Linzer biol. Beitr.	43/1	363-380	25.7.2011

Myzininae of the Old World
The subtribe Braunsomeriina (Hymenoptera: Tiphiidae)

M. BONI BARTALUCCI

A b s t r a c t : Three new species are described: *Braunsomeria glyptocorra*, *Braunsomeria micans*, *Notomeria namibiana*. A new genus name *Notomeria*, having *Myzine constrictiventris* TURNER 1912 as typus generis, is proposed. New combinations are made: *Myzine constrictiventris*, *Braunsomeria perpunctata* TURNER 1913 and *Braunsomeria mutilloides* TURNER 1913 under the name *Notomeria*. The synonymies of *Warayoa* ARGAMAN 1994 with *Braunsomeria* TURNER 1912, of *Braunsomeria perpunctata* TURNER 1913 with *N. constrictiventris* are promoted. Lectotypes of *Braunsomeria quadraticeps* TURNER 1912, *Myzine constrictiventris* TURNER 1912, *Braunsomeria peringueyi* TURNER 1920, *Braunsomeria cognata* TURNER 1920, *Braunsomeria albohirta* TURNER 1927 are designed.

K e y w o r d s : Myzininae, *Braunsomeria*, *Notomeria*.

Introduction

Braunsomeriina is a group of well segregated taxa from the remainder of the tribe Meriini (BONI BARTALUCCI 2004) with a distribution area so far strictly confined to the Austral Africa, the records coming out from South Africa, Namibia, Botswana, Zimbabwe, Angola; probably their actual distribution spreads over some neighbouring country. They very like xero thermal and arid habitats like most of other representatives of the tribe.

TURNER (1912) described a peculiar female together with its ascribed male from the same south African locality under the new taxon name *Braunsomeria quadraticeps*; he gave drawings of habitus of both female and male, plus male wings; he also described another female under the name *Braunsomeria atriceps*. One year after he appended the descriptions of *B. perpunctata* and *B. mutilloides*. The latter is a very distinct species with great size (about 12 mm), very coarse integument and light markings on the metasoma; the other species gets smaller size (about 7 mm), with lightly pitted and weaker integument without light spots. Successively he described *B. arnoldi* ♀ (1916), *B. peringuey* ♂, *B. cognata* ♂ (1920) and *B. albohirta* ♀ (1927). JACOT GUILLARMOD (1953) established the synonymy of *Bruesia* KIEFFER 1913 and *Bruesiola* KIEFFER 1914 (ascribed to Serphidae) with *Braunsomeria* TURNER 1912, correctly confirming its belonging to Myzininae. NAGY (1970) repeated the Jacot Guillarmod's action about *Bruesia* KIEFFER 1913, referring at the same time *Braunsomeria atriceps* TURNER 1912

to the genus *Dermasothes* MENOZZI 1940. The last action, repeated by GORBATOVSKY (1979) without any criticism, was recently sunken (BONI BARTALUCCI 2004) by replacing *atriceps* in its original position. ARGAMAN (1994) did not considered congeneric the types of *B. quadraticeps*, erecting the new taxon name *Warayoa citreosigna* for the male only and ascribing another male to the female.

Here the old use to consider Myzininae within the family Tiphiidae has been preserved. The Pilgrim's results (2008) from molecular analysis about the inclusion of the Myzininae in the family Thynnidae, even though highly reliable, probably need a morphological confirmation, hitherto unperformed. For example in their analysis they use only two taxa of the single genus *Tiphia* inferring the character state of the single mid spur. Really both sexes of the clade Silifkini show two mid tibial spurs, while volsella and aedeagus of males are very similar to male Anthoboscinae. Moreover within Tiphiinae the gonosquama in males and the lateral clypeus in females appear close to Anthoboscinae members.

Methods and abbreviations

About terms and morphological definitions reference has to be made to BONI BARTALUCCI (2004), where terminology mostly follows GAULD & BOLTON (1988) and, for mesosoma and wings, has been lent mainly by BOHART & MENKE (1976). The body orientation used in descriptions and drawings follows the GOULET & HUBER (1993) indications.

The frontal aspect of the head is performed perpendicularly to the virtual plane joining lateral ocelli and apex of **Tsa**; dorsal and lateral aspects, perpendicular to each other, are performed along the virtual plane along the occipital carina (BONI BARTALUCCI 2004).

About terms and morphological definitions reference has to be made to BONI BARTALUCCI (2004). Genitalia are only outlined. The lateral outline of the aedeagus is figured in most of cases.

Genitalia are settled in a solidified drop of 5,5-dimethyl hidantoin formaldheyd (5,5-DMHF) on a transparent support.

Hair and punctuation have been overlooked in most of the drawings.

Chararacters are listed giving priority to those shared both by females and males and at any case following the scheme: anterior→posterior, dorsal→ventral, basal→apical.

Material examined besides specimens recorded in chorological items:

Meria tripunctata (ROSSI 1790) ♂: /Italia, Toscana, Grosseto, litorale Marina di GR., su Echinophora, 10.VII.1981, MBB leg/, MZUF (Fig. 1).

Abbreviations

CC = costal cell (***C***ella ***C***ostalis)

CD = discoidal cell (***C***ella ***D***iscoidalis)

cHy = hypostomal keel (**c**arina **Hy**postomae)

CM = marginal cell (***C***ella ***M***arginalis)

M = Male (**M**as)

MPS = **M**ultiporous **P**late **S**ensillum

$\mathbf{N_1}$ = pro**N**otum

$\mathbf{N_3}$ = meta**N**otum

CSM = submarginal cell (***C***ella ***S***ub ***M***arginalis

cOc = **c**arina **O**ccipitis (-alis).

em = **e**pi**m**eron

es = **e**pi**s**ternum

F = female (**F**oemina)

FoO = oral fossa (**Fo**ssa **O**ris)

Hy = **Hy**postoma

I = distance (**I**ntervallum)

iS = interspace (**i**nfra **S**patium)

l = lateral (**l**ateralis)

L = length (**L**ongitudo)

LA = width (**LA**titudo)

LaSt$_2$ = mesosternal lobes (**La**mellae meso**St**erni)

m = median (**m**edianus)

mR = microreticulation (**m**icro **R**eticulum) or microreticulated

Ol = lateral ocellum (**O**cellum **l**ateralis)

Om = median ocellum (**O**cellum **m**edianum)

p = puncture (-s) (**p**unctum), punctured

P = **P**ropodeum

Pal = labial palpus (**Pa**lpus **l**abialis)

Pam = maxillary palpus (**Pa**lpus **m**axillaris)

PoG = genal bridge (**Po**ns **G**enarum).

Sc$_1$ = **Sc**utum.

Sc$_2$ = **Sc**utellum.

spP = propodeal spiracle (**sp**iraculum **P**ropodei)

ssa = sub antennal sclerite (**s**cleritis **s**ub **a**ntenna)

sts = transcutal suture (**s**utura **t**rans **s**cuta**)**

sul = lateral furrow (**su**lcus **l**ateralis)

sup = parapsidal line (**su**lcus **p**arpsidalis)

Tsa = **T**uberculum **s**upra **a**ntennam

X = co**X**a

( ) = digits between round brackets in the chorological items mean number of specimens. Italics in the chorological items means handwritten. / / = delimit the single label. ! = Types examined.

Acronyms

BMNH = Nation History Museum, London;
MZUF = Museo Zoologico de "La Specola", Firenze;
SAM = Iziko South Africa Museum, cape Town;
TMP = Transvaal Museum, Pretoria.

Morphology

The sexual dimorphism is extreme in general habitus; the females are strongly brachypterous till completely apterous and normally soberly pigmented, while the fully winged males are mostly colourful wasps; only the males here recorded under the new name *Notomeria* are almost completely black. All of them show diurnal customs.

Their distinctive character states from members of Meriina are yet referred (BONI BARTALUCCI 2004) and here modified as follow:

Females

a Eyes always about rounded, the long diameter only 1.2 times the short one

b Clypeus strongly narrowed in frontal aspect (ratio **L**/**LA** up to 20); normally without

median ventral expansion and enlarged laterally getting higher than in the middle

c Transscutal suture (**Sts**), reduced to a simple shallow furrow between Scutum ($\mathbf{Sc_1}$) and scutellum ($\mathbf{Sc_2}$)

d In dorsal aspect, the $\mathbf{Sc_1}$ is mostly covered by the apical border of pronotum and lesser than 10 % of its total surface is exposed, without any trace of notaulices (**No**) and **sup**

e The large pits on the sides of $\mathbf{Sc_2}$ are lacking (well expressed only in *N. mutilloides*)

f $\mathbf{es_2}$ differentiated in a flattened antero ventral surface, densely sculptured, and a posterior almost smooth surface; the outer median surface reduced to a narrow stripe like edge between them

g Scrobis (**Sb**) not expressed on $\mathbf{es_2}$

h $\mathbf{N_3}$ strongly narrowed to a transversal linear sclerite with pits, where present, at its extremities

i **spP** very shifted sideways up to the borders of the horizontal area of the propodeal disk or even off it up to get a sub vertical placement

j Metepimeron ($\mathbf{em_3}$) strongly reduced; its height along the mesopleural suture always less than 1/3 the total length of the latter

k Wings absent or scale-like with no cells. Where forewing is scale like, hind wing always extremely reduced and hardly detectable at x50 magnifications too, not overcome the edges of the fossa where they arise from.

Males

l **Ssa** absolutely flat

m Clypeal disk flattened in the middle with raising sides (well detectable in sub ventral aspect)

n Clypeus narrowed in frontal aspect: ratio **L**/**LA** always as long as or more than 4 (no more than 3 in Meriina)

o Fore and back borders of mandibles with plate like expansions, best in lateral aspect

p Notauli absent

q Scrobal sulcus not expressed

r Hind tibial major spur combed

s No **sul** on 1st tergum; sometimes a trace of it is present only before spiracle

t In ventral aspect, preapical groove along apical border of 1st sternum and basal border of 2nd sternum are both convex forewards, while the basal groove of 2nd sternum is convex backwards

u Cerci of 8th tergum are almost completely concealed in dorsal aspect (Fig. 41) (largely exposed in Meriina, fig. 1)

v Tip of the gonostylus sharpened

w Volsella with a inward bent cuspis (in lateral aspect)

x Digitus as bent as cuspis, about as large forward as the volsella and articulated on its median point

Specimens of this group also have the following character states which occur sporadically in other genera:

- In females the paramandibular carina merges into the genal surface or bends toward the inner clypeal surface, never meeting hypostomal carina (**hypC**)
- Mouthparts very shortened; **Pam** and **Pal** always reduced in both sexes (but males of *Notomeria* nov.gen.)
- Males with open mandibular socket
- Entire inner border of the eye in the males
- Labrum two-surfaced with a distinct sub-horizontal velum like in all Meriini
- The keel on the inner ventral edge of the forecoxa is present in both sexes, feeble in *Braunsomeria* females, well produced in *N. mutilloides*, absent in female *N. constrictiventris*
- Claws have a median small inner tooth
- The first metamerus of females shows a deep furrow between petiolar and declivitous tergal surfaces, joining the lateral furrows and severing the integument between them like it occurs in *Meria*. The petiolar surface is formed only by sternum
- Ocelli are present in both sexes, strongly reduced in females
- Fore tibial spur entire without any combed structure.

The term "areola" is used here to indicate a small surface slightly prominent and delimited by a row of **p** at the anterior corner of 2nd tergum, uppermost delimited by **sul** where it is present.

Key to Genera

This generic splitting has been based on the well settled differences between the male *N. constrictiventris* (and the other related new species described) and true *Braunsomeria* males. The females too are well distinct by a fairly good set of character states which seem significant enough to justify their severance. Nevertheless the relative couplings lack hitherto definitive proof (even though highly probable). The coupling of *B. perpunctata* with *M. constrictiventris* is proposed with some rate of uncertainty also because of the scarcity of female material. Within this frame we can insert the case of *Weerpaga udomanca* ARGAMAN 1994 from Northern Cameroon, the typical material of which has been so far inaccessible. From the description it is possible to guess its pertaining to this group (the shape of the mandible, the apterous state, the very small tegulae and presence of white markings approach it to *B. mutilloides*), even though clypeal shape appears inconsistent with it. Nevertheless because it has been so far impossible to examine any specimen and therefore decide where eventually to place it in one of the sections here discussed, its consequent exclusion from this treatment has been compulsory.

In case the connection *M. constrictiventris – B. perpunctata* here proposed could be confirmed by field observations and forthcoming studies would reveal the proximity of *W. udomanca* to *N. mutilloides*, the taxon name *Weerpaga* should replace *Notomeria* of

course, as senior synonym. Moreover the distribution area of the group would be dramatically changed, opening new scenarios for zoogeographical hypothesis and investigations in the arid areas neighbouring to North Cameroon.

In conclusion, even though probable, the connections here proposed are not yet definitive.

Typical specimens of *B. mutilloides* (♀) has not been examined.

Most of the other specimens studied come from BMNH (exact references are given under specifical items).

Females

F a) **cOc** well expressed up to temples area, wearing out just along vertex

F b) Scape like in the vaste majority of Meriini, with a stripe of dense pits bearing long bristles both on its dorsal and ventral surfaces, shining and almost **p**-less in the remainder

F c) 4^{th} to 7^{th} flagellomeri as long as high

F d) Palpal formula variable: **Pam** 2-4, **Pal** 2-3 segmented

F e) Labrum: well produced portion of velum beyond the row of long bristles

F f) Mandibles with subapical tooth parallel to the tip of the mandible and simple inner border; *B. quadraticeps* and *B. micans* have additional teeth along inner border

F g) $\mathbf{Sc_1}$ partially visible in dorsal aspect along its entire width; the concealed as shining as the exposed surface

F h) $\mathbf{em_3}$ strongly reduced; its height along the mesopleural suture from about 1/6 up to 1/10 (about ½ in Meriina) total length of the latter; endophragmal (upper metapleural) pit never detectable (always present)

F i) Strongly brachypterous: scale-like wings with no cells. The hind wing is always extremely reduced and hardly detectable at x50 magnifications too; it never overcomes the edges of the fossa where it arises from

F j) Tegulae small, normally about 1/3 the scape length

F k) Fore tibial spur: apex as long as or longer than trunk

F l) Hindtibial major spur with parallel sides and rounded tip

F m) Gradulus present on the second tergum, most often largely concealed by the apical border of the 1^{st} tergum

F n) Areola always present

F o) 1^{st} laterotergum large, folded ventrally up to cover partially the sternal surface in ventral aspect, completely in lateral aspect

F p) Integument of the body mostly **p**-less and shining

Males

M a) Eye rounded with longer diameter no more than 1.2 times its width

M b) **Tsa** strongly and almost perpendicularly protruding from the frons; inner borders almost touching each other in dorsal aspect

M c) Malar space well expressed

M d) **PoG** as long as **FoO**

M e) Flagellum far longer than aggregate of mesosoma and metasoma; sometimes more than the whole body. 2nd to last elements slender, their length 4 times their thickness

M f) Flagellar surface almost absolutely glabrous; conical sensilla absent; sensilla curvata present only in depressions on the apical flagellomeri

M g) **MPS** large, up to 0,06 mm

M h) Palpal formula reduced: Pal 2-, Pam 3-4 segmented

M i) Horizontal velum of the labrum with a distinct median notch

M j) Prepectal sclerite freely articulated to $\mathbf{es_2}$

M k) Metasternal ventral lobes slightly protruding downward, lying under the plane of $\mathbf{LaSt_2}$ in ventral aspect

M l) Fore wing: ***CM*** smaller and shorter than pterostigma and ***CSM***s

M m) Only 2 ***CSM*** present (3 only in some specimens of *B. quadraticeps*)

M n) Hind wing: jugal lobe surface lesser than anal lobe surface

M o) Foretarsomerus: dorsal surface mostly smooth and hairless

M p) Hind coxa with a sub triangular cross section with only three surfaces; the inner edge simply angled

M q) First metamerus without any break of the integument, neither furrow nor narrow impression between the sloping tergal and upper petiolar surfaces; the latter flattened and formed by a ribbon-like extension of the tergal surface

M r) First tergum regularly tapering backward, without strong median swelling in dorsal and lateral aspect

M s) 2nd to 6th terga without any strangling about them; their surfaces flattened (best detectable in lateral aspect)

M t) Gradulus well expressed on 2nd tergum

M u) **sul** well expressed on 2nd tergum, vestigial on 3rd and 4th

M v) Lateroterga very large, covering almost half sternal surfaces

M w) Integument mostly shining, **p**-less and hairless. Colourful wasps; sometimes yellow colour is overpowering on dark integument.

***Braunsomeria* TURNER 1912**

Females

F aa) **cOc** poorly expressed either only ventrally before lower genae near **PoG** in *N. mutilloides*, either laterally in *N. constrictiventris*

F bb) Scape with scattered and rare bristles throughout its surface, without stripe of densely packed pits

F cc) 4^{th} to 7^{th} flagellomeri clearly longer than thick

F dd) Palpal formula: **Pam** 1-2-, **Pal** 1 –segmented

F ee) Labrum: row of long bristles just along distal border of velum

F ff) Mandible inner border like an irregular saw; subapical tooth directed backwards, perpendicularly to the main plane of the head

F gg) Mesoscutum almost completely concealed in dorsal aspect; only extreme sides in *N. mutilloides* bear punctures with bristles; its surface mate and not pigmented

F hh) $\mathbf{em_3}$ in *N. perpunctata* does not show endophragmal pit like in *Braunsomeria*; in *N. mutilloides* its height along the mesopleural suture is 1/3 the total length with a strong, well detectable endophragmal pit

F ii) Apterous; only micro stumps lie within the rounded fossa of fore wing where are detectable only at x100 magnifications

F jj) Tegulae very small as long as or shorter than ¼ the scape length

F kk) Fore tibial spur with apex clearly shorter than trunk

F ll) Hindtibial spur with borders evenly tapering toward an acute tip

F mm) No gradulus present on terga

F nn) Areola absent

F oo) 1^{st} laterotergum narrow, subtriangular and vertically placed leaving completely exposed sternal surface in ventral aspect and partially in lateral aspect too

F pp) Integument mostly either mate by fine punctures spread throughout either shining with strong and dense punctures bearing black bristles

Males

M aa) Eye almost twice high than wide in lateral aspect

M bb) **Tsa** like in members of subtribe Meriina, protruding at acute angle on the frontal surface with inner borders clearly diverging forwards

M cc) No detectable malar space

M dd) **PoG** shorter than half **FoO**

M ee) Flagellum does not overcome metasoma. Flagellomeri no more than 2.5 times longer than high

M ff) Flagellomeri with slender sensilla conica present everywhere; sensilla curvata present along longitudinal depressions on most of them

M gg) **MPS** smaller, less than 0,03 mm

M hh) Palpal formula: **Pam** 6-, **Pal** 4- segmented

M ii) Entire Horizontal velum of the labrum

M jj) Metasternum like in *Meria* with strongly protruded ventral lobes; they lie at or overcome the plane of $\mathbf{LaSt_2}$

M kk) Prepectal sclerite fused to $\mathbf{es_2}$

M ll) Fore wing: ***CM*** longer (longitudinally) than pterostigma, 2^{nd} and 3^{rd} ***CSM***

M mm) Fore wing always with 3***CSM***

M nn) Hind wing: jugal lobe far greater than anal lobe

M oo) Foretarsomerus dorsal suface covered by short dense hair

M pp) The cross section of the hind coxa is sub rectangular with a clear inner subvertical surface ventrally delimited by a carina (*N. constrictiventris* show a supplementary weaker carina also dorsally)

M qq) First tergum with a deep furrow joining the lateral furrows with a break of the integument between declivitous and petiolar surfaces (the latter surface a little convex, without angled lateral edges); petiole formed only by sternum

M rr) First tergum: medially strongly swollen, in lateral and dorsal aspect, getting a sub globular shape

M ss) Surface of 2nd to 6th terga suddenly swollen, with produced strangling among them, well detectable in lateral aspect

M tt) No graduli on terga; there is only a very shallow groove at the base of the swelling of terga

M uu) **sul** well developed on 2nd to 6th terga

M vv) Lateroterga not covering at all sternal surface

M ww) Integument: densely pitted, mostly black wasps with scanty light markings

***Notomeria* nov.gen.**

Braunsomeria TURNER 1912

Typus generis: *Braunsomeria quadraticeps* TURNER 1912: 698-699
Braunsomeria TURNER 1912: 697
Braunsomeria: JACOT GUILLARMOD (1953: 15-16)
Braunsomeria: NAGY (1970: 188-189)
Warayoa ARGAMAN 1994: 91. Syn. Nov.

ARGAMAN (1994: 91) erected the new taxon name *Warayoa citreosigna* on the TURNER's male of *B. quadraticeps*. At the same time he proposed a new male (far different from it) for the female of the same taxon. Nevertheless he gave only a very brief description without any news about examined specimens, provenance area, date and depository, neither any ground of his action which accordingly appears somewhat mystic and not verifiable at all. From the data of the collection labels, with identity of collectors and collecting places of a lot of females and males specimens, well congeneric with Turner's types, a strict coincidence of their distribution areas well emerges. Because of that and the advices of authoritative students, TURNER himself and JACOT GUILLARMOD, even though Turner does not explicitly refer about the grounds of their coupling, the most natural and correct action seems by far to restore and maintain the validity of his action, sinking the ARGAMAN's name *Warayoa* as synonym of *Braunsomeria*.

At the present state of the art it has not been possible to establish a well-grounded key for the males, since the scantiness of material precluded the detection of character states suitable to operate as morphological tools to perform it. Additive difficulty arises from the impossibility of unambiguous couplings between recorded males and females. It can be guessed that other species wait for description. Some males from Angola, Namibia, Botswana and Southern Africa have been examined.

All the females examined show a mat, finely sculptured 1st sternal surface and well differentiated, often prominent surfaces on terga and sterna, delimited by lighter stripes and row of p.

Key to species (Females only)

1

α **sul** well expressed at the base of 2nd tergum too; sometimes vestigial one on 3rd tergum too

β the pair of slightly prominent areas on terga and sterna large; their transversal diameter larger than their distance

χ areola dorsally delimited by **sul**, getting a semielliptic shape

δ 1st sternal disk complanar to the petiolar surface, without any angled border between them

2

αα **sul** well expressed only on 1st tergum

ββ The couple of pre apical row of pits on 2nd to 5th terga and sterna strongly bent subtending narrow small areas very far from each other: their width far less than 1/5 the width of the terga, their transversal diameter far lesser than their distance

χχ Areola on 2nd tergum not delimited by **sul**, getting a semicircular shape

αα 1st sternal disk sub orthogonal to petiolar surface, with evident angled border between them

4

2

α Inner mandible with only one sub apical tooth and even inner border (like fig. 19)

β **Pal** 3- and **Pam** 4-segmented

χ Lateral pronotum largely wrinkled

δ Propodeum evenly rounded in dorsal aspect

ε 1st tergal and prominent semicircular areas on terga quite densely covered by **p** bearing long bristles

Braunsomeria albohirta **TURNER 1935**

αα Inner border of mandible with more than one subapical tooth

ββ **Pal** and **Pam** both 2- either 3-segmented

χχ Lateral pronotum mostly smooth

δδ Propodeum enlarged on the behind in dorsal aspect

εε 1st tergal and prominent areas on terga smooth or with only sparse **p**

3

3

α Eyes as high as half head height in lateral aspect

β **Pal** 2-and **Pam** 2 or 3 segmented

χ 1st tergum with a sub rectangular outline in dorsal aspect

δ 1st tergal disk and semicircular areas on 2nd to 5th terga with sparse **p** bearing long whitish bristles just as the **p** of the row delimiting them.

ε The whole surface of areola under **sul** on 2nd tergum well prominent and delimited by strong **p** bearing long bristles

***Braunsomeria quadraticeps* TURNER 1912**

αα Eyes smaller, their height 1/3 the head in lateral aspect

ββ **Pal** 3- and **Pam** 2 or 4-segmented

χχ 1st tergum with a campanuliform outline in dorsal aspect

δδ 1st tergal surfaces and semicircular areas on 2nd to 5th terga completely smooth and **p**-less. Very weak **p** only along borders of semicircular areas

εε Areola partially prominent and delimited by weak **p** bearing short weak bristles.

***Braunsomeria micans* nov.sp.**

4

α Head dark brown to pitchy black

β Temples with sparse **p**

χ Rear border of $\mathbf{Sc_1}$ clearly bent backwardly

δ Forewing well overcoming propodeal fore border, covering **spP** in dorsal aspect

***Braunsomeria atriceps* TURNER 1912**

αα Head light reddish brown

ββ Temples with a differentiated stripe of **p** getting almost mandible condyle

χχ Rear border of $\mathbf{Sc_1}$ straight

δδ Forewing not overcoming propodeal fore border, leaving exposed **spP** in dorsal aspect

5

5

α Vertex subsquared in frontal aspect

β $\mathbf{I_{Ol\text{-}Ol}}$ about 2/3 length of tegula

χ Forewing stump greater and longer than tegula

δ Propodeum evenly rounded in dorsal aspect

ε Prominent areas on terga greatly strangled at their base, with apical subsferical enlargement

ϕ Ill defined areola on 2nd tergum

***Braunsomeria arnoldi* TURNER 1916**

αα Vertex gently rounded in frontal aspect

ββ $\mathbf{I_{Ol\text{-}Ol}}$ just a bit shorter than length of the tegula

χχ Forewing stump smaller and shorter than tegula

δδ Propodeum clearly angled in dorsal aspect

εε Prominent areas on terga gently strangled at their base, without apical subsferical enlargement

ϕϕ Well defined areola on 2nd tergum

***Braunsomeria glyptocorra* nov.sp.**

Braunsomeria quadraticeps TURNER 1912

Braunsomeria quadraticeps TURNER 1912: 698-699 (♀ & ♂)
Braunsomeria quadraticeps: JACOT-GUILLARMOD (1953: 15-16)
Braunsomeria quadraticeps: NAGY (1970: 189)
Lectotypus ♀ (here designated in order to ensure the name' proper and consistent use). South Africa: /Willowmore Capland Dr Brauns *1.1.1903*/ /Brauns coll. 1912-44/ /*Braunsomeria quadraticeps Type Turn*/ (autographic) / /Typ/ (rounded with red outer ring) /B:M: Type 15.1501/, BMNH !
Paralectotypus ♂. South Africa: /Willowmore Capland Dr Brauns *15.1.1902*/ /Brauns coll. 1912-44/ /*Braunsomeria quadraticeps Type Turn*/ (autographic) / /Typ/ (rounded with red outer ring) /Syntype/ (rounded with yellow outer ring) /B:M: Type 15.1501/, BMNH !
M a t e r i a l ♀. SouthAfrica = (1) /Kimberley Bio. power Nov. 1913/ /*Braunsomeria quadraticeps var. Turn*/ (autographic) /RE. Turner determ./ /SAM HYM A003 077/, SAM

Female. Lectotype. Figs 2-5. **Pal** and **Pam** both 2-segmented

The male paralectotype has **Pal** 2- and **Pam** 4-segmented, 3 ***CSM*** on the right wing and only two ***CSM*** on the left wing.

Braunsomeria atriceps TURNER 1912

Braunsomeria atriceps TURNER 1912: 699 (♀)
Braunsomeria atriceps: JACOT-GUILLARMOD (1953: 16)
Dermasothes atriceps: NAGY (1970: 191)
Holotypus ♀. South Africa: Algoa bay, cape Colony; November (Dr. Brauns), BMNH
Paratypus ♀. SouthAfrica: /Algoa Bay Capland dr Brauns *22.12.95*/ /Brauns coll 1912-44/ /Paratype/ (Rounded with yellow outer ring), BMNH
M a t e r i a l . ♀. SouthAfrica = (1) /Kimberley Bio. power 3. 1921/ / SAM HYM A003 078/, SAM.

The female paratype has **Pal** 2- and **Pam** both 2-segmented, the latter with very small apical one.

Braunsomeria arnoldi TURNER 1917

Braunsomeria arnoldi TURNER 1917: 352
Lectotypus ♀ (here designated in order to ensure the name' proper and consistent use): Zimbabwe: /*Bembesi* S. Rhodesia 2.I.1913 G.Arnold/ /*Braunsomeria Turn n.sp./ /Braunsomeria arnoldi Type Turner*/ (auotographic) /Type H.T./ (rounded with red outer ring) /Holotype/ (rounded with red outer ring) /B.M.Type Hym. 15.1503/, BMNH !

Pal 2- and **Pam** both 2-segmented.

Braunsomeria peringueyi TURNER 1920

Braunsomeria peringueyi TURNER 1920: 489-490.

Lectotypus ♂ (here designated in order to ensure the name' proper and consistent use). South Africa: /*O'okiep Nov 85*/ /*Braunsomeria peringueyi Turn. Type*) (autographic) /Type/ (red) /SAM HYM A00 3080/, SAM !

N o t e . It is a well known taxon by the vertical wrinkles on **em$_3$**, a character state not observed in any hitherto examined male specimen.

Braunsomeria cognata TURNER 1920

Braunsomeria cognata TURNER 1920: 490.

Lectotypus ♂ (here designated in order to ensure the name' proper and consistent use). South Africa: /Junction Crocodile Marico R. Transvaal/ /*Braunsomeria cognata Turn. Type* / (autographic) /Type/ (red) /SAM HYM A00 3082/, SAM!

Pal 2- and **Pam** 4-segmented.

Braunsomeria albohirta TURNER 1927

Braunsomeria albohirta TURNER 1927: 545-546.

Lectotypus ♀ (here designated in order to ensure the name' proper and consistent use). Zimbabwe: /Museum Bulawayo 13.10.1919 – G.Arnold/ /Brit. Mus. 1927-344/ */Braunsomeria albohirta Type Turner*/ (auotographic) /Type/ (rounded with red outer ring) /B.M.Type Hym. 15.1504/, BMNH!

Pal 3- and **Pam** 4-segmented.

Note. TURNER in the original paper wrote about three specimens; the sole specimen which exists at BMNH can be designed as lectotype.

Braunsomeria micans nov.sp.

Holotypus ♀. Botswana: /BOTSWANA Manxunyane/ /*19-26*.X.1976 AR. Smith B.M. 1979-256/, BMNH

Paratypi ♀. Botswana: (2) / BOTSWANA Manxunyane/ /*19-26*.X.1976 AR. Smith B.M. 1979-256/, BMNH (1), MZUF (1); (1) / BOTSWANA Manxunyane Mopane wood*19-26*.X.1976/ /AR. Smith B.M. 1979-256/, BMNH; (1) /BOTSWANA *X-1976 Manxunyane grassland Pitfall trap CR. Smith*/ /*Brunsomeria sp. ♀ not atriceps Turner* det. MC. Day1979/ /*Poecilotiphia sp.* V. Gorbatovsky det. *1987*/, BMNH

Female. Holotype. Figs 6-15. Measurements: body length = 6.8 mm

Almost uniformly light brown, as hair is, with slightly darker head.

The whole body and mainly dorsally smooth and shining with only very few **p** on temples and genae, ventral **es$_2$**, coxae and femurs, lateral **Sc$_2$**, posterior propodeal disk. Stripe of densely packed **p** on the collar, uppermost lateral **N$_1$**, t outer **es$_2$** and along the edge between dorsal and lateral areas of **P**. Sub vertical surface of 1st tergum with dense **p** bearing long whitish bristles. Metasoma also **p**-less but also microscopic ones along contour of slightly prominent semicircular areas present on 2nd to 5th terga and sterna. Row of single **p** delimiting anterior from sub vertical portion of vertex. **cOc** vanishing along the total length of vertex. Both **Pal** and **Pam** 3-segmented. Temples broadly angled with vertex. **PoG** distinctly longer than **FoO**. Very feeble, almost undetectable **mR** on dorsal **P**, 2nd to 5th terga and 2nd to 4th sterna; stronger **mR** on genae, **es$_1$** and forecoxa.

V a r i a b i l i t y . **Pam** is variably segmented, in one specimen left **Pam** is 3- and

right **Pam** is 4-segmented; one specimen has both **Pam** 2-segmented. Small variances about size, from 6 to 7.5 mm.

Male. Unknown.

D e r i v a t i o n o m i n i s . From the Latin micans (= shining).

***Braunsomeria glyptocorra* nov.sp.**

Holotypus ♀. Botswana: /BOTSWANA: Smiti grassland *19-26.IX.* 1975/ /AR. Smith B.M. 1979-256/, BMNH

Paratypus ♀. Botswana: (1) /BOTSWANA Okavango Shorobe VIII.1975/ /AR. Smith B.M. 1979-256/, BMNH. Namibia: (1) /Cochenagas 218 WINDHOEK 17°12'E 22°49'S 19 Nov-22 Dec 1981 M-L.Penrith Preser traps/ /NNIC/, NNM; (1) /Noachabeb 97 Keetmanshop SE 2719 Ba 7-12 Jan 1972/ /NNIC/, NNM

Paratypi ♂. (2) Botswana: /BOTSWANA: Smiti grassland *19-26.IX.* 1975/ /AR. Smith B.M. 1979-256/, BMNH; (1) /BOTSWANA: Smiti grassland.*IX.* 1975/ /AR. Smith B.M. 1979-256/, BMNH

Female. Holotype. Figs 16-24. Measurements: body length = 5.7 mm.

Reddish brown and light brown. Reddish brown are dorsal head and metasoma. All the remainder is light brown, including ventral head, clypeus, scape and contour of the prominent surfaces on metameri (giving them great evidence). Bristles and hair are light brown.

Few **p** on lower frons, the remainder smooth. Stripe of densely packed **p** on temples along the edge with dorsal surface, like a scar till mandible condyle. **PoG** just a bit shorter than **FoO**. **Pal** and **Pam** both 2-segmented. Sparse p on $\mathbf{N_1}$ disk, lateral surface finely shagreened. Remainder of dorsal mesosoma almost **p**-less. Metanotum ($\mathbf{N_3}$) without evident lateral pits. Narrow stripe of densely packed p along the contour edge between dorsal and lateral surfaces of **P**. Sub vertical surface of 1st tergum with numerous **p** bearing long bristles. Terga and sterna with **p** only along the contour of prominent areas. 1st sternal disk densely and finely sculptured, sub orthogonal to petiolar surface, getting an arched angle between them. No **sul** on 2nd tergum, with a well developed and prominent areola, delimited by **p** bearing very long bristles. Feeble **mR** on frons and propodeal disk; strong and well detectable at x20 on metasoma.

Male. Paratype. Figs 25-37. Measurements: Body length = 7 mm.

Basic body colour of head and mesosoma is black. Dark portions of legs and metasoma are brown. Apex of 7th tergum is semitransparent. Pale yellow: most of clypeus and mandible, borders of **Tsa**, large markings on head and mesosoma (**P** is mostly black with only small spots on lateral surfaces); apical stripe on terga, becoming larger on 3rd to 7th ones, with strongly indented fore profile, often closing two lateral brown "eyes" assuming a striking masked appearance; 1st sternum with two small lateral spots; the remainder of sterna almost completely with lateral brown small "eyes"; veins and perimeter of pterostigma which has transparent centre.

Sparse p throughout head and mesosoma, with completely smooth clypeus, central frons and lower genae. **cOc** complete. **PoG** strongly depressed. **Pal** 2- and **Pam** 3-segmented. 2nd flagellomerus about 1.8-1.9 times longer than 1st flagellomerus. Ventral suture Ventral suture between $\mathbf{es_2}$ like a strong stitch. $\mathbf{em_3}$ sub horizontally wrinkled. Disk of **P** mostly finely sculptured with a smooth shining subtriangular surface adiacent to postscutellar area. lateral **P** with weak sculpture among sparse **p**. Strong gradulus on 2nd

tergum. Sul wellexpressed on 1st and 2nd, vestigial on 3rd and 4th terga. Very weak **mR** (x80) on ventral **es$_2$**, 2nd to 6th sterna.

N o t e . The sex association is based only on the identity of the labels. It is distinct from other males by different palpal formula, different clypeus, different apical cells of the forewing.

V a r i a b i l i t y . Male paratypes slightly differ in colour patterns.

D e r i v a t i o n o m i n i s . From the Greek γλυπτός = engraved and κόρρη (α) = temple.

***Notomeria* genus novum**

Typus generis. *Myzine constrictiventris* TURNER 1912: 701-702.
Braunsomeria: TURNER (1913: 720-722).

D e r i v a t i o n o m i n i s . From the Greek word νότος = South and *Meria*.

Key to species

1
Males 2
Females 3

2

α Anteroventral corner of pronotal disk unarmed

β 7th tergum with a median apical notch well developed and without differentiated horizontal and vertical lateral areas

χ 8th sternum (anal hook) slender with an acute tips

δ Light apical bands on 2nd to 6th terga

ε Volsella without strong spines on its inner surface

***Notomeria namibiana* nov.sp.**

α Anteroventral corner of pronotal disk with a prominent tooth

β 7th tergum without notch, its apex only with a shallow concavity in dorsal aspect, and with well differentiated horizontal and vertical lateral areas

χ 8th sternum stout and strongly bent apically, with a blunt tip

δ Only lateral spots on 2nd to 6th terga

ε Volsella with strong spines on its inner surface

Notomeria constrictiventris (TURNER 1912)

3

α **Pal** 1-, **Pam** 2-segmented

β Large pits present on sides of of **Sc$_2$**

χ Body black and ferruginous, strongly pigmented and pitted integument, with stout bristles; **p**. tend to be settled longitudinally on the metasoma

δ Light markings on metasoma. Bigger size (~ 12 mm)

ε Basal hind tarsomerus with strong spines

ϕ **sul** present on 1st to 5th terga

γ Metasoma convex, not flattened

Notomeria mutilloides (TURNER 1913)

αα **Pal** and **Pam** both 1-segmented

ββ No pits on $\mathbf{Sc_2}$

χχ The whole body pale brown yellow ferruginous, feebly pigmented with weak whitish hair

δδ No light markings. Small size: 7 mm

εε Basal hind tarsomerus unarmed

ϕϕ **sul** present only on 1st and 2nd terga

γγ Metasoma flattened

Notomeria constrictiventris (TURNER 1912)

Notomeria constrictiventris (TURNER 1912) nov. comb.

Myzine constrictiventris TURNER 1912: 701-702

Lectotypus ♂.(here designated in order to ensure the name' proper and consistent use). South Africa: /Willowmore, Capland 1.12.1901 Dr Brauns/, /Brauns coll. 1912-44/ /*Myzine constrictiventris Type Turn*/ (autographic)/ /Type/ (rounded with red outer ring), BMNH !

Paralectotypi ♂. South Africa: (1) /Willowmore, Capland 15.10.99 Dr Brauns/, /Brauns coll. 1912-44/, BMNH; (1) /Willowmore, Capland 15.11.1901 Dr Brauns/, /Brauns coll. 1912-44/, BMNH; (1) /Willowmore, Capland Dr Brauns *1.IV.1901*/ /*Myzine constrictiventris*/ /South African Museum ex National Museum Bulawayo 1917 /SAM HYM A003171/, SAM

Braunsomeria perpunctata TURNER 1913 **nov.syn.**

Lectotypus ♀ (here designated in order to ensure the name' proper and consistent use). South Africa: /Willowmore, Capland Dr Brauns/ /*Braunsomeria perpunctata Type Turn.*/ (autographic) /Type Turn/ (red) /*Braunsomeria perpunctata Type Turne*/ /Type Hym 0 342 Braunsomeria perpunctata Turner/, TMP!

Male. Paralectotype from SAM. Figs 38-44.

Female. Lectotype *B. perpunctata*. Figs 45-50.

Note. The present association is purely intuitive based on their common ascription to the tribe Braunsomeriina and consequently on a "convention ad excludendum". In the choice between *B. mutilloides* and *B. perpunctata* the identity of labels of the types benefits the latter, even though the size could advise otherwise.

The choice to design as lectotype and paralectotypes the specimens of *Myzine constrictiventris* at BMNH has been made because TURNER wrote "October to January", so *meaning* the existence of more than one typical specimen. Otherwise the typical specimen of *B. perpunctata* has been stated already holotype (FITZIMONS & al. 1958: 49) and there is no reason for any change since it is really the unique recorded specimen.

Notomeria namibiana nov.sp.

Holotypus ♂. Namibia: /Regenstein 32 Windhoek SE 2217 Ca 6 Mar 1973/ /H12065//NNIC/, NNM

Paratypus ♂. Namibia: (2) /Windhoek SE 2217 Ca 13-15 Nov 1973/ /NNIC/ NNM (1), MZUF (1)

Male. Holotype Figs 51-66. Measurements: body length = 8 mm.

Black. Flagellum, dark portions of the legs, last two terga and all the sterna and anal hook (8th sternum) are brown. Tip of mandible, veins and pterostigam, lateroterga are semitransparent brown. Creamy yellow: most of mandibles, small spot along inner and outer contours of eye, two subapical stripes on $\mathbf{N_1}$ disk, apical femurs, upper fore tibia, tarsi, narrow apical stripes with median and lateral extensions of the fore contour on 2nd to 6th terga, two lateral irregular spots on 2nd to 5th sterna. Hair, spines and calcaria whitish.

Large puncture-less areas before **mO**, laterally to **lO** and on vertex. Irregularly sparse **p** (**iS** far longer than their diameter) on most of the head (lower frons more densely p), $\mathbf{N_1}$ disk, $\mathbf{Sc_1}$ and $\mathbf{Sc_2}$. **PoG** depressed, appearing like a stitch Lateral $\mathbf{N_1}$ mostly corrugated. Regular and less sparse **p** on $\mathbf{es_2}$. $\mathbf{em_3}$ and antero-ventral stripe of lateral **P** strongly wrinkled. The remainder of **P** densely **p** and/or corrugated. Terga sparsely **p**, sterna almost smooth and shining.

N o t e . It lacks left hind tarsus and last four hind tarsomeri. No variability neither in size neither in colour patterns.

Female. Unknown.

V a r i a b i l i t y . No detectable differences between holo- and paratypes.

***Notomeria mutilloides* (TURNER 1913) nov.comb.**

Braunsomeria mutilloides TURNER 1913: 721-722.
Holotype(?) ♀. Zimbabwe: Salisbury, Mashonaland, TMP?).

M a t e r i a l . ♀. Zimbabwe = (1) /*Empandeni* S.Rhodesia *13.1.*19*19* Rhodesia Museum *leg. O'Neil*/, BMNH; (1) /Salisbury April 13/ /*Braunsomeria mutilloides Turn*/ (autographic) /RE: Turner determ./ /SAM HYM A003079/, SAM

Female. Figs 67-68.

Acknowledgments

The author is grateful for the loan of the material to the following colleagues: M.A. Cochrane and Simon van Noort (Cape Town, SAM), B. Dombrowsky (Pretoria, TMP), Eugene Marais (Whindoek, NMN). Special thanks to Suzanne Ryder and Gavin Broad (London, BMNH) for loans and a lot of additional informations about material at BMNH.

Zusammenfassung

Vorliegende Arbeit behandelt die Unterfamilie Myzininae der Alten Welt (Subtribus Braunsomeriina). Es werden drei neue Arten beschrieben: *Braunsomeria glyptocorra*, *Braunsomeria micans*, *Notomeria namibiana.* Die neue Gattung *Notomeria* basiert auf dem Genotypus *Myzine constrictiventris* TURNER 1912. Als neue Kombinationen werden nunmehr *Myzine constrictiventris*, *Braunsomeria perpunctata* TURNER 1913 und *Braunsomeria mutilloides* TURNER 1913 unter *Notomeria* geführt. Lectotypen von *Braunsomeria quadraticeps* TURNER 1912, *Myzine constrictiventris* TURNER 1912, *Braunsomeria perpunctata* TURNER 1913, *Braunsomeria arnoldi* TURNER 1917, *Braunsomeria peringueyi* TURNER 1920, *Braunsomeria cognata* TURNER 1920 und *Braunsomeria albohirta* TURNER 1927 werden designiert.

References

ARGAMAN Q. (1994): Generic synopsis of Myzinidae (Hymenoptera: Scolioidea). — Annales. historico-naturales Musei nationalis hungarici. **86**: 85-104.

BOHART R.M. & A.S. MENKE (1976): Sphecid wasps of the world. — University of California Press, Berkeley, IX + 695 pp.

BONI BARTALUCCI M. (2004b): Tribe-groups of the Myzininae with special regard to the palaearctic taxa of the tribe Meriini (Hymenoptera, Tiphiidae). — Linzer biol. Beitr. **36** (2): 1205-1308.

FITZIMONS V. & A.J. JANSE (1958): A list of zoological and botanical types preserved in collections in Southern and East Africa. — Published by the South African Museums' Association, Pretoria **1** (1): 1-147.

GAULD I. & B. BOLTON (1988): The Hymenoptera. — British Museum (Natural History) & Oxford University press, Oxford, 332 pp.

GOULET H. & J.T. HUBER (1993): Hymenoptera of the world: an identification guide to families. — Research Branch Agriculture Canada publication, Ottawa, VII+668 pp.

JACOT GUILLARMOD C. (1953): Preliminary notes on African Tiphiidae (Hymenoptera). — Proceedings of the Royal entomologivcal Society of London (b) **22** (1-2): 15-18.

KROMBEIN K.V. (1937): Studies in the Tiphiidae (Hymenoptera aculeata). — Ann. Ent. Soc. Am. **30**: 26-30.

NAGY C.G. (1970): The identity of the genera *Bruesia* KIEFFER and *Dermasothes* MENOZZI (Hymenoptera: Heterogynidae). — Rev. Zool. Bot. Afr. **36** (1-2): 188-192.

PILGRIM E.M., VON DOLEN C.D. & J.P. PITTS (2008): Molecular phylogenetics of Vespoidea indicate paraphyly of the superfamily and novel relationships of its component families and subfamilies. — Zoologica Scripta **37**: 539-560.

TURNER R.E. (1912): Studies in the Fossorial Wasps of the family Scoliidae, Subfamilies Elidinae and Anthoboscinae. — Proceedings of the Zoological Society of London **46**: 696-754.

TURNER R.E. (1913): On new species of fossorial Hymenoptera from Africa, mostly Elidinae. — Trans. ent. Soc. London **4**: 720-754.

TURNER R.E. (1917): Notes on Fossorial Hymenoptera. XXX On new Ethiopian Scoliidae. — Ann. Mag. Nat. Hist. **8** (20): 351-356.

TURNER R.E. (1920): On Some New species and others of Fossorial hymenoptera in the South African Museum. — Annals of the South African Museum **17**: 489-497.

TURNER R.E. (1927): Notes on Fossorial Hymenoptera. — Ann. Mag. Nat. Hist. **9** (20): 545-552.

Author's address: Dr. Mario BONI BARTALUCCI
Sezione di Entomologia
Museo Zoologico "La Specola"
via Romana 17
I-50125 Firenze, Italy
E-mail: bonibartaluccimario@hotmail.com

For technical reasons the figures 1-68 of this article are given as appendix on pages 893-899.