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A CONTRIBUTION TO THE KNOWLEDGE OF DRYINIDAE (HYMENOPTERA: CHRYSIDOIDEA) OF NORTHERN MOZAMBIQUE

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ABSTRACT. The twenty one species of Dryinidae known so far from Mozambique were collected in southern provinces (Maputo and Gaza). From 1999 to 2003 the author collected and reared several species in northern Mozambique (Niassa, Nampula and Zambezia provinces), resulting in the discovery of four new species of Dryinidae (*Dryinus zambeziacus*; *Gonatopus cuambensis*, *G. macua* and *G. niassensis*). The males of *Gonatopus ridens* Olmi and *Gonatopus acutus* (Olmi) were reared, so that they are here described for the first time. The other fifteen collected species are new records from Mozambique (*Dryinus undulatus* (Benoit), *D. spangleri* Olmi; *Gonatopus afer* (Olmi), *G. obscurus* (Olmi), *G. nearcticus* (Fenton), *G. bekilyanus* (Benoit), *G. ceres* (Olmi)) or from Northern Mozambique (*Anteon kawandanum* Olmi; *Gonatopus ochreus* (Olmi), *G. mossambicus* Olmi, *G. varipes* Brues, *G. incognitus* Olmi, *G. communis* Olmi, *G. faustae* Olmi, *G. guigliae* (Benoit)).

Key words: Taxonomy, Chrysidoidea, Dryinidae, new species, Afrotropical Region, Mozambique.

Introduction

The *Dryinidae* (Hymenoptera: Chrysidoidea) of Mozambique are insufficiently known: only the following twenty one species were listed by Olmi (1987a, 1989b, 1990, 1994a, 1998b) and Guglielmino & Olmi (1997):

Subfamily Anteoninae: *Anteon afrum* Olmi 1984;

Anteon kawandanum Olmi 1984;

Subfamily Dryininae: *Dryinus orophilus* (Benoit 1950);

Subfamily Gonatopodinae:

Echthrodelphax afer Olmi 1984;

Echthrodelphax migratorius Benoit 1953;

Gonatopus amoenus Olmi 1994;

Gonatopus capensis Brues 1906;

Gonatopus communis Olmi 1984;

Gonatopus faustae Olmi 1998;

Gonatopus festivus Olmi 1994;

Gonatopus gazensis Olmi 1998;

Gonatopus guigliae (Benoit 1951);

Gonatopus incognitus Olmi 1984;

Gonatopus maputensis Olmi 1998;

Gonatopus mossambicus Olmi 1998;

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Gonatopus ochreus (Olmi 1984)
Gonatopus okahandjae Olmi 1984;
Gonatopus ridens Olmi 1984;
Gonatopus rubripes (Olmi 1984);
Gonatopus similis Brues 1906;
Gonatopus varipes Brues 1906.

All the above species were collected in the subtropical southern provinces, whereas the tropical northern region (about 1200 - 2000 kilometres from south) was not investigated.

This gap is important, because the Dryinidae are parasitoids of Homoptera Auchenorrhyncha (leafhoppers, planthoppers and treehoppers). Some of the hosts are important pests of plants, so that some species of Dryinidae may be used in biological control programs (Olmi, 1999).

Some leafhopper and planthopper pests of cultivated plants also occur in Mozambique (Olmi, 1985) where they cause economic damage. The main species are *Perkinsiella saccharicida* Kirkaldy, *Toya propinqua* (Fieber), *Sogatella kolophon* (Kirkaldy), *Peregrinus maidis* (Ashmead) (Delphacidae), *Cicadulina mbila* Naudé and *Empoasca facialis* (Jacobi) (Cicadellidae) (Olmi, 1985, 1998b).

Material and Methods

The present paper is the result of my investigations in northern Mozambique in 1999-2003, while stationed in Cuamba (Niassa province) to teach Agricultural Entomology at the Catholic University of Mozambique.

Parasitized leafhoppers and planthoppers were collected in the field and reared in laboratory.

The rearing techniques were those described by Olmi (1984).

The descriptions follow the terminology used by Olmi (1984) and revised after Gauld & Bolton (1988) and Olmi (1994b). The measurements reported are relative, except for the total length (head to abdominal tip, without the antennae), which is expressed in millimetres.

In the descriptions POL is the distance between the inner edges of the two lateral ocelli; OL is the distance between the inner edges of a lateral ocellus and the median ocellus; OOL is the distance from the outer edge of a lateral ocellus to the compound eye; OPL is the distance from the posterior edge of a lateral ocellus to the occipital carina; TL is the distance from the posterior edge of a eye to the occipital carina.

In the figures of male genitalia the left half was removed.

Almost always in the description of the species the collection information includes three dates: the first (C.) refers to the date of collection of the parasitized host, the second (B.) to the dryinid larva pupation and the third (Sf.) to the emergence of the dryinid from the cocoon.

The material studied in this paper is deposited in the author's collection, c/o Department of Plant Protection, University of Tuscia, Viterbo, Italy (OLC).

Systematic account

Subfamily Anteoninae

1. *Anteon kawandanum* Olmi

Both sexes of this species are known (Olmi, 1984).

Distribution: Gambia, Sierra Leone, Burkina Faso, Benin, Cameroon, Botswana, South Africa, Madagascar, Uganda, Somalia, Yemen and Southern Mozambique (Maputo prov.: Olmi, 1990).

In Northern Mozambique reared from a single nymph of an unknown species of Cicadellidae collected in the Catholic University Campus at Cuamba (Niassa Province) and parasitized by two dryinid larvae: C. 23.III.2003; B. 24.III.2003; adult dryinids (1 male and 1 female) emerged (Sf.) on 11.IV.2003; M. Olmi collected and reared (OLC).

In 1999, I also collected this species at Nampula (Nampula Province).

Subfamily Dryininae

2. *Dryinus zambeziacus*, sp. nov. (Figs. 1-2)

Female: Fully winged. Length 6.87 mm. Head black, with clypeus and mandibles testaceous; ventral side of head black; occiput black; antennae testaceous, with segments 7-10 brown; propleura black; mesosoma black, with sides and posterior collar of pronotum slightly testaceous; gaster black, with posterior half testaceous-reddish; fore legs testaceous, with most part of coxae, part of trochanters and proximal extremity of femora black; mid and hind legs black, with articulations and tarsi (except for arolium) testaceous. Antennae clavate; antennal segments in the following proportions: 14:7:23:17:14:11:9:8:7:9; rhinaria present in the segments 7-10. Head convex, dull, hairy, granulated and reticulate rugose; frontal line incomplete, not visible in the anterior third of the frons; occipital carina incomplete, not visible only on the temples, laterally not reaching the eyes; the occipital carina is also visible on the sides of the occiput; POL = 5; OL = 4; OOL = 9; OPL = 1; TL = 2; breadth of posterior ocelli: 4. Propleura almost completely hidden under the pronotum; pronotum dull, hairy, granulated, slightly humped, crossed by an anterior slight transverse furrow and by a posterior deep furrow; posterior collar of pronotum very short, almost absent, slightly rugose; pronotal tubercles not reaching the tegulae. Scutum dull, hairy, completely granulated and reticulate rugose; notauli absent (however there are two incomplete longitudinal keels reaching mid length of the scutum and very similar to notauli). Scutellum dull, reticulate rugose, except for a small granulated median area. Metanotum dull, reticulate rugose. Propodeum completely reticulate rugose; dorsal surface of propodeum shorter than posterior surface (16:25); posterior surface of propodeum with two longitudinal keels; median area of posterior surface of propodeum dull, reticulate rugose. Mesopleura dull, reticulate rugose. Metapleura dull, granulated and transversely striate. Fore wing with one dark transverse band beneath the pterostigma; distal part of stigmal vein much longer than proximal part (18:9). Fore tarsal segments in the following proportions: 14:3:8:14:25. Enlarged claw (Fig. 1) without subdistal teeth, with a row of 5 bristles in addition to 2 distal lamellae. Segment 5 of front tarsus (Fig. 1) with 2 rows of 12 + 4 lamellae (the shortest row is composed of 4 very long lamellae, whereas the longest row is composed of very short lamellae); distal apex with a group of at least 19 lamellae, among which one very long lamella. Tibial spurs 1, 1, 2.

Male: Fully winged. Length 4.50 mm. Head black, with mandibles and clypeus testaceous; antennae testaceous; mesosoma black; gaster black, with posterior half testaceous-reddish; fore legs testaceous, with coxae mostly black, trochanter partly brown and a brown spot on clubs of femora; mid and hind legs with coxae mostly black, trochanters partly black and whitish, femora black, tibiae testaceous-darkened, tarsi testaceous, except for arolia brown, articulations testaceous. Antennae filiform; antennal segments in the following proportions: 8:6:18:12:11:12:10:9:9:10.5. Head dull, convex, completely reticulate rugose; frontal line complete; occipital carina complete; POL = 8; OL = 4; OOL = 6; OPL = 3; TL = 3; major diameter of the ocelli: 5. Scutum, scutellum and metanotum dull, reticulate rugose; notauli slightly visible, incomplete, reaching approximately 0.5 length of scutum. Propodeum reticulate rugose, without transverse or longitudinal keels. Fore wing hyaline, without dark transverse bands; distal part of stigmal vein much longer than proximal part (17:10); marginal cell open. Parameres with dorsal side showing a mosaic sculpture (Fig. 2). Tibial spurs 1, 1, 2.

Holotype: ♀, MOZAMBIQUE: Zambezia Prov.: Gurué, 580 m, reared from an adult of *Philotheria talassio* Fennah (Dictyopharidae) feeding on an unknown weed belonging to Tiliaceae and growing in tea fields, parasitized host captured (C.) on 20.XI.2002, dryinid larva pupated (B.) on 26.XI.2002, adult dryinid emerged (Sf.) on 16.XII.2002, M. Olmi collected and reared (OLC).

Paratype: 1 ♂, same locality label data, host collected (C.) on 19.XI.2002, dryinid larva pupated (B.) on 24.XI.2002 (OLC).

Remarks: The host planthopper was identified by Mr. Jacques Bonfils (Roussoulp Aiguefonde, Mazamet).

Dryinus zambeziacus belongs to *Dryinus aberrans* group. Because of the absence of notauli and the enlarged claw with a few distal lamellae, the female of *D. zambeziacus* is similar to that of *D. aethiopicus* (Olmi, 1984). The main differences are the following: occipital carina complete and fore wing with 2 dark transverse bands in *D. aethiopicus*; occipital carina incomplete and fore wing with 1 dark transverse band in *D. zambeziacus*.

Because of the occipital carina laterally not reaching the eyes, the male of *D. zambeziacus* is similar to that of *D. aethiopicus* (Olmi). The main differences are the following: occipital carina incomplete and scutellum granulated and with a few areolae in *D. aethiopicus*; occipital carina complete and scutellum completely and strongly reticulate rugose in *D. zambeziacus*.

After the description of *Dryinus zambeziacus* the following new key to the females and males of the Ethiopian species of *Dryinus* belonging to *aberrans* group is proposed:

Females

1. Notauli visible, but incomplete 2
-- Notauli absent 4
2. Scutum reticulate rugose ..... 2. *botswanensis* (Olmi)
-- Scutum granulated, not reticulate rugose 3
3. Enlarged claw with a row of lamellae and with distal apex pointed and without lamellae (Fig. 666 in Olmi, 1984) ..... 1. *aberrans* Benoit
-- Enlarged claw with a row of bristles and with distal apex rounded and with lamellae (Fig. 1 in Olmi, 1993) ..... 8. *madagascolus* Olmi

4. Enlarged claw with lamellae (Fig. 687 in Olmi, 1984; fig. 7 in Olmi, 1989a; fig. 1). 5
-- Enlarged claw without lamellae, only with bristles (Figs 22 - 23 in Olmi, 1987b; fig. 395 in Olmi, 1984) 7
5. Enlarged claw with proximal and medial lamellae (Fig. 7 in Olmi, 1989a) ..... 6. *ivoriensis* (Olmi)
-- Enlarged claw with only distal lamellae (Fig. 687 in Olmi, 1984; fig. 1) 6
6. Fore wing with two dark transverse bands; occipital carina complete ..... 3. *aethiopicus* (Olmi)
-- Fore wing with 1 dark transverse band; occipital carina incomplete ..... 9. *zambeziacus,* sp. nov.
7. Hind wing with distal extremity darkened; scutellum reticulate rugose; posterior surface of propodeum completely reticulate rugose ..... 4. *noyesi* (Olmi)
-- Hind wing completely hyaline; scutellum granulated or without sculpture; posterior surface of propodeum completely reticulate rugose, or with a central area sculptured by irregular and longitudinal keels 8
8. Occipital carina laterally reaching the eyes ..... 7. *bekilyensis* (Benoit)
-- Occipital carina laterally not reaching the eyes ..... 5. *eardleyi* (Olmi)

Males

1. Occipital carina laterally reaching the eyes ..... 7. *bekilyensis* (Benoit)
-- Occipital carina laterally not reaching the eyes 2
2. Occipital carina incomplete; scutellum granulated and with a few areolae ..... 3. *aethiopicus* (Olmi)
-- Occipital carina complete; scutellum completely and strongly reticulate rugose ..... 9. *zambeziacus,*sp. nov.

Note: The males of *Dryinus aberrans, eardleyi, noyesi, ivoriensis, madagascolus* and *botswanensis* are unknown.

3. *Dryinus undulatus* (Benoit)

Only the female of this species is known (Olmi, 1984).

Distribution: Congo, Burundi, Uganda, Mozambique (New Record).

In Mozambique reared from an adult of *Elasmoscelis cimicoides* Spinola (Lophopidae) at Coração Sagrado de Jesús de Maúa Mission (approximately 8 Km N of Maúa, Niassa Province, parasitized host collected (C.) on 11.XI.1999, dryinid larva pupated (B.) on 12.XI.1999, adult dryinid emerged (Sf.) on 1.XII.1999; M. Olmi collected and reared)(OLC).

The host was identified by Mrs. Adeline Soulier-Perkins (Paris).

4. *Dryinus spangleri* Olmi

Only the female of this species is known (Olmi, 1984).

Distribution: Guinea Bissau, South Africa, Zimbabwe, Kenya, Mozambique (New Record).

In Mozambique a female specimen was reared from an adult of *Paranotus rufilineus* (Walker)(Flatidae) collected in the neighbourhood of Nampula Catholic Seminary (at Nampula, Nampula Province, parasitized host collected (C.) on 21.XI.1999, dryinid larva

pupated (B.) on 26.XI.1999, adult dryinid emerged (Sf.) on 22.XII.1999; M. Olmi collected and reared)(OLC).

The host was identified by Dr. John T. Medler (Honolulu).

Subfamily Gonatopodinae

5. *Gonatopus cuambensis*, sp. nov. (Fig. 3)

Female: Apterous. Length 5.87 mm. Head black, with clypeus, mandibles and a narrow stripe along the orbits and on malar space testaceous; antennae brown, with segments 1-2 testaceous; mesosoma and gaster black; legs black, with tarsi testaceous. Antennae clavate, without rhinaria; antennal segments in the following proportions: 10:7:25:14:12:12:11:10:10:12. Head very slightly excavated, almost flat, dull, with short sparse hairs, granulated and slightly rugose; temples distinct; frontal line complete; occipital carina absent; POL = 3; OL = 2; OOL = 10. Pronotum dull, crossed by a strong transverse impression, strongly granulated, with long sparse hairs. Scutum dull, rugose, granulated and sculptured by strong longitudinal keels, without lateral points, with long sparse hairs. Scutellum dull, granulated, inclined. Metanotum hollow behind the scutellum, flat, granulated and reticulate rugose. Metathorax + propodeum dull, with long sparse hairs, with anterior surface granulated and with posterior surface granulated and with slight tracks of a few transverse striae; the above striae are more visible on the sides of the posterior surface. Mesopleura and metapleura dull, granulated and rugose; mesometapleural suture distinct and complete. Fore tarsal segments in the following proportions: 18:4:6:15:25. Enlarged claw (Fig. 3) without a subdistal tooth, with a row of 7 bristles, with the proximal half very broad. Segment 5 of front tarsus (Fig. 3) with 3 rows of 24 lamellae; distal apex with a group of at least 40 lamellae. Maxillary palpi with 6 segments; labial palpi with 3 segments. Tibial spurs 1, 0, 1.

Male: Unknown.

Holotype: ♀, MOZAMBIQUE: Niassa Prov.: Cuamba, Catholic University Campus, reared from a parasitized adult of *Hecalus viresces* (Distant)(Cicadellidae) collected (C.) on 26.IV.2002; dryinid larva pupated (B.) on 30.IV.2002; adult dryinid emerged (Sf.) on 15.V.2002; M. Olmi collected and reared (OLC).

Remarks: The host was identified by Mr. Jacques Bonfils (Roussoulp Aiguefonde, Mazamet).

Gonatopus cuambensis belongs to *Gonatopus incognitus* group. The female is similar to that of *G. upembanus* Olmi 1984. However, the enlarged claw of *G. cuambensis* has no subapical teeth, whereas that of *G. upembanus* has a small subapical tooth.

After the description of *G. cuambensis*, the key to the females of Afrotropical *Gonatopus* (*incognitus* group) published by Olmi (2002) is modified as follows:

25. Scutum without two lateral pointed prominences (Fig. 1131 B in Olmi, 1984)..... 25'
-- Scutum with two lateral pointed prominences (Figs. 1103 A, F, G in Olmi, 1984) . 26
25' Enlarged claw without a small subapical tooth (Fig. 3) ..... 42. *cuambensis*, sp. nov.
-- Enlarged claw with a small subapical tooth (Fig. 1133 in Olmi, 1984; fig. 2 in Olmi, 2002) ..... 25"
25" Head excavated; mesosoma completely black ..... 24. *upembanus* Olmi
-- Head flat; mesosoma ferruginous ..... 40. *martellii* Olmi

6. *Gonatopus macua*, sp. nov. (Fig. 4)

Female: Apterous. Length 6.06 mm. Head black, with clypeus, mandibles and anterior region of frons testaceous; antennae brown, with segments 1-2 and proximal third of 3 testaceous; mesosoma and gaster black; legs black, with articulations, tarsi and part of fore tibiae testaceous. Antennae clavate, without rhinaria; antennal segments in the following proportions: 13:7:36:14:10:19:13:12:10:14. Head excavated, dull, with long sparse hairs, with frons granulated and sculptured by numerous longitudinal keels; temples distinct, strongly granulated and slightly rugose; frontal line complete; occipital carina absent; POL = 2; OL = 2; OOL = 10. Pronotum dull, crossed by a strong transverse impression, strongly granulated and slightly rugose, with long sparse hairs. Scutum dull, rugose, granulated and sculptured by strong longitudinal keels, with two lateral points situated on the sides of the scutellum; scutum covered with long sparse hairs. Scutellum shiny, smooth, inclined. Metanotum not hollow behind the scutellum, inclined, granulated and reticulate rugose. Metathorax + propodeum dull, covered with long sparse hairs, with anterior surface reticulate rugose and granulated and with posterior surface strongly transversely striate, granulated and partly reticulate rugose. Mesopleura dull, strongly transversely striate and granulated. Metapleura dull, reticulate rugose. Meso-metapleural suture obsolete. Fore tarsal segments in the following proportions: 26:4:8:21:35. Enlarged claw (Fig. 4) without a subdistal tooth, with a row of 4 lamellae and 1 bristle; proximal half of enlarged claw very broad. Segment 5 of front tarsus (Fig. 4) with 1 row of 10 lamellae; distal apex with a group of approximately 30 lamellae. Maxillary palpi with 6 segments; labial palpi with 3 segments. Tibial spurs 1, 0, 1.

Male: Unknown.

Holotype: ♀, MOZAMBIQUE: Niassa Prov.: Cuamba, Catholic University Campus, 10.IV.2002, collected by sweeping on grass, M. Olmi coll. (OLC).

Remarks: The host is unknown; however, the female holotype was seen to attack unidentified planthoppers belonging to the following families: Meenoplidae, Delphacidae and Tropiduchidae. This species has no antennal rhinaria; in spite of this it attacks Fulgoromorpha and not Cicadomorpha (see Olmi, 1999).

The new species is named after Macua, a people living in Niassa province.

Gonatopus macua belongs to *Gonatopus incognitus* group. Its female is similar to that of *G. paulyi* Olmi 1989. Its enlarged claw, however, is broader than that of *G. paulyi*.

After the description of *G. macua*, the key to the females of the Afrotropical *Gonatopus* (*incognitus* group) published by Olmi (1989b) is modified as follows:

8. Metathorax + propodeum completely reticulate rugose, except for transverse striae present on the posterior surface and occasionally on pleura ..... 8'
-- Scutum and metathorax + propodeum differently sculptured (granulated, or without sculpture, or with longitudinal keels, or punctate) ..... 8"
8' Proximal half of the enlarged claw slender (Fig. 60 A in Olmi, 1989b) ..... 35. *paulyi* Olmi
-- Proximal half of the enlarged claw very broad (Fig. 4) ..... 41. *macua*, sp. nov.

7. *Gonatopus niassensis*, sp. nov. (Figs. 5-6)

Female: Apterous. Length 2.31 mm. Head brown-black, with mandibles, anterior margin of frons, malar space, clypeus and a short median longitudinal stripe near clypeus testaceous; antennae brown, with segments 1-2 testaceous; mesosoma black, except for the distal apex of propodeum testaceous; petiole black; gaster brown; legs brown, with part of coxae, trochanters, articulations and tarsi testaceous. Antennae distally thickened; antennal segments in the following proportions: 5:4.5:12:7:5.5:5:5:5:5:7. Head excavated, shiny, slightly granulated; frontal line incomplete, not present in the anterior third; occipital carina absent; POL = 1.5; OL = 1.5; OOL = 6.5. Pronotum almost hairless, crossed by a strong transverse impression, with anterior collar shiny, smooth and without sculpture and with disc and sides slightly granulated. Scutum dull, granulated, laterally without points. Scutellum shiny, smooth, flat. Metanotum short, dull, granulated and rugose, not hollow behind the scutellum; sides of metanotum rounded, not laterally protruding. Metathorax + propodeum shiny, almost hairless, with anterior surface sculptured by numerous slight longitudinal striae; disc of metathorax + propodeum with a track of a median longitudinal furrow. Posterior surface of propodeum, mesopleura and metapleura transversely striate. Meso-metapleural suture obsolete. Fore tarsal segments in the following proportions: 12:2:3.5:10:16. Enlarged claw (Fig. 5) with a large subapical tooth and 1 row of 5 lamellae. Segment 5 of front tarsus (Fig. 5) with two rows of 15 lamellae; distal apex of segment 5 with a group of approximately 9 lamellae. Maxillary palpi with 4 segments; labial palpi with 2 segments. Tibial spurs 1, 0, 1.

Male: Fully winged. Length 1.75 mm. Head black, with mandibles testaceous; antennae brown; mesosoma and gaster black; legs brown, with tarsi and fore tibiae testaceous. Antennae hairy, not distally thickened; antennal segments in the following proportions: 5:3:6:5:5:5:5:5:5:7; antennal segment 3 about three times as long as broad: 6:2. Head hairy, dull and granulated; frontal line absent; occipital carina absent; POL = 5; OL = 2; OOL = 3; vertex with a track of two oval areas situated on the sides of the posterior ocelli and occupying the areas between the posterior ocelli and the eyes; these areas are not anteriorly surrounded by a high carina. Scutum dull and strongly granulated; notauli incomplete, reaching approximately 0.7 length of scutum. Scutellum and metanotum shiny, smooth, punctate, without sculpture among the punctures. Propodeum dull and completely reticulate rugose; posterior surface of propodeum without longitudinal or transverse keels. Fore wing hyaline, without dark transverse bands; marginal cell open; stigmal vein regularly curved, with distal part approximately as long as proximal part. Dorsal process of the parameres (Fig. 6) long and with a broad distal region; the distal margin of the dorsal process is slightly serrate. Maxillary palpi with 4 segments; labial palpi with 2 segments. Tibial spurs 1, 1, 2.

Holotype: ♀, MOZAMBIQUE: Niassa Prov.: Cuamba, Catholic University Campus, reared from a parasitized adult of an unknown species of Delphacidae collected (C.) on 23.III.2003; dryinid larva pupated (B.) on 25.III.2003; dryinid adult emerged (Sf.) on 14.IV.2003, M. Olmi collected and reared (OLC).

Paratype: 1 ♂, same locality label data, host collected (C.) on 21.III.2003; dryinid larva pupated (B.) on 22.III.2003; dryinid adult emerged (Sf.) on 11.IV.2003; M. Olmi collected and reared (OLC).

Remarks: Gonatopus niassensis belongs to *Gonatopus pilosoides* group. After the description of this new species the key to the females of this group is modified as follows:

1. Metanotum with sides rounded (Fig. 824 in Olmi, 1984); meso-metapleural suture obsolete or incomplete 2
-- Metanotum with sides protruding (protrusions rounded or pointed); meso-metapleural suture distinct and complete 11
2. Mesosoma at least partly black 3
-- Mesosoma completely yellow-testaceous, or yellow-reddish, or brown-reddish, or partly yellow-reddish and brown-reddish 6
3. Pronotum with collar black and disc yellow ..... 2. *perkinsiellavorus* (Benoit)
-- Pronotum completely black or brown 4
4. Scutum yellow, with anterior margin darkened; antennal segment 10 brown ..... 9. *harteni* (Olmi)
-- Scutum black; antennal segment 10 brown, or whitish, or yellow 5
5. Antennal segment 10 whitish or yellow ..... 1. *pilosoides* Olmi
-- Antennal segment 10 brown ..... 14. *niassensis,* sp. nov.
6. Body very shiny, without sculpture, except for posterior surface of propodeum transversely striate ..... 3. *ceballosi* Olmi
-- Body at least partly strongly or slightly granulated 7
7. Head completely yellow-testaceous 8
-- Head brown-black, with occiput, clypeus, mandibles and anterior part of frons yellow 9
8. Disc of metathorax + propodeum with a track of median furrow ..... 4. *polli* (Benoit)
-- Disc of metathorax + propodeum without a track of median furrow ..... 10. *ghanensis* Olmi
9. Pronotum showing a disc contraction near the posterior margin (Fig. 2 in Olmi, 1994a); sides of the metanotum less sinuate (Fig. 2 in Olmi, 1994a) ..... 11. *festivus* Olmi
-- Pronotum not showing a disc contraction near the posterior margin (Fig. 5 in Olmi, 1994a); sides of the metanotum more sinuate (Fig. 5 in Olmi, 1994a) 10
10. Disc of metathorax + propodeum without a track of a median longitudinal furrow ..... 5. *ruens* Olmi
-- Disc of metathorax + propodeum with a track of a median longitudinal furrow ..... 12. *amoenus* Olmi
11. Body at least partly black or brown or brown-reddish ..... 6. *acutus* (Olmi)
-- Body yellow testaceous, or testaceous, with petiole black; occasionally antennae or gaster partly or totally brown or black 12
12. Pronotum with a transverse impression narrow and less deep (Fig. 833 B in Olmi, 1984); disc of metathorax + propodeum without a median furrow (Fig. 833 A in Olmi, 1984) ..... 8. *similis* Brues
-- Pronotum with a transverse impression strongly deep and broad (Fig. 831 B in Olmi, 1984); disc of metathorax + propodeum with a median furrow (Fig. 831 A in Olmi, 1984) or with a track of median furrow 13
13. Scutum broader (Fig. 831 A in Olmi, 1984) ..... 7. *spiracularis* (Benoit)
-- Scutum very slender (Fig. 15 in Olmi, 2001) ..... 13. *fisheri* Olmi

Note: The male of *G. niassensis* can be included in a new key to the males of the Afrotropical *Gonatopus* (see after the descriptions of the males of *G. ridens* and *G. acutus*).

8. *Gonatopus ridens* Olmi (Fig. 7)

Gonatopus ridens Olmi, described from Mossel Bay (Western Cape Province, South Africa), was already known from Southern Mozambique (Maputo Province: Olmi, 1994a). However, only female specimens were known. In 1999 a series of female and male specimens was reared at Cuamba and Maúa (Niassa Prov., Northern Mozambique) and in a few localities of Western Cape Province, South Africa. The following description of the male can be proposed:

Male: Fully winged. Length 1.12-1.87 mm. Head black, with mandibles testaceous; antennae brown; mesosoma and gaster black; legs brown, with tarsi, fore tibiae and stalks of fore femora testaceous. Antennae hairy, not distally thickened; antennal segments of a male specimen from Cuamba (Mozambique) in the following proportions: 4:4:5:4:4.5:4.5:4:4.5:4:6.5; antennal segments of a male specimen from Blue Mountain Ranch Bed & Breakfast (Swellendam, South Africa) in the following proportions: 5:4:5:5:4.5:4.5:4.5:4:4:6; antennal segment 3 less than three times as long as broad: 5:1.7 in a male specimen from Cuamba (Mozambique); 5:2.3 in a male specimen from Blue Mountain Ranch Bed & Breakfast (Swellendam, South Africa). Head dull, granulated; frontal line absent; occipital carina absent; in a male specimen from Cuamba (Mozambique): POL = 5; OL = 2; OOL = 4; in a male specimen from Blue Mountain Ranch Bed & Breakfast (Swellendam, South Africa): POL = 5; OL = 3; OOL = 4; vertex with two oval smooth and shiny areas situated on the sides of the posterior ocelli and occupying the areas between the posterior ocelli and the eyes; these areas are anteriorly surrounded by a high carina. Scutum dull, granulated; notauli complete, posteriorly separated; minimum distance between the posterior ocelli less than 0.5 as long as breadth of posterior ocelli (0.5:1.5) in a male specimen from Cuamba (Mozambique); minimum distance between the posterior ocelli less than breadth of posterior ocelli (1.5:2.0) in a male specimen from Blue Mountain Ranch Bed & Breakfast (Swellendam, South Africa). Scutellum shiny, slightly granulated. Metanotum shiny, smooth, without sculpture. Propodeum dull, completely reticulate rugose; areolae of propodeum small; posterior surface of propodeum without longitudinal or transverse keels. Fore wing hyaline, without dark transverse bands; in the fore wing only the costal cell is surrounded by well pigmented veins, whereas the other basal cells are surrounded by obsolete veins; marginal cell open; stigmal vein regularly curved, with distal part longer than proximal part (approximately 9:7). Dorsal process of the parameres (Fig. 7) short and slender, with distal apex pointed. Maxillary palpi with 4 segments; labial palpi with 2 segments. Tibial spurs 1, 1, 2.

Hosts: In Mozambique: *Aconurella aethiopica* (Cogan)(Cicadellidae)(identified by Mr. Jacques Bonfils); in South Africa: nymphs and adults of an unknown species of Cicadellidae.

Remarks: This species is only known from Mozambique and South Africa. Specimens of *G. ridens* were collected and reared in the following localities:

Mozambique: Niassa Province, M. Olmi coll. (OLC) - 1 female, Cuamba: C. 8.XI.1999, B. 10.XI.1999, Sf. 27.XI.1999; - 1 male, Cuamba: C. 8.XI.1999, B. 11.XI.1999, Sf. 2.XII.1999; - 1 male, Cuamba: C. 8.XI.1999, B. 12.XI.1999, Sf.

2.XII.1999; - 1 male, Cuamba: C. 8.XI.1999, B. 9.XI.1999, Sf. 1.XII.1999; - 1 male, Cuamba: C. 8.XI.1999, B. 10.XI.1999, Sf. 1.XII.1999; - 3 males, Cuamba (Catholic University Campus): C. 22.III.2003, B. 24.III.2003, Sf. 14.IV.2003; - 1 male, Maúa: C. 10.XI.1999, B. 14.XI.1999, Sf. 10.XII.1999.

South Africa: Western Cape Province, M. Olmi coll. (OLC) - 1 female, N12 – Road to Montagu Pass junction (near George): C. 25.I.2003, B. 29.I.2003, Sf. 19.II.2003; - 1 female, Marloth Nature Reserve (near Swellendam), C. 29.I.2003, B. 7.II.2003, Sf. 27.II.2003; - 1 male, Blue Mountain Ranch Bed & Breakfast (near Swellendam), C. 29.I.2003, B. 6.II.2003, Sf. 25.II.2003.

The male of *Gonatopus ridens* Olmi is very similar to that of *Pseudogonatopus cornutus* Benoit, 1951 (species provisionally attributed to *Pseudogonatopus*; see *nomina dubia* in Olmi, 1984). The main difference between these two species regards the notauli (notauli posteriorly joint, or separated, but very near, with minimum distance between them less than the breadth of the posterior ocelli in *G. ridens*; notauli posteriorly separated, with minimum distance between them as long as breadth of posterior ocelli in *Ps. cornutus*).

The male of *G. ridens* can be included in a new key to the males of the Afrotropical *Gonatopus* (see after the description of the male of *G. acutus*).

9. *Gonatopus acutus* (Olmi) (Fig. 8)

Gonatopus acutus (Olmi), described from Mossel Bay (Western Cape Province, South Africa) and also known from Benin and Gabon, was not known so far from Mozambique (New Record). In addition, only female specimens were known of this species (Olmi, 1984).

In 1999 female and male specimens were reared in Mozambique (at Cuamba in Niassa Prov.; parasitized host collected on 15.XI.1999; mature larvae emerged on 18.XI.1999; adults emerged on 12.XII.1999; M. Olmi reared) and in South Africa (at The Baths near Citrusdal, in Western Cape Province; parasitized host collected on 22.I.2003; mature larvae emerged on 24.I.2003; adults emerged on 10.II.2003; M. Olmi reared).

The following description of the male is proposed:

Male: Fully winged. Length 1.62-1.75 mm. Head black, with mandibles and part of clypeus testaceous; antennae brown; mesosoma and gaster black; legs brown, with trochanters, articulations, part of fore femora, part of mid and hind tarsi testaceous. Antennae hairy, not distally thickened; antennal segments in the following proportions: 4:4:5:4.5:4.5:5:4.5:4.5:4:6; antennal segment 3 less than three times as long as broad: 5:2. Head shiny, granulated; frontal line absent; occipital carina absent; POL = 5; OL = 2; OOL = 3; vertex with two oval smooth and shiny areas situated on the sides of the posterior ocelli and occupying the region between the posterior ocelli and the eyes; the above areas are anteriorly surrounded by a high carina. Scutum dull, granulated; notauli incomplete, reaching approximately 0.6-0.7 length of scutum. Scutellum dull or shiny, more or less strongly granulated. Metanotum shiny, smooth, without sculpture. Propodeum shiny, with dorsal surface almost smooth and without sculpture, with a strong longitudinal median furrow; posterior surface of propodeum shiny, with irregular keels or striae, without sculpture among the striae and keels. Fore wing hyaline, without dark transverse bands; in the fore wing only the costal cell is surrounded by well pigmented veins, whereas the other basal cells are surrounded by obsolete veins; marginal cell open; stigmal vein regu-

larly curved, with distal part much longer than proximal part (approximately 14:4). Dorsal process of the parameres (Fig. 8) very long and slender, with distal apex very pointed. Maxillary palpi with 4 segments; labial palpi with 2 segments. Tibial spurs 1, 1, 2.

Hosts: In Cuamba (Mozambique) this species was reared from an unknown species of *Caliscelis* (Issidae); the parasitized specimen had 5 cysts, but only 4 larvae were able to spin the cocoons; from the 4 cocoons only 3 adults emerged, one female and two males. At The Baths (South Africa) this species was reared from *Toya tuberculosa* (Distant) (Delphacidae); the parasitized specimen was a female adult with two cysts, from which two larvae emerged; the two larvae pupated and from the cocoons a female and a male emerged. These are the only two cases of rearing of this species. Maybe this species is specialized in superparasitism. *T. tuberculosa* was identified by Mr. Jacques Bonfils.

Remarks: The male of *Gonatopus acutus* (Olmi) is similar to those of *Gonatopus incognitus* Olmi, 1984, and *Gonatopus mossambicus* Olmi, 1998. The main difference between these three species regards the dorsal process of the parameres (with a very pointed distal apex in *G. acutus*; with a not pointed distal apex in *G. incognitus* and *mossambicus*).

After the descriptions of the males of *Gonatopus niassensis*, *G. ridens* and *G. acutus*, a new key to the males of the Afrotropical *Gonatopus* is proposed:

1. Notauli absent ..... *incognitus* Olmi
-- Notauli at least partly present 2
2. Notauli complete 3
-- Notauli incomplete 13
3. Antennal segment 3 less than three times as long as broad 4
-- Antennal segment 3 three times, or more than three times as long as broad 7
4. Region of the head between posterior ocelli and eyes with a shiny, ovoidal area anteriorly delimited by a strong apophysis 5
-- Region of the head between posterior ocelli and eyes with a shiny, ovoidal area not delimited anteriorly by a strong apophysis 6
5. Notauli posteriorly joint, or separated, but very near, with minimum distance between notauli less than the breadth of the posterior ocelli; scutum dull, granulated ..... *ridens* Olmi
-- Notauli posteriorly separated; minimum distance between the notauli as long as breadth of posterior ocelli; scutum shiny, punctate, without sculpture among the punctures ..... *cornutus* Benoit (*nomen dubium*)
6. Propodeum shiny, smooth, without sculpture ..... *okahandjae* Olmi
-- Propodeum dull, completely reticulate rugose ..... *guigliae* (Benoit)
7. Propodeum shiny, almost completely or mostly smooth and without sculpture 8
-- Propodeum dull, completely or mostly reticulate rugose 9
8. Dorsal process of the parameres long and slender (Fig. 26 in Olmi, 1987b) ..... *similis* Brues
-- Dorsal process of the parameres very broad (Fig. 8 in Olmi, 1998b) ..... *faustae* Olmi
9. Head black, with ventral side, temples, genae, clypeus and mandibles testaceous-dark; dorsal process of the parameres reduced to an inner membranous band, not transverse (Fig. 11 in Olmi, 1998b) ..... *maputensis* Olmi

-- Head black, with only mandibles testaceous; dorsal process of the parameres long (Figs 7, 8, 10 in Olmi, 1994a), or short and transverse (Fig. 4 in Olmi, 1994a) 10

10. Dorsal process of the parameres short, transverse and pointed (Fig. 4 in Olmi, 1994a) ..... *festivus* Olmi

-- Dorsal process of the parameres long or short, but in this last case not pointed (Figs 7-8, 10 in Olmi, 1994a; fig. 5 in Olmi,1998b) 11

11. Dorsal process of the parameres slender (Fig. 5 in Olmi, 1998b) ..... *communis* Olmi

-- Dorsal process of the parameres broad (Figs 7-8, 10 in Olmi, 1994a) 12

12. Dorsal process of the parameres longer and with a very pointed distal apex (Fig. 10 in Olmi, 1994a) ..... *ruens* (Olmi)

-- Dorsal process of the parameres shorter and with a not pointed distal apex (Figs 7-8 in Olmi, 1994a) ..... *amoenus* Olmi

13. Clypeus very prominent, sticking out as a bill ..... *harteni* (Olmi)

-- Clypeus not prominent, not sticking out as a bill..... 14

14. Notauli reaching approximately 0.75 length of scutum ..... *inexpectatus* Benoit (*nomen dubium*)

-- Notauli shorter, reaching at most 0.5-0.7 length of scutum..... 15

15. Propodeum completely without sculpture..... 16

-- Propodeum completely granulated, or at least partly reticulate rugose, or with irregular striae and without sculpture among the striae..... 19

16. Distal part of stigmal vein approximately as long as proximal part ..... *africanus* Benoit (*nomen dubium*)

-- Distal part of stigmal vein much longer than proximal part..... 17

17. Propodeum with dorsal surface approximately twice as long as posterior surface ..... *nearticus* (Fenton)

-- Propodeum with dorsal surface approximately as long as posterior surface..... 18

18. Dorsal process of the parameres longer (Fig. 1121 in Olmi, 1984); occasionally dorsal process short and transverse (Fig. 4 in Olmi, 1998b), but in this case its distal apex is pointed ..... *incognitus* Olmi

-- Dorsal process of the parameres short and transverse, with distal apex rounded (Fig. 3 in Olmi, 1998b)..... *rubripes* (Olmi)

19. Dorsal process of the parameres distally broad (Fig. 57 E in Olmi, 1989b; fig. 6)... 20

-- Dorsal process of the parameres slender and with distal apex narrow (Fig. 1121 in Olmi, 1984; fig. 2 in Olmi, 1998b; fig. 1 in Olmi, 1994a; fig. 4 B in Olmi, 1998a; fig. 8)..... 21

20. Region of head between posterior ocelli and eyes with a smooth ovoidal area shiny and without sculpture; this area is anteriorly surrounded by a strong prominent process (Fig. 57 E in Olmi, 1989b) ..... *ochreus* (Olmi)

-- Head without a smooth area between posterior ocelli and eyes surrounded by a strong prominent process (Fig. 6)..... *niassensis,* sp. nov.

21. Distal apex of the penis deeply cut (Fig. 4 B in Olmi, 1998a) ..... *obscurus* (Olmi)

-- Distal apex of the penis not deeply cut (Fig. 1121 in Olmi, 1984; fig. 2 in Olmi, 1998b; fig. 1 in Olmi, 1994a; fig. 8) 22

22. Dorsal process of the parameres broader (Fig. 1 in Olmi, 1994a) ..... *varipes* Brues

-- Dorsal process of the parameres more slender (Fig. 1121 in Olmi, 1984; fig. 2 in Olmi, 1998b; fig. 8)..... 23

23. Dorsal process of the parameres with a very pointed distal apex (Fig. 8) .... *acutus* (Olmi)
-- Dorsal process of the parameres with a not pointed distal apex (Fig. 1121 in Olmi, 1984; fig. 2 in Olmi, 1998b) 24
24. Palpal formula 4/2 ..... *incognitus* Olmi
-- Palpal formula 3/2 ..... *mossambicus* Olmi

10. *Gonatopus ochreus* (Olmi)

Tetrodontochelys ochreus Olmi, 1984: 1450.

Both sexes of this species are known (Olmi, 1984, 1989b).

Distribution: Cameroon, Namibia, South Africa, Mozambique.

This species was already known from Southern Mozambique (Maputo Province: Olmi, 1994a). Recently, however, specimens of *G. ochreus* were also collected and reared in the following localities of Northern Mozambique:

a) in Niassa prov.: approximately 8 Km N of Maúa, on grass in pastures situated around the Catholic Mission of "Coração Sagrado de Jesús de Maúa", reared from nymphs and adults of *Exitianus capicola* (Stål) (Cicadellidae) (identified by Mr. Jacques Bonfils):

1 female: C. 11.XI.1999, B. 13.XI.99, Sf. 1.XII.99;
1 female: C. 11.XI.1999, B. 12.XI.99, Sf. 1.XII.99;
1 female: C. 11.XI.1999, B. 12.XI.99, Sf. 1.XII.99;
1 female: C. 11.XI.1999, B. 12.XI.99, Sf. 1.XII.99;
1 female: C. 11.XI.1999, B. 12.XI.99, Sf. 1.XII.99;
1 female: C. 11.XI.1999, B. 12.XI.99, Sf. 1.XII.99;
1 female: C. 11.XI.1999, B. 13.XI.99, Sf. 1.XII.99;
1 female: C. 11.XI.1999, B. 12.XI.99, Sf. 1.XII.99;
1 female: C. 11.XI.1999, B. 12.XI.99, Sf. 2.XII.99;
1 female: C. 11.XI.1999, B. 14.XI.99, Sf. 4.XII.99;
1 female: C. 11.XI.1999, B. 14.XI.99, Sf. 4.XII.99;
1 female: C. 11.XI.1999, B. 14.XI.99, Sf. 4.XII.99;
1 female: C. 11.XI.1999, B. 13.XI.99, Sf. 1.XII.99;
1 male: C. 11.XI.1999, B. 19.XI.99, Sf. 3.XII.99;
1 male: C. 11.XI.1999, B. 12.XI.99, Sf. 1.XII.99;
1 male: C. 11.XI.1999, B. 12.XI.99, Sf. 2.XII.99;
1 male: C. 11.XI.1999, B. 13.XI.99, Sf. 2.XII.99;
1 male: C. 11.XI.1999, B. 13.XI.99, Sf. 1.XII.99;
1 male: C. 11.XI.1999, B. 12.XI.99, Sf. 2.XII.99;
1 male: C. 11.XI.1999, B. 13.XI.99, Sf. 1.XII.99.

b) in Niassa Prov.: near Cuamba, pastures near a bridge at the beginning of Maúa Road, C. 8.XI.1999, B. 9.XI.99, Sf. 1.XII.99, reared from a nymph of unidentified Cicadellidae.

c) in Niassa Prov.: in the campus of the Catholic Mozambique University at Cuamba: 6 females: collected by sweeping on 11.IV.2003; 2 females: reared from nymphs of unidentified Cicadellidae, C. 7.IV.2003, B. 10.IV.2003, Sf. 26.IV.2003; 1 female: reared from a female adult of an *Acomurella* species (Cicadellidae), C. 5.IV.2003, B. 8.IV.2003, Sf. 24.IV.2003.

d) in Nampula Prov.: pastures near Nampula Catholic Seminary in Nampula: 1 female: collected by sweeping on 21.XI.1999; 1 male: reared from a nymph of unidentified Cicadellidae, C. 21.XI.1999, B. 24.XI.99, Sf. 16.XII.99.

11. *Gonatopus mossambicus* Olmi

Both sexes of this species are known (Olmi, 1998b).

Distribution: Only known from Southern Mozambique (Maputo Province: Olmi, 1998b).

Recently, specimens of *G. mossambicus* were also collected and reared from *Doratulina instabilis* (Ribaut) (Cicadellidae) (identified by Mr. Jacques Bonfils) in Northern Mozambique, as follows:

Niassa prov.: Catholic University Campus at Cuamba: 1 female: C. 4.IV.2003; B. 8.IV.2003. Niassa prov.: near the dormitory of the Catholic University at Cuamba: 1 female: C. 15.XI.1999; B. 18.XI.1999; Sf. 5.XII.1999.

12. *Gonatopus afer* (Olmi)

Tetrodontochelys afer Olmi, 1984: 1458.

Only female specimens of this species are known (Olmi, 1984).

Distribution: Only known from Congo and Mozambique (New Record).

In Mozambique a female specimen of *G. afer* was collected and reared from *Exitianus frontalis* (Distant) (Cicadellidae) (identified by Mr. Jacques Bonfils) in the following locality:

Nampula prov.: Nampula, Bishop Seminary garden, M. Olmi coll.: 1 female: C. 22.XI.1999; B. 25.XI.1999; Sf. 23.XII.1999.

13. *Gonatopus obscurus* (Olmi)

Tetrodontochelys obscurus Olmi, 1984: 1452.

Both sexes of this species are known (Olmi, 1984, 1998a).

Distribution: Only known from South Africa and Mozambique (New Record).

In Mozambique a female specimen of *G. obscurus* was collected and reared from a nymph of an unknown species of Cicadellidae in the following locality:

Niassa prov.: Catholic University Campus at Cuamba, M. Olmi coll.: 1 female: C. 30.III.2003; B. 1.IV.2003; Sf. 20.IV.2003.

14. *Gonatopus varipes* Brues

Both sexes of this species are known (Olmi, 1984).

Distribution: Known from Gambia, Botswana, South Africa and Southern Mozambique (Maputo prov.: Olmi, 1994a, 1998b).

In Northern Mozambique a female specimen of *G. varipes* was collected by sweeping in the following locality:

Niassa prov.: Catholic University Campus at Cuamba, 10.IV.2002, M. Olmi coll.

15. *Gonatopus nearcticus* (Fenton)

Pachygonatopus nearcticus Fenton, 1927: 6.
Platygonatopus ugandanus Benoit, 1951: 300 (syn. proposed by Olmi, 1993).

Both sexes of this species are known (Olmi, 1984).

Distribution: Known from the Palaearctic region (Turkey, Cyprus, Greece, Montenegro, Croatia, France, Italy, Spain, Madeira, Canaries), Nearctic region (U.S.A.) and Afrotropical region (Benin, Botswana, South Africa, Swaziland, Zimbabwe, Kenya, Uganda, Ethiopia and Mozambique (New Record)).

In Northern Mozambique a female specimen of *G. nearcticus* was collected by sweeping in the following locality:

Nampula prov.: Nampula, about 500 m from the Bishop Seminary, 24.XI.1999, M. Olmi coll.

16. *Gonatopus incognitus* Olmi

Both sexes of this species are known (Olmi, 1984).

Distribution: Known from the Cabo Verde Islands, Gambia, Guinea-Bissau, Sierra Leone, Burkina Faso, Nigeria, Cameroon, Congo, South Africa, Madagascar, Tanzania, Uganda and Southern Mozambique (Maputo prov.: Olmi, 1994a).

In Northern Mozambique a female specimen of *G. incognitus* was collected by sweeping in the following locality: Niassa prov.: Cuamba, 8.XI.1999, M. Olmi coll.

17. *Gonatopus communis* Olmi

Both sexes of this species are known (Olmi, 1984, 1998b).

Distribution: Known from Congo, South Africa, Madagascar, Tanzania, Ethiopia and Southern Mozambique (Maputo prov.: Olmi, 1994a, 1998b).

In Northern Mozambique a female specimen of *G. communis* was reared from nymphs of unidentified Cicadellidae in the following locality: Nampula prov.: Nampula, Bishop Seminary garden, M. Olmi coll. 1 female: C. 21.XI.1999; B. 24.XI.1999; Sf. 16.XII.1999; 1 female: C. 21.XI.1999; B. 23.XI.1999; Sf. 10.XII.1999; 1 female: C. 21.XI.1999; B. 21.XI.1999; Sf. 24.XII.1999.

18. *Gonatopus faustae* Olmi

Both sexes of this species are known (Olmi, 1998b).

Distribution: Only known from South Africa and Southern Mozambique (Maputo prov.: Olmi, 1998b).

In Northern Mozambique a female specimen of *G. faustae* was reared from *Doratulina instabilis* (Ribaut)(Cicadellidae) (identified by Mr. Jacques Bonfils) in the following locality: Nampula prov.: Nampula, about 500 m from the Bishop Seminary, C. 24.XI.1999, B. 25.XI.1999, Sf. 21.XII.1999, M. Olmi coll.

19. *Gonatopus guigliae* (Benoit)

Digonatopus guigliae Benoit, 1951: 298.

Both sexes of this species are known (Olmi, 1984, 1998b).

Distribution: Only known from South Africa, Uganda and Southern Mozambique (Maputo and Gaza prov.: Olmi, 1998b).

In Northern Mozambique a female specimen of *G. guigliae* was reared from *Exitianus zuluensis* Ross (Cicadellidae) (identified by Mr. Jacques Bonfils) in the following locality: Nampula prov.: Nampula, about 500 m from the Bishop Seminary, C. 24.XI.1999, B. 28.XI.1999, Sf. 1.I.2000, M. Olmi coll.

20. *Gonatopus bekilyanus* (Benoit)

Neogonatopus bekilyanus Benoit, 1953: 394.

Only female specimens of this species are known (Olmi, 1984).

Distribution: Only known from Madagascar, Kenya and Mozambique (New Record).

In Mozambique a few female specimens of *G. bekilyanus* were reared from *Exitianus capicola* (Stål) (Cicadellidae) (identified by Mr. Jacques Bonfils) in the following locality:

Niassa prov.: Catholic University Campus at Cuamba, M. Olmi coll.: 1 female: C. 19.IV.2002; B. 21.IV.2002; Sf. 12.V.2002; 1 female: C. 19.IV.2002; B. 21.IV.2002; Sf. 12.V.2002; 1 female: C. 22.III.2003; B. 23.III.2003; Sf. 14.IV.2003; 1 female: C. 23.III.2003; B. 27.III.2003; Sf. 18.IV.2003.

21. *Gonatopus ceres* (Olmi)

Agonatopoides ceres Olmi, 1984: 1328.

Only female specimens of this species are known (Olmi, 1984).

Distribution: Only known from Namibia, South Africa and Mozambique (New Record).

In Mozambique a few female specimens of *G. ceres* were collected and reared from a female adult of *Caliscelis* sp. (Issidae) and an adult of *Eumecurus hottentottus* (Stål)(Cixiidae) (identified by Mr. Jacques Bonfils) in the following localities:

Niassa prov.: Cuamba, near Catholic University dormitory, M. Olmi coll.: 1 female: C. 15.XI.1999; B. 19.XI.1999; Sf. 18.XII.1999 (from *Caliscelis* sp.); 1 female: C. 15.XI.1999; B. 17.XI.1999; Sf. 18.XII.1999 (from *Eumecurus hottentottus*). Nampula prov.: Nampula, Bishop Seminary garden, 1 female collected by sweeping, 21.XI.1999, M. Olmi coll.

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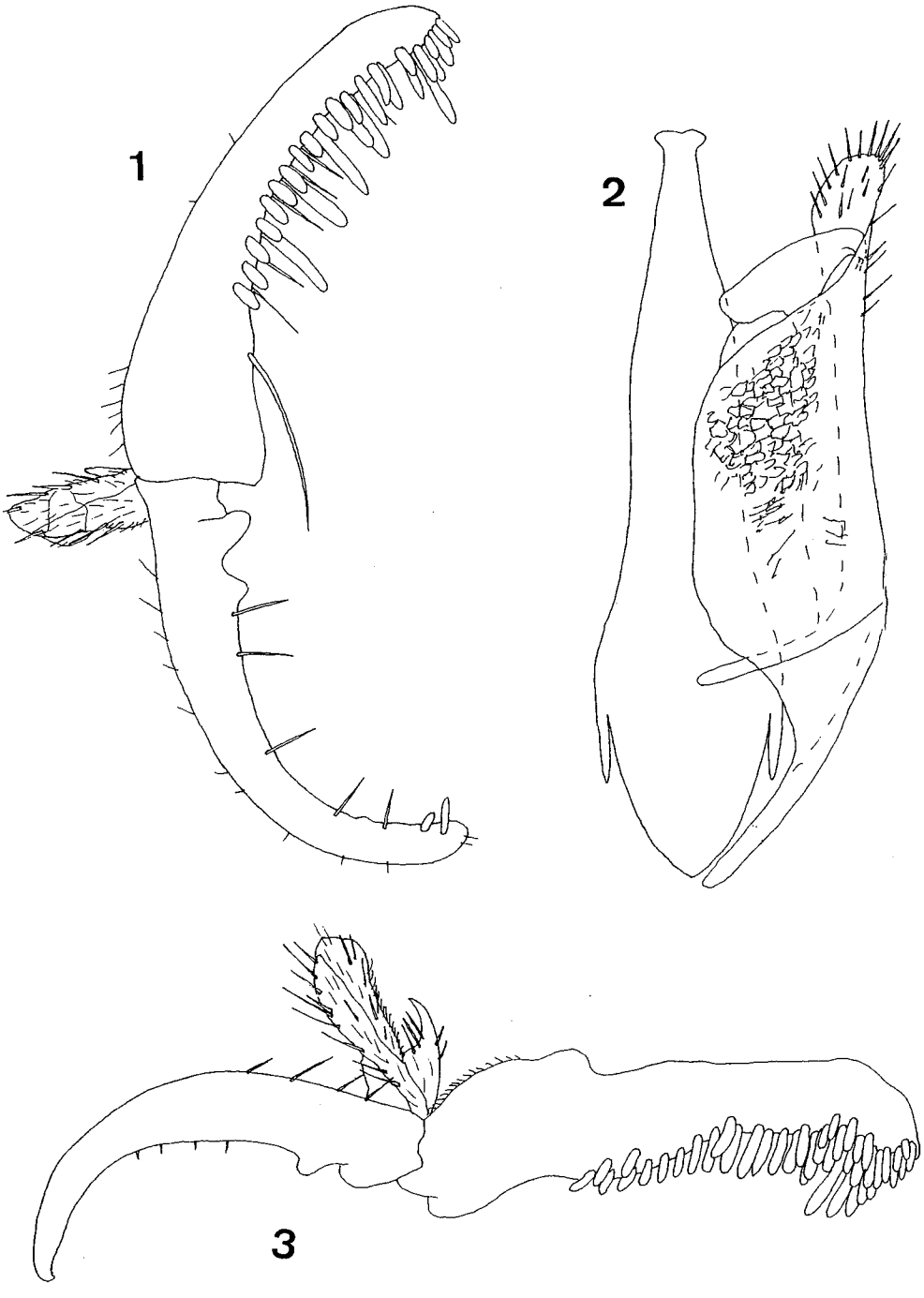
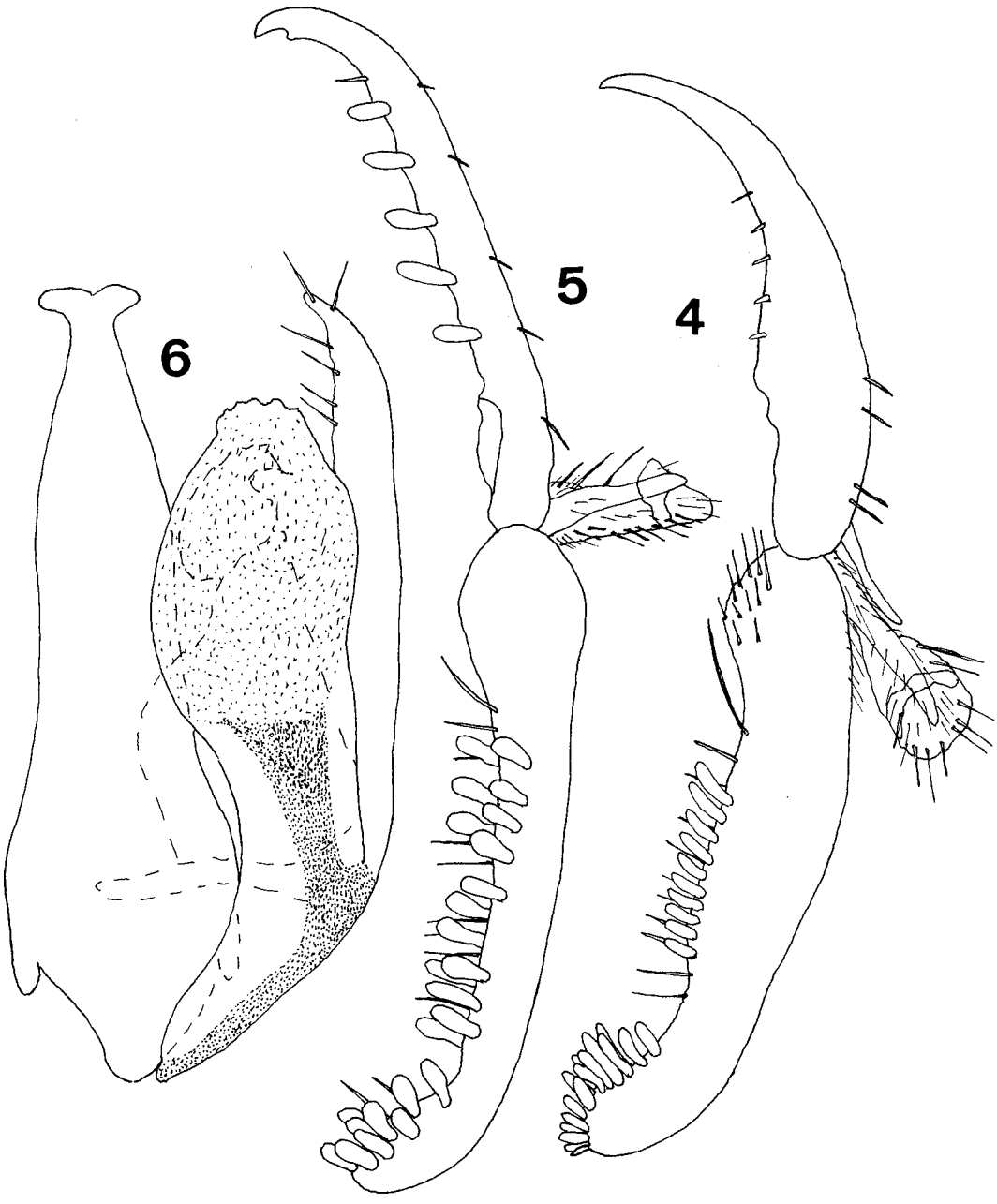


Figs. 1-3. 1-2, *Dryinus zambeziacus*: 1, chela of holotype; 2, genital armature of male paratype (right half); 3, *Gonatopus cuambensis*: chela of holotype.



Figs. 4-6. 4, *Gonatopus macua*: chela of holotype; 5-6, *Gonatopus niassensis*: 5, chela of holotype; 6, genital armature of male paratype (right half).