covered with fine scales.

ETYMOLOGY. The specific epithet refers to *Eulophia*, a genus of Orchidaceae.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar (Fig. 435).

5. *Gauropterus esiranus* sp.n.

EXAMINED MATERIAL. Holotype ♂: SE Madagascar, 24 Km NE Esira, Col de Marotaolana, 1100-1200 m, 24.14S, 46.53E, J. Janák 1-2.II.2004 (cJ); paratype: same data, 1 ♂ (cJ).

DESCRIPTION. Length of body 13 mm; from anterior margin of head to posterior margin of elytra: 5.5 mm. Body shiny, black, with reddish brown dark elytra and abdomen; 6th abdominal segment and genital segment red; antennae and legs testaceous. Head sub-quadrangular, moderately narrow anteriorly, with scarcely rounded posterior angles, Eyes medium-sized and almost flat. Surface of head with the usual 2 punctures between eyes and frontal grooves; 2 median series of fine punctures; an irregular series of large and deep, setiferous punctures below the eyes; very numerous finer and denser punctures on the sides. Labrum and epistoma as in Fig. 361. Epistoma large, with superficial median emargination. Pronotum a little longer and narrower than head, dilated anteriorly, with oblique anterior margins, widely rounded anterior angles and scarcely emarginated sides. Surface with 3 punctures near the anterior angles. Elytra sub-rectangular, dilated posteriorly, longer than pronotum, posteriorly wider than it. Surface with some series of very fine, dense punctation. Scutellum with numerous punctures. Abdomen with some series of fine, sparse punctures on each segment. Tergite and sternite of male genital segment as in Figs 362-363. Aedeagus (Fig. 364) 0.92 mm long, ovoid, narrow, with evident

median lobe; parameres narrow, arched; inner sac tape-like, narrow and long, folded on time on itself, covered with minute scales.

ETYMOLOGY. The specific epithet refers to the type locality.

DISTRIBUTION. The species is known only from the type locality in SE Madagascar.

2. *albocinctus* GROUP

KEY TO THE SPECIES

1. Body markedly robustior (15 mm long); head with one horizontal, median series of punctures and one near the posterior margin; elytra with some series of punctures; scutellum black; abdomen with very long and dense pubescence; male unknown.....1. *G. hova* (Fvl.)
-. Body markedly smaller (about 10 mm long), with three series of punctures on elytra.....2
2. Head quadrangular.....3
-. Head narrow antieriad; head-pronotum and abdomen brown light; elytra pale orange with yellowish sutura and humeral angles; pronotum with very emarginated sides; aedeagus as in Fig. 368.....2. *G. albocinctus* (Fvl.)
3. Head with more median punctures; head black, pronotum and abdomen reddish brown; aedeagus as in Fig. 372.....2. *G. rubescens* sp.n.
-. Head with less median punctures; head, pronotum and abdomen brown; aedeagus as in Fig. 376.....2. *G. claviger* (Fvl.)

1. *Gauropterus hova* (Fauvel, 1905)

Xantholinus hova Fauvel, 1905: 172.

Gauropterus hova; Bernhauer & Schubert, 1914: 310; Herman, 2001a: 3635.

TYPE MATERIAL. The Insitut royal des Sciences naturelles of Bruxelles preserves 1 specimen, female, labelled “forêt de Moramanga / Madag. Est”, “Type” (on pink label), “*hova* / Fvl.”, “*Gauropetrus hova* (Fauvel), J. Janák det. 2007”.

EXAMINED MATERIAL. Central Madagascar, Fianarantsoa Prov., Ranomafana N.P., Vohiparara area, 1050 m, mixed tropical forest, 21°13.6’S, 47°23.0’E, D.H. Kavanaugh 23.IV.1998, 1 ♀ (CAS).

DESCRIPTION. Length of body 15 mm; from anterior margin of head to posterior margin of elytra: 8.5 mm. Body shiny, black with red elytra; scutellum and abdomen brown black; antennae and legs brown. Head sub-rectangular, with sub-rectilinear sides, narrowly rounded posterior angles. Eyes small and almost flat. Epistoma with very superficial median emargination. Surface of head with a horizontal series of oblong punctures on the anterior half, a series of 4 punctures forming a groove from the eyes to the posterior angles; some sparse punctures on the posterior half of head;

some, smaller, denser punctures on the sides. Pronotum dilated anteriorly, with oblique anterior margins, narrowly rounded anterior angles, scarcely emarginated sides. Surface with the usual puncture near the anterior angles. Elytra sub-rectangular, longer than pronotum, as wide as it, with moderately rounded sides and rounded humeral angles. Surface with some series of superficial punctures. Abdomen with fine, more or less dense punctation, well visible. Male unknown.

DISTRIBUTION. E Madagascar (Fig. 435).

REMARKS. The female from Ranomafana have smaller body than that of the holotype and head with different punctation. The specimen was collected in "soil cracks, under dirt clods and under root clods in abandoned rice paddy area".

2. *Gauropterus albocinctus* (Fauvel, 1905)

Xantholinus albocinctus Fauvel, 1905: 172.

Gauropterus albocinctus; Bernhauer & Schubert, 1914: 310; Herman, 2001a: 3631.

TYPE MATERIAL. The Institut royal des Sciences naturelles de Bruxelles preserves one specimen, male, labelled "*albocinctus* / Fvl." (handwritten by Fauvel), "Suberbieville".

DESCRIPTION. Length of body 10.5 mm; from anterior margin of head to posterior margin of elytra: 5.5 mm. Body shiny, reddish brown with lighter elytra and reddish yellow last three abdominal segments. Elytra with yellowish lateral margins, humeral angles and partially suture. Head sub-rectangular, slightly narrow anteriorly, with widely rounded posterior angles. Eyes small and moderately protruberant. Surface of head with rounded, not dense or deep punctures, forming a very superficial, lateral groove; numerous denser and finer punctures on the tempora. Epistoma and labrum as in Fig. 365. Epistoma with superficial, large, median concavity. Pronotum dilated anteriorly, more or less longer and narrower than head. Surface with 2 punctures near the anterior angles and some, spaced punctures on the lateral margins. Elytra scarcely dilated posteriorly, longer and wider than pronotum, with rounded humeral angles. Surface with very fine and sparse punctation, arranged in three series, one near the suture, one median and one lateral. Abdomen with very fine micro-striation and fine, sparse punctation, especially on the sides. Tergite and sternite of male genital segment as in Figs 366-367. Aedeagus (Fig. 368) 1.25 mm long, sub-spherical, with very small median lobe; parameres arched and narrow; inner sac tape-like, narrow, covered with fine scales.

DISTRIBUTION. The species is known only from the type locality in NW Madagascar (the locality is in the Mahajanga prov., Maevatanana distr.).

3. *Gauropterus rubescens* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Antananarivo prov., Manankazo env., I. Jenis 26-29.XI.2002 (cJ).

DESCRIPTION. Length of body 10 mm; from anterior margin of head to posterior margin of elytra: 5.5 mm. Body shiny; head and pronotum black, elytra reddish orange, scutellum brown, abdomen reddish brown with posterior half of 5th visible abdominal segment, 6th and genital segment reddish; antennae and legs reddish brown. Head sub-quadrangular, with rectilinear and sub-parallel sides and narrowly rounded posterior angles. Eyes medium-sized and scarcely protruding. Surface of head with 2 setiferous punctures between eyes and frontal grooves; a series of deep, spaced punctures below the eyes; 3-4 setiferous, broad punctures near the posterior angles; some deep, sparse punctures on the median portion of head; numerous fine punctures on the sides. Epistoma and labrum as in Fig. 369. Epistoma with very superficial, median emargination. Pronotum small, as long as head, dilated anteriorly where is narrower than it, with oblique anterior margins, narrowly rounded anterior angles and slightly emarginated sides. Surface with spaced micro-punctuation, with one puncture near the anterior angles and few, spaced punctures on the lateral margins. Elytra large, narrowly dilated posteriorly, larger and wider than pronotum, with scarcely rounded humeral angles. Surface with superficial, spaced punctures, arranged in three series, one near the suture, one median and one lateral. Abdomen with 3-4 series of fine, deep punctures, on each segment. Tergite and sternite of male genital segment as in Figs 370-371. Aedeagus (Fig. 372) 1.3 mm long, sub-spherical, with large, massive median lobe; parameres proportionally short and narrow; inner sac tube-like, narrow and short, covered with very minute scales.

ETYMOLOGY. The specific epithet comes from the Latin *rubescens-is* (reddish).

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

4. *Gauropterus claviger* (Fauvel, 1905)

Xantholinus claviger Fauvel, 1905: 173.

Gauropterus claviger; Bernhauer & Schubert, 1914: 310; Herman, 2001a: 3631.

TYPE MATERIAL. The Institut royal des Sciences naturelles of Bruxelles preserves 2 specimens, one labelled "forêt de Moramanga", "*claviger* / Fvl." (handwritten by Fauvel), "Ex-typis" (printed on white label), "*Gauropterus claviger* (Fauvel), J. Janák det. 2007"; the other labelled "forêt de Moramanga / Madag. Est", "Ex-Typis" (printed on white label), "*Gauropterus claviger* (Fauvel), J. Janák det. 2007". The first is a male that I choose as lectotype of the species and the second is a female that I choose as paralectotype of the species. They bear respectively the labels "Lectotypus *Xantholinus claviger* Fvl., Bordoni des. 2014" and "Paralectotypus

Xantholinus claviger Fvl., Bordoni des. 2014”, and both the determination”*Gauropterus claviger* (Fvl.), Bordoni det. 2014”.

DESCRIPTION. Length of body 10 mm; from anterior margin of head to posterior margin of elytra: 5.5 mm. Body shiny, reddish brown dark, with reddish light elytra and red posterior margin of the 5th visible abdominal segment, and last 2 segments. Scutellum brown. Head sub-rectangular, dilated anteriorly, with widely rounded posterior angles. Eyes small and protruding. Surface of head with very big, lateral punctures; numerous small punctures on the tempora. Epistoma and labrum as in Fig. 373. Epistoma with superficial median emargination. Pronotum dilated anteriorly, longer and anteriorly wider than head, with oblique anterior margins, widely rounded anterior angles, and slightly emarginated sides. Surface with micro-punctuation and 2 punctures near the anterior angles. Elytra large, moderately dilated posteriorly, longer and wider than pronotum, with rounded humeral angles. Surface with very fine punctuation, arranged in 2 series near the suture, one median and one lateral. Abdomen with very fine, transverse micro-striation and fine, sparse punctuation with long setae. Tergite and sternite of male genital segment as in Figs 374-375. Aedeagus (Fig. 376) 1.22 mm long, sub-spherical, with short median lobe; parameres narrow, bent at a right angle; inner sac short, narrow, covered with fine spinulae.

DISTRIBUTION. E Madagascar.

3. *subcylindricus* GROUP

KEY TO THE SPECIES

1. Body robust (15-16 mm long); head sub-rectangular elongate; pronotum narrower than head; elytra with three series of punctures; aedeagus as in Fig. 380.....1. *G. subcylindricus* Jarr.
-. Body smaller (10-13 mm long).....2
2. Body smaller (10 mm long); head sub-quadrangular with diffuse punctuation; reddish humeral angles; epistoma narrow (Fig. 381); aedeagus as in Fig. 384.....2. *G. diabolicus* (Bh.)
-. Body larger (11-13 mm long).....3
3. Lateral margin of elytra yellowish; head a little narrower than head, with diffuse punctuation; elytra with punctuation arranged in 2 series near the suture, one median and one lateral; aedeagus as in Fig. 388.....3. *G. andalabiby* sp.n.
-. Only the anterior portion of elytra near the scutellum yellowish.....4
4. Body 13 mm long; longer head; shorter elytra; pronotum brown darker, epistoma wider (Fig. 389); aedeagus as in Fig. 392.....4. *G. antsirananaensis* sp.n.
-. Body 11 mm long; head shorter; longer elytra; pronotum brown lighter; epistoma narrower (Fig. 393); aedeagus as in Fig. 396.....5. *G. andapanus* sp.n.

1. *Gauropterus subcylindricus* Jarrige, 1948

Gauropterus subcylindricus Jarrige, 1948: 18; Herman, 2001a: 3636.

TYPE MATERIAL. The Muséum national d'Histoire naturelle de Paris, preserves 1 specimen, male, labelled "Type" (on red label), "Madagascar / Dr. Nodier", "*Gauropterus / subcylindricus / Jarr. / J. Jarrige det.*".

EXAMINED MATERIAL. Madagascar, Sikora, 1 ♂ (NMW); Central Madagascar, Andasibe-Mantadia N.P., Mantadia, "Circuit *Eulophia*", 955 m, 18°47'53"S, 48°25'40"E, P. Banar 17-22.I.2017, 6 ♂♂, 2 ♀♀ (MMB), 3 ♂♂ (cB).

DESCRIPTION. Length of body 15-16 mm; from anterior margin of head to posterior margin of elytra: 6-6.5 mm. Body shiny, black with brown black abdomen; antennae and legs brown. Elytra with lateral margins around the humeral angles yellowish. Head sub-rectangular, with sub-rectilinear and sub-parallel sides and narrowly rounded posterior angles. Eyes medium-sized and flat. Surface of head with one setiferous puncture at the end of the frontal grooves; one groove from the inner margin of eyes to the posterior angles, with 5-6 setiferous, deep punctures; 10-11 broad punctures on the median portion of head, and numerous, fine, dense punctures on the sides. Labrum and epistoma as in Fig. 377. Epistoma of peculiar shape, with emarginated lateral margin and anterior margin and with narrow, evident median concavity. Pronotum moderately dilated anteriorly, shorter and narrower than head, with oblique anterior margins, rounded anterior angles and emarginated sides. Surface with one puncture near the anterior angles. Elytra sub-rectangular, a little dilated posteriorly, with sub-rectilinear sides and not particularly marked humeral angles. Surface with punctation arranged in three series, one near the suture, one median and one lateral. Abdomen with transverse micro-striation and fine punctation on the sides of each segment. Tergite and sternite of male genital segment as in Figs 378-379. Aedeagus (Fig. 380) 1.7 mm long, large, sub-ovoid, with sub-triangular median lobe; parameres short and robust; inner sac tape-like, not narrow, folded on itself, covered with opposing spinulae in the medio-distal portion and with minute scales in the medio-proximal portion.

DISTRIBUTION. The species is known from Central Madagascar (Fig. 435).

2. *Garopterus diabolicus* (Bernhauer, 1902)

Eulissus diabolicus Bernhauer, 1902: 167.

Garopterus diabolicus; Bernhauer & Schubert, 1914: 310; Herman, 2001a: 3631.

TYPE MATERIAL. The Field Museum of Natural History of Chicago preserves 1 specimen, male, labelled "*Eulissus / diabolicus / Brnh. Type*", "Port Daufin" / ded. Plason".

DESCRIPTION. Length of body 10 mm; from anterior margin of head to posterior margin of elytra: 5 mm. Body shiny, black, with brown antennae and legs. Head

sub-rectangular, with sub-rectilinear and sub-parallel sides and rounded posterior angles. Eyes medium-sized and protruding. Surface of head with 2 setiferous punctures between the inner margin of eyes and frontal grooves; numerous, deep, rounded punctures on the median portion of head, finer and denser on the sides. Labrum and epistoma as in Fig. 381. Epistoma very broad, with superficial median concavity. Pronotum as long as head, dilated anteriorly where it is as wide as it, with oblique anterior margins, rounded anterior angles and emarginated sides. Surface with one puncture near the anterior angles and few lateral punctures. Elytra slightly dilated posteriorly, scarcely longer and wider than pronotum, with rounded humeral angles. Surface with very fine, superficial punctation, arranged in three series, one near the suture, one median and one lateral. Abdomen with some series of evident punctation. Tergite and sternite of male genital segment as in Figs 382-383. Aedeagus (Fig. 384) 1.51 mm long, proportionally large, ovoid, with broad and short median lobe; parameres robust, bent at a right angle; inner sac tape-like, covered with fine spinulae.

DISTRIBUTION. The species is known only from the type locality in N Madagascar.

3. *Gauropterus andalabiby* sp.n.

EXAMINED MATERIAL. Holotype ♂: SW Madagascar, Zombitse-Vohibasia N.P., Andalabiby, 771 m, 22°52'58.0"S, 44°42'08.3"E, ZOM / Jan 2013, L. S. Rahanitriniaina & E. M. Rabotoson 26.I.2013 (MMB); paratypes: same data, 1 ♂ (MMB), 1 ♂ (cB).

DESCRIPTION. Length of body 12.5 mm; from anterior margin of head to posterior margin of elytra: 7 mm. Body shiny; head and pronotum black; elytra, abdomen, antennae and legs brown. Elytra with yellowish lateral margins. Head sub-quadrangular, with sub-rectilinear and sub-parallel sides and rounded posterior angles. Eyes medium-sized and scarcely protruding. Surface of head with the usual 2 punctures between the eyes and the frontal grooves; rounded, sparse punctures on the median portion of head; oblique, irregular series of oblong, deep, setiferous punctures below the eyes; numerous, dense, finer, lateral punctures. Labrum and epistoma as in Fig. 385. Epistoma with median, narrow, evident concavity. Pronotum dilated anteriorly, longer and narrower than head, with oblique anterior margins, rounded anterior angles and emarginated sides. Surface with the usual big puncture near the anterior angles. Elytra dilated posteriorly, shorter and wider than pronotum, with rounded humeral angles. Surface with 2 series of punctures near the suture, one median and one lateral. Abdomen with fine, sparse punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 386-387. Aedeagus (Fig. 388) 1.7 mm long, large, ovoid, with long, protruding median lobe; parameres proportionally short, narrow; inner sac narrow and long, tube-like, folded one time on itself, covered with very minute scales.

ETYMOLOGY. The specific epithet refers to the type locality, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in SE Madagascar (Fig. 435).

4. *Gauropterus antsirananaensis* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, (Antsiranana Prov.), Montagne d'Ambre N.P., 1035 m, MDA / Jan 2016, by big tree, P. Banar 13-18.I.2016 (MMB); paratypes: same data, 1 ♂, 1 ex. (without genital segment) (MMB), 1 ♂ (cB).

DESCRIPTION. Length of body 13 mm; from anterior margin of head to posterior margin of elytra: 7 mm. Body shiny, black, with reddish brown dark elytra; antennae and legs brown. A very small portion of humeral angles of elytra yellowish. Head sub-quadrangular, with sub-rectilinear and sub-parallel sides and widely rounded posterior angles. Eyes small and almost flat. Surface of head with deep, rounded, sparse punctation, focused on the median portion of head and below the eyes; two setiferous punctures between eyes and frontal grooves; one setiferous puncture near the posterior margin of eyes, followed by other three spaced punctures; some finer, deep punctures on the sides. Labrum and epistoma as in Fig. 389. Epistoma large, with lateral emargination and evident median concavity. Pronotum a little longer than head, narrower than it, with oblique anterior margins, rounded anterior angles and moderately emarginate sides. Surface with one setiferous puncture near the anterior margin, 2 punctures near the anterior angles, 5-6 lateral punctures. Elytra sub-rectangular, scarcely dilated posteriad, with sub-rectilinear sides and rounded humeral angles. Surface with some series of fine, spaced punctures. Abdomen with some series of evident punctures. Tergite and sternite of male genital segment as in Figs 390-391. Aedeagus (Fig. 392) 1.4 mm long, ovoid elongate, long and narrow, with rounded, broad median lobe; parameres long and robust, arched at the apex; inner sac tape-like, very narrow, long, folded on itself one time, covered with series of fines spinulae.

ETYMOLOGY. The specific epithet refers to the province of the type locality, Antsiranana.

DISTRIBUTION. The species is known only from the type locality in N Madagascar.

5. *Gauropetrus andapanus* sp.n.

EXAMINED MATERIAL. Holotype: N Madagascar, 5 Km E Andapa Lembonibona, 800-1000 m, J. Janák & P. Moravec 2.III.1996, for. degradee (cJ); paratype: E Madagascar, 30 Km SE Betroka, 3 Km NE Tsanerena, 900 m, J. Janák 15.XII.1998 (cJ).

DESCRIPTION. Length of body 11 mm; from anterior margin of head to posterior margin of elytra: 6 mm. Similar to *G. umbilicatus* but robustior; 6th segment and genital segment brown black; different labrum and epistoma (Fig. 393); shorter frontal grooves; anterior margin of elytra near the scutellum yellowish; different tergite and sternite of male genital segment (Figs. 394-395) and aedeagus with sub-triangular median lobe (Fig. 396).

ETYMOLOGY. The specific epithet refers to the type locality.

DISTRIBUTION. The species is known only from the type localities in North and E Madagascar.

4. *banari* GROUP

KEY TO THE SPECIES

1. Body smaller (11 mm long); anterior margin of epistoma concave (Fig.); only a short part of the anterior portion of elytra near the scutellum yellowish; aedeagus as in Fig. 408.....
 1. *G. ranomafanus* sp.n.
- . Body larger (15 mm long)..... 2
2. Shorter head; denser fine punctation on the lateral portion of head; epistoma with rectilinear anterior margin (Fig.); lateral margins of elytra entirely yellowish; surface of elytra with punctation arranged in two juxtatural series, one median and one lateral; aedeagus as in Fig. 412..... 2. *G. banari* sp.n.
- . Longer head; sparser fine punctation on the lateral portion of head; epistoma with rounded anterior margin (Fig.); only the anterior, lateral portion of elytra near the scutellum yellowish; surface of elytra with numerous series of fine punctures; aedeagus as in Fig. 400..... 3.
 *G. punctatus* sp.n.

1. *Gauropterus ranomafanus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Fianarantsoa env., Ranomafana, 900 m, F. Murzin 5-15.I.2001 (cJ); paratype: same data, J. Stolarczyk 29.XI-1.XII.1995, 1 ♂ (cJ).

DESCRIPTION. Length of body 11 mm; from anterior margin of head to posterior margin of elytra: 5.5 mm. Body shiny, black with antero-lateral angles of scutellum, 6th abdominal segment and genital segment reddish; antennae and legs brown dark. Head sub-rectangular, with sub-rectilinear and sub-parallel sides and rounded

posterior angles. Eyes proportionally large and protruding. Surface of head with deep, rounded, spaced punctation, with the usual 2 punctures between eyes and frontal grooves; some setiferous, oblong punctures below the eyes; numerous finer punctures on the lateral margins. Labrum and epistoma as in Fig. 405. Epistoma with concave anterior margin and large median emargination. Pronotum as long and narrower as head, very dilated anteriorly, with oblique anterior margins, narrowly rounded anterior angles and emarginated sides. Surface with 3 punctures near the anterior angles and few lateral punctures. Elytra sub-rectangular, longer and wider than pronotum, with sub-rectilinear and sub-parallel sides and marked humeral angles. Surface with fine, spaced punctation, arranged in three series, one near the suture, one median and one lateral. Abdomen with fine punctation, arranged in few series on each segment. Tergite and sternite of male genital segment as in Figs 406-407. Aedeagus (Fig. 408) 1.66 mm long, large, sub-ovoid, with protruding and rounded median lobe; parameres short and narrow, bent at a right angle; inner sac short, proportionally wide, folded up on itself, covered with scales and minute spinulae.

ETYMOLOGY. The specific epithet refers to the type locality (Ranomafana), as a noun in apposition

DISTRIBUTION. The species is known only from the type locality in Central Madagascar (Fig. 435).

2. *Gauropterus banari* sp.n.

EXAMINED MATERIAL. Holotype ♂: SW Madagascar, Zombitse-Vohibasia N.P., Andalabiby, 805 m, 22°52'57.5"S, 44°41'34.1"E, ZOM / Jan 2013, L. S. Rahanitriniaina & E. M. Robotson 25.I.2013 (MMB); paratype: same data, 1 ♀ (damaged) (MMB).

DESCRIPTION. Length of body 15 mm; from anterior margin of head to posterior margin of elytra: 8 mm. Body shiny; head and pronotum black; elytra, abdomen, antennae and legs reddish brown. Elytra with yellowish lateral margins. Head sub-rectangular, with sub-rectilinear and sub-parallel sides and rounded posterior angles. Eyes medium-sized and protruding. Surface similar to that of *G. ranomafana* sp.n. from which differs by large size, shape of head and colour. Labrum and epistoma as in Fig. 409. Epistoma with narrow median, superficial concavity. Pronotum as long as head, slightly narrower than it, with scarcely oblique anterior margins, narrowly rounded anterior angles and emarginated sides. Surface with 2 punctures near the anterior angles and few medio-lateral punctures. Elytra wider and shorter than pronotum, proportionally short, dilated posteriorly, with rounded humeral angles. Surface with punctation arranged in two series of punctures near the suture, one median and one lateral. Abdomen with fine punctation on the sides of each segment. Tergite and sternite of male genital segment as in Figs 410-411. Aedeagus (Fig. 412) 1.85 mm long, very large, sub-ovoid, with sub-triangular median lobe; parameres

short and robust; inner sac narrow and long, tube-like, folded some times on itself and covered with fine scales.

ETYMOLOGY. Dedicated to the friend and colleague Dr. Petr Banar of the Moravian Museum, Brno, collector of many of the specimens treated in these pages.

DISTRIBUTION. The species is known only from the type locality in South Western Madagascar (Fig. 435).

3. *Gauropterus punctatus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Ranomafana N.P., 987 m, 21°15'47S, 47°25'13E, RFN / Jan 2017, P. Banar 10-14.I.2017 (MMB); paratypes: same data, 1 ♂ (cB); same data, 21°15'44S, 47°25'17E, 2 ♀♀ (MMB).

DESCRIPTION. Length of body 15 mm; from anterior margin of head to posterior margin of elytra: 8 mm. Body shiny, black, with reddish black elytra and abdomen; antennae and legs testaceous. A very small portion of humeral angles of elytra yellowish. Head sub-rectangular, elongate, with sub-rectangular and sub-parallel sides and rounded posterior angles. Eyes proportionally small and very scarcely protruding. Surface of head with the usual 2 punctures between eyes and frontal grooves, and fine, dense punctation on the median portion of head; a finer, denser, lateral punctation. Labrum and epistoma as in Fig. 397. Epistoma large, dilated anteriorly, with emarginated sides and rounded anterior margin; median concavity very small and very superficial. Pronotum visibly shorter and narrower than head, with oblique anterior margins, rounded anterior angles and not emarginated sides. Surface with 2-3 punctures near the anterior angles, and scattered, very superficial punctation on the lateral margins. Elytra dilated posteriorly, longer and wider than pronotum, with rounded humeral angles. Surface with very fine, dense punctation. Abdomen with dense, not fine punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 398-399. Aedeagus (Fig. 400) 1.85 mm long, ovoid elongate, very large, long and narrow, with large, broad median lobe; parameres long and arched; inner sac tape-like, narrow, covered with fine scales,

ETYMOLOGY. The specific epithet comes from the Latin “punctatus-a-um” (spotted).

DISTRIBUTION. The species is known only from the type locality in Central Madagascar (Fig. 435).

5. *erosus* GROUP

KEY TO THE SPECIES

1. Lateral margin of elytra entirely black. Lateral portion of head with dense, fine punctation; epistoma widely concave (Fig.); last 3 abdominal segment reddish; body 17-18 mm long; aedeagus as in Fig. 404..... 1. *G. nigripennis* (Jarr.)

-. Lateral margin of elytra with anterior portion near the scutellum reddish..... 2

2. Head with sparser, fine punctation; epistoma less concave (Fig. 416); genital segment and partially 6th visible abdominal segment reddish; body 15-16 mm long; aedeagus as in Fig. 416.
..... *G. erosus* (Fvl.)

-. Head with denser, broad punctation; epistoma with feebly emargination (Fig.); genital segment yellowish; body 12 mm long; aedeagus as in Fig. 420..... 3. *G. elegans* sp.n.

1. *Gauropterus nigripennis* (Jarrige, 1948) comb.n.

Platydomus nigripennis Jarrige, 1948: 18; Herman, 2001a: 3743.

TYPE MATERIAL. The Muséum national d'Histoire naturelle de Paris preserves 1 specimen, female, labelled "Antongil., Dr. Nodier", "Type" (on red label).

EXAMINED MATERIAL. Central Madagascar, Antananarivo prov., Manankazo env., I. Jenis 20-22.XI.1996, 2 ♂♂, 1 ♀ (cJ); Central Madagascar, Ranomafana, 90 Km E Fianarantsoa, F. & L. Kantner 1-5.XII.1999, 1 ♀ (SMNS), 1 ♂ (cB); Central Madagascar, Rés. Expérimentale de Vohimana, "Circuit 4, bivouac", 18°55'02"S, 48°39'30.7"E, 966 m, E. L. S. Rahanitriniana & E. M. Rabotoson 20.VIII.2012, 1 ♂ (MMB).

DESCRIPTION. Length of body 15 mm; from anterior margin of head to posterior margin of elytra: 9.5 mm. Body black, with reddish 6th visible abdominal segment and genital segment; antennae and legs brown dark. Head sub-rectangular, a little longer than wide, with moderately rounded sides and widely rounded posterior angles. Eyes medium-sized and scarcely protruding. Surface of head covered with deep, dense, circular, areolate punctation, sparser anterior and posterior; folded lateral surface of head with dense, small punctures. Epistoma and labrum as in Fig. 401. Superior concavity of epistoma narrow and deep. Pronotum dilated anteriorly, as long as head, narrower than it, with oblique anterior margins, marked anterior angles and emarginated sides. Surface with one puncture near the anterior angles and some punctures on the lateral margins. Elytra sub-rectangular, large, not dilated posteriorly, with sub-rectilinear sides and marked humeral angles. Surface with two series of punctures near the suture, one median and one lateral; all the series composed by very fine and very sparse punctures. Abdomen with transverse micro-striation and evident punctation, especially at the base of the segments. Tergite and sternite of male genital segment as in Figs 402-403. Aedeagus (Fig. 404) 2.22 mm long, large,

ovoid elongated, with broad median lobe; parameres long; inner sac tape-like, wide, folded some times on itself, covered with fine scales.

DISTRIBUTION. Central Madagascar (Fig. 435).

REMARKS. According to Jarrige (l.c.), this species differs from *G. erosus* (Fvl.) by sparser punctuation on head, shiny between the punctures and on the anterior and posterior surface of head. Head shorter and dilated laterally, between posterior margin of eyes and posterior angles; elytra totally black, with finer punctuation. Further, important differences are the shape of the labrum and epistoma and the genitalia.

2. *Gauropterus erosus* (Fauvel, 1905) comb.n.

Platydomus erosus Fauvel, 1905; 174; Bernhauer & Schubert, 1914: 309; Herman, 2001a: 3743.

TYPE MATERIAL. The Institut royal des Sciences naturelles of Bruxelles preserves 1 specimen, female, labelled "*Platydomus* / Fauvel", "*erosus* / Fvl.", "forêt de Maramanga / Madag. Est", "Type" (on orange label). It bears the label "*Gauropterus erosus* (Fvl.), Bordoni det. 2017".

EXAMINED MATERIAL. Central Madagascar, Maromizaha Protected area, 1142 m, 18°57'56"S, 48°27'18"E, MAR / Jan 2017, P. Banar 18-21.I.2017, 1 ♂ (MMB), 1 ♂ (cB); Central E Madagascar, Andasibe-Mantadia N.P., Mantadia, "Circuit *Eulophia*", 18°47'53"S, 48°25'40"E, 955 m, MTD / Jan 2017, P. Banar 19-22.I.2017, 2 ♂♂ (MMB); Central Madagascar, Central Plat., Andasibe, 950 m, V. Dolin & R. Andreeva 19-31.XII.2001, 1 ♂ (cJ); Central Madagascar, Fianarantsoa Prov., Ranomafana Nat. Park, Talatakely area, 900 m, 21.25041'S, 47.41945'E, mixed tropical forest, D. H. & K. M. Kavanaugh, R. L. Brett, E. Nelson & F. Vargas 4-16.I.2001, 2 exx. (CAS); SW Madagascar, Toliara Prov., Andohahela Nat. Park, Col du Sedro, 3.8 Km 113th ESE Mahamavo, 37.6 Km 341st NNW Tolagnaro, 900 m, montane rainforest, Fisher, Griswold *et al.* 21-25.I.2002, 1 ex. (cB).

DESCRIPTION. Length of body 15-15.5 mm; from anterior margin of head to posterior margin of elytra: 8-8.3 mm. Body black, with red humeral angles and genital segment; antero-lateral margins of elytra and humeral angles yellowish. Head sub-rectangular, with almost rectilinear sides and rounded posterior angles. Eyes small and a little protruding. Surface of head almost totally covered with dense, very deep, wide punctuation, except for the clypeus and the posterior portion of head. Some punctures, partially setiferous, below the eyes and one setiferous puncture near the posterior angles. Folded lateral surface of head with more sparse punctuation than in *G. nigripennis*. Epistoma and labrum as in Fig. 413. Superior concavity of epistoma evident. Pronotum shorter than head, anterior as wide as it, widened anteriorly, with very oblique anterior margins, widely rounded anterior angles and emarginate sides. Surface with a big puncture near the anterior angles,

followed by an oblique series of superficial, oblong punctures. Elytra sub-rectangular, long, very longer and wider than pronotum, with rounded humeral angles. Surface with very fine, sparse punctation, arranged in three series, one juxtatural, one median and one lateral. Abdomen with very fine, dense, transverse micro-striation and superficial but evident punctation on the anterior portion of the segments. Tergite and sternite of male genital segment as in Figs 414-415. Aedeagus (Fig. 416) 1.7 mm long, sub-ovoid, with large median lobe; parameres arched, long; inner sac tube-like, folded on itself and covered with very fine scales.

DISTRIBUTION. The species is known from Central Madagascar.

3. *Gauropterus elegans* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, 5 Km E Moramanga, 18°57'10.3 S, 048°16'07.0" E, P. Pavel 21-23.I.2010 (NMS).

DESCRIPTION. Length of body 12 mm; from anterior margin of head to posterior margin of elytra: 6 mm. Body black; tarsi and anterior angles of elytra reddish; antennae and legs brown dark. Head sub-quadrangular, with sub-rectilinear sides and narrowly rounded posterior angles. Labrum and epistoma as in Fig. 417. Eyes medium-sized and barely protruding. Surface, except for the clypeus, with deep, round punctation; the distance between the punctures more than the diameter of the same. Some broader punctures below the eyes. Pronotum moderately longer and visibly narrower than head, with very oblique anterior margin, widely rounded anterior angles and slightly emarginated sides. Surface with the usual big puncture near the anterior angles. Elytra sub-rectangular, longer and wide than pronotum, with sub-rectilinear and sub-parallel sides and rounded humeral angles. Surface wrinkled, with superficial, broad punctation, arranged in three series one juxtatural, one median and one lateral. The lateral surface of elytra without punctation. Abdomen with traces of transverse micro-striation and deep, sclosed punctation, arranged in 3-4 series on each segment. Tergite and sternite of male genital segment as in Figs 418-419. Aedeagus (Fig. 420), 1.68 mm long, ovoid, with emarginate median lobe; parameres long; inner sac tube-like, narrow and long, covered with fine spinulae.

ETYMOLOGY. The specific epithet comes from the Latin “elegans-te” (elegant).

DISTRIBUTION. The species is known from Central Madagascar.

Gen. *Malgalinus* gen.n.

TYPE SPECIES. *Leptacinus politus* Fauvel, 1895.

DESCRIPTION. The genus differs from the other Xantholinini by the contemporary presence of the following characters: head normally dilated laterally, regardless of sex, sometimes with a ventro-lateral groove which produces a thin ledge below the

eyes; ventral surface flat; eyes large and protruding; maxillary palpi with long and thin articles, the third longer than the second (Fig. 422); labial palpi of similar shape (Fig. 423); labrum as in Fig. 421; mandible narrow, with lateral groove; ocular grooves absent; frontal grooves short, arched; gular sutures fused together for almost all their length (Fig. 425); antesternal plate divided; upper epipleural line of pronotum entire and not joint with the lower line; sternum with median, posterior apophysis barely visible; pronotum with dorsal and lateral series of punctures; tarsi long and narrow; tergite of the male genital segment very broad, normally with concave posterior margin, provided with more or less evident postero-lateral lobules with three long, apical setae (Figs 426, 436); aedeagus (Figs 451, 461) of peculiar shape, very membranous, transparent and soft, with long, sometimes robust parameres, provided with setae; inner sac in some taxa just visible.

ETYMOLOGY. The name of the genus comes from the Malagasy term “malagasy” and from the Latin “linus-a-um”, as suggested by my colleague Jiří Janák.

DISTRIBUTION. Madagascar.

REMARKS. The reader should take into account that the species of this group show a certain variability in the size of the body

KEY TO THE SPECIES-GROUPS

1. Head sub-rectangular with barely rounded sides..... 2.
 - . Head sub-ovoid, barely dilated laterally..... Group B
 - . Head sub-round, with widely rounded sides..... 3
2. Species with shorter aedeagus (0.7-0.96 mm) and large parameres (apart from *M. densicephalus* sp.n.); inner sac composed by 2 very thin structures in the shape of a stick or apparently not visible (Fig.428, 451)..... Group A
 3. Species with long aedeagus and long, narrow parameres..... Group C

GROUP A

KEY TO THE SPECIES

1. Body medium-sized (7-7, 5 mm long); head with longitudinal striation; pronotum with dorsal series of 6 punctures; aedeagus (Fig. 428) 0.7 mm long, short, ovoid, with inner sac in the form of a forked stick at the proximal apex..... 1. *M. politus* (Fauvel)
- . Body smaller (5.4-5.5 mm long); head without micro-striation; pronotum with dorsal series of 5 punctures; aedeagus 0.74-0.85 mm long; inner sac with two distal, short stick..... 2
- . Body small (4.5 mm long); head with polygonal micro-reticulation; aedeagus (Fig. 431) ovoid, narrow, with long, peculiar parameres; inner sac apparently not visible..... 2. *M. densicephalus* sp.n.

2. Aedeagus (Fig. 434) 0.85 mm long, ovoid, narrow distally, with large parameres; inner sac composed by two sticks distally.....3. *M. montanus* sp.n.
 -. Aedeagus (Fig. 438) 0.74 mm long, similar to that of *M. montanus* sp.n., but with very long and narrow parameres; inner sac with two diaphanous stick.....4. *M. orientalis* sp.n.

1. *Malgalinus politus* (Fauvel, 1895) comb.n.

Leptacinus politus Fauvel, 1895: 168; Bernhauer & Schubert, 1914: 294; Herman, 2001a: 3681.

TYPE MATERIAL. The Institut royal des Sciences naturelles of Bruxelles preserve 1 specimen, female, labelled "*politus* Fvl.", "Type" (on pink label), "*Malgalinus politus* (Fauv.), J. Janák det. 1992" (in litt.).

EXAMINED MATERIAL. N Madagascar, Diégo Suarez Prov., Sakalava Beach, 10 m, dwarf littoral forest, 12°15'46"S, 49°23'51"E, R. Harin'Hala 15.II-6.III.2001, 1 ex. (CAS), 1 ex. (cB); NE Madagascar, Tamatave prov., Andasibe (Maromizaha), I. Jenis 21-24.XI.1995, 1 ex. (cJ); Andasibe-Mantadia N.P., 946 m, 18°56'18.4"S, 48°25'04.1"E, P. Banar 25-31.I.2019, 3 exx. (MMB); same data, 959 m, 28°56'24.3"S, 48°25'12.4"E, 1 ex. (MMB); Andasibe Mantadia N.P., Andasibe, 947 m, 48°25'04.1"S, 18°56'18.4"E, P. Banar 23-31.I.2019, 34 exx. (MMB), 8 exx. (cB); same data, 959 m, 48°25'12.4"S, 18°56'24.3"E, P. Banar 25-31.I.2019, 132 exx. (MMB); same data, 945 m, 48°25'19.3"S, 18°56'18.3"E, P. Banar 25-31.I.2019, 42 exx. (MMB); Central Madagascar, Mandraka, 1300-1400 m, forêt dégradée, ruisseau, J. Janák 7.I.1995, 1 ex. (cJ); Central Madagascar, Anjozorobe, Soa Camp, 1300 m, primary montane forest, G. de Rougemont 10-11.IV.2006, 10 exx. (NHMO), 3 exx. (cB); Anjozorobe, 1331 m, 18°24'47.4"S, 47°56'33.1"E, P. Banar 15-19.I.2019, 13 ex. (MMB); Central Madagascar, Antananarivo prov., Manankazo env., I. Jenis 20-22.XI.1996, 3 exx. (cJ); Central Madagascar, Antananarivo prov., Manankazo env., I. Jenis 26-29.XI.2002, 2 exx. (cJ), 1 ex. (cB); Central Madagascar, Ambohitantely Spec. Rés., 18°11'46"S, 47°17'13"E, 1598 m, P. Banar 5-8.I.2017, 6 ex. (MMB); same data, 1604-1619 m, 18°11'52"S-18°10'17"S, 47°17'08"E-47°16'38"E, P. Banar 5 exx. (MMB); same data, 1497 m, 18°10'52.6"S, 47°17'22.5"E, P. Banar 18.XI.2019, 4 exx.; same data, 1603 m, 18°11'52.7"S, 47°17'04"E, P. Banar 116.XI.2011, *Pandanus* litter, 1 ex. (MMB); Central E Madagascar, Fianarantsoa, 45 Km S Ambalavao, 785 m, 22.13S, 47.1E, rainforest, B. L. Fisher 24.IX.1993, 7 exx. (FMHN), 1 ex. (cB); Central E Madagascar, Fianarantsoa, R. S. Ivahibe, 7.5 Km ENE Ivohibe, Camp I, 900 m, 22°28.2'S, 46°57.6'E, rainforest, B. L. Fisher 7-12.X.1997, 10 exx. (FMNH), 2 exx. (cB); Central E Madagascar, Fianarantsoa Prov., Ranomafana Nat. Park, Talatakoly area, 900 m, mixed tropical forest, 21.25041°S, 47.41945°E, D. H. & K. M. Kavanaugh, R. L. Brett, E. Elsom & F. Vargas 4-16.I.2001, 4 exx. (CAS), 1 ex. (cB); Central E Madagascar, Fianarantsoa, Ifanadiama, Ranomafana, Talatakely, 1000 m, 21.26S, 47.42E, D. Lees at al. 4-7.XII.2004, 2 exx. (NHML), 1 ex. (cB); E Madagascar, Maromiza prov., Andasibe, 950-1150 m, forêt humide, ruisseau, J.

Janák 8-10.I.1995, 1 ex. (cJ); E Madagascar, Ranomafana N.P., Ambodiamontana, 850-1000 m, J. Janák 26-27.I.1993, 96 exx. (cJ), 15 exx. (cB); Ranomafana N.P., 1020 m, 21°25'44"S, 47°25'17"E, P. Banar 10-114.I.2017, 25 exx. (MMB); same data, 976 m, 21°15'45.2"S, 47°25'12.7"E, P. Banar 8-11.I.2019, 18 exx. (MMB); E Madagascar, 30-32 Km ESE Betroka, 16090 m, Vohitrosa forest, 2 Km NEE ▲ 1825 m, rainforest, J. Janák 19-23.XII.1998, 4 exx. (cJ); E Madagascar, S Ambositra, R.N. Km 293 by Ambatofitorahana, 1700 m, rainforest, J. Janák 6.I.1999, 1 ex. (cJ); E Madagascar, Massif Ambondrombe, 1600-1700 m, slope SW, forêt humide, J. Janák & P. Moravec 17.III.1996, 2 exx. (cJ); S Madagascar, 13 Km NW Rés. Andohahola, 24.33S, 46.48E, montane rainforest, litter, B. L. Fisher 30.XI.1992, 1 ex. (FMNH); E Madagascar, N Andringitra, Vohidray rdg, 3-5 SE Amboarafibe, 1500-1850 m, J. Janák 8-9.IV.2001, 6 exx. (cJ); E Madagascar, 2 Km S Ambondro, 1350-1500 m, J. Janák 17-18.IV.2001, 5 exx. (cJ).

DESCRIPTION. Length of body 7-7.5 mm; from anterior margin of head to posterior margin of elytra: 3.5-4 mm. Head ovoid, slightly dilated laterally, with rounded sides from the eyes to the neck. Eyes large and protruding. Surface of head with sparse punctation; latero-anterior portion below the eyes longitudinally wrinkled. Head in ventral view with long, arched carina from the mandibles to over half the length of the head; the portion between this carina and the lateral margin of head concave. Surface with more or less longitudinal, wrinkled striation, mixed with some fine punctures. Pronotum as long as head, narrower than it, dilated anteriorly, with oblique anterior margins, widely rounded anterior angles, and barely emarginated sides. Surface with dorsal series of 5 punctures and lateral series of 1 anterior and 3 posterior punctures. Elytra sub-rectangular, markedly longer and wider than pronotum, with sub-rectilinear and sub-parallel sides and rounded humeral angles. Surface with evident punctation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with traces of transverse micro-striation and fine, sparse punctation. Tergite and sternite of male genital segment as in Figs 426-427. Tergite with concave posterior margin. Aedeagus (Fig. 428) 0.7-0.74 mm long, ovoid, narrow posteriorly, with robust parameres, provided with setae; inner sac shaped like a small tube divided at the apex.

DISTRIBUTION. Probably widespread in all island (Fig. 447).

2. *Malgalinus densicephalus* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, N Andringitra, Vohidray rdg., 3-5 Km SE Amboarafibe, 11750-1850 m, rainforest, J. Janák 12-18.IV.2001 (cJ).

DESCRIPTION. Length of body 4.5 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Body reddish brown dark, with more infuscate head and abdomen; antennae and legs testaceous. Head sub-rectangular, with moderately rounded sides and widely rounded posterior angles. Eyes medium-sized and

protruding. Surface of head with fine, dense, polygonal micro-reticulation and deep punctation, except for a median stripe; the distance between the punctures is equal to their diameter. Pronotum dilated anteriorly, as long as head, anteriorly a little narrower than it. Surface with dorsal series of 5 spaced punctures and lateral series of 4 punctures. Elytra large, dilated posteriorly, longer and wider than pronotum, with rounded humeral angles. Surface with fine and sparse punctation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with superficial, fine, transverse micro-striation and fine, very spaced punctation on the sides. Tergite and sternite of male genital segment as in Figs 429-430. Tergite with arched, short posterior lobules. Aedeagus (Fig. 431) 0.74 mm long, very narrow and short, with very long parameres of peculiar shape; inner sac apparently not visible.

ETYMOLOGY. The specific epithet comes from the Latin “densus-a-um” and “cephalus-a-um” (head with dense) polygonal micro-reticulation.

DISTRIBUTION. This species is known only from the type locality in E Madagascar.

REMARKS. The species differs from its congeners by size, shape, punctation and micro-reticulation of head, and by the aedeagus.

3. *Malgalinus montanus* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Antsiranana, R. S. Manongarivo, 20.4 km SW 219th Antanambao, 1860 m, 14°2.72'S, 48°24.06'E, litter in montane rainforest, B. L. Fisher 3.XI.1998 (FMNH).

DESCRIPTION. Length of body 5.4 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Similar to *M. politus* (Fvl.) but body smaller; darker head, sub-rectangular, not dilated, with moderately rounded sides and widely rounded posterior angles, without lateral carina; eyes smaller and less protruding; pronotum proportionally longer and narrower; elytra longer. Tergite and sternite of male genital segment as in Figs 432-433. Tergite broad, with short lateral lobules and without concave posterior margin. Aedeagus (Fig. 434) 0.85 mm long, with proportionally longer and robustior parameres; inner sac with 2 distal, short surface, covered with very fine setae.

ETYMOLOGY. The specific epithet comes from the Latin “montanus-a-um” (montane).

DISTRIBUTION. This species is known only from the type locality in N Madagascar.

4. *Megalinus orientalis* sp.n.

EXAMINED MATERIAL. Holotype ♂: SE Madagascar, Mt Ambondrombe (Ikoka), SW slope and ridge, 1600-1800 m, litter in rainforest, J. Janák 26.III-2.IV.2001 (cJ); paratypes: same data, ▲ 1579, Camp 6, 1500-1600, rainforest, J. Janák 25.III-3.IV.2001, 1 ♂ (cB); Andasibe Mantadia, Mantadia circuit *Eulophia*, 958 m, 18°48'16"S, 48°25'43"E, P. Banar 17-19.I.2017, 2 ♂♂, 4 ♀♀ (MMB).

DESCRIPTION. Length of body 5.5 mm; from anterior margin of head to posterior margin of elytra: 3.1 mm. Body shiny; head and abdomen brown dark, pronotum and elytra reddish brown, antennae and legs brown. Head ovoid, narrow forward, with moderately rounded sides and widely rounded posterior angles. Eyes medium-sized and a little protruding. Surface of head with sparse, fine punctation on the sides. Pronotum as long as head, narrower than it, with oblique anterior margin, widely rounded anterior angles and emarginated sides. Surface with dorsal series of 5 fine punctures and lateral series of 3 fine punctures. Elytra long, large, dilated posteriad, with rounded humeral angles, very longer and wider than pronotum. Surface with fine punctation, arranged in three series, one juxtatural, one median and one lateral. Abdomen with traces of transverse micro-striation and fine, punctation on the sides of each segment. Tergite and sternite of male genital segment as in Figs 436-437. Tergite squared, with very small posterior lobules and moderately concave posterior margin. Aedeagus (Fig. 438) 0.74 mm long, membranous, ovoid; parameres very long, for a long distance adjacent the distal sides of the bulb; inner sac composed by two series of fine scales.

ETYMOLOGY. The specific epithet comes from the Latin "orientalis-e" (eastern), in relation to the type locality.

DISTRIBUTION. This species is known only from the type locality in SE Madagascar.

GROUP B

1. Body about 6 mm long 2
 -. Body 5.3 mm long; dorsal series of pronotum with 5 punctures; aedeagus (Fig. 441) 0.55 mm long, ovoid very narrow, with very long parameres; inner sac apparently not visible
 1. *M. minutus* sp.n.
2. Body 6.5 mm long; head with dense punctation; 6th abdominal tergite with protruding lobules; aedeagus (Fig. 444) 0.8 mm long, ovoid elongated, with long and narrow parameres; inner sac tube-like long and narrow 2. *M. centralis* sp.n.
 -. Body 6 mm long; aedeagus (Fig. 448) 0.8 mm long with very large parameres and very large distal portion; inner sac apparently not visible 3. *M. janaki* sp.n.

1. *Malgalinus minutus* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Ranomafana N.P., 21°15'46"S, 47°25'14"E, 987 m, P. Banar 10-14.I.2017 (MMB); paratypes: same data, 9 ♂♂, 8 ♀♀ (MMB), 4 ♂♂, 1 ♀ (cB); Andasibe Mantadia, Mantadia N.P. circuit "*Eulophia*", 956 m, 18°47'55"S, 48°25'38"E, P. Banar 19-22.I.2017, 1 ♂, 3 ♀♀ (MMB).

DESCRIPTION. Length of body 5.3 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Body shiny, reddish brown with darker head. Head with dilated sides, rounded from the eyes to the neck. Eyes medium-sized and barely protruding. Surface of head with fine, scattered punctation. Pronotum shorter and narrower than head, with moderately oblique anterior margins, narrowly rounded anterior angles; dorsal series of 5 punctures and lateral series of 3 punctures. Elytra large, sub-rectangular, longer and wider than pronotum, with sub-parallel sides and marked humeral angles. Scutellum large without punctures. Surface with two series of fine punctures, one juxtasutural and on median. Abdomen with fine and sparse punctation on the sides of each segment. Tergite and sternite of male genital segment as in Figs 439-440. Aedeagus (Fig. 441) 0.55 mm long, membranous and diaphanous except for the long parameres.

ETYMOLOGY. The specific epithet comes from the Latin "minutus-a-um" (small).

DISTRIBUTION. This species is known only from the type localities in E Madagascar.

2. *Malgalinus centralis* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Ambohitantely Spec. Rés., 1604 m, 18.11.52S, 47.17.06E, P. Banar 6-8.I.2017 (MMB); paratypes: same data, 3 ♂♂, 1 ♀ (MMB), 1 ♂ (cB); same data, 1535 m, 18°11'54"S, 47°17'25"E, P. Banar 17.XI.2011, 1 ♂ (MMB); same data, 1604 m, 18°11'52"S, 47°17'06"E, P. Banar 6-8.I.2017, 1 ♂, 5 ♀♀ (MMB); Fianarantsoa prov., 29 Km SSW Ambositra, Ankazomivady, 20°46.6'S, 47°09.9'E, 1700 m, litter in disturbed montane forest, B. L. Fisher 7.I.1998, 2 ♂♂, 2 ♀♀ (FMNH), 1 ♂, 1 ♀ (cB); Anjozorobe, 1424 m, 18.4118S, 47.9504E, V. Grebennikov 8.I.2019 (cJ); same data, 18°24'47.4"S, 47°56'33.1"E, 1331 m, P. Banar 15-19.I.2019, 2 ♂♂ (MMB), 1 ♂ (cB); same data, 1382 m, under *Pandanus*, 18°24'35.2"S, P. Banar 15-19.I.2019, 1 ♂, 2 ♀♀ (MMB); Ranomafana N.P., 974 m, 21°15'45.2"S, 47°25'12.7"E, P. Banar 8-11.I.2019, 1 ♀ (MMB); Andasibe Mantadia N.P., Andasibe, 959 m, 18°56'24.3"S, 48°25'12.4"E, P. Banar 25-31.I.2019, 1 ♀ (MMB).

DESCRIPTION. Length of body 5.5 mm; from anterior margin of head to posterior margin of elytra: 3.4 mm. Similar to *M. politus* (Fvl.) from which differs by the following characters: body smaller, head more dilated, with more rounded sides; surface of head with denser punctation; pronotum narrower, with less oblique

anterior margins; elytra more sub-rectangular, shorter, with less evident humeral angles. Tergite and sternite of male genital segment as in Figs 442-443. Tergite with evident, long posterior lobules. Aedeagus (Fig. 444) 0.8 mm long, with longer and narrower parameres; inner sac with some distal setae, followed by 2 structures shaped like a small tubes.

ETYMOLOGY. The specific epithet comes from the Latin *centralis-e* (central).

DISTRIBUTION. This species is known only from the type localities in Central Madagascar.

3. *Malgalinus janaki* sp.n.

EXAMINED MATERIAL. Holotype♂: N Madagascar, Massif Anjanaharibe Nord, sentier Ambodihasina-Ambalarombe, 600-700 m, Riv. Andramonta env., forêt humide, J. Janák & P. Moravec 24-29.II.1996 (cJ); paratype: Makirovana, 581 m, 14.1714S, 49.9497E, V. Grebennikov 25.XII.2018, 1 ♂ (cJ).

DESCRIPTION. Length of body 5 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Similar to *M. politus* (Fvl.) from which differs by the following characters: body markedly smaller and narrower, reddish brown black, with brown antennae and yellowish legs; eyes proportionally larger; pronotum sub-rectangular, slightly dilated anteriorly; elytra narrower. Tergite and sternite of male genital segment as in Figs 445-446. Tergite long and narrow, with latero-posterior lobules and posterior margin with a median projection. Aedeagus (Fig. 448) 0.8 mm long, of very peculiar shape, ovoid but with broad distal portion; parameres evenly of peculiar shape, very dilated; inner sac apparently not visible, except for a small groups of distal, minute scales.

ETYMOLOGY. The species is dedicated with pleasure to the friend and colleague Ing. Jiří Janák who collected a large part of the studied species, giving me the opportunity to study copious material.

DISTRIBUTION. This species is known only from the type localities in N Madagascar.

GROUP C

- | | |
|--|----|
| 1. Body 6-6.7 mm long..... | 2 |
| - Body 7-8.5 mm long..... | 4 |
| 2. Body 6.7 mm long; aedeagus (Fig. 451) 0.85 mm long, with basal bulb dilated proximally..... | |
| 1. <i>M. septentrionalis</i> sp.n. | |
| - Body 6 mm long..... | 3. |
| 3. Aedeagus (Fig. 454) 0.9 mm long, with peculiar parameres; inner sac apparently not visible | |

- 2. *M. dieganus* sp.n.
 -. Aedeagus (Fig. 458) 0.92 mm long, with peculiar distal portion and large parameres in distal portion; inner sac tube-like, short and diaphanous 3. *M. minor* sp.n.
4. Aedeagus (Fig. 461) 0.85 mm long, similar to that of *M. minor* sp.n. but shorter, inner sac apparently not visible; antero-lateral portion of head with polygonal micro-reticulation; body 7 mm long 4. *M. enakarensis* sp.n.
 -. Aedeagus (Fig. 464) 0.96 mm long, with peculiar parameres; inner sac tube like, diaphanous; body 8.5 mm long 5. *M. indomitus* sp.n.

1. *Malgalinus septentrionalis* sp.n.

EXAMINED MATERIAL. Holotype ♂: NE Madagascar, Fambanambo (Maroantsera), J. Vadon IX.1958 (MRAC).

DESCRIPTION. Length of body 6.7 mm; from anterior margin of head to posterior margin of elytra: 4 mm. Similar to *M. politus* (Fvl.) from which differs by the following characters: body darker, larger, brown, with reddish brown elytra; head spherical; eyes medium-sized and flat; pronotum not dilated anteriorly, with marked anterior angles; elytra shorter. Tergite and sternite of male genital segment as in Figs 449-450. Tergite squared, with very small posterior lobules and without concave posterior margin. Aedeagus (Fig. 451) 0.85 mm long, very narrow distally, with very long, proximally narrow and acute parameres; inner sac apparently not visible.

ETYMOLOGY. The specific epithet comes from the Latin "septentrionalis-e" (northern).

DISTRIBUTION. This species is known only from the type locality in NE Madagascar.

REMARKS. The specimen is in very poor conditions.

2. *Malgalinus dieganus* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Diégo Suarez Prov., Sakalava Beach, 10 m, 12°15'46"S, 49°23'51"E, R. Harin'Hala 15.II-6.III.2001, littoral forest (CAS); paratypes: same data, 2 ♀♀ (CAS), 1 ♂ (cB); same data, Parc Nat. Montagne d'Ambre, 960 m, 12°30'52"S, 49°10'53"E, R. Harin'Hala 12.II-4.III.2001, 1 ♀ (CAS), 1 ♂ (cB).

DESCRIPTION. Length of body 5.9 mm; from anterior margin of head to posterior margin of elytra: 2.7 mm. Body shiny, reddish brown, with black head; antennae and legs brown light. Head dilated laterally, with widely rounded sides and posterior angles; a carina under the eyes and along the lateral sides. Eyes medium-sized and slightly prominent. Surface of head with few, fine but evident median punctures under the eyes. Pronotum evidently shorter and narrower than head, with oblique anterior margin, rounded anterior angles and emarginated sides. Surface with dorsal

series of 5 punctures and lateral series of 4 spaced punctures. Elytra sub-rectangular, wider and longer than pronotum, with marked humeral angles. Surface with fine and spaced punctures, arranged in three series, one juxtatural, one median and one lateral. Abdomen with fine punctation on the sides of each segment. Tergite and sternite of male genital segment as in Figs 452-453. Aedeagus (Fig. 454) 0.9 mm long, narrow and very long, diaphanous; the basal bulb is followed by two narrow structures on which the thick parameres are connected.

ETYMOLOGY. The specific epithet refers to Diégo Suarez province.

DISTRIBUTION. This species is known only from the type localities in N Madagascar.

3. *Malgalinus minor* sp.n.

EXAMINED MATERIAL. Holotype ♂: Madagascar, Andasibe-Mantadia N.P., Mantadia, "Circuit *Eulophia*", 955 m, 18°47'53"S, 48°25'40"E, P. Banar 17-22.I.2017 (MMB); paratypes: same data, 47 ♂♂, 67 ♀♀ (MMB), 8 ♂♂, 5 ♀♀ (cB); same data, 968 m, 18°48'16"S, 48°25'43"E, P. Banar 17-19.I.2017, 1 ♂, 16 ♀♀ (MMB), 1 ♂, 5 ♀♀ (cB); Andasibe Mantadia N.P., Andasibe, 947 m, 48°25'04.1"E, 18°56'18.4"S, P. Banar 25-31.I.2019, 7 ♂♂, 112 ♀♀ (MMB), 7 ♂♂, 11 ♀♀ (cB); same data, 946-947 m, 48°25'04.1"S, 18°56'18.4"E, P. Banar 23-31.I.2019, 5 ♂♂, 111 ♀♀ (MMB), 2 ♂♂, 2 ♀♀ (cB); same data, 18°56'24.3"E, 48°25'12.4"S, P. Banar 25-31.I.2019, 14 ♀♀ (MMB); same data, 945 m, 48°25'19.3S, 18°56'18.3"E, P. Banar 25-31.I.2019, 8 ♂♂, 58 ♀♀ (MMB); same data, 959 m, 18°56'24.3"S, 48°25'12.4E, P. Banar 25-31.I.2019, 15 ♂♂, 63 ♀♀ (MMB), Madagascar, Maromizaha, Protected area, 1130 m, 18.57.55S, 48.27.17E, MAR / Jan 2017, P. Banar 18-21.I.2017, 1 ♂ (MMB); E Madagascar, Ranomafana N.P., 987 m, 21.15.46"S, 47.25.14"E, RNF / Jan 2017, P. Banar 10-14.I.2017, 4 ♂♂ (MMB); same data, 21°15'45.2"S, 47°25'12.7"E, P. Banar 8-11.I.2019, 5 ♂♂, 24 ♀♀ (MMB), 2 ♂♂, 4 ♀♀ (cB); Anjozorobe forest, 1382 m, 18°24'35.2"S, 47°56'42.5"E, P. Banar 15-19.I.2019, 1 ♂ (MMB).

DESCRIPTION. Length of body 6-6.3 mm; from anterior margin of head to posterior margin of elytra: 3-3.4 mm. Similar to *M. politus* (Fvl.) but very smaller and narrower; pronotum, elytra and abdomen reddish brown, with darker last three segments; pronotum proportionally shorter, more dilated anteriorly, with more oblique anterior margins; elytra more sub-rectangular, with sub-parallel and sub-rectilinear sides. Tergite and sternite of male genital segment as in Figs 456-457. Tergite of peculiar shape, with wavy sides and posterior margin very concave. Aedeagus (Fig. 458) 0.92 mm long, very long and very narrow, with long and narrow median lobe; parameres very dilated in the distal portion; inner sac tube like, almost devoid of scales.

ETYMOLOGY. The specific epithet comes from the Latin "minor-minor-minus" (smaller).

DISTRIBUTION. This species is known from the type localities in Central N Madagascar (Fig. 455).

4. *Malgalinus enakaraensis* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Ranomafana N.P., Ambodiamontana, 850-1000 m, J. Janák 26-27.I.1993 (cJ); paratypes: same data, 42 exx. (cJ), 6 exx. (cB); same data, Ranomafana Nat. Park, Talatakely area, 900 m, 21 25041°S, 47. 41945°E, tropical forest, D. H. & K. M. Kavanaugh, R. L. Brett, E. Elsom & F. Vargas 4-16.I.2001, 3 ♂♂ (CAS); Andasibe N.P., 900 m, primary montane forest, G. de Rougemont 2.IV.2006, 1 ex. (NHMO); Central Madagascar, Fianarantsoa, 29 Km SSW Ambositra, Ankazomivady, 1700 m, 20°46.6'S, 47°9.9'E, disturbed montane rainforest, B. L. Fisher 7.I.1998, 2 exx. (FMNH); Antananarivo, R. S. Ambohitantely, 24 Km NE Ankazobe, 18°10.1'S, 47°16.6'E, 1450 m, disturbed transitional montane mossy rainforest, S. M. Goodman 12.XII.1997, 3 exx. (FMNH), 1 ex. (cB); Antananarivo Prov., botanic garden c / o, Andasibe N.P., 1025 m, 18°55.58'S, 48°24.47'E, R. Harin'Hala 31.VII-15.VIII.2001, 1 ♂ (CAS); same data, 30.IV-29.IX.2001, 1 ♂, 9 ♀♀ (CAS), 2 ♂♂, 2 ♀♀ (cB); same data, Andasibe N.P., headquarters, 1050 m, 18°57'76"S, 48°27.16"E, tropical forest. R. Harin'Hala 9-23.III.2001, 1 ♂, 6 ♀♀ (CAS), 1 ♀ (cB); Andasibe-Mantadia N.P., Mantadia, "Circuit *Eulophia*", 941 m, 18°48'14"S, 48°25'43"E, P. Banar 22-23.I.2017, 1 ♂, 5 ♀♀ (MMB); Andasibe-Mantadia N.P., 946 m, 18°56'18.4"S, 48°25'04.1"E, P. Banar 25-31.I.2019, 1 ♂, 2 ♀♀ (MMB); S Madagascar, Enakara, 10 Km NW, Rés. Andohahela, 430 m, 24.34S, 46.49E, pitfall trap in rainforest, B. L. Fisher 22.XII.1992, 3 exx. (FMNH); same data, 800 m, 16.XI.1992, 18 exx. (FMNH), 5 exx. (cB); same data, 1250 m, 24.33S, 46.48E, 30.XI.1992, 1 ex. (FMNH).

DESCRIPTION. Length of body 6.8-7.2 mm; from anterior margin of head to posterior margin of elytra: 3.2-3.5 mm. Body shiny, reddish brown, with barely darker head; antennae brown, legs brown yellowish. Head of peculiar shape, very dilated laterally behind the eyes, with an evident carina on the lateral margin, from the eyes to the neck. Eyes medium-sized and moderately protruding. A groove along the inner margin of eyes. Surface of head with scattered, deep, small punctation, except for a median area. Antero-lateral portion of head, between eyes and lateral carina, with fine, very dense, more or less polygonal micro-reticulation. Ventral surface of head with a carina from the mandible to almost half length of head, totally covered with fine, dense punctation. Pronotum very narrow, shorter and narrower than head, with oblique anterior margins, rounded anterior angles and emarginate sides. Surface with dorsal series of 5 punctures and lateral series of 2 anterior and 3 posterior punctures. Elytra sub-rectangular, longer and very wider than pronotum, with sub-rectilinear sides and rounded humeral angles. Surface with fine punctation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with very fine, sparse punctation. Tergite and sternite of male genital segment as in Figs

459-460. Tergite with evident postero-lateral lobules and rectilinear posterior margin. Aedeagus (Fig. 461) 0.85 mm long, narrow and long, with very narrow median lobe; parameres of peculiar shape, very dilated posteriorly; inner sac apparently not visible.

ETYMOLOGY. The specific epithet refers to one of the typical localities (Enakara).

DISTRIBUTION. Madagascar.

5. *Malgalinus indomitus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Andasibe-Mantadia N.P., Mantadia, "Circuit *Eulophia*", 941 m, 18°48'14"S, 48°25'43"E, MTD / Jan 2017, P. Banar 19-22.I.2017 (MMB); paratype, same data, 1 ♀ (cJ).

DESCRIPTION. Length of body 8.5 mm; from anterior margin of head to posterior margin of elytra: 4 mm. Similar to *M. politus* (Fvl.) from which differs by the following characters: body shiny, larger, longer, darker; head black, pronotum brown black, elytra and abdomen brown; antennae and legs testaceous; surface of head with broader punctation; head very wide, the sides very dilated and widely rounded; eyes larger, barely protruding, from which starts the lateral carina; pronotum larger, more dilated anteriorly. Tergite and sternite of male genital segment as in Figs 462-463. Tergite with arched, robust posterior lobules. Aedeagus (Fig. 464) 0.96 mm long, very narrow in the distal portion where is divided in two long, thin lobules; parameres of peculiar shape, narrow in the proximal portion and very dilated in the distal portion; inner sac narrow, just visible, with few, minute scales.

ETYMOLOGY. The specific epithet comes from the Latin "indomitus-a-um" (indomitable), for the aggressive appearance.

DISTRIBUTION. This species is known only from the type locality in Central Madagascar (Fig. 455).

Genus *Heterocinus* Jarrige, 1970

Heterocinus Jarrige, 1970: 44; Herman, 2001a: 3651.

TYPE SPECIES. *Leptacinus tenellus* Erichson, 1839: 336, by original designation.

DESCRIPTION. Similar in the external shape to *Leptacinus* Erichson, 1839 from which differs by the contemporary presence of the following characters: maxillary palpi with more globular articles, the last shorter than the 3rd article (Fig.); labial palpi (Fig.) with the last article evidently longer than the 2nd, ocular grooves absent or just marked, frontal grooves deep, sub-parallel; gular sutures V-shaped, widely separated from each other along their entire length (Fig.), antesternal plate with suture, sternum without evident median apophysis; upper epipleural line of pronotum joint with the lower line; sixth visible tergite often with concave posterior

margin (Fig.), in some taxa with protruding lateral lobules (Fig.); tarsi not dilated, with short, square segments; bulbus of the aedeagus sub-ovoid, flat, with two, sometimes three thickening of the membrane vaguely squared on the ventral side (Fig.); parameres thick and robust, more or less symmetric, provided with a comb of short setae, often facing inwards. Female genital segment as in Fig. 470.

DISTRIBUTION. Madagascar.

REMARKS. The difference between *Leptacinus*, which does not occur in the Magalasyan Region or in Africa south of Sahara, is evident. The genus is endemic to Madagascar and indeed it is the most characteristic and widespread in that area. I believe that the exoskeletal and aedeagic characters that are related to the genus *Chaetocinus* Clark *et al.*, 1972 of the Afrotropical region (Bordoni, 2016) are evident. The thickening of the membrane on the ventral side of aedeagus are very showy, so that Jarrige (1970) (and subsequently Lecoq, 1996) believed they were on the dorsal side and so he has always figured them in his very rough drawings, especially as regards the shape of the parameres and the structure of the inner sac. I prefer to keep this genus for the moment however in my opinion it could be considered as subgenus of *Chaetocinus*, since the only difference consists in having two darker plates on the dorsal side (but not in all) of the aedeagus and parameres with shorter setae. *Heterocinus* are small or medium-sized staphylinids so even a small different body size can be important for identification. Many species described below are compared with the most common species *Heterocinus brunneus* sp.n., since they are often very similar in colour, size and punctuation and can be distinguished with certainty only on the basis of the examination of the inner sac of the aedeagus. The inner sac present in some cases very fine, filiform structures, normally rectilinear and very closed, or wavy that I indicated as spinulae.

KEY TO THE SPECIES-GROUPS

- | | |
|--|---------|
| 1. Inner sac more or less narrow, shaped like a longitudinal tube, covered with two denser series of fine spinulae or small spines, united in a single dark mass, sometimes with a group of distal spines..... | Group A |
| .- Inner sac with only one series of spinulae or scales..... | Group B |
| .- Inner sac with 2 series of spines or scales spaced apart..... | Group C |
| .- Inner sac wrapped one or more times..... | Group D |
| .- Inner sac of different shape..... | Group E |

Before the key of the various groups of species, I list some taxa known only on the basis of female specimens:

1. *Heterocinus dieganus* (Fauvel, 1905) comb.n.

Leptacinus dieganus Fauvel, 1905: 169; Bernhauer & Schubert, 1914: 293; Herman, 2001a: 3672.

TYPE MATERIAL. The Institut royal d'Histoire naturelle of Bruxelles preserves 1 specimen, female, labelled "Madagascar / Diégo Suarez / Ch. Alluaud 1893", "Alluaud", "Type" (printed on pink label), "*dieganus* / Fvl."

DESCRIPTION. Length of body 4 mm; from anterior margin of head to posterior margin of elytra: 1.9 mm. Body reddish orange, with antennae and especially legs yellowish pale. Head of characteristic shape, ovoid, proportionally short, with moderately rounded sides and widely rounded posterior angles. Eyes medium-sized and almost flat. Surface of head with deep, scattered punctation, except for a wide median stripe. Pronotum very longer than head, barely narrower than it, with very oblique anterior margins, widely rounded anterior angles and narrowly emarginated sides. Surface with dorsal series of 8-9 fine punctures and lateral series of 5-6 irregular punctures. Elytra moderately dilated posteriad, longer and wider than pronotum, with not protruding humeral angles, not evident. Surface with some series of very fine punctation. Abdomen with fine punctation, arranged in some series.

Male unknown.

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

REMARKS. Only the study of a male will be able to define the systematic position of the species.

2. *Heterocinus capitegranosus* sp.n.

EXAMINED MATERIAL. Holotype ♀: Central Madagascar, Antananarivo Prov., botanical garden near the entrance to Andasibe N.P., 1025 m, 18°55.58'S, 48°24.47'E, R. Harin'Hala 5-19.IX.2001, tropical forest (CAS).

DESCRIPTION. Length of body 5 mm; from anterior margin of head to posterior margin of elytra: 2.8 mm. Reddish brown with black head and brown antennae and legs. Characterized by the peculiar surface of head. Head sub-rectangular, barely narrower posteriad, with moderately rounded sides and widely rounded posterior angles. Eyes medium-sized and barely prominent. Surface of head very wrinkled, except for a median posterior stripe, due to a dense graininess between which there are some rear punctures. This peculiar micro-sculpture is particularly thick on the anterior portion of head. Pronotum sub-rectangular, as long as head, narrower than it, with slightly oblique anterior margins, rounded anterior angles and emarginated sides. Surface with dorsal series of 8 punctures and lateral series of 3-4 irregular punctures. Elytra sub-rectangular, barely dilated posteriad, slightly shorter and wider than pronotum, with closely rounded humeral angles. Abdomen with trace of

polygonal micro-recticulation and fine, scattered punctation on each segment. Male unknown.

ETYMOLOGY. The specific epithet comes from the Latin “capite-granosus-a-um”, in relation to the peculiar surface of head.

DISTRIBUTION. The specie is known only from the type locality in Central Madagascar.

3. *Heterocinus lembonibonaensis* sp.n.

EXAMINED MATERIAL. Holotype ♀: N Madagascar, 5 Km E Andapa-Lembonibona (1265 m), 800-1000 m, forêt dégradée, arbres, arbustes, J. Janák & P. Moravec 2.III.1996 (cJ); paratypes: same data, 2 ♀♀ (cJ), 1 ♀ (cB).

DESCRIPTION. Length of body 4.4 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Body brachypterous, small, shiny, reddish orange, with yellowish pale antennae and legs. Head sub-rectangular, with moderately rounded sides and widely rounded posterior angles. Eyes very small and flat, composed of few ommatidia. Surface of head with scattered, fine punctation. Pronotum longer and wider than head, with widely rounded anterior angles from the neck up to the front third of the pronotum, and feebly emarginated sides. Surface with dorsal series of 7-8 fine, irregular punctures and lateral series of 5-6 punctures. Elytra sub-rectangular, shorter and narrower than pronotum, with sub-rectilinear and sub-parallel sides and almost obsolete humeral angles. Surface with fine, scattered punctation, arranged in some spaced series. Abdomen with transverse micro-striation and fine, sparse punctures on the sides of each segment. Male unknown.

ETYMOLOGY. The specific epithet refers to the type locality.

DISTRIBUTION. The species is known only from the type locality in N Madagascar.

REMARKS. Only the study of a male will be able to define the systematic position of the species.

GROUP A

- | | |
|---|-------------------------------|
| 1. Body 4.7 mm long, brown amaranth; inner sac of the aedeagus (Fig. 473) sinuous, covered with very closed spinules and with two distal group of evident spines..... | 1. <i>H. forestalis</i> sp.n. |
| -. Body 5 mm long..... | 2. |
| -. Body 4-4.4 mm long..... | 3. |
| -. Body reddish, 3.8 mm long; inner sac of the aedeagus apparently without spines or scales..... | 2. <i>H. tenellus</i> (Er.) |

2. Inner sac of the aedeagus (Fig. 486) with a median series of sub ovoid scales next to a series of small ovoid scales; the proximal portion with closed spinulae; body 5 mm long, reddish brown dark.....3. *H. pluvialis* sp.n.
 -. Inner sac of the aedeagus (Fig. 489) with a dark mass of spinulae; a group of distal spines.....4. *H. brunneus* sp.n.
-
3. Elytra with two series of punctures near the suture, one median and one lateral; body 4.4 mm long; inner sac of the aedeagus (Fig. 492) covered with closed spinulae under which are two series of ovoid opposed scales5. *H. obstrusus* sp.n.
 . - Elytra with three series of punctures one juxtatural, one median and one lateral.....4
4. Tergite of the male genital segment protruding laterally; body 4.4 mm long; inner sac of the aedeagus (Fig. 476) covered with opposed spinulae, with one left series of spines.....6. *H. andramontanus* sp.n.
 -. Tergite of the male genital segment with posterior margin slightly convex; body 3.6 mm long, reddish brown; inner sac of the aedeagus (Fig. 479) covered with three different series of closed spines and scales.....7. *H. betsileo* sp.n.
 -. Tergite of the male genital segment with posterior margin slightly convex; body 4 mm long inner sac of the aedeagus similar to that of *H. brunneus* but with different spinulae, above a left series of oval scales; a distal group of arched scales (Fig. 482).....8. *H. minutulus* sp.n.

1. *Heterocinus forestalis* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, 5 Km S Ambalamamakama, route Ambositra-Fianarantsoa, forest, L. Bartolozzi, S. Taiti & C. Raharimina 10.V.1991 (ZMF); paratype: Central Madagascar, Andasibe-Mantadia N.P., Mantadia, "Circuit *Eulophia*", 958 m, 18°46'16"S, 48°25'43"E, P. Banar 19-22.I.2017, 1 ♂ (MMB).

DESCRIPTION. Length of body 4.7 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Body entirely brown amaranth, with antennae brown and legs brown very light. Head sub-rectangular, with rounded sides, widely rounded posterior angles. Eyes large and very protruding. Surface of head with scattered, fine punctation, except for a narrow median stripe. Pronotum sub-rectangular, moderately dilated anteriorly, slightly longer and narrower than head, with oblique anterior margins, widely rounded anterior angles and barely emarginated sides. Surface with dorsal series of 11-12 punctures and lateral series of 5-6 punctures. Elytra large and long, sub-rectangular, moderately dilated posteriorly, with rounded humeral angles, Surface with fine punctation arranged in three series, one near the suture, one median and one lateral. Abdomen (partially damaged) with fine punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 471-472. Aedeagus (Fig. 473) 0.92 mm long, sub-rectangular; parameres of peculiar shape; inner sac covered with dense spines of different shape.

ETYMOLOGY. The specific epithet comes from the Latin "forestalis-is-e" (from the forest).

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

REMARKS. The body of the specimen from Andasibe-Mantadia N.P. is darker.

2. *Heterocinus pluviialis* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Montagne d'Ambre N.P., 1035 m, P. Banar 13-18.I.2016, by big tree, (MMB); paratypes: same data, 2 ♀♀ (MMB), 1 ♀ (cB).

DESCRIPTION. Length of body 5 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Body shiny, without micro-sculpture, reddish brown very dark, with black head; antennae and legs brown. Head sub-rectangular, with widely rounded posterior angles. Eyes medium-sized and protruding. Surface of head with 2 series of 3 punctures between the eyes; few other punctures on the sides. Pronotum barely dilated anteriorly, as long as head and moderately narrower than it, with scarcely oblique anterior margins, slightly rounded anterior angles and very emarginate sides. Surface with dorsal series of 6-7 punctures and lateral series of 3 punctures. Elytra dilated posteriorly, as long as pronotum, wider than it. Surface with some series of very fine and sparse punctures. Abdomen with some series of fine punctures on each segment. Tergite and sternite of male genital segment as in Figs 484-485. Aedeagus (Fig. 486) 1 mm long, sub-rectangular; parameres arched; inner sac covered with proximal series of acute spines, followed by rounded, large scales and with a lateral series of smaller scales.

ETYMOLOGY. The specific epithet comes from the Latin "pluviialis-is-e", in relation to the rainforest of the area.

DISTRIBUTION. The species is known only from the type locality in N Madagascar (Fig. 560).

3. *Heterocinus tenellus* (Erichson, 1839)

Leptacinus tenellus Erichson, 1839: 336; Bernhauer & Schubert, 1914: 298 (as *Mitomorphus*); Steel, 1949: 269 (as *Leptacinus*); Janák, 1989: 167 (as *Leptacinus* subgen. *Chaetocinus*).

Heterocinustenellus; Jarrige, 1970: 44; Herman, 2001a: 3652.

TYPE MATERIAL. The Naturhistorisches Museum of Berlin preserves 4 specimens: the first labelled "Madagascar Goudot", "5863", "*tenellus* Er.", "Lectotypus *Leptacinus tenellus* Erichson, J. Janák det. 1987"; the second third and fourth specimens, labelled "Madagascar / Goudot / nr. 5863", "*Leptacinus* sp. ♂, J. Janák det. 1987", "Paralectotypus *Leptacinus tenellus* Erichson, 1839, J. Janák det. 2006"; with the same labels and "*Leptacinus* sp. ♂, J. Janák det. 1987",

“Paralectotypus *Leptacinus tenellus* Erichson, 1839, J. Janák des. 2006” belongs to a different species (*H. brunneus* sp.n.).

DESCRIPTION. Length of body 3.8 mm; from anterior margin of head to posterior margin of elytra: 1.7 mm. Body shiny, reddish brown with red pronotum. Head sub-rectangular, with almost obsolete posterior angles. Eyes small and moderately protruding. Surface of head with some sparse punctures. Pronotum longer than head, with very oblique anterior margins and not emarginated sides. Surface with 3 anterior and 2 posterior punctures. Elytra as long as pronotum, sub-rectangular, with rounded humeral angles. Surface with three series of punctures, one juxtatural, one median and one lateral. Tergite and sternite of the male genital segment missing; aedeagus as in Janák, 1989, Fig. 2.

DISTRIBUTION. Madagascar.

4. *Heterocinus brunneus* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, 5 Km S Ampamoho pr., Andiulamena, 850-1000 m, forêt humide, G. Dunay 18-20.I.1995 (cJ); paratypes: same data, 89 exx. (cJ), 5 exx. (cB); N Madagascar, 5 Km E Andapa Lembonibona (1265 m), 800-1000 m, forêt dégradées, J. Janák & P. Moravec 2.III.1996, 1 ex. (cB); N Madagascar, Massif Anjanaharibe Nord, sentier Ambodiharina-Ambalarombe, 600-700 m, Riv. Andramonta env., forêt humide, J. Janák & P. Moravec 24-29.II.1996, 34 exx. (cJ), 2 exx. (cB); Central Madagascar, Fianaratsoa distr., Ronamafana env., I. Jenis 28.I-6.II.1995, 9 ♂, 1 ♀ (cJ); Central Madagascar, Fianaratsoa distr., 2.5 Km SE Ranomena, 47.24.11S, 21.29.36E, O. Hovorka 6.II.2000, 6 exx. (cJ); same data J. Moravec 26.I.2000, 1 ex. (cJ); Central Madagascar, Antananarivo, Sikora, 1 ex. (NMB); Central Madagascar, Antananarivo Prov., botanic garden near Andasibe N.P., 1025 m, 18°55.58'S, 48°24.47'E, R. Harin'Hala 14-31.VI.2001, 1 ♂ (CAS); same data, 21.V-4.VI.2002, 1 ♂ (cB); E Madagascar, Ikoka, pr. Ambohimahamasina, Reg. Fianaratsoa, 1000-1100 m, forêt secondaire, J. Janák & P. Moravec 8.III.1996, 55 exx. (cJ), 5 exx. (cB); E Madagascar, Massif Ambondronbe, Ikoka env., 1100-1200 m, crête Amboasa, J. Janák & P. Moravec 8-10.III.1996, 38 exx. (cJ), 2 ex. (cB); E Madagascar, 30 Km SE Betroka, 3 Km E of ▲ 1656 m Ambalando, 1200 m, J. Janák 16.XII.1998, savanna zebu dropping, 1 ex. (cJ); E Madagascar, road Betroka-Ihosy, Ilana River, 1000 m, J. Janák 3.I.1999, 1 ex. (cJ); E Madagascar, 30 Km ESE Betroka, 1600 m, Vohitrosa forest, 2 Km NEE ▲ 1825 m, rainforest, J. Janák 23.XII.1998, 2 exx. (cJ), 1 ex. (cB); E Madagascar, SE Ambalavao, Ankarinombo pr. Sahabe, 1000-1100 m, river bank, J. Janák 22.III.2001, plant debris, 7 exx. (cJ), 1 ex. (cB); E Madagascar, 2-4 Km NNW of RNZ, pk 181, between Beforona and Ampasimbe, 500-600 m, 18.54S, 48.38E, J. Janák 22-24.II.2004, rainforest, 1 ex. (cJ); Comoros Arch., Mohéli Isl., S. Voeltzkov, 7 ♂ (MHB), 2 ♂♂ (cB). The paralectotypes specimens indicated by Janák (1989) as *H. tenellus* (Er.) belong to this species: three specimens labelled “Madagascar / Goudot / nr. 5863”.

“*Leptacinus* sp. ♂, J. Janák det. 1987”, “Paralectotypus *Leptacinus tenellus* Erichson, 1839, J. Janák des. 2006”; with the same labels and “*Leptacinus* sp. ♂, J. Janák det. 1987”, “Paralectotypus *Leptacinus tenellus* Erichson, 1839, J. Janák des. 2006”.

DESCRIPTION. Length of body 5-5.5 mm; from anterior margin of head to posterior margin of elytra: 2.4-2.7 mm. Body shiny, entirely reddish brown. Head sub-rectangular, elongate, narrow, with sub-rectilinear and sub-parallel sides and rounded posterior angles. Eyes small and protruding. Surface of head with fine, sparse punctation. Pronotum moderately longer than head, slightly dilated anteriorly and there as wide as head, with oblique anterior margins, rounded anterior angles and a little emarginated sides. Surface with dorsal series of 9-13 punctures and lateral series of 5-7 punctures. Elytra dilated posteriorly, wider than pronotum, as long as it, with rounded humeral angles. Abdomen without micro-sculpture, with fine, sparse punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 487-488. Aedeagus (Fig. 489) about 0.8 mm long, sub-rectangular; parameres short, with a comb of setae; inner sac covered with very thick spinulae, so that sometimes it looks like a dark mass; in the distal portion there is a tuft of distinct arched spines.

ETYMOLOGY. The specific epithet comes from the Latin “*brunneus-a-um*” (brown, brownish).

DISTRIBUTION. Madagascar (apparently especially in the eastern part), and Mohéli (Comoros) (Fig. 483).

REMARKS. This species is the one depicted by Jarrige (1970) as *H. tenellus*.

5. *Heterocinus obstrusus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Andasibe-Mantadia N.P., Mantadia, “Circuit *Eulophia*”, 958 m, 18°48'16"S, 48°25'43"E, P. Banar 19-22.I.2017, MTD / Jan 2017, (MMB); paratypes: same data, 5 ♂♂, 8 ♀♀ (MMB), 1 ♂, 1 ♀ (cB); same data, 946 m, 18°56'18.4"S, 48°25'04.1"E, P. Banar 25-31.I.2019, 3 ♂♂, 8 ♀♀ (MMB), 1 ♂, 2 ♀♀ (cB); same data, 350 m, P. Banar & E. M. Rabotosan 28.I.2015, ASB / Jan 2015, 1 ♂ (cB); same data, Maromizaha, protected area, 1130 m, 18°57'55"S, 48°27'17"E, P. Banar 18-21.I.2017, MAR / Jan 2017, 1 ♂ (MMB); Amboohitantly Spec. Rés., 18°10'17"S, 47°16'38"E, 1619 m, P. Banar 6-8.I.2017, 2 ♀♀ (MMB), 1 ♂ (cB); Central E Madagascar, Ranomafana N.P., 21°14'51"S, 47°24'13"E, 1079 m, P. Banar 16-18.XI.2010, 2 exx. (MMB); same data, 21°15'07.7"S, 47°24'31.4"E, 1198 m, RFN / Aug 2011, L. S. Rahanitriaina 15.IV.2011, 3 exx. (MMB).

DESCRIPTION. Length of body 4.4 mm; from anterior margin of head to posterior margin of elytra: 2.5 mm. Body shiny, without micro-sculpture, brown very dark; antennae and legs slightly lighter. Head ovoid, moderately narrow anteriorly, with

feebly rounded sides and widely rounded posterior angles. Eyes medium-sized and protruding. Surface of head with few, very scattered punctures. Pronotum moderately longer than head, dilated anteriorly where it is as wide as head, with very oblique anterior margins, widely rounded anterior angles and emarginated sides. Surface with dorsal series of 7-8 punctures and lateral series of 4 punctures. Elytra large, longer and wider than pronotum, dilated posteriorly, with rounded humeral angles. Surface with 2 series of punctures near the suture, 1 median and 1 lateral. Abdomen with very fine punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 490-491. Aedeagus (Fig. 492) 0.81 mm long, sub-rectangular; parameres large; inner sac looks like a compact, dark mass of very thick ovoid, large scales, opposed in the median-distal portion.

ETYMOLOGY. The specific epithet comes from the Latin *obstrusus-a-um* (hidden).

DISTRIBUTION. The species is known only from the type localities in Central Madagascar (Fig. 511).

6. *Heterocinus andramontanus* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Massif Anjanaharibe Nord, sentier Ambodihasina-Ambalarombe, 600-700 m, Andramonta env., for. humide, J. Janák & P. Moravec 24-19.II.1996 (cJ); paratypes: same data, 1 ♂, 1 ♀ (cJ), 1 ♂ (cB).

DESCRIPTION. Length of body 4.4 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Similar to *H. brunneus* sp.n. but markedly darker, head not dilated forward, eyes more protruding, punctation of head sparse, pronotum with very rounded anterior angles and more oblique anterior margins, elytra wider. Tergite and sternite of male genital segment as in Figs 474-475. Tergite with long posterior lobules. Aedeagus (Fig. 476) 0.85 mm long, sub-ovoid, with small parameres; inner sac narrow, covered with fine, opposite spinules, with a short left series of small spines in the medio-distal portion.

ETYMOLOGY. The specific epithet refers to the type locality.

DISTRIBUTION. The species is known only from the type locality in N Madagascar.

7. *Heterocinus betsileo* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, SE of Ambalavao, Ankarinomy pr. Sahabe, 1000-1100 m, under rot plant debris, J. Janák 22.III.2001 (cJ); paratype: same data, 1 ♀ (cJ).

DESCRIPTION. Length of body 3.6 mm; from anterior margin of head to posterior margin of elytra: 2.1 mm. Similar to *H. brunneus* sp.n. but with smaller body; head

more rectangular, with very protruding eyes, sub-parallel sides and sparser punctation; pronotum shorter; dorsal series of less numerous punctures. Tergite and sternite of male genital segment as in Figs 477-478. Tergite of peculiar shape. Aedeagus (Fig. 479) short, 0.58 mm long, sub-rectangular, with sub-acute distal portion; parameres medium-sized; inner sac with two juxtaposed series of different, small spines; the spines of the distal, left series very light.

ETYMOLOGY. The specific epithet refers to the ethnic group Betsileo of central and E Madagascar, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

8. *Heterocinus minutulus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Madagascar, Antananarivo, Parc Tsimbazaza, S. Taiti & L. Bartolozzi 7.IX.1989 (MZF).

DESCRIPTION. Length of body 4 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Body moderately flat, brown light with slightly darker head and pronotum. Head sub-rectangular, with moderately rounded sides and narrowly rounded posterior angles. Eyes small and barely protruding. Surface of head with very fine, scattered punctation, except for a narrow median stripe. Pronotum very dilated anteriorly, as long as head, anteriorly as wide as it, with oblique anterior margins, widely rounded anterior angles and emarginated sides. Surface with dorsal series of 6-7 punctures and lateral series of 3 anterior, fine punctures. Elytra dilated posteriorly, longer and wider than pronotum, with scarcely rounded humeral angles. Surface with very fine, scattered punctation, arranged in three series, one near the suture, one median and one lateral. Abdomen with very fine punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 480-481. Aedeagus (Fig. 482) 0.74 mm long, sub-rectangular; parameres robust; inner sac similar to that *H. brunneus* sp.n. but the dark mass is composed of different spinulae and the distal spines are partially with apex hook shaped.

ETYMOLOGY. The specific epithet comes from the Latin “minutulus-a-um” (small).

DISTRIBUTION. The species is known only from the type locality.

GROUP B

- | | |
|--|-----------------------------|
| 1. Body 6.4 mm long; inner sac of the aedeagus (Fig. 495) covered with a series of spines and with a large distal spine..... | 1. <i>H. montanus</i> sp.n. |
| -. Body 4.8 mm long..... | 2 |
| -. Body 4 mm long..... | 3 |

- . Body 3.3 mm long; posterior margin of the tergite of male genital segment with short lateral protrusion; body 3.3 mm long; pronotum and abdomen yellowish pale; inner sac of the aedeagus (Fig. 517) large, covered with spinules facing right and with a distal group of shorter scales..... 2. *H. substrictus* sp.n.
2. Tergite of male genital segment with slightly concave posterior margin; inner sac of the aedeagus (Fig. 498) covered with ovoid arched, long scales and with a distal group of spines..... 3. *H. septentrionalis* sp.n.
- . Tergite of male genital segment rectilinear; inner sac of the aedeagus (Fig. 501) covered with thin and closed spinules and with a left, short, distal series of triangular scales..... 4. *H. andasibe* sp.n.
- . Tergite of male genital segment ovoid; inner sac of the aedeagus (Fig. 504) narrow and short, covered with very thin, narrow longitudinal scales..... 5. *H. pseudoelegans* sp.n.
3. Tergite of male genital segment sub-rectangular; inner sac of the aedeagus (Fig. 507) covered with very small scales and spinules..... 6. *H. mandresyanus* sp.n.
- . Tergite of male genital segment of usual shape..... 4
4. Reddish brown with red pronotum; body 4.1 mm long; posterior margin of tergite of male genital segment rectilinear; inner sac of the aedeagus (Fig. 509) covered with thin spinules; parameres of peculiar shape..... 7. *H. brevis* sp.n.
- . Reddish brown; body 4.1 mm long; posterior margin of tergite of male genital segment concave; inner sac of the aedeagus (Fig. 514) large, covered with very closed spinulae..... 8. *H. pseudobstrusus* sp.n.

1. *Heterocinus montanus* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Ranomafana N.P., 1000 m, Ambodiamontana, J. Janák 26-27.I.1993 (cJ).

DESCRIPTION. Length of body 6.4 mm; from anterior margin of head to posterior margin of elytra: 3.3 mm. Body reddish brown light; head sub-rectangular, with moderately rounded sides and widely rounded posterior angles; eyes medium-sized and very protruding. Surface of head with very sparse, fine punctation on the sides. Pronotum narrow, longer and narrower than head, with oblique anterior margins and rounded anterior angles. Surface with dorsal series of 6 deep, spaced punctures and lateral series of 3 finer punctures. Elytra large, dilated posteriad, longer and wider than pronotum, with rounded humeral angles. Surface with superficial punctation, arranged in some series. Abdomen with fine punctation, arranged in 3-4 series on each segment. Tergite and sternite of male genital segment as in Figs 493-494. Aedeagus (Fig. 495) 1 mm long, sub-rectangular; parameres not found in the balsam preparation of the collector; inner sac with a distal big spine, next to a small, toothed structure, followed by a left series of smaller spines and by a medio-proximal range of larger, closed spines.

ETYMOLOGY. The specific epithet comes from the Latin “montanus-a-um” (montane).

DISTRIBUTION. The species is known only from the type locality in E Madagascar (Fig. 511).

2. *Heterocinus substrictus* sp. n

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Maromiza pr., Périnet, 950-1150 m, sous écorces, J. Janák 8-10.I.1995 (cJ).

DESCRIPTION. Length of body 3.4 mm; from anterior margin of head to posterior margin of elytra: 1.8 mm. Similar to *H. brunneus* sp.n. but with smaller body, lighter colour (pronotum and abdomen yellowish pale); head shorter and not narrow anteriorly, with larger eyes; punctation sparser; pronotum with very rounded anterior angles and more oblique anterior margins; elytra with less marked humeral angles and with sparser punctation. Tergite and sternite of male genital segment as in Figs 515-516. Tergite with distal, lateral, short lobules. Aedeagus (Fig. 517) small, 0.6 mm long, proportionally narrow and long, with sub-acute median lobe; parameres distally approached; inner sac long and broad, covered with long, closed spines, followed by a distal series of curved spines.

ETYMOLOGY. The specific epithet comes from the Latin *substrictus-a-um* (narrow), in relation to thin body.

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

3. *Heterocinus septentrionalis* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Montagne d'Ambre N.P., 1035 m, MDA / Jan 2014, P. Banar 13-18.I.2018 (MMB); paratypes: same data, 2 ♂♂, 4 ♀♀ (MMB), 1 ♂ (cB); same data 1057 m, 12.I.2016, 1 ♂, 1 ♀ (MMB); same data, L. Bartolozzi & S. Taiti 23-25.IX.1989, 1 ♂ (ZMF), 1 ♂ (cB); same data, 945 m, circuit "Ampijoroana", litter under *Pandanus*, MDA / Jan 2015 P. Banar & E. M. Rabotosan 7.I.2015, 1 ♂ (cB).

DESCRIPTION. Length of body 4.8 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Similar to *H. pluvialis* sp.n. but slender, narrower, with brown light elytra and brown abdomen; head narrower, eyes smaller, 2 series of 2 punctures between the eyes; pronotum narrower, with more oblique anterior margins, more rounded anterior angles and finer punctation. Tergite and sternite of male genital segment as in Figs 496-497. Aedeagus (Fig. 498) 1 mm long, sub-rectangular; parameres large; inner sac composed of a series of very closed horizontal spines, ovoid in the distal portion.

ETYMOLOGY. The specific epithet comes from the Latin "septentrionalis-is-e" (northern).

DISTRIBUTION. The species is known only from the type locality in N Madagascar (Fig. 560).

4. *Heterocinus andasibe* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Maromiza pr., Andasibe, 1100-1200 m, J. Janák 9.II.1993 (cJ).

DESCRIPTION. Length of body 4.8 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Similar to *H. elegans* sp.n. but body wider; head wider, with sparser punctation; pronotum more dilated anteriorly, with more rounded anterior angles; elytra wider, with more parallel sides. Tergite and sternite of male genital segment as in Figs 499-500 (genital segment damaged). Aedeagus (Fig. 501) long, 1.22 mm long, sub-rectangular, narrower in the middle; parameres of peculiar shape; inner sac sinuous, covered with parallel, closed spinulae, with a short series of distal scales.

ETYMOLOGY. The specific epithet refers to the type locality, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

5. *Heterocinus pseudoelegans* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Ranomafana N.P., 850-1000 m, Ambodiamontana, J. Janák 26-27.I.1993 (cJ); paratype: same data, 1 ♂ (cJ).

DESCRIPTION. Length of body 4.6 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Similar to *H. elegans* sp.n. but moderately shorter, lighter; head sub-rectangular, wider; eyes more protruding; punctation of head wider and sparser; pronotum narrower, less dilated anteriorly, with dorsal series of 6 deeper punctures; elytra shorter, wider, with slightly rounded sides and more marked humeral angles; abdomen with denser punctation. Tergite and sternite of male genital segment as in Figs 502-503. Tergite of peculiar shape. Aedeagus (Fig. 504) 0.85 mm long, sub-rectangular; parameres of peculiar shape, very narrow; inner sac narrow, covered with parallel, juxtaposed, narrow spines.

ETYMOLOGY. The specific epithet comes from the Latin “pseudo” and “elegans-te” (elegant).

DISTRIBUTION. The species is known only from the type locality in E Madagascar (Fig. 511).

6. *Heterocinus mandrasyanus* sp.n.

EXAMINED MATERIAL. Holotype ♂: SW Madagascar, Zombitse-Vohibasia N.P., “circuit Mandrasy”, 897 m, 21°52'43.8"S, 44°41'36.5"E, L. S. Rahanitriniaina & E. M. Rabotoson 25.I.2013 (MMB); paratypes: same data, 4 ♂♂, 2 ♀♀ (MMB), 2 ♂♂ (cB).

DESCRIPTION. Length of body 4 mm; from anterior margin of head to posterior margin of elytra: 2.3 mm. Similar to *H. brunneus* sp.n. but with wider and shorter head; eyes larger; pronotum shorter, more narrow posteriad; elytra wider and shorter, more dilated posteriorly. Tergite and sternite of male genital segment as in Figs 505-506. Tergite of peculiar shape. Aedeagus (Fig. 507) 0.88 mm long, sub-rectangular; parameres robust and short; inner sac narrow, rectilinear, covered in the proximal and distal portions respectively with fine and dense scales and with fine, dense spinulae.

ETYMOLOGY. The specific epithet refers to the type locality.

DISTRIBUTION. The species is known only from the type locality in SW Madagascar.

7. *Heterocinus brevis* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Ranomafana N.P., 21°15'13.5"S, 47°24'09.8"E, 1158 m, L. S. Rahanitriniaina & R. Rabotoson 16.IV.2011 (MMB); paratypes: same data, 3 ♂♂ (MMB), 1 ♂ (cB); same data, 1125 m, P. Banar 16.IV.2011, 1 ♂ (MMB); same data, 21°15'20.2"S, 47°25'27.4"E, L. S. Rahanitriniaina 30.XII.2009, 1 ♂ (cB); same data, 1079 m, 21°14'51"S, 47°24'13"E, P. Banar 16-18.XI.2010, 1 ♂ (MMB); Fianarantsoa, 40 Km S Ambalavao, Rés. Andringitra, 1275 m, 22.13S, 46.58E, litter montane rainforest, B. L. Fisher 15.X.993, 1 ♂, 4 ♀♀ (FMNH), 2 ♀♀ (cB); same data, Ambatolahidimy, 1017 m, 21°13'40.4"S, 47°26'16.5"E, L. S. Rahanitriniaina 27.IX.2012, 3 ♂♂, 7 ♀♀ (MMB), 2 ♂♂ (cB); Antasibe-Mantadia, Mantadia circuit *Eulophia*, 958 m, 18°48'16"S, 48°25'43"E, P. Banar 19.I.2017, 1 ♂ (MMB).

DESCRIPTION. Length of body 4.6 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Similar to *H. obstrusus* sp.n., but with smaller body, markedly lighter, reddish brown with almost red pronotum; head shorter, not narrow anteriad but moderately dilated; pronotum sub-rectangular, with much less oblique anterior margins and much more rounded anterior angles and less emarginated sides; dorsal series of 5 punctures and lateral series of 3-4 punctures; elytra sub-rectangular and shorter. Tergite and sternite of male genital segment as in Figs 507-508. Aedeagus (Fig. 509) 0.85 mm long, sub-rectangular; parameres of peculiar shape, very narrow distally; inner sac with juxtaposed, partially arched spinulae and scales.

ETYMOLOGY. The specific epithet comes from the Latin “brevis-is-e” (short), in relation to the short body.

DISTRIBUTION. The species is known only from the type localities in Eastern and Central Madagascar (Fig. 511).

8. *Heterocinus pseudobstrusus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Ranomafana N.P., 987 m, 21°15'20.2"S, 47°25'27.4"E, RFN / Sept 2012, litter, L.S. Rahanitriniaina 30.IX.2012 (MMB); paratypes: same data, 3 ♀♀ (MMB), 1 ♂ (cB).

DESCRIPTION. Length of body 4.1 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Very similar to *H. obstrusus* sp.n. but eyes smaller, head more sub-rectangular and narrower, with sparser punctation; pronotum shorter and narrower, with less oblique anterior margins and more marked anterior angles; elytra shorter; surface with punctation arranged in three series, one near the suture, one median and one lateral. Tergite and sternite of male genital segment as in Figs 512-513. Aedeagus (Fig. 514) 1 mm long, sub-rectangular; small parameres; the inner sac looks like a compact, dark mass of very thick spinulae.

ETYMOLOGY. The specific epithet comes from the Latin "pseudo" and "obstrusus-a-um" (similar to the species *H. obstrusus*).

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

GROUP C

- | | |
|--|------------------------------------|
| 1. Body 8 mm long; inner sac of the aedeagus (Fig. 520) covered with thin spinulae under which there are two series of triangular, short spines..... | 1. <i>H. grandis</i> sp.n. |
| - . Body 7 mm long or just shorter than 7 mm..... | 2 |
| - . Body 5.7-6.4 mm long..... | 3 |
| - . Body 3.5-5.3 mm long..... | 4 |
| 2. Body 7 mm long; inner sac of aedeagus (Fig. 523) with three large spines in the distal portion and two long surface, all covered with thin spinules | <i>H. kotokely</i> sp.n. |
| - . Body 6.8 mm long; inner sac of the aedeagus (Fig. 526) with two parallel, narrow, straight surface covered with very thin scales..... | 3. <i>H. fulvomarginatus</i> sp.n. |
| 3. Body 5.7 mm long; inner sac the aedeagus (Fig. 529) with two large surface covered with closed spinules; parameres of peculiar shape..... | 4. <i>H. rubescens</i> sp.n. |
| - . Body 6.4 mm long; inner sac of the aedeagus (Fig. 532) with two surface covered with spines; parameres long..... | 5. <i>H. litoralis</i> sp.n. |
| 4. Body 4.5-5.3 long..... | 5 |
| - . Body 3.9-4 mm long..... | 6 |

5. Body 4.5 mm long, reddish brown; basal bulbus of peculiar shape; inner sac of the aedeagus (Fig. 535) covered with two surface covered with thin spinules.....6. *H. rano* sp.n.
 -. Body 5.3 mm long, yellowish pale; basal bulbus ovoid; inner sac of the aedeagus (Fig. 538) with two series of short opposed spines.....7. *H. pallidus* sp.n.
- . Body 5.3 mm long, brown with slightly lighter elytra and abdomen; aedeagus ovoid very long; inner sac with two parallel structures long and narrow, covered with spinulae and spines (Fig. 541).....8. *H. delfinensis* sp.n.
6. Body 4-4.3 long.....7
 -. Body less than 4 mm long.....8
7. Body 4 mm long, reddish brown light with brown anterior legs; inner sac of aedeagus (Fig. 544) with two opposed wide surfaces covered with spinules.....9. *H. levis* sp.n.
 -. Body 4.3 mm long, reddish brown dark with yellowish anterior legs; inner sac of the aedeagus (Fig. 547) with two series of short spinules and with a right series of very small scales.....10. *H. elegans* sp.n.
 -. Body 4.3 mm long, reddish brown light with yellowish legs; inner sac of the aedeagus (Fig. 550) with a long and a short series of scales.....11. *H. biseriatus* sp.n.
8. Body 3.9 mm long reddish brown dark; tergite of the male genital segment with concave posterior margin; inner sac of the aedeagus (Fig. 553) with two opposed series of short small spines.....12. *H. rubicundulus* sp.n.
 -. Body 3.5 mm long, reddish brown; tergite of the aedeagus with rounded posterior margin; inner sac of the male genital segment (Fig. 556) with proximal portion covered with very closed spinules and the proximal portion with short spines13. *H. antemoro* sp.n.

1. *Heterocinus grandis* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Ankarana, Hosekj 15.III.1993 (cJ).

DESCRIPTION. Length of body 8 mm; from anterior margin of head to posterior margin of elytra: 4.2 mm. Body shiny, without micro-sculpture, except for the abdomen with transverse micro-striation; reddish brown dark, with head almost black, elytra reddish, abdomen brown dark; antennae and legs testaceous. Head sub-rectangular, moderately narrow anteriorly, with slightly rounded sides and widely rounded posterior angles. Eyes medium-sized and protruding. Surface of head with few, deep, sparse punctures, apart from a wide median stripe. Pronotum as long as head, narrower than it, with oblique anterior margins, widely rounded anterior angles, not emarginated sides. Surface with dorsal series of 6 spaced, evident, fine punctures and lateral series of 4 spaced punctures. Elytra sub-rectangular, very longer and wider than pronotum, with sub-rectilinear and sub-parallel sides and rounded humeral angles. Surface with fine punctation, arranged in three series, one juxtatural, one median and one lateral. Abdomen with very fine and very scattered punctation. Tergite and sternite of male genital segment as in Figs 518-519. Tergite of peculiar shape, broad. Aedeagus (Fig. 520) 1.22 mm long, sub-rectangular, with

evident median lobe; parameres of peculiar shape, very long; inner sac with a group of distal spines, followed by a longitudinal area covered with very fine filiform setae, under which there are two parallel series of short triangular spines.

ETYMOLOGY. The specific epithet comes from the Latin “grandis-is-e” (big), in relation the the body size.

DISTRIBUTION. The species is known only from the type locality in N Madagascar.

2. *Heterocinus kotokely* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Massif Ambondronbe, Ikoka env., 1300-100 m, sous écorces crête Amboasa, J. Janák & P. Moravec 11-12.III.1996 (cJ); paratypes: same data, 1 ♂ (cJ), 1 ♂ (cB).

DESCRIPTION. Length of body 7 mm; from anterior margin of head to posterior margin of elytra: 3.3 mm. Similar to *H. brunneus* sp.n. from which differs for the following characters: larger body; shorter head, with moderately rounded sides; eyes larger and more protruding; surface of head with finer punctation; pronotum with more rounded anterior angles and emarginate sides; elytra with more rounded humeral angles and denser punctation; abdomen with more evident and dense punctation. Tergite and sternite of male genital segment as in Figs 521-522. Tergite of peculiar shape, with posterior margin prolonged in very short, lateral lobule. Aedeagus (Fig. 523) 1 mm long, sub-ovoid, with parameres of peculiar shape; inner sac with a sub-triangular, distal scale, followed by 3 big spines, under a group of very fine spinulae and by two parallel surfaces, covered with very fine, dense spinulae.

ETYMOLOGY. The species takes its name from the local forest spirit “kotokely”, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

3. *Heterocinus fulvomarginatus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central N Madagascar, Ambohitantely Spec. Rés., 1641 m, 18°11'44"S, 47°17'14"E, P. Banar 5-8.I.2017 (MMB).

DESCRIPTION. Length of body 6.8 mm; from anterior margin of head to posterior margin of elytra: 3.5 mm. Body reddish brown dark, with black head and brown abdomen; elytra with red yellowish suture: antennae brown; legs brown light. Head sub-rectangular, with rounded sides and widely rounded posterior angles. Eyes small and slightly protruding. Surface of head with very scattered punctation. Pronotum moderately longer and narrower than head, with scarcely oblique anterior margins,

rounded anterior angles and barely emarginated sides. Surface with dorsal series of 5-6 spaced punctures and lateral series of 3 punctures. Elytra sub-rectangular, moderately dilated posteriad, longer and wider than pronotum, with rounded humeral angles. Surface with broad, superficial punctation, arranged in three series, one juxtatural, one median and one lateral. Abdomen with more or less polygonal micro-reticulation and fine, sparse punctation on the sides. Tergite and sternite of male genital segment as in Figs 524-525. Aedeagus (Fig. 526) large and long, 1.36 mm long, sub-ovoid, narrow in the middle, with evident median lobe; parameres proportionally small; inner sac very characteristic, with 2 narrow, parallel, long areas, covered with parallel, very fine filiform setae, externally with very minute scales; in the distal portion the inner sac presents a large, pale scale.

ETYMOLOGY. The specific epithet comes from the Latin “fulvus-a-um” (red-yellowish) and “marginatus-a-um” (inner margins), in relation to the peculiar colour of the elytra.

DISTRIBUTION. The species is known only from Central Madagascar (Fig. 560).

4. *Heterocinus rubescens* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central N Madagascar, Ambohitantely S.R., 1603 m, 18°11'52-7”S, 47°17'04”E, litter under *Pandanus*, ABT / Nov 2011, L. S. Rahanitriniaina & P. Banar 16.XI.2011 (MMB); paratypes: same data, 18°11'51”S, 47°16'59”E, 1585 m, P. Banar 5-8.I.2017, 1 ♂ (MMB), 1 ♂ (cB); Andringitra, 1653 m, 22.105S, 46.946E, V. Grebennikov 7.XII.2029, 1 ♂ (cJ).

DESCRIPTION. Length of body 5.7 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Body shiny, without micro-sculpture, reddish brown with darker head. Head sub-rectangular, moderately narrow anteriorly, with widely rounded posterior angles. Eyes small and slightly protruding. Surface of head with scattered punctation, apart from a median stripe. Pronotum barely dilated anteriorly, as long as head, narrower than it, with moderately oblique anterior margins, rounded anterior angles and emarginated sides. Surface with dorsal series of 7-8 punctures and lateral series of 3-4 irregular punctures. Elytra large, dilated posteriad, longer and wider than pronotum, with rounded humeral angles. Surface with fine punctation, arranged in three series, one juxtatural, one median and one lateral. Abdomen with fine but evident, spaced punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 527-528. Aedeagus (Fig. 529) 1 mm long, sub-ovoid, with parameres of peculiar shape, thick and short, arched; inner sac with 2 long surfaces covered with dense spines and two distal spines.

ETYMOLOGY. The specific epithet comes from the Latin “rubescens-ente” (reddish).

DISTRIBUTION. The species is known only from the type localities in Central and N Madagascar (Fig. 560).

5. *Heterocinus litoralis* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Diégo Suarez Prov., Sakalava Beach, 10 m, 12°15'46"S, 49°23'51"E, R. Harin'Hala 20-28.VIII.2001, swarf littoral forest (CAS); paratypes: same data, 1 ♀ (CAS), 1 ♀ (cB); Antsiranana, Sarakamy, Montagne d'Ambre, 1094 m, 12.53S, 49.17E, D.C. Lees 15-19.XII.2004, 2 ♂♂, 4 ♀♀ (NHML), 1 ♂, 2 ♀♀ (cB).

DESCRIPTION. Length of body 6.4 mm; from anterior margin of head to posterior margin of elytra: 3.3 mm. Similar to *H. brunneus* sp.n. in general appearance, but with shorter body, smaller eyes, very longer elytra, different tergite and sternite of male genital segment, parameres and inner sac of the aedeagus. Tergite of the male genital segment of peculiar shape (Fig. 530); sternite as in Fig. 531. Aedeagus (Fig. 532) 1.1 mm long, sub-ovoid, with large parameres; inner sac with two spaced series of evident spines, among which there is a short, proximal series of smaller spines.

ETYMOLOGY. The specific epithet comes from the Latin "litoralis-is-e" (coastal) in relation to the environmental characteristics where the species was collected.

DISTRIBUTION. The species is known only from the type localities in N Madagascar.

REMARKS. Some differences can be noted at the level of the inner sac of the aedeagus between the males collected almost at sea level and those of the mountains, such however not to suggest the description of a different species from *H. litoralis*.

6. *Heterocinus rano* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Massif Anjanaharibe nord, sentier Ambodihasina-Ambalarombe, 750-850 m, Riv. Andramonta, forêt humide, J. Janák & P. Moravec 28.II.1996 (cJ).

DESCRIPTION. Length of body 4.5 mm; from anterior margin of head to posterior margin of elytra: 2.3 mm. Similar to *H. brunneus* sp.n. but with smaller body; head shorter, with rounded sides and widely rounded posterior angles; punctation of head less evident; pronotum moderately shorter, with very rounded anterior angles from the neck up to half the length of pronotum; dorsal series of less punctures; elytra shorter and wider. Tergite and sternite of male genital segment as in Figs 533-534. Aedeagus (Fig. 535) 0.96 mm long, evidently narrow in the middle; parameres small; inner sac with two series of closed spinulae, all turned to the left.

ETYMOLOGY. The specific epithet is the Malagasy “rano” (water) in relation to the collection environment.

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

7. *Heterocinus pallidus* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Massif Ambondrombe, 1100-1200 m, Ikoka env., forêt humide, crête Amboasa, J. Janák & P. Moravec 9-10.III.1996 (cJ).

DESCRIPTION. Length of body 5.3 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Similar to *H. brunneus* sp.n. from which differs by the following characters: light colour, shorter head-pronotum-elytra; head not narrow anteriorly; eyes longer; less dilated anterior portion of pronotum; denser punctation of elytra. Tergite of male genital segment with concave posterior margin (Fig. 536). Sternite as in Fig. 537. Aedeagus (Fig. 538) 0.85 mm long, almost ovoid, with asymmetric, very large parameres; inner sac long, with two series of spinulae, addressed one another.

ETYMOLOGY. The specific epithet comes from the Latin “pallidus-a-um” (pale), in relation to the body colour.

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

8. *Heterocinus delfinensis* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Réserve Expérimental de Vohimana, “Circuit 4, bivouac”, 18°55'07.8”S, 48°29'26.6”E, 937 m, L. S. Rahanitriniaina & E. M. Rabotoson 20.VIII.2012 (MMB); paratypes: same data, 1 ♂ (MMB), 1 ♂ (cB); Andasibe-Mantadia N.P., Mantadia, “Circuit *Eulophia*”, 958 m, 18°48'16”S, 48°25'43”E, P. Banar 17-19.I.2017, 2 ♂ (MMB); Central Madagascar, Mantadia N.P., Mantadia, “Circuit *Eulophia*”, 958 m, 18°48'16”S, 48°25'43”E, MTD / Jan 2017, P. Banar 19-23.I.2017, 4 ♂♂, 3 ♀♀ (MMB), 1 ♂ (cB); Andasibe-Mantadia N.P., Mantadia, “Circuit *Eulophia*”, 956 m, 18°47'55”S, 48°25'38”E, MTD / Jan 2017, P. Banar 17-19.I.2017 (MMB); paratypes: same data, 17 ♂♂, 12 ♀♀ (MMB), 2 ♂♂, 1 ♀ (cB); same data, Maromizaha, 1130 m, 18°57'55”S, 48.27.17E, MAR / Jan 2017, P. Banar 18-22.I.2017, 3 ♂♂, 11 ♀♀ (MMB), 3 ♂♂ (cB).

DESCRIPTION. Length of body 5.2 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Body small, shiny, brown with slightly lighter elytra and abdomen; antennae and legs testaceous. Head ovoid, with rounded sides and widely rounded posterior angles. Eyes medium-sized and moderately protruding. Surface of

head with very scattered, fine, lateral punctation. Pronotum barely shorter and narrower than head, with less oblique anterior margins, rounded anterior angles and almost not emarginated sides. Surface with dorsal series of 5 punctures and lateral series of 3 punctures. Elytra large, dilated posteriad, longer and wider than pronotum, with marked humeral angles. Surface with superficial and broad punctation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with transverse micro-striation and fine, lateral punctation. Tergite and sternite of male genital segment as in Figs 539-540. Aedeagus (Fig. 541) 1.37 mm long, ovoid elongated, with robust parameres; inner sac long and narrow, divided in two parallel parts, long and narrow in the proximal portion, with rounded apex, covered with minute scales on the margins and with fine spines in the middle.

ETYMOLOGY. The specific epithet refers to “Ile Dauphin” (Madagascar), so called by the French in the 15th century in honor of the heir to the throne of France (the name come from the Dauphiné region).

DISTRIBUTION. Central Madagascar.

9. *Heterocinus levis* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Ranomafana N.P., 1000 m, L. Bartolozzi, C. Raharimina & S. Taiti 11-12.V.1991 (MZP).

DESCRIPTION. Length of body 4 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Body shiny, without micro-sculpture. Entirely reddish brown light. Head sub-rectangular, moderately narrow anteriad, with widely rounded posterior angles. Eyes medium-sized, very protruding. Surface of head with few, fine, lateral punctation. Pronotum barely longer and wider than head, with very oblique anterior margins, almost obsolete anterior angles, emarginated sides. Surface with dorsal series of 6 punctures and lateral series of 3 punctures, all punctures with long setae. Elytra sub-rectangular, longer and wider than pronotum, with marked humeral angles. Surface with fine and very sparse punctation, arranged in three series, one juxtasutural, one median and one lateral. Andomen with some series of fine, lateral punctures on each segment. Tergite and sternite of male genital segment as in Figs 542-543. Aedeagus (Fig. 544) 0.88 mm long, sub-ovoid, with parameres distally narrow; inner sac with two broad, parallel surfaces, covered with spinulae.

ETYMOLOGY. The specific epithet comes from the Latin “levis-is-e” (shiny).

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

10. *Heterocinus elegans* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Maheriara, Route Morarano Chrome-Ambakireni, 1200-1300 m, forêt humide, marais, J. Janák 21.I.1995 (cJ); paratypes: same data 1 ♂ (cJ), 1 ♂ (cB).

DESCRIPTION. Length of body 4.3 mm; from anterior margin of head to posterior margin of elytra: 2.3 mm. Similar to *H. brunneus* sp.n. but with smaller body; markedly darker, reddish brown dark, with antennae and legs yellowish. Head sub-rectangular, with moderately rounded sides and widely rounded posterior angles. Eyes medium-sized and protruding. Surface of head with finer punctation; pronotum shorter and more dilated anteriorly, with more oblique anterior margins; elytra wider, barely dilated posteriorly. Surface with three series of punctures very fine and spaced, one juxtasutural, one median and one lateral. Abdomen with more evident punctation, arranged in 3-4 series on each segment. Tergite and sternite of male genital segment as in Figs 545-546. Aedeagus (Fig. 547) small, 0.74 mm long, sub-rectangular, narrower in the middle, with rounded median lobe; parameres narrow; inner sac with two closed series of very fine, oblique spinulae, facing each other.

ETYMOLOGY. The specific epithet comes from the Latin “elegans-elegante” (elegant).

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

11. *Heterocinus biseriatus* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Toliara Prov., Andohahela Nat. Park, Col du Sedro, 3.8 Km 113th ESE Mahamavo, 37.6 Km 341st NNW Tolagnaro, 900 m, montane rainforest, Fisher, Griswold *et al.* 21-25.I.2002 (CAS); paratypes: same data, 1 ♀ (CAS), 1 ♀ (cB).

DESCRIPTION. Length of body 4.3 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Body shiny, reddish brown light, with lighter antennae and legs. Eyes medium-sized and moderately protruding. Head sub-rectangular, with slightly rounded sides and widely rounded posterior angles. Surface of head with fine, very sparse punctation on the sides. Pronotum longer and narrower than head, with very oblique anterior margins (in one paratype slightly oblique), almost obsolete anterior angles and moderately emarginated sides. Elytra dilated posteriorly, longer and wider than pronotum, with marked humeral angles. Surface with very fine punctation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with traces of fine, transverse micro-striation and fine, sparse punctation on the sides. Tergite and sternite of male genital segment as in Figs 548-549. Aedeagus (Fig. 550) small, 0.77 mm long, ovoid narrow, with very short, robust parameres; inner sac with two closed series of small spines and scales of different structure.

ETYMOLOGY. The specific epithet comes from the Latin “bis” (double) and “seriatus-a-um” (with two series), in relation to the inner sac of the aedeagus.

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

REMARKS. This species is related to *H. sakalava* sp.n. especially by the structure of the inner sac of the aedeagus.

12. *Heterocinus rubicundulus* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Montagne d’Ambre, 1169 m, circuit “Sommet”, 12°31’52”S, 40°10’17”E, LITTER, Jan 2015, P. Banar & E. M. Rabotoson 8.I.2015 (MMB); paratypes: same data, litter *Pandanus*, 1 ♂, 1 ♀ (MMB); same data, 1100 m, P. Banar 30.X.2019, 1 ♂ (cB); same data, 3.6 Km 235th SW Joffreville, 925 m, 12°32’4”S, 49°10’46”E, Fisher, Griswold *et al.* 20-26.I.2001, 1 ex. (see Remarks) (cB).

DESCRIPTION. Length of body 3.9 mm; from anterior margin of head to posterior margin of elytra: 2.3 mm. Body reddish brown infusate, with lighter pronotum. Head dilated anteriorly, with slightly rounded sides and widely rounded posterior angles. Eyes large and protruding. Surface of head with few, scattered, very fine punctation. Pronotum sub-rectangular, moderately dilated anteriorly, with sub-rectilinear sides. Surface with dorsal series of 5-6 spaced punctures and indistinct lateral series. Elytra dilated posteriorly, longer and wider than pronotum. Surface with fine and spaced punctation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with transverse micro-striation and fine, very spaced punctation. Tergite of male genital segment with concave posterior margin and membranous distal portion (Fig. 551); sternite as in Fig. 552. Aedeagus (Fig. 553) small, 0.55 mm long, almost ovoid, with peculiar, robust parameres; inner sac with two longitudinal, spaced series of small spines.

ETYMOLOGY. The specific epithet comes from the Latin “rubicundulus-a-um” (reddish), in relation to the body colour.

DISTRIBUTION. The species is known only from the type localities in N Madagascar (Fig. 560).

REMARKS. The paratype in cB is in very poor condition, without part of abdomen.

13. *Heterocinus antemoro* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, 30 Km SE Betroka, 3 Km NE Tsanarena, 900 m, Ivahona River, alluvions, J. Janák 15.XII.1998 (cJ).

DESCRIPTION. Length of body 3.5 mm; from anterior margin of head to posterior margin of elytra: 1.9 mm. Similar to *H. bruneus* sp.n. but with smaller body, with darker head; head shorter, with smaller but more protruding eyes; pronotum with more rounded anterior angles; dorsal series shorter; elytra with more rounded humeral angles. Tergite and sternite of male genital segment as in Figs 554-555. Aedeagus (Fig. 556) small, 0.6 mm long, sub-rectangular, with prominent median lobe; parameres robust; inner sac with some, distal, sinuouse filiforme setae, followed by longitudinal, closed filiforme setae, under which are a left series of small scales and a right series of parallel spinulae; the medio-proximal portion of the sac present 2 short series of triangular, small spines, followed by a narrow surface covered with dense, fine filiforme setae.

ETYMOLOGY. The specific epithet refers to ethic group "Antemoro", as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

GROUP C

- | | |
|---|------------------------------------|
| 1. Body 5.3-8 mm long | 2 |
| - . Body less than 5 mm long | 3 |
| 2. Body 6 mm long; tergite of male genital segment with protruding posterior angles; inner sac of the aedeagus (Fig. 559) arched, covered with long spinules, three large spines in median portion | |
| | 1. <i>H. ikokaensis</i> sp.n. |
| - . Body 5.3 mm long; red yellowish with slightly darker head; tergite of male genital segment with protruding posterior angles; inner sac of aedeagus (Fig. 563) wound several times on itself and covered with minute spinules | 2. <i>H. madecassianus</i> sp.n. |
| 3. Body 4.6-4.7 mm long | |
| - . Body 4.4 mm long; body reddish brown; inner sac of aedeagus (Fig. 573) wound one time on itself, covered whit 5 distal spines and minute triangular scales in the medio-proximal portion ³ . | <i>H. vazimba</i> sp.n. |
| - . Body 4-4.4 mm long | 5 |
| 4. Dorsal series of pronotum of 5 punctures; inner sac of aedeagus (Fig. 566) wound one time on itself with a distal series of spines, next to a left triangular scales, covered with minute scales in the medio-proximal portion | |
| | 4. <i>H. banari</i> sp.n. |
| - . Dorsal series of pronotum of 8 punctures; inner sac of aedeagus (Fig. 569) folded on time, covered with very minute scales | 5. <i>H. descarpentriesi</i> Jarr. |
| 5. Body 4.3 mm long; inner sac of aedeagus (Fig. 576) wound two time, with one very long medio-distal spine, and covered with minute spinules in the proximal portion | |
| | 6. <i>H. isandra</i> sp.n. |
| - . Body 4.2 mm long; inner sac of aedeagus (Fig. 579) wound one time, covered with scales, a distal group of small spines | 7. <i>H. rasoherina</i> sp.n. |
| - . Body 4.4 mm long; inner sac of the aedeagus (Fig. 582) broad, with some ovoid scales and a distal group of spines | 8. <i>H. tsimbazaza</i> sp.n. |

1. *Heterocinus ikokaensis* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Massif d'Ambondrombe, Ikoka env., 1300-1400 m, sous écorces crête Amboasa, J. Janák & P. Moravec 11-12.III.1996 (cJ).

DESCRIPTION. Length of body 6 mm; from anterior margin of head to posterior margin of elytra: 3.3 mm. Similar to *H. brunneus* sp.n. from which differs for the following characters: bigger, longer, darker body (reddish brown with lighter abdomen); head more ovoid, with sparser punctation; pronotum with more rounded and less dilated anterior angles; elytra broader and longer. Tergite and sternite of male genital segment as in Figs 557-558. Tergite of peculiar shape, with posterior margin prolonged in long lateral lobules. Aedeagus (Fig. 559) 1.1 mm long, sub-ovoid, with larger parameres; inner sac with a large, distal scale, followed by 3 big spines and by a medio-proximal portion tube-like, covered with closed, evident spines.

ETYMOLOGY. The specific epithet refers to the type locality.

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

2. *Heterocinus madecassianus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Ambohitantely S.R., 18°11'44"S, 47°17'14"E, 1641 m, P. Banar 5-8.I.2017 (MMB); paratypes: same data, 18°11'49.1"S, 47°17'05.6"E, L.S. Rahanitriniaina & P. Banar 16-17.XI, 2011 (MMB); same data, 18°11'42.6"S, 47°17'10.8"E, 1620 m, litter under *Pandanus*, L.S. Rahanitriniaina 21.X.2011 (MMB).

DESCRIPTION. Length of body 5.3 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Body yellowish with barely darker head. Head sub-rectangular, with almost rectilinear and parallel sides and rounded posterior angles. Eyes small and slightly protruding. Surface of head with few, lateral punctures. Pronotum moderately longer and narrower than head, scarcely dilated anteriorly, with barely oblique anterior margin and narrowly rounded anterior angles; dorsal series of 5 punctures and lateral series of 3 punctures. Elytra as long as pronotum and wider than it, dilated posteriorly with rounded humeral angles. Surface with three series of punctures, one juxtatasural, one median and one lateral. Abdomen with superficial transverse micro-striation and fine, sparse punctures on the sides of each segment. Tergite and sternite of male genital segment as in Figs 561-562. Tergite with short posterior lobes. Aedeagus (Fig. 563) 1.1 mm long, ovoid, with robust parameres; inner sac narrow and very long, folded on itself many times, covered with spinules of different shape.

ETYMOLOGY. The specific epithet is the old name of Madagascar (Fig. 560).

DISTRIBUTION. The species is known only from the type locality in Central Madagascar.

3. *Heterocinus vazimba* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, 30 Km ESE Betroka, Vohitrosa forest, 2 Km NEE of ▲ 1825 m, 1600 m, litter on tree foot in rainforest, J. Janák 19-23.XII.1998 (cJ); paratypes: same data, 4 ♂♂, 1 ♀ (cJ), 1 ♂ (cB).

DESCRIPTION. Length of body 4.4 mm; from anterior margin of head to posterior margin of elytra: 2.5 mm. Similar to *H. brunneus* sp.n. from which differs by the following characters: narrower head, more protruding eyes, surface of head with sparser and finer punctation, pronotum narrower with dorsal series composed by less numerous punctures; elytra wider, dilated posteriad, with more dense punctation. Tergite of male genital segment of peculiar shape (Fig. 571); sternite as in Fig. 572. Aedeagus (Fig. 573) 0.92 mm long, sub-ovoid, with large parameres; inner sac tube-like, long and narrow, folded one time on itself, covered with two series of small, triangular scales and with a distal group of spines.

ETYMOLOGY. The species takes its name from the local Vazimba tribe, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

REMARKS. This species is very different, in external characters and aedeagus, from *H. vohitrosanus* sp.n. from the same locality.

4. *Heterocinus banari* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central E Madagascar, Ranomafana N.P., 946 m, 21°15'30"S, 47°25'17"E, P. Banar 11-14.I.2017, RNF / Jan 2017, (MMB); paratypes: same data, 2 ♀♀ (MMB), 1 ♂ (cB).

DESCRIPTION. Length of body 4.2 mm; from anterior margin of head to posterior margin of elytra: 2.3 mm. Similar to *H. obstrusus* sp.n. but with slightly lighter body; head less narrow anteriorly; eyes larger; pronotum shorter, with less oblique anterior margins; elytra shorter. Tergite and sternite of male genital segment as in Figs 564-565. Aedeagus (Fig. 566) 0.96 mm long, sub-ovoid; peculiar parameres; inner sac with a distal series of closed spines, next to a series of triangular scales, followed by a large surface, folded on itself, covered with fine scales.

ETYMOLOGY. The species is dedicated with pleasure to Dr. Petr Banar of the Moravian Museum of Brno who collected a large part of the here studied specimens and take me the possibility to study them.

DISTRIBUTION. The species is known only from the type locality in Central E Madagascar (511).

5. *Heterocinus descarpentriesi* Jarrige, 1978

Heterocinus descarpentriesi Jarrige, 1978: 277; Herman, 2001a: 3651.

TYPE MATERIAL. The Muséum national d'Histoire naturelle of Paris preserves 1 male labelled "FDHM2", "Andringitra sud / Andrianony, cirque / Manjarivolo, 1800 m / 26.X / 3.XI.1979", "Madagascar Est / mission C.N.R.S. / R.C.P. nth 225", "Paratype" (on red label), "*Heterocinus / descarpentriesi*".

DESCRIPTION. Length of body 4.6 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Body shiny, brown dark, with lighter antennae and legs. Head sub-rectangular, with sub-parallel sides, widely rounded posterior angles. Eyes large and protruding. Surface of head with two series of 4 punctures between the eyes and a group of setiferous punctures on the postero-lateral portion. Pronotum as long as head, dilated anteriorly where it is as wide as head, with oblique anterior margins, widely rounded anterior angles and slightly emarginate sides. Surface with dorsal series of 8 irregular punctures and lateral series of 9-10 punctures. Elytra longer and wider than pronotum, moderately dilated posteriorly, with marked humeral angles. Surface with some series of very fine, sparse punctures. Abdomen with some series of fine punctures on each segment. Tergite and sternite of male genital segment as in Figs 567-568. Aedeagus (Fig. 569-570) 1.1 mm long, sub-rectangular, with sub-acute median lobe; parameres large, with evident setae (Fig.); inner sac tape-like, long, covered with very fine scales.

DISTRIBUTION. The species is known only from the type locality in SE Madagascar.

REMARKS. In the original description are mentioned other three specimens that I could not study, coming from the same place of the studied paratype.

6. *Heterocinus isandra* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, N. Andringitra, Vohidray rdg, 3-4 Km SSE Amboarafibe, 1600-1700 m, rainforest, J. Janák 10-11.IV.2001 (cJ); paratypes: same data, 2 ♀♀ (cJ), 1 ♂ (cB).

DESCRIPTION. Length of body 4.3 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Similar to *H. brunneus* sp.n. but slightly darker; eyes barely larger; head with denser punctation; pronotum with more rounded anterior angles and more numerous punctures of dorsal series; elytra wider, with more denser punctation and more rounded humeral angles; abdomen with more denser punctation. Tergite and sternite of male genital segment as in Figs 574-575. Aedeagus (Fig. 576) 0.85 mm long, sub-rectangular; parameres large; inner sac

tube-like, long and narrow, with a long, big medio-distal spine and with a series of small scales in the proximal portion.

ETYMOLOGY. The species takes its name from Isandra district, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in S. Madagascar.

7. *Heterocinus rasoherina* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central S Madagascar, 30 Km ESE Betroka, 1600 m, Vohitrosa forest, 2 Km NEE of ▲ 1825 m, on tree foot in rainforest, J. Janák 19-23.XII.1998 (cJ); paratype: same data, 2 ♀♀ (cJ).

DESCRIPTION. Length of body 4.2 mm; from anterior margin of head to posterior margin of elytra: 2.3 mm. Similar to *H. brunneus* sp.n. but with broader body; head shorter; eyes more protruding; pronotum with more rounded anterior angles; elytra wider, moderately dilated posteriad, with some series of evident punctures. Tergite and sternite of male genital segment as in Figs 577-578. Aedeagus (Fig. 579) 1.1 mm long, sub-ovoid; short parameres; inner sac narrow and long, with a group of distal spines, followed by a tube-like surface with median, black spinulae and by medio-proximal juxtaposed series of short, acute scales.

ETYMOLOGY. The species takes its name from the Malagasy queen “Rasoherina”, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in Central South Madagascar.

8. *Heterocinus tsimbazaza* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Tananarive, Antanana Prov., Parc de Tsimbazaza, R.W. Brooks 1-6.XI.1984 (FMNH); paratype: same data, 1 ♂, 1 ♀ (cB).

DESCRIPTION. Length of body 4.4 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Body reddish brown with darker head. Characterized by the very long sub-rectangular head, narrow in front; pronotum narrow, with dorsal series of 11-12 punctures and lateral series of 7-8 punctures. Elytra very long and narrow, with three series of punctures, one jaxstasutural, one median and one lateral. Abdomen with fine punctures on each segment. Tergite and sternite of male genital segment as in Figs 580-581. Aedeagus (Fig. 582) 0.74 mm long, ovoid; parameres narrow and long; inner sac with some series of ovoid scales.

ETYMOLOGY. The specific epithet refers to the type locality (Tsimbazaza), as a noun in apposition.

DISTRIBUTION - The species is known only from the type locality in Central Madagascar.

GROUP E

1. Inner sac of the aedeagus covered with few scales *obscurus* Sub-group
 2. Inner sac of the aedeagus with some large spines *oculeus* Sub-group
 3. Inner sac of the aedeagus with different structures *plantialis* Sub-group

1. *obscurus* SUB-GROUP

1. Body 5.3 long; reddish brown very dark; inner sac of the aedeagus (Fig. 585) with few scales arranged to form an S. 1. *H. obscurus* sp.n.
 -. Body 4.8 mm long; inner sac of the aedeagus (Fig. 588) with a different series of spinules; parameres very large; dorsal series of pronotum of 9-10 punctures 2. *H. paramerum* sp.n.
 -. Body less than 4.8 mm long 2
2. Body 4.2-4.3 mm long, reddish brown with darker head. Inner sac of the aedeagus (Fig. 590) narrow and short, covered with minute spinules; pronotum brown 3. *H. fimbriatus*
 . Body 4-4.1 mm long, of different colour 3
3. Body reddish amaranth; inner sac of the aedeagus (Fig. 593) with a short series of triangular minute spines 4. *H. subagrestis* sp.n.
 -. Body reddish brown; inner sac of the aedeagus (Fig. 595) with a short series of minute scales 5. *H. minutus* sp.n.

1. *Heterocinus obscurus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central Madagascar, Maromizaha protected area, 1142 m, 18°57'56"S, 48°27'18"E, MAR / Jan 2017, P. Banar 18-21.I.2017 (MMB); paratypes: same data, 1 ♂, 1 ♀ (MMB); Central Madagascar, Andasibe-Mantadia N.P., "Mantadia circuit *Eulophia*", 958 m, 18°48'16"S, 48°25'43"E, P. Banar 17-21.I.2017, 1 ♂ (MMB), 1 ♂ (cB).

DESCRIPTION. Length of body 5.3 mm; from anterior margin of head to posterior margin of elytra: 2.9 mm. Body reddish brown very dark; antennae and legs testaceous. Head sub-rectangular, with rounded sides and widely rounded posterior angles. Eyes large and protruding. Surface of head with fine, sparse punctation, except for a median stripe. Pronotum dilated anteriorly, moderately longer and narrower than head, with very oblique anterior margins, widely rounded anterior angles and emarginated sides. Surface with dorsal series of 6-7 punctures and lateral series of 3 punctures; all the punctures superficial. Elytra sub-rectangular, with sub-rectilinear and sub-parallel sides, longer and wider than pronotum, with rounded humeral angles. Surface with some series of very fine punctures. Abdomen with some series of fine punctures on each segment. Tergite and sternite of male genital

segment as in Figs 583-584. Tergite with concave posterior margin. Aedeagus (Fig. 585) 0.85 mm long, sub-rectangular, with protruding posterior margin; parameres robust; inner sac transparent, difficult to delimit, covered with sparse, small scales, forming a sort of S.

ETYMOLOGY. The specific epithet comes from the Latin “obscurus-a-um” (dark), in relation to the body colour.

DISTRIBUTION. The species is known only from Central Madagascar.

2. *Heterocinus paramerum* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central N Madagascar, Ambohitantely Spec. Rés., 1625 m, 18°11.44'S, 47°17.16'E, P. Banar 6-8.I.2017 (MMB).

DESCRIPTION. Length of body 4.8 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Similar to *H. brunneus* sp.n. but body slender, darker, with brown yellowish legs. Head with denser punctation; eyes less protruding; pronotum moderately dilated anteriorly, with more oblique anterior margins, very widely rounded anterior angles and barely emarginated sides. Surface with dorsal series of 9-10 punctures and lateral series of 6 punctures; other punctures near the lateral margins. Elytra more sub-rectangular, less dilated posteriorly, with more marked humeral angles. Surface with fine punctation, arranged in some series. Abdomen with more or less polygonal micro-reticulation and fine, scattered punctation, arranged in some series. Tergite and sternite of male genital segment as in Figs 586-587. Tergite broad, with concave posterior margin. Aedeagus (Fig. 588) 0.77 mm long, sub-ovoid, with protruding median lobe; parameres very peculiar, large, with a supplementar, proximal comb of long setae; inner sac narrow, longitudinal, short, covered with a series of spinulae.

ETYMOLOGY. The specific epithet refers to the peculiar parameres.

DISTRIBUTION. The species is known only from Central N Madagascar (Fig. 560).

3. *Heterocinus fimbriatus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central N Madagascar, Ambohitantely Spec. Rés., 1595 m, 18°11'48.5"S, 47°17'09.3"E, litter, ABT / Nov. 2011, P. Banar 18.XI.2011 (MMB).

DESCRIPTION. Length of body 4.3 mm; from anterior margin of head to posterior margin of elytra: 2.6 mm. Body reddish brown with darker head; antennae and legs brown. Head sub-rectangular, with sub-parallel sides and widely rounded posterior angles. Eyes large and very protruding. Surface of head with deep, moderately scattered punctation, especially on the posterior half. Pronotum dilated anteriorly, as

long as head and wider than it, with very oblique anterior margins, very rounded anterior angles, slightly emarginated sides. Surface with dorsal series of 8-9 broad punctures and lateral series of 7-8 broad punctures. Elytra large, dilated posteriad, longer and wider than pronotum, with widely rounded humeral angles. Surface with fine but evident punctation, arranged in some series. Abdomen with fine, sparse punctation, arranged in some series on each segment. Tergite of male genital segment missing; sternite as in Fig. 589 Aedeagus (Fig. 590) 0.62 mm long, sub-rectangular; parameres short; inner sac filiform, very narrow, composed by very minute setae.

ETYMOLOGY. The specific epithet comes from the Latin “fimbriatus-a-um” (fringe shaped), in relation to the inner sac.

DISTRIBUTION. The species is known only from Central N Madagascar.

4. *Heterocinus subagrestis* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central N Madagascar, Ambohitantely S.R., 1595 m, 18°11'48.5"S, 47°17'09.3"E, litter, ABT / Nov 2011, P. Banar 18.XI.22011 (MMB); paratypes: same data, 2 ♂♂, 1 ♀ (MMB), 1 ♂ (cB).

DESCRIPTION. Length of body 4.1 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Body reddish amaranth, with antennae and legs brown very ligh. Head sub-rectangular, with sub-parallel sides and widely rounded posterior angles. Eyes medium-sized and protruding. Surface of head with fine, scattered punctation, except for a wide median stripe. Pronotum dilated anteriorly, longer than head and as wide as it, with oblique anterior margins, widely rounded anterior angles and emarginated sides. Surface with dorsal series of 6-7 fine punctures and lateral series of 4 punctures. Elytra moderately dilated posteriad, as long as pronotum, wider than it, with rounded humeral angles. Surface with fine, very scattered punctation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with fine, scattered punctation, arranged in some series on each segment. Tergite and sternite of male genital segment as in Figs 591-592. Tergite with membranous posterior portion. Aedeagus (Fig. 593) small, 0.66 mm long, sub-ovoid, with evident median lobe; parameres small and rectilinear; inner sac with an arched distal, black surface, followed by a long series of small, triangular spines.

ETYMOLOGY. The specific epithet comes from the Latin “sub” (under) and “agrestis-e” (wild).

DISTRIBUTION. The species is known only from Central N Madagascar (Fig. 560).

5. *Heterocinus minutus* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Ambatondrazaka reg., 5 Km N Didy, 1100-1200 m, ruisseau en forêt humide, J. Janák 14-16.I.1995 (cJ); paratype: same data, 1 ♀ (cJ).

DESCRIPTION. Length of body 4 mm; from anterior margin of head to posterior margin of elytra: 2.2 mm. Similar to *H. brunneus* sp.n. but body shorter, narrower; head sub-rectangular, not narrow anteriorly, with denser and more evident punctation and smaller eyes; pronotum less squarish; elytra shorter, with less marked humeral angles and sparser punctation. Tergite of male genital segment as in Fig. 594; sternite missing. Aedeagus (Fig. 595) about 0.85 mm long, ovoid; parameres sub-rectilinear; inner sac with medio-distal series of small scales and spines, followed by a broad, very pale surface, with two series of minute scales.

ETYMOLOGY. The specific epithet comes from the Latin “minutus-a-um” (small), in relation to the little and narrow body.

DISTRIBUTION. The species is known only from Central N Madagascar.

2. *oculeus* SUB-GROUP

- | | |
|---|---------------------------------|
| 1. Body 6.4 mm long; elytra very long, sub-rectangular; eyes very protruding; inner sac of the aedeagus (Fig. 598) with numerous spines..... | 1. <i>H. oculeus</i> sp.n. |
| - . Body less than 6 mm long..... | 2 |
| 2. Body 5.2-5.6 mm long..... | 3 |
| - . Body 5 mm long..... | 4 |
| 3. Body 5.6 mm long; pronotum with dorsal series of 7-8 punctures; inner sac of the aedeagus (Fig. 601) with two proximal surface covered with minute spinules and two long spines in the distal portion..... | 2. <i>H. bispinosus</i> sp.n. |
| - . Body 5.2 mm long; pronotum with dorsal series of 5 punctures; inner sac of the aedeagus (Fig. 604) with two areas covered with scales and spinules and with two large spines in the distal portion..... | 3. <i>H. valiha</i> sp.n. |
| 4. Body 5 mm long; inner sac of the aedeagus (Fig. 605) with a proximal group of minute scales and a long medio-distal spine..... | 4. <i>H. ambiroa</i> sp.n. |
| - . Body 5 mm long; inner sac of the aedeagus (Fig. 608) with two surface covered with minute spinules and 5 short distal spines..... | 5. <i>H. vohitrosanus</i> sp.n. |

1. *Heterocinus oculeus* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Ranomafana N.P., 21°15'30"S, 47°25'17"E, by stream, P. Banar 11-14.I.2017 (MMB); paratype: same data, 1 ♀ (cB).

DESCRIPTION. Length of body 6.4 mm; from anterior margin of head to posterior margin of elytra: 3.2 mm. Body reddish brown with lighter abdomen and brown light antennae and legs. Characterized by very long and rectangular elytra, with spaced and fine punctation. Head sub-rectangular but with widely rounded sides and posterior angles. Eyes medium-sized but very prominent. Surface of head with fine, scattered punctures and light setae facing the large median, impunctate stripe. Pronotum very dilated anteriorly, as long as head but very narrower than it, with oblique anterior margins and barely rounded anterior angles. Elytra wider and very longer than pronotum, with marked humeral angles. Surface with fine, sparse punctures, arranged in three spaced series, one juxtasutural, one median and one lateral. Tergite and sternite of male genital segment as in Figs 596-597. Aedeagus (Fig. 598) 1 mm long, sub-ovoid, dilated forward, narrow in the middle, with robust parameres; inner sac with a median, long mass composed by spines and scales of medium size and with 2 long spines in the distal portion.

ETYMOLOGY. The specific epithet comes from the Latin “oculus-a-um” (sharp-eyes).

DISTRIBUTION. The species is known only from the type locality in E Madagascar (Fig. 511).

REMARKS. I believe this species can be approached by *H. longelytratus* sp.n. from the same locality for the conformation of the inner sac of the aedeagus, but very different for longer and robustior body and for very darker colour.

3. *Heterocinus bispinosus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central N Madagascar, 10 Km N Maheriara, Route Morarano Chrome-Ambakireni, 1200-1300 m, forêt humide, J. Janák 21.I.1995 (cJ).

DESCRIPTION. Length of body 5 mm; from anterior margin of head to posterior margin of elytra: 2.8 mm. Body reddish brown with darker head and elytra. Head sub-rectangular, with rounded sides and widely rounded posterior angles. Eyes small and slightly protruding. Surface of head with few, fine, lateral punctation. Pronotum narrow, narrower than head, as long as it, with moderately oblique anterior margins, rounded anterior angles and emarginated sides. Surface with dorsal series of 7-8 spaced punctures and lateral series of 3-4 punctures. Elytra large, dilated posteriorly, longer and markedly wider than pronotum, with rounded humeral angles. Surface with fine and spaced punctation, arranged in three series, one juxtasutural, one median and one lateral. Abdomen with very spaced, fine punctation; paratergites with long setae. Tergite and sternite of male genital segment as in Figs 599-600. Aedeagus (Fig. 601) 1.1 mm long, sub-rectangular; parameres missing; inner sac with a distal big scale, followed by 2 long spines between other smaller spines and by 2 parallel surface covered with scales and fine spinulae.

ETYMOLOGY. The specific epithet comes from the Latin “spinosus-a-um” (with spines), in relation to the inner sac of the aedeagus.

DISTRIBUTION. The species is known only from the type locality in Central N Madagascar.

4. *Heterocinus valiha* sp.n.

EXAMINED MATERIAL. Holotype ♂: N Madagascar, Massif Anjanaharibe Nord, sentier Ambodihasina-Ambalarombe, 750-850 m, Riv. Andramonta env., forêt humide, J. Janák & P. Moravec 28.II.1996 (cJ).

DESCRIPTION. Length of body 5.2 mm; from anterior margin of head to posterior margin of elytra: 2.8 mm. Similar to *H. brunneus* sp.n. but with wider body, very shiny, very dark, reddish brown amaranth, with almost black head; head wide, shorter, with rounded sides and widely rounded posterior angles; eyes large and very protruding; punctation of head finer and sparser; pronotum with more oblique anterior margins and rounded anterior angles; elytra longer, with punctation arranged in three series, one juxtatural, one median and one lateral. Tergite and sternite of male genital segment as in Figs 602-603. Tergite of peculiar shape. Aedeagus (Fig. 604) 1.15 mm long, sub-rectangular with rounded median lobe; parameres sub-triangular; inner sac intricate, with a large distal spine, followed by a broad surface covered with a long right series of small scales and, in the middle, by more or less arched, filiform spinules.

ETYMOLOGY. The species takes its name from the local traditional musical instrument “Valiha”, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in N Madagascar.

5. *Heterocinus ambiroa* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Maromiza pr., Andasibe (Périnet), 1200 m, J. Janák 9.II.1993 (cJ).

DESCRIPTION. Length of body 5 (?) mm (see immediately below); from anterior margin of head to posterior margin of elytra: 2.7 (?) mm. Body damaged, head and part of genital segment missing. Similar to *H. brunneus* sp.n. but body robustior, wider, darker; pronotum with more oblique anterior margins and rounded anterior angles; dorsal series of 6 punctures and lateral series of 3 punctures; elytra longer and wider, dilated posteriad; abdomen with sparser punctation. Tergite and sternite of male genital missing. Aedeagus (Fig. 605) 0.88 mm long, sub-rectangular, with sub-acute median lobe; parameres short; inner sac with a short, distal spine, followed by two narrow, long, light, closed surfaces, and by an arched series of small, short spines.

ETYMOLOGY. The species takes its name from the local spirit “Ambiroa”, as a noun in apposition.

DISTRIBUTION. The species is known only from the type locality in E Madagascar.

6. *Heterocinus vohitrosanus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central S Madagascar, 30 Km ESE Betroka, 1600 m, Vohitrosa forest, 2 Km NEE of ▲ 1825 m, on tree foot in rainforest, J. Janák 19-23.XII.1998 (cJ); paratype: same data, 3 Km NE Tsanarena, 900 m, Ivahona River alluvions, J. Janák 15.XII.1998, 1 ♂ (cJ).

DESCRIPTION. Length of body 5 mm; from anterior margin of head to posterior margin of elytra: 2.8 mm. Similar to *H. brunneus* sp.n. but body larger; head sub-ovoid, with widely rounded posterior angles and finer punctation; eyes slightly larger and protruding; pronotum more dilated anteriorly, with more rounded anterior angles, with punctation more evident and less numerous; elytra slightly wider, with more series of punctures; abdomen with less numerous punctures. Tergite and sternite of male genital segment as in Figs 606-607. Aedeagus (Fig. 608) 0.92 mm long, sub-rectangular, narrow in the middle; parameres long; inner sac with 2 distal series of curved spines, followed by 2 parallel surfaces covered with fine, closed spinulae.

ETYMOLOGY. The specific epithet refers to the type locality in Central South Madagascar.

DISTRIBUTION. The species is known only from the type localities in Central South Madagascar.

REMARKS. This species have aedeagus similar to that of *H. bispinosus* sp.n. from Central North island but differs by smaller body, colour, punctation and by the structure of inner sac.

3. *planitalis* SUB-GROUP

1. Body 5.4 mm long, elytra with three series of punctures, one juxtasutural, one median and one lateral; body brown; inner sac of the aedeagus (Fig.) with a group of medio-proximal portion of spines and a distal group of large scales..... 1. *H. merina* sp.n.
-. Body about 4.5 mm..... 2

2. Pronotum with usual shape; inner sac of the aedeagus (Fig. 614) with a group of scales and a distal group of minute spines..... 2. *H. amarantinus* sp.n.
-. Pronotum with very oblique anterior angles; body 4.5 mm long; inner sac of the aedeagus (Fig. 617) with some areas covered with fine spinules and one distal, narrow spine..... 3.
..... *H. longelytratus* sp.n.

1. *Heterocinus merina* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, N Andringitra, Vohidray rdg., ▲ 1920 m env., N part, 1900-1920 m, rock under *Philippia*, J. Janák 15.IV.2001 (cJ).

DESCRIPTION. Length of body 5.4 mm; from anterior margin of head to posterior margin of elytra: 2.7 mm. Similar to *H. brunneus* sp.n. but body larger; head shorter and narrower, with finer punctation; eyes larger; pronotum narrower, with more rounded anterior angles; elytra more convex, wider, moderately dilated posteriad, with very numerous series of closed punctures; abdomen with denser punctation. Tergite and sternite of male genital segment as in Figs 609-610. Tergite of peculiar shape. Aedeagus (Fig. 611) 1 mm long, sub-rectangular, with robust parameres; inner sac similar to that of *H. amarantinus* sp.n., with medio-proximal portion covered with fine, closed scales, forming some, long surface spines-like; in the distal portion are a group of ovoid, large scales.

ETYMOLOGY. The species takes its name from the ethnic group “Merina”, as a noun in apposition.

DISTRIBUTION. The species is known only from the two listed locality in E Madagascar.

2. *Heterocinus amarantinus* sp.n.

EXAMINED MATERIAL. Holotype ♂: E Madagascar, Fianarantsoa, Rés. Andringitra, 8.5 Km SE Antanitotsy, 1990 m, 22.10S, 44.58E, litter in montane rainforest, B. L. Fisher 6.III.1997 (FMNH); paratypes: same data, 1 ♂, 1 ♀ (FMNH), 1 ♂ (cB); Massif Ambondrombe, 1500-1600 m, cote 1579, forêt humide, J. Janák & P. Moravec 15-18.III.1996, 2 ♂♂ (cJ).

DESCRIPTION. Length of body 4, 4 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Body reddish amaranth, with darker head; antennae and legs brown. Similar to *H. brunneus* sp.n. but body broader; head shorter; eyes large; head with finer and sparser punctation; pronotum with more oblique anterior margins and widely rounded anterior angles; elytra wider and longer, with more series of denser punctures. Tergite and sternite of male genital segment as in Figs 612-613. Aedeagus (Fig. 614) 1.18 mm long, sub-rectangular, with short parameres; inner sac with a median surface covered with very fine scales, forming 3-4 denser areas, spines-like.

ETYMOLOGY. The specific epithet comes from the Latinization of the adjective “amaranth”.

DISTRIBUTION. The species is known only from the two listed localities in Central Madagascar.

3. *Heterocinus longelytratus* sp.n.

EXAMINED MATERIAL. Holotype ♂: Central E Madagascar, Fianarantsoa distr., Ranomafana env., I. Jenis 28.I-6.V.1995 (cJ); paratypes: same data, 5 ♂♂ (cJ), 1 ♂ (cB).

DESCRIPTION. Length of body 4.5 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Similar to *H. brunneus* sp.n. but with smaller body; head wider, with more evident punctation; pronotum with more oblique anterior margins and shorter dorsal series; elytra longer and wider. Tergite and sternite of male genital segment as in Figs 615-616. Aedeagus (Fig. 617) small, 0.7 mm long, sub-rectangular with protruding median lobe; parameres large; inner sac intricate, with very small distal, arched scales, followed by a distal, narrow spine, next to some small scales, followed by small, elongated scales, differently arranged.

ETYMOLOGY. The specific epithet comes from the Latin “*longus-a-um*” and “*elytratus-a-um*”, in relation to the long elytra.

DISTRIBUTION. The species is known only from the type locality in Central E Madagascar.

DISCLAIMER

Finally, I was not able to examine a few species described by Jarrige and preserved in the Paris Museum, for which I refer to the description and the figures of the aforementioned author: (1) *Heterocinus betshi* Jarrige, 1978: 278, described from Andringitra, Plateau Andohariana, 2000-2100 m; (2) *Heterocinus andringitranus* Jarrige, 1978: 278, described from Andringitra, Marosity, E rivière Antisitora, 2000 m; (3) *Heterocinus pauliani* Jarrige, 1970: 44, described from Mt Tsatanana, 1500 m.

CONCLUSIONS

The Xantholinini of Madagascar can be divided into some categories, The first is that of the endemic genera (*Elea* with 19 species, *Edrisia* with 2 species, *Paulianella* with 33 species, *Qumuria* with one, *Malgalinus* with 13, *Heterocinus* with 56 species), the second is that of the genera present both in Africa and in the Oriental Region (*Thyrecephalus*, *Phacophallus*, *Gauropterus*), the third that of the genera present also in Africa (*Chaetocinus*) or hitherto only in the Oriental Region (*Erymus*, *Metolinus*).

Qumuria is endemic to the Comoros islands, the others to Madagascar, among them the genus *Heterocinus* includes the largest number of species and is the most characteristic like *Metolinus* in the Eastern Region and *Chaetocinus* in Africa south of Sahara.

The species belonging to genera proper to the Oriental Region and Africa have been collected mainly in the smaller islands, such as *Thyrecephalus jocheni* Bordoni, *Phacophallus pallidipennis*, *P. flavipennis*, *Metolinus mauritianus* and *Erymus gracilis*, almost all probably introduced by human activities. Several species of the genus *Elea* also occur in the islands (*Elea magniceps* and *E. seycellensis* in Seychelles, *E. gomyi* and *E. jarrigei* in La Réunion, *E. vinsoni*, *E. infima* and *E. quadriceps* in Mauritius). The remaining species of other genera occurs only in Madagascar.

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RIASSUNTO

Revisione degli Xantholinini del Madagascar, delle Mascarene, Comore e Seychelles, con la descrizione di quattro nuovi generi e cento-quarantanove nuove specie (Coleoptera, Staphylinidae)

La revisione degli Staphylinidae Xantholinini (Coleoptera) del Madagascar e delle isole vicine è presentata inclusa la revisione storica, la discussione dei caratteri diagnostici, la morfologia ed alcune osservazioni sulla zoogeografia di questo gruppo in Madagascar. Il numero dei generi conosciuti del Madagascar ammonta a 16 (4 dei quali nuovi per la scienza: *Elea* gen.n., *Edrisia* gen.n., *Qumuria* gen.n., *Malgalinus* gen.n.) e il numero delle specie a 204 delle quali 149 nuove per la scienza. *Platydromus* Fauvel è messo in sinonimia con *Gauropterus* Thomson. Lectotipi e talora paralectotipi sono designati per *Elea magniceps* (Bernhauer), *Paulianella innocua* (Fauvel), *P. obsoleta* (Schubert), *P. insularis* (Bernhauer), *Thyrecephalus silvaticus* (Bernhauer), *T. goudoti* (Fauvel) *T. madagascarensis* (Steel), *Gauropterus umbilicatus* (Fauvel) and *G. claviger* (Fauvel). Nuove combinazioni sono designate per *Elea scalabrei* (Fauvel), *E. ganglbaueri* (Bernhauer), *E. puncticollis* (Fauvel), *E. magniceps* (Bernhauer), *E. vinsoni* (Cameron), *E. quadriceps* (Cameron), *E. mauritiana* (Lecoq), *E. jarrigei* (Lecoq), *E. infima* (Lecoq), *Edrisia angustata* (Jarrige), *Paulianella innocua* (Fauvel), *P. insularis* (Bernhauer), *P. obsoleta* (Schubert), *Chaetocinus jarrigei*

(Lecoq), *Thyrecephalus nossibeanus* (Bernhauer & Schubert), *T. mirabilis* (Jarrige), *T. silvaticus* (Bernhauer), *T. goudoti* (Fauvel), *T. sexpunctatus* (Fauvel), *T. madagascarensis* (Steel), *T. heterocephalus* (Fauvel), *Qumuria bordonii* (Lecoq), *Microleptus microphthalmus* (Fauvel), *Gauropetrus nigripennis* (Jarrige), *G. erosus* (Fauvel), *Malgalinus politus* (Fauvel), and *Heterocinus dieganus* (Fauvel). Una chiave degli Xantholinini e una chiave delle specie di tutti i generi di questa tribù del Madagascar vengono proposte. Ogni specie è descritta e originariamente illustrata, tutte le informazioni circa la bionomia e la distribuzione sono presentate e la distribuzione è talora mappata.

PAROLE CHIAVE: Coleoptera, Staphylinidae, Xantholinini, revisione, Madagascar, Mascarenes, Isole Comore, Seychelles.

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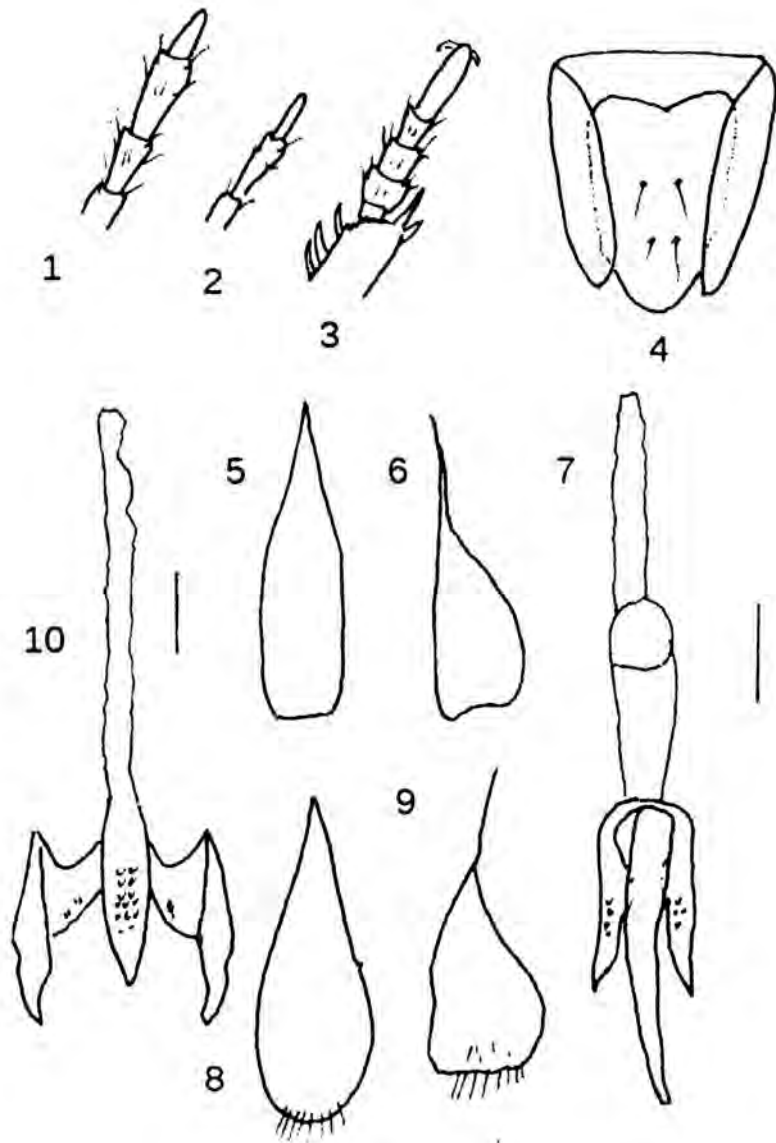
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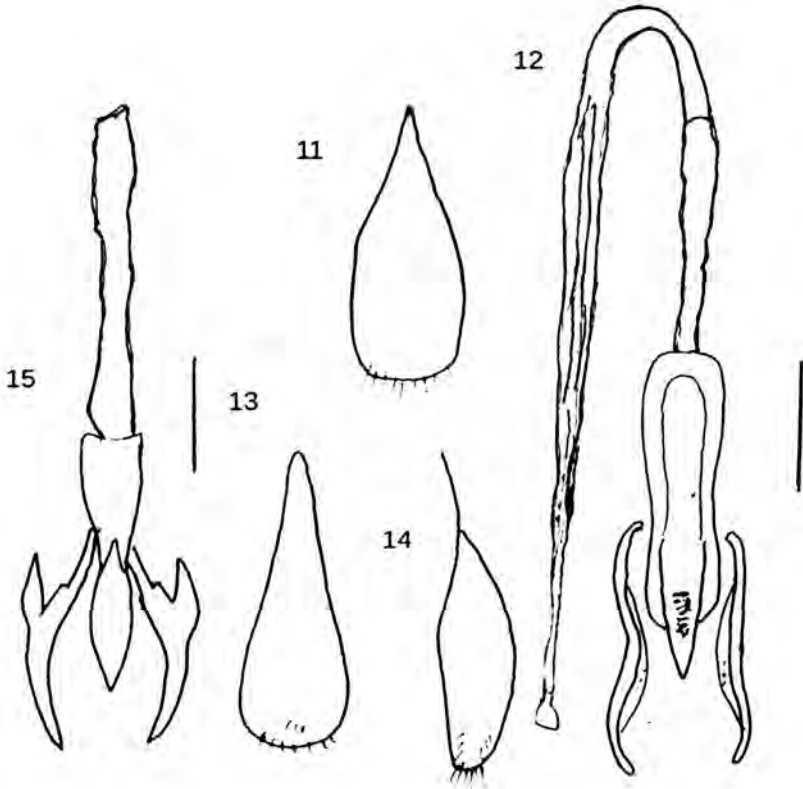
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FIGURES

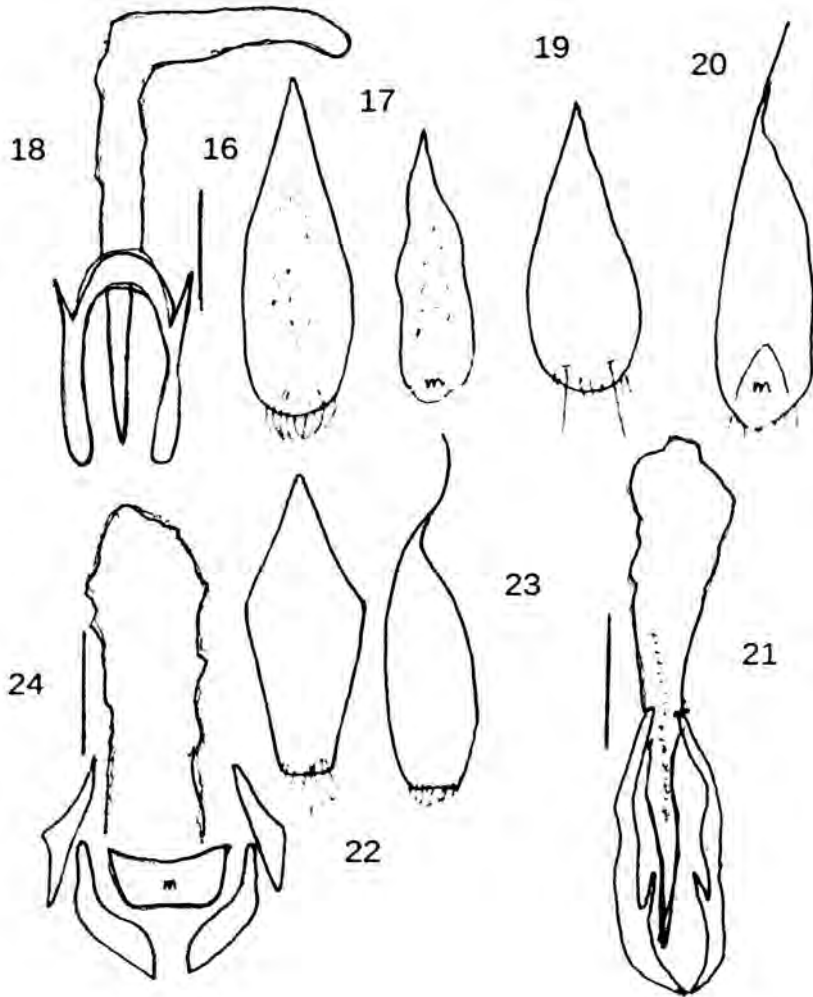
Figs 1-10. *Elea* gen.n.: maxillary palpi (1), labial palpi (2), anterior tarsi (3), female genital segment (4). *Elea toliaraensis* sp.n.: tergite and sternite of male genital segment (5-6), aedeagus (7). *Elea clivia* sp.n.: tergite and sternite of male genital segment (8-9), aedeagus (10). Scale bars = 0.1 mm.



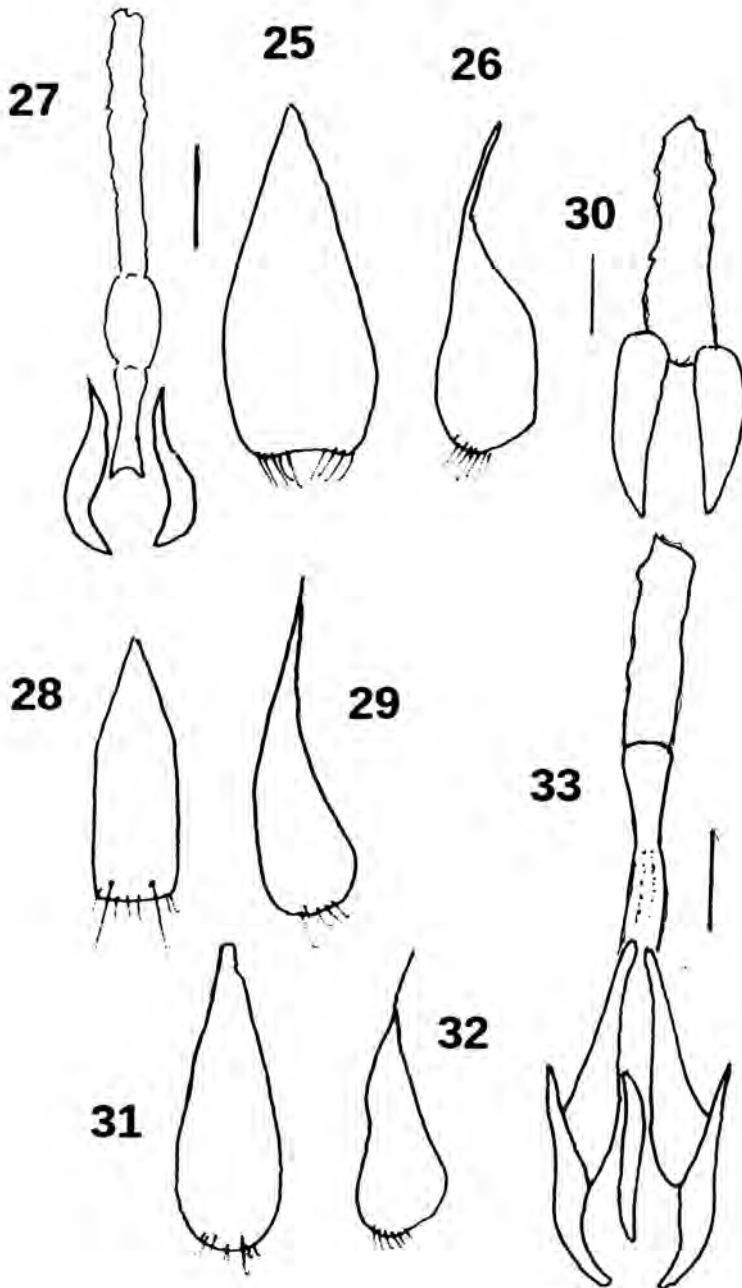
Figs 11-15. *Elea complicita* sp.n.: tergite of male genital segment (11), aedeagus (12). *Elea diegana* sp.n.: tergite and sternite of male genital segment (13-14), aedeagus (15) (m = membranous part). Scale bars = 0.1 mm.



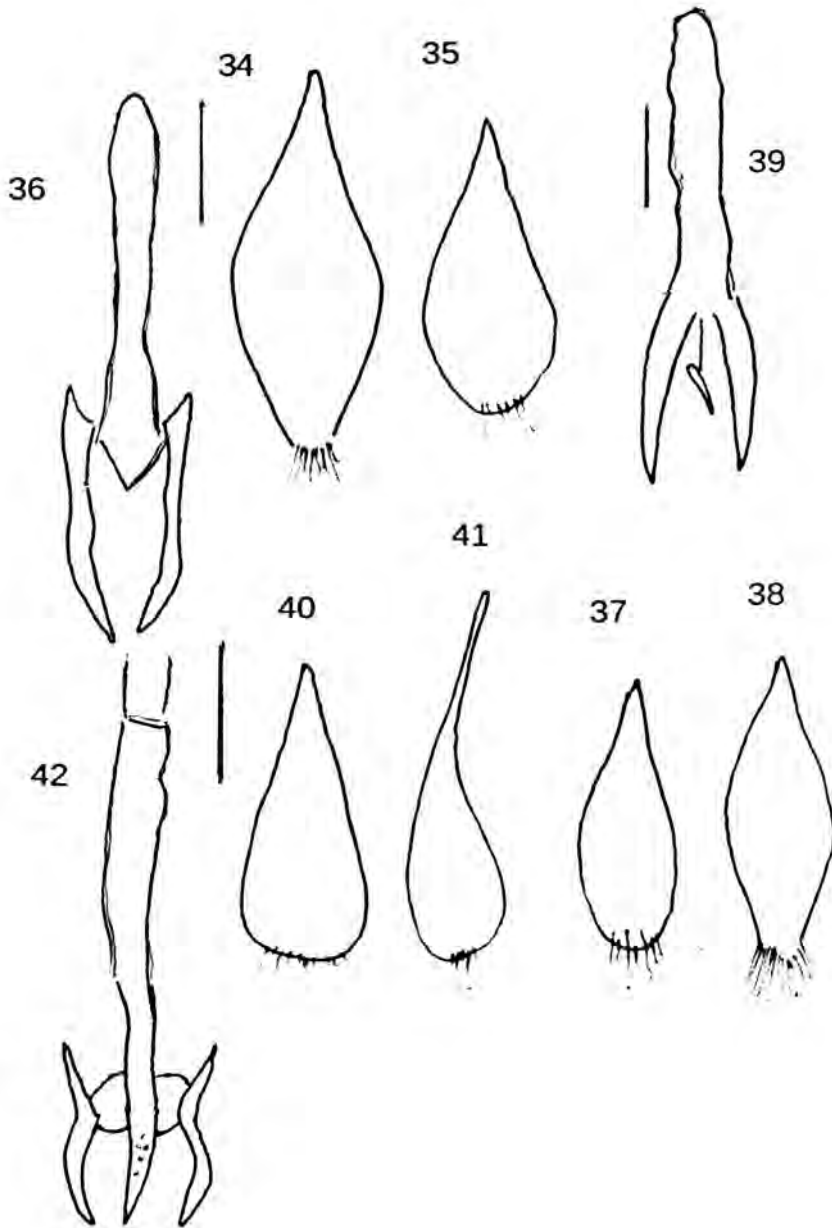
Figs 16-24. *Elea flavoelytrata* sp.n.: tergite and sternite of male genital segment (16-17), aedeagus (18). *Elea scalabrei* (Fvl.): tergite and sternite of male genital segment (19-20), aedeagus (21). *Elea ganglbaueri* (Bh.): tergite and sternite of male genital segment (22-23), aedeagus (24). Scale bars = 0.1 mm.



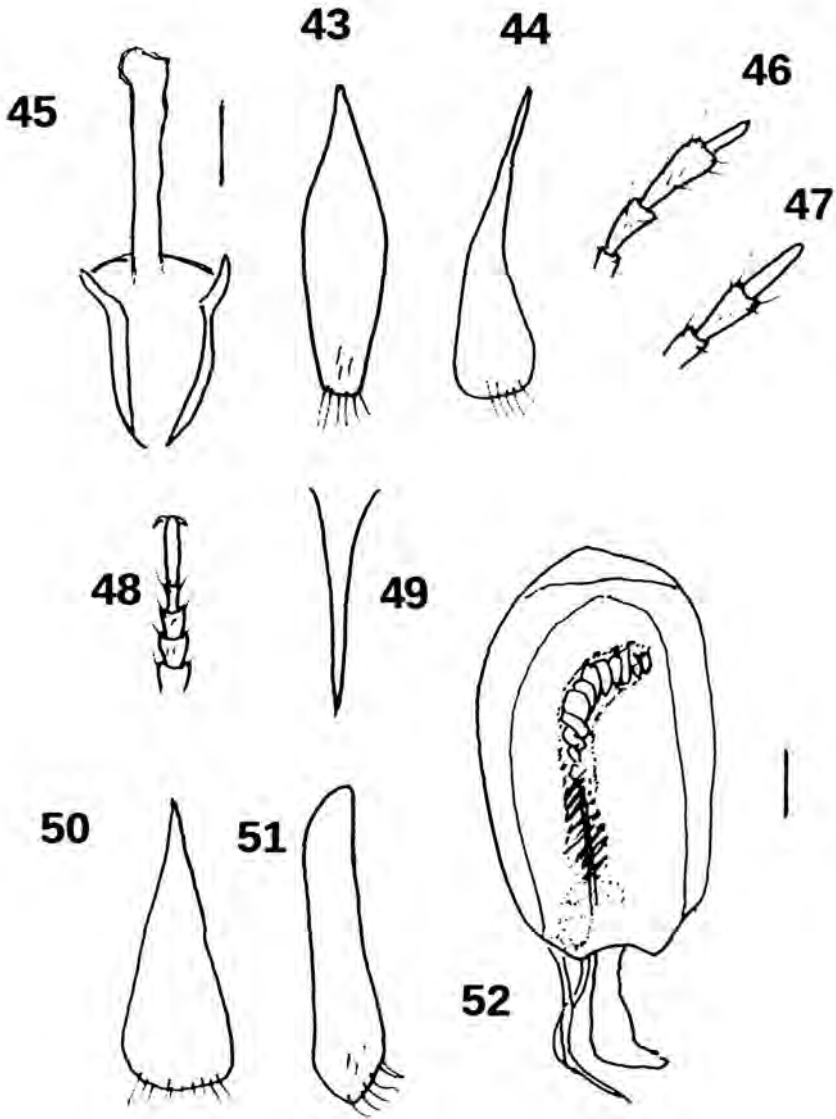
Figs 25-33. *Elea nigra* sp.n.: tergite and sternite of male genital segment (25-26), aedeagus (27). *Elea puncticollis* (Fvl.): tergite and sternite of male genital segment (28-29), aedeagus (30). *Elea tsaratananaensis* sp.n.: tergite and sternite of male genital segment (31-32), aedeagus (33). Scale bars = 0.1 mm.



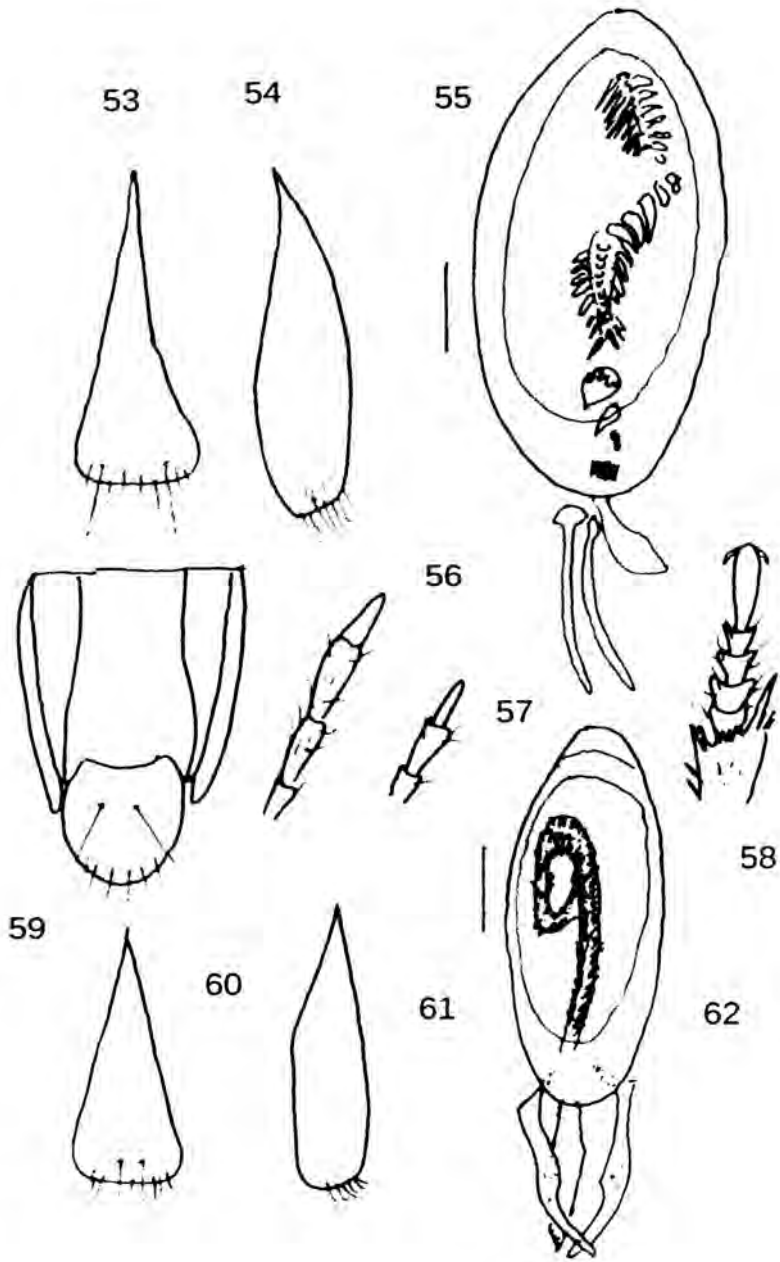
Figs 34-42. *Elea magniceps* (Bh.): tergite and sternite of male genital segment (34-35), aedeagus (36). *Elea nossibiana* sp.n.: tergite and sternite of male genital segment (37-38), aedeagus (39). *Elea seycellensis* sp.n. tergite and sternite of male genital segment (40-41), aedeagus (42). Scale bars = 0.1 mm.



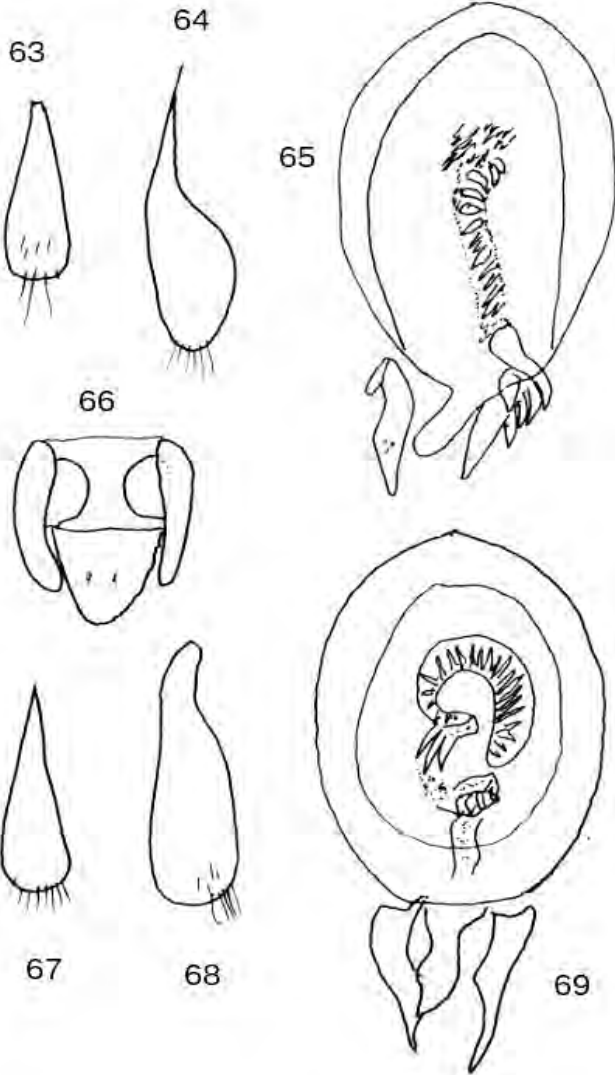
Figs 43-52. *Elea quadriceps* (Cam.): tergite and sternite of male genital segment (43-44), aedeagus (45). *Edrisia* gen.n.: maxillary palpi (46), labial palpi (47), anterior tarsi (48), gular suture (49). *Edrisia angustata* (Jarr.): tergite and sternite of male genital segment (50-51), aedeagus (52). Scale bars = 0.1 mm.



Figs 53-62. *Edrisia elegantissima* sp.n.: tergite and sternite of male genital segment (53-54), aedeagus (55), female genital segment (56). *Paulianella* Jarr.: maxillary palpi (57), labial palpi (58), anterior tarsi (59). *Paulianella singularis* sp.n.: tergite and sternite of male genital segment (60-61), aedeagus (62). Scale bars = 0.1 mm.



Figs 63-69. *Paulianella ambositra* sp.n.: tergite and sternite of male genital segment (63-64), aedeagus (65), female genital segment (66). *Paulianella cincinnata* sp.n.: tergite and sternite of male genital segment (67-68), aedeagus (69). Scale bars = 0.1 mm.



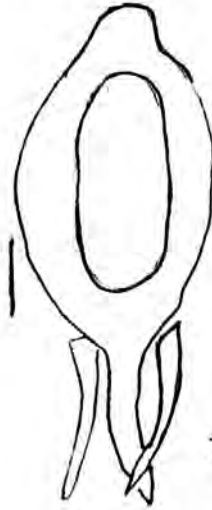
Figs 70-75. *Paulianella pallida* sp.n.: tergite and sternite of male genital segment (70-71), aedeagus (72). *Paulianella newtoni* sp.n.: tergite and sternite of male genital segment (73-74), aedeagus (75). Scale bars = 0.1 mm.



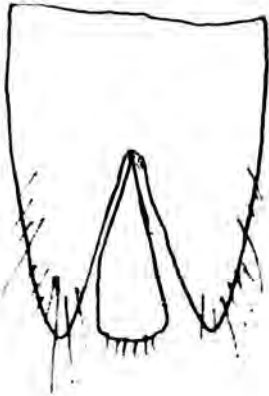
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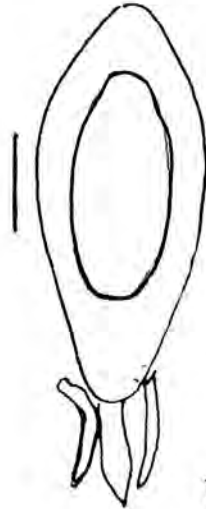
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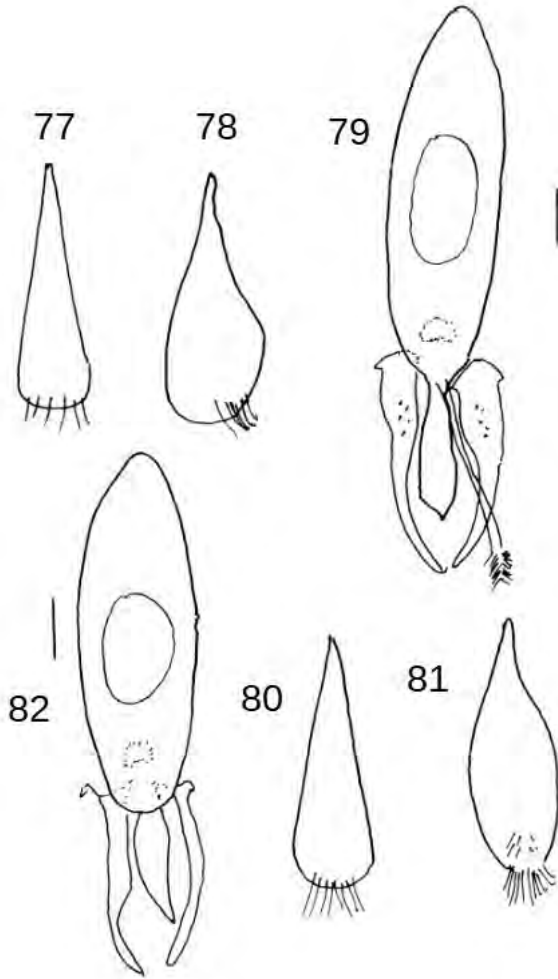


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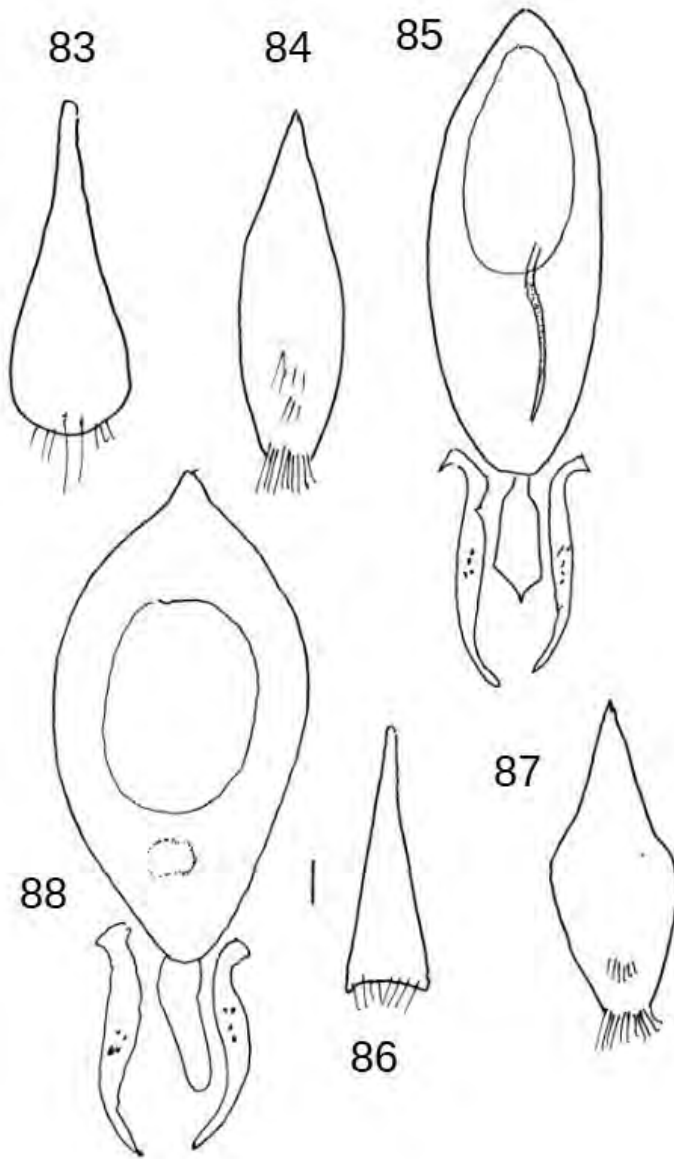
Fig. 76. Distribution of *Paulianella ambositrana*, *P. cincinnata* around Ambositra (square) and *P. newtoni*, *P. mirabilis* around Antsiranana (triangle).



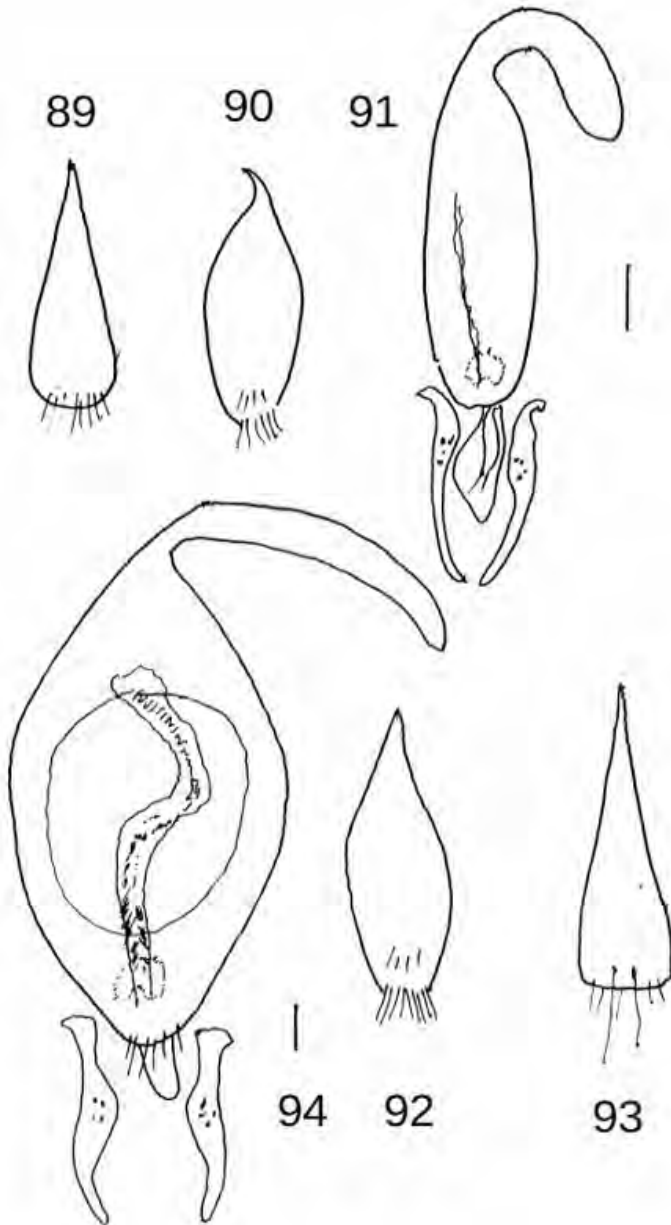
Figs 77-82. *Paulianella depauperata* sp.n.: tergite and sternite of male genital segment (77-78), aedeagus (79). *Paulianella kalabatrira* sp.n.: tergite and sternite of male genital segment (80-81), aedeagus (82). Scale bars = 0.1 mm.



Figs 83-88. *Paulianella ankazobaensis* sp.n.: tergite and sternite of male genital segment (83-84), aedeagus (85). *Paulianella vohitrosa* sp.n.: tergite and sternite of male genital segment (86-87), aedeagus (88). Scale bars = 0.1 mm.



Figs 89-94. *Paulianella differens* sp.n.: tergite and sternite of male genital segment (89-90), aedeagus (91). *Paulianella incredenda* sp.n.: tergite and sternite of male genital segment (92-93), aedeagus (94). Scale bars = 0.1 mm.



Figs 95-100. *Paulianella superlata* sp.n.: tergite and sternite of male genital segment (95-96), aedeagus (97). *Paulianella tenerella* sp.n.: tergite and sternite of male genital segment (98-99), aedeagus (100). Scale bars = 0.1 mm.

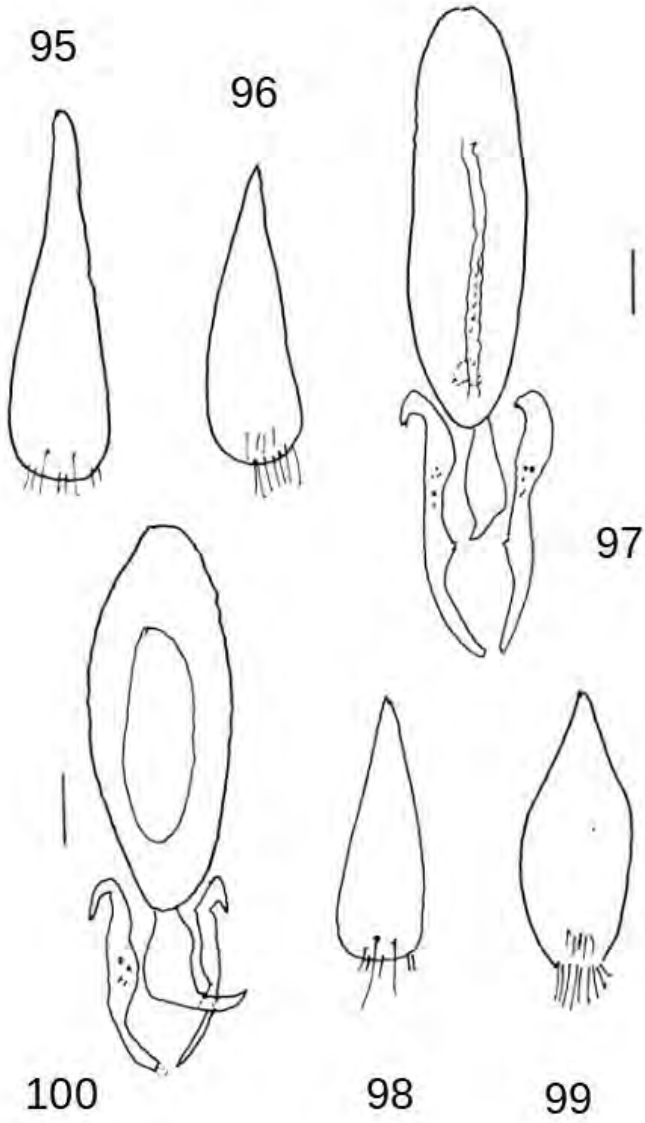
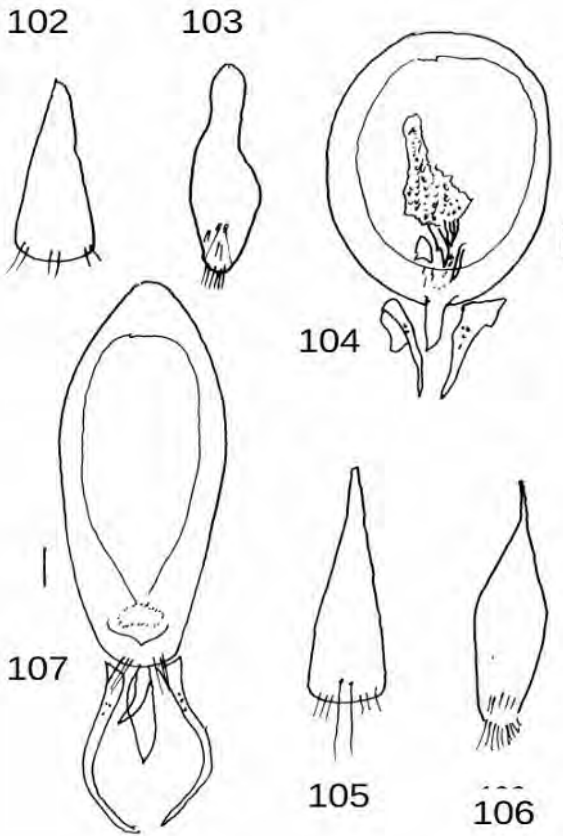


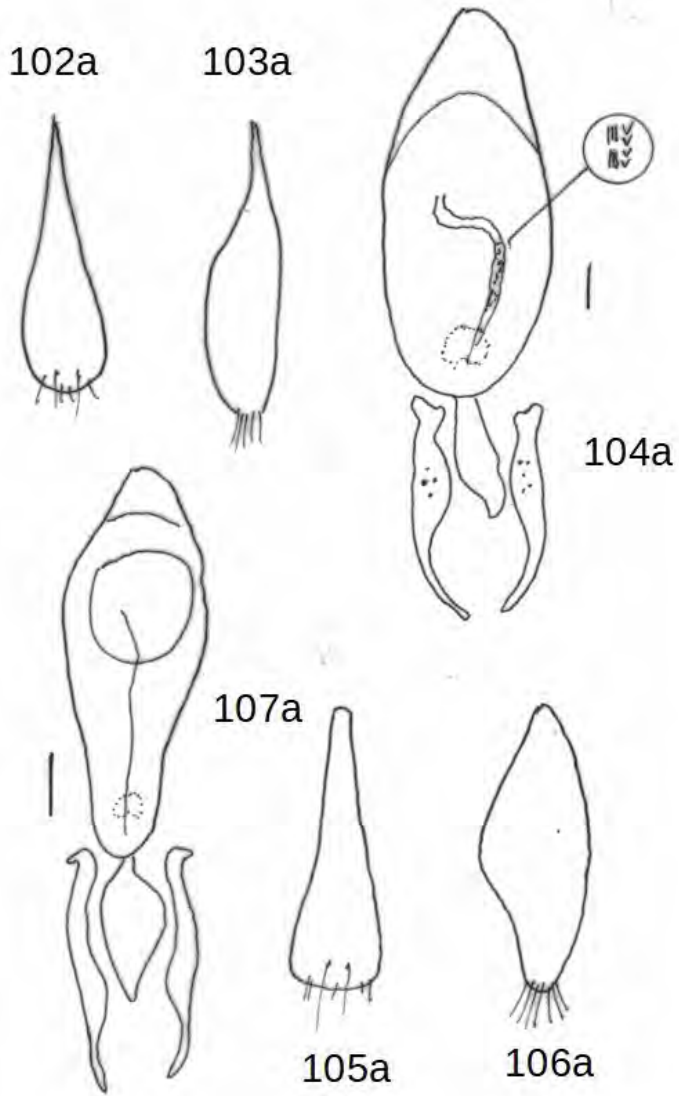
Fig. 101. Distribution of *Paulianella betroka*, *P. kalambatritra*, *P. vohitrosa*, *P. incredenda* around Betroka (square) and *P. depauperata*, and *P. superlata* around Andasibe-Mantadia N.P. (triangle).



Figs 102-107. *Paulianella subaenea* Jarr.: tergite and sternite of male genital segment (102-103), aedeagus (104). *Paulianella janaki* sp.n.: tergite and sternite of male genital segment (105-107), aedeagus (108). Scale bars = 0.1 mm.

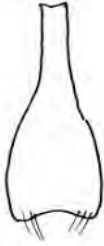


Figs 102a-107a. *Paulianella betroka* sp.n.: tergite and sternite of male genital segment (102a-103a), aedeagus (104a). *Paulianella microps* Jarr.: tergite and sternite of male genital segment (105a-106a), aedeagus (107a). Scale bars = 0.1 mm.



Figs 108-113. *Paulianella nigra* sp.n.: tergite and sternite of male genital segment (108-109), aedeagus (110). *Paulianella mirabilis* sp.n.: tergite and sternite of male genital segment (111-112), aedeagus (113). Scale bars = 0.1 mm.

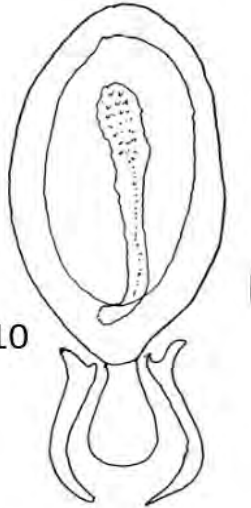
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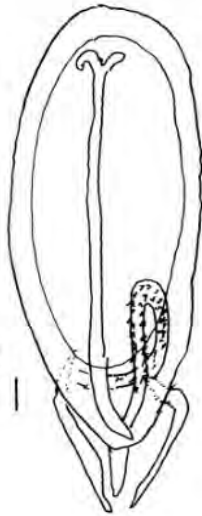
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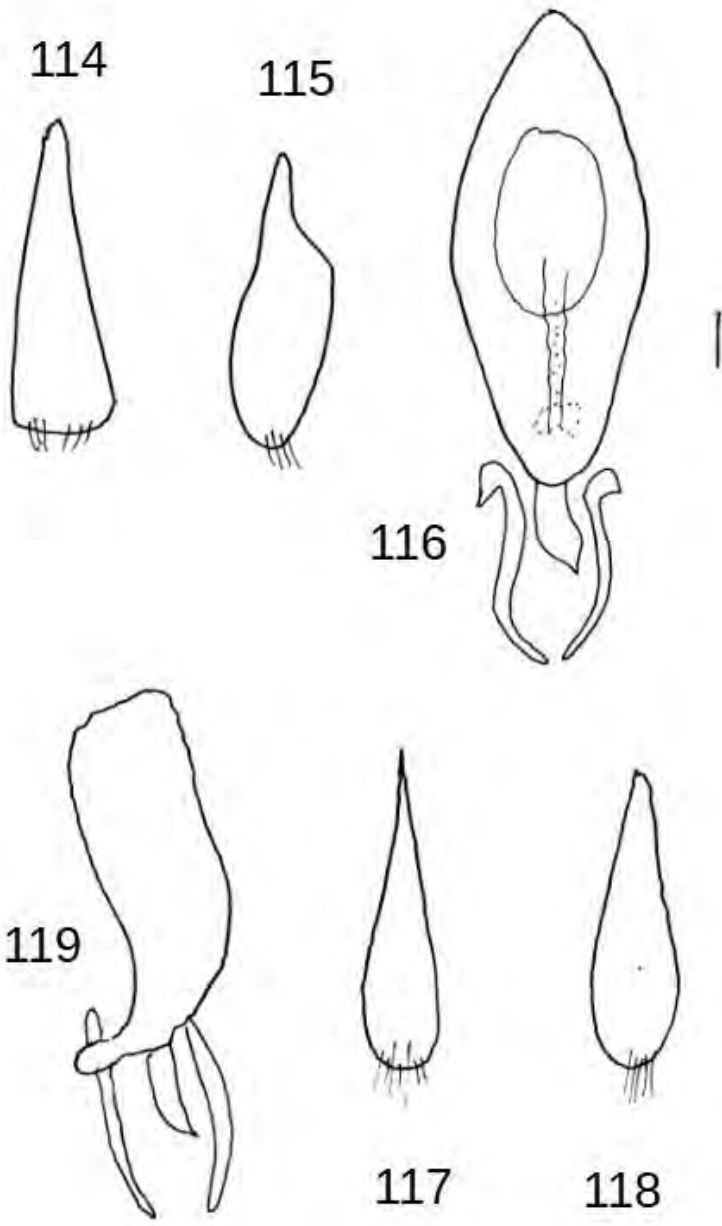
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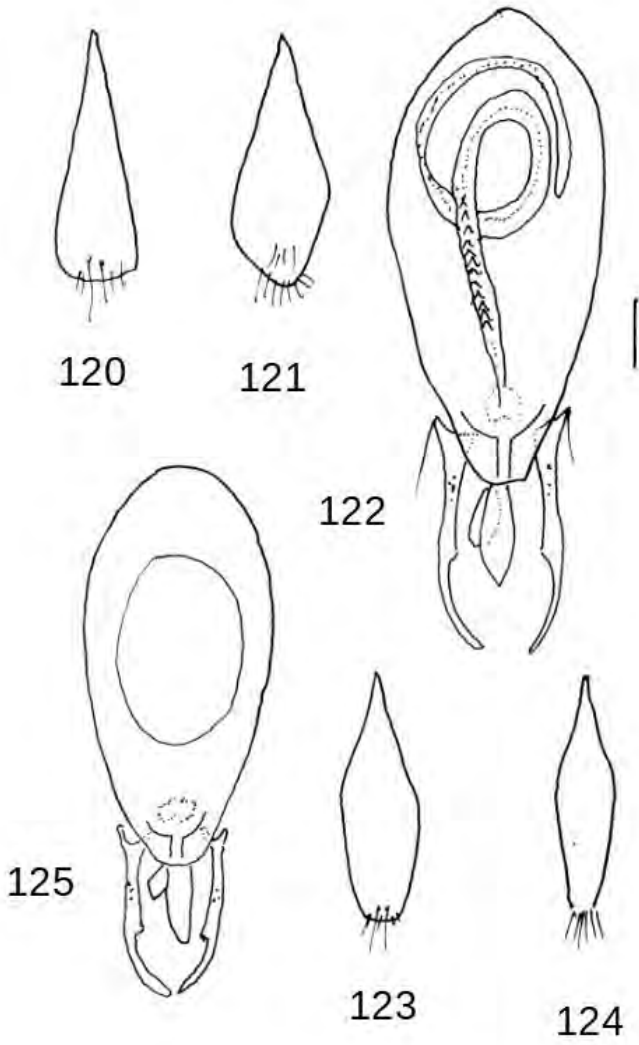
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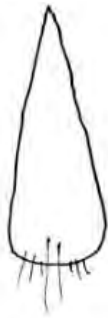
Figs 114-119. *Paulianella punctata* sp.n.: tergite and sternite of male genital segment (114-115), aedeagus (116). *Paulianella subrutila* sp.n.: tergite and sternite of male genital segment (117-118), aedeagus (119). Scale bar = 0.1 mm.



Figs 120-125. *Paulianella subcorticalis* sp.n.: tergite and sternite of male genital segment (120-121), aedeagus (122). *Paulianella imaha* sp.n.: tergite and sternite of male genital segment (123-124), aedeagus (125). Scale bar = 0.1 mm.



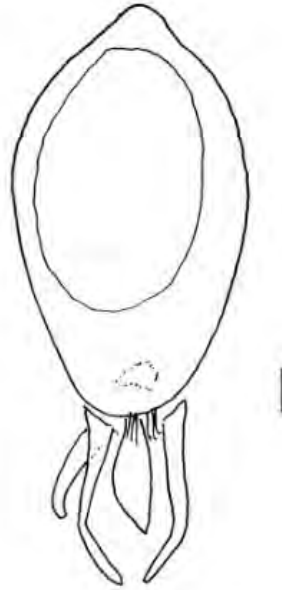
Figs 126-131. *Paulianella amboasa* sp.n.: tergite and sternite of male genital segment (126-127), aedeagus (128). *Paulianella polygonalis* sp.n.: tergite and sternite of male genital segment (129-130), aedeagus (131). Scale bars = 0.1 mm.



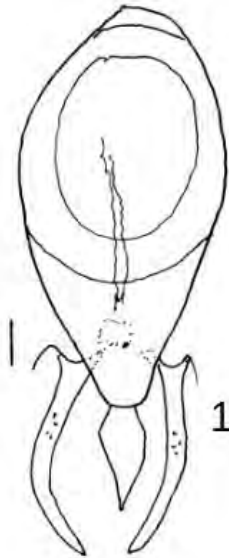
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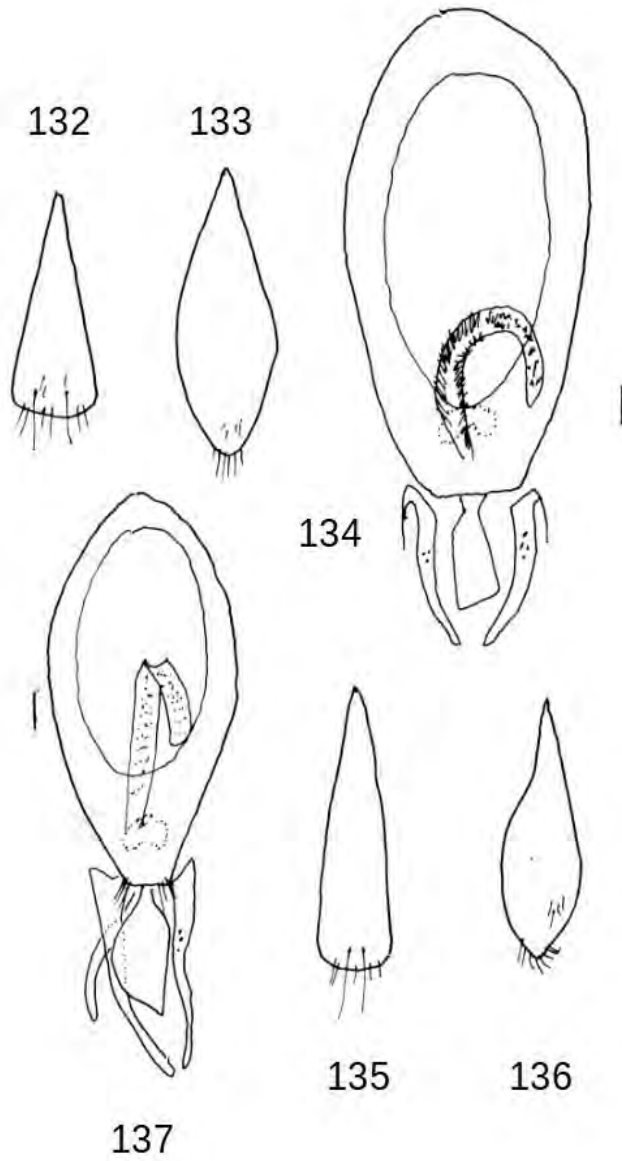


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Figs 132-137. *Paulianella lutulenta* sp.n.: tergite and sternite of male genital segment (132-133), aedeagus (134). *Paulianella rougemonti* sp.n.: tergite and sternite of male genital segment (135-136), aedeagus (137). Scale bars = 0.1 mm.



Figs 138-143. *Paulianella ikokaensis* sp.n.: tergite and sternite of male genital segment (138-139), aedeagus (140). *Paulianella befigotrana* sp.n.: tergite and sternite of male genital segment (141-142), aedeagus (143). Scale bars = 0.1 mm.

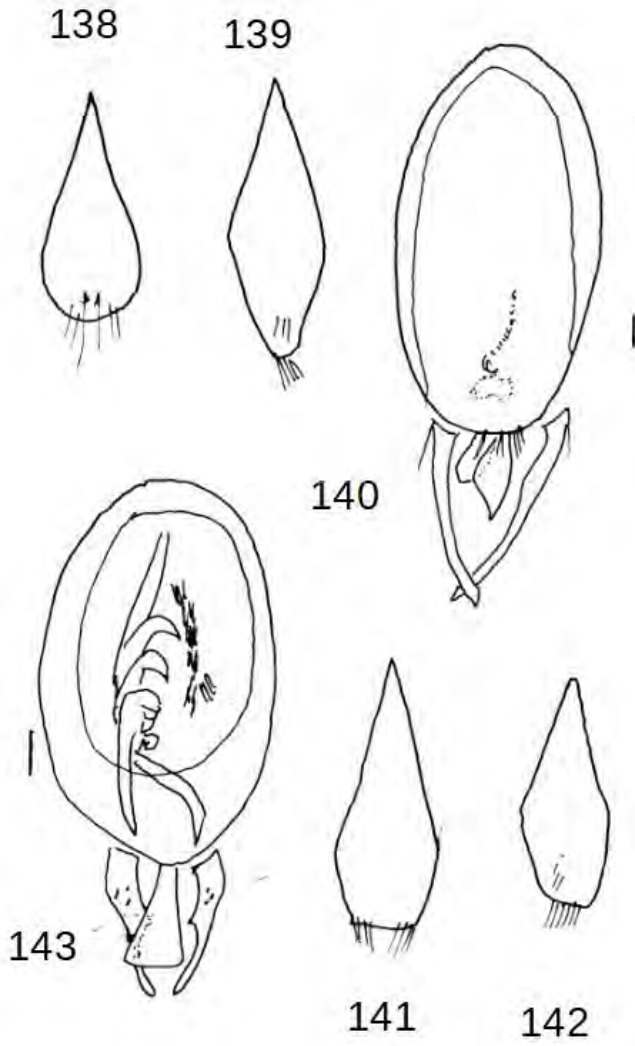


Fig. 144. Distribution of *Paulianella subcorticalis*, *P. subrutila*, *P. janaki* around Betroka (triangle), and *P. lutulenta* (square).



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Figs 145-150. *Paulianella tristis* Jarr.: tergite and sternite of male genital segment (145-146), aedeagus (147). *Paulianella parcepunctata* sp.n.: tergite and sternite of male genital segment (148-149), aedeagus (150). Scale bars = 0.1 mm.

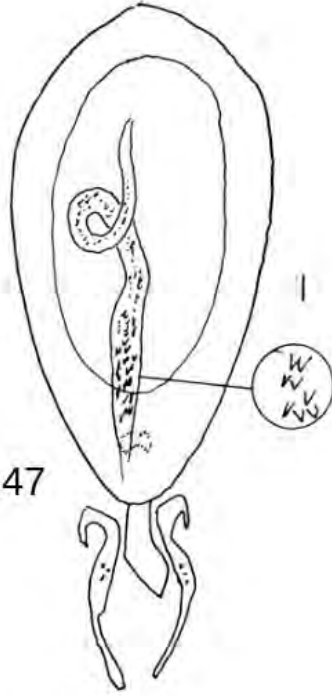
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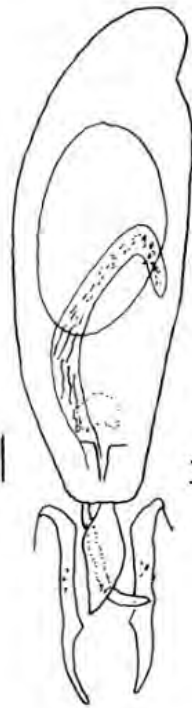


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Figs 151-156. *Paulianella monticola* Jarr.: tergite and sternite of male genital segment (151-152), aedeagus (153). *Paulianella oblonga* sp.n.: tergite and sternite of male genital segment (154-155), aedeagus (156). Scale bar = 0.1 mm.

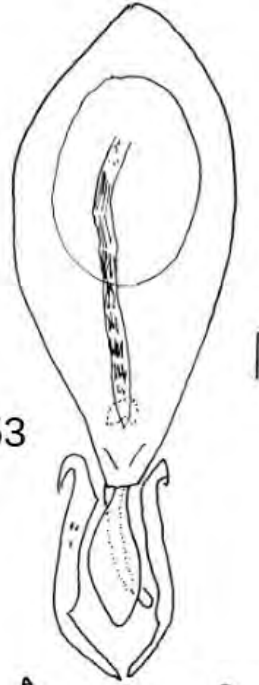
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Figs 157-159. *Paulianella ignota* sp.n.: tergite and sternite of male genital segment (157-158), aedeagus (159). Scale bar = 0.1 mm.

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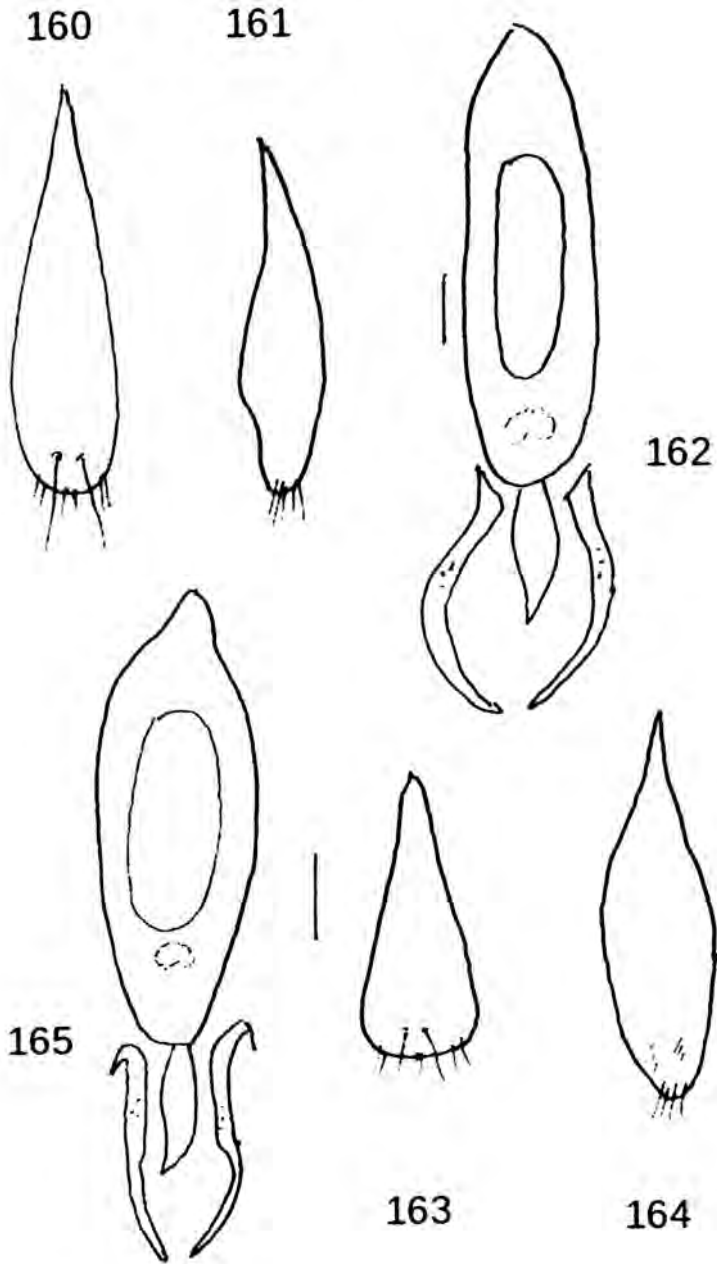


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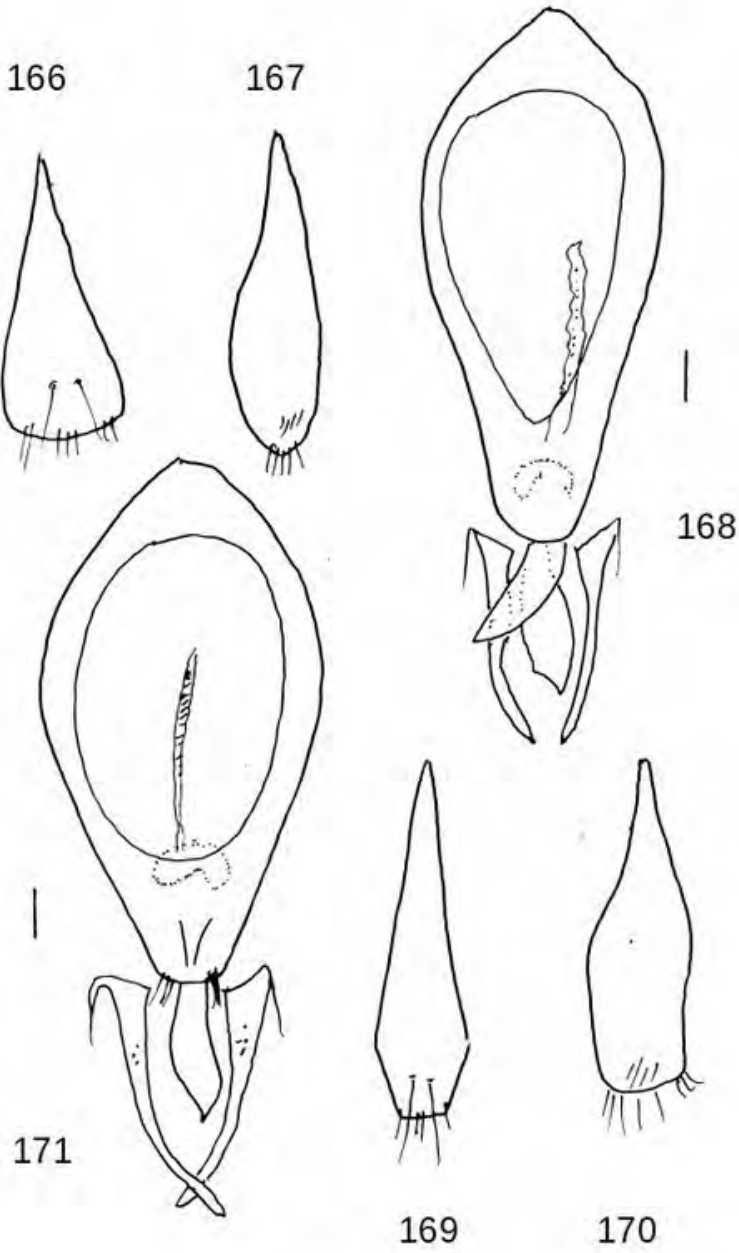


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160-165. *Paulianella ambohitra* sp.n.: tergite and sternite of male genital segment (160-161), aedeagus (162). *Paulianella insularis* (Bh.): tergite and sternite of male genital segment (163-164), aedeagus (165). Scale bar = 0.1 mm.



Figs 166-171. *Paulianella opaca* sp.n.: tergite and sternite of male genital segment (166-167), aedeagus (168). *Paulianella grossula* sp.n.: tergite and sternite of male genital segment (169-170), aedeagus (171). Scale bars = 0.1 mm.



Figs 172-177. *Paulianella abdominalis* sp.n.: tergite and sternite of male genital segment (172-173), aedeagus (174). *Paulianella obsoleta* (Schub.): tergite and sternite of male genital segment (175-176), aedeagus (177). Scale bars = 0.1 mm.

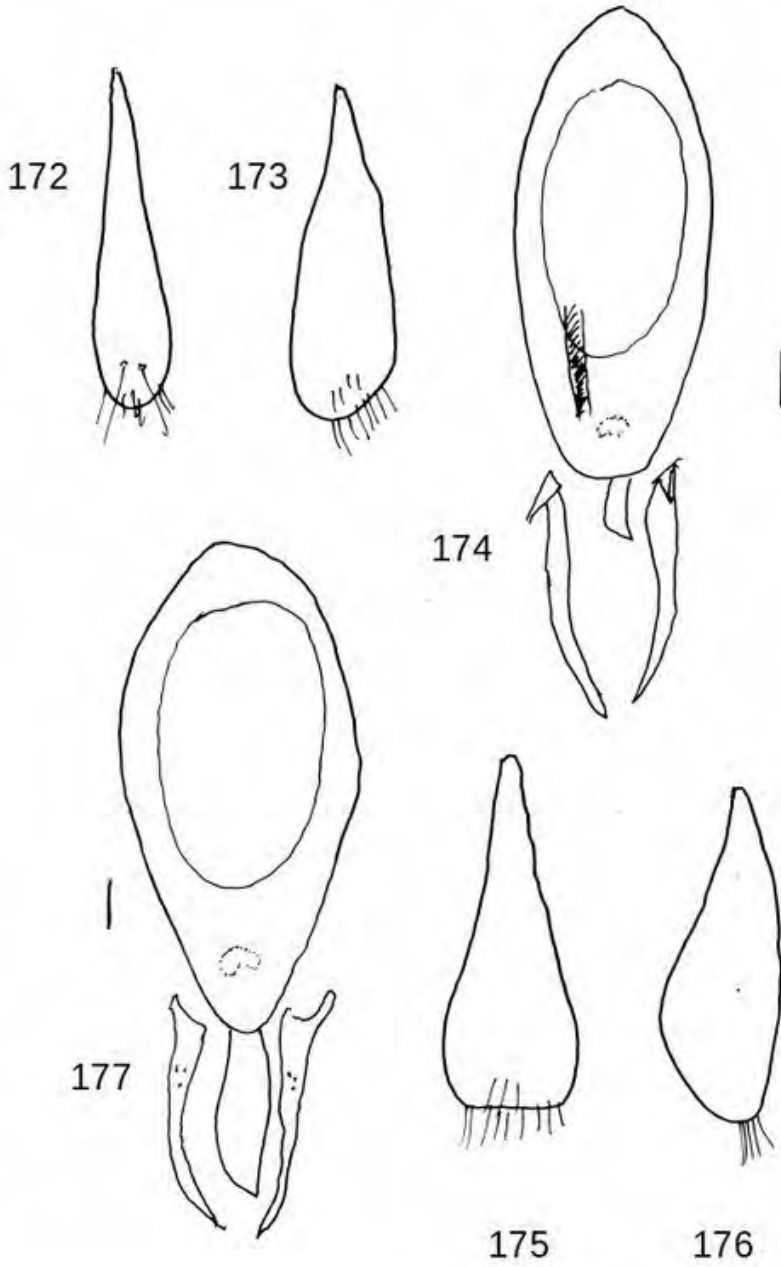


Fig. 178. Distribution of *Paulianella obsoleta*, *P. lutulenta*, *P. innocua* around Anatananarivo (triangle), and *P. grossula*, *P. ikokaensis*, *P. amboasa* on Ambondrombe Massif (circle), and *P. tristis*, *P. subaenea* on Tsaratanana Massif (square), and *P. opaca*, *P. monticola* around Andringitra N.P. (inverted triangle).



Fig. 179. Distribution of *Paulianella insularis*.



Figs 180-188. *Stenistoderus mahajanga* sp.n.: tergite and sternite of male genital segment (180-181), aedeagus (182) (scale bar = 0.1 mm). *Dactylaptatus* Lecoq: labrum (183), maxillary palpi (184), labial palpi (185), gular suture (186), female genital segment (187). *Dactylaptatus taborskyi* Jan.: aedeagus (scale bar = 0.5 mm).

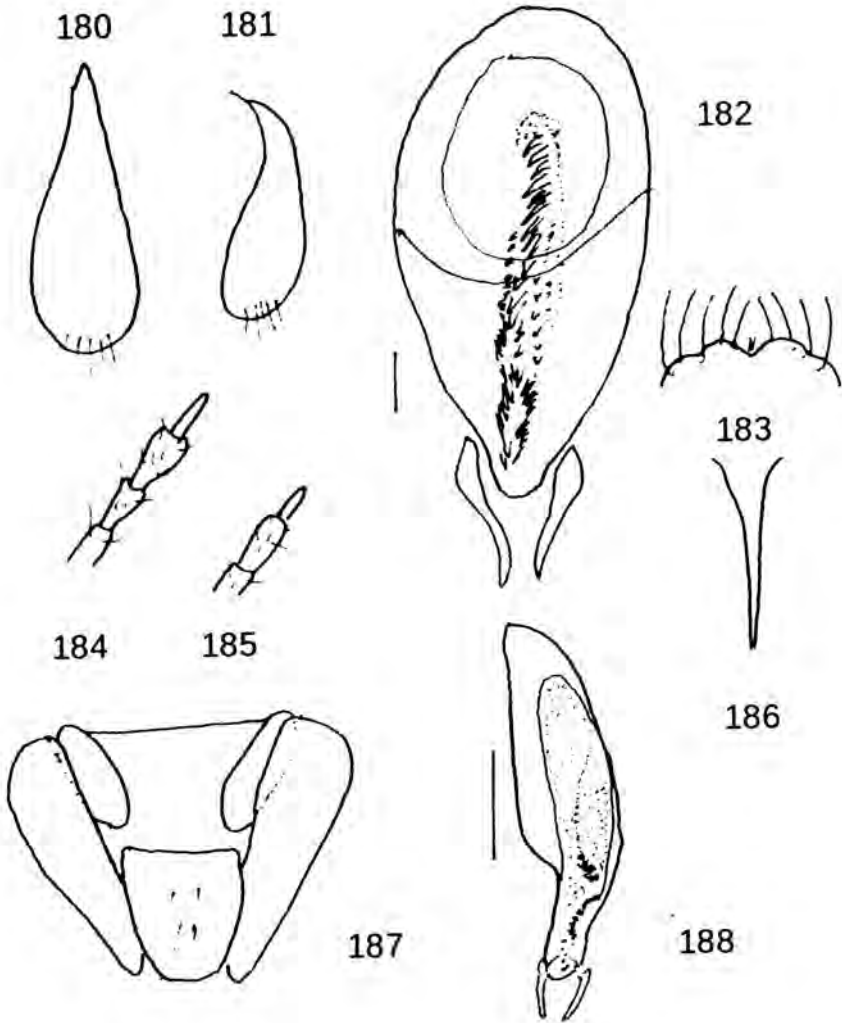
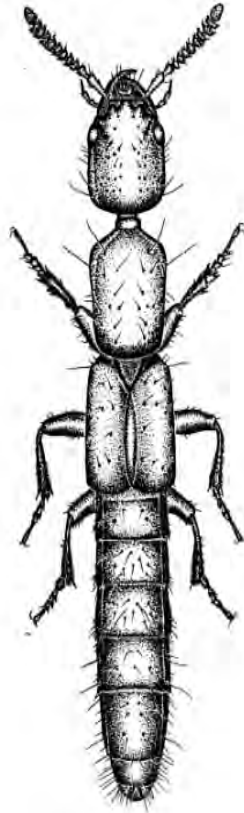


Fig. 189. Habitus of *Metolinus mauritanus* (from Bordoni, 2002) (total length = 5.0 mm).



Figs 190-195. *Metolinus mauritianus* sp.n.: tergite and sternite of male genital segment (190-191), aedeagus (192). *Phacophallus madescassianus* sp.n.; tergite and sternite of male genital segment (193-194), aedeagus (195). Scale bars = 0.1 mm.

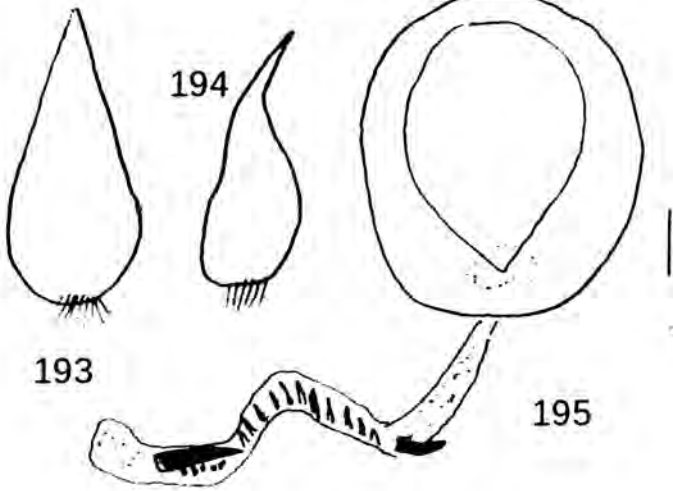
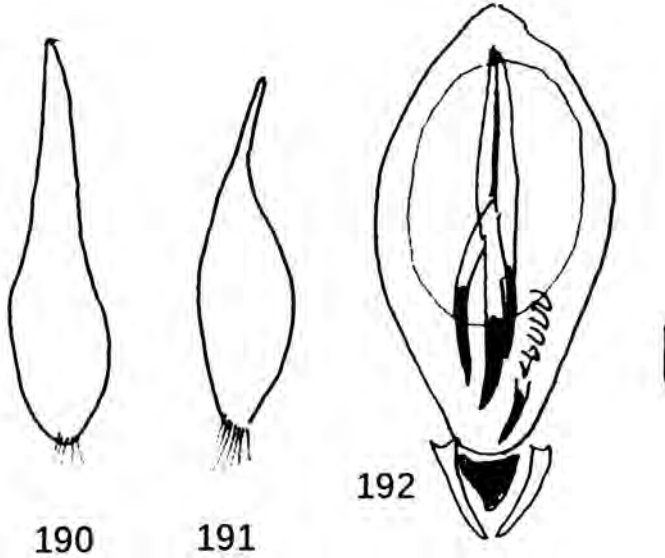


Fig. 196. Habitus of *Phacophallus madescassianus* (from Bordoni, 2002) (total length = 5.5 mm).

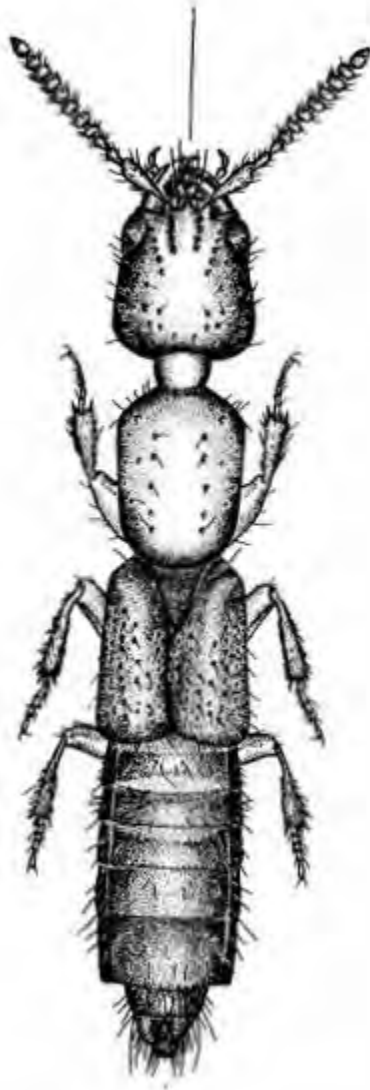


Fig. 197. Inner sac of *Phacophallus madescassianus* sp.n. Scale bar = 1.0 mm.



Fig. 198. Distribution of *Phacophallus madescassianus* sp.n.



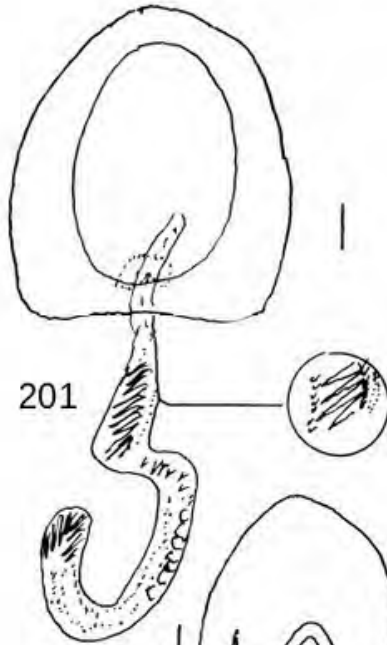
Figs 199-204. *Phacophallus kali* sp.n.: tergite and sternite of male genital segment (199-200), aedeagus (201). *Erymus seycellensis* sp.n.: tergite and sternite of male genital segment (202-203), aedeagus (204). Scale bars = 0.1 mm.



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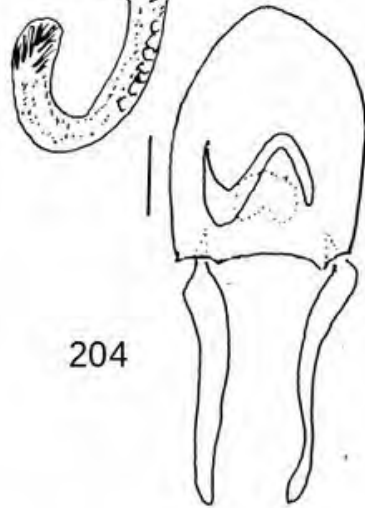
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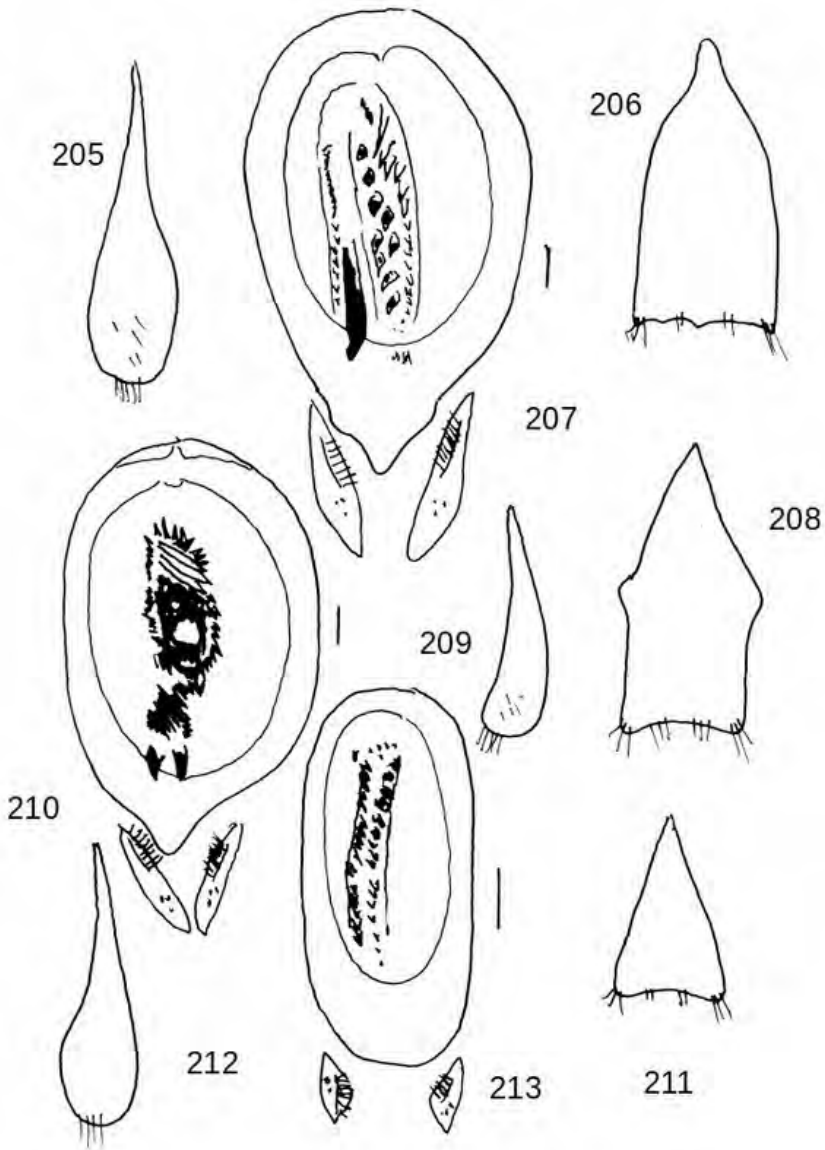


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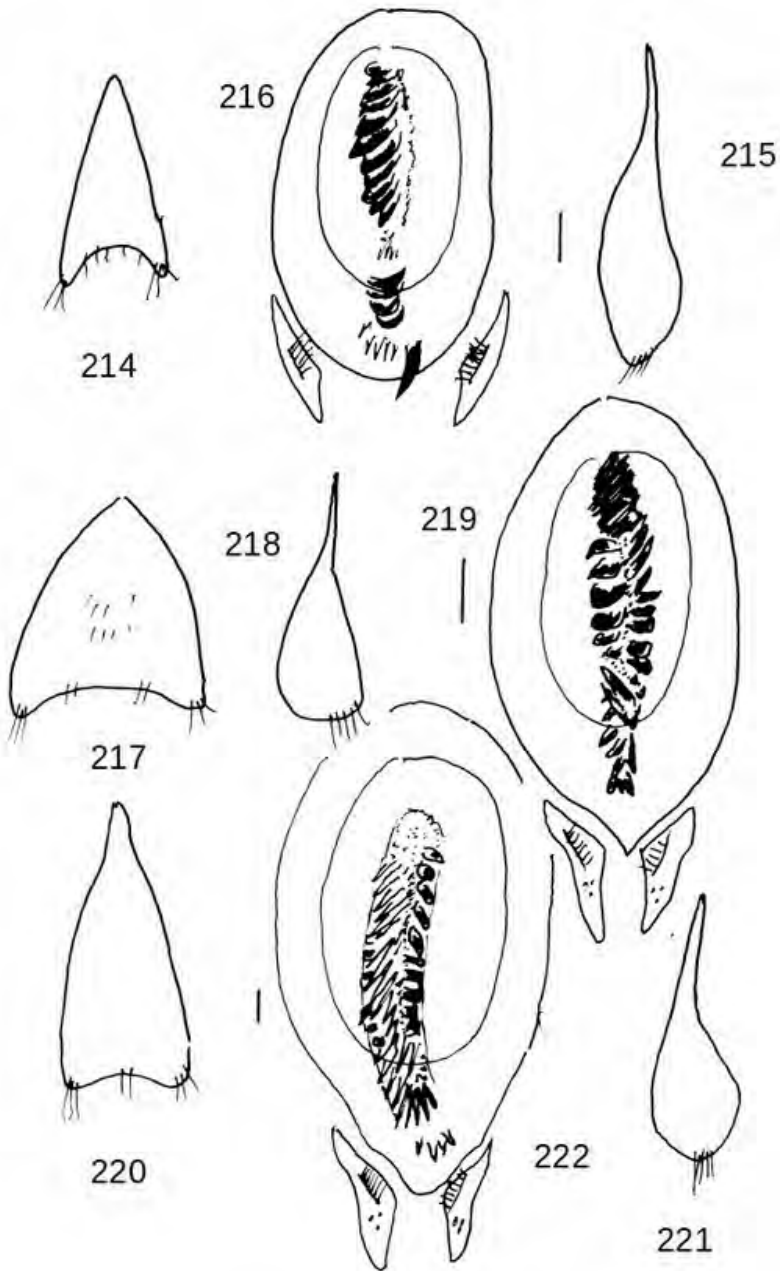


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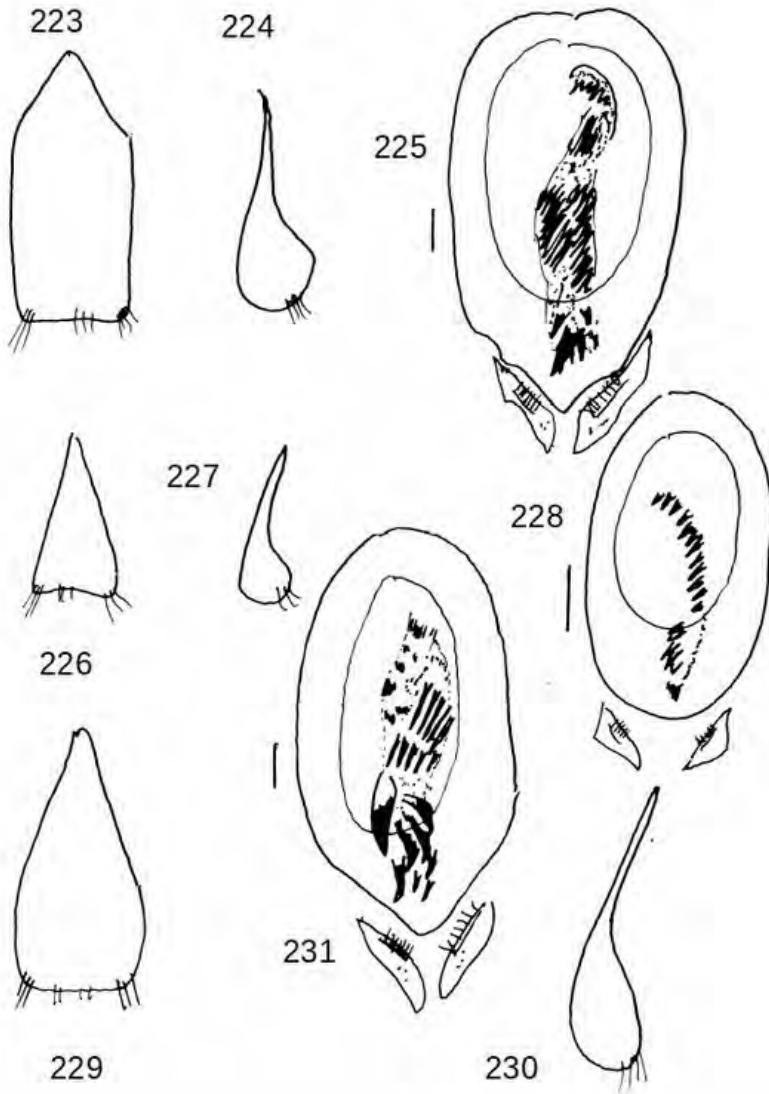
Figs 205-213. *Chaetocinus fulvoelytratus* sp.n.: tergite and sternite of male genital segment (205-206), aedeagus (207). *Chaetocinus primarius* sp.n.: tergite and sternite of male genital segment (208-209), aedeagus (210). *Chaetocinus interaneus* sp.n.: tergite and sternite of male genital segment (211-212), aedeagus (213). Scale bars = 0.1 mm.



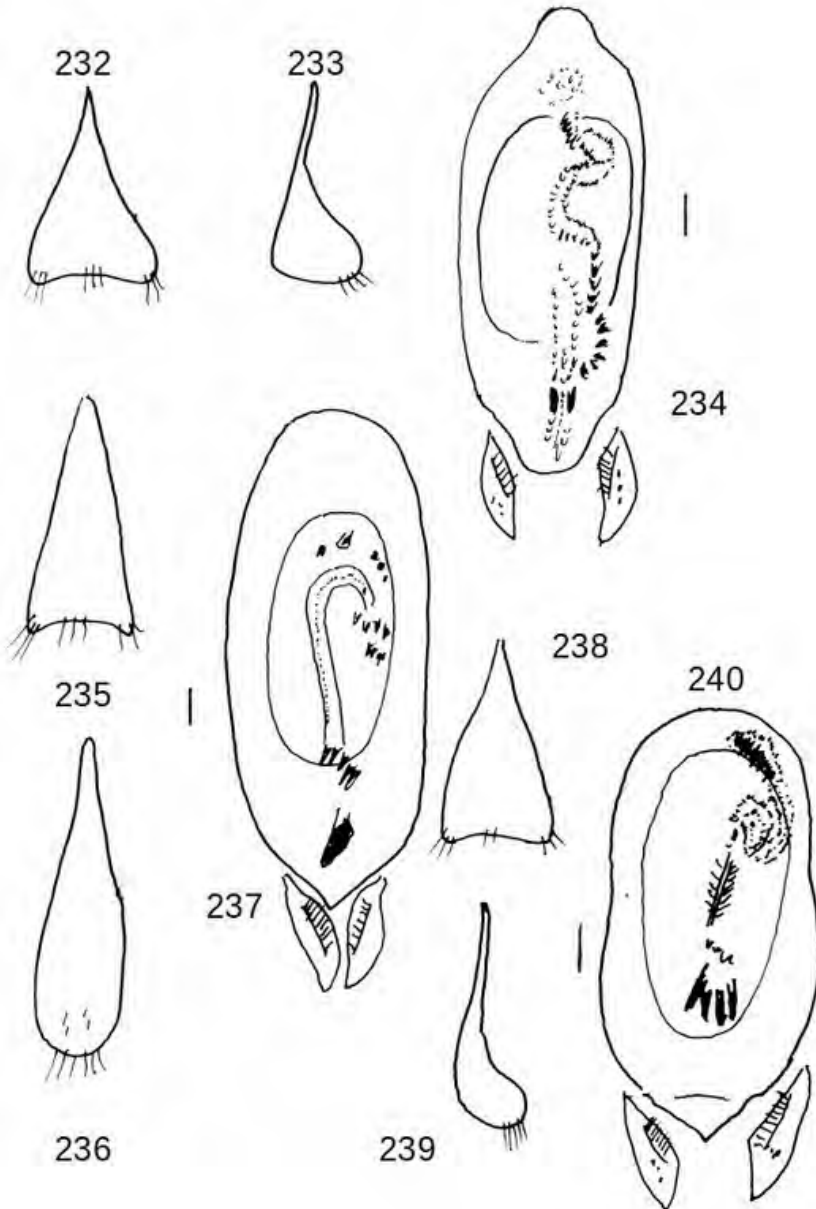
Figs 214-222. *Chaetocinus corticolus* sp.n.: tergite and sternite of male genital segment (214-215), aedeagus (216). *Chaetocinus avaratra* sp.n.: tergite and sternite of male genital segment (217-218), aedeagus (219). *Chaetocinus talatakely* sp.n.: tergite and sternite of male genital segment (220-221), aedeagus (222). Scale bars = 0.1 mm.



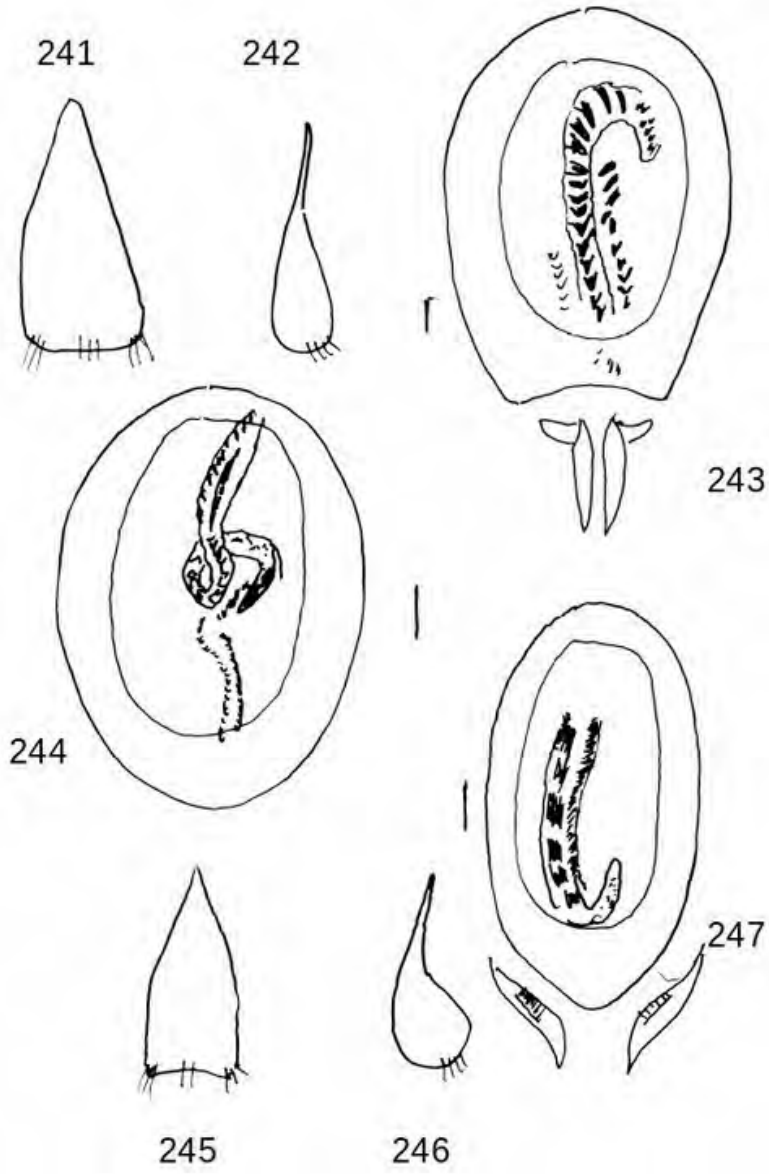
Figs 223-231. *Chaetocinus lacustris* sp.n.: tergite and sternite of male genital segment (223-224), aedeagus (225). *Chaetocinus minor* sp.n.: tergite and sternite of male genital segment (226-227), aedeagus (228). *Chaetocinus jarrigei* Lec.: tergite and sternite of male genital segment (229-230), aedeagus (231). Scale bars = 0.1 mm.



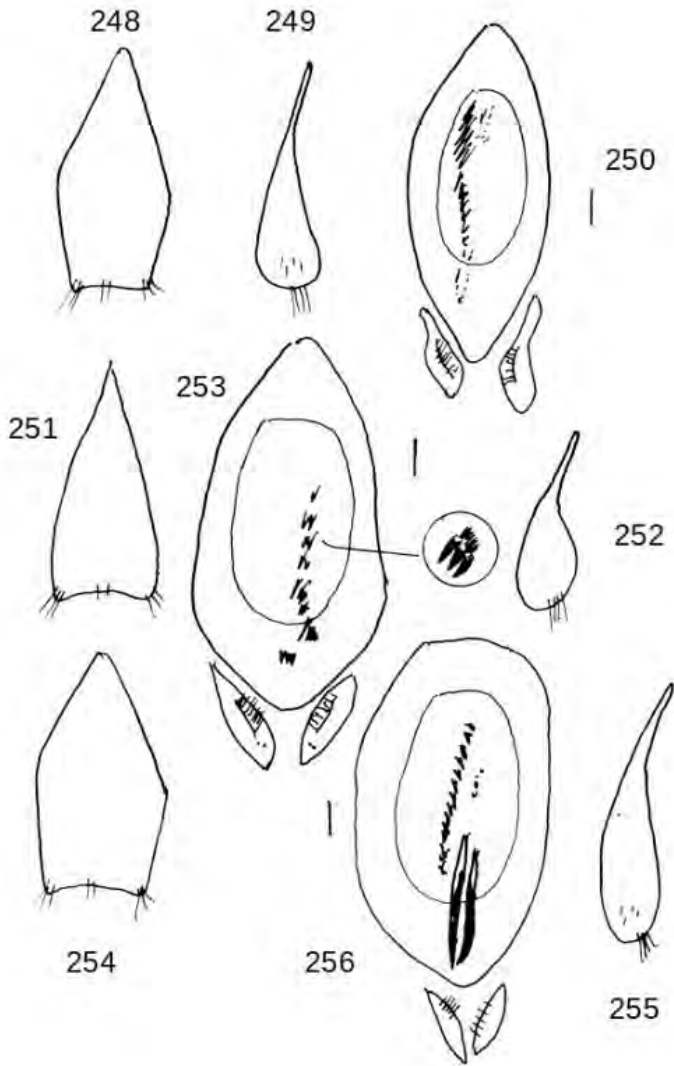
Figs 232-240. *Chaetocinus voluptuosus* sp.n.: tergite and sternite of male genital segment (232-233), aedeagus (234). *Chaetocinus oblongus* sp.n.: tergite and sternite of male genital segment (235-236), aedeagus (237). *Chaetocinus iugatus* sp.n.: tergite and sternite of male genital segment (238-239), aedeagus (240). Scale bars = 0.1 mm.



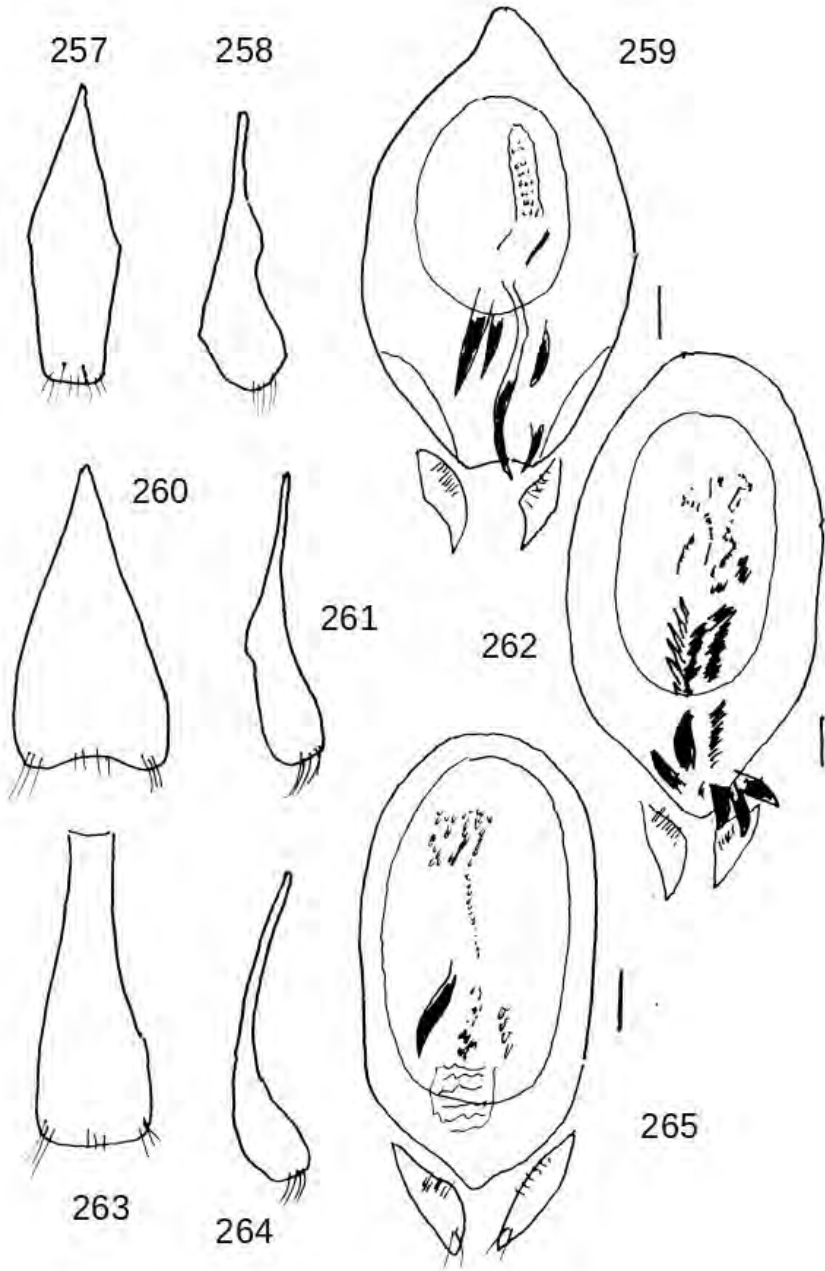
Figs 241-247. *Chaetocinus ivohibe* sp.n.: tergite and sternite of male genital segment (241-242), aedeagus (243). *Chaetocinus deterius* sp.n.: aedeagus (244). *Chaetocinus rufus* sp.n.: tergite and sternite of male genital segment (245-246), aedeagus (247). Scale bars = 0.1 mm.



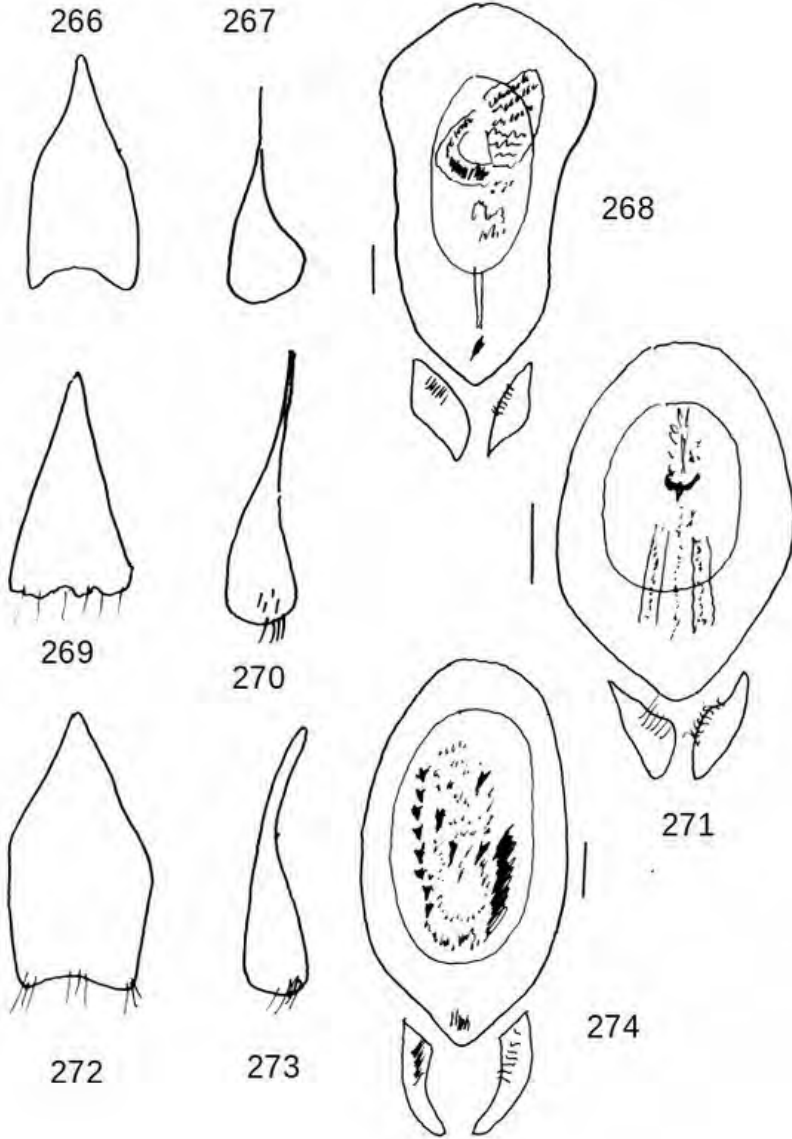
Figs 248-256. *Chaetocinus sabulosus* sp.n.: tergite and sternite of male genital segment (248-249), aedeagus (250). *Chaetocinus lutens* sp.n.: tergite and sternite of male genital segment (251-252), aedeagus (253). *Chaetocinus fisheri* sp.n.: tergite and sternite of male genital segment (254-255), aedeagus (256). Scale bars= 0.1 mm.



Figs 257-265. *Chaetocinus novus* sp.n.: tergite and sternite of male genital segment (257-258), aedeagus (259). *Chaetocinus armatus* sp.n.: tergite and sternite of male genital segment (260-261), aedeagus (262). *Chaetocinus spinosus* sp.n.: tergite and sternite of male genital segment (263-264), aedeagus (265). Scale bars = 0.1 mm.



Figs 266-274. *Chaetocinus camurus* sp.n.: tergite and sternite of male genital segment (266-267), aedeagus (268). *Chaetocinus amandus* sp.n.: tergite and sternite of male genital segment (269-270), aedeagus (271). *Chaetocinus planitalis* sp.n.: tergite and sternite of male genital segment (272-273), aedeagus (274). Scale bars = 0.1 mm.



Figs 275-283. *Chaetocinus sinuosus* sp.n.: tergite and sternite of male genital segment (275-276), aedeagus (277). *Chaetocinus succineus* sp.n.: tergite and sternite of male genital segment (278-279), aedeagus (280). *Chaetocinus ornatus* sp.n.: tergite and sternite of male genital segment (281-282), aedeagus (283). Scale bars = 0.1 mm.

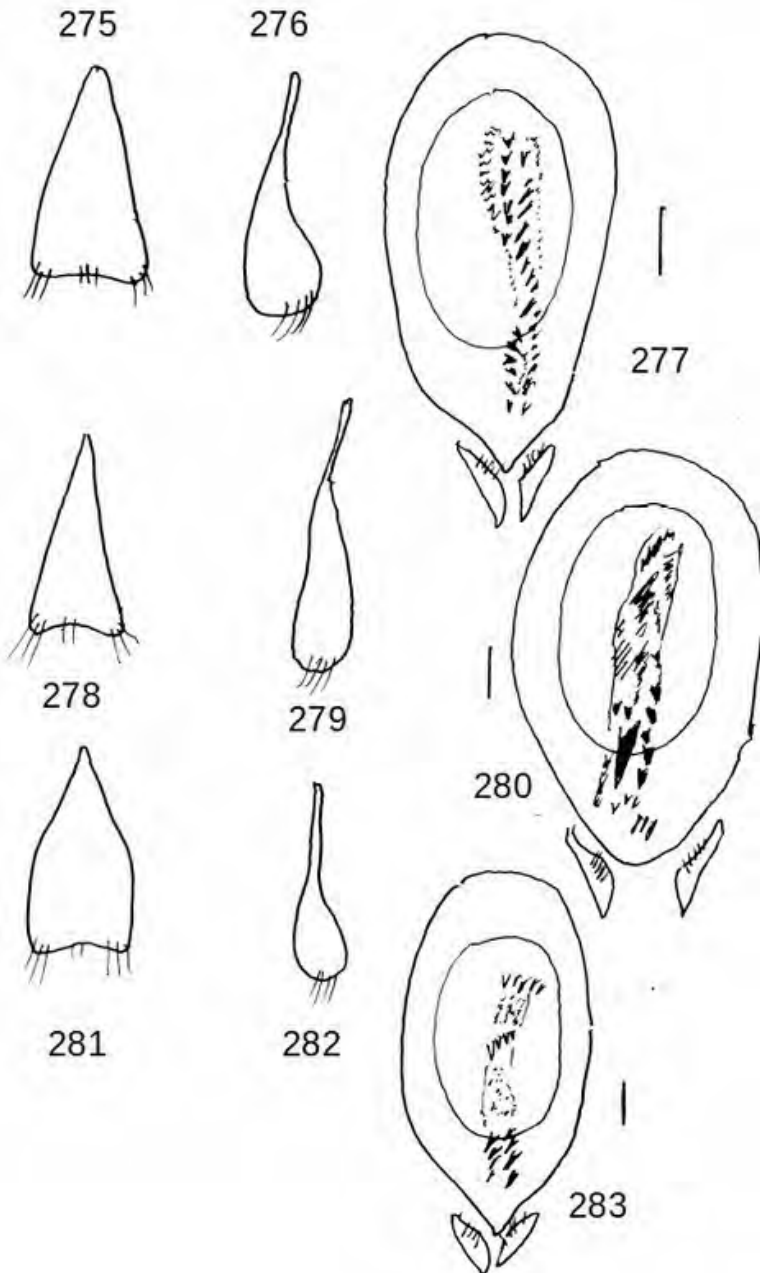


Fig. 284. Distribution of *Chaetocinus primarius*, *C. avaratra*, *C. sabulosus*, *C. novus*, *C. succineus* on Montagne d'Ambre and Antsiranana (circle), and *C. lutens*, *C. corticolus* in

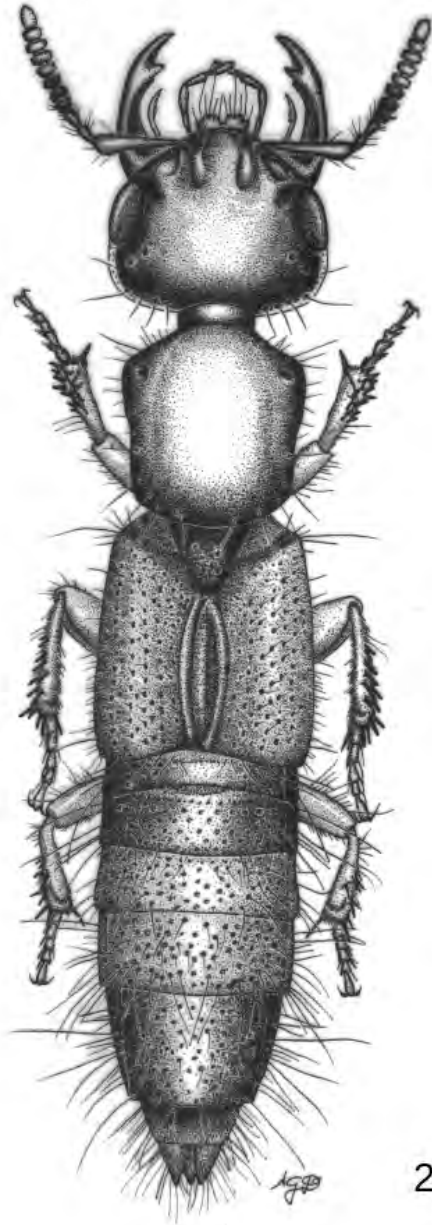


Fig. 285. Distribution of *Chaetocinus ornatus*, *C. talatakely* in Ranomafana Natural Reserve (square), and *C. fisheri*, *C. armatus* around Toamasina (circle).

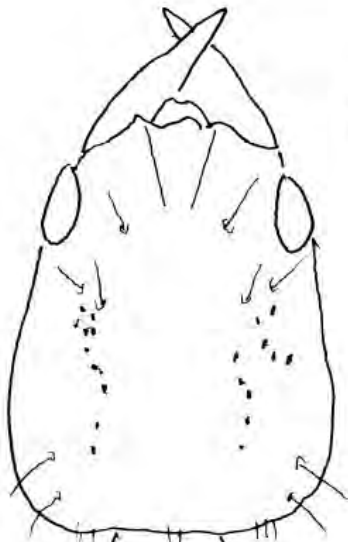


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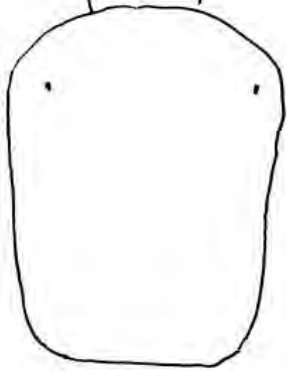
Fig. 286. Habitus of *Thyreocephalus labiosus* (from Bordoni, 2002) (total length = 16.0 mm).



Figs 287-291. *Thyreocephalus labiosus* sp.n.: head and pronotum (287) (scale bar = 0.5 mm), labrum (288) (scale bar = 1.0 mm), tergite and sternite of male genital segment (289-290), aedeagus (291) (scale bar = 0.1 mm).



287



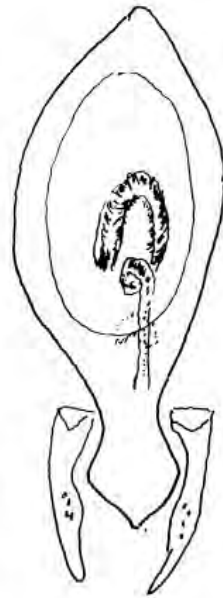
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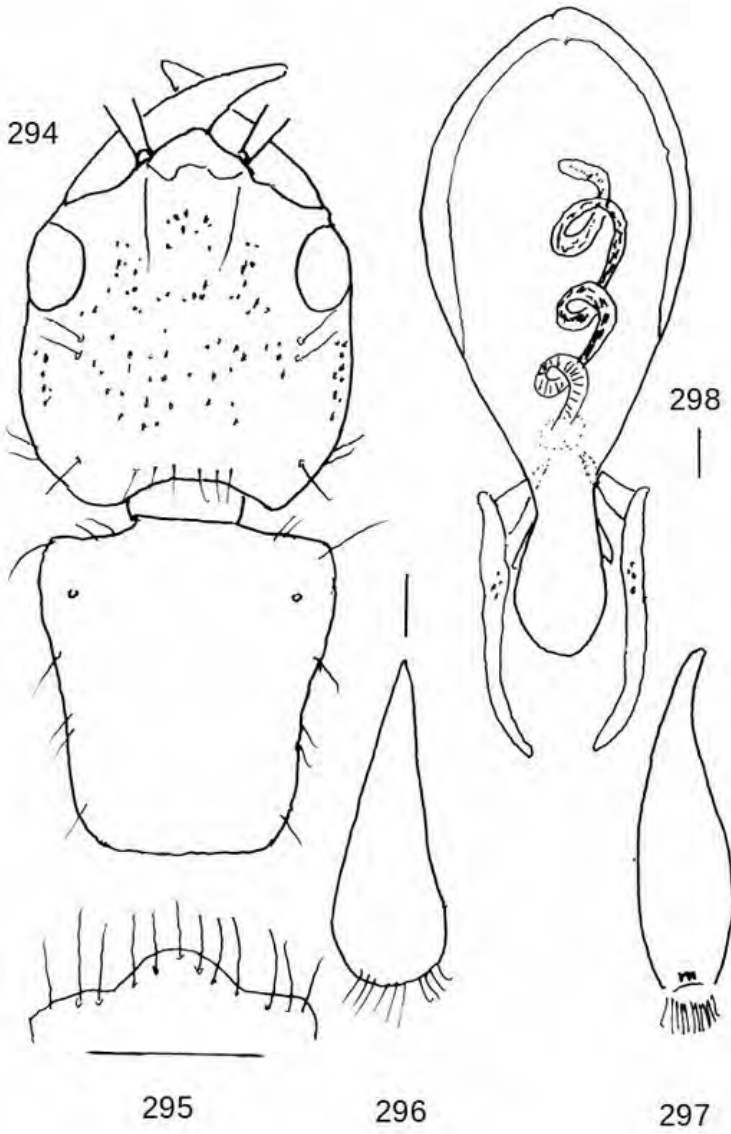
Fig. 292. Distribution of *Thyreocephalus nossibeanus* (circle), *T. silvaticus* (square), and *T. goudoti* (triangle).



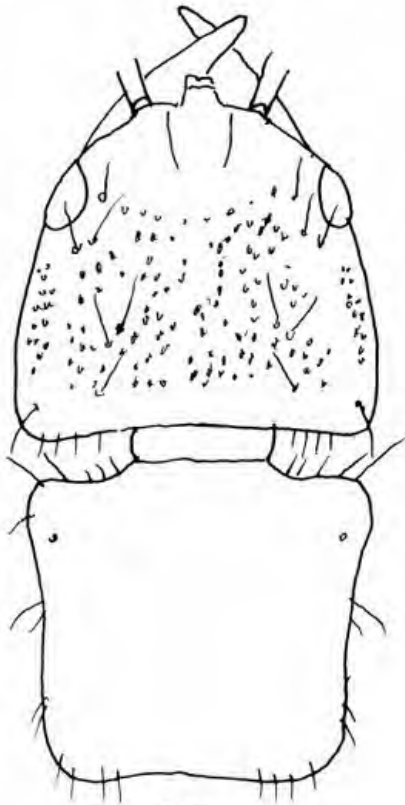
Fig. 293. Distribution of *Thyreocephalus helvomarginatus* (triangle), *T. heterocephalus* (square), and *T. labiosus* (circle).



Figs 294-298. *Thyreocephalus nossibeanus* (Bh. & Schub.): head and pronotum (294) (scale bar = 0.5 mm), labrum (295) (scale bar = 1.0 mm), tergite and sternite of male genital segment (296-297), aedeagus (298) (scale bar = 0.1 mm).



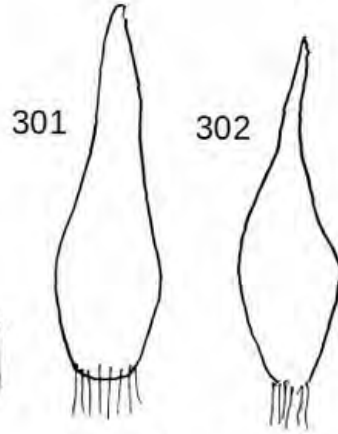
Figs 299-303. *Thyreocephalus silvaticus* Bh.: head and pronotum (299) (scale bar = 0.5 mm), labrum (300) (scale bar = 1.0 mm), tergite and sternite of male genital segment (301-302), aedeagus (303) (scale bar = 0.1 mm).



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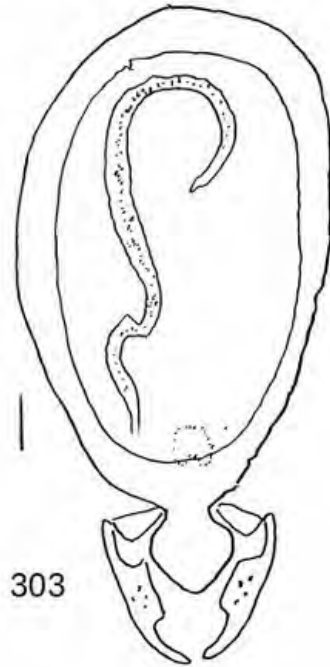


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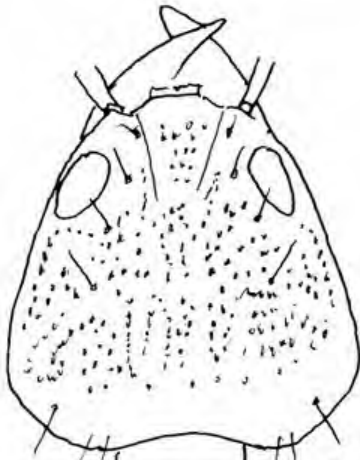
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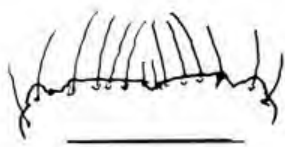
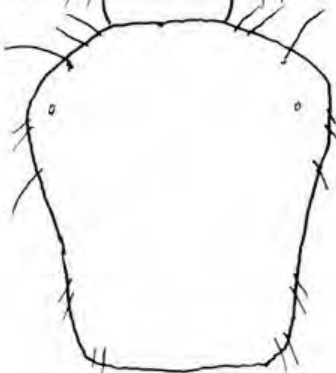


303

Figs 304-308. *Thyreocephalus goudoti* (Fvl.): head and pronotum (304) (scale bar = 0.5 mm). Labrum (305) (scale bar = 1.0 mm), tergite and sternite of male genital segment (306-307), aedeagus (308) (scale bar = 0.1 mm).



304

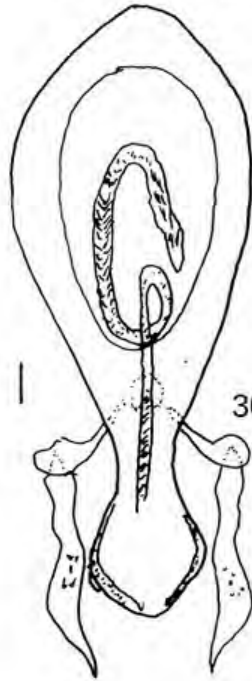


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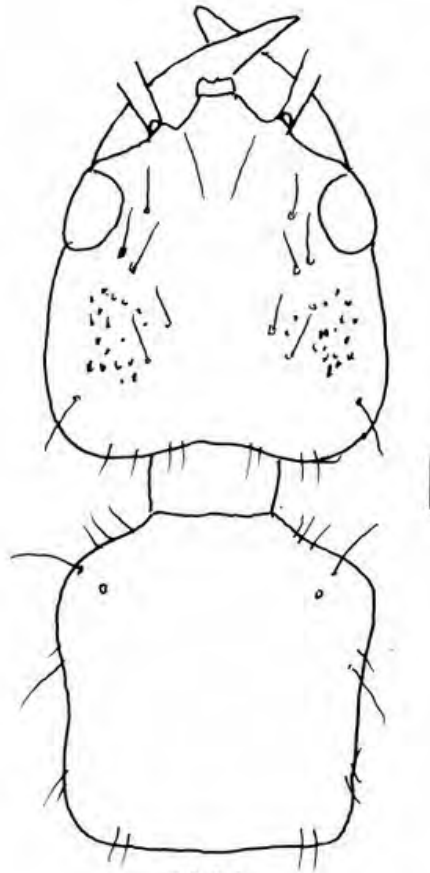


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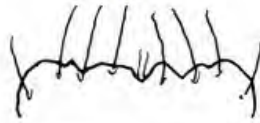


308

Figs 309a-309b. *Thyreocephalus sexpunctatus* (Fvl.): head and pronotum (309a), (scale bar = 0.5 mm), labrum (309b) (scale bar = 1.0 mm).

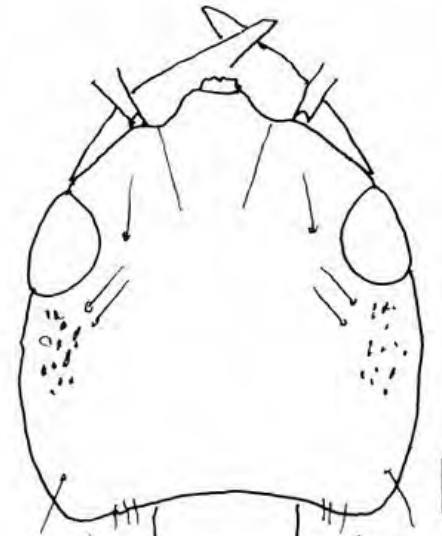


309A

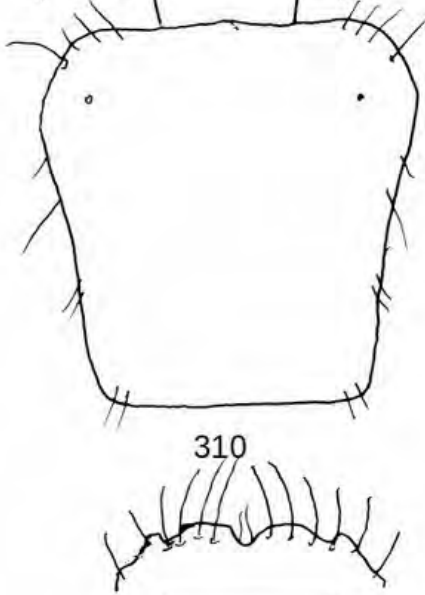


309B

Figs 310-314. *Thyrecephalus helvomarginatus* sp.n. pronotum (310) (scale bar = 0.5 mm), labrum (311) (scale bar = 1.0 mm), tergite and sternite of male genital segment (312-313), aedeagus (314) (scale bar = 0.1 mm).



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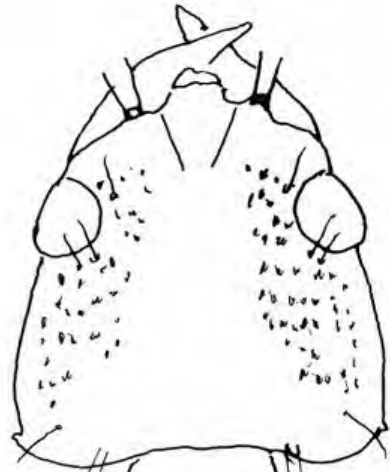


313



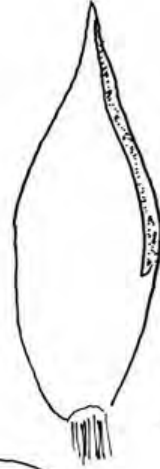
314

Figs 315-319. *Thyreoscephalus madagascarensis* Steel: head and pronotum (315) (scale bar = 0.5 mm), labrum (316) (scale bar = 1.0 mm), tergite and sternite of male genital segment (317-318), aedeagus (319) (scale bar = 0.1 mm).

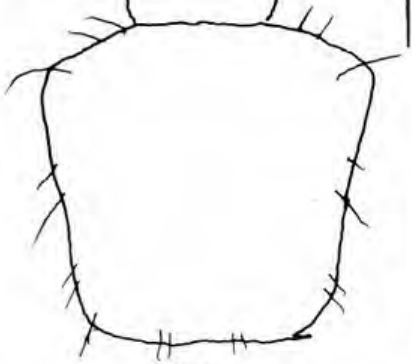


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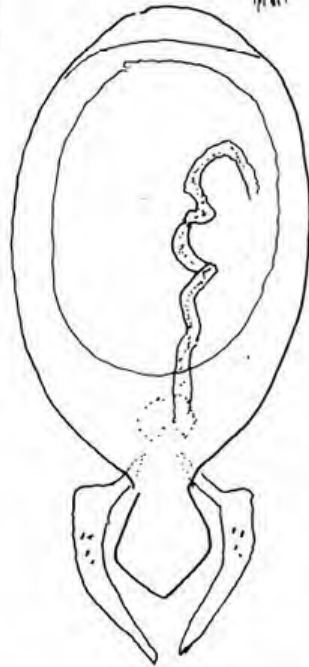
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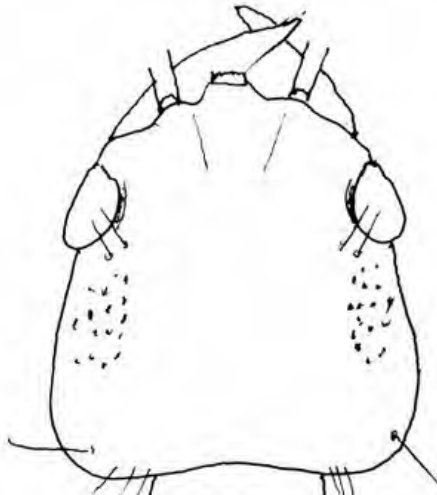


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319

Figs 320-324. *Thyreocephalus heterocephalus* (Fvl.): head and pronotum (320) (scale bar: 0.5 mm), labrum (321) (scale bar: 1.0 mm), tergite and sternite of male genital segment (322-323), aedeagus (scale bar: 0.1 mm).



320

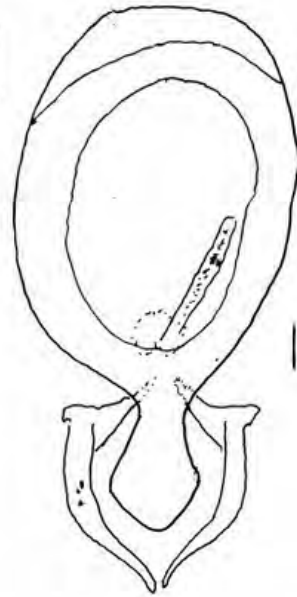


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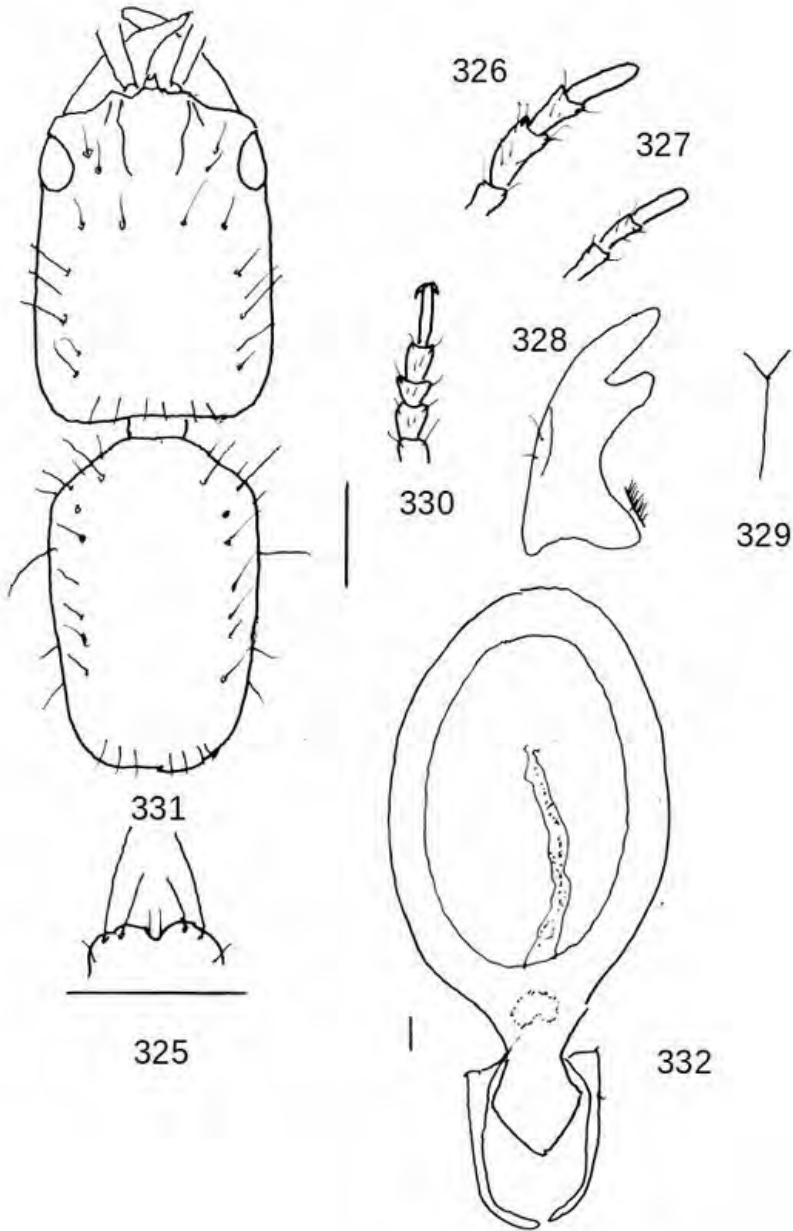


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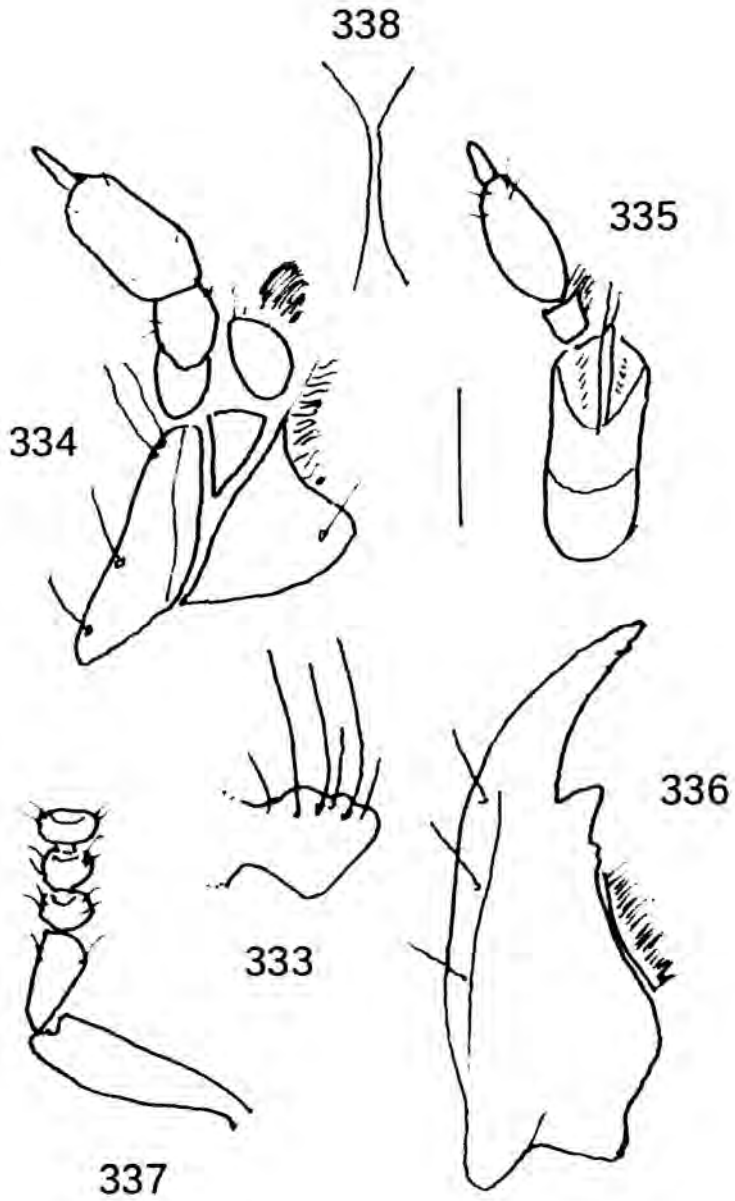


324

Figs 325-332. *Qumuria* gen.n.: head and pronotum (325) (scale bar = 0.5 mm), labrum (326) (scale bar = 1.0 mm), maxillary palpi (327), labial palpi (328), mandible (329), gular suture (330), anterior tarsi (331). *Qumuria bordonii* (Lec.): aedeagus (332) (scale bar = 0.1 mm).



Figs 333-338. *Microleptus* Jarr.: labrum (333), maxillary palpi (334), labial palpi (335), mandible (336), anterior tarsi (337), and gular suture (338). Scale bar = 1.0 mm.



Figs 339-347. *Microleptus microphthalmus* (Fvl.): tergite and sternite of male genital segment (339-340), aedeagus (341), apex in lateral view (342), female genital segment (343). *Gauropterus umbilicatus* (Fvl.): labrum and epistoma (344), tergite and sternite of male genital segment (345-346), aedeagus (347). Scale bars = 0.1 mm.

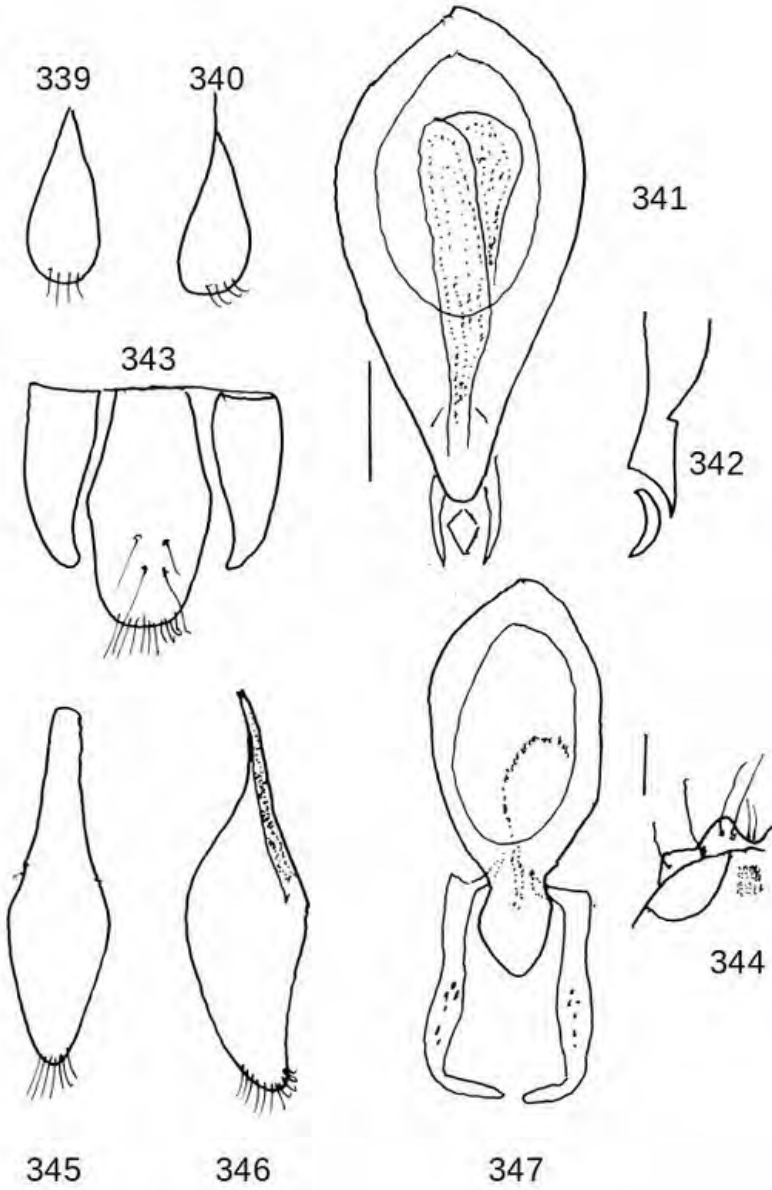
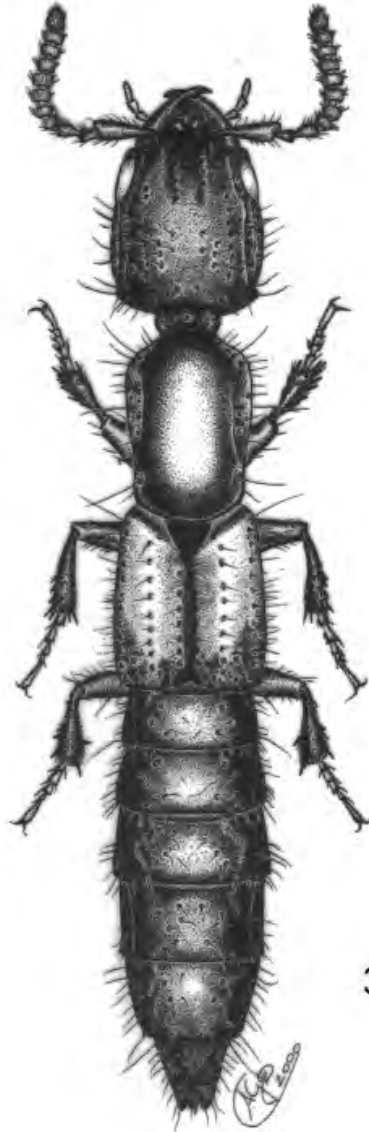


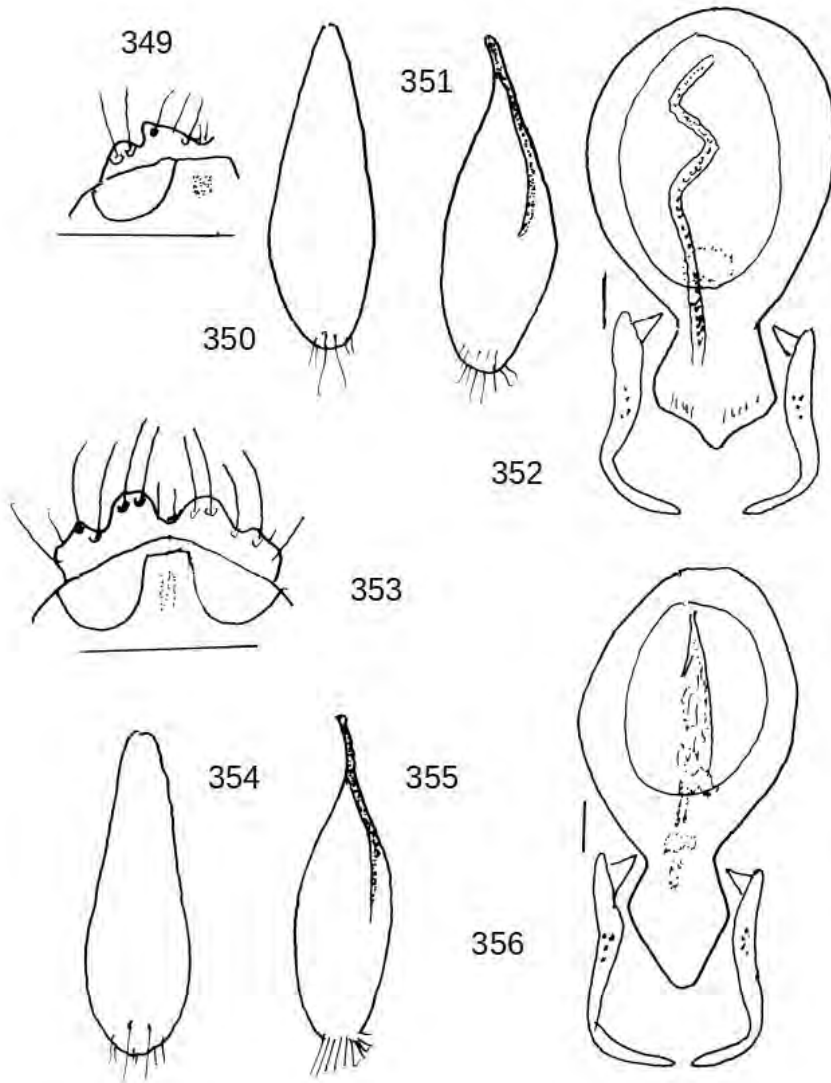
Fig. 348. Habitus of *Gauropterus anjanaharibe* (from Bordoni, 2002) (total length = 6.5 mm).



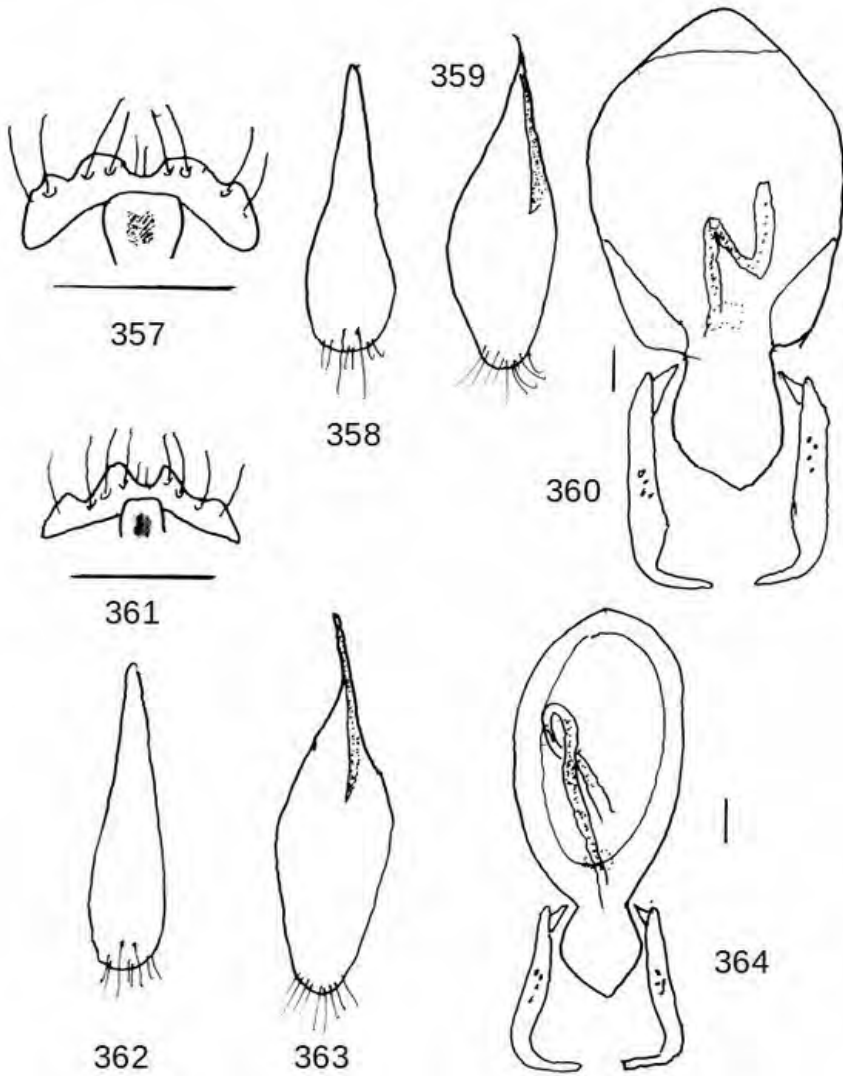
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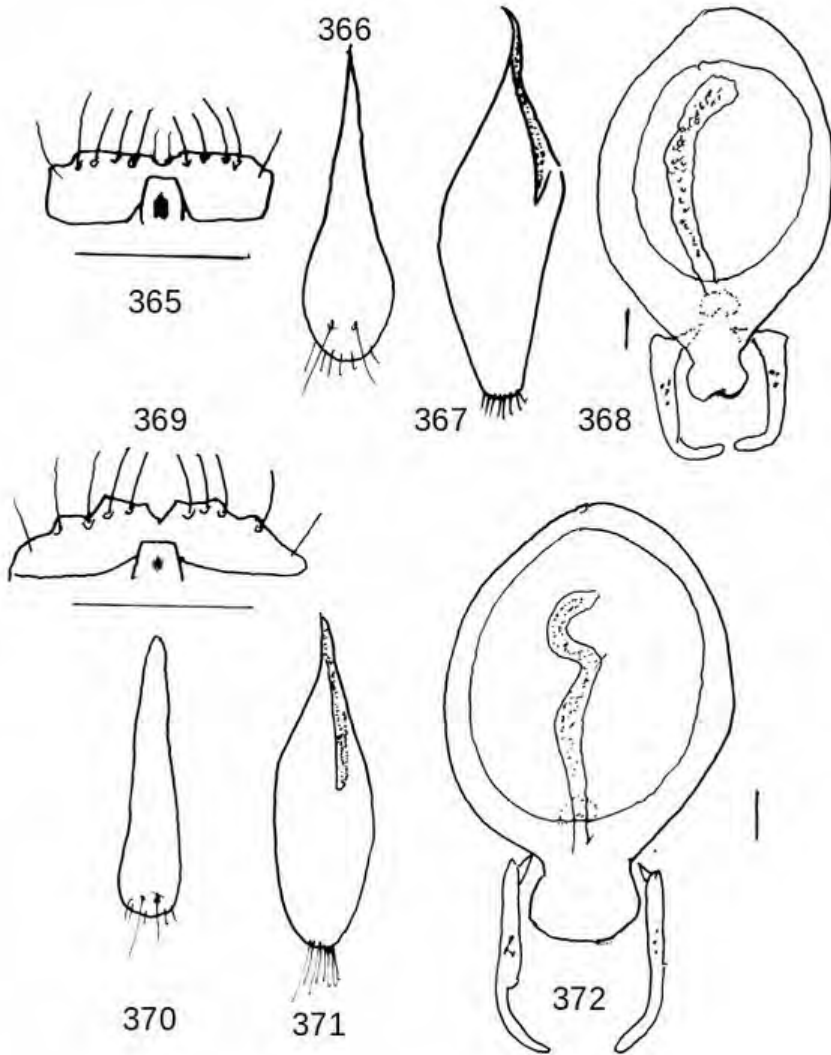
Figs 349-356. *Gauropetrus anjanaharibe* sp.n.: labrum and epistoma (349) (scale bar = 1.0 mm), tergite and sternite of male genital segment (350-351), aedeagus (352). *Gauropetrus janaki* sp.n.: labrum and epistoma (353) (scale bar = 1.0 mm), tergite and sternite of male genital segment (354-355), aedeagus (356) (scale bar = 0.1 mm).



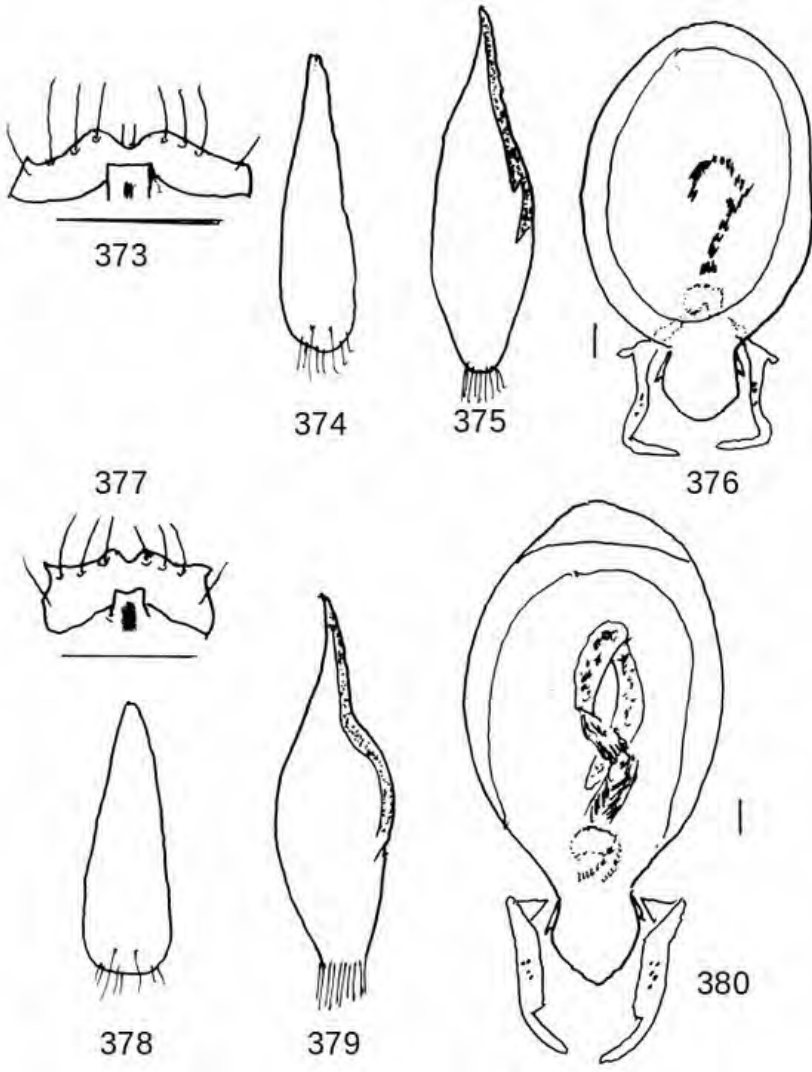
Figs 357-364. *Gauropetrus eulophiaensis* sp.n.: labrum and epistoma (357) (scale bar = 1.0 mm), tergite and sternite of male genital segment (358-359), aedeagus (360). *Gauropetrus esiranus* sp.n.: labrum and epistoma (361) (scale bar = 1.0 mm), tergite and sternite of male genital segment (362-363), aedeagus (364) (scale bar = 0.1 mm).



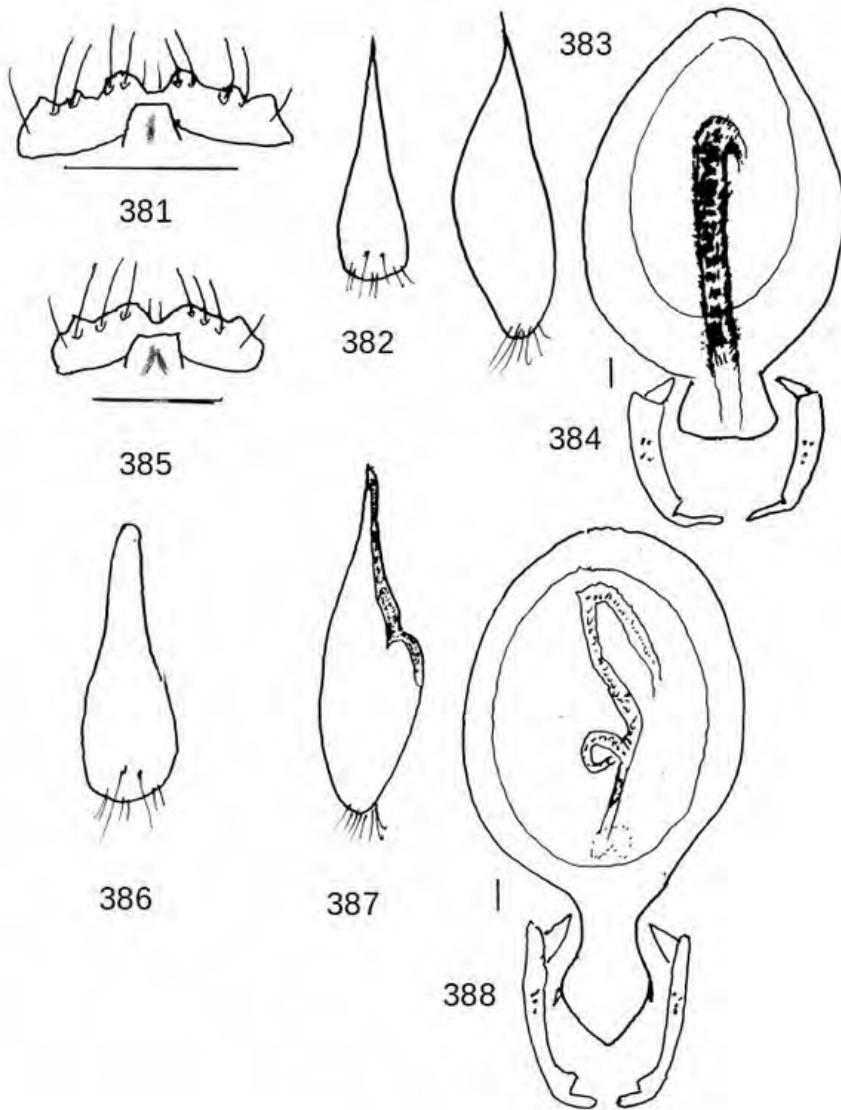
Figs 365-372. *Gauropetrus albocinctus* (Fvl.): labrum and epistoma (365) (scale bar = 1.0 mm), tergite and sternite of male genital segment (366-367), aedeagus (368). *Gauropetrus rubescens* sp.n.: labrum and epistoma (369) (scale bar = 1.0 mm), tergite and sternite of male genital segment (370-371), aedeagus (372) (scale bar = 0.1 mm).



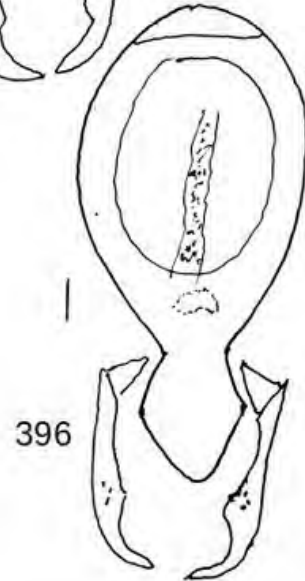
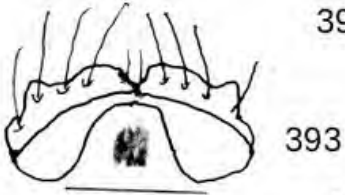
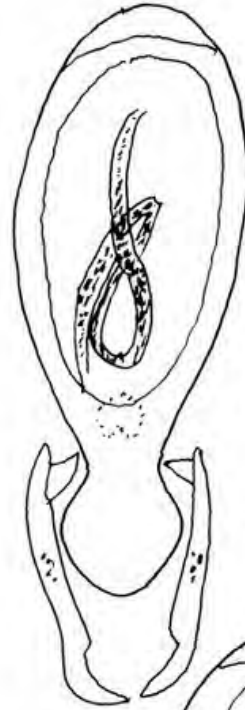
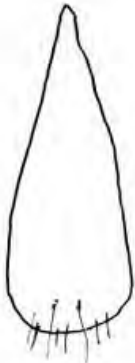
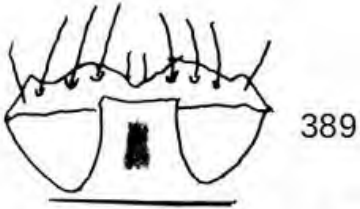
Figs 373-380. *Gauropetrus claviger* (Fvl.): labrum and epistoma (373) (scale bar = 1.0 mm), tergite and sternite of male genital segment (374-375), aedeagus (376). *Gauropetrus subcylindricus* (Jarr.): labrum and epistoma (377) (scale bar = 1.0 mm), tergite and sternite of male genital segment (378-379), aedeagus (380) (scale bar = 0.1 mm).



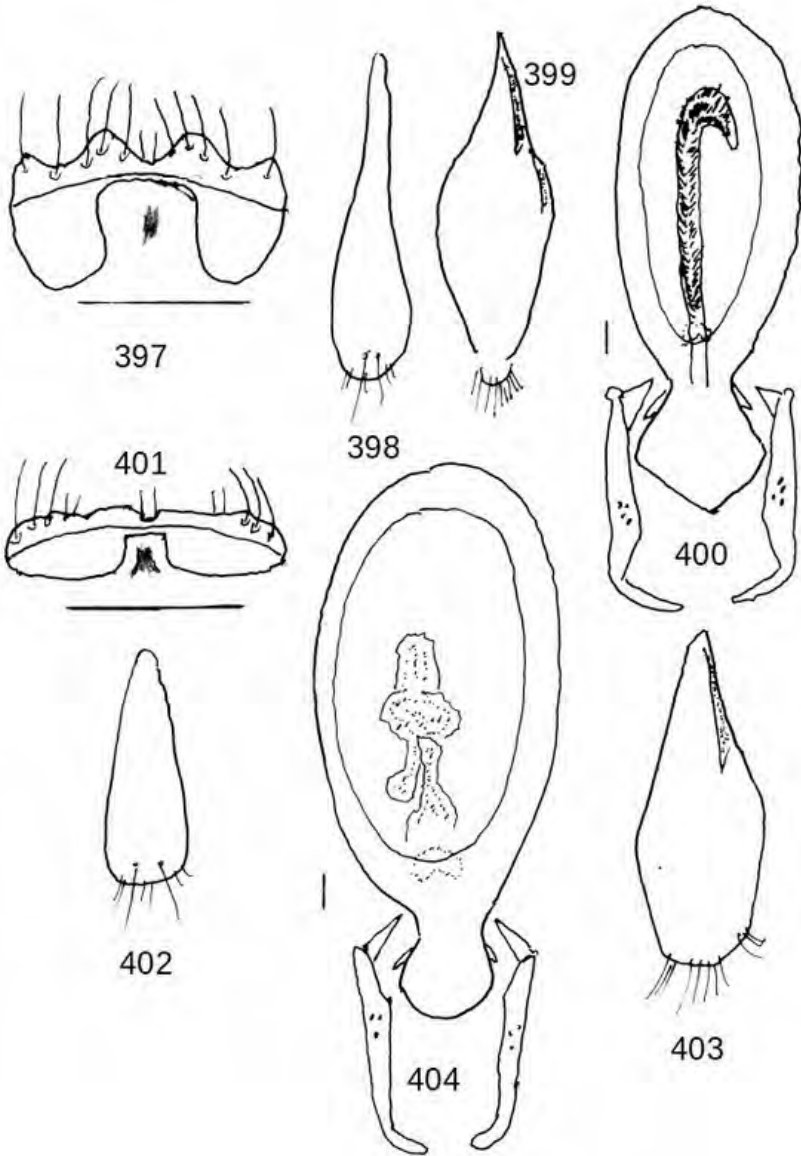
Figs 381-388. *Gauropetrus diabolicus* (Bh.): labrum and epistoma (381) (scale bar = 1.0 mm), tergite and sternite of male genital segment (382-383), aedeagus (384). *Gauropetrus andalabiy* sp.n.: labrum and epistoma (385) (scale bar = 1.0 mm), tergite and sternite of male genital segment (386-387), aedeagus (388) (scale bar = 0.1 mm).



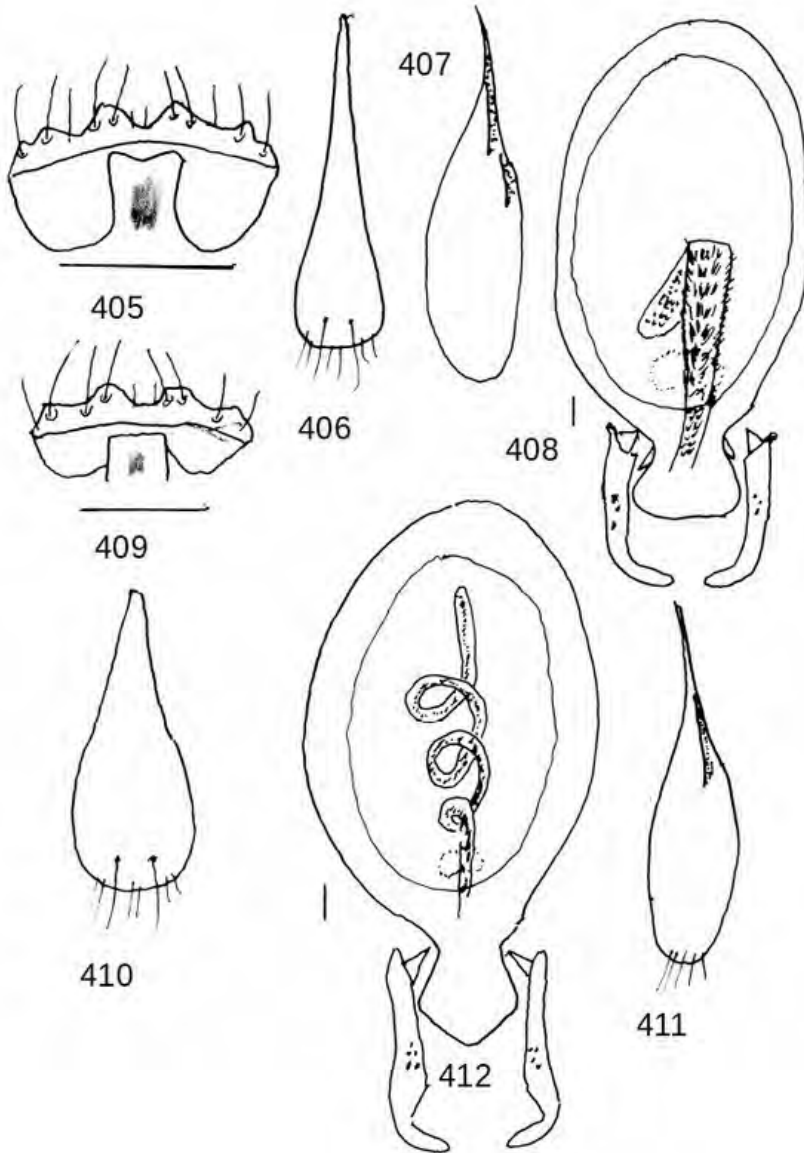
Figs 389-396. *Gauropetrus antsirananensis* sp.n.: labrum and epistoma (389) (scale bar = 1.0 mm), tergite and sternite of male genital segment (390-391), aedeagus (392). *Gauropetrus andapanus* sp.n.: labrum and epistoma (393) (scale bar = 1.0 mm), tergite and sternite of male genital segment (394-395), aedeagus (396) (scale bar = 0.1 mm).



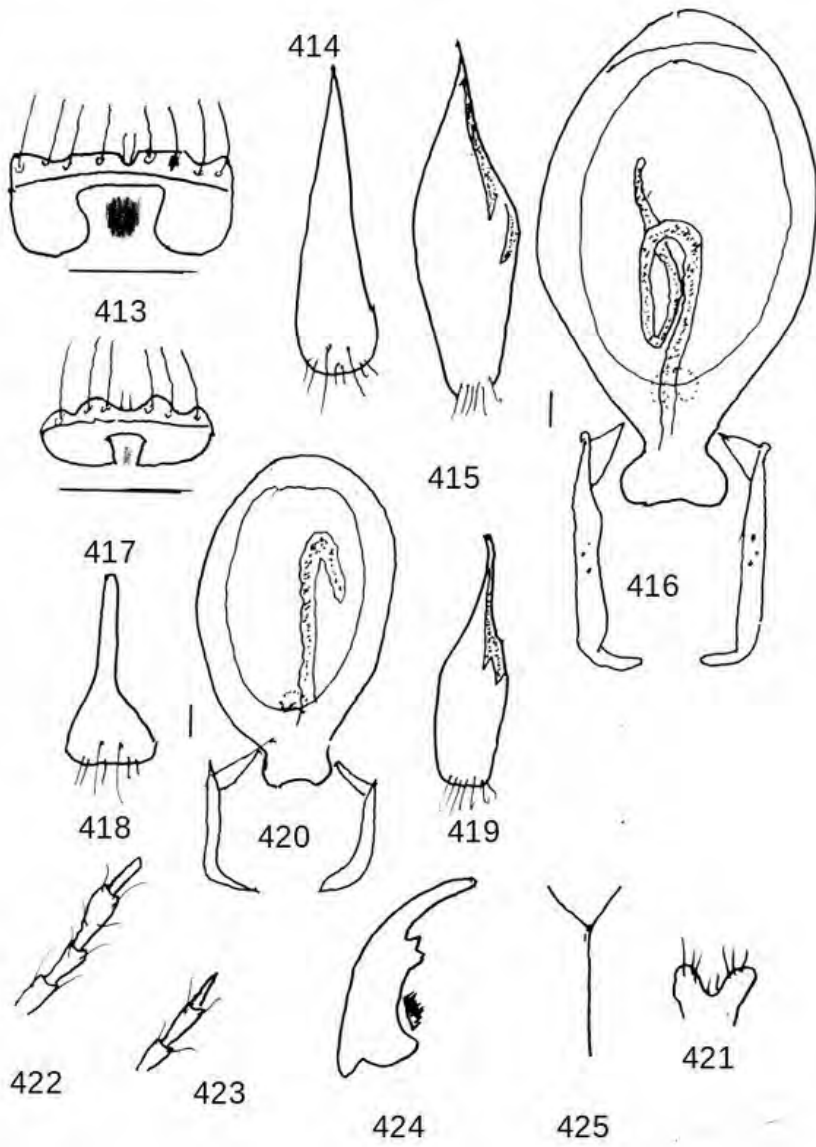
Figs 397-404. *Gauropetrus punctatus* sp.n.: labrum and epistoma (397) (scale bar = 1.0 mm), tergite and sternite of male genital segment (398-399), aedeagus (400). *Gauropetrus nigripennis* (Jarr.): labrum and epistoma (401) (scale bar = 1.0 mm), tergite and sternite of male genital segment (402-403), aedeagus (404) (scale bar = 0.1 mm).



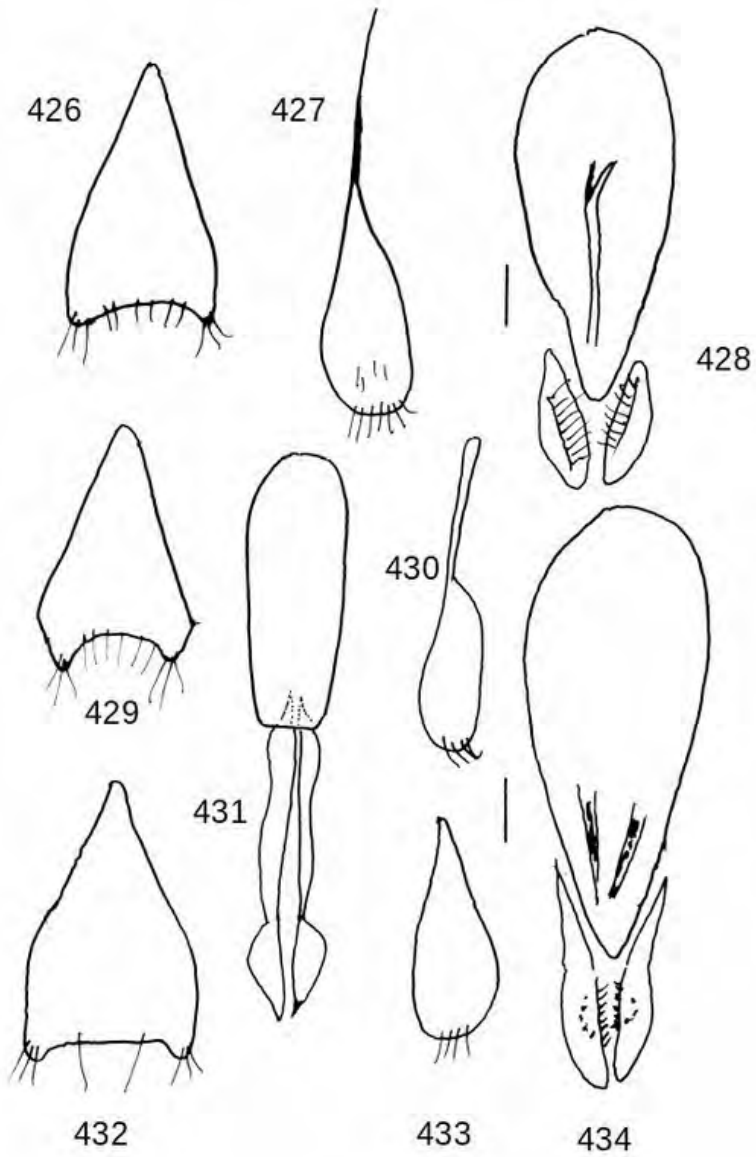
Figs 405-412. *Gauropetrus ranomafana* sp.n.: labrum and epistoma (405) (scale bar = 1.0 mm), tergite and sternite of male genital segment (406-407), aedeagus (408). *Gauropetrus banari* sp.n.: labrum and epistoma (409) (scale bar = 1.0 mm), tergite and sternite of male genital segment (410-411), aedeagus (412). Scale bars = 0.1 mm.



Figs 413-425 *Gauropetrus erosus* (Fvl.): labrum and epistoma (413) (scale bar = 1.0 mm), tergite and sternite of male genital segment (414-415), aedeagus (416). *Gauropetrus elegans* sp.n.: labrum and epistoma (417) (scale bar = 1.0 mm), tergite and sternite of male genital segment (418-419), aedeagus (420). *Malgalinus* gen.n.: labrum (421), maxillary palpi (422), labial palpi (423), mandible (424), gular sutures (425) (scale bar = 0.1 mm).



Figs 426-434. *Malgalinus politus* (Fvl.): tergite and sternite of male genital segment (426-427), aedeagus (428). *Malgalinus densicephalus* sp.n.: tergite and sternite of male genital segment (429-430), aedeagus (431). *Malgalinus montanus* sp.n.: tergite and sternite of male genital segment (432-433), aedeagus (434). Scale bars = 0.1 mm.



Figs 435. Distribution of *Gauropterus subcylindricus* (Andasibe-Mantadia N.P., circle). *G. andalabiby*, *G. banari* (Vohitrosa forest, triangle). *G. ranomafana*, *G. punctatus*, *G. nigripennis*, and *G. hova* (Ranomafana N.P., square).



435

Figs 436-446. *Malgalinus orientalis* sp.n.: tergite and sternite of male genital segment (436-437), aedeagus (438). *Malgalinus minutus* sp.n.: tergite and sternite of male genital segment (439-440), aedeagus (441). *Malgalinus centralis* sp.n.; tergite and sternite of male genital segment (442-443), aedeagus (444). *Malgalinus janaki* sp.n.: tergite and sternite of male genital segment (445-446). Scale bars = 0.1 mm.

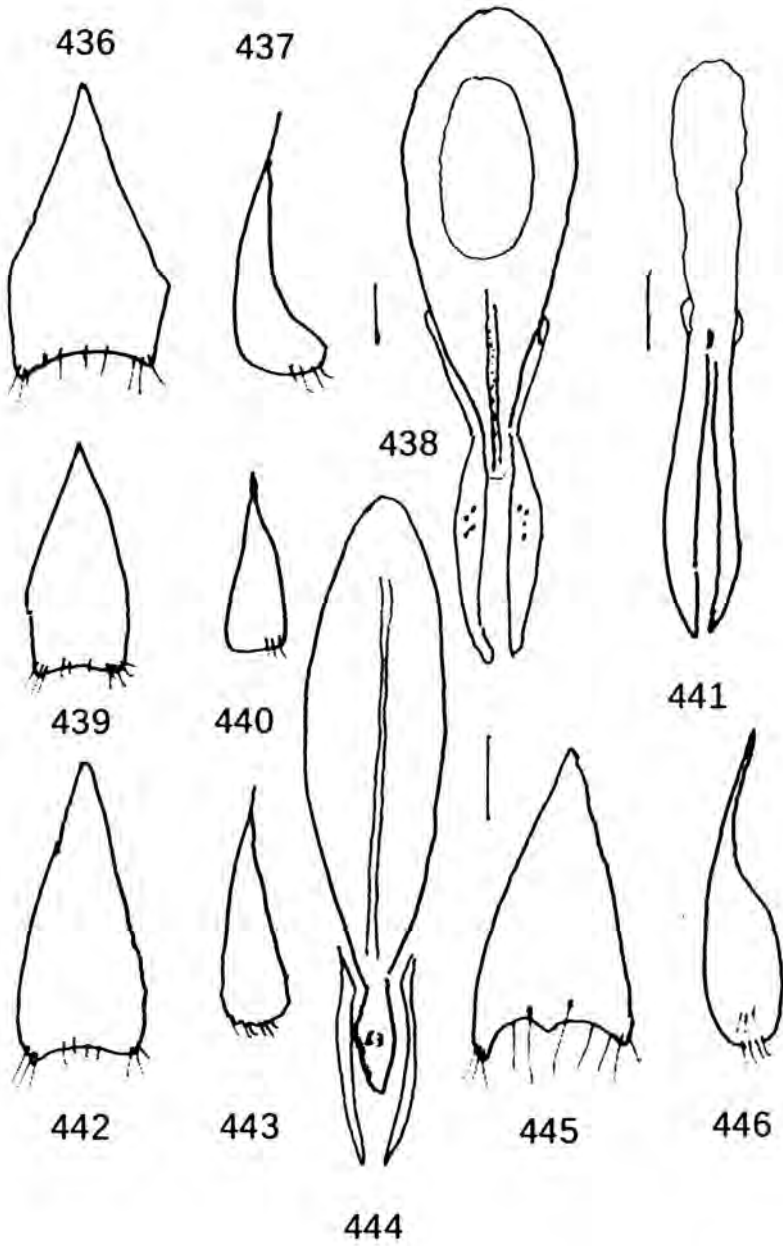


Fig. 447. Distribution of *Malgalinus politus* (Fvl.).



447

Figs 448-454. *Malgalinus janaki* sp.n.: aedeagus (448). *Malgalinus septentrionalis* sp.n.: tergite and sternite of male genital segment (449-450), aedeagus (451) *Malgalinus dieganus* sp.n.: tergite and sternite of male genital segment (452-453), aedeagus (454). Scale bars = 0.1 mm.

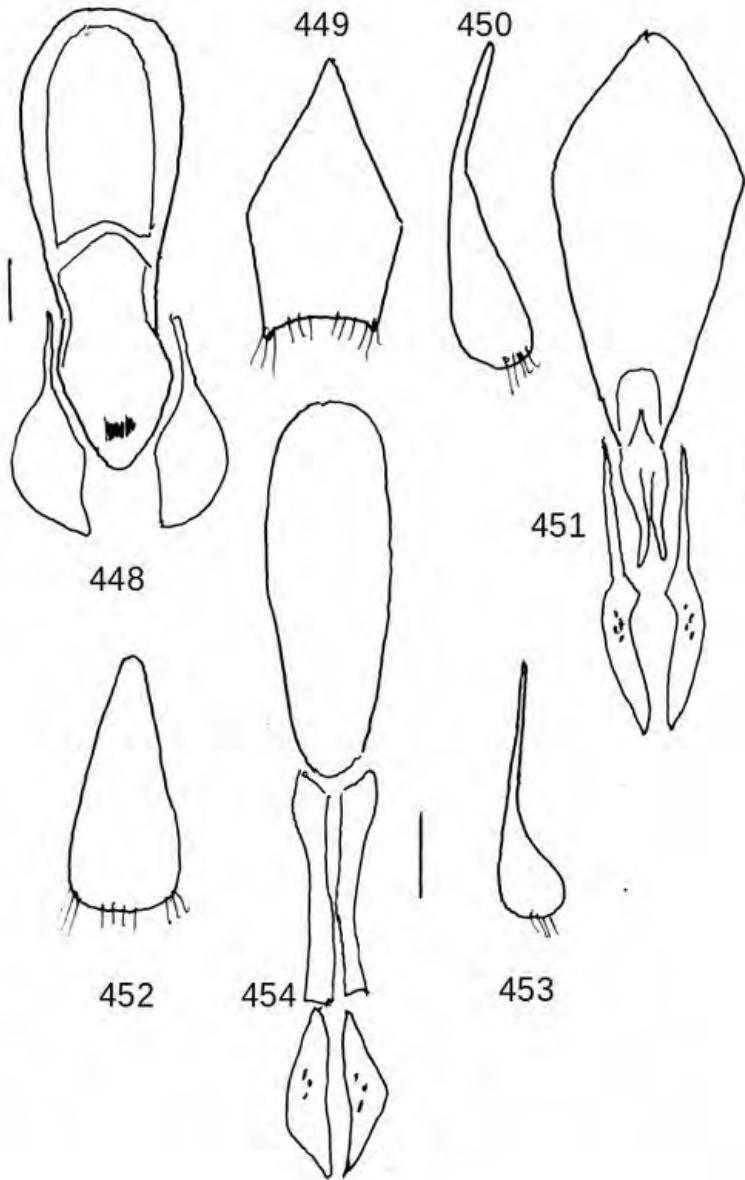
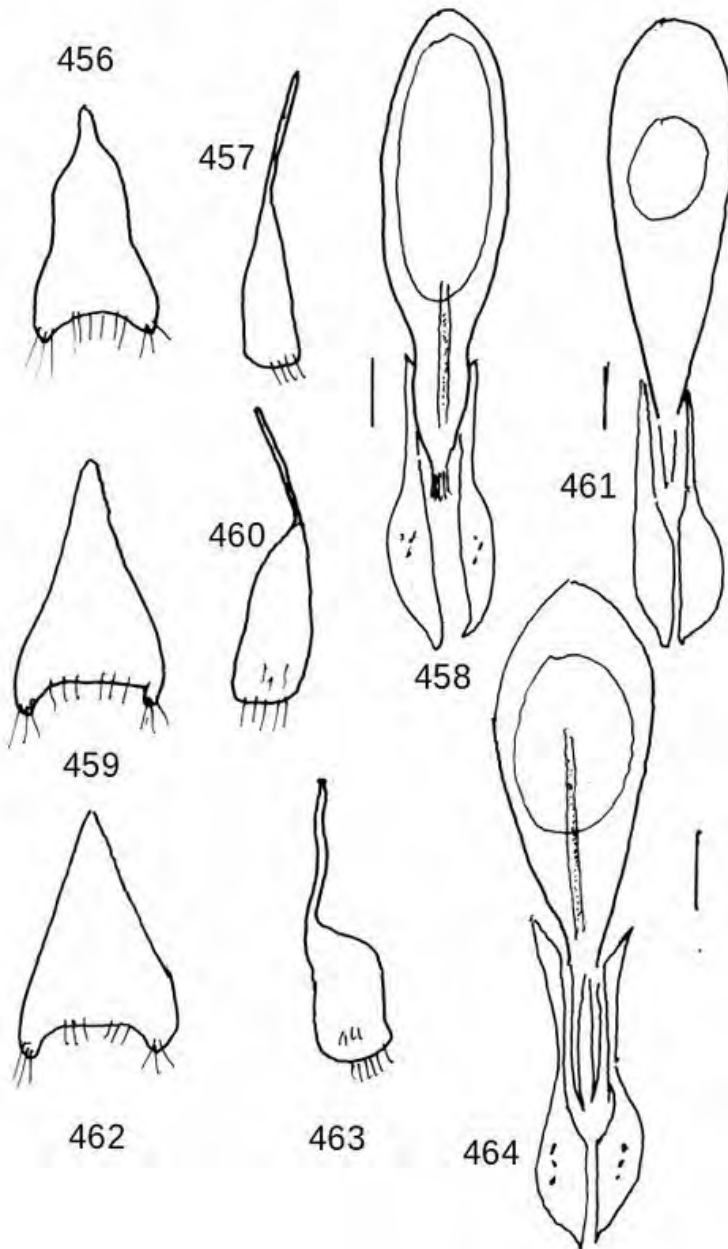


Fig. 455. Distribution of *Malgalinus indomitus* in Andasibe-Mantadia N.P. (square) and *M. minor* (circle).

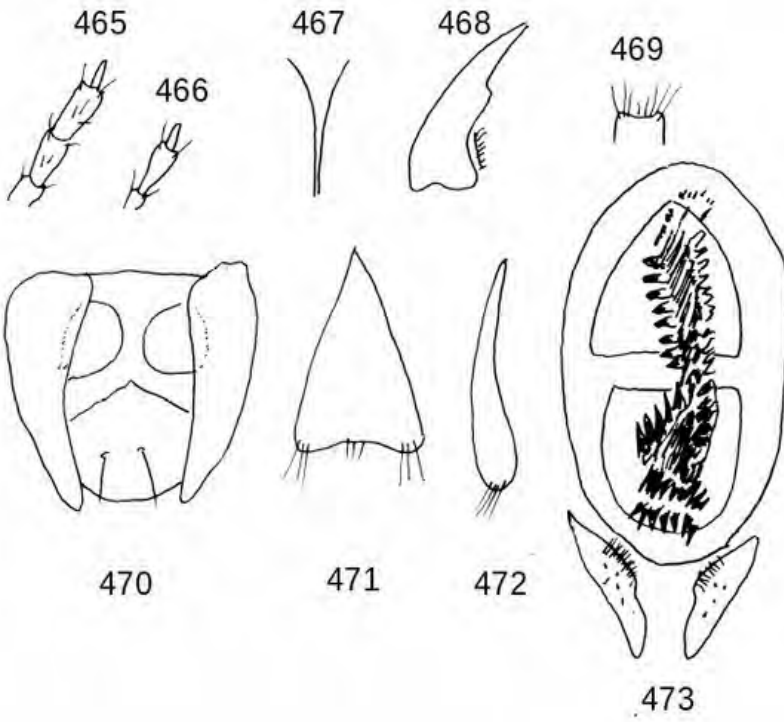


455

Figs 456-464. *Malgalinus minor* sp.n.: tergite and sternite of male genital segment (456-457), aedeagus (458). *Malgalinus enakarensis* sp.n.: tergite and sternite of male genital segment (459-460), aedeagus (461). *Malgalinus indomitus* sp.n.: tergite and sternite of male genital segment (462-463), aedeagus (464). Scale bars = 0.1 mm.



Figs 465-473. *Heterocinus*: maxillary palpi (465), labial palpi (466), gular sutures (467), mandible (468), labrum (469), female genital segment (470). *Heterocinus forestalis* sp.n.: tergite and sternite of male genital segment (471-472), aedeagus (473). Scale bar = 0.1 mm.



Figs 474-482. *Heterocinus andramontanus* sp.n.: tergite and sternite of male genital segment (474-475), aedeagus (476). *Heterocinus sakalava* sp.n.: tergite and sternite of male genital segment (477-478), aedeagus (479). *Heterocinus minutulus* sp.n.: tergite and sternite of male genital segment (480-481), aedeagus (482). Scale bar = 0.1 mm.

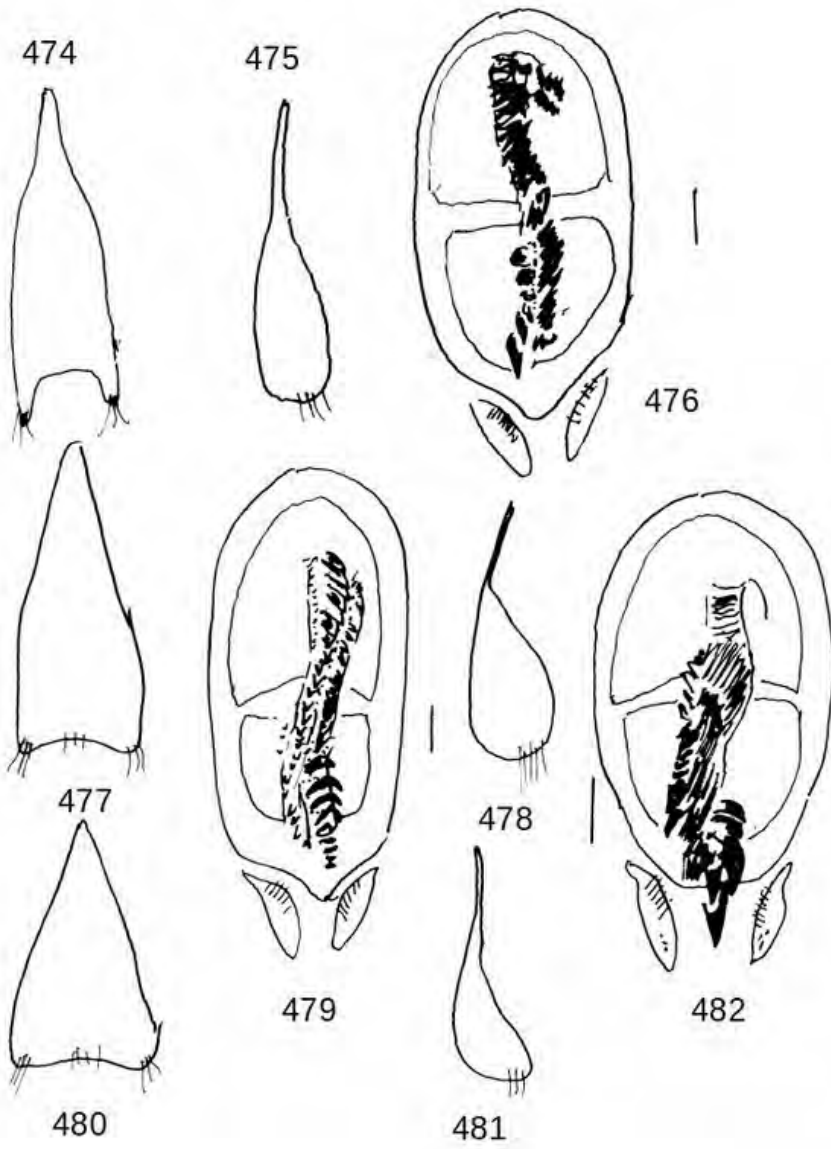
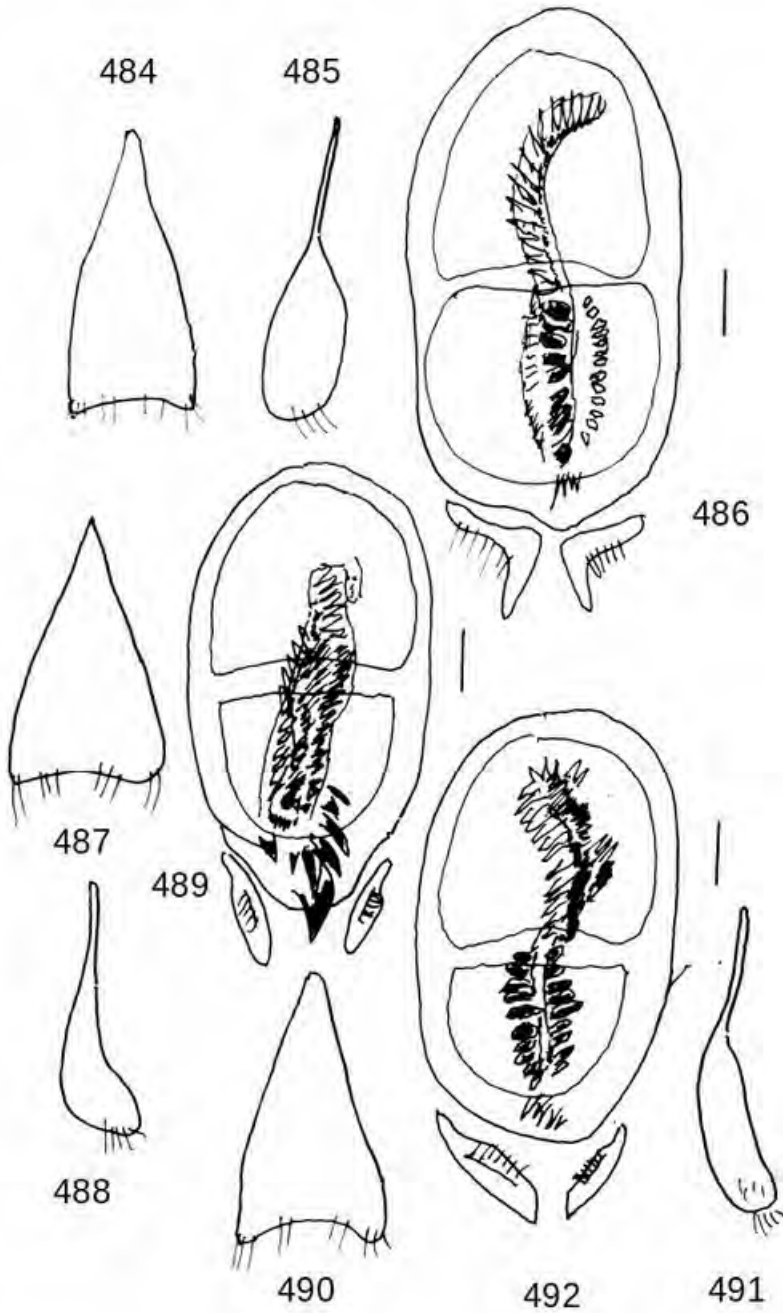


Fig. 483. Distribution of *Heterocinus brunneus*.

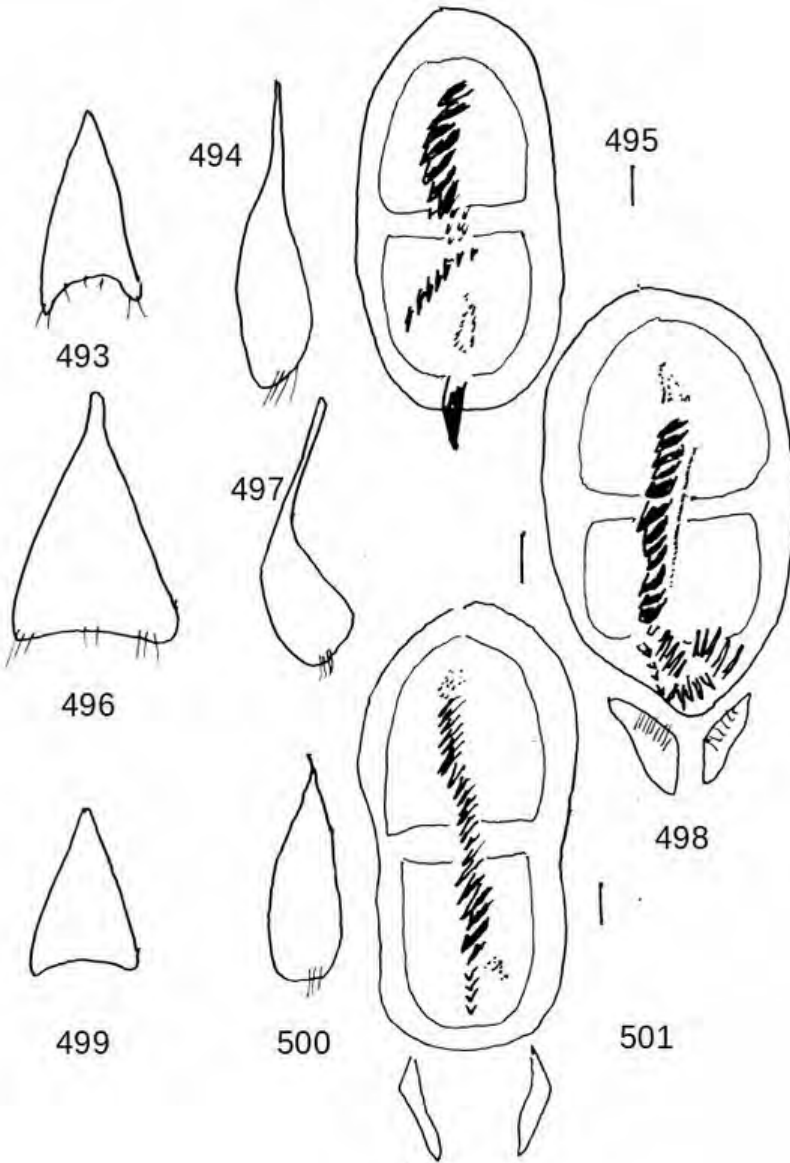


483

Figs 484-492. *Heterocinus pluvialis* sp.n.: tergite and sternite of male genital segment (484-485), aedeagus (486). *Heterocinus brunneus* sp.n.: tergite and sternite of male genital segment (487-488), aedeagus (489). *Heterocinus obstrusus* sp.n.: tergite and sternite of male genital segment (490-491), aedeagus (492). Scale bars = 0.1 mm.



Figs 493-501. *Heterocinus montanus* sp.n.: tergite and sternite of male genital segment (493-494), aedeagus (495). *Heterocinus septentrionalis* sp.n.: tergite and sternite of male genital segment (496-497), aedeagus (498). *Heterocinus andasibe* sp.n.: tergite and sternite of male genital segment (499-500), aedeagus (501). Scale bars = 0.1 mm.



Figs 502-509. *Heterocinus pseudoelegans* sp.n.: tergite and sternite of male genital segment (502-503), aedeagus (504). *Heterocinus mandresyanus* sp.n.: tergite and sternite of male genital segment (505-506), aedeagus (507). *Heterocinus brevis* sp.n.: tergite and sternite of male genital segment (507-508), aedeagus (509). Scale bars = 0.1 mm.

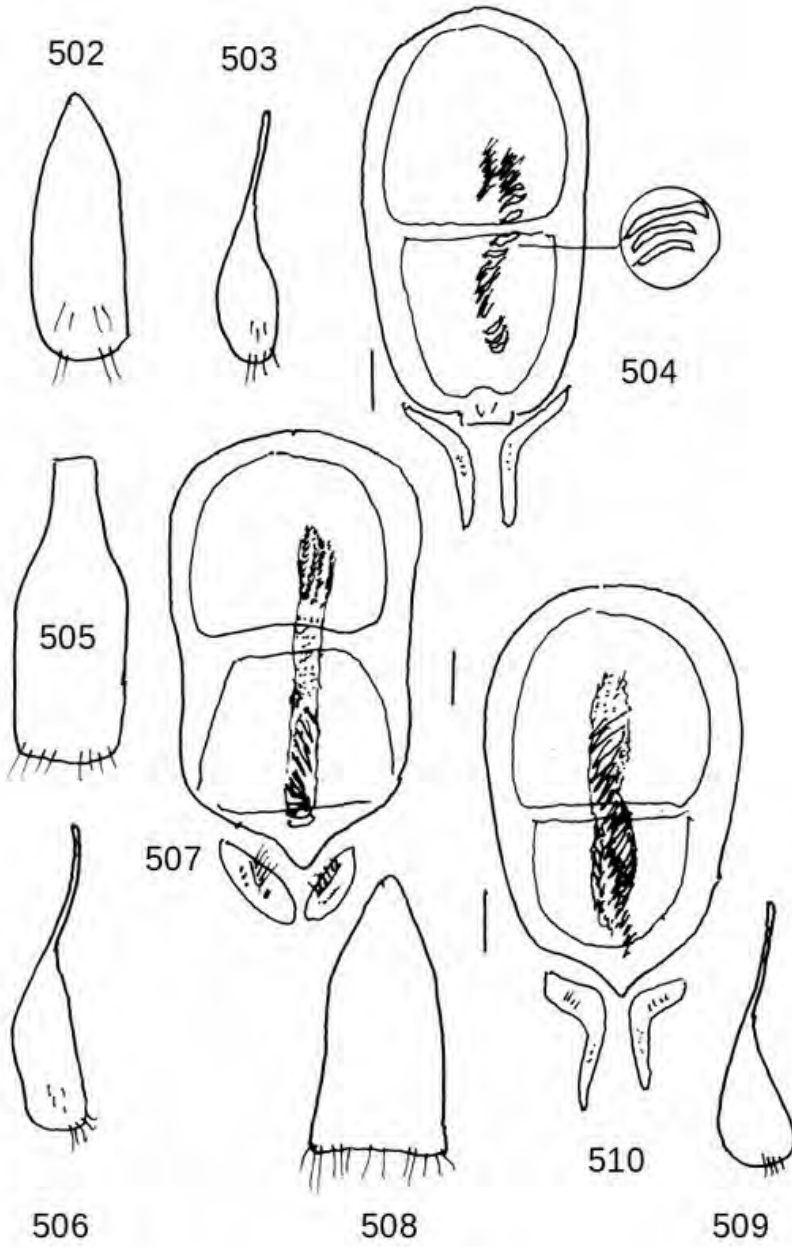
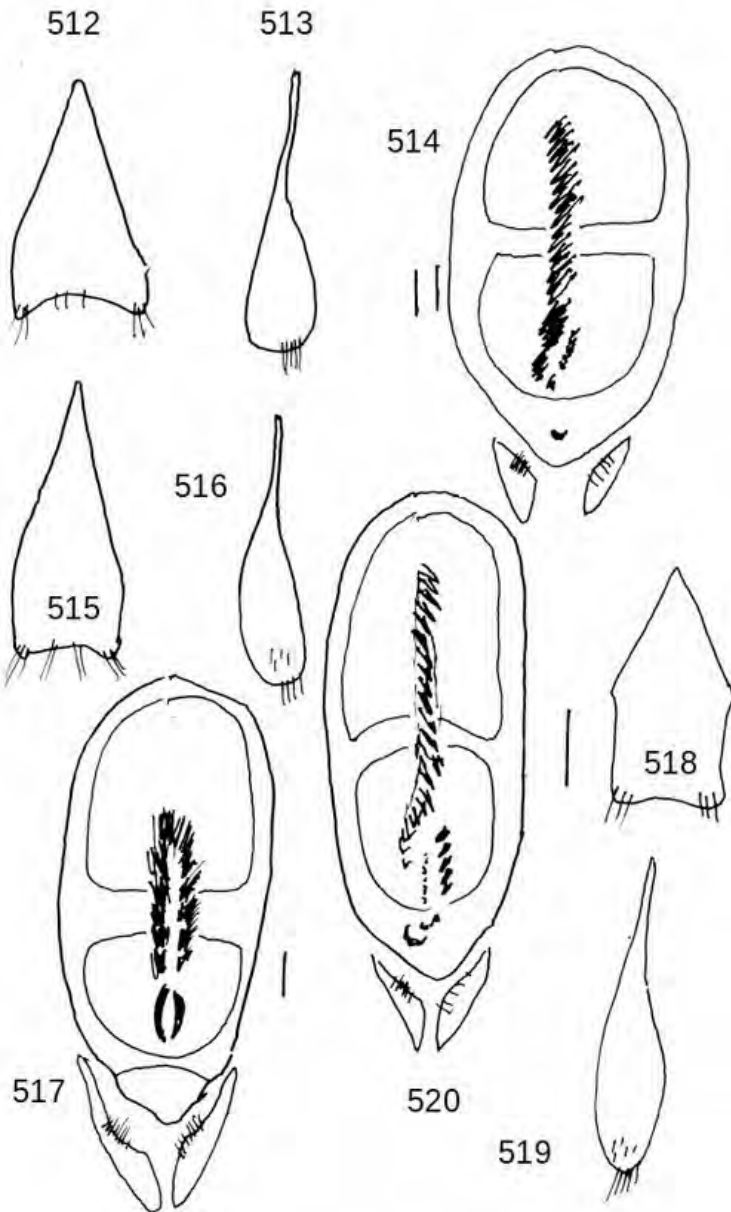


Fig. 511. Distribution of *Heterocinus montanus*, *H. pseuedoelegans*, *H. brevis*, *H. banari*, *H. oculus* in Ranomafana N.P. (square), and *H. obstrusus* in Andasibe-Mantadia N.P. (circle).

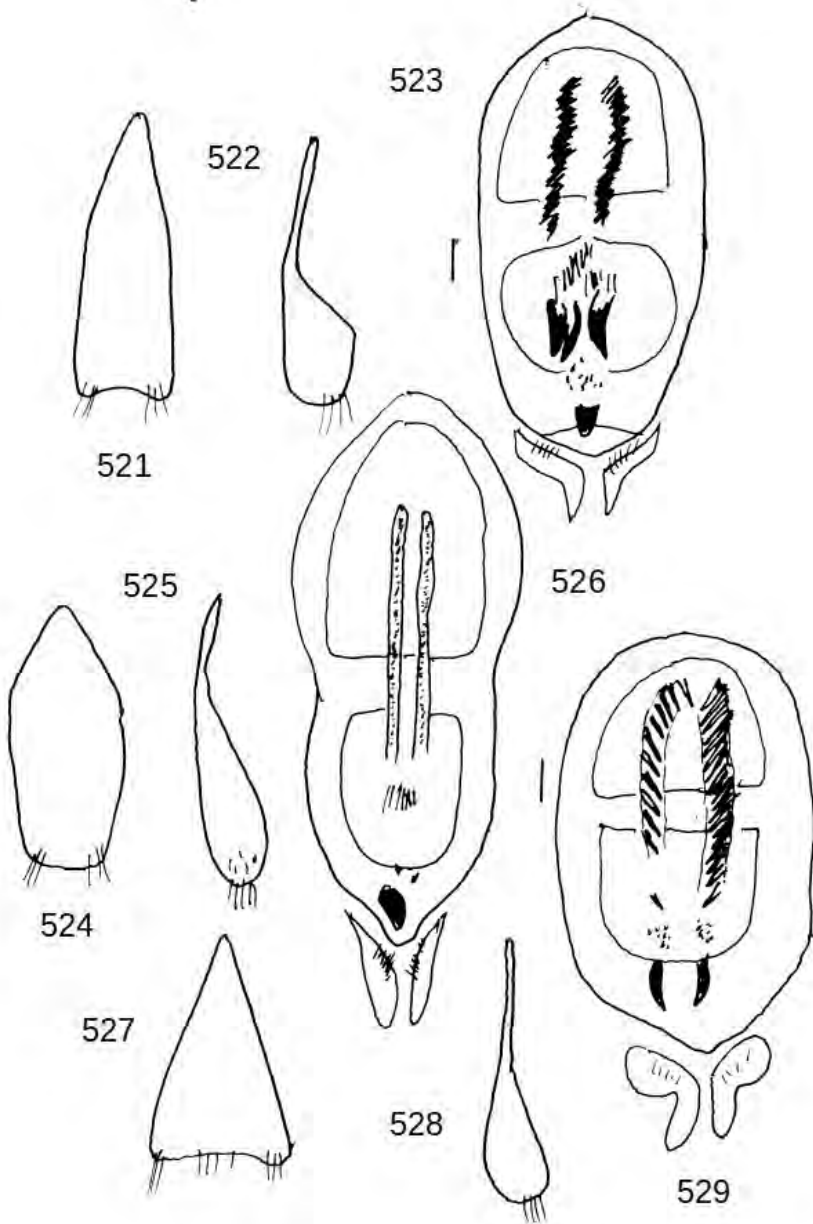


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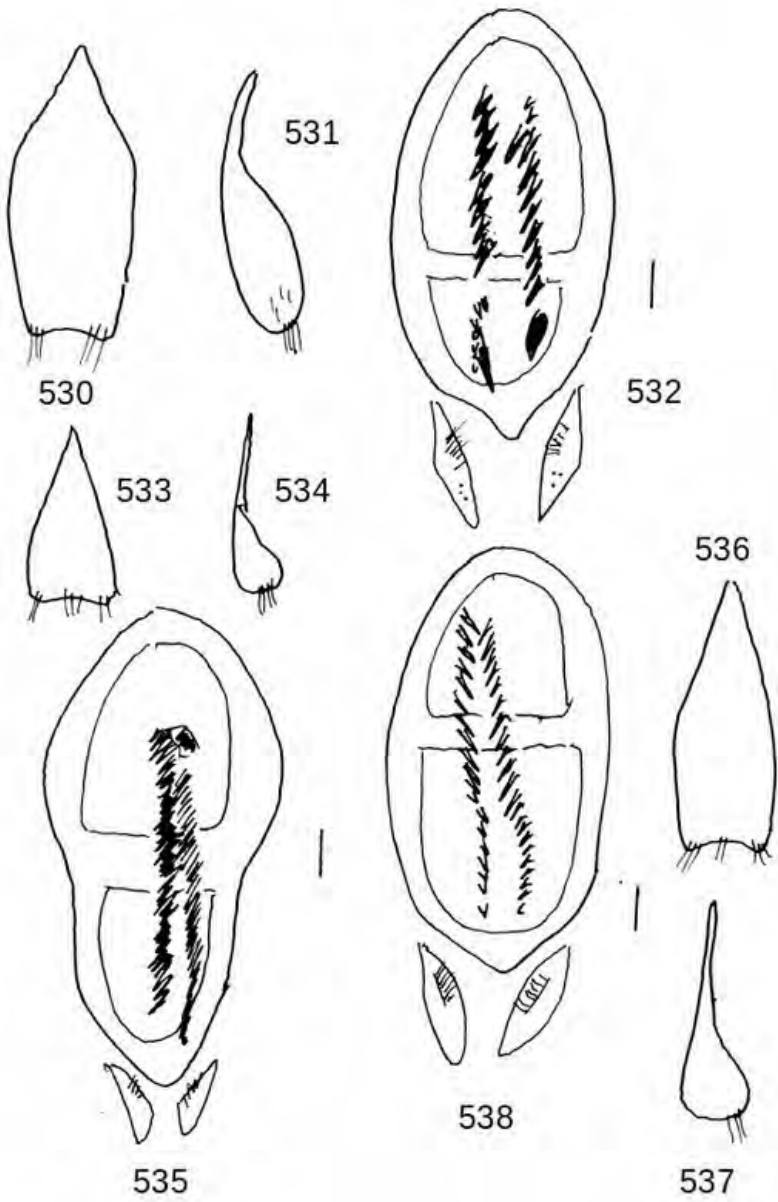
Figs 512-520. *Heterocinus pseudobstrusus* sp.n.: tergite and sternite of male genital segment (512-513), aedeagus (514). *Heterocinus subtilior* sp.n.: tergite and sternite of male genital segment (515-516), aedeagus (517). *Heterocinus grandis* sp.n.: tergite and sternite of male genital segment (518-519), aedeagus (520). Scale bar = 0.1 mm.



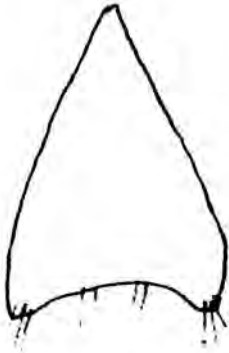
Figs 521-529. *Heterocinus kotokely* sp.n.: tergite and sternite of male genital segment (521-522), aedeagus (523). *Heterocinus fulvomarginatus* sp.n.: tergite and sternite of male genital segment (524-525), aedeagus (526). *Heterocinus rubescens* sp.n.: tergite and sternite of male genital segment (527-528), aedeagus (529). Scale bar = 0.1 mm.



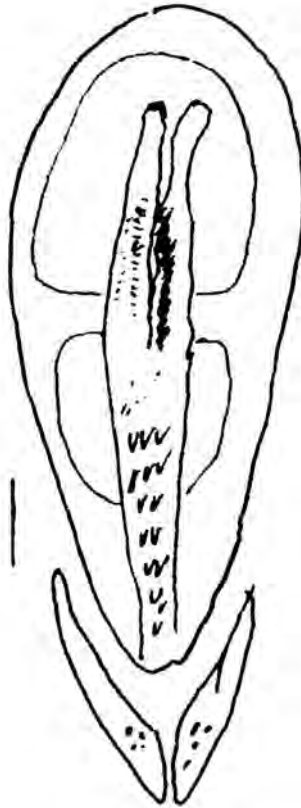
Figs 530-538. *Heterocinus litoralis* sp.n.: tergite and sternite of male genital segment (530-531), aedeagus (532). *Heterocinus rano* sp.n.: tergite and sternite of male genital segment (533-534), aedeagus (535). *Heterocinus pallidus* sp.n.: tergite and sternite of male genital segment (536-537), aedeagus (538). Scale bars = 0.1 mm.



Figs 539-541. *Heterocinus delfinensis* sp.n.: tergite and sternite of male genital segment (539-540), aedeagus (541). Scale bar = 0.1 mm.



539

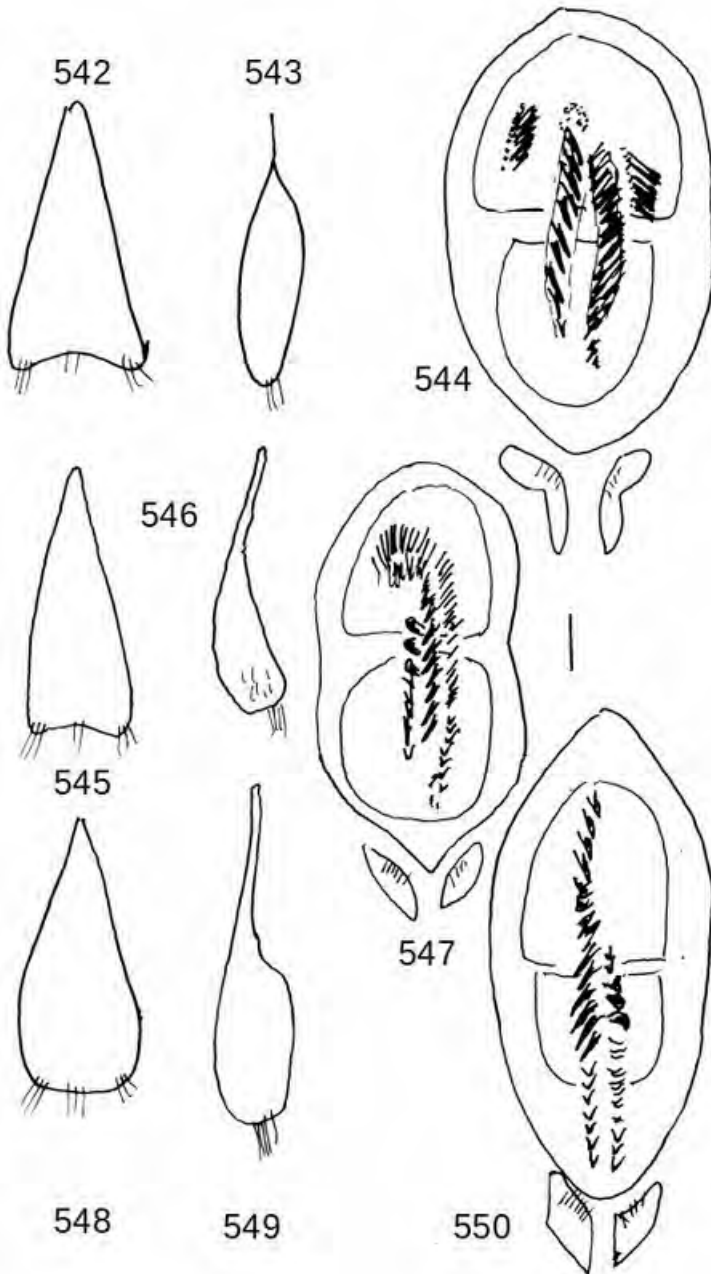


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Figs 542-550. *Heterocinus levis* sp.n.: tergite and sternite of male genital segment (542-543), aedeagus (544). *Heterocinus elegans* sp.n.: tergite and sternite of male genital segment (545-546), aedeagus (547). *Heterocinus biseriatus* sp.n.: tergite and sternite of male genital segment (548-549), aedeagus (550). Scale bars = 0.1 mm.



Figs 551-559. *Heterocinus rubicundulus* sp.n.: tergite and sternite of male genital segment (551-552), aedeagus (553). *Heterocinus antemoro* sp.n.: tergite and sternite of male genital segment (554-555), aedeagus (556). *Heterocinus ikokaensis* sp.n.: tergite and sternite of male genital segment (557-558), aedeagus (559). Scale bars = 0.1 mm.

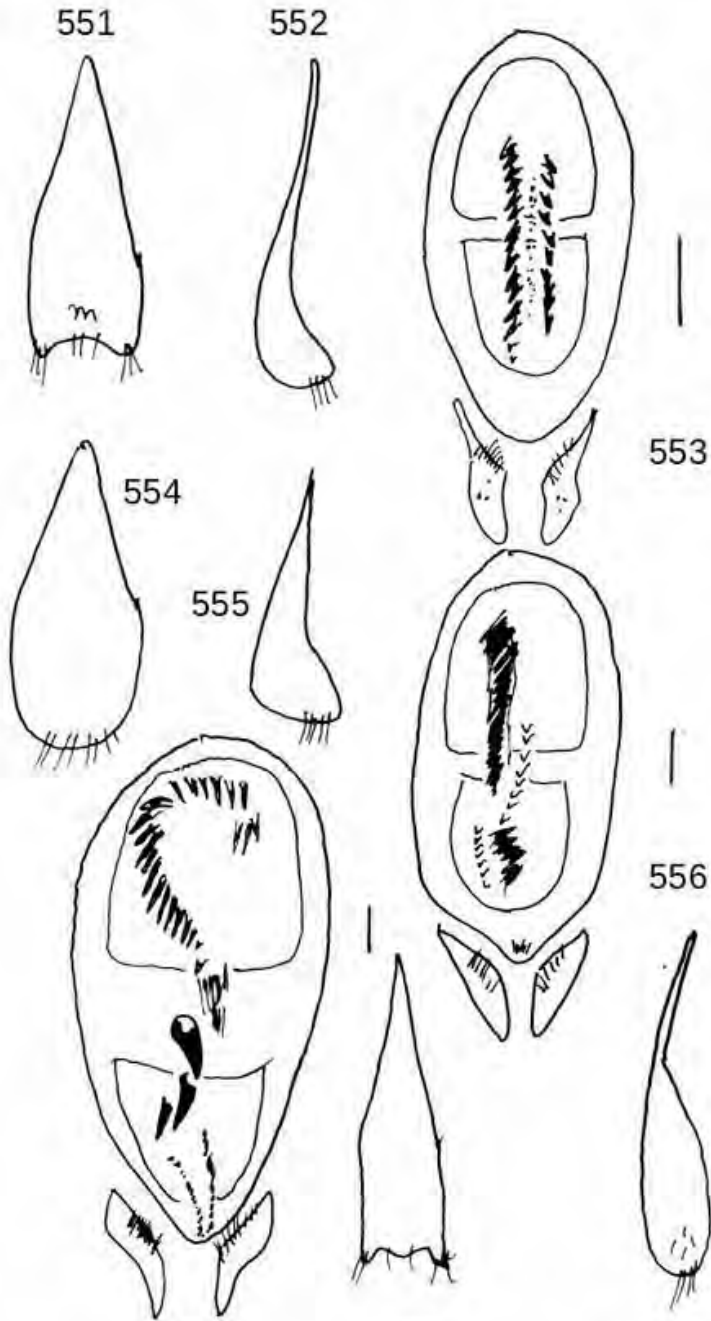
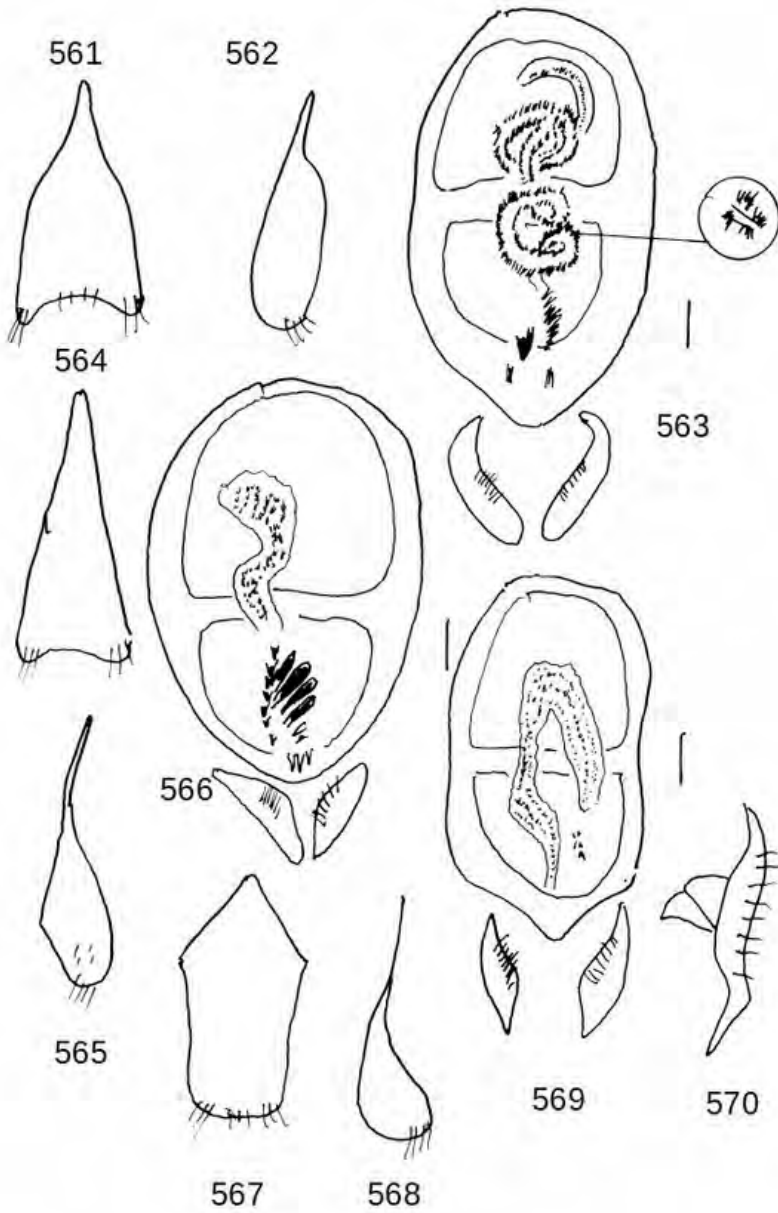


Fig. 560. Distribution of *Heterocinus avaratra*, *H. pluvialis*, *H. septentrionalis* (square), *H. madecassianus*, *H. paramerum*, and *H. subagrestis* around Ambahitantly (circle).

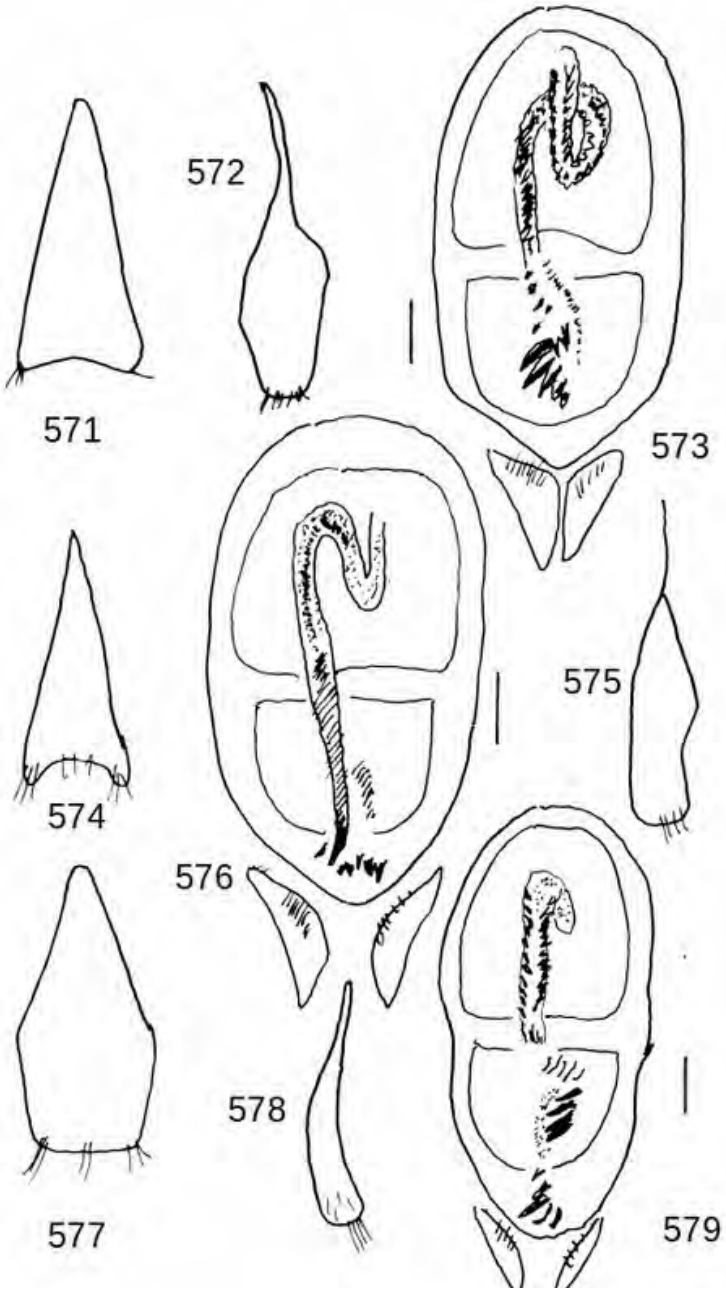


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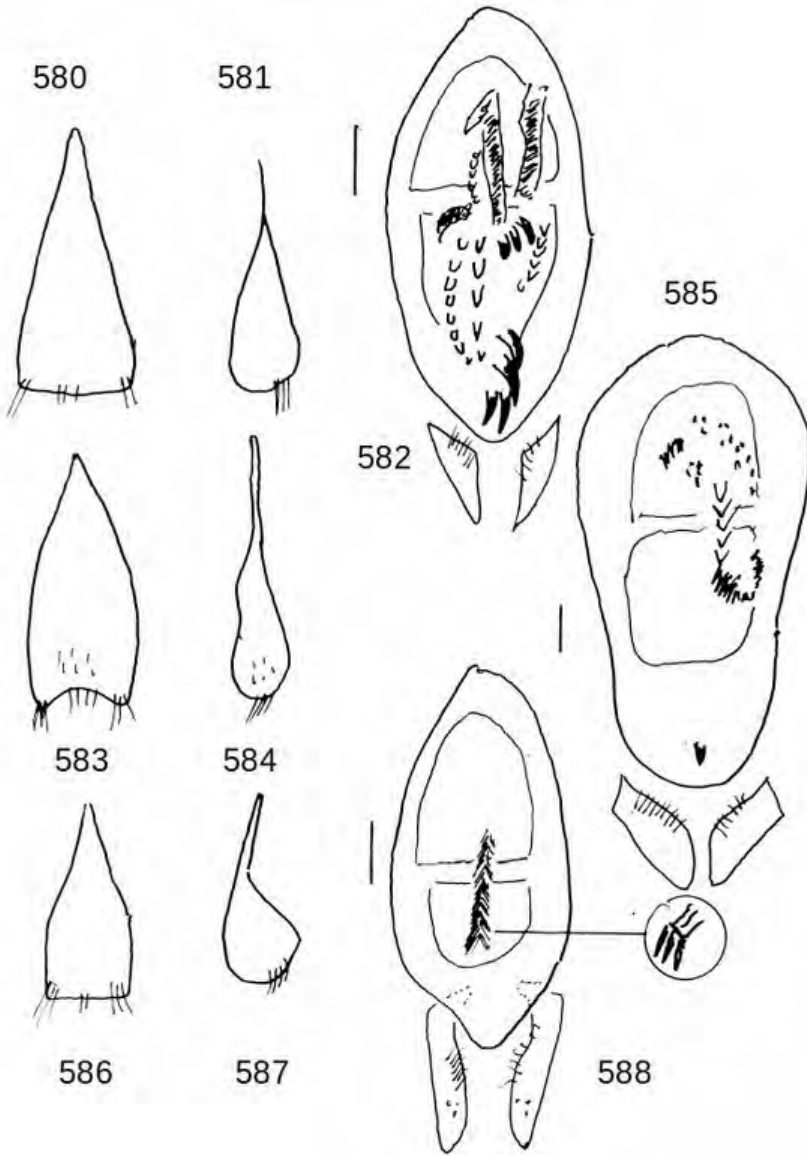
Figs 561-570. *Heterocinus madescassianus*: tergite and sternite of male genital segment (561-562), aedeagus (563). *Heterocinus banari* sp.n.: tergite and sternite of male genital segment (564-565), aedeagus (566). *Heterocinus descarpentriesi* Jar.: tergite and sternite of male genital segment (567-568), aedeagus (569) with paramere in lateral view (570). Scale bars = 0.1 mm.



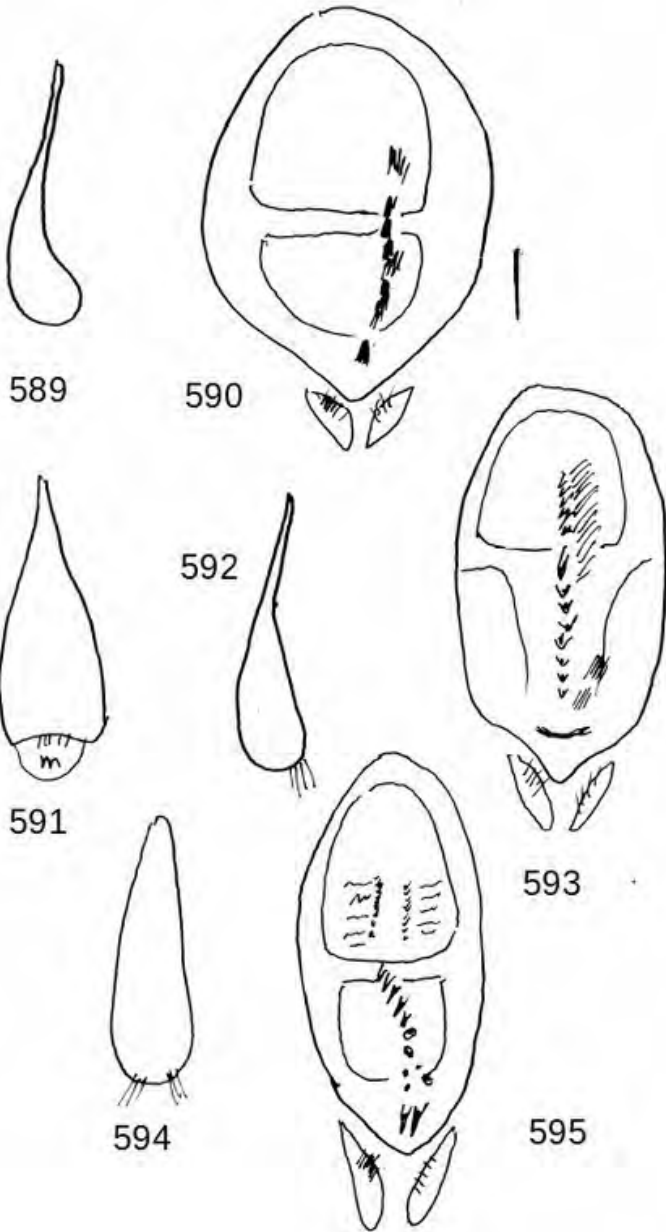
Figs 571-579. *Heterocinus vazimba* sp.n.: tergite and sternite of male genital segment (571-572), aedeagus (573). *Heterocinus isandra* sp.n.: tergite and sternite of male genital segment (574-575), aedeagus (576). *Heterocinus rasoherina* sp.n.: tergite and sternite of male genital segment (577-578), aedeagus (579). Scale bars = 0.1 mm.



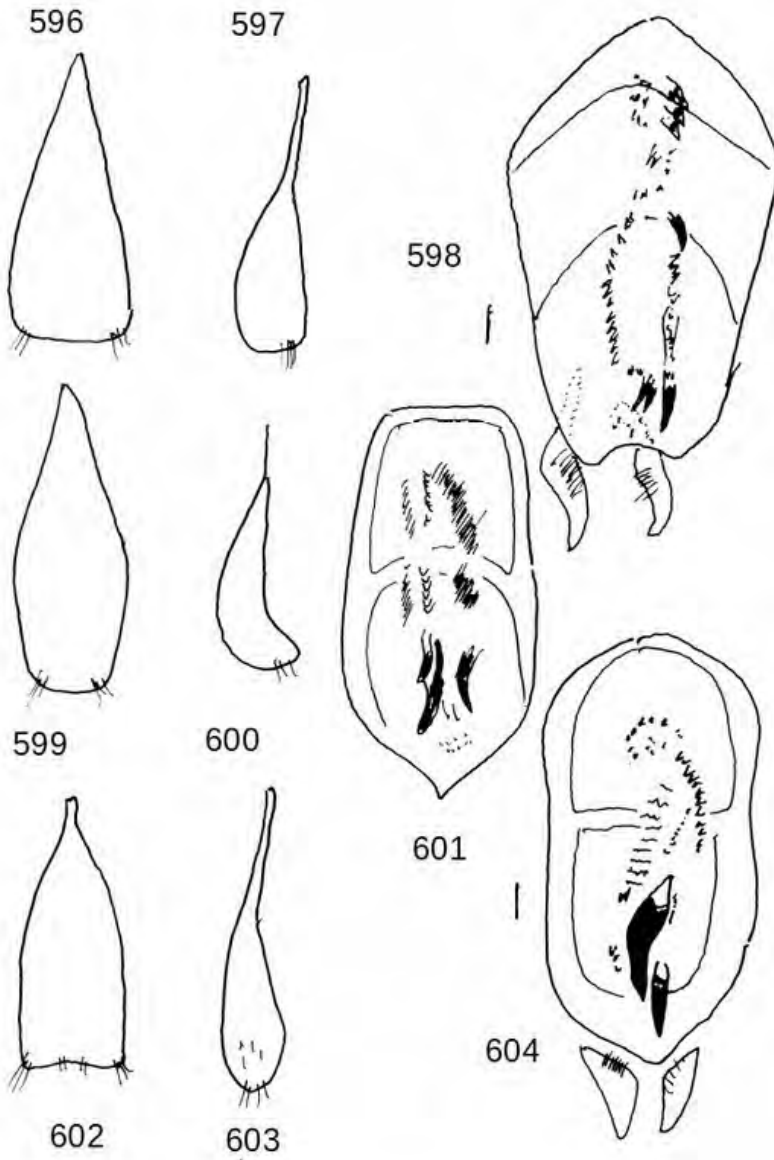
Figs 580-588. *Heterocinus tsimbazaza* sp.n. tergite and sternite of male genital segment (580-581), aedeagus (582). *Heterocinus obscurus* sp.n.: tergite and sternite of male genital segment (583-584), aedeagus (585). *Heterocinus paramerum* sp.n.: tergite and sternite of male genital



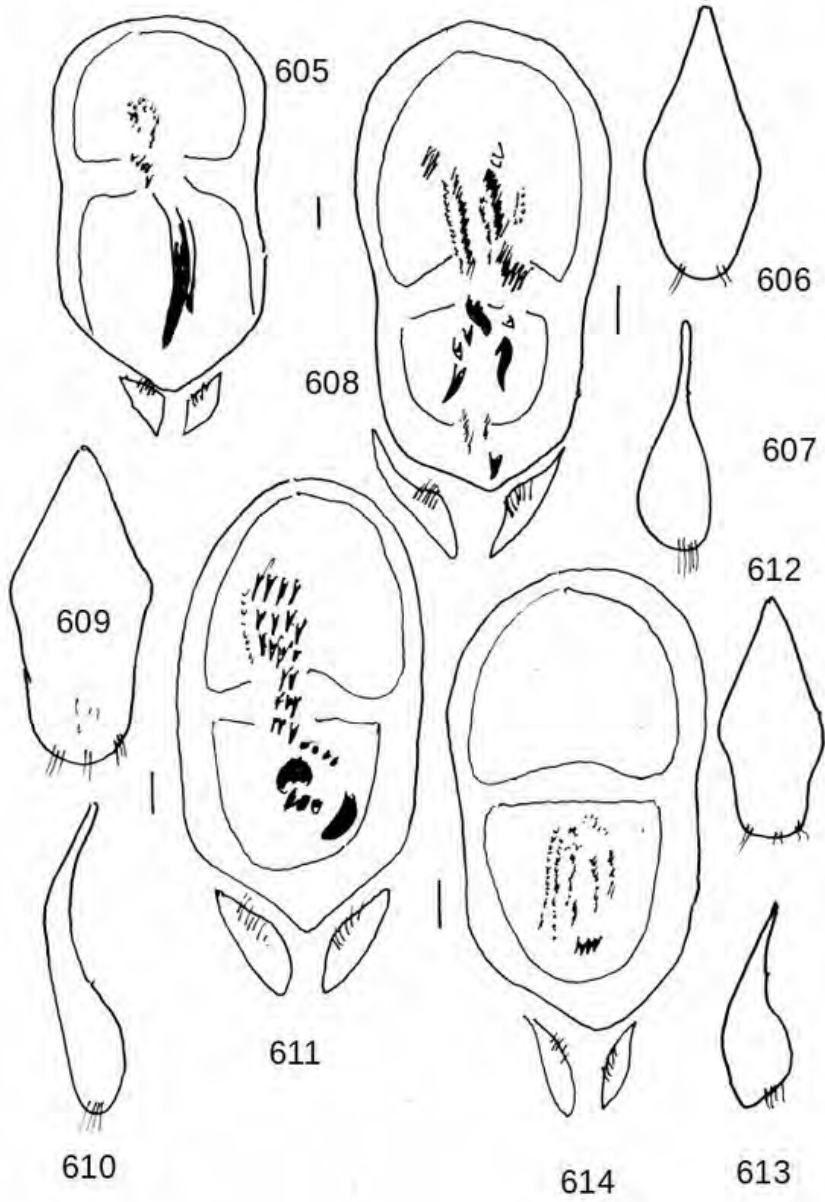
Figs 589-595. *Heterocinus fimbriatus* sp.n.: sternite of male genital segment (589), aedeagus (590). *Heterocinus subagrestis* sp.n.: tergite and sternite of male genital segment (591-592), aedeagus (593). *Heterocinus minutus* sp.n.: tergite of male genital segment (594), aedeagus (595). Scale bars = 0.1 mm.



Figs 596-604. *Heterocinus oculus* sp.n.: tergite and sternite of male genital segment (596-597), aedeagus (598). *Heterocinus bispinosus* sp.n.: tergite and sternite of male genital segment (599-600), aedeagus (601). *Heterocinus valiha* sp.n.: tergite and sternite of male genital segment (602-603), aedeagus (604). Scale bars = 0.1 mm.



Figs 605-614. *Heterocinus ambiroa* sp.n.: aedeagus (605). *Heterocinus vohitrosanus* sp.n.: tergite and sternite of male genital segment (606-607), aedeagus (608). *Heterocinus merina* sp.n.: tergite and sternite of male genital segment (609-610), aedeagus (611). *Heterocinus amarantinus* sp.n.: tergite and sternite of male genital segment (612-613), aedeagus (614). Scale bars = 0.1 mm.



Figs 615-617. *Heterocinus longelytratus* sp.n.: tergite and sternite of male genital segment (615-616), aedeagus (617). Scale bar = 0.1 mm.



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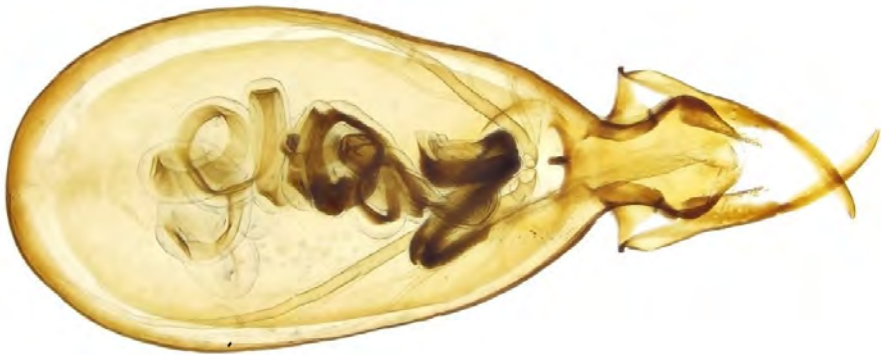
Figs. 618-620. *Thyreocephalus flavoviolaceus* Janák: habitus (618), head and pronotum (619), aedeagus (620) (photos by J. Janák).



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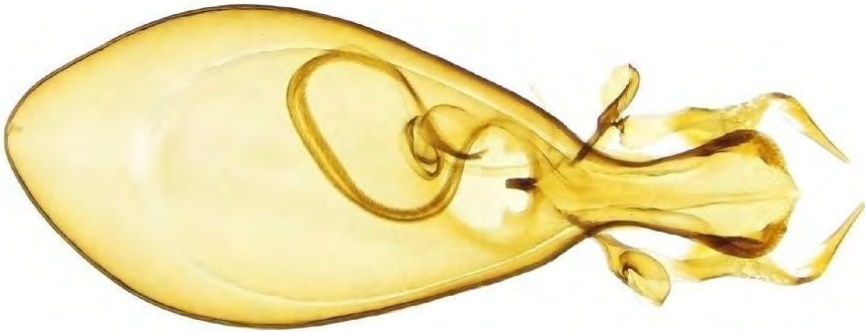
Figs 621-623. *Thyrecephalus banari* Janák: habitus (621), head and pronotum (622), aedeagus (623) (photo by J. Janák). Scale bars = 1 mm.



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Figs 624-626. *Arnaldolinus bordonii* Janák: habitus (624), head and pronotum (625), aedeagus (626) (photos by J. Janák).



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Figs 627-633. Habitus of *Elea toliarensis* sp. n. (total length 8 mm) (627), *Paulianella microps* (Jar.) (total length = 4.5 mm) (628), bordo *Edrisia elegantissima* sp.n. (total length = 6.4 mm) (629), *Edrisia angustata* Jar.) (total length = 7.5 mm) (630), *Dactylaptatus taborskyi* (total length = 8.0 mm) (631), head and pronotus (total length = 3.5 mm) (632), *Chaetocinus lutens* sp.n. (total length = 4.8 mm) (633 (photo by S. Cuoco).)



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Figs 634-638. Habitus of *Microleptus microphthalmus* (Fvl.) (total length 3 mm) (634), *Gaur-
opterus nigripennis* Jar. (total length = 15.0 mm) (635), head (636) and particular of epistoma
(total length =3.0 mm) (637). Habitus of *Malgalinus janaki* sp.n. (total length = 5.0 mm)
(638) (photo by S. Cuoco).



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Figs 639-643. Habitus of *Chaetocinus amarantinus* sp. n. (total length = 4.4 mm) (639), *Qumuria bordonii* (Lec.) (total length = 11.5 mm) (640), *Heterocinus brunneus* sp. n. (total length = 5.0 mm) (641). Aedeagus of *Chaetocinus lacustris* sp. n. (total length = 1.8 mm) (642), *Heterocinus obstrusus* sp. n. (total length = 2.0 mm) (643) (photos by S. Cuoco).



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Figs 644-647. Aedeagus of *Heterocinus ikokaensis* sp.n. (total length = 1.6 mm) (644), *Heterocinus brunneus* sp.n. (total length = 2 mm) (645), *Heterocinus rubicundulus* sp.n. (total length = 1.8 mm) (646), *Heterocinus banari* sp.n. (total length = 2 mm) (647) (photos by S. Cuoco).



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Fig. 648. Landscape, Chaines Anosyennes (photo by J. Janák).

Fig. 649. Landscape, Kalambatritra forest (photo by J. Janák).



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Fig. 650. Landscape, Ambondrombe Massif (photo by J. Janák).

Fig. 651. Landscape, Vohitrosa forest (photo by J. Janák).



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Fig. 652. Landscape, Montagne d'Ambre (photo by P. Banar).

Fig. 653. Landscape, Parc National de l'Andringitra (photo by J. Janák).



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