

BULLETIN ZOOLOGISCH MUSEUM

 UNIVERSITEIT VAN AMSTERDAM

Vol. 6 No. 9 1978

CAMPSOMERINAE (HYMENOPTERA, SCOLIIDAE) FROM MALAWI (CENTRAL AFRICA)

G.G.M. SCHULTEN

ABSTRACT

A report is given on a collection of Campsomerinae (Hymenoptera; Scoliidae) from Malawi which was made largely during 1974-1975. The specimens belong to 16 species, 11 subspecies and 10 formae of which 4 species, 1 subspecies and 4 formae are new to the fauna of Malawi.

A description is given of one new species and two formae viz *Extrameris sochensis*, *E. sochensis* f. *bundae*, and *Megameris nigrocalcarata* f. *zombae*.

INTRODUCTION

After reporting on a collection of Campsomerinae which was made in Malawi between 1968-1973 (Schulten, 1975) there was the unexpected opportunity to do some more collecting in early 1975 together with Drs. and Mrs. H.R. Feijen. The specimens obtained have been identified and are listed in this paper. Some older material has been included in this report as well, making a total of 436 specimens belonging to 16 species,

11 subspecies and 10 formae of which 1 species and 2 formae are described for the first time.

Identifications were made with the monograph on Campsomerinae by Betrem (1971) and by comparing specimens with those present in the Zoölogisch Museum (Amsterdam) and the British Museum (Natural History). Taxa indicated with an asterisk are new to the fauna of Malawi. The distribution has only been indicated for Malawi except when the taxon was collected for the first time in Malawi. The known distribution of Ethiopian Campsomerinae is given by Betrem (1971). All specimens were collected in 1975 except where mentioned otherwise. The number of specimens collected on a particular date is shown between brackets. For a map of the collecting localities see fig. 1. The material is kept at the Institute of Taxonomic Zoology (Zoölogisch Museum), University of Amsterdam.

LIST OF SPECIES

Trielidini

* *Trielis pardalina* (Gerstaecker, 1857)

26 ♂, Nkudzi Bay, 23-III (16); Monkey Bay, 23-III (10)
1 ♀, Nkudzi Bay, 23-III.

Distribution: South and South West Africa, Rhodesia, Moçambique. This species was very common in old maize fields at Nkudzi Bay and Monkey Bay.

Remarks: The males appear to be very variable as to the yellow colouration of the scutellum, area horizontalis medialis (arhm), area medialis posterior (armp) and sternites 2 and 3. There was no apparent relation between the various colourations.

One specimen has yellow spots on the hind corners of the arhm which are additional to all the yellow markings on the mesothorax that have been described by Betrem (1971). In four specimens the yellow line on the arhm is only slightly enlarged on the armp. Two specimens have a similar yellow line but the scutellum has only two small yellow spots. In 11 specimens the yellow line on the arhm is incomplete or largely reduced, the yellow spots on the scutellum vary in size. The yellow line on the arhm is completely absent in three specimens while the spots on the scutellum of one of these are very small. Four specimens have a completely black scutellum and only a small spot in the middle of the arhm while in one specimen this spot is also absent. Sternite 2 can be partly or almost completely yellow except for a smaller or larger anterior black margin and two elongate black spots which are sometimes united in the middle with the black anterior margin. Sometimes, however, there are also two small round spots halfway each of the side margins which may be united with the anterior margin by a thin line. In some specimens the small spots are united with the elongate spots resulting in two yellow spots surrounded by black. Sternite 3 may have a similar colouration to sternite 2 but the black anterior margin is in general larger.

Crioscolia punctum (De Saussure, 1891)

4 ♂, Kachulu Bay, 25-V (4)
6 ♀, Kachulu Bay, 25-V; Nkudzi Bay, 14-V (5).

Distribution in Malaŵi: Lake Shore and Lower Shire Valley. Kachulu Bay is a new locality.

Remarks: In two male specimens the tergites are reddish yellow. Two specimens have two short yellow stripes on the mesoscutum as has been described in the allotype. All four specimens have a small yellow spot on the posterior corners of the metanotum besides the long, yellow crossband.

Campsomerini

Micromeriella hyalina insuperata f. *antennata* (Klug, 1832)

25 ♂, Likangala rice scheme, 22-I; Kachulu Bay, 25-V (2); Salima (Fish Eagle Inn), 19-VIII-1974; Nkhata Bay, 8-IV (16), 9-IV (5).

Micromeriella hyalina insuperata f. *longinerva* (Cameron, 1910)

33 ♂, Chikwawa, 26-IV; Khanda rice scheme, 12-II; Kasungu (Lifupa dam), 11-IV; Nkhata Bay, 8-IV (17), 9-IV (13).

Distribution in Malaŵi: Both formae are common along the lake shore. New localities are the Lake Chilwa area, the Lower Shire Valley and Kasungu (Lifupa dam).

* *Micromeriella hyalina insuperata* f. B
Betrem, 1971

2 ♂, Nkudzi Bay, 22-III, 14-V.

Distribution: This forma has been collected in South Africa (Natal), Rhodesia, Moçambique and Zaire.

Micromeriella hyalina insuperata f. D
Betrem, 1971

1 ♂, Kasungu (Lifupa dam), 13-IV.

Remarks: The forma D is specifically found in

Malaŵi according to Betrem (1971). My data suggest that it is rather rare. Some specimens of the forma *longinerva* have, however, very small yellow spots on coxae I (black coxae are typical for the forma D).

Micromeriella hyalina insuperata
Betrem & Bradley, 1971

2 ♀, Kasungu (Lifupa dam), 13-IV; Karonga, 15-II-1971.

* *Micromeriella hyalina* aff. ssp. *meruensis*
(Cameron, 1910)

1 ♀, Khanda rice scheme, 19-III.

Distribution: Tanzania, Kenya, Ethiopia.

Remarks: This specimen has coppery-red hairs on the mesoscutum, on the fringes of all tergites and dispersed over the tergites. Betrem (1971) considers those specimens as belonging to the subspecies *meruensis* which have white fringes on the basal tergites and a coppery coloured vestiture on the apical segments. He also mentions specimens with a more extensive copper colouration but considers the available material insufficient to give distinctive characters for the subspecies *meruensis*.

Micromeriella aureola bobi Betrem, 1971

20 ♂, Chikwawa, 26-IV (5); Limbe (Maone), 20-IV-1973; Limbe (Chichiri hill), 13-III; Liwonde, 24-IV (2); Zomba (Mlunguzi Estate), 22-II, 8-III, 10-III; Zomba Pt. (Mlunguzi stream), 9-II; Nkudzi Bay, 23-III (3), 14-V; Nkhata Bay, 8-IV (2); Bunda 15-IV.
3 ♀, Likangala rice scheme, 24-IV; Limbe (Ndirande Mt.), 21-V; Kasungu (Lifupa dam), 13-IV.

Distribution in Malaŵi: A common subspecies below approx. 1200 m.

Remarks: One specimen from Chikwawa has only a tiny yellow spot on femur III; tibia II has a yellow line; tibia III is completely brown while the metanotum is black. Betrem (1971) has already mentioned the occurrence of *M. aureola bobi* specimens with reduced yellow markings on femur III in Malaŵi which resemble the more southern subspecies *M. aureola godofredi* (Sichel, 1858). This specimen could be considered to belong to this subspecies but it has been collected too far north of its normal range.

* *Micromeriella atropos* Betrem, 1971

1 ♀, Nkudzi Bay, 23-III.

Distribution: South and South West Africa, Botswana, Rhodesia, Moçambique, Anogola, Zaire, Kenya.

* *Micromeriella rhodesiae* Betrem, 1971

11 ♂, Kasungu (Lifupa dam), 11-IV (8); Mzuzu, 9-IV (3).

Distribution: Rhodesia; Zambia, Zaire.

Remarks: In 7 specimens from Kasungu and in the specimens from Mzuzu the flagella is more or less reddish at the under side. This is rarely found according to Betrem (1971). In all specimens the pronotum has a median yellow spot while the scutellum and metanotum are black. One Mzuzu specimen has a small yellow spot at the base of the mandible. Two Mzuzu specimens have a yellow tergite 6(5) which is black in the others. The outer side of tibia III varies from almost black to specimens with a yellow line.

The Mzuzu specimens have an almost black clypeus except for a small yellow spot in upper lateral corners; tergite 4(3) has a black stripe laterally in yellow area. The specimens are larger than most of the Kasungu specimens.

* *Extrameris sochensis* sp.n.

Aureimeris spec: Schulten, 1975. p. 63 and fig. 3. Limbe (Mt. Soche), 19-III-1972 (1 ♀ holotype), collected by G.G.M. Schulten. Limbe (Mt. Soche), 25-II-1973; 6-III-1973. (2 ♀, paratypes).

This species was thought earlier to be an *Aureimeris* species but when more material became available its identity became clearer. This species has the characteristics of the subgenus *Extrameris* but the spiracular angles are clearly punctate. It can easily be recognized by the lemon-yellow coloured tergites and the yellowish white spatulate and somewhat sinuate spurs on tibiae III.

The male of this species is unknown. It could be *E. mlanjensis* Betrem or *E. sengaensis* Betrem of which a specimen of each has been collected in Malaŵi.

Description. black; mandibles brown-red and

the following yellow markings: broad apical band on tergite 2(1), tergites 3(2) and 4(3) almost entirely excluding their black bases and two deep lateral incisions; the yellow area on tergites 3(2) and 4(3) is somewhat incised medially; the black area is larger on tergite 4(3); small apical band on tergite 5(4) (See Schulten, 1975, fig. 3). Lateral spots on sternites 3(2) and 4(3) and much smaller lateral spots on sternite 5(4). Vestiture white on thorax, more yellowish on abdomen; that of last two segments light to red-brown. Spines on tibiae III light brown. Spurs yellowish white, shorter spur blunt, longer spur distinctly spatulate and somewhat sinuate. Wings hyaline, light brown along upper margin, veins dark brown.

Fore margin of clypeus medially broader than at the sides of median portion; side lobes broad. Disk of clypeus rather flat and impunctate but with some vague striae basally, sides densely punctate. Spatium frontale densely punctate, punctation extending to sinus ocellaris; fissura frontalis deep on upper part of spatium frontale. Front impunctate medially, except for some deep punctures before anterior ocellus; fissura frontalis vaguely visible on front; areas between ocellar triangle and orbits coarsely punctate. Some punctures between posterior ocelli. Vertex with some coarse punctures anteriorly, some more punctures posteriorly, especially near apical eye margin; declivous part more densely punctate with smaller punctures. No temporal groove. Tempora with dispersed punctation. Scapulae rather densely punctate; their impunctate hind margin broad; callosities broad with a dispersed punctation. Impunctate area behind callosities small. Horizontal area of mesopleura not very densely punctate, transition to vertical portion very gradual; anterior upper area impunctate anteriorly but punctate near horizontal area and along upper margin; posterior upper area impunctate except near horizontal area; cross furrow distinct but not deep; anterior lower area impunctate anteriorly but punctate above coxae II and along the rounded crest; posterior lower area entirely with dispersed punctation. Horizontal area of metapleura punctate along transition forming a rather obtuse angle with vertical

portion; transition not sharp; vertical part of upper plate of metapleura impunctate; lower plate sparsely punctate. Mesoscutum coarsely punctate but anteriorly with impunctate margin and a much wider punctation with large impunctate areas in the middle. Scutellum coarsely punctate but hind margin impunctate and a small area anteriorly in the middle. Metanotum densely punctate except for small area anteriorly in the middle and hind margin. Forewing bare except for costa, subcosta, subcostal cell, the stigmal cell completely, some setae on extreme upper margin of first submarginal and marginal cells, some dispersed hairs posteriorly on submarginal cell and anteriorly on marginal cell.

Carinae lateralis extending beyond spiracles, forming a distinct but short and low carina on external apex of area horizontalis lateralis and upper portion of area posterior lateralis. Area horizontalis medialis densely punctate; diameters of punctures in general somewhat smaller than their interspaces; transition to area posterior medialis rounded, medially with indication of a tubercule. Upper part of area posterior medialis rather finely punctate, lower two thirds impunctate. Spiracular area impunctate. Spiracular angle clearly punctate. Area horizontalis lateralis punctate, interspaces between punctures larger than punctures. Area posterior lateralis with dispersed punctation over its whole length except medially along its interior margin. Area lateralis with dispersed punctation. Tergites opaque. Space between row of subapical punctures and fringes largely impunctate on tergites 3(2) and 4(3), there are, however, some irregularly placed hairs in this area. Length of body 18 mm, of wing 13 mm.

* *Extrameris sochensis* f. *bundae* nova forma

2 ♀, Bunda, 15-IV-1975 (2).

Description. These two specimens differ in the first instance from the type and paratypes of *E. sochensis* in their yellow colouration which is a much darker yellow (like in *M. soleata soleata*). The difference in intensity of yellow was present when the specimens were still alive. The black area on tergite 4(3) is broader and the lateral incisions in the yellow area are

broad and short (not thin and strongly curved to the inner side). Sternite 5(4) lacks the yellow marginal spots. No structural differences could be found. For the time being these two specimens are considered to be a forma of *E. sochensis*.

Extrameris spec.

1 ♂, Kasungu (Lifupa dam) 12-IV.

Remark: This specimen resembles *E. neavei* Betr. as to the colouration but the yellow hind margin of tergite 3(2) is not excised laterally. Sternite 2(1) has, however, medially a low distinct elevation which has been described in *E. sengaensis* Betr. It may be an undescribed species or one of the above mentioned species. The type of *E. sengaensis* was not available.

Megameris soleata soleata
(Gerstaecker, 1871)

6 ♂, Nkudzi Bay, 14-V (2); Monkey Bay, 23-III; Salima (G.B.H.) 25-II (2); Bunda, 15-IV. 11 ♀, Limbe (Ndirande Mt.) 21-V; Zomba (MLunguzi Estate) 10-III-1974; Salima (G.B.H.) 25-II (4), 26-II (5).

Distribution in Malaŵi: A common subspecies below approximately 1350 m.

Megameris soleatoides Schulten, 1975

17 ♀, Salima (G.B.H.) 25-II (10), 26-II (5); Nkudzi Bay, 23-III, 14-V.

Distribution in Malaŵi: This species is till now only known from Malaŵi below 1170 m. It occurs, probably commonly, along the Lake Shore.

Remarks: Two specimens from Salima have in addition to the normal colouration small yellow lateral spots on sternite 4(3). Another specimen from Salima has a small yellow posteromedial spot on the metanotum.

The male of this species is still unknown.

M. malawiensis (see next species) has been collected in three of the five localities from which *M. soleatoides* is known. This species could be the male but both species seem to belong to different subgenera. However, taking the obvious differences in character between

M. malawiensis and *M. nigrocalcarata* (and its forma *zombae*) into account the incorporation of *M. malawiensis* in the subgenus *Penimeris* may have to be reconsidered. *M. malawiensis* looks intermediate between the subgenera *Megameris* and *Penimeris* and *M. soleatoides* intermediate between the sections *Megameris* and *Canimeris*.

Megameris malawiensis Schulten, 1975

2 ♂, Nkudzi Bay 23-III; Salima (G.B.H.) 25-II.

Distribution. This species is only known from Malaŵi. (Lake Shore, Lower Shire Valley.)

Remarks: To the description of this species, cf. Schulten, 1975, should be added that there is a small yellow spot posteromedially on the metanotum and this area is impunctate.

This spot is present in all known specimens but absent in the specimens from from Nkudzi Bay and one from Mpatamanga. The spurs on tibiae III vary somewhat in colour. In general they are dark testaceous to black while the apex is lighter coloured. In the type specimens the general colouration is somewhat lighter (testaceous to light brown).

Megameris nigrocalcarata Betrem, 1971

1 ♂, Zomba V - 1927.

This specimen has on tergite 3(2) a broad yellow band which is deeply incised laterally. The dark spots are united with the black colour of the base of the tergite (see remark to forma *zombae*).

Distribution. Probably uncommon and limited to areas above 750 m. (Mulanje Mt, Zomba and Bunda).

* *Megameris nigrocalcarata* f. *zombae* nova forma

4 ♂, Zomba township III-1974.

Description: This new forma differs from *M. nigrocalcarata* by its black scutellum and legs which have a less extensive colouration. The yellow hind margin of tergite 3(2) is

laterally incised by a rather thin projection of the black area which ends in a small knob. This forma resembles *M. soleata soleata*, *M. nigrocalcarata* and *M. malawiensis*.

Remarks: Betrem (1971) mentions the existence of two 'forms' as to the colouration of tergite 3(2) in *M. nigrocalcarata*. In one 'form' there is laterally a black spot which is completely surrounded by yellow and not connected with lateral projection of the black area. This 'form' was collected at Bunda (Schulten, 1975). Tergite 3(2) of the other 'form' of Betrem agrees with *M. nigrocalcarata* forma *zombae* but the black scutellum is not mentioned by Betrem (1971).

Several subspecies of formae have been described for *M. fasciatipennis fasciatipennis*, the probable female of *M. nigrocalcarata*, while there also seems to be much variability between specimens of the same locality. For the time being the Zomba specimens of *M. nigrocalcarata* are considered to be a forma of *M. nigrocalcarata* until more material becomes available.

In order to facilitate the identification of males of *M.s. soleata*, *M. malawiensis*, *M. nigrocalcarata* and *M. nigrocalcarata* f. *zombae*, the distinguishing characteristics are summarised below.

M.s. soleata: Tibia I and II with yellow stripes on outer side. Femur I with two short yellow stripes. Femur II yellow on fore side and femur III at under side. Coxa III black or with yellow spot. Scutellum yellow. Margins of tergites 2(1)-5(4) yellow (exceptionally also tergite 6(5)). Sternites 3(2)-4(3) with medially interrupted short bands and 5(4) with lateral spot. Some punctures before anterior ocellus. Spurs on tibia III white. Vestiture white except on sternite 5(4) and segments 6(5) and following. Parameres short and broad, rounded at the apex.

M. malawiensis: Outer side of tibia I and II with yellow stripe and of tibia III with incomplete yellow stripe. Femur I apically with short yellow stripe(s). Femur II apically yellow. Femur III apically with short stripe and spot. Coxa III with 2-3 yellow lines or spots.

Scutellum black or with faintly yellow spots. Margins of tergites 2(1)-6(5) yellow. Sternites 3(2)-4(3) with interrupted band and 5(4) with lateral spot. Some punctures before anterior ocellus. Spurs on tibia III testaceous to dark brown but apex clearly lighter. Vestiture white on tergites 2(1)-6(5) and sternites 2(1)-5(4); sternite 6(5) white with black apical fringes, last two segments black to brown. Parameres rather short and thick with pointed apex.

M. nigrocalcarata: Tibia I yellow on outer side. Tibia II with stripe and tibia III yellow or black. Femur I apically with one or two stripes. Femur II apically with spot or short line. Femur III with yellow line. Coxa III black. Scutellum yellow. Margins of tergites 2(1)-5(4) yellow, sometimes also 6(5) and 7(6). Sternites with lateral spots or disrupted band on 3(2)-4(3), sometimes on 5(4). No punctures before anterior ocellus. Spurs on tibia III black.

Vestiture: in general anterior segments of abdomen white and posterior segments black. In the middle segments especially white and black hairs may occur together. Parameres elongate with pointed apex.

M. nigrocalcarata f. *zombae*: Tibia I yellow on outer side. Tibia II more or less yellow on outer side or black. Tibia III black. Femur I apically with short yellow stripe or spot. Femur II apically yellow or black. Femur III with yellow spot or black. Coxa III black. Scutellum black. Margins of tergites 2(1)-5(4) yellow and 6(5) faintly yellow. Sternites 3(2)-4(3) with interrupted bands and 5(4) with lateral spots. No punctures before anterior ocellus. Spurs on tibia III dark brown to black. Vestiture white on tergites 2(1)-5(4) and sternites 2(1)-4(3); black or white and black on tergite 6(5), white, white and black or black on sternites 5(4) and 6(5); black to brown on last two apical segments. Parameres elongate with pointed apex.

Megameris pseudofasciatipennis pseudofasciatipennis Betrem, 1971.

4 ♀, Limbe (Ndirande Mt.) 21-V (2). Length of body 21 mm, of wing 17 mm. Zomba Pt. 11-V (2). Length of body 28 mm, of wing 21 mm.

Distribution: This subspecies is known from Mulanje Mt, Mangochi (Fort Johnston) and a few localities in Southern Africa. According to Betrem (1971) it is probably the female of *M. nigrocalcarata* or *M. marshalli* or both.

Remarks: The apex of wing is somewhat darker in the small specimens. There is much variation in the punctuation of the scutellum and area horizontalis medialis (arhm). One Ndirande specimen has an almost impunctate scutellum except for a median cross row of punctures. This is in agreement with the description of the holotype. The arhm is coarsely punctate except in the middle. This is typical for *M. marshalli* according to Betrem (1971). The other specimen has a scutellum which is coarsely punctate at the anterior corners; the arhm is largely impunctate except for two cross rows of punctures medio-laterally which are broader anteriorly than posteriorly. The Zomba specimens have the anterior half of the scutellum with dispersed punctures. The arhm is coarsely punctate except medially.

Several subspecies and formae have been described of *M. pseudofasciatipennis* but the total number of specimens available is very limited. A revision of the *M. pseudofasciatipennis* group is recommended when more specimens become available.

Charimeris empeyi Betrem, 1971.

2 ♂, Salima (G.B.H.) 25-II (2)

Distribution in Malaŵi: This species was already known from Chitala and the Mombera District.

Cathimeris hymenae (Gerstaecker, 1891),
subspecies ?

4 ♀, Chikaluma village 1-III-1974; Zomba (Mlunguzi Estate) 20-III; Salima (G.B.H.) 25-II (2).

Cathimeris hymenaea bradleyana Betrem, 1971.

17 ♂, Limbe (Ndirande Mt.) 21-V (2); Zomba (Chirungu Estate) 11-VI; Zomba Pt. (Mlunguzi stream) 9-II; Likangala river 24-IV; Kachulu Bay 25-V (2); Liwonde 23-III (3), 24-III (5); Salima (Fish Eagle Inn) 19-VIII-1974 (2).

Distribution in Malaŵi: the collection of a specimen on the Zomba Pt. shows that this (sub)-species occurs at a higher altitude than was anticipated previously. It is probably a common species below 1650 m but it may, however, be more common at lower rather than high altitudes.

Cathimeris hymenaea bradleyana f. *ugandae*
Betrem, 1971

1 ♂, Mulanje Boma 30-III.

Distribution in Malaŵi: This forma was already known from Mangochi.

Cathimeris lachesis lachesis (De Saussure, 1859)

44 ♂, Mulanje Boma, 30-III; Limbe (Ndirande Mt.) 21-V (8); Zomba (Chirungu Estate) 11-VI (19); Zomba (Mlunguzi Estate) 22-II (4), 10-III; Zomba Pt. (Forestry Road) 4-V; Zomba Pt. (Mlunguzi stream) 9-II (8); Zomba Pt. 19-I-1974; Nkhata Bay 8-IV.

Cathimeris lachesis lachesis f. *interrupta*
Betrem, 1971

17 ♂, Limbe (Ndirande Mt.) 21-V (2); Zomba (Chirungu Estate) 11-VI (5); Zomba (Mlunguzi Estate) 22-II (2); Zomba (Mlunguzi stream) 9-II (5); Zomba Pt. 11-V; Nkhata Bay 9-IV.

Cathimeris lachesis lachesis f. B
Betrem, 1971

1 ♂, Nkudzi Bay 14-V.

Cathimeris lachesis lachesis
(De Saussure, 1859)

5 ♀, Limbe (Ndirande Mt.) 21-V; Zomba (Chirungu Estate) 11-VI; Zomba (Mlunguzi Estate) 18-III (2); Monkey Bay 23-III.

Distribution in Malaŵi: *C. lachesis lachesis* and the f. *interrupta* occur commonly at the higher altitudes. The present and earlier data show, however, that this subspecies is also found in lower areas such as the Lake Shore and the Lake Chilwa area. The subspecies seems to be uncommon here

Cathimeris masaiica (Cameron, 1910)

2 ♀, Limbe (Chancellor College), 20-VI-1974;

Zomba 15-IX-1925.

Distribution in Malaŵi: This species was already known from Mpatamanga and Bunda. (C.o.A.).

Aureimeris africana (De Saussure, 1859)

2 ♂, Mulanje Boma 30-III (2).

Distribution in Malaŵi: This species was collected on the slopes of Mt. Mulanje in 1913, in the Lake Chilwa area and in the Ruo Valley.

Aureimeris mansueta mansueta
(Gerstaecker, 1857)

1 ♂, Kachulu Bay 25-V.

Distribution: South Africa (Natal), Mozambique. A female specimen has been collected in Chirolo (1902).

Aureimeris fasciatella fasciatella
(Klug, 1832), subspecies ?

5 ♂, Chikwawa 26-IV (4); Liwonde 24-IV.

Aureimeris fasciatella arnoldi
Betrem & Bradley, 1971

1 ♀, Salima (G.B.H.) 25-II.

Distribution in Malaŵi: *A. fasciatella* and its subspecies *arnoldi* are probably common below 510 m (cf. Schulten, 1975).

Campsomeriella caelebs caelebs
(Sichel, 1864)

93 ♂, Chikwawa 26-IV (18); Likangala 21-IV; Kachulu Bay 15-V, 25-V (14), 31-V-1974 (13); Liwonde 23-IV, 24-IV; Nkudzi Bay 23-III (8), 14-V (6); Salima (Fish Eagle Inn) 19-VIII-1974 (17); Salima (G.B.H.) 26-II; Nkhata Bay 8-IV (12).
25 ♀, Chikwawa 26-IV; Mulanje Boma 30-III (2); Zomba (Mlunguzi Estate) 14-IV-1974; Chimpeni farm 17-II; Likangala river 24-IV; Kachulu Bay 31-V; Nkudzi Bay 23-III (4); 14-V; Monkey Bay, 23-III (3); Salima (Fish Eagle Inn) 19-VIII-1974 Salima (G.B.H.) 25-II (4); 26-II; Kasungu (Lifupa dam) 12-IV (2); Nkhata Bay 8-IV (2).

Distribution in Malaŵi: A very common species below 1800 m (cf. Schulten, 1975).

* *Campsomeriella caelebs f. flavata*
Betrem, 1971

7 ♂, Kachulu Bay, 25-V (4), 31-V (2) Nkudzi Bay 14-V.

Distribution: This forma has been collected in Zaire and Zanzibar.

Remark: The tergites are reddish yellow to yellow.

Campsomeriella caelebs var.

1 ♂, Kachulu Bay 25-V.

This specimen has two yellow spots on the scutellum which are not found in the nominate species.

Campsomeriella rubromarginata Betrem, 1971

2 ♂, Kachulu Bay 25-V (2).

Distribution in Malaŵi: An uncommon species which has been recorded from the Lake Shore, the Lake Chilwa area and Mt. Mulanje.

Campsomeriella madonensis (Buysson, 1910),
subspecies ?

1 ♀, Likangala river 24-IV.

Campsomeriella madonensis madonensis
(Buysson, 1910)

7 ♂, Tibia III black. Kasinthula rice scheme (Chikwawa); 6-VIII-1974 (5), 26-VIII-1974 (2); Khanda river 18-XII-1973.
4 ♂, Tibia III with short yellow line. Kasinthula rice scheme (Chikwawa) 6-VIII-1974 (3), 26-VIII-1974.

Campsomeriella madonensis zambiensis
Betrem, 1971

6 ♂, Tibia III black. Khanda river 24-XII-1973; Kasinthula rice scheme (Chikwawa) 6-VIII-1974 (4), 26-VIII-1974 (3).
1 ♂, Tibia III with short yellow line. Kasinthula rice scheme (Chikwawa) 6-VIII-1974.

Distribution in Malaŵi. *C. madonensis* and its two subspecies are common in the Lake Chilwa area and the Lower Shire Valley.

DISCUSSION

At present 24 species, 13 subspecies and 11 formae of Campsomerinae are known from Malaŵi of the approximately 84 species, 64 subspecies and 47 formae which have been described from Africa. Typical is the occurrence of several species of the subgenus *Extrameris* which however, seem to have a very limited distribution and are always rare. An exception may be *Extrameris neavei* which was collected in large numbers on

Mt. Mulanje in 1913 but it was never collected during our frequent collecting trips.

REFERENCES

- BETREM, J.G., 1971. The African Campsomerinae (Hymenoptera, Scoliidae). - *Mon. ned. ent. Ver.*, 6 : 1-325.
 SCHULTEN, G.G.M., 1975. Campsomerinae (Hymenoptera, Scoliidae) collected in Malaŵi (Central Africa) between 1968 and 1973. - *Bull. Zool. Mus. Univ. Amsterdam.*, 4 (8): 59-68.

Dr. G.G.M. Schulten
 Royal Tropical Institute
 Department of Agricultural Research
 Mauritskade 63
 Amsterdam 1092 AD - The Netherlands

Received: 23 May 1977
 Mailed : 31 March 1978

Fig. 1 A map of Malaŵi indicating the collecting localities and their height above sea level

1. Chikwawa, 105 m
2. Mulanje Boma 720 m
3. Limbe (Mt. Soche) 1200 m
4. Limbe (Chancellor College) 1170 m
Limbe (Chichiri hill) 1170 m
Limbe (Maone) 1190 m
5. Limbe (Ndirande Mt.) 1490 m
6. Zomba (Chirungu Estate) 700 m
7. Zomba (Mlunguzi Estate) 1005 m
Zomba Pt. 1470-1832 m
8. Chimpeni farm 660 m
9. Likangala river
Likangala rice scheme 640 m
10. Kachulu Bay 640 m
11. Chikaluma village 640 m
12. Khanda river
Khanda rice scheme 640 m
13. Liwonde 465 m
14. Nkudzi Bay 487 m
15. Monkey Bay 487 m
16. Bunda (College of Agriculture) 1170 m
17. Salima G.B.H. (Grand Beach Hotel)
Salima, Fish Eagle Inn 487 m
18. Kasungu (Lifupa dam) 1021 m
19. Nkhata Bay 487 m
20. Mzuzu 650 m
21. Karonga 487 m

