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Tribe-groups of the Myzininae with special regard to the palaearctic taxa of the tribe Meriini (Hymenoptera, Tiphiidae)

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Abstract: The subfamily Myzininae is splitted in four tribe-groups: Austromyzinini, Myzinini, Mesini and Meriini; the last one is furtherly divided in two subtribe-groups: Braunsomeriina and Meriina. An identification key for the Palaearctic genera of the subtribe Meriina is proposed with a special concern to the crepuscular and nocturnal forms; about them the revision of the taxon *Iswara* WESTWOOD 1851 and *Komarowia* RADOSZKOWSKI 1886 is performed. The taxon names *Cocovasna* ARGAMAN 1994, *Gonordula* ARGAMAN 1994, *Keyovaska* ARGAMAN 1994 are synonymizied with *Myzinum* LATREILLE 1803, *Nyuka* ARGAMAN 1994 with *Mesa* SAUSSURE 1892 and *Melaniswara* GORBATOVSKY 1977 with *Komarowia* RADOSZKOWSKI 1886. Two new genera are named: *Tamerlanella* and *Lamprowara*. The new species *Iswara physostomus*, *Iswara elongatus*, *Iswara arabicus*, *Komarowia meridiana*, *Komarowia concolor*, *Lamprowara leucothorax* and *Lamprowara gorbatovskyi* are also described. The lectotypes of *Meria radialis* SAUSSURE 1880 (♂) and *Pseudomeria tamerlanella* SAUSSURE 1880 (♀) are designated, redescribed and their synonymy proposed. The lectotype and paralectotype of *Myzine nodosa* GUÉRIN, 1837, the neotype of *Iswara fasciatus* SMITH 1873 are designated. The holotypes of *Iswara luteus* WESTWOOD 1851 (♂) and *Iswara mongolicus* GUIGLIA 1973 (♀ = *K. mongolina*), the lectotypes (♂) of *Myzine orientalis* SMITH 1879, *Myzine pallida* SMITH 1879 and the paralectotype of *Milluta chobauti* ANDRÈ 1898 have been redescribed. The following old taxa are described and/or newly combined: *Meria radialis* SAUSSURE 1880 and *Meria kurnubiensis* GUIGLIA 1963 under the new genus *Tamerlanella*; *Myzine pallida* SMITH 1879, *Milluta chobauti* ANDRÈ 1898, *I. mateui* SUAREZ 1974, *Meria nocturna* MORAWITZ 1888. under *Iswara* WESTWOOD 1851; *Iswara fasciatus* SMITH 1873, *Myzine orientalis* SMITH 1879, *Meria tartara* SAUSSURE,1880, *Meria timurella* SAUSSURE 1880, *Meria immatura* MORAWITZ 1890, *Meria mongolina* GUIGLIA 1965 under *Komarowia* RADOSZKOWSKI 1886. The proposal of invalidating the synonymies by ARGAMAN (1994) of *Dermasothes* MENOZZI 1940 with *Komarowia* RADOSZKOWSKI 1886 and of *Scleroderma ruficornis* LUCAS 1846 [which actually belongs to *Poecilotiphia* CAMERON 1902 and should be named *P. ruficornis* (LUCAS 1846)].with *K. victoriosa* RADOSZKOWSKI 1886 (= *K. tartara*) is also introduced.

Key words: Myzininae, tribes, *Iswara*, *Komarowia*, *Tamerlanella*, *Lamprowara*.

Introduction

This subfamily did not attract great attention of many students because of its poor economic weight, its inhabiting among the most waste areas of the world and the customary scarceness and difficulty for most of the females to be found in the habitats.

They are normally colourful wasps with a strong to extreme sexual dimorphism which makes hard to visualize a typical Myzinin and which caused many ancient authors to often mislead their correct position; probably because of that there is no common name applied to the members of this subfamily.

Myzinins are quite scarce in the collections and most of them are rarely encountered by collectors, especially in the Old World. Only the nearctic taxa are more frequently collected and are present in the collections in fairly good amounts; their ethology is also by far better known than for the Old World forms.

This a medium sized subfamily with an approximated number of 200 so far known apparently valid species, but the state of the art is very far to have a satisfying settlement; many areas of the Southern hemisphere and sub desert zones wait for a deeper investigation.

Morphology and methods

The majority of the species are small to medium wasps, the giants belong to *Austromyzinum* and *Myzinum* (up to 25 mm), the pygmies to the Old World fauna (down to the 5 mm of *Myzinella*). Coloration is mostly meaningless at specific to tribal level about the males, because of their relative variability; only the males of the *Iswara* group show a particular habitus, recognizable at first insight because of their mostly uniform, straw coloration with translucent integuments. On the contrary about the females we can trace some headlines at generic level, taking account of the few exceptions about. In front of the always light spotted females of *Myzinum* and most of the *Austromyzinum*, the females of *Mesa* (but two species: *picticollis* and *picta*) and *Hylomesa* are without any light spots; the females of *Macromeria*, *Iswara*, *Komarowia*, *Poecilotiphia*, *Braunsomeria*, *Myzinella* and *Tamerlanella* are spotless. *Parameria* and *Meria* have the metasoma with creamy spots, but few species of the latter. Just few species of the genus *Hylomesa* show well detectable metallic lustre, especially on the metasoma; some males of different genera have at the most feeble metallic reflections on the metasoma.

The morphological terminology mostly follows GAULD & BOLTON (1988); the body orientation used here in descriptions and drawings follows the GOULET & HUBER (1993) indications, while mesosomal and wing terminologies of the figures 1-3 has been mainly lent from REID (1941) and BOHART & MENKE (1976).

The frontal aspect of the head is performed perpendicularly to the virtual plane "A" indicated by the line on the figures 28 and 131; the dorsal and lateral aspects, perpendicular to each other, are performed along the virtual plane on the occipital carina represented by the line B.

The sensilla placoidea on the flagellomeres are named MPS (BASIBUYUK & QUICKE 1999) and in the subfamily are mostly elliptic or sausage shaped, while the previously (BONI BARTALUCCI 1997, 2001) named "bent bristles" which are placed on particular areas of the flagellomeres of the males are actually the "sensilla trichoidea curvata" of authors and here will be simply named "sensilla curvata" while "placoid (-s)" indicate the depression where they often lie into. Two more kinds of conical sensilla trichoidea, slender and stout, are also present in the large majority of taxa and are named respectively sensilla trichoidea and sensilla basiconica.

The term "brachyptery" is used for all the females of Meriini, both so far called flightless and apt to flight forms; this distinction used by REID (1941) is somehow unclear and potentially source of misinterpretation since the wing length is too much variable into the same genus (from scale-like to apparently long enough to be regarded fit to flying); hence to estimate when we deal with an effective wing capability is often a hard task. The recorded behaviour by BONI BARTALUCCI (1994) of the apparently fully winged females of *Poecilotiphia rousseli* (GUÉRIN 1838), which showed a really reduced ability to flight, corroborates the REID's intuition (1941: 368) about: "it is possible that the muscles of flight become reduced to an extent that makes flight impossible, before the wings themselves become too small."

Here "brachyptery" simply means both the reduction of the number of closed cells together with the loss of function of the apical veins in the fore wing, which have lost the tubular structure to become nebulous (MASON 1986).

In the vast majority of the females of the tribe Meriini where six or seven functional cells are expressed, the previously called 3rd CSM is here named Paramarginal Cell (CPM), since it has been considered the result of the melting between CM and 3rd CSM through the loss of the apical Rs vein and the confluence between the veins R_1 and 3rs-m [All that has been inferred from the wing formula of the females of the tribes Myzinini and Mesini (Figs 20, 31) where the vein R_1 shows both a similar attachment on the pterostigma and the detachment from the wing edge]. At the same time, the loss of the tubular habit to become nebulous for the apical veins of the same CPM and 2nd CD and the withdrawal of the 2rs-m towards the middle of the wing always occur in this tribe. As a result, in the females of Meriini the tubular veins barely get at most half the length of the fore wing, clearly before the end of pterostigma. The hind wing too show a withdrawal of the cells with tubular veins toward its base with drastic reduction of the length of the Rs, M and M+Cu veins (Fig. 3A).

In the females of the subfamily, the wing veins and cells show discriminatory characters among the tribes, while in the males there is a substantial homogeneity about (apart the relative ratio between jugum and clavus) with few exceptions within Meriini. Moreover, the wing pattern of the males is very similar to the wings of both sexes of Austromyzinini, which do not show any sexual dimorphism about, unless the light apical detachment of the vein R_1 from the wing edge in the females.

For the morphological terms the well established English words have been used, otherwise the latin form has been preferred. Some other specifications have to be stressed to avoid misunderstandings about the terminology; following GOULET & HUBER (1993) the term metasternum refers only to the mesosomal sclerite, while the ventral sclerites of the metasoma have to be simply named "sternum (-a)" and the relative dorsal sclerites "tergum (-a)". "Metamerus (-i)" refers to every entire single segment of the metasoma. Postscutellum or postscutellar area here means the central area of metanotum between the large lateral pits (fN3).

The characters 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

Diagnostic character states

1. Presence of strongly prominent supra antennal lobes (Tsa) (Fig. 261) (♀ & ♂)

2. Radicle axis is sub perpendicular to the main axis of the scape (Figs 262, 263) (♀ & ♂)
3. Pedicel mostly concealed, and fulfilling it, into the apical cavity of the scape; the latter is expanded anteriorly, completely covering the pedicel in frontal aspect; the flagellum appears to have only 10 segments in the females and 11 in the males. (Fig. 263) (♀ & ♂)
4. The bristles on the pedicel are very short, less than 1/5 the height of the element (Fig. 264) (♀ & ♂) (Austromyzinini constitutes a significant exception)
5. Eyes higher than large, parallel, often with an inner notch in the males and at any way weakly concave in both sexes in frontal aspect (♀ & ♂)
6. Mesepisternum (es_2) largely swollen and well protruding outwards from the outline of the mesosoma (more stressed in the females, Fig. 1A) in dorsal aspect, producing two shelters for the folded fore and median/hind femurs, respectively before and back to it (♀ & ♂)
7. Metapleural line (su_3) between upper and lower metapleural pits either not expressed or shifted very close to the metacoxal carina, so lower metapleura is normally not expressed or very small and almost undetectable (♀ & ♂)
8. Mesosternal lobes (LaM) contiguous for half their length at least (Figs 1A, 2A) (♀ & ♂)
9. Propodeal sternite (StP) completely developed, separating propodeal (FoP) from hindcoxal fossa (FoX) in ventral aspect; only Austromyzinini show the opposite state with sternite not developed and fused fossae
10. The velum of the fore tibial spur does not show any combed surface, with an entire border too; only Austromyzinini show a roughly fissured border (♀ & ♂)
11. Two midtibial spurs (only one recorded exception) (♀ & ♂).
12. Tarsal claws generally bifid or with a median tooth (♀ & ♂)
13. Always with a deep constriction between 1st and 2nd sterna (♀ & ♂) (quite weaker in Austromyzinini)
14. Furrow (sul) separating terga from lateroterga always present in one metamere at least (♀ & ♂)
15. Tsa largely fused to each other for most of their extension, well separating frons from the underlying sub triangular Ssa (Fig. 261) (♂)
16. In the females the scape is elongated, with a sub cylindrical shape for most of its length which is always more than 2.5 times its height in frontal aspect, (Fig. 262) (♀)
17. The first flagellomerus of the males shows, about medially in frontal aspect, a small sub rounded plate of sensitive pores (Fig. 263) (♂)
18. MPS on the flagellum are sausage shaped or more or less elliptical (Fig. 265), but in Austromyzinini where they are rounded (♂)
19. Ocelli normally present; sometimes they are absent in the females of the genera *Iswara* and *Komarowia* where the males bear conspicuously enlarged ocelli
20. Presence in the males, but in *Zezelda*, *Iswara* and *Komarowia*, of a vertical shining surface, the pronotal plate, sometimes surrounded above by an acute keel, separating it from the pronotal disk (Fig. 266) (♂)

21. Except in Braunsomeriina where scutum (Sc_1) is strongly atrophied, the area parapsidalis (= ap) is large, its width about ¼ the median height of the exposed Sc_1 in dorsal aspect and, but in *Austromyzinum*, its posterior corner is quite protruding, completely covering the lateral section of the transscutal suture (sts) in dorsal aspect (Fig. 1A) (♀)
22. In the females the legs are normally heavy built, with strongly expanded mid and hind femurs (♀)
23. Hind tibial spur simply scaled, without evident comb-like structures up to × 100 magnifications, but in Braunsomeriina where it looks like in *Methocha* (Fig. 280) (♂)
24. Male epipygium (or 7th tergum) mostly strongly notched; within some genera (*Austromyzinum* and *Mesa*) the notch can be very shallow (♂)
25. Male hypopygium (or 8th sternum) turned into a long and strong upward curved hook (♂)
26. 6th sternum no longer than 5th, leaving exposed most of 7th sternum in the males. (♂)
27. Volsella flattened, almost bidimensional; the articulated digitus and cuspis lie on the same plane of its main body (♂)

At a glance the Myzininae are featured wasps by the prominent, well-developed Tsa in both of the sexes and the 8th sternum of the males transformed in a strong upwards hook. Nevertheless, other representatives of the Tiphiidae show these characters.

State 1 is well developed also in both sexes of *Pterombrus*, in the males of Methochinae and, even if normally less developed, in most of the taxa of Thynninae; the same distribution is showed by state 2, while Anthoboscinae, Diamminae, Brachycistidinae and Tiphiinae share both absence of the Tsa and coaxial scape and radicle. State 5 is present in most of the Tiphiid taxa, while a notched inner border is present only in many taxa of the Myzininae. State 6 occurs also in other groups but the females of Methochinae, Diamminae and Thynninae. State 7 occurs only in the females of Brachycistidinae. States 8, 11, 12, 19, 23 are widely distributed in most of the groups within the family. The presence of the state 25 (8th sternum changed in a strong upward hook) occurs in all groups, even if variously shaped, but Anthoboscinae and many Thynnins taxa. State 13 lacks only in Anthoboscinae and females of Thynninae.

State 3, 16, 17, 27 occurring exclusively in the taxa of this group, could be considered good and reliable synapomorphies for Myzininae. The state described at item 21 is also unique in the subfamily, only approached by *Pterombrus*, where otherwise the posterior corner does not protrude.

The states 4 and 18 could be good synapomorphies for this group, excluding Austromyzinini, where the pedicel (state 4) show at its apex as long bristles as half its height and the MPS (state 18) are well rounded like in all the other Tiphiidae. The state 15 is shared by *Pterombrus* [while in the males of Methochinae and Thynninae the Tsa are not fused to each other at all, separated by a narrow stripe of frontal surface which contact directly the underlying Ssa]. The state 24, shallowly expressed about some *Austromyzinyum* and *Mesa*, is otherwise clearly present about some *Pterombrus* too. The same reasoning is concerned with the state 10 (within the limits of the males): in the other Tiphiidae the velum of the fore tibial spur is completely combed or it has a combed marginal half; in few instances about Thynninae it has a rough combed structure, the same condition occurring both in females and males of Austromyzinini.

Myzininae including Austromyzinini appear a not so homogeneous group; a forthcoming phylogenetic analysis could support or not if it can be considered a paraphiletic group. Austromyzinini show important differences from the remainder taxa of the subfamily; one of these, displayed at item 9, has been used elsewhere (KIMSEY 1991) to discriminate taxa at the subfamily level.

In Myzininae, sexual dimorphism ranges from quite consistent to extreme, following the general trend in Hymenoptera where the males are more slender and show more primitive character states, with few exceptions, than females.

Many arguments and proofs, which will be better dealt with in a next issue, induce to take off from Myzininae (and place probably very close to, but not within, Methochinae) the genera *Pterombrus* and *Isotiphia*, which do not possess character states 3, 16, 17 and 27 (together with other different character states and different way of living). Henceforth this treatment omits any other than historical reference to them.

Abbreviations

A	height (Altitudo).
amP	marginal area of propodeum (area marginalis Propodei)
ap	area parapsidalis
as	area subalaris
Ca	head (Caput)
CB	basal cell (Cella Basalis)
CC	coastal cell (Cella Costalis)
CD	discoidal cell (Cella Discoidalis)
cHy	hypostomal keel (carina Hypostomae)
CM	marginal cell (Cella Marginalis)
cmP	propodeal marginal keel (carina marginalis Propodei)
cOc	carina Occipitis (-alis)
CPM	paramarginal cell (Cella Para Marginalis)
CSB	subbasal cell (Cella Sub Basalis)
CSD	subdiscoidal cell (Cella Sub Discoidalis)
CSM	sub marginal cell (Cella Sub Marginalis)
D	diameter (Diametros)
dP	propodeal tooth (dens Propodei)
eN$_1$	pronotal collar (extensio Pronoti)
em	epimeron
es	episternum
F	female (Femina)
Fa	anterior discriminal pit (foramen anteriore)
fav	anteroventral pit (foramen antero ventrale)
fi	lower metapleural pit (foramen inferiore)
fN$_3$	metanotal pit (foramen metaNoti)
fs	upper metapleural pit (foramen superiore)
lh	humeral lamella (lamella humeralis)
M	Male (Mas)
mem$_3$	metepimeral edge (margo metepimeri)
mes$_2$	mesepisternal edge (margo mesepisterni)
Mpm	paramandibular edge (margo paramandibularis)
Mps	parascutal edge (margo parascutalis)
MP	external (dorsal) cuticolar surface of the MPS
MPS	Multiporous Plate Sensillum
MS	MesoSoma
MT	MeTasoma
N$_1$	proNotum
N$_3$	metaNotum
No	Notaulix
O	eye (Oculus)
ol	lateral ocellus (ocellus lateralis)
om	median ocellus (ocellus medianus).
P	Propodeum
pN$_3$	postmetaNotum
Pal	labial palpus (Palpus labialis)
Pam	maxillary palpus (Palpus maxillaris)
pcl	claval furrow (plica clavi)
pju	jugal furrow (plica jugi)
PoG	genal bridge (Pons Genarum)
sb	scrobis
Sc$_1$	Scutum
Sc$_2$	Scutellum
sts	transscutal suture (sutura trans scutum)

fSt_2	mesosternal pit (foramen mesoSterni)
FoX	coxal cavity (Fossa coXae)
FoO	oral cavity (Fossa Oris)
FoP	propodeal cavity (Fossa Propodei)
Fos	subalar cavity (Fossa subalaris)
G	Gena
Hy	Hypostoma
I	distance (Intervallum)
L	length (Longitudo)
L_{MS}	length from tip of the pronotum to the propodeal end (Longitudo MeSosomae)
L_{Tap}	hind tarsus length (Longitudo Tarsi posterioris)
L_{Tap4}	penultimate hind Tarsomerus length (LongitudoTarsomeri posterioris IV)
L_{Tap5}	ultimate hind tarsomerus length (Longitudo Tarsi posterioris V).
L_{Tip}	hind tibia length (Longitudo tibiae posterioris)
LA	width (LAtitudo)
LA_{MS}	width of the mesosoma between outer edges of the es_2 (LAtitudo MeSosomae)
LA_{NI}	width of the pronotum in dorsal aspect (Latitudo pronoti)
LaM	mesosternal lobes (Lamellae Mesosterni)
smm	meso-metapleural suture (sutura meso-metapleuralis)
spP	propodeal spiracle (spiraculum Propodei)
SPr	prepectal sclerite (Scleritis Praepecti)
Ssa	subantennal sclerite (Scleritis sub antenna)
stm	transmetanotal suture (sutura trans metanotum)
St_1	proSternum
St_3	metaSternum
StP	propodeal sternite (Sternum Propodei)
Sul	lateral furrow (sulcus lateralis)
su_3	metapleural line (sulcus metapleurae)
sum	transmetapleural line (sulcus intra metapleuras)
sup	parapsidal furrow (sulcus parapsidis)
To	Torulus
Ta	Tarsus
Tg	Tegula
Ti	Tibia
Tsa	supra antennal lobes (Tuberculum supra antennam)
X	coXa

! = Types examined; / / = delimit the single label; Mya = Million years ago; SEM = Scanning Electronic Microscopy.

Genitalia are settled in a solidified drop of 5,5-dimethyl hidantoin formaldheyd (5,5-DMHF) on a transparent support. The drawings of the volsella and gonostylus show respectively their inner and outer aspect, unless otherwise indicated. Henceforth the outermost pair of appendages of male genitalia will be termed "gonostylus" (with its portions basi- and disti-stylus) instead of the previously used "paramere". Hair and punctuation have been overlooked in most of the drawings. Most of the hair has been drawn off by the specimens used for the SEM analysis too.

SEM pictures have been performed by Maurizio Ulivi at the "Centro di Microscopia elettronica e di microanalisi" of the University of Florence.

Acronyms

ANSP = Academy of Natural Science, Philadelphia; BMNH = Natural History Museum, London; CB = Collection Borsato; CP = Collection Pagliano; MHNG = Museum d'Histoire Naturelle, Genéve; MNHB = Museum Nationale Hungaricum (Magyar Természettudomànyi Mùzeum), Budapest; MHNP = Museum d'Histore naturelle, Paris; MNCN = Museum Nacional de Ciencias naturales, Madrid; MNHU = Museum für Naturkunde der Humboldt-Universität, Berlin; MSNG = Museo Civico di Storia naturale "G. Doria", Genov.; MSNP = Museo di Scienze Naturali di Calci (Pisa); MZUF = Museo Zoologico de "La Specola", Firenze; NMN = National Museum of

Namibia, Windhoek; NNIC = National Namibian Insect Collection; NHMW = Naturhistorische Museum, Wien; NTM = Northern Territory Museum, Darwin; OLL = Oberösterreichisches Landesmuseum, Linz; OUM = University Museum, Oxford; PAN = Polska Akademia Nauk (Institute of Systematics and Evolution of Animals), Krakow; SAM = South African Museum, Cape Town; USNMNH = United States National Museum of Natutral History, Washington; UZM = Universitets Zoologiske Museum, Copenhagen; WAM =Western Australia Museum, Perth; ZIN = Academy of Science, Saint Petersburg; ZMA = Zoological Museum, Amsterdam; ZMUM = Zoological Museum University Moscow.

Historical outline

LATREILLE (1803) established the genus *Myzinum* (modified to the vernacular *Myzine* in the same work) on *Tiphia maculata* FABRICIUS 1793, a female specimen from Northern America; FABRICIUS (1804) erected the new genus *Elis* on his *Scolia sexcincta* (a male), actually *Myzinum quinquecinctum* (FABRICIUS 1775). ILLIGER (1807) established the genus *Meria* for the Old world female *Tiphia tripunctata* ROSSI 1790; JURINE (1807) described *Tachus staphylinus*, which is actually isogenotypic with *Tiphia tripunctata*, and established *Plesia* on the same *maculata* from Northern America. The next major students "shuffled" these names for more than one century, because of the strong sexual dimorphism and the apparent similarity of the males from the different continents, generating a lot of confusion. GUÉRIN first (1837) used the name *Myzine* for all the male specimens, then (1838) *Plesia* for the females from Americas and the females far after ascribed to *Mesa* and finally (1839) *Meria* for the other females from Old World. After him many authors [GERSTAECKER (1857), SMITH (1855, 1879), BURMEISTER (1874, 1876), MOCSARY (1883), MAGRETTI (1884), COSTA (1887), CRESSON (1887)] used *Myzine* for different taxa too, while others [WESTWOOD (1835), SICHEL (1859), RADOSZKOWSKI (1886, 1887), MORAWITZ (1888, 1890 and 1896), GRIBODO (1893)] used *Meria*. SAUSSURE (1880) used *Plesia* and *Pseudomeria* for females, *Meria* for both sexes of *tripunctata* and other males; successively (1892) he used *Plesia* for the females of the new world, *Meria* and his new genus *Mesa* for the females of the Old World, *Myzine* for the males of all of them, rightly suggesting at the same time a deeper search on the mouthparts to find differences between the Old and New World males. He also created a new generic name *Hemimeria* basing it on *Myzine semirufa* GERSTAECKER 1857, as pointed out by JACOT-GUILLARMOD (1961). DALLA TORRE (1897) used *Myzine* and *Plesia*, mixing taxa from Old and New World; he held some neogaeic taxa under *Myzine* apparently only referring the original ascription (e.g. *Myzine albomaculata* SMITH 1879, ♀♂) and ascribed to *Plesia* most of the neogaeic taxa together with the Old World species actually belonging to *Mesa*.

GUÉRIN (1837) described *Parameria femorata*; S.S. SAUNDERS (1850) used the new taxon names *Pseudomeria* for *P. graeca* and *Macromeria* for *Meria klugi* WESTWOOD 1835. WESTWOOD himself described (1851) a new genus and species ascribed to Thynnidae, *Iswara luteus*, and SMITH (1869) *Pterombrus aenigmaticus* on a female specimen from Brasil. RADOSZKOWSKI (1886) named *Komarowia victoriosa* some female nocturnal specimens from Caspian area and SAUSSURE named *Mesa heterogamia* some specimens from Mosambique. FOX (1895) erected *Engycystis* on *Myzine rufiventris* CRESSON 1872. ANDRÉ (1898) described *Milluta chobauti* on nocturnal male specimens from Algeria, CAMERON (1902) *Poecilotiphia albomaculata* on male specimens from NW India and ASHMEAD (1903) *Isotiphia nigra* on a female Brazilian specimen, ascribing it to the Cosilidae. DUCKE (1907) first created a new genus *Huberia*, then (1907) synonymized it with *Pterombrus*. TURNER (1912) erected a new genus *Braunsomeria* on female and male specimens from South Africa giving also an account for the species belonging to the genus *Elis* (*Mesa*), then (1913) resumed the records of the African *Myzine*.

PATE (1935) first argued that the name *Myzinum* pertains to the New World and *Meria* to the old World species. In its more inclusive review of the genera KROMBEIN (1937) supported this action, then (1938) published a revision of the nearctic Myzininae, including *Pterombrus* and *Isotiphia*, with detailed account of the records on their biology. PATE (1947) among its treatments on the subfamilies of the Tiphiidae, gave a more detailed key for the New World *Myzinum* and *Pterombrus*. In the meanwhile MENOZZI (1940) described the new genus *Dermasothes* on a brachypterous female from Lybia, ascribing it to the Bethylidae. JACOT GUILLARMOD (1953) established the synonymy of *Bruesia* KIEFFER 1913 and *Bruesiola* KIEFFER 1914 (ascribed to the Serphidae) with *Braunsomeria* TURNER 1912 and confirming its belonging to Myzininae. GUIGLIA in the time arch from 1948 to 1974 produced a lot of issues on the palaearctic Myzininae, using the Illiger taxon name *Meria* for most of them; she described *Myzinella* (1959) on male specimens from the Lybian desert. 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 1941 that he ascribed to Myzininae for the first time. GORBATOVSKY (1977) examined the nocturnal palaearctic forms establishing the new genus *Melaniswara*, then (1979) gave an identification key for the other palaearctic genera with a resume on the genus *Dermasothes*, which finally (1981) he put in synonymy with *Poecilotiphia*, newly erected to the rank of valid genus after its sinking made by TURNER (1910); at the same time he considered *Pseudomeria* S. SAUNDERS 1850 as a junior synonym of *Meria* ILLIGER 1807. RASNITSYN (1988) ascribed to Myzininae the fossil genera *Litotiphia* COCKERELL 1906 and *Geotiphia* COCKERELL 1910, the latter previously considered belonging to Anthoboscinae by TURNER (1912). BROWN (1985, 1996) referred on the very interesting discovering of Myzininae in the Australian region, naming two new genera, *Austromyzinum* and *Cleftomyzinum*. ARGAMAN (1994) gave a world wide synopsis about this group and named 21 new generic taxa, 16 of which were considered junior synonyms of older genera by BONI BARTALUCCI (2001, 2004).

LATREILLE (1803) grouped them in the "famille Hètérogynes, tribu des Mutillaires" and GUÉRIN (1837) followed him; SMITH too (1855) listed them under Mutillidae; all the other ancient students either grouped them in the Scoliidae [SAUNDERS S. (1855) under "Scoliadae", GERSTAECKER (1857), SMITH itself (1879), SAUSSURE under Scolidae sect. Scoliae (1880) and under Scoliites groupe *Plesia* and *Meria* (1892), MAGRETTI (1884), DALLA TORRE (1897)] either listed them generically as "Hymenoptera" [JURINE (1807), SPINOLA (1808, 1843), WESTWOOD (1835), SICHEL (1859), RADOSZKOWSKI (1886, 1888), TOURNIER (1895), SAUNDERS E. (1901)] and "raubwespen" MORAWITZ (1888, 1890, 1894)]. Ashmead considered most of them within the family Myzinidae. CAMERON first (1902 till 1907) grouped them under SCOLIIDAE, then (1910) under Myzinidae. TURNER (1908 till 1940) grouped them within the subfamily Elidinae of the Scoliidae. More recently DENIS (1930), DUSMET (1930) and MASI (1933) used only "Scoliidae".

PATE (1935 and 1947), KROMBEIN (1937, 1938, 1942, 1949, 1968), GUIGLIA (1948 till 1978), NAGY (1970), who referred the first use of the subfamily name Myzininae by BÖRNER (1919), GORBATOVSKY (1977, 1979, 1980, 1981, 1990), BROWN (1985, 1996), KIMSEY (1991), BONI BARTALUCCI (1994, 1997, 2001) named them Myzininae of the family Tiphiidae, supported by the BROTHER's analysis (1975). In the recent times only NAGY (1969), SUAREZ (1974) and ARGAMAN (1994) named this group of taxa under the nomenclatorial family rank "Myzinidae".

Biology

Data and remarks are very scanty for all the subfamily and there is an astounding gap about our knowledge on ethology between the New World and Old World genera.

KROMBEIN (1938: 229-232), together with flower records given under each specific taxa, resumed the quite detailed observations referred by many students on *Myzinum* species, revealing its seizing upon Scarabaeid larvae (particularly *Phyllophaga*, *Phytalus* and *Anomalus*). Both examined specimens of *Myzinum carolinianum* at AMNH bear a cocoon and a label "reared from *Lachnosterna* (?)".

On the other side the observations and data on Old World species are very poor; only FERTON (1911) has given a report on the prey (a larva of the Tenebrionid *Tentyria grossa*) of his *Myzine andrei* [actually *Poecilotiphia rousseli* (GUÉRIN 1838)]. TURNER (1912) wrote about *Elis* (*Mesa*) *tricolor* (SMITH 1873) [actually *Hylomesa longiceps* (TURNER 1918)]: "T.R. Bell informed me that he bred this species from the larva of a longicorn beetle.". DENIS (1930) made some field observation on *Meria lineata* (SICHEL 1859). MENOZZI (1940) referred the collecting of his *Dermasothes endecamera* under a stone very near an ant nest. KROMBEIN (1968) resumed TURNER's report and then (1982) referred other short hint about *Hylomesa*. Other field observations have been recorded by GUIGLIA (1967) about *Meria* (= *Poecilotiphia*) *gracilis* (BRULLÉ 1840), GORBATOVSKY (1979) about *Dermasothes* (= *Poecilotiphia*) *cilatus* (MORAWITZ 1890) and BONI BARTALUCCI (1994) about *Poecilotiphia rousseli* (GUÉRIN 1838) on specimens caught in copula and visited flowers. The hints (ARGAMAN 1994) to the larvas seized by *Mesa*, even if reliable, neither are referred to nor supported by any recorded note.

Myzininae are wasps loving hot situations and climates, in some instances inhabiting exclusively desert areas, and mostly preferring sandy places. In all of them the females have digger customs (but the genus *Hylomesa*), searching for a ground beetle larva as a prey, which is paralyzed and hauled into the soil, apparently without nesting care; however any conclusion appears to be hazardous because of the above said argumentations.

Some taxa inhabiting the Palaearctic desert areas (*Iswara*, *Komarowia* and *Lamprowara*), show nocturnal or crepuscular customs, a specialization probably arisen from the prohibitive diurnal weather. The nocturnal and crepuscular habits, beyond the evidence from the modified ocelli in the males, are tested by some field observations sometimes referred in labels too. RADOSZKOWSKI himself (1886: 44) wrote about the female of *K. victoriosa*: "C'est une espèce nocturne; elle a èté prise pendant la nuit à la fin du mois d'Août, (deux exemplaires en 1884 et un en 1885 au nord d'Askhabad) sur les sables, attiré par la lumière."

Many Old World forms show a more or less advanced brachyptery which probably causes a modified behaviour in mating, flower feeding and prey seizing, besides a different collecting technique for the students.

About the palaearctic species, the following observation has been performed on the field:

Males and females of the nocturnal genera *Iswara* and *Komarowia* have been caught at the lamps in the night-time. The males of the other genera visit flowers of *Echinophora spinosa*, *Eryngium campestre*, *E. maritimum* and *E. amethystinum*, *Foeniculum vulgare*, *Chrithmum maritimum*, *Oenanthe lachenali*, *Daucus* sp., *Ferula* sp, *Euphorbia paralias*, *Cistus* sp., *Paliurus spinachristi*, *Ziziphus jujuba*, *Ziziphus lotus*, *Dorycnium rectum*, *Acacia karoo*, *Rubus* sp., *Euonymus japonicum*, *Melilotus* sp. The females of *Meria*, *Mesa*, *Parameria* and *Myzinella* visit flowers too, while females of *Poecilotiphia* and probably *Tamerlanella* can be caught only near the ground at the beginning or end of the daylight.

Biogeography

RASNITSYN (1986) studied the following type specimens of the fossil species attributed to the Tiphiidae, ascribing them to ancient Myzininae:

Lithotiphia scudderi COCKERELL 1906 (51. Holotype ♀: USA = Lower Oligocene of Florissant, Colorado. "M.C.Z. n° 2022", MCZH); *Geotiphia foxiana* COCKERELL 1910 (279. Holotype ♀: USA = Lower Oligocene of Florissant, Colorado. "M.C.Z. n° 2021", MCZH); *Geotiphia halictina* COCKERELL 1910 (279. Holotype ♀: USA = Lower Oligocene of Florissant, Colorado. "Holotype N° 18619", MUC); *Geotiphia sternbergi* COCKERELL 1910 (277. Holotype ♀: USA = Lower Oligocene of Florissant, Colorado. "Holotype N° 18868", AMNH); *Geotiphia pachysoma* COCKERELL 1927 (432. Holotype ♀: USA = Lower Oligocene of Florissant, Colorado. "N° In 26929", BMNH); *Geotiphia orientalis* RASNITSYN 1986 (97-99. Holoytype ♀: Russia = "Bolshya Svetlovodnaya river, Pozharsky District, Maritime province: ?Upper Oligocene", Palaeontological Institute, Moscow).

In order to understand better the frame-work of the distribution areas into the Myzininae it is worthwhile to first examine the Anthoboscinae and Thynninae distribution areas too.

Anthoboscinae are recorded overall from southern hemisphere. Australia, S-Africa and South America lodge the vast majority of taxa, showing distinctness among them only at generic level at most. *Anthobosca arabica* TURNER 1912 is the only representative from northern Africa and Arabian peninsula, while *Anthobosca ceylonica* KROMBEIN 1984 from Sri Lanka is the sole record from Oriental Region; both of them very close to the south African form *A. aspericornis* (BUYSSON 1898). *Lalapa lusa* PATE 1947, from SW USA, is the unique representative in the Nearctic Region.

This distribution pattern seems to point out an ancient origin, previous the conclusive breaking of the southern continents, i.e. before the late Cretaceous, consistently with its generally admitted plesiomorphic characters. The discovering of *Architiphia rasnitsyni* DARLING 1990 (an ancestral anthoboscin according to author's opinion) from deposits tracing back to the lower Cretaceous (about 100-110 Mya) seems to support this conjecture.

Thynninae have disjoined distribution areas, inhabiting Australia with surroundings islands (Pulau, New Guinea, New Caledonia, Tasmania, but absent from New Zealand)

and Southern America. Their history appears parallel and even contemporaneous to the fortunes of the Marsupials. We could think their springing occurred in the period late Cretaceous / late Paleocene after the separation of Africa, India, Madagascar and New Zealand from Australia. At that time it was still attached to Antarctica (where no ice and a temperate climate, mild enough to permit at least seasonal migrations through it, reasonably existed; mangrove swamps of southern Australia were located at 65° south latitude) which should have been still connected to Southern America in its turn.

The distribution of the Myzininae is very different, almost worldwide; they have no cosmopolitan tribe and genera and their distribution is entirely disjoined (Figs 4, 5). Myzinini are exclusive of the Americas, Austromyzinini (a small apparently relict and rare group with some characters very close to Anthoboscinae).of Australia, while Mesini and Meriini have found only in the Old World. There are so far no records from northern palaearctic (from British islands and most of France to far eastern Siberia) and nearctic (Alaska and most of Canada) regions, pacific coast of South America and also from Japan, New Guinea, New Zealand and Polinesia.

Among the tribes, Mesini have the largest geographical distribution, ranging over Afrotropical, Oriental and Palaearctic Regions. Their distribution is a matter worthy of remark. It is the only tribe so far recorded from Oriental Region where neither xeric nor desert areas occur. From the data, the limited distribution range of most of the Old World species well emerges. Within the group *Mesa/Hylomesa*, no representatives of the Oriental Region have been found in the Afrotropical and vice versa. In the Afrotropical Region, only *Mesa picta*'s distribution ranges from Angola to Sènégal, all the other taxa seem to have hitherto much more restricted distributions. The representatives of *Hylomesa* show a marked inclination to wet conditions, inhabiting only wet rainforest areas from Uganda (1 endemic species,) and Oriental Region (4 or 5 species). Since these areas are very remote from each other and at the present time severed by huge, extremely arid areas we should argue that its origin traces back on the age when Africa and Asia were well joined and before the vast desert areas of the Arabian peninsula and surroundings came out, an event presumed to begin on about mid cenozoic (20 Mya).

There are so far no reliable records of tribe Meriini in the Oriental region. About them, the trend toward restricted distribution areas is much more stressed than in the other tribes. The distribution areas are disjoined at generic level too (but *Myzinella* and *Meria*, widespread through vast, intercontinental areas of Africa, Asia and, marginally, Europe). *Parameria* is limited to Northern Africa and Israel. *Poecilotiphia* seems restricted to the southern Palaearctic area. The nocturnal taxa of the group *Iswara/Komarowia* inhabit desert and sub desert palaearctic areas. *Braunsomeria*, *Macromeria*, south African species of *Meria* (but *cingulata*) and the other austral taxa have not been collected north of austral Africa and vice versa.

Among species of the genus *Meria*, only *Meria dorsalis* (FABRICIUS 1804) (Northern Mediterranean area to Caucase and Russian steppes through Eastern Europe and Asia Minor) and *Meria cingulata* (GERSTAECKER 1857) (all over the eastern Africa from Southern Africa to Erythrea) show wide distribution range. A more detailed investigation about the chorology of palaearctic Meriini is offered under the relative item.

We could argue that the more or less stressed brachypterous status of all the females of the Meriini could be a mighty limiting factor. Since flying mating and carriage do not happen about Myzininae (or rather they are not so far observed), they hardly could overcome great geographical barriers as mountain ranges or even marine straits; therefore the relative segregation of the populations could be easier. The wet equatorial belt has been apparently an insurmountable barrier for most of them, consistently with their xerothermic customs.

The records [GUÉRIN (1837), SAUSSURE (1892), KROMBEIN (1947)] from Madagascar of 7 endemic taxa undoubtedly belonging to *Mesa* and *Meria* (the latter with one species, *Meria vonizongo*, described on a male specimen different only in having some spines about the median area of the volsella) are very worthwhile data. Since the severance of Madagascar from continental Africa is considered to occur from about late Eocene and the probability of a casual immigration of "seven" actually endemic taxa from the close continent approachs to zero, we could infer that the origin of the modern taxa is quite older than the origin inferred by Rasnitsyn from the fossil data he examined (proximal to Oligocene). The separation between North America and Laurasia, still connected while South America was yet detached from Africa at the late Cretaceous, seems to occur at mid Eocene when the climate was still warm enough to permit life to hot loving wasps at high latitude too; from then we could infer the separation between Myzinini and Mesini/Meriini.

Under all that, we could criticize some Rasnitsyn's conclusions. If his opinion about *Geotiphia* as a possible ancestor of *Myzinum* is preserved as reasonable and reliable we should consider the latter younger than the group Mesini/Meriini (contrasting with its more primitive features). Otherwise because of the closer similarity of the wings of *Geotiphia* to *Austromyzinum* (not known by him and which has the sole modern representative females of Myzininae with the presence of both pterostigma and CM on the fore wing and a postfurcal cu-a vein on the hind wing: Fig. 9A) rather than *Myzinum* (which lacks a well developed pterostigma on the fore wing and has an antefurcal cu-a vein on the hind wing) and the discovery of a specimen from the Old World (*Geotiphia orientalis*, without any light markings) we could consider *Geotiphia* a transiently survivor ancestor (very close to *Austromyzinum*) to its descents. It is possible to ascribe the absence of any other modern Myzininae from the Oligocene fossils purely to a poor fossil documentation (yet hinted by RASNITSYN himself).

The attribution of *Litotiphia* to Myzininae is somehow problematic. The antefurcal cu-a vein in the fore wing of the female is present, even if less stressed, among the modern taxa of Tiphiidae only in some Tiphiinae, i.e. in *Tiphia femorata* FABRICIUS 1775 and *Paratiphia robusta* (CAMERON 1905). The latter is correlated to *Epomidiopteron julii* ROMAND 1836 a light spotted taxon; both of them have a strong reminiscence of three CSM, a closed CM and the same hind wing nervure of *Litotiphia*. Moreover, the ventral aspect of the head is very like Tiphiinae with "a short oral cavity, distant from occipital carina"; within Myzininae, a similar ventral head occurs only in Mesini and most of Meriini, which nevertheless have wings with strongly different veins and cells from *Litotiphia*. To consider it an ancient Tiphiin wasp could be probably a more reliable and mighty inference

In conclusion, we could give the following general outline.

The subfamily arose probably at mid Cretaceous (100 Mya) when Pangea was still not completely broken and Africa was still connected to South America and Antarctica. Several problems arose in this outline. The absence of Austromyzinini (here considered the closest modern Myzinins to a common ancestor) from New Zealand and New Caledonia which were severed from Australia about 80 Mya., could be explained by the colder and wetter climate of New Zealand even in that time, but it appears obscure for New Caledonia, unless to guess a subsequent extinction. The other choice could be a less old origin, i.e. during late Cretaceous, but this hypothesis could exclude the presence of Myzininae in Africa and Laurasia, since according the students of continental drift in the late Cretaceous Africa was well separated from Antarctica and South America, while the latter had already lost its direct connection with North America near the end of Triassic (about 140 Mya). The absence of Austromyzini, or better their extinction if the argumentations about *Geotiphia* should result correct, from other continents and especially South America is also very hard to support and ground, at least in the absolute lacking of any data about their ecology. Myzinini are the sole representatives of the subfamily in South America; nevertheless, they are seemingly wanting from the pacific coast, the region that maintains the greatest bio geographical affinities with the Australian region; it is reasonable to argue their presence in a late age after the emersion of the Panama isthmus and after the breaking off of S-America from Antharctica-Australia.

All the aforesaid considerations are based only on well settled records of taxa. Further data, especially from areas so far wanting of any record, could change them of course. As a matter of fact there are two single records which could weaken their reliability: *Myzine binghami* TURNER 1908 from Tenasserim (a region at the root of the Malayan peninsula) and *Myzinum maculatum* (FABRICIUS 1790) from Sicily (misinterpreted as *Mesa italica* by GUIGLÌA: 1963). The former record could shift far eastward the distribution area of the Meriini to the heart of the Oriental Region, in the middle of the wet equatorial belt and off their customary habitats. Since then no other specimen of Meriini have been recorded from India east of Rajasthan and Gujarat, nor from the remainder SE Asia. The latter record could upset the general framework. Nevertheless, because of their uniqueness no more confirmed during the last century, the doubt (GORBATOVSKY 1981) about shuffled labels is well founded and accordingly it is probably better to overlook them and wait for more reliable data, rather than to infer misleading conjectures.

Key to tribes

The subfamily is here intended to include four tribes, Austromyzinini, Myzinini, Mesini, Meriini, and 17 genera: *Myzinum* LATREILLE 1803, *Meria* ILLIGER 1807, *Parameria* GUÉRIN 1837, *Iswara* WESTWOOD 1851, *Macromeria* S. SAUNDERS 1850, *Mesa* SAUSSURE 1882, *Komarowia* RADOSZKOWSKI 1886, *Poecilotiphia* CAMERON 1902, *Braunsomeria* TURNER 1912, *Myzinella* GUIGLIA 1959, *Hylomesa* KROMBEIN 1968, *Austromyzinum* BROWN 1985, *Cleftomyzinum* BROWN 1985, *Weerpaga* ARGAMAN 1994, *Zezelda* ARGAMAN 1994, *Lamprowara* gen. nov., *Tamerlanella* gen. nov..

The best references about the genera are TURNER (1912, 1913), KROMBEIN (1937, 1968), GUIGLIA (1968) and GORBATOVSKY (1977, 1979) for the Old World fauna, KROMBEIN (1938) for the New World and BROWN (1985) for the Australian faunas. The number of genera has raised up to 43 by ARGAMAN (1994) but here the option of suspending most of his arrangement has been chosen, since 5 old names restored by him and 20 new generic names (16: BONI BARTALUCCI 2001, 2004 and additional 4 in this study) have been respectively sunken again and set in synonymy.

The keys to tribes of the subfamily together with a special concern with palaearctic genera are proposed in order to get a reliable (even if provisional waiting for a forthcoming cladistics approach to the family) arrangement of the taxa here dealt with. It does not presume to satisfy fully phylogenetic criteria, but at any way the main argumentations and items probably hold a significant value.

Additional useful data will be got through more extensive investigations about mouthparts; at the state of the art, they are still unfinished and hence mostly overlooked.

Females:		Males:	
a)	10 flagellomeri	aa)	11 flagellomeri
b)	6 visible metameri	bb)	7 visible metameri
c)	apical sternum without hook	cc)	8th sternum converted to a strong upward hook

1

a Scutellum (Sc_1) and postscutellar area of the metanotum (N_3) not contiguous, separated by a deep transversal ditch (Fig. 6) (♀ & ♂)

b Propodeal sternite (StP) not developed; propodeal (FoP) and hindcoxal cavities (FoX_3) fused in ventral aspect. (♀ & ♂)

c Velum of the foretarsal spur roughly combed (Fig. 7) (♀ & ♂)

d Pedicel bearing bristles as long as up to more than half its height in frontal aspect (Fig. 267) (♂)

e Flagellomeri with rounded MPS (Fig. 267) (♂)

f Basal width of the collar just a bit more than 4 times its height in dorsal aspect (Fig. 8) (♀)

g Prepectal sclerite (SPr) well visible in lateral aspect, not covered by the posteroventral corner of the pronotal disk (but in the unique male of *Cleftomyzinum* where the character state "gg" seems to occur) (♂)

h Propodeal outline wider than high in posterior aspect; propodeal declining surface flat, almost perpendicular to the main axis of the body and well distinct all around from the remainder of the propodeum by a cluster of rough keels and wrinkles. (Fig. 9) (♀)

i Mesosternal lobes (LaM) elongated and hiding the metasternum (St_3) in ventral aspect (♂)

j Marginal area of the propodeum (amP) higher than upper propodeal cavity (FoP) in back aspect (♀)

k 8th sternum (or anal hook) stout, without any longitudinal furrow or keel, with pits and relative short bristles scattered everywhere and somehow mat appearing; in the males of the sole *Austromyzinum* there is a second minor hook, with acute tip, on the basal upper surface (Fig. 10) (♂)

l Gonostylus without any differentiation between basi- and disti-stylus (Fig. 11) (♂)

Australian - **Austromyzinini**

(Genera: *Austrotromyzinum* BROWN 1985, *Cleftomyzinum* BROWN 1985)

aa Sc_1 and postscutellar area contiguous (♀ & ♂)

bb StP completely developed; FoX_3 and FoP completely severed in ventral aspect (Fig. 1D, 2C) (♀ & ♂)

cc Velum of the foretarsal spur entire without any trace of comb (Figs 12, 37, 54, 94) (♀ & ♂)

dd Pedicel bearing only very shorter bristles than 1/5 the height of the element (♂)

ee Flagellomeri: MPS elliptic or sausage shaped (Fig. 265) (♂)

ff Basal width of the collar less than 3 times its height (Fig. 13) (♀)

gg SPr not detectable in lateral aspect, covered by the posteroventral corner of the pronotal disk (♂)

hh Propodeal outline higher than high in back aspect; propodeal declining surface gently convex and never distinct from the horizontal area by any kind of keels and wrinkles; in some taxa of the Mesina there is a sort of keel between it and lateral areas (Figs 1D, 14) (♀)

ii LaM never hiding the St_3 in ventral aspect (♂)

jj amP lower than FoP in back aspect

kk 8th sternum (or anal hook) slender with longitudinal furrows and keels, pits bearing few and relatively long bristles only settled along them; surface smooth and shining; very rarely a basal stout tooth on its upper surface (Fig. 15) (♂)

ll Gonostylus well differentiated in basi- and disti-stylus (Figs 24, 30) (♂)........................... 2

2

a The hypostoma broadly breaks ventrally the carina occipitalis (cOc) and is mostly prominent over the plane of the lower genae; FoO as long as or longer than genae in ventral aspect (Fig. 15, 16) (♀ & ♂)

a Genal bridge (PoG) never expressed (♀ & ♂)

c First metamerus evenly constricted toward its articulation with mesosoma; no petiole expressed; first tergum broader than stenum and overlying it on its entire length (Fig. 17) (♀ & ♂)

d Subantennal sclerite (Ssa) mostly subvertical and detectable in frontal aspect (Fig. 18). Its surface and the median clypeus almost complanar with the frontal surface in lateral aspect (Fig. 19) (♀)

e Toruli widely separated from each other; their distance about as long as their width (Fig. 16) (♀)

f Plate like expansion of the ventral mesepisternal edge (mes_2) well detached over the underlying mesepisternal surface for a distance as long as apical foretarsomere (Fig. 268) (♂)

g Forewing without any deep slit of the membrane from the tip of the M-a vein to the outer border (Fig. 20) in the vaste majority of taxa (♀)

h Outer edge of the basal fore tarsomerus is shed-roof shaped (even and regular in dorsal aspect) (Fig. 21) (♀)

i Basal, ventral edge of the mid femur clearly laminated (♀)

j Dorsal hindtibia on its inner side with a regular row of long bristles along its entire length, outwards flanked by a sort of crest made by the fusion of the integumental rings which contour the base of the strong conical spines, with an acute lightly twisted tips, settled in a regular longitudinal row too (Fig. 22) (♀)

k Hind tibial spur with an inner strong, almost semicircular, basal notch (Fig. 23) (♀)

l Gonostylus: dististylus far narrower than half the basistylus, and less high than it in lateral aspect (Fig. 24) (♂)

m Volsella with several, rows of densely packed black spines on its median area; digitus articulating well below its median height, therefore the cuspis is higher than the remainder of the volsella (Fig. 24) (♂)

Neogaeic - **Myzinini**

(Genus *Myzinum* LATREILLE 1803)

aa cOc never broadly broken ventrally by the hypostoma, which is either completely or mostly sunken under the plane of the lower genae; FoO clearly shorter than genal areas in ventral aspect (Fig. 25) (♀ & ♂)

bb PoG normally expressed (♀ & ♂)

cc First metamerus always petiolate; first tergum overlies sternum just backward; forward either it gets ribbon-like and fused to the sternum or is absent; in the last case the petiole is formed by the sternum only (Fig. 26) (♀ & ♂)

dd Ssa subhorizontally placed, sunken under the Tsa between the toruli and at any way not detectable in frontal aspect (Fig. 27). The mid surface of the clypeus far shifted from the plane of the frontal surface in lateral aspect (Fig. 28) (♀)

ee Toruli almost contiguous (with the sole exception of *Myzinella*) (Fig. 25) (♀)

ff Plate like expansion of mes_2 stuck to the mesepisternal surface (Fig. 269) (♂)

gg Where closed cells are expressed, the forewing shows a deep slit from the tip of the M-a vein to the outer border (Figs 3, 31) (♀)

hh Outer edge of the basal fore tarsomerus irregular in dorsal aspect and not shed-roof shaped (Fig. 29) (♀)

ii Ventral edge of the mid femur completely evenly rounded and not laminated (♀)

jj Dorsal hindtibia without regularly arranged long bristles and any prominent crest between it and the strong spines which are less densely arranged and without an acute twisted tip (♀)

kk Hind tibial spur spoonshaped in some taxa, but always with a straight inner border; only in some taxa of Mesini there is a sort of a broad notch (♀)

ll Gonostylus: dististylus with base larger than half the basistylus and higher than it (♂) (Fig. 30)

mm Inner surface of the volsella more often simple; at the most only either few transparent "spines" on its median area or few dark spines at its basal end; digitus articulating from its median point upwars, therefore the cuspis is less higher than the remainder of the volsella (♂) (Fig. 30) 3

3

Females:

a Scape with scattered pits and hair throughout (Fig. 270)

b Flagellomeri covered throughout by approached, densely packed sensilla trichoidea; their surface bears rounded MPS with expressed dorsal surface (the MP) (Fig. 271)

c Fully winged; fore wing always with ten functional cells getting 9/10 of its total length; CM (R_1 vein always detached from the wing border) and three CSM expressed; pterostigma obsolete (Fig. 31)

d Hind wing: veins cu-a of the hindwing distinctly antefurcal (Fig. 31)

e Hind wing: Cu-a, M-a, Rs-a almost reaching the wing outer border; Rs and M both almost as long as M+Cu vein and running sub longitudinally; they are 4-5 times longer than r-m vein which is well distinct (Fig. 31)

f Dispersal secondary hamuli are present on the C vein of the hind wing

g Fore tibial spur with an apex far shorter than trunk; velum as long as ¾ of the entire spur (Fig. 32)

h The velum of the fore basitarsal notch is combed

i Upper surface of the apical tarsomerus and base of claws entirely covered by short bristles (Fig. 272)

j Ventral hind femur with a strongly laminated portion

k Dorsal edge and outer surface of the hindtibia with conical spines; their height only twice their basal width at most (Fig. 33)

l Apical ventral border of the hind tibia distinctly angled

m Hind tarsomerus: inner surface with a stripe of densely packed hair and ventral edge with a row of short, variously arranged, round tipped "spines" (Fig. 33) n Distal borders of metameri distinctly combed (Fig. 273)

o 6th tergum (epipygium) flattened, with a pygidial area well expressed, more or less sculptured

p Body mostly pitted

Males:

a Closed mandibular socket (Fig. 274)

b Hypostomal carina (cHy) shifting laterally toward the outer mandibular condyle (Fig. 274)

c Apical three maxillary palpi (Pam) very elongated up to twice the length of the basal ones (Fig. 34)

d Prepectal sclerite (SPr) not freely articulated, fused with the anterolateral border of mesepisternum (es_2)

e 7th sternum length 1/2 to 2/5 of the 7th tergum in lateral aspect (Fig. 35)

f Base of volsella with few strong short spines (Fig. 36)

Palaearctic, Oriental and Afrotropical - **Mesini**

(Genera: *Mesa* SAUSSURE 1892 and *Hylomesa* KROMBEIN 1968)

Females:

aa Scape with long bristles, up to as long as its length, arranged in two stripes on its upper and lower surface only, smooth and shining elsewhere (Fig. 262)

bb Basal four flagellomeri with few long bristles on their upper surface; all the remainder completely smooth and shining, lacking any sensilla, with rounded MPS lacking exposed dorsal surface (the MP) (Figs 264, 275)

cc Brachypterous till apterous. Fore wing with only seven cells bordered by functional veins at the most, barely getting half its length; CM and 3rd CSM fused together in the CPM and pterostigma well developed; where two CSM are expressed, the second is always petiolate (Fig. 3A)

dd Hind wing: veins cu-a of the hindwing, when present, interstitial or lightly postfurcal (Fig. 3A)

ee Hind wing: Cu-a, M-a and Rs-a are often not expressed or vestigial, ending far before the edge of the wing; Rs and M much shorter than M+Cu, as long as r-m and sub perpendicular to the longitudinal axis of the wing; where r-m and Rs are indistinguishable from each other (like in *Meria*), Rs-a is absent (Fig. 3A)

ff No dispersal secondary hamuli on the C vein

gg Apex of the fore tibial spur from just a bit shorter (only two taxa) up to clearly longer than trunk; velum no more than ½ the length of the spur (Fig. 37)

hh Velum of the fore basitarsal notch entire, not combed (Fig. 276)

ii Upper surface of the apical tarsomerus and claws hairless (Fig. 277)

jj Hind femur vertically flattened with normally rounded ventral border and no lamina

kk The strong spines on the upper edge and outer surface of the hind tibiae are cylindrical, round tipped and elongated, three times longer than wide at least (Fig. 218)

ll Rounded ventral border of hind tibia

mm Hind tarsomerus with only scattered long bristles throughout

nn Metameri with simple distal borders (Fig. 278)

oo 6th tergum (epipygium) quite convex and shining, always without a clear pygidial area; just rarely with a sculpture detectable at magnifications less than ×50

pp Body mostly pitless

Males:

aa Open mandibular socket (just one species of *Tamerlanella* have closed sockets)

bb Hypostomal carina (cHy) not shifted laterally, but getting the inner mandibular condyle (Fig. 274)

cc Palpi often reduced; in the forms with Pam 6 segmented, the apical ones only little longer than basal ones

dd SPr freely articulated, not fused at all with es_2

ee 7th sternum only little shorter than 7th tergum in lateral aspect (Fig. 250)

ff Base of volsella without any stout spines (Fig. 30)

Palaearctic and Afrotropical - **Meriini**

(Genera: *Meria* ILLIGER 1807, *Macromeria* WESTWOOD 1835, *Parameria* GUÉRIN 1837, *Iswara* WESTWOOD 1851, *Komarowia* RADOSZKOWSKI 1886, *Poecilotiphia* CAMERON 1902, *Braunsomeria* TURNER 1912, *Myzinella* GUIGLIA 1959, *Weerpaga* ARGAMAN 1994, *Zezelda* ARGAMAN 1994, *Lamprowara* gen.nov. and *Tamerlanella* gen.nov.)

Austromyzinini

The following discussion is based mainly on specimens of both sexes of *Austromyzinum*. The sexual dimorphism is the most moderate into the subfamily; most of males have very similar colour. patterns to and are not much more slender than females. This is well showed (Figs 11A) by the shape of the first metamerus, much stouter than in the other males of the subfamily. Moreover this is the unique tribe where the pattern of the wings is the same for both sexes (Fig. 9A) apart the little shifting from the edge of the R1 vein in the females. The states **1e** and **1l** have been examined only in specimens of *Austromyzinum*.

The apical borders of the females are as combed as in Mesini (and present also in one Anthoboscin taxon). In the hindwing of the females vein cu-a is distinctly postfurcal (Fig. 9A), the same pattern of the males.

Both of the sexes have the clavus of the hind wing a bit larger than jugum (a similar shape of the lobes occurs about the male of *Parameria*; also the females of *Parameria* itself and *Myzinella* show a reduced, but quite different jugum). Pterostigma is well developed in both sexes.

The shape of the metanotum (state **1a**), the fusion between hindcoxal and propodeal cavities in both sexes (state **1b**), together with the states **1g** and **1j** look very like in Anthoboscinae. The long bristles on the pedicel of the males, the shape of the MPS on the flagellomeri and the fissured velum of the fore tibial spur in the males seem plesiomorphic states occurring in the representatives of the other subfamilies, and distinguish them from the remainder of the Myzininae. The characters states at items **1c** (within the limits of the sole females), **1h**, **1k**, **1l** are not found in any other Tiphiidae.

Examined specimens (the unique male of *Cleftomyzinum transversum* BROWN 1985 has been examined by Dr. Brown himself, personal communication):

Austromyzinum pyxidatum (**TURNER 1908**). 1♂: / Kenwick., 4 km SE of Perth, West. Aust. 19 November 1981 T.F. Houston 411/ /*Austromyzinum pyxidatum* (Turn.) det. G.R. Brown 1986/ /Western Australia Musem Entomology Reg. n° 33490/; 1♂: /Western Australia Cervantes 02.IV.1993 leg. W. Borsato/, CB (Figs 7 B, 267); 7♂♂: / Dragon Rock Nature Res., 37 Km N of Newdegete Western Australia 24-27 Nov. 1996 T.F. Houston 921-5/ / Flying close to ground on bare firebreak with many others/ / Austromyzinum pyxidatum det T.F. Houston/ / Western Australia Musem Entomology Reg. n° 3349 (1) to (7)/.

Austromyzinum nubilipennis (**TURNER 1910**). 1♀: /36-5066 Magumber/ /Tiphiidae Austromyzinum nubilipennis (Turner) Det. G.R. Brown 1995/ /Western Australia Musem Entomology Reg. n° 33483 /; 1♀: /36-5581 Wanneroo/ / Tiphiidae Austromyzinum nubilipennis (Turner) Det. G.R. Brown 1995/ /Western Australia Musem Entomology Reg. n° 33484/; 1♀: /37-3626 Bushbrooks/ /Tiphiidae Austromyzinum nubilipennis (Turner) Det. G.R. Brown 1995/ /Western Australia Musem Entomology Reg. n° 33485/; 1♀: /52-3695/ /*Anthobosca nubilipennis* Turner/ / Tiphiidae Austromyzinum nubilipennis (Turner) Det. G.R. Brown 1995/ /Western Australia Musem Entomology Reg. n° 33486/; 1♀: / Hamersley R. X - Ing Fitzgerald River Nat. Park W. Aust. 30 Dec. 1978 T.F. Houston 247-6/ /investigating low vegetation/ /Tiphiidae Austromyzinum nubilipennis (TURNER) Det. G.R. Brown 1995/ / Wam Collection *93-13323*/ /Western Australia Musem Entomology Reg. n° 33487/; 1♀: /Snangara near Wanneroo Western Australia 7 NOV 1980 R.P. Macmillan/ /WAM Collection 93-13335/ /Western Australia Museum Entomology Reg. n° 33488/

Austromyzinum dissociatum (**TURNER 1912**). 1♀: /Comet Vale Siding 37.5 KM NE (29.57S 121.07E) W, A. 7-15.III.1979 T.F. Houston ET AL. 256/ / Wam Collection *93-13329*/ /Western Australia Musem Entomology Reg. n° 33489/ /Tiphiidae *Austromyzinum dissociatum* (Turner) Det. G.R. Brown 1995/

Austromyzinum transversum **BROWN 1985**. 1♀: /South headland N.A. 21.II.1970 E.M. Exley on Acacia sp./ /Austromyzinum transversum Brown det. G.R. Brown 1986/ /Northern Territory Museum specimen/ (Figs 7A, 8, 9, 9A, 10A, 10B) - 1♂: /NT Jabiru Lake Jabiru 24 Feb. 1996 Brown & Mc Aline/ /Tiphiidae Austromyzinum transversum Brown Det. G.R. Brown1996/ /Northern Territory Museum specimen/ (Figs 6, 11A, 11B, 11C).

Austromyzinum flavum **BROWN 1996**. 1♀: /Australia VIC. Wyperfeld N. Pk. 25 mi N. Rainbow 18-23 Feb. 1970/ Coll. H. Evans R.W. Matthews/ / *Austromyzinum flavum*/ /Northern Territory Museum specimen/.

Austromyzinum austrinum **BROWN 1996**. 1♀: /Lake Palankarinna S. Austr. 3 march 1972 E. Matthews/ /*Austromyzinum austrinum*/ / S.A. Museum specimen/

Myzinini

The sexual dimorphism is more stressed than in Austromyzinini, especially in the greater slenderness of the males. While in the females the vein cu-a of the hind wing is distinctly antefurcal as it happens about the Mesini (Fig. 31), in the males it is postfurcal. Myzinini share the character states **2a, 2b, 2c, 2d, 2g, 2h** with Austromyzinini.

Female character states at the items **2i, 2j, 2k** and male character states **2f, 2l, 2m**, could be considered good autapomorphies of this group. Argaman (1994) called "acetabular carina" the protruded mesepisternal border. The use of this term could be misleading, since the acetabular carina of the Sphecidae (BOHART & MENKE 1976) is often a ventral prosecution of the "omaulus", it is absolutely independent from mesepisternal border and it is always placed far afterwards the anterior pit (fa) in ventral aspect. In Myzininae the keel runs contiguously but well before it and it is actually the back edge of the mesepisternal border (Fig. 2B, Figs 268, 269).

Examined specimens:

Myzinum quinquecinctum (**FABRICIUS 1775**). 1♀: /Reared from *Lachnosterna* ?/ /san Pierre Ind. IV.20.34/ /Luginhill & Painter Coll/ /15/ /*Myzinum 5-cinctum F*/, USNMNH (Fig. 14); 1♂: /Falls Church Va. 11 August/ /♂ *Myzine 5-cinctum* (Fabr.) Det. K.V. Krombein 1935/, USNMNH; 2♂♂: /USA Sulphur La 5.vVI.1927/, MSNP (Fig. 268)

Myzinum maculatum (**FABRICIUS 1790**). 1♀: /Dickinson co Kansas/ /Bridwell Aug/ /♀ *Myzine maculata* Fabr Det. K.V. Krombein 1935/, USNMNH (Fig. 18); 1♀: /Sabino Can Ar. 9-16-31 R.A. Flock/, USNMNH. 1♂: /Dunning neb 8.1.53 R.R. Dreisbach/, USNMNH

Myzinum obscurum (**FABRICIUS 1805**). 1♀: /*Elis obscura* Fab ♀, det. Crossnan/ /*Myzine obscura* Fab. ♀ Ashm/ /Through Riley/, NC?, USNMNH (Figs 22, 23); 1♀: /Vienna Va/ /J.C. Bridwell Coll. 8.18.35/ /♀ *Myzine obscura* (Fabr.) Det. K.V. Krombein 1935/, USNMNH

Myzinum nameum (**FABRICIUS 1805**). 1♀: /"mi" of Nogales Sta Cruz Co. ARIZ 24 August 1933 F.G. Werner & G.D. Butler/, USNMNH (Figs 12, 13, 15, 16, 19, 21); 1♀: /Orlando Fla *Garberia* flrs XI.III:1936/, USNMNH

Myzinum carolinianum (**PANZER 1806**). 1♀: /Funiak Fla 47/ /HGHubbard Collector/ /*Elis caroliniana* (Panz) Rob Lahan/ /♀ *Myzine caroliniana* (Panz.) Det. K.V. Krombein 1935*/, USNMNH; 1♂: /Tifton, Ga 6-12-96/ /♂ *Myzine caroliniana* (Panz.) Det. K.V. Krombein 1935/, USNMNH; 1♂: /Carri turk ?. Co S. Carol. July 27 1935/ /J.C. Bridwell Collector/ /*Myzine caroliniana* (Panz.) Det. K.V. Krombein 1936/, USNMNH (Fig. 24)

Myzinum carolinianum s sp. ***collare*** (**SAY 1837**). 1♀: /Jul 25/ /♀ *Myzine collare* (Say*) Det. K.V. Krombein 1935/, USNMNH; 1♀: /Elk point SD/ /C.N. Ainslie Collection/ /♀ *Myzine collare* (Say*) Det. K.V. Krombein 1935/, USNMNH; 1♂: /S. Diego Tex 6.31/ /♂ *Myzine collaris* (Panz.) Det. K.V. Krombein 1935/, USNMNH

Myzinum laterale (**CRESSON 1865**). 1♀: /*Myzine lateralis* Cress/ (autographic) /N.M./ "TYPE n°1895/ (red) ANSP!

Myzinum dubiosum **CRESSON 1872**. 1♀: /Victoria Tx VIII.25/ /JD Mitchell Collector/ /♀ *Myzine dubiosa Cress* Det. K.V. Krombein 1935*/, USNMNH; 1♀: /Las Parras Baja California W.M. Mann/ /Oct 1927/ /♀ *Myzine dubiosa Cress* Det. K.V. Krombein 1935/, USNMNH; 1♂: /Bowie Ariz. June 27, 1954 G.D. Butler Alfalfa/ /♂ *Myzine dubiosum Cress* Det. K.V. Krombein 1955/, USNMNH

Myzinum frontale (**CRESSON 1875**). 1♀: /Las cruces N.M. 8.11/ /♀ *Myzine frontalis* (Cresson) Det. K.V. Krombein 1935/, USNMNH; 1♀: /Imperial co Cal June 1912/ /Experimental farm/ /J.C. Bridwell collector/ /♀ *Myzine frontalis* (Cresson) Det. K.V. Krombein 1935/, USNMNH; 1♂: (1) /Imperial co cal May 29 1912/ /Experimental farm/ /J.C. Bridwell collector/ /♂ *Myzine frontalis* (Cresson) Det. K.V. Krombein 1935/, USNMNH

Myzinum spilonotum (**CAMERON 1908**). 1♀: /Boulder Colo S.A. Romwer Sept. 16 08/ /*Plesia interrupta* (Say)/ /♀ *Myzine spilonotum* (Cam.) Det. K.V. Krombein 1935/, USNMNH; 1♀: /Pine Vy Mts Wash Co ft Utah/ /Brooklin Museum Collection 1929/ /♀ *Myzine spilonota*) (Cam. Det. K.V. .Krombein 1935/, USNMNH

Myzinum berlyi (**BRIMLEY 1927**). 1♀ /Jul 26/ /Riley Coks Popenoe/ /♀ *Myzine berlyi* (Brim.) Det. K.V. Krombein 1935/, USNMNH; (1) /Aug 16/ /Riley Coks Popenoe/ /♀ *Myzine berlyi* (*BRIM.*) Det. K.V. Krombein 1935/, USNMNH

Myzinum **sp.** 1♀: /Montevideo da Sichel/ /Coll. Guérin/ /Collezione Gribodo/, MSNG; (1) /*Myzine serena* sec. Guérin/, MSNG; 4♀♀: /Guatemala/, MZUF (Figs 17, 20); 2♀♀ / Kenscoff Haiti Jan 21-31 '48 G.N. Wolcott/ (*M. wolcotti* ?) USNMNH

Myzinum LATREILLE 1803

Myzine: KROMBEIN 1938
Cocovasna ARGAMAN 1994: 86; **syn.nov.**
Gonordula ARGAMAN 1994: 87; **syn.nov.**
Keyovaska ARGAMAN 1994: 88; **syn.nov.**

The examination of the holotype of *Myzine lateralis* CRESSON 1865 and of three specimens (2♀♀ and 1♂) determined *Myzine frontalis* CRESSON 1875 by K.V. Krombein has revealed only marginal differences, useful to specific discrimination, with specimens of *Myzinum maculatum* (FABRICIUS 1793) and with other specimens determined *Myzine* by K.V. Krombein; they otherwise share with it all the character states **2a** → **2m**. The differences used by ARGAMAN (1994) in order to differentiate his two new generic name *Gonordula* and *Keyovaska* (based on *lateralis* and *frontalis* respectively) appear too much weak and shallow to support them, hence considered junior synonyms of *Myzinum*.

The grounds which the new taxon name *Cocovasna* (based on *Myzine flavopicta* SMITH 1855) was established upon are the particular apophysis on the forecoxa of the male and the supplementary gradulus on 4th tergum of the female, facing the presence of graduli only on 2nd and 3rd terga of the other taxa. The type is a female [*/flavopicta* Sm Type/ /Type/ (rounded label with outer red ring), BMNH!]; from its examination no other difference with the females above listed stands out; moreover the graduli (only that one on the 2nd tergum is complete getting the lateral spiracles) are as quite weak as in all the females of the subfamily, where expressed. The females of *M. carolinianum* and *M. frontalis* too show a weak, incomplete gradulus on 4th tergum, while the females from Haiti (*M. wolcotti* ?) have a single gradulus on 2nd tergum. This variability about the number of terga with graduli occurs within Mesini and Meriini too. *Meria aurantiaca*, a well established taxon, together with other African taxa show a single gradulus on 2nd tergum, while the majority of females of the same genus have a gradulus on 3rd tergum too. The same occurs within *Mesa*, where three species at least bear only one tergum with gradulus facing the majority of species bearing two terga with graduli. It thence appears that the character state used by Argaman could be worth at specific level at most. Even though no male specimen has been examined, *Cocovasna* is here considered a junior synonym of *Myzinum*. The positions of other three new taxon names by ARGAMAN (1994) for the neogaeic fauna, *Tokoparta*, *Fikoplesa* and *Ekepirka* have been suspended in waiting for the examination of the relative type specimens.

Mesini

The sexual dimorphism is more stressed than in Myzinini, even if both sexes are still fully winged. Most of the males show light spots on the head, mesosoma, legs and metasoma, while the females are spotless (with two exceptions).

In this tribe the males show much more derived states than females, which do not possess any good derived character state; they share many characters states with the females of both Myzinini and Austromyzinini (**3a**, **3b**, **3e**, **3f**, **3g**, **3h**, **3i**, **3k**, **3o**) with the sole Myzinini (**3c**, **3d**, **3j**, **3l**,) and with the sole Austromyzinini (**3n**).

Good reliable autapomorphies for the males appear to be the character states **3r**, **3t**, **3u**, **3v**; state 3q is shared only with two species of two distinct genera of Meriini, and 3s with only one.

The character **2cc** is shared only with Meriini and it is unique within the whole Tiphiidae. Because of that, it carries a strong weight both in taxonomic and geographical considerations.

The genus *Mesa* is poorly represented in the Palaearctic region and Mediterranean areas: six species from SW Asia [*M. fedstchenkoi* (SAUSSURE 1880), *M. picticollis* MORAWITZ

1890, *M. dubia* MORAWITZ 1890, *M. apimacula* (CAMERON 1902), *M. nursei* (TURNER 1909) and *M. persa* GORBATOVSKY 1981], two from Greece (*M. palestinella* GUIGLIA 1963 and *M. attica* GORBATOVSKY 1981), one from Asia Minor and Israel (*M. palestinella*) have been so far described; one female specimen different from the other palaearctic species and not yet described exists from Western Lybia.

Examined specimens:

Hylomesa longiceps **(TURNER 1918)**. 1♀: /Birmania Schwezo Myo X 1985 Fea/ /Hylomesa longiceps (Turner) det. Krombein, 1967/, MSNG - 1♂: /Birmania Schwezo Myo *X* 1985 Fea/ /Hylomesa longiceps (Turner) det. Krombein, 1967/, MSNG

Mesa haemorroidalis **(GUÉRIN 1837)**. 1♂: holotype (Fig. 36), MHNP

Mesa nodosa **(GUÉRIN 1837)**. 2♂ : Lectotype and paralectotype; 1♂: /Coll. Guerin/ /Collezione Gribodo/, MSNG

Mesa capensis **(LEPELETIER 1845)**. 1♀: lectoype and 1♀: paralectotype of *Mesa peringueyi* SAUSSURE, 1892, MHNG; 1♀: /Augustfontein (Calvinia) C.P. - Mus. Exp. Sept. 1947S./ /*Mesa capensis* ♀ (Lep.) det.1948 C.J. Guillarmod/, SAM; 1♀: /7-10 m. SW. of Matjiesfontein - 15.10.1966 S.A.M./, SAM (Figs 270, 271, 272, 273). 1♂: /Augustfontein (Calvinia) C.P. - Mus. Exp. Sept. 1947S./ /*Mesa capensis* ♂ (Lep.) det.1948 C.J. Guillarmod/, SAM; 1♂: /M Fongosi Zulu L. W.E. Jones - Feb 1912/ /*Myzine klugi* ♂ var ?/ /R.E. Turner determ./ /*Mesa capensis* ♂ (Lep.) det.1948 C.J. Guillarmod/, SAM.

Mesa ruficeps **(SMITH 1855)**. 1♀: /Pt Natal/ /*Mesa ruficeps* (Smith) det 1949 C.J. Guillarmod/, BMNH; 1♂: /Waterberg distr. 1899/ /1915-319/, BMNH.

Mesa capitata **(SMITH 1855)**. 1♀: /Mamathes Basutoland 13-1-1946 C. Jacot Guillarmod/ /*Mesa capitata* (Smith) det. 1947 - Det C.J. Guillarmod/, BMNH. 1♂: /Mamathes Basutoland 28-12-1945 C. Jacot Guillarmod/ /*Mesa capitata* (Smith) det. 1947 - Det C.J. Guillarmod/, BMNH;

Mesa xanthocera **(GERSTAECKER 1857)**. 1♀: /Cape province: Somerset east. 1-26.I.1931/ /S-Africa R.E. Turner. Brit. Mus. 1931-95/, BMNH. 1♂: /Grahamstown, Capeprovince. 3500 ft. 16.I.-10.II.1923/ /S-Africa: R.E. Turner. Brit. Mus. 1923-140/, BMNH; 1♂: /Natal Estcourt. Haviland/ /*Elis* (*Mesa*) *reticulata* Cameron/ /R.E. Turner determ./, SAM-Hym A003344.

Mesa fedtschenkoi **(SAUSSURE 1880)**. 1♀ /Хорог 26.VII.1960 окр.бомсада Л. Зимица *2300*/ /Mesa fedtschenkoi (F. Mor.) Gorbatovsky det./, MSNG. 1♂: /З. Памир, 25 km В Хорога, 2600 m, 29.07.1979 Песенко/ /Mesa fedtschenkoi (F. Mor.) Gorbatovsky det./, MSNG.

Mesa heterogamia **SAUSSURE 1892**. 1♀: lectotype, MHNG; 1♀: paralectotype, MHNG; 1♀: /Nyasaland Mlanje 23 Apr 1913 1913 140/ / *Mesa heterogamia* Sauss ♀ C.J. Guillarmod det 1949/ (Figs 31, 32), BMNH. 1♂: / Malawi = "Njasaland. Mlanje. 2 Jan 1914. S.A. Neave." "1914-416/ /*Mesa heterogamia* Sauss ♂ C.J-Guillarmod det. 1949/ (Fig. 34), BMNH).

Mesa hottentotta **SAUSSURE 1892**. 1♀: lectotype, MHNG.

Mesa mandalensis **(MAGRETTI 1892)**. 1♀: lectotype, MSNG.

Mesa donaldsoni **(FOX 1896)**. 1♀: /Tanganyika shinyanga Makumbo 12.4.1958 197 I.A.D. Robertson / Pres. By Com Ins: Fnt, B.M. 1963-4 / *Elis* (*Mesa*) *aliciae* Turner G.E.J. Nixon det. 1962 / BMNH. 1♂: /Somalia - Sar Uanle / programma litorale 1 Trans *A* trapp. data 3.XI.71 ore 18 Zona 3 Direz T /; MZUF.

Mesa rothney **(CAMERON 1902)**. 1♀: /Thailand: Chieng Mai province Doi Suthep 14-1500 m 2.X.1981 Zool. Museum Copenhagen leg./, UZM.

Mesa erythropoda **(TURNER 1908)**. 1♀: /Saw Mills S. Rhodesia 27/12/1923 Rhod. Museum/ /*Mesa erythropoda* Turner det. 1949 C.J. Guillarmod/, SAM-Hym A003307. 1♂: / Saw Mills S. Rhodesia 27/12/1923 Rhod. Museum/ /*Mesa erythropoda* Turner det. 1950 C.J. Guillarmod/, SAM-Hym A003307.

Mesa hova **(TURNER 1910)**. 1♀. /Madagascar/, MHNG.

Mesa angolensis **BERLAND 1925**. 1♀: /Nyasaland. Mlanje. 10 feb. 1914S. A. Neave./ /1914-416/ /*Mesa angolensis* Berland det. 1947 C.J. Guillarmod/, BMNH

Mesa palestinella GUIGLIA 1963. 1♂: paratype, MSNG

Mesa attica GORBATOVSKY 1981. 1♀: /Hellas, Peloponissos 5 km S Monemvasia 12.VIII.1983 Georg Christensen leg./, UZM (Fig. 33). 1♂: /Hellas, Peloponissos 5 km S Monenvasia 26-31.VIII.1983 Georg Christensen leg./, UZM (Fig. 35) (Photo 274).

Mesa persa GORBATOVSKY 1981. 1♀: /ю Гусейнабад, ю Пасратабад Сеис Заруднњь 4.V198/, MSNG

Mesa SAUSSURE 1892

Nyuka ARGAMAN 1994: 90. **syn.nov.**

ARGAMAN established this new taxon name on the type species *Plesia picticollis* MORAWITZ 1890. The description of some particulars of a male ascribed to the MORAWITZ's species, until then not described, was given by BONI BARTALUCCI (2004: in press). That action was incomplete and somehow "shy" because the female typical specimen of *picticollis* had been inaccessible. Nevertheless, if that attribution is assumed as correct it compulsorily induces to the above said synonymy. The males of *fedtschenkoi*, *attica* and *persa* were examined and the GORBATOVSKY's (1981) opinion about the similarity of the male of *Plesia dubia* MORAWITZ 1890 to *Mesa palestinella* GUIGLIA 1963 has been accepted. Since all of the aforesaid males are clearly different from the male ascribed to *picticollis* which is otherwise pertaining to the genus *Mesa*, the present proposal of synonymy of *Nyuka* is considered highly justified. It is also based on the original description of Morawitz who did not find any generic difference among its *Plesia dubia* (♀), *Plesia picticollis* (♀) and *Plesia petiolaris* (♂) (=*fedtschenkoi*, ♀) and above all on the Gorbatovsky's authority (1981) when he designated all the lectotypes of the Morawitz's taxa and of *fedtschenkoi* under the generic name *Mesa* SAUSSURE 1892.

Mesa nodosa (GUÉRIN 1837)

Myzine nodosa GUÉRIN 1837: 577 - Lectotypus ♂ here designated in order to ensure the name's proper and consistent use: Madagascar = 1♂: /Goudot Madagascar 1829/(rounded) /Museum Paris Madagascar Goudot 86-39/ /*Myzine nodosa* guer. mag. zool./(autographic) /Type/, MHNP - Paralectotypus: Madagascar = 1♂ /*Myzine nodosa* guer. Monogr. Madagascar/ (autographic) /Coll. Guerin/ /Collezione Gribodo/ /LectoTypus/, MSNG

Mesa picticollis (MORAWITZ 1890)

Plesia picticollis MORAWITZ 1890: (Lectotypus ♀: Dort-Kuyu, 6.V.1890, A. Semenov , ZMUM)
Mesa picticollis: GORBATOVSKY (1981: 387)
Mesa picticollis: BONI BARTALUCCI (2004: in press)

Material: Kazakhstan = 2♂♂: /Kuldja Mont. Boreal./, MHNW (1), MZUF (1); Turkmenistan = 1♂: /Transcasp Bala-Tschem/, MHNW

Male: Pitchy black, brown and pale yellow. Pale yellow: most of clypeus, frontal Tsa, mandibles but tip, outer basal genae, most of pronotum, a spot on the mesepisternum, most of scutellum, postscutellar area, two spots lateral to the propodeal foramen, LaM, tegulae, ventral surface of fore and mid coxae, most of fore femurs and tibiae, apical mid and hind femurs, upper mid and hind tibiae, all the tarsi, large apical stripe with sub entire fore profile on 1st to 6th terga, irregular narrow apical stripe on 2nd to 6th sterna. Brown: scape and flagellum, tip of mandibles, the remainder of legs, apical metameri and anal hook. Dark brown: the remainder of metasoma.

The head is larger than high (Ratio about 1.1), with a bulging vertex in frontal aspect. The pronotal disk has a rounded fore border, without any keel and lateral teeth; the pronotal plate is small and sub triangular. Metameri slender: 2nd metamere with a ratio LA/L = 0.9. Epipygium convex with a median longitudinal blunt ridge and poorly developed lateral keels (less than 1/5 its length in dorsal aspect). Hair scattered and not covering the underlying integument anywhere.

Note. The coloration, shape of the head, pronotum, metameri, epipygium and genitalia distinguish it from the other Palaearctic males.

Meriini

In this tribe the sexual dimorphism reachs the highest degree into the group, the females being more or less brachypterous up to apterous. In the females normally only the upper portion of the metapleural sulcus (su3) is expressed.

Meriini are well joined with Mesini to constitute a good natural group, very featured by the states **2aa** → **2dd**, **2ff** and **2ii** present only in the Old World taxa of the subfamily. The states **3aa, 3cc, 3hh** and **3oo** are not present in any other Tiphiid. The states **3bb** and **3ii** are shared with Brachycistidinae.

Examined specimens (excluding those listed under *Tamerlanella*, *Iswara*, *Komarowia* and *Lamprowara*)

Braunsomeria quadraticeps TURNER 1912. 1♀: /Kimberley Bio Power Nov 1913/ /*Braunsomeria quadraticeps* var Turne./ /R.E. Turner determ./, SAM-Hym A0030077.

Braunsomeria atriceps TURNER 1912. 1♀: /Algoa bay Capland Dr Brauns 22.12.95/ /Brauns Coll. 1912-44/ /*Braunsomeria atriceps* Turn Type/ (autographic) /Paratype/ (rounded with yellow outer ring), BMNH (Fig. 38).

Braunsomeria mutilloides TURNER 1912. 1♀: /Salisbury April/13/ /*Braunsomeria mutilloides* Turn./ /R.E. Turner determ./, SAM-Hym A003079.

Braunsomeria peringueyi TURNER 1926. 1♂: (Holotypus) /O'okiep Nov 1895/ /*Braunsomeria peringuey* Turn Type/ (autographic) /Type/ /SAM-Hym A003080/ (Fig. 42).

Braunsomeria sp. 1♂: /Botswana B6 11 m n of Ghanzi 14.IV.1972/, BMNH (Figs 39, 40, 41, 279, 280).

Iswara sp. 1♂: /Siria. Talilah National Park (Palmira) 16.VII.2000 legit G. Serra/, MZUF (Figs 66, 67).

Macromeria klugi (WESTWOOD 1835). 1♀: /O'okiep G Warden 9-86/ /*Meria klugii* Westw. Det 1949 C.J. Guillarmod/, SAM-Hym A003084. 1♂: /O'okiep G Warden 9-86/ /*Meria klugii* Westw. Det 1949 C.J. Guillarmod/, SAM-Hym A003084.

Meria tripunctata (ROSSI 1790). 1♀:/Italia, Toscana, Principina a mare (GR), su *Echinophora* 07.VII.1989, Boni Bartalucci leg/, MZUF (Fig. 1A, 1B, 1C, 262, 264, 275, 276, 277, 278, 282, 283). 1♂: / Italia, Toscana, Principina a mare (GR), su *Echinophora* 07.VII.1989, Boni Bartalucci leg/, MZUF (Figs 43, 54, 55, Figs 261, 263, 265, 266, 269, 281).

Meria rufifrons (FABRICIUS 1804). 1♀: /Natal Eastcourt/ /1913-319/ /E. Haviland 1894/, SAM (Figs 1D, 29, 37, 47); 1♀: /M fongosi Zulu L. W.E. Jones/ /*Myzine rufifrons* Fabr. ♀/ /R.E. Turner determ./, SAM-Hym A003114. 1♂: (1) /M. fongosi Zulu L. W.E. Jones/ /*Myzine rufifrons* Fabr. ♂/ /R.E. Turner determ./, SAM-Hym A003114.

Meria geniculata (BRULLÉ 1832). 1♀: /Grecia, Pili m. 250, 19.VI.1992, I. Pagliano/, CP. 1♂: (1) /Grecia, Pili m. 250, 18.VI.1992, I. Pagliano/, CP.

Meria aurantiaca (GUÉRIN 1837). 1♀: /Grecia. Rodi. Paradissi beach. 4.VIII:1990 Boni Bartalucci leg./, MZUF (Fig. 25). 1♂: /Grecia. Rhodos. Kamiros. 2.VIII.1990. Boni Bartalucci leg./, MZUF.

Meria arabica (GUÉRIN 1837). 1♀: /SW Persia, Escalera, 1900-61/, BMNH (Figs 27, 48). 1♂: /SW Persia, Escalera, 1900-61/, BMNH (Fig. 30).

Meria thoracica GUÉRIN 1838. 1♀: lectotype, MHNP. 1♂: /S-Arabia, Abu Arish, 24.3.80 KMG/, BMNH.

Meria lineata SICHEL 1859. 1♀: /ile de Port-Cros 24/VIII/1954 F. Aubert leg/, MZUF. 1♂: /Pyrènèes orientales Trouilles 16.VII.1966/, MZUF.

Meria ashabadensis RADOSZKOWSKI 1886. 1♂: lectotype, PAN (Fig. 53).

Meria perornata (TURNER 1908). 1♀: /Transvaal/ /*Myzine perornata* Turner/ /R.E. Turner determ./SAM-HYM A003097. 1♂: /Mamathes Basutoland 10-II-1946 C+A Jacot Guillarmod/ /*Meria perornata* ♂ (Turn) det 1949 C.J. Guillarmod/, SAM-Hym A003181.

Meria rufinodis (Turner, 1910). 3♂: / *Namibia* Omaruru district 2 km W Brandberg West 20°58'05"S 14°06'36"E 22-24 .X.1998 Kirk-Spriggs & Marais Malaise trap / /NNIC /, NMN.

Meria sp. 1♀: /Egypt: Cairo 9-20/V/1978 K. Guichard/, BMNH (Figs 26, 28). 1♂: / Egypt: Cairo 9-20/V/1978 K. Guichard/, BMNH.

Myzinella lybica (MASI 1933). 1♀: holotype, MSNG. 1♂: holotype of *Myzinella patrizii* Guiglia, 1959, MSNG; 1♂: /Sahara Alger. Biskra tamarix Meggal/ /29.V.80 sur Tamarix Leg. A.G. Soika/, MZUF (Fig. 287).

Myzinella maura BONI BARTALUCCI 2001. 1♀: holotype, MHNP. (Figs 44, 45, 46).

Myzinella bambeyana BONI BARTALUCCI 2004. 1♂: holotype, BMNH (Figs 59, 60, 61).

Parameria femorata GUÉRIN 1837. 1♀: /Ghardaia V-1919/, MHNP (Fig. 49). 1♂: /Ghardaia (MZAB) Sud Algerien / /Museum Paris Coll. J. Pérez 1915/, MHNP (Fig. 62).

Poecilotiphia rousseli (GUÉRIN 1838). 1♀: /Corsica. Portovecchio: Pinarello. Spiaggia 21/27-VII-1992 Boni Bartalucci leg/, MZUF (Fig. 284). 1♂: /Corsica. Portovecchio: Pinarello. Spiaggia 21/27-VII-1992 Boni Bartalucci leg/, MZUF.

Poecilotiphia parvula (SMITH 1855). 1♀: /Rhodes, Faliraki beach 22.VIII.1979/ /*Meria parvula* det. M.C. Day 1979/ /Poecilotiphia parvula Gorbatovsky det 1987/. 1♂: (1) /Morea/ /Morea Oertzen/, MHNW (Figs 64, 65).

Poecilotiphia lacteipennis (S. SAUNDERS 1901). 1♀: (1) /Zarzis 20.VIII.1969/, MZUF (Fig. 51). 1♂: /Italia. Sicilia. Agrigento: Eraclea Minoa 2/VIII/1980 Boni Bartalucci leg./, MZUF.

Poecilotiphia albomaculata CAMERON 1902: 1♂: lectotype, BMNH (Fig. 58).

Poecilotiphia mogadorensis (TURNER 1911). 1♀: /Tagazout 18/19-IV-1990 leg. Scaramozzino/, CP (Fig. 51). 1♂: /Maroc Tiznit, Sidi Moussa 3/V/1947 J. De Beaumont/ /*mogadorensis* Turner det. D. Guiglia/, MSNG (Fig. 286).

Poecilotiphia collarinata BONI BARTALUCCI 1997. 1♂: paratype from Egypt, MZUF (Figs 57, 63).

Poecilotiphia oasicola BONI BARTALUCCI 2001. 1♂: holotype, MSNG (Figs 3B, 42).

Chorology of the Palaearctic taxa

The data hitherto recorded suggest that the Palaearctic Region should be intended in the same sense as by KIMSEY (1990). It has to be specify that the state of the art is not complete for the areas except Europe, since in the collections some new taxa wait for description.

Its southern boundary could be placed through Canary and Cabo Verde islands, Sahel, Sudan, Ethiopia, Somaliland (where Afrotropical with Palaearctic taxa somehow merge) and Arabian peninsula toward SW India (where Afrotropical taxa seem absent), since these are the most southern lands where specimens belonging to *Poecilotiphia* have been collected. Northwards the distribution area coincides with the northern mediterranean basin, spreading to the central eastern Europe, towards southern Russia and Caspian areas up to the Gobi desert in Mongolia.

From the data, four main sub regions can be easily detected: Europe, North Africa, SW Asia, Central Asia.

Europe is here intended to include Ukraine, Cypern and Anatolia too. North Africa extends to the above said southern palaearctic areas, but Asian ones. SW Asia means a region including Arabian peninsula, Middle East and Mesopotamia, an area bordered by Taurus mountains, southern Caucasus and Zagros mountains. Central Asia has to be intended in a broader sense, including most of Persia, Caspian areas (southern Volga basin and northern Caucasian areas too) and Afghanistan southwards to NW India and northwards to Gobi desert. Mediterranean area is here intended including only the regions and countries which border the sea.

Meria ILLIGER 1807

Europe: *M. tripunctata* (♀ & ♂), *M. cylindrica* (FABRICIUS 1793) (♀ & ♂), *M. volvulus* (FABRICIUS 1798) (♀ & ♂), *M. dorsalis* (FABRICIUS 1804) (♀ & ♂), *M. nitidula* KLUG 1810 (♀ & ♂), *M. geniculata* (♀ & ♂), *M. aurantiaca* (♀ & ♂), *M. lineata* (♀ & ♂), *M. latifasciata* (PALMA 1869) (♂), *M. anatolica* BONI BARTALUCCI 2004 (♂)..... 10 species

N-Africa: *M. tripunctata* (♀ & ♂), *M. cylindrica* (♀ & ♂), *M. volvulus* (♀ & ♂), *M. thoracica* (♀ & ♂), *M. lineata* (♂), *M. latifasciata* (♀ & ♂), *M. cephalotes* BONI BARTALUCCI 1997 (♀ & ♂) .... 7 species

SW-Asia: *M. aurantiaca* (♀ & ♂), *M. arabica* (♀ & ♂), *M. thoracica* (♀ & ♂), *M. sabae* BONI BARTALUCCI 2001 (♀ & ♂) .... 4 species

Central Asia: *M. dorsalis* (♀ & ♂), *M. nitidula* (♀ & ♂), *M. geniculata* (♀ & ♂), *M. aurantiaca* (♀ & ♂), *M. ashabadensis* (♀ & ♂), *M. caspica* RADOSZKOWSKI 1887 (♀ & ♂), *M. sanguinicollis* MORAWITZ 1890 (♀ & ♂), *M. quadrimaculata* CAMERON 1902 (♀), *M. discussa* GUIGLIA 1966 (♀ & ♂), *M. flava* GORBATOVSKY 1981 (♂), *M. aprica* GORBATOVSKY 1981 (♀ & ♂), *M. morawitzi* GORBATOVSKY 1981 (♀ & ♂), *M. gussakovskyi* GORBATOVSKY 1981 (♀ & ♂).......... 13 species

Total number of palaearctic species: 23 species

Shared taxa between Europe and N-Africa: 5 on 12 (~ 42 %)

Shared taxa between Europe and SW Asia: 1 on 13 (~ 8 %)

Shared taxa between Europe and Central Asia: 4 on 19 (~ 21 %)

Shared taxa between N-Africa and SW Asia: 1 on 10 (10 %)

Shared taxa between N-Africa and Central Asia: 0

Shared taxa between SW Asia and Central Asia: 1 on 15 (~ 7 %)

N-Mediterranean: *M. tripunctata*, *M. cylindrica*, *M. volvulus*, *M. dorsalis*, *M. nitidula*, *M. geniculata*, *M. aurantiaca*, *M. lineata*, *M. latifasciata*, *M. anatolica* .... 10 species

S-Mediterranean: *M. tripunctata*, *M. cylindrica*, *M. volvulus*, *M. aurantiaca*, *M. lineata*, *M. latifasciata*, *M. cephalotes* .... 7 species

W-Mediterranean: *M. tripunctata*, *M. cylindrica*, *M. volvulus*, *M. dorsalis*, *M. lineata*, *M. latifasciata* .... 6 species

E-Mediterranean: *M. dorsalis*, *M. nitidula*, *M. geniculata*, *M. aurantiaca*, *M. latifasciata*, *M. cephalotes*, *M. anatolica* .... 7 species

Total number of mediterranean species: 11

Shared taxa between S. & N: 6 on 11 (54 %)

Shared taxa between W and E: 2 on 11 (18 %)

***Poecilotiphia* CAMERON 1902**

Europe: *P. rousseli* (♀ & ♂), *P. oraniensis* LUCAS 1849 (♂), *P. parvula* (♂), *P. lacteipennis* (♀ & ♂)..4 species

N-Africa: *P. aegyptiaca* (GUÉRIN 1837) (♀ & ♂), *P. nigripes* (GUÉRIN 1837) (♀ & ♂), *P. gracilis* (BRULLÉ 1833) (♂), *P. rousseli* (♀ & ♂), *P. ruficornis* (LUCAS 1846) (♀), *P. oraniensis* (♂), *P. lacteipennis* (♀ & ♂), *P. fasciculata* (E. SAUNDERS 1901) (♂), *P. dakarensis* (BUYSSON 1910) (♀ & ♂), *P. diffinis* (TURNER 1908) (♂), *P. mogadorensis* (♀ & ♂), *P. kristenseni* (TURNER 1912) (♂), *P. endecamera* (MENOZZI 1940) (♀), *P. contrastata* (GUIGLIA 1963) (♂), *P. guichardi* (GUIGLIA 1967) (♂), *P. scorteccii* (GUIGLIA 1968) (♂), *P. collarinata* (♂), *P. oasicola* (♂), *P. sahelica* BONI BARTALUCCI 2001 (♂), *P. ruvida* BONI BARTALUCCI 2004 (♂), *P. trichogastra* BONI BARTALUCCI 2004 (♂)..21 species

SW Asia: *P. aegyptiaca* (♀ & ♂), *P. nigripes* (♀ & ♂), *P. lacteipennis* (♀ & ♂), *P. contrastata* (♂), *P. pseudofasciculata* (GUIGLIA 1963), *P. scorteccii* (♂), *P. triapitzini* GORBATOVSKY 1979 (♂), *P. collarinata* (♂), *P. oasicola* (♂), *P. excavata* BONI BARTALUCCI 2001 (♂), *P. dhofarensis* BONI BARTALUCCI 2004 (♂)....................11 species

Central Asia: *P. nigra* (RADOSZKOWSKI 1887) (♂), *P. rugosopunctata* (TOURNIER 1889) (♂), *P. brevicauda* (MORAWITZ 1890) (♂), *P. ciliata* (MORAWITZ 1894) (♀ & ♂), *albomaculata* (CAMERON 1902) (♂), *P. subpetiolata* (CAMERON 1907) (♂), *P. hymalaiana* (MASI 1933) (♀), *contrastata* (♂), *P. mollis* GORBATOVSKY 1979 (♀), *P. lugubris* GORBATOVSKY 1979 (♀), *P. massageta* GORBATOVSKY 1979 (♂), *P. sogdiana* GORBATOVSKY 1979 (♂)...12 species

Total number of palaearctic taxa: 37 species

Shared taxa between Europe and N-Africa: 3 on 22 (≤14 %)

Shared taxa between Europe and SW Asia: 1on 14 (~ 7 %)

Shared taxa between Europe and Central Asia (0%)

Shared taxa between N-Africa and SW Asia: 7 on 25 (28 %)

Shared taxa between N-Africa and Central Asia: 1 on 32 (≥3 %)

Shared taxa between SW Asia and Central Asia: 1 on 22 (≤5 %)

The same action about the Mediterranean area can be operate here too.

N-Mediterranean: *P. rousseli*, *P. oraniensis*, *P. parvula*, *P. lacteipennis*.....................4 species

S-Mediterranean: *P. aegyptiaca*, *P. nigripes*, *P. rousseli*, *P. ruficornis*, *P. oraniensis*, *P. lacteipennis*, *P. fasciculata*, *P. mogadorensis*, *P. endecamera*, *P. contrastata*, *P. pseudofasciculata*, *P. scorteccii*, *P. triapitzini*, *P. collarinata*, *P. oasicola*, *P. excavata* ....16 species

W-Mediterranean: *P. rousseli*, *P. ruficornis*, *P. oraniensis*, *P. lacteipennis*, *P. fasciculata*, *P. mogadorensis*, *P. collarinata*, *P. oasicola*..8 species

E-Mediterranean: *P. aegyptiaca*, *P. nigripes*, *P. parvula*, *P. lacteipennis*, *P. endecamera*, *P. contrastata*, *P. pseudofasciculata*, *P. scorteccii*, *P. triapitzini*, *P. collarinata*, *P. oasicola*, *P. excavata*...12 species

Total number of Mediterranean taxa: 17

Shared taxa between N. & S.: 3 on 17 (≤18 %).

Shared taxa between W. & E.: 3 on 17 (≤18 %)

The genus *Parameria* is monotypic ranging through Northern Africa up to Israel. The genera *Iswara* (with only two taxa from saharian area), *Komarowia*, *Lamprowara* and *Tamerlanella* are from central and SW Asia. *Myzinella* has three saharian and three different from them species from central Asia.

If the northern Mediterrananean area is well intelligible, the southern one here roughly identifies with an area expanding southwards from Mediteranean sea to the boundaries of Sahel and Sudan. Western Mediterranean here means the area artificially severed from the eastern area by an ideal line laid out just eastward Italian peninsula and southward through Libya & Tunisia; Anatolia has been considered belonging to northern, while Lebanon and Israel to southern Mediterranean areas. The remainder areas of the Middle east have been considered under the denomination of SW Asia.

The remarkable gap not only between Central Asia and the other areas (mainly between south western and central Asia) but also between Western and Eastern Mediterranean fauna is the general peculiarity standing out from the data, probably due to an eventual scarcity of records too. In the almost complete lack of ethological and ecological data (prey, seasonal frequencies, nesting habits etc.) we can only hazard the hypothesis that these relative segregations could be due to the more or less advanced state of brachyptery of the females. This suggestion is quite supported by the very lower percentage of the shared taxa within *Poecilotiphia,* where the brachypterous condition of the females is more stressed. Nevertheless, to explain the significant gap between western and eastern Mediterranean areas is really a hardier task than between northern and southern, where the sea itself is a mighty barrier. While the Northern area too shows mighty barriers (Alps and Balkans), there are no geographical obstacles and seemingly no echological or significant climatic differences between the sides of the imaginary border line which the data lay out through Libya and Tunisia.

Key to subtribes and palaearctic genera of the Meriini

1

Females:

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

b Clypeus enlarged getting higher sidewards than medially (included lamella too) in frontal aspect

c Transscutal suture (Sts) reduced to a shallow furrow between Sc1 and Sc2

d In dorsal aspect, the Sc1 is mostly covered by the apical border of pronotum and lesser than 10 % of its total surface is exposed, without even any trace of notaulices (No) and parapsidal lines (sup)

e Scrobis (Sb) of es2 not expressed

f N3 strongly narrowed to a transversal linear sclerite, with pits (fN3) shifted to its extreme lateral tips (Fig. 38)

g Propodeal spiracles (spP) shifted towards the borders of the horizontal area of the propodeal disk or even off it up to get a sub vertical placement

h Metepimeron (em_3) strongly reduced; its height along the meso-metapleural suture (smm) less than 1/5 the total length of the latter

i Wings absent or scale-like with no cells. Where scale like, hind wings always extremely reduced and hardly detectable at ×50 magnifications too; they never overcome the edges of the fossa where they arise from

Males:

J Ssa absolutely flat (Fig. 279)

k Clypeal disk flattened in the middle with raising sides (well detectable in ventral aspect) (Fig. 279)

l Fore and back borders of mandibles with plate like expansions, inflated in lateral aspect (Fig. 39)

m Hind tibial major spur combed (Fig. 280)

n In ventral aspect, both the preapical groove with apical border of 1st sternum and the basal border of 2nd sternum are convex forewards, while the basal groove of 2nd sternum is convex backwards (Fig. 40)

o Tip of the gonostylus sharpened (Fig. 41)

p Volsella with a inward bent cuspis (in lateral aspect) (Fig. 41)

q Digitus as bent as cuspis, about as large forward as the volsella and articulated on its median point (Fig. 41)

(Afrotropical) Subtribe **Braunsomeriina**

Females:

aa Eyes vertically lengthened, the longitudinal diameter more than 1.6 up to 2 times the short one (Figs 28, 214), best detectable in lateral aspect; only one known exception: the supposed female of *Iswara nocturnus*

bb Clypeus tightening sideward, higher medially in frontal aspect

cc Sts well produced, Sc1 and Sc2 deeply severed

dd The exposed portion of Sc1 never less than 1/3 its total size with No and sup well expressed (just in few taxa they are substituted by pits)

ee Sb always expressed

ff N3 never so narrowed to a linear sclerite and always with two fN3 delimiting a central (postscutellar) area and two lateral areas of about equal width (Fig. 1A)

gg spP never shifted off the horizontal propodeal area to get a sub vertical placement

hh em3 more developed; its height half the total length of the smm at least (Fig. 1B)

ii Wings variable; fore wing mostly with six or seven cells bordered by tubular veins. Where scale-like, the fore wing has two closed small, but detectable, cells at least and the hind wings always well overcome the edge of the fossa where they arise from (easily detectable at ×10 magnifications too under the fore wing)

Males:

JJ Ssa with a vertical, broad based median ridge (Fig. 261)

kk Clypeal disk convex in the middle, without raising sides (Fig. 261)

ll Mandibles with sub straight not inflated borders in lateral aspect (Fig. 43)

mmHind tibial major spur simple, not combed (Fig. 281)

nn 2nd sternum with basal border and relative groove always straight; pre apical groove and distal border of 1st sternum straight too (Figs 174, 197) as well in the vast majority of taxa but *Iswara* (Fig. 143) where they are convex forwards

oo The tip of the gonostylus rounded or roughly squared (Fig. 30)

pp Cuspis of volsella not bent inward (Fig. 30)

qq Digitus not bent, much narrower than volsella and articulate laterally (Fig. 30) ....(Palaearctic and Afrotropical) Subtribe **Meriina 2**

2

(only Palaearctic taxa)

a Females...**3**

aa Males..**8**

3

a Paramandibular edge (mpm) meeting outer hypostomal carina (cHy) before the latter merges with inner clypeal surface, so there is no genal surface getting clypeus (Fig. 25)

b Pam and Pal always 6- and 4- segmented respectively (with the sole exception of *Tamerlanella*)

c Forecoxa: a longitudinal strong keel along the whole inner edge of its ventral surface (Fig. 282)

d Dense tufts of short whitish bristles at the apex of the basal and along the ventral edge of the 2nd fore tarsomerus (Fig. 29) [the sole *Myzinella* shows the state dd)]

e First tergum with either a deep furrow or a narrow impression (hardly detectable in *Tamerlanella*) joining the lateral furrows with an actual solution of the integument between sloping tergal and upper petiolar surfaces; the latter is formed only by 1st sternum (Fig. 283) 4

aa) mpm merges into the genal surface or bends toward the inner clypeal surface, never meeting cHy; genal surfaces touch clypeus (Fig. 180)

bb) Pam and Pal always more or less reduced (but *Parameria*, so far monotypic genus, which shows the state b)

cc) Forecoxa without any longitudinal keel on its ventral surface in most of taxa; *Parameria* shows the state a , while it is partially produced in the *Poecilotiphia* species of the group *P. nigripes*

dd) Fore tibia and fore tarsus without any tuft of short hair; (Fig. 284)

ee) Neither furrow nor narrow impression, without any solution of the integument, between the sloping tergal and upper petiolar surfaces; the latter apparently formed only by a ribbon like extension of the tergal surface 6

4

a Tsa shifted laterally (e.g. Fig. 59) with toruli clearly separate by a distance about as long as their widtht

b FoO with a sub triangular shape (Fig. 44)

c Fore wing always with six functional cells, even if the veins are weakened; pterostigma large, longer than scape, with uniform surface without any inner differentiated area (Fig. 45)

d Jugum smaller than clavus in the wind wing, where M and Rs veins lack distally to the Rs-m venation (Fig. 45)

e No tuft of short hair on the fore tibia and fore tarsus

f Row of points on 2nd to 6th terga and sterna, medially severed and shifted far from the distal border of the elements; they are strongly bent backward, subtending two well distinct areas from the remainder and separated by a distance longer than their basal width (Fig. 46)

g Probably the most minute female specimens of the whole subfamily; their size normally about 5 mm, never overcoming 7 mm; no light markings
.... *Myzinella* GUIGLIA 1959

aa Tsa fused or not, but toruli always separated by a distance far lesser their width (Fig. 25)

bb FoO posteriorly rounded with sub parallel sides (Fig. 25)

cc Fore wing variable, till scale-like; in most of the species the fore wing has six functional cells at least; pterostigma, where it exists, well shorter than scape with a differentiated inner area (Fig. 3)

dd In the latter forms, the jugum is always greater than clavus in the hind wing, where the M and/or Rs veins distally to the Rs-m venation are always expressed (Fig. 3A)

ee Dense tufts of short whitish bristles at the apex of the basal and along the ventral edge of the 2nd foretarsomerus at least (Fig. 29) ff Row of points on the tergal and sternal surface variable, sometimes sub parallel and very close to the distal border, sometimes weakly bent at most, but not subtending well distinct far distanced areas (e.g. Fig. 178)

gg Size always more than 7 mm, up to 22 mm and mostly with light spots and patterns 5

5

a The furrow starting from the tooth delimits a lobe ending with a second blunt process on the inner side of the mandible (Fig. 47)

b Pam 6-, Pal 4-segmented

c Wings variable, never fringed by long hair and always with some detctable cell, even in the only recorded taxon (*M. lineata*) with scale-like wings.

d Tufts of short hair also at the base of the fore tibial spur

e Strigilis functional, foretibial spur and basitarsal notch with a well produced velum

f Transmetapleural line (sum) well expressed (Fig. 1B)

g Petiole slender, 1.5 times to twice longer than wide in ventral aspect (Fig. 48), forming an obtuse but clear angle with the sloping down tergal surface in lateral aspect (Fig. 26) .... *Meria* ILLIGER 1807

aa The furrow starting from the subapical tooth wears out upward without delimiting any lobe on the inner side of the mandible (Fig. 76)

bb Pam 4-, Pal 3 segmented (Fig. 77)

cc Wings reduced, without any detectable cell and fringed by long hair (Figs 75, 78)

dd No tuft of short hair at the base of the fore tibial spur (Fig. 79)

ee Strigilis not functional, foretibial spur and basitarsal notch without any velum (Fig. 79)

ff sum not expressed; the surfaces of the em3 and lateral propodeal area are almost lying on the same plane

gg Petiole just a bit longer than wide (Fig. 82); its upper surface lying on about the same plane as the sloping down tergal surface (in lateral aspect) .... *Tamerlanella* gen. nov.

6

a Fore surface of the mandibles almost flat and smooth, without strong longitudinal furrows

b Pam 6- and Pal 4- segmented

c Fore wing with six cells bordered by tubular veins

d Hind wing with jugum smaller than clavus

e Pterostigma with a large transparent area

f Foretibial spur: apex hardly developed and very shorter than trunk (Fig. 49)

g Large white markings on metasoma and often on mesosoma too

h Lateral furrows on 1st to 3rd terga .... *Parameria* GUÉRIN 1837

aa Fore surface of the mandibles not flattened and with a longitudinal furrow

bb Palpi variously reduced, always less than 6- and 4- segmented

cc Fore wing variable from scale-like to with six cells with tubular veins

dd In the latter forms, the jugum is always greater than clavus in the hind wing

ee Where present, the pterostigma is homogeneous without any inner differentiated area

ff Foretibial spur: apex strongly developed, about as long as trunk (Fig. 50)

gg No light markings anywhere (but individual aberrations)

hh Lateral furrows on 1st to 4th terga 7

7

a Scape with a stripe of densely packed pits bearing bristles as long as its length from its base just to apex, along the upper and ventral surfaces (Fig. 51)

b em3 normally higher, rarely as high as, than half the smm (Fig. 1B)

c Upper meta pleural sulcus (su3) straight (Fig. 1B)

d Metasternum (St_3) with sub flattened ventral apophysis, lying about on the same plane of the LaM (Figs 1B, 1C)

e Strigilis functional; always both fore tibial spur and basal fore tarsomerus with a notch bearing a velum; in some species with reduced wings the notchs are less deep and velum reduced, but clearly expressed (Fig. 50)

f The edge of the wings is simple without long fimbriae; only *P. mogadorensis* (TURNER 1911) bears quite long bristles on their apical half)
.... *Poecilotiphia* CAMERON 1902

aa Scape with more scattered pits, not shaping a stripe and ending well far from its apex, on the upper and ventral surfaces; the bristles shorter than its length (Fig. 52)

bb em_3 a little shorter than half the smm (Fig. 183)

cc Upper portion of su3 bent backward (Fig. 183)

dd Metasternum with narrow flat, parallel apophysis, sub vertical to the main axis of the body (Figs 123, 290)

ee Strigilis not functional; both fore tibial spur and basal fore tarsomerus without detectable notch and velum (Fig. 285)

ff Very long (as long as or longer than the height of the hind wing) densely set bristles along the whole of the edges of the wings (Figs 178, 212) (only the supposed female *I. mateui* show similar conditions to *Parameria*)
.... *Iswara* WESTWOOD 1851 / *Komarowia* RADOSZKOWSKI 1886

8

a Eye with a well expressed notch on its inner border (best in frontal aspect) (Fig. 53, 59), with the sole exception of *Tamerlanella*

b Flagellomeri: in most of the taxa the sensilla curvata are not arranged in placoids but in more or less wide longitudinal stripe from 2nd or 3rd element to the apical one, where also most of sensilla basiconica are crowded (Fig. 265). Sensilla trichoidea are spread throughout elsewhere. In *Myzinella* the sensilla curvata seem to spread all over its surface. *Tamerlanella* show an almost completely hairless flagellum, a similar condition to *Iswara*

c Fore coxa with a longitudinal strong keel along the whole inner edge of its ventral surface (Fig. 282)

d Simple row of bristles parallel to the combed velum, on the ventral surface of the basal fore tarsomerus (Figs 54, 84)

e Basal hind tarsomerus entirely covered all around its surface by approached hair, shorter than its diameter (Photo 21), but in *Tamerlanella*

f Dorsal lateral ribs of 8th sternum (anal hook) neither broadened toward its base nor covering the underlying basal portion of the element (Fig. 55)

g Volsella always without any sword like apophysis

h Dististylus normally with a longitudinal ridge (Fig. 30) on its dorsal (lateral in the drawings) surface (but in *Myzinella* and very few other instances)
.... 9

aa Inner border of the eye lightly bent or almost straight, without a deep notch (Fig. 87A)

bb Flagellomeri: the sensilla curvata are bounded into well detectable semi elliptic placoids present on the last seven elements at most (Fig. 286); trichoid sensilla are spread throughout elsewhere, while the sensilla basiconica are absent (present only in *Parameria*) cc Ventral surface of the fore coxa either without strong longitudinal keel along its inner edge or sometimes only with a feeble furrow, not completely produced along its entire length, (only *Parameria* and *Poecilotiphia* of the group *P. nigripes* show the character state c)

dd Ventral surface of the basal foretarsal notch without any row of bristles (Fig. 57)

ee Basal hind tarsomerus without short approached hair at least on its upper surface, replaced by scattered thin bristles longer than its diameter (but *Parameria* and the sole *Poecilotiphia rousseli*)

ff Dorsal lateral ribs of 8th sternum very broadened toward its base, covering the underlying parts up to more than ½ the element in some taxa (Fig. 58) [*Iswara* / *Komarowia* have not this character state, but they show all the other character states from aa) through hh)]

gg Volsella normally with lateral sword like apophysis (Figs 101, 251); its absence has a spot shaped distribution at specific level (six instances altogether in two genera)

hh Dististylus with a smooth dorsal surface, without any ridge (Fig. 101) **11**

9

a Tsa and toruli widely separated; their distance bigger than single torulus width (Fig. 59); between them the frons looks like a shed-roof

b Median area of clypeus and Ssa entirely protruding up to and complanar with the plane of the frons and the upper surface of the Tsa (best in lateral aspect)

c FoO sub triangular; PoG always well expressed (Fig. 44)

d Flagellomeri: the sensilla curvata and sensilla basiconica are spread throughout while the sensilla trichoidea are absent (Fig. 287)

e Forewing: 3rd CSM about as high as wide

f First metamerus elongated, more than twice longer than wide in dorsal aspect (from the apical border to the tip of the petiole) (Fig. 60)

g Post-gradular surface suddenly and strongly raised above the pre-gradular surface, till to form a sub perpendicular step (Fig. 60)

h Gonostylus with simple surface

i Digitus appearing somehow "crushed" (Fig. 61) .... *Myzinella* GUIGLIA 1959

aa Tsa touching each other at their insertion point on the frons; distance between toruli less than their width (Fig. 261)

BB Ssa with only a median vertical broadly based keel which meets the inner point of insertion of the Tsa (Fig. 261) clearly under the plane of the frons (best in lateral aspect)

cc FoO semielliptic, PoG mostly absent (Fig. 25)

dd Sensilla curvata and most of basiconica bounded to longitudinal stripes or placoids.

ee Forewing: 3rd CSM strongly wider than high

ff First metamerus never more than 1.5 times longer than wide

gg Post-gradular lower than pre-gradulus surface

hh Gonostylus with a more or less strong longitudinal keel delimiting an apically open depression on its dorsal edge

ii Digitus not crushed (Fig. 30) **10**

10

a Eyes with a notched inner border (Fig. 54)

b FoO large, almost as long as genal area (in ventral aspect); PoG not always expressed and never longer than 1/5 of the FoO c FoO and PoG (where present) complanar to or a bit prominent over the contiguous genal areas

d Open mandibular socket; paramandibular process absent or very poorly expressed

e Sensilla curvata and most of basiconica set up in longitudinal stripe; the remainder of flagellar surface completely covered by sensilla trichoidea (Figs 263, 265); scattered basiconica along the border of the stripe

f Pam 6-, Pal- 4-segmented

g Fore wing: CM overcoming apex of 3rd SMC toward tip of the wing (Fig. 3B)

h Hind wing: jugum and its height only a bit greater respectively than clavus and its height

i Dorsal surface of the basal fore tarsomerus completely covered by approached short hair

j Basal hind tarsomerus entirely covered all around its surface by approached hair, shorter than its diameter

k Petiole slender; its upper surface forming a blunt but clear angle with the sloping down tergal surface

l 8th sternum (anal hook) with a simple dorsal surface, without any basal prominent tooth (Fig. 55, 56)
.... *Meria* ILLIGER 1807

aa Eyes with a sub straight inner border (Fig. 68)

bb PoG always expressed, as long as ¾ the FoO

cc FoO and genal bridge sunken under the plane of the genal areas in ventral aspect

dd Mandibular socket either closed or with a strong paramandibular process

ee Flagellomeri: completely hairless and smooth, but sensilla curvata into very small placoids on the last four flagellomeres (Fig. 288)

ff Pam 4-, Pal 3- segmented (Fig. 70)

gg Fore wing: apex of the CM drawn back toward base, overcome by apex of 3rd CSM

hh Hind wing: jugum twice greater than clavus; its height twice the height of the anal lobe too

ii Dorsal surface of the basal fore tarsomerus only with scattered bristles

jj Basal hind tarsomerus almost smooth with only scattered long setae

kk Petiole stout and short; its upper surface lying on the same plane as the sloping down tergal surface

ll 8th sternum with a prominent tooth at its base (Fig. 73)
.... *Tamerlanella* gen. nov.

11

a Keeled perimeter of the anterior surface of the scape

b Flagellum with a longitudinal stripe of sensilla curvata; sensilla basiconica present throughout, more crowded along this stripe

c Hind wing with jugum smaller than clavus

c Basal hind tarsomerus covered by approached short hair all around

e Lateral furrows present on 1st to 7th terga

f Deep slits and/or large transversal deep hollows on the whole width of 2nd to 6th sterna; deep graduli or slits, on 2nd to 6th terga

g Digitus enormously lengthened, as long as the total length of the vosella (Fig. 62)
.... *Parameria* GUÉRIN 1837

aa Perimeter of the anterior surface of the scape not keeled

bb Flagellum without the longitudinal stripe of sensilla which are present only into the placoids; sensilla basiconica always completely absent

cc Hind wing: jugum greater than clavus

dd Basal hind tarsomerus dorsally without approached short hair and with scattered long bristles

ee Lateral furrows present on 1st to 6th terga at most

ff Neither deep hollows nor slits on the whole width of the metameri; just one species (*P. sahelica*) show deep slits, ending well before reaching the lateroterga, on 3rd to 6th sterna

gg Digitus length ¼ the total length of the volsella at most (Figs 101, 251) 12

12

a Tsa with a flattened upper surface without transparent fore border

b Length of the om normally about 1/15 the width of the head in frontal aspect (i.e. LA_{Ca} / D_{om} about 15, 11 in only one taxon) (Fig. 53)

c PoG complanar or a bit prominent over the contiguous genal areas in ventral aspect

d Flagellar surface always with sensilla trichoidea throughout, but into the placoids where only sensilla curvata exist (Fig. 286)

e su3 straight (Fig. 2A)

f Subtrapezoidal 3rd CSM, much wider than high; the distance of its distal tip from apex of the wing as long as its width (Fig. 3B)

g Jugum of the hind wing has a sub straight outer margin, sub parallel to the jugal fold and is almost as high as or just a bit higher than clavus (Fig. 3B)

h Basitarsal notch with an entirely combed velum

i Outer apex of the fore tarsomeri with weak spines far shorter than following element; their dorsal surface covered throughout by short bristles. (Fig. 63)

j Metameri with clear strangling among them (Fig. 42)

k Strong, complete graduli on the basal terga at least

l Apical border of 7th sternum with a clear notch in ventral aspect (Fig. 64A)

m Apical border of 7th sternum broadly U-shaped in back aspect (Fig. 65) .... *Poecilotiphia* CAMERON 1902

aa Tsa with a swollen dorsal surface and a transparent stripe along the fore border

bb Ocelli enlarged; ratio D_{om} / LA_{Ca} at least 1/9, up to 1/5, in frontal aspect (Fig. 87A)

cc PoG is at the bottom of a depression formed by the near genal surfaces sloping downward to it (in *Lamprowara* the depression it is very shallow) (in ventral aspect)

dd Flagellar surface completely smooth, but placoids with sensilla curvata on the last elements; no sensilla trichoidea (but on the two basal elements in *Lamprowara*)

ee su3 more or less bent backward (Fig. 173)

ff Sub squared 3rd CSM, about as high as wide up to petiolate; the distance of its outer border from the apex of the wing more than twice, up to more than three times, its width (Figs 93, 169)

gg Jugum of the hind wing with a well rounded outer margin; its height more than 1.5 times the height of the clavus (Figs 93, 169)

hh Basitarsal notch with a velum entire or just with a combed apical half

ii Outer apex of fore tarsomeri with spines as long as or longer than the following element; their dorsal surface with only scattered short bristles (Figs 95, 174)

jj Metameri without clear strangling among them (Figs 147, 169)

kk Graduli weakly impressed and wearing off laterally

ll Apical border of 7th sternum without any notch (Fig. 66B)

Apical border of 7th sternum V-shaped (Fig. 67) **13**

13

a Ratio L / A of the single flagellomerus about 2-2.5 at the most. (Fig. 242)

b Flagellar surface with scattered sensilla trichoidea only on the basal two flagellomeri; elliptical placoids with sensilla curvata at the base of the last 4 flagellomeri

c Pam 6-, Pal 4-segmented

d Pronotal plate well expressed, with either a blunt, clear angle or a keel delimiting its upper border

e Metasternal apophysis not flattened, clearly divergent from each other and not subvertical to the main axis of the body

f CM distally opened (Fig. 242)

g Velum of the foretibial spur with an almost straight edge (Fig. 247)

h Strong keel on the upper inner border of the hind coxa

i 7th sternum quite shorter than 7th tergum in lateral aspect (Fig. 250)

j 7th tergum with a keel dividing horizontal from vertical surface of the lobes

k 7th tergum shining, without any microreticulation and detectable sub basal row of points; only scattered weak and short bristle on its horizontal surface (Fig. 249)

l 8th sternum strongly enlarged basally in dorsal aspect (Fig. 58)

....*Lamprowara* gen. nov.

aa Flagellomeri: 3 times longer than high at least (Figs 86, 169)

bb Flagellar surface absolutely without sensilla trichoidea; longitudinal placoids with sensilla curvata present at the base of the last 2 flagellomeri at the most only in *Komarowia* (Fig. 289)

cc Pam 3-, Pal 2-segmented

dd Pronotal plate not expressed without a clear angle between horizontal disk and sloping down surface

ee Metasternum with narrow flat, parallel apophysis, sub vertical to the main axis of the body (Figs 123, 290)

ff CM closed

gg Velum of the fore tibial spur with a strongly arched edge (Fig. 94)

hh Upper inner border of the hind coxa rounded, without any keel

ii 7th sternum only a bit shorter than 7th tergum in lateral aspect (Figs 99, 167)

jj 7th tergum without any keel dividing horizontal from vertical surface of the lobes

kk 7th tergum with a row of sub basal row of points bearing bristles well longer than the height of the notch in dorsal aspect (Fig. 98); lobes with a well detectable micro reticulation even at ×20 magnifications)

ll 8th sternum without strong basal enlargement (100, 178)

.... 14

14

a Pam 3 segmented; the apical one isometric with the basal ones

b Basitarsal notch with an entire velum, without any combed structure (like in the females)

c The preapical rows of points on the sides of the terga strongly bent forward and widely broken off about the middle of the element (Figs 96, 147, 158)

d 7th tergum (epipygium) with a very narrow (width 1/ 5 height at most) notch having sub parallel and weakly prominent borders (Fig. 98)

e Furrows delimiting lateroterga hardly detectable only on the 1st tergum; in some species it is present on the 2nd tergum but it does not overtake the spiracle f Apical border and preapical groove of 1st sternum convex forwards in ventral aspect (Figs 97B, 143)

g 8th sternum (anal hook) without longitudinal keels, abruptly narrowing from 2/3 its length towards apex (Figs 100, 126, 127)

h Inner surface of the volsella without any row of long, densely packed bristles (Fig. 101)

i Quite big digitus with a tapering top ("gnome hat like"); its height as long as or longer than 1/3 the height of volsella (Fig. 101)

j Sword like process, where present, always less long than ½ the height of the volsella, rising directly from the main body of the volsella and looking like a giant bristle (Figs 101, 153)

k Most of the body is evenly translucent, straw-coloured, but basalar area and most of the head which are dark brown
....*Iswara* WESTWOOD 1851

aa Pam 2 segmented; where 3 segmented the median segment is modified and the apical one atrophied, in some instance hardy detectable

bb Velum of the basitarsal notch with a combed apical half

cc The preapical rows of points on terga clearly forward directed about the middle, but only weakly bent and shortly broken off about the middle (Fig. 169)

dd 7th tergum with a sub triangular notch (apical width up to as long as height) and clearly divergent inner borders (Fig. 177)

ee Furrows delimiting lateroterga well detectable at least on the 1st and 2nd tergum, when present on 3rd it is vestigial and not overtaking the spiracle; in some taxa previously ascribed to *Melaniswara* they are well expressed up to 4th metamere and vestigial on 5th

ff Apical border and preapical groove of the 1st sternum straight in ventral aspect (Fig. 176)

gg 8th sternum with prominent keels (one ventral, two lateral and two dorsal) and evenly tapering to apex (Figs 168, 178)

hh Median area of the volsella very thinned, almost vanishing; its inner surface with long, densely packed bristles downward directed along its upper border (Figs 169, 179)

ii Quite small digitus; its height no longer than ¼ the height of volsella (Figs 169, 179)

jj Sword like process always present and much longer than ½ the volsellar height, rising from a lateral process of the volsella (as in *Poecilotiphia*) (Figs 169, 179)

kk Most of the species have either whitish or pale yellow coloured patterns on a straw-coloured or light brown body, besides a darker head. Only two species look like *Iswara*
....*Komarowia* RADOSZKOWSKI 1886

Genus *Tamerlanella* gen.nov.

Species typus: *Meria radialis* SAUSSURE 1880: 39, ♂.

SAUSSURE (1880) in his "voyage de M. Fedtschenko a Turkéstan" described first *Meria radialis* on male specimens having a truncated apex of the CM, then *Pseudomeria tamerlanella* on female specimens showing advanced brachyptery. At the figure 22 of the relative table, the last taxon was named "*P. tartara*"; this mistake caused a misunderstanding in DALLA TORRE (1897) who listed it under *Myzine tamerlanella*, then created another taxon name, *Myzine pseudotartara*, from the name of the table. RADOSZKOWSKI (1888), in replying to a MORAWITZ's remark, gave a plentiful exhibition of the very *Ps. tamerlanella*. with the grounds of his *Komarowia victoriosa*.

The examination of relative specimens at MHNG pertaining to the DE SAUSSURE's collection revealed that *M. radialis* needs to be segregated from the remainder genera of the

Myzininae and considered a branch apart with a new taxon name. At the same time *Pseudomeria tamerlanella* is not close to *Pseudomeria graeca* S.S. SAUNDERS 1850 (= *Meria*, sensu GORBATOVSKY 1981) and it is here considered the female sex of *M. radialis*, mainly because of the same provenance area and same palpal formula; this action is obviously somehow arbitrary as long as definitive proofs from the field will confirm it or not. The same generic taxon name has been assigned to *Meria kurnubiensis* GUIGLIA 1962 (♂), as it shares most of its character states.

Gorbatovsky first perceived their peculiarity; he wrote a new generic taxon name on the label of the male specimen at MSNG, but he did not put it into action without any issue about, as far as we know. Since all of attempts to contact him failed, the resolution to use all the same another name has been taken.

The items of the key together with the relative drawings well characterize this genus that could be considered closer to *Meria* than to *Poecilotiphia* because of:

- the shape of the genitalia and ventral surface of the fore tarsomere in the male
- in the female: the upper and ventral surfaces of the scape with more scattered pits (with bristles shorter than its length) than in *Poecilotiphia*, not shaping a stripe and well ending far from its apex
- tufts of short, dense hair on the basal foretarsomeres of the female
- the shape of the preapical row of points on the metameri of the female.

The female and both the males here ascribed show a short petiole and 1st tergal and dorsal petiolar surfaces lying on the same plane

Derivatio nominis: From the original specific name of *Pseudomeria tamerlanella*. Gender feminine

Tamerlanella radialis (SAUSSURE 1880) comb. nov.

Meria radialis SAUSSURE 1880: 39', Tab 2-fig. 20 - Lectotypus ♂ here designated in order to ensure the name's proper and consistent use: Kazahkistan = /Степь М. С. Д и Т./ /19/ /*Myzine* (*Meria*) *radialis* ♂ *Saus*/ (autographic) /TYPE/ (red) /C. ne de Saussure/, MHNG !
Pseudomeria tamerlanella SAUSSURE 1880: 41-42, Tab 2 - fig. 22 - Lectotypus ♀ here designated in order to ensure the name's proper and consistent use: Kazahkistan = /Степь М. С. Д и Т./ /*Pseudomeria tamerlanella Sauss*/ (autographic)/C. ne de Saussure/, MHNG !. Syn.nov.
Pseudomeria tartara SAUSSURE 1880 (lapsus calami in the legend of the fig. 22, table 2: ♀)
Pseudomeria tamerlanella: MORAWITZ (1888: 299, ♀)
Pseudomeria tamerlanella: RADOSZKOWSKI (1889: 309, ♀)
Komarovia tamerlana: SAUSSURE (1892: 249-250, ♀)
Myzine pseudotartara: DALLA TORRE (1898: 126, ♀)
Myzine tamerlanella: DALLA TORRE (1898: 127, ♀)
Meria radialis: GUIGLIA (1963: 241-242, ♂)
Meria radialis: GUIGLIA (1965: 114, ♂)

Material: Turkmenistan = 1♂: /Turkm./ /meria radialis Sauss D. Gribodo/, MSNG; Uzbekistan = 1♂: /Узбекустан 18.VI.1969 окр Каршу В. Горбатовскуў/ /Telepinus radialis (Sauss.) Gorbatovsky det./, MSNG; Kazachstan = 1♂: /Kazachstan mer Darbaza 30.V.94 40 km N Tachkent leg Ma. Halada/, OLL.

Male: Figs 68-74 (Lectotype). The eye has an egg-like shape in lateral aspect and a sub rectilinear inner border in frontal aspect. The gonostylus and volsella looks very like in *Meria*.

Female Figs 75-82 (Lectotype): SAUSSURE (1880: p. 36) first inferred about its relation with one of the new males he described (*Meria tartara*, *M. radialis*, *M. timurella*), then (p. 39) with *tartara*, in both circumstances calling it again *Pseudomeria tartara*. Successively (1892) he abandoned the last inference linking *tartara* with the female *K. victoriosa*. RADOSZKOWSKI (1888) gave a detailed description.

Ecology: Unknown.

Distribution: Turanic region.

Tamerlanella kurnubiensis **(GUIGLIA 1963) comb. nov.**

Meria kurnubiensis GUIGLIA 1963: 240-242, figs 6-7 (Holotypus ♂: ISRAEL = /Kurnub 14.VI.19?, leg. H. Bytinski-Salz/, ?).

Material: Jordan = 1♂: /Giordania Totes Meer 11.IX.64 J. Klapperich/, CB.

Male: Figs 83-85, 288.

Female: Unknown.

Ecology: Unknown.

Distribution: Israel and Jordan.

Note: The present attribution of this specimen has been based on hers original description. This species is known from *Meria radialis* in having more stout flagellomeri (only twice longer than high instead of three times in *M. radialis*), lacking of any keel and impression on the dorsal surface of the gonostylus and overall because of the deep invagination of the graduli present on 2nd to 7th terga. The tooth at the base of 8th sternum is quite less prominent.

Nocturnal and crepuscular palaearctic taxa

Historical outline

WESTWOOD (1851) described a new genus and a new species, *Iswara luteus*, giving good description and figures of a specimen from India with ochreous general colour and enlarged ocelli revealing nocturnal habits; he ascribed it to the family Thynnidae. SMITH (1873) gave a shallow description, without figures, of a male specimen from Sind (NW India, actually Pakistan) ascribing it to the genus *Iswara* and family Dorylidae: *Iswara fasciatus*. He then described (1879) other two species under the name *Myzine*, *M. pallida* with general "pallide flavis" colour (or straw coloured) and *M. orientalis* with well-developed yellow colour patterns, both with somehow enlarged ocelli. SAUSSURE (1880) quoted from Caspian area two new species, based on male specimens: *Meria tartara*, with a mostly pale, straw-coloured body and enlarged ocelli, and *Meria timurella*, with darker integument and less enlarged ocelli.

RADOSZKOWSKI (1886) erected a new genus, *Komarowia*, based on female specimens from the same area having pale ochreous colour; he named them *Komarowia victoriosa*, hinting at its possible conspecificity with *M. tartara*; successively (1888) he gave the description of the male, omitting his previous hypothesis. MORAWITZ (1888) added new species from Central Asia bearing more or less enlarged ocelli and pale teguments, *Meria nocturna*, *Meria albipe* and *Meria sculpturata*, then (1890) *Meria immatura*. SAUSSURE

(1892) in the key for the genera of his "Groupe de *Meria*" joined the male *M. tartara* with the female *Komarowia victoriosa*. DALLA TORRE (1897) in his "Hymenopterorum catalogum" followed Westwood's opinion ascribing *Iswara* to the family Thynnidae. ANDRÉ (1898) named a new genus and species, *Milluta chobauti*, ascribed to the Mutillidae, basing them on some specimens from Algerian Sahara with pale integument and enlarged ocelli. After him ASHMEAD (1901) created the new genus *Magrettina*, having *Meria nocturna* MORAWITZ 1888 as type-species. TURNER (1909) argued upon these genera, *Komarowia*, *Milluta* and *Magrettina*, concluding about their synonymy with the ancient genus *Iswara*. Both KROMBEIN (1937) in his treatment on the genera of the Myzininae and SUAREZ (1974) in describing a new species, *Iswara mateui*, from Sahara Ennedi (Tchad) just accepted his opinion; at the same time the latter argued about the family status for the Myzinin group. GUIGLIA described first (1965) *Meria mongolina* on male specimens from the Gobi desert (Mongolia); then (1973) a female specimen from the same place was named by her *Iswara mongolicus*; both of them with basic light brown colour of the body. GORBATOVSKY (1977) made the first modern attempt to rearrange this group of nocturnal Myzininae; he described two new females, restored *Milluta* to the generic rank and established a new genus, *Melaniswara*, with *Meria timurella* SAUSSURE 1880 as type species, ascribing to it *Iswara fasciatus* SMITH 1873; *Meria albipes* MORAWITZ 1888; *Meria sculpturata* MORAWITZ 1888; *Iswara mongolicus* GUIGLIA 1973. The same author first (1980) established the synonymy of *Iswara mongolicus* GUIGLIA 1973 with *Meria mongolina* GUIGLIA 1965 under the genus *Melaniswara*, then (1981) ascribed *Myzine orientalis* SMITH 1879 to the same genus, *Meria tartara* SAUSSURE 1880, *Komarowia victoriosa* RADOSZKOWSKI 1886 and *Meria immatura* MORAWITZ 1890 to *Iswara*, *Myzine pallida* SMITH 1879 to *Milluta*. ARGAMAN (1994) in his "Generic synopsis of Myzinidae" created a subfamily Iswarinae, restoring also to generic rank *Magrettina* and *Komarowia*, setting down its type species, *Komarowia victoriosa* RADSZKOWSKY 1886, in synonymy with *Scleroderma ruficornis* LUCAS 1846. BONI BARTALUCCI (2001) described the supposed female of *Milluta mateui* (SUAREZ 1974).

Discussion

None of the above-mentioned authors referred about a direct examination of the type specimen of *Iswara luteus* WESTWOOD 1851; its description and drawings here follow. (in order to make clearer comparisons, also the redescriptions of the paralectotype of *Milluta chobauti* ANDRÉ 1898 and of one male specimen of *Komarowia victoriosa* RADOSZKOWSKI 1886 are given.). It spring well out that *Milluta chobauti* ANDRÉ 1898 has to be considered congeneric with *Iswara luteus* WESTWOOD 1851. At the same time, the species so far referred to *Iswara* (*Meria tartara* SAUSSURE 1880 and *Meria immatura* MORAWITZ 1890) have to be placed in a distinct genus. Since we have to rely upon to the authority of many authors [shortly RADOSZKOWSKI himself (1886), SAUSSURE (1892), TURNER (1909), KROMBEIN (1937) and at last GORBATOVSKY (1981) in designating the relative lectotypes] about the conspecificity between *Komarowia victoriosa* RADOSZKOWSKI 1886 (female) and *Meria tartara* SAUSSURE 1880 (male), *Komarowia* RADOSZKOWSKI 1886 has to be retained the senior available name for this group of species. Into the Palaearctic fauna the group *Iswara/Komarowia*, together with the new genus *Lamprowara*, appears having the most specialized character states. It constitutes a homogeneous and natural group of nocturnal and crepuscular forms, strictly confined to desert sandy areas of the southern Palaearctic Region. Their distribution ranges from the Thar (Indian desert) to Middle East and Arabian Peninsula through Afghanistan, Persia and desert Caspian areas. The huge Sahara queerly seems to be only a marginal area, because only two species of *Iswara* are so far recorded; this situation is probably due to its relatively young desert status. Moreover, no records from the desert areas of Erythrea and Somalia are so far known, while several taxa come out from the facing southern Arabian Peninsula. These facts together could be explained by a fairly recent origin of the group, following the formation of the Red Sea as an insurmountable barrier (~5 Mya.).

Here a list of characters states present in the specimens of the group follows:

1 Mostly with straw-coloured and weakly pigmented integument. (♀ & ♂)

2 Mouthparts strongly reduced, palpal formula 2-3. (♀ & ♂)

3 Upper su3 somewhat sinuous, convex backward. (♀ & ♂) (Figs 104, 162, 173)

4 Metasternum with narrow flat, parallel apophysis, sub vertical to the main axis of the body. (♀ & ♂) (Figs 123, 290)

5 Ocelli enlarged, the om diameter at least 1/9 (normally much more than, up to a bit less than 1/5) the width of the head in frontal aspect. (♂)

6 Dorsal surface of the Tsa globular, not flattened. (♂)

7 Tsa with transparent fore border and leaving exposed a little portion of the toruli in frontal aspect. (♂)

8 No trichoid sensilla on the flagellar surface; sensilla are present only into the small and very weak depressions on the final flagellomeri of *Komarowia*. (Fig. 289) (♂)

9 Pronotum normally without or with a feebly expressed pronotal plate. (♂)

10 Upper metapleural pit clearly shifted from mesopleural suture for a distance more than twice its diameter. (♂)

11 Forewing: 3rd CSM about as high as wide, up to petiolate in one species of *Lamprowara*. (♂)

12 Jugum of the hind wing very enlarged, twice higher than clavus, with rounded posterior margin. Its area twice the area of the clavus too. (♂)

13 Strigilis not functional: fore tibial spur without any velum, basal fore tarsomerus without any detectable notch and relative velum. (Fig. 285) (♀)

14 Fore tarsal notch with a velum either entire, without any comb-like structure, or with only a combed apical half in (♂)

15 Outer apex of fore tarsomeri with spines as long as or longer than the element; their dorsal surface with only sparse short bristles. (Figs 77, 174) (♂)

16 Hind coxa rounded, without any keel. (♂)

17 Terga without strong graduli (the males of *Komarowia* show weak graduli on the 2nd to 4th terga). (♂)

18 Metasoma without any tightening among metameri (but between 1st and 2nd in *I. chobauti*). (♂)

19 Distal border of the 7th sternum almost straight, without any notch , in ventral aspect and rounded "V" shaped in back aspect. (♂)

20 Attachment of the anal hook (8th sternum) placed far from the distal border of the 7th sternum, up to 1/3 its length; up to 1/3 anal hook hidden by the apical border of the 7th sternum. (♂)

21 Apex of 7th sternum almost reaching the apex of 7th metatergum in lateral aspect. (♂)

22 Micro reticulation always covering just the apical lobes of the 7th tergum. (♂)

23 No lateral keel clearly dividing lobes of the 7th tergum in horizontal and vertical (lateral) surfaces. (♂)

- 4, 20, 21 & 22 states seem reliable synapomorphies of the group *Iswara*/*Komarowia*
- 3, 5, 6, 7, 10 states can be deemed reliable synapomorphies for this group plus *Lamprowara*. The character state 5 occurs otherwise only once into the Tiphiidae, within the subfamily Brachycistidinae; in *Lamprowara* the ratio D_{om} / LA_{Ca} gets to 1/7, while in the other Myzininae it ranges about (and often less than) 1/15, with the sole exception of *Poecilotiphia aegyptiaca* (GUÉRIN 1837) where it gets 1/11
- 14 state is one of the best autapomorphies for the males within the entire family
- 1 is only approached by some females of *Poecilotiphia* and *Myzinella* while it is uniquely derived in the males
- 19 is shared also by *Parameria* and *Lamprowara* where the attachment of the anal hook (state 20) is far closer to the distal border, approaching the contiguity occurring about the other Myzininae
- 2 is uniquely derived in the palaearctic fauna about the males, while some female *Poecilotiphia* [i.e. *ciliata* (MORAWITZ 1890)] show similar strong reduction of the mouth parts; into the afro tropical fauna both sexes of *Braunsomeria* and the male *Myzine stigma* TURNER 1912 (= *Zezelda* ARGAMAN 1994) show similar reduction
- 8 is a derived character state shared only with *Tamerlanella* and the afro tropical genus *Braunsomeria*, where the MPS are much longer and greater
- 9, 17 & 18. These states resemble what occurs customarily about the females of the subfamily and are shared only with the males of *Myzine stigma*
- State 11 occurs otherwise about *Myzinella*, *Tamerlanella* and the afrotropical *Myzine constrictiventris* TURNER 1912
- 13 occurs elsewhere only in *Pseudomeria tamerlanella* SAUSSURE 1880 (= *Tamerlanella* gen. n.); *Braunsomeria* and some species of *Poecilotiphia* have strigilis very reduced, even if still detectable
- 12 is also the condition of *M. constrictiventris* and *Myzinella*
- 15 occurs also in *Tamerlanella* and *Braunsomeria* an *Myzine stigma* (= *Zezelda*)
- 16 occurs in *Braunsomeria* too
- 23 occurs in *Braunsomeria*, *Myzinella* and some African species

The females of four taxa lack ocelli and closed cells on the wings, while the supposed female of *I. mateui* (SUAREZ 1974) has both of them.

In the males there is a general trend toward a narrowing of the pronotal disk; the ratio LA_P / A_P gets up to more than four in dorsal aspect, while in the other genera it is less than three up to two. Other features are present about all the females of this group and shared with many other taxa: reduced scutum, vestigial notauli, narrowed metanotum (its height at most 1/8 its width).

Note: The following identification keys under the relative topics are accomplished only for the male specimens; a likewise worthwhile key can not be performed for the females as hitherto an extremely poor lot of specimens and species is known. Apart few specimens of *Komarowia tartara*, only the following female specimens, hypothetically referred under the taxon names of the original descriptions (the digits between round brackets mean their number), are so far described and recorded: (1) *Melaniswara timurella*, (2) *Milluta nocturna*, (2) *Melaniswara mongolinus*, (1) *Milluta mateui*. Facing the males of *Meria nocturna* and *Iswara mateui* (congeneric between themselves and with *Iswara luteus* WESTWOOD 1851) their supposed females, described respectively by GORBATOVSKY (1977) and BONI BARTALUCCI (2001), show so many differences from each other that any generic diagnosis can not be considered any more reliable. About *Iswara*, I examined only the supposed female of *I. mateui* and a possible discriminating character state between them could be the palpal formula, but on account of all that and the remarks under *Komarowia*, at the state of the art any other conclusion seems hazardous and misleading.

Because of the arguments under the relative topic the genus *Melaniswara* GORBATOVSKY 1977 is here considered a junior synonym of *Komarowia*.

Iswara WESTWOOD 1851

(Species typus: *Iswara luteus* WESTWOOD 1851: 232, ♂)
Milluta ANDRÉ 1898: 143
Magrettina ASHMEAD 1901: 144
Iswara: SUAREZ 1974: 118-120
Milluta: GORBATOVSKY (1977: 1312-1314)
Milluta: GORBATOVSKY (1981: 387)
Milluta: BONI BARTALUCCI (2001: 47, 50)
Magrettina: ARGAMAN (1994: 89)

ARGAMAN (1994) inserted the aforesaid genera in a subfamily Iswariinae grounded upon "Male antennal toruli vertical, confined to plane of front", supplying the figure of the supposed head of the male of "*Iswara mongolina* GUIGLIA 1965" in frontal aspect. Both *Meria mongolina* GUIGLIA 1965 (actually *Komarowia mongolina*) and *Iswara luteus* have the toruli twisted under the prominent Tsa in a sub horizontal position (Figs 87, 221). The figure given by Argaman does not appear to be congruous with real specimens and the grounds of his action should be sunken; the toruli shifted from the plane of the front to the underside of prominent Tsa are shared by all the Myzininae without any exception. The other character used for this supposed subfamily, i.e. "Female ocellar triangle close to occipital margin, separated by a distance less than postocellar line ..", has to be considered weak and unreliable to ground whatever supra specific group, because it occurs sporadicly in different genera; therefore it does not carry any useful information to group species together. At the same time he based the elevation to generic rank of *Magrettina* ASHMEAD 1901 (type-species: *Meria nocturna* MORAWITZ 1888) on the unique character "Hind tibial spurs exceedingly dilated and conspicuously spatulated apically in both sexes, more expressively in female", facing the "Hind tibial spurs simple, parallel sided or tapering to be very acute toward apex" ascribed to the other genera of his tribe Iswarini (i.e. *Iswara*, *Milluta* and *Zezelda*). The male specimens so forth quoted do not possess at all "spatulated" hind tibial spurs, but spurs with simple parallel side and a small rounded tip. By the way, neither Morawitz himself nor GORBATOVSKY (1977) refer about enlarged spurs for the males of *Meria nocturna* which otherwise possess all the character states occurring in the species here ascribed to the genus *Iswara*, of which *Magrettina* is therefore confirmed as junior synonym.

Identification key of the males

1

- Elongated mesosoma: ratio $L_{MS} / LA_{MS} = 1.75$. .... *I. elongatus* spec.nov.
- Mesosoma not elongated; ratio L_{MS} / LA_{MS} in the other species no more than 1.55 2

2

- Clypeus without any lamella on its ventral border 3
- Clypeus with a lamella on its ventral border 4

3

- Clypeus strongly inflated; volsella with a sword-like apophysis rising at 1/3 of the volsellar heigth, on the side of the cuspis; digitus large broadly subtriangular, almost isosceles .... *I. physostomus* spec.nov.
- Clypeus normally convex; volsella without any apophysis; digitus slender with heigth twice its base .... *I. nocturnus* (MORAWITZ 1888)

4

- Aedeagus strongly inflated for more than half its height; volsella without any sword-like process on its upper border 5
- Aedeagus inflated much less than half its height; volsella with a sword like process 6

5

- Strangling between 1st and 2nd metameri in dorsal aspect; very narrow notch of the 7th tergum in dorsal aspect (its width 1/10 its length); ratio LA_{NI} / A_{NI} less than 3 .... *I. chobauti* (ANDRÉ 1898)
- No strangling between 1st and 2nd metameri in dorsal aspect; width of the notch of the 7th tergum 1/5 its height; ratio LA_{NI} / LA_{NI} about 4 .... *I. arabicus* spec.nov.

6

- Lamella on the ventral border of the clypeus with a straight profile, without central notch; digitus tip folded; squat apophysis on the upper volsella, facing cuspis .... *I. mateui* SUAREZ 1974
- Lamella with central notch; erect digitus and slender, long apophysis on the upper volsella 7

7

- Ratio $I_{ol\text{-}O} / D_{ol}$ more than 2. Ratio $I_{om\text{-}O} / D_{om}$ more than 3; ratio LA_{Ca} / D_{om} a little more than 7; lamella of the clypeus strongly protruded downwards (in frontal aspect); fore surface of the mandibles without valuable furrow; digitus with a stout tip .... *I. pallidus* (SMITH 1879)

- Ratio I_{ol-O} / D_{ol} little more than 1. Ratio I_{om-O} / D_{om} about 2-2.5. Ratio LA_{Ca} / D_{om} about 5.4 to 6; lamella normally protruded down wards; fore surface of the clypeus with a furrow from the inner preapical tooth; digitus with a slender tip ....*I. luteus* WESTWOOD 1851

Iswara luteus WESTWOOD 1851

Iswara luteus: 232-233, P.7, fig. 5 (Holotypus ?: India = /East India Boyd Trans Ent Soc N 2 1-232 PL7 t/ /Iswara luteus Westw./ /W/, OUM !)

Male: Holotype. Figs 86-101. Measurements (mm) - Body length: 9.5; fore wing length: 6.5

To the good original description, only the following items have to be added:

- the tips of the mandibles and partially the basalar area are as pitch brown as the head
- the lower genae are much lighter brown than the remainder of the head
- the metapleural sulcus is somewhat sinuous and convex backward
- 7th tergum and sternum are rufous brown
- L_{Tap4} / L_{Tap5} is about 1.5

Female: Unknown

Ecology: Unknown

Note: The provenance area "East India" appears quite problematic, since the eastern boundary-line for *Iswara* specimens, which are usually strictly tied to desert and sub desert areas, appears to be the arid areas of NW India. The author probably meant the areas east of Indo river, i.e. Thar desert and neighbourhoods.

Iswara pallidus (SMITH 1879) comb.nov.

Myzine pallida SMITH 1879: 179 (Lectotypus ♂: India = /India/ /69-86/ /15.1499/, BMNH!)
Milluta pallida: GORBATOVSKY (1981: 385, 387)

Material: Afghanistan = 2♂♂: /3 Dankse Exp. til Centralasien Pirzada 31.6.1948 Afghanista N. Haarlov St 48/, UZM.

Male: Figs 102-107 (Lectotype).

The specimen is in poor conditions, lacking the hind tarsi and most of the flagella; the mesosoma is mostly whitish pigmented, with two vertical, light brown stripes on the sides of the scutum; the metasoma is mostly translucent light brown, with thin transversal straw-coloured bands.

The specimens from Afghanistan show a little different shape of the clypeus and have a much less pigmented body (but the head), i.e. evenly translucent straw-coloured; L_{Tap4} / L_{Tap5} = about 1.3.

Female: Unknown

Ecology: Unknown

Iswara nocturnus (MORAWITZ 1888) comb.nov.

Meria nocturna MORAWITZ 1888: 301-302 (Lectotypus ♂: Turkmenistan = TransCaspi G., Turkmenien, Merv, E. Konig, ZIN)
Magrettina nocturna: ASHMEAD (1901: 144)
Milluta nocturna: GORBATOVSKY (1977: 1312-1314, ♀; 1981: 385, 387, ♂)

Material: Turkmenistan = 1♂: */Merw/* /Trans Caspi G. Turkmenien E. Koenig/ */Meria nocturna F. Moravis/* (autographic) /К.Ф. Морабница/, MSNG; 2♂♂: /Ashabad/ / Syntipus *Meria caspica* Rad. Gorbatovsky, 1981/ */Milluta nocturna* (F. Mor.) Gorbatovsky, 1982/, PAN. Uzbekistan = 1♂: /Bag-Absal 50 km N Buchara 15 VIII 1931 Zhelochovtsev/ / Milluta nocturna (F. Mor.) Gorbatovsky det./, MSNG.

Male: Figs 108-116 (specimen from Merw). Mesosoma: L_{Tap4} / L_{Tap5} = about 2.

Female: See GORBATOVSKY (1977).

Ecology: Unknown.

Note: The paralectotypes (♂) of *Meria caspica* RADOSZKOWSKI 1887 belong to this species here.

Iswara chobauti (ANDRÉ 1898)

Milluta chobauti ANDRÉ 1898: 144 (Lectotypus ♂: Algeria = /Ghardaia Mai 1897 Dr. A. Chobaut/ /Algérie/ /Chobaut/ /Museum Paris Collection Ernest André 1914/ /Type/ /Lectotypus *Milluta chobauti* André design. Gorbatovsky 1988/ MHNP)
Iswara chobauti: SUAREZ (1974: 121-125)
Milluta chobauti: GORBATOVSKY (1977: 1312)

Material: ALGERIA = 1♂: Paralectotypus /Ghardaia (MZAB) Sud Algerien/ */Chobaut/* /TYPE/ /Algérie/ /Museum Paris, Collection Ernest Andre' 1914/ /Paralectotypus *Milluta chobauti* André design. Gorbatovsky 1988/, MHNP !.

Male: Figs 117 –128 (Paralectotype).

Female: Unknown

Ecology: Unknown

Note: The types are in poor condition, lacking variously most of the antennae. I have not been able to find where the designation of Lectotype and Paralectotype were recorded.

ARGAMAN (1994) referred about its "putative female with monstruously inflated hind tibia (Fig. 58)", but he did not give any reference about it, until now never described. The figures here given confirm that it is congeneric to *I. luteus*.

Iswara mateui SUAREZ 1974

Iswara mateui: 126-128 (Holotypus ♂: Tchad = de Mare de Bagadà Mourdi, R. du Tchad, 15.X.1958 J. Mateu, MNCN).
Milluta mateui: BONI BARTALUCCI (2001: 47-50, figs 165-172, ♀)

Material: Tchad = 1♂: /Oumadjer, Tchad,10.XI.58 Mateu/, MZL.

Male: Figs 129 - 134

Female: The supposed female (BONI BARTALUCCI 2001) has well developed wings with seven functional cells.

Ecology: Unknown

Note: It differs from *I. chobauti*, apart the data given in the plentiful original description, in the shape of volsella and aedeagus.

Iswara physostomus spec.nov.

Holotypus ♂: ARABIA = /Arabian desert: Rub'al Khali, Al Rimal, Wabar, Hadida. 5.II.1932. H. St.J.B. Philby/, BMNH
Paratypi: ARABIA = 2♂♂: /Arabian desert: Rub'al Khali, Al Rimal, Wabar, Hadida. 5.II.1932. H. St. J.B. Philby/, BMNH

Male: Figs 135 - 146 (Holotype.). Measurements (mm): body length = 11; Fore wing length = 7.5. Head, (but clypeus mandible and Tsa) and a small portion of the basalar area: brown and dark brown. Lobes of the 7th tergum and apex of 7th sternum rufous. The remainder of the body is evenly translucent, straw-coloured. Head - PoG length ½ length of the FoO. Outer mandibular surface evenly rounded, without any furrow. Mesosoma - Metapleurae with fine sub vertical wrinkles. Dense pits only on the sides of the dorsal surface of the propodeum. Ratio L_{Tap4} / L_{Tap5} about 1.8 . Metasoma - Dense pits, bearing white bristles on the entire surface of the 1st tergum and the anterior surface of 2nd to 6th terga. Scattered, quite feeble pits all over the remainder of the body.

Female: Unknown.

Ecology: Unknown.

Distribution: Arabian desert Rub'al Khali.

Derivatio nominis: From the Greek words φυσών (= swollen) and στόμα (= mouth), because of the largely swollen clypeus.

Variability: It mainly concerns the size; one specimen gets 14 mm.

Iswara elongatus spec.nov.

Holotypus ♂: Iraq = /Mesopotamia Nr. Baghdad Hinaidi 20.VI.1922 Maj. J.E.M. Boyd./ /Brit. Mus. 1923-298/, BMNH.

Male: Figs 147-153 (Holotype). Measurements (mm): body length = 11.3; fore wing length = 7.7. General habitus as into the genus, i.e. basalar, area and head brown with black eyes. The remainder of the body translucent straw-coloured, a bit darker than the other species; upper clypeus, Tsa, mandibles, ventral surface of the mesopleurae, metapleurae and the apical smooth areas of the metameri more or less light brown shaded. The specimen is not in good conditions, lacking most of the flagellum (the left 1st and 2nd and right 1st flagellomeri only existing), last left hind tarsomerus. Head - PoG length ¾ the FoO length. Ratio $I_{ol\text{-}o} / D_{ol} = 1.1$; ratio $I_{om\text{-}o} / D_{om} = 2$; ratio $LA_{Ca} / D_{om} = 6$. Mesosoma - Metapleurae finely shagreened; propleural side areas smooth. Ratio L_{Tap4} / L_{Tap5} about 1.5. Metasoma - The ratio between the width (taken at their median height) of the 4th metamerus and 2nd is very near 1. In the other taxa is about 0.85.

Female: Unknown

Ecology: Unknown.

Distribution: The typical locality.

Derivatio nominis: From the Latin name meaning lengthened.

Note: In spite of its uniqueness, I hazard to base on it a new taxon name because of *the characters states given in the key, about which there is absolutely no variability into* the other species; moreover the peculiar volsella and the elongated metasoma too, different from all other taxa, seem to well support this decision. It lacks nine left and ten right flagellomeri, the last left hind tarsomerus.

Iswara arabicus spec.nov.

Holotypus ♂: ARABIA = /ARABIA Hadda 23.XI.1938 H. St. J.B. Philby B.M. 1938-743 / /10311-58/, BMNH

Paratypi: ARABIA = 1♂: /ARABIA Hadda 23.XI.1938 H. St. J.B. Philby B.M. 1938-743 / /10311-58/, BMNH; 1♂: /SAUDI ARABIA: Abha 9.VII.1962. G. Popov. B.M. 1965-369/, BMNH. OMAN = 1♂: /OMAN Dhofar17° 53'N 52°57'E. 13.V.1982 M.D. Gallagher/, BMNH.

Male: Figs 66, 67, 154-160 (Holotype). Measurements (mm): body length = 8.5; fore wing length = 6. General habitus and appearance typical of the genus: head and basalar area brown, eyes black, tip of 7th metamerus rufous, the remainder of the body (clypeus, Tsa, flagella and mandibles included) translucent straw-coloured; only pronotum shows a very weak whitish pigment. Scattered pits and hair all over the body. Head - Bulging vertex in frontal aspect. PoG length ¾ the FoO length. Ratio $I_{ol\text{-}O}$ / D_{ol} about 1.4; ratio $I_{om\text{-}O}$ / D_{om} = 2; ratio LA_{Ca} / D_{om} = 5.4. Mesosoma - Metapleurae finely wrinkled and smooth lateral areas of the propodeum. Ratio L_{Tap4} / L_{Tap5} about 1.4. Metasoma - The edge of the lobes of the 7th tergum are waving in posterior aspect.

Female: Unknown

Ecology: Unknown

Distribution: Arabian Peninsula

Variability: The unique appreciable variation is about the size: the other one from Hadda gets 10 mm long as the specimen from Oman does; the specimen from Abha gets the same size of the holotype.

Note: Apart the bulging vertex its appearance looks like *luteus*, from which is furthermore segregated by the absence of any sword like process on the volsella. Among the other taxa having simple volsella, it is well distinguished from *chobauti* because of the different size of the ocelli and clypeal lamella, head shape, absence of the strangling between the first metameri and from *nocturnus* because of the presence of clypeal lamella, very different head shape and different ratio L_{Tap4} / L_{Tap5}

Genus *Komarowia* RADOSZKOWSKI 1886

(Species typus: *Komarowia victoriosa* 1886: 43, ♀)
Komarovia: RADOSZKOWSKI (1888: 306-312)
Komarowia: SAUSSURE (1890: 248, 249-250)
Komarowia: TURNER (1909: 476, partim)
Komarowia: KROMBEIN (1937: 27)
Melaniswara GORBATOVSKY 1977: 1310 (Species typus *Meria timurella* SAUSSURE 1880 ♂) **Syn.nov.**
Iswara: GORBATOVSKY (1981: 386-387)
Komarowia: ARGAMAN (1994: 92)

In his "Generic synopsis", ARGAMAN (1994) erected a tribe Komarowiini, considered part of a subfamily Meriinae. The position of *Komarowia* RADOSZKOWSKI 1886 in his key springs from the item "male hind coxa with two sharp, acute longitudinal carinules both on inner ventral and dorsal edge (..); flagellar segments opaque, often strongly and randomly, sometimes delicately but always conspicuously spinulose in longitudinal rows (..)". Actually the male of *Komarowia victoriosa* does possess both a simply rounded hind coxa and hairless flagellum, showing only sensilla in small placoids of the last two flagellomeri; hence the ground of this tribe results greatly mined. Moreover, it does not seem justified to split off into fragments the very homogeneous group *Iswara* / *Komarowia*, which appears to constitute a true monophylum. The same author writes about the new synonymy of *Dermasothes* MENOZZI 1940 with *Komarowia* RADOSZKOWSKI 1886 and the identity of *K. victoriosa* with *Scleroderma ruficornis* LUCAS 1846.

About the first synonymy, I could not see the type of *Dermasothes endecamerus* MENOZZI 1940 (female). Nevertheless the author in the original description reports about the presence of a clearly "toothed", almost bifid, fore tibial spur (detectable on the figure of the general habitus of the insect too), which reveals the presence of a functional strigilis otherwise absent in *Komarowia.* He gives too a clear figure (VI; A) of the antenna where the most reliable autapomorphy of the females so far ascribed to *Poecilotiphia* CAMERON 1902 (i.e. the densely arranged pits along the entire upper surface of the scape, bearing strong, bristle as long as the scape itself: items 7a of the key) is well detectable. Moreover, the reduced wings of *endecamerus* lack the long fimbriae along their edges, while they are normally present in all the supposed females of *Komarowia*, and the reported colour is brown and reddish. It seems more correct to agree with the GORBATOVSKY's opinion (1981) who first established the synonymy *Dermasothes* = *Poecilotiphia.*

The typical specimen of *Scleroderma ruficornis* LUCAS 1846 [/ALGERIE Collection Lucas PARIS MUSEUM/ /*Scleroderma ruficornis*/ (autographic) /*Scleroderma ruficornis Lucas* / /*HOLOTYPE Scleroderma ruficornis H. SORG des.* 1986 /, MHNP, !] belongs to *Poecilotiphia*, as it has the states 7a → 7f of the key, minute but well detectable ocelli and scale-like wings, very similar to that occurs in other *Poecilotiphia* females and in *Meria lineata* SICHEL 1859. Moreover it has very different shape of the head, pronotum, propodeum and legs from *K. victoriosa*; its coloration is even reddish brown, while *victoriosa* is straw-coloured, and it gets smaller size (8 mm.). Accordingly the synonymy established by ARGAMAN (1994) should be sunken. The most likely coupling could be with *P. fasciculata* (E. SAUNDERS 1901), but there is no conclusive proof about.

The distinction of the genus *Melaniswara* from *Komarowia* is highly problematic. GORBATOVSKY (1977) settled up the differences between the females of *Iswara tartara* and *Melaniswara* (between brackets) exclusively on the features of tibial spurs: fore tibial spur as long as two basal tarsomeri (slightly longer of the first one only) and with a rounded tip (pointed), absence of the median spurs (two present), prominent upper border of the hind tibia (even), greatly enlarged bent hind tibial spurs (narrow and straight). I could not see the supposed female of *M. timurella* while I could examine the holotype of *Iswara mongolicus* GUIGLIA 1973 (= *K. mongolina*). While the first two differences appear consistent, the third one does not exist at all and the last one is not so marked to justify any conclusion. Other differences will be described under the relative topics. Here some analogies are listed: absence of ocelli, rounded upper metapleural suture (exactly alike the males of the group), identical palpal formula and shape, shape of the glossa, loss of a functional strigilis, narrow scutum and metanotum, reduced metapleural surface (these last characters certainly due to the advanced brachyptery). GORBATOVSKY (1977) gave too the main features of the males belonging to *Melaniswara*: the distance of the lateral ocellus from the eye greater than half the ocellus itself, the pterostigma longer than marginal cell and the last hind tarsomerus far longer than penultimate in the males. I could verify that the last hind tarsomerus is almost as long as penultimate in *Meria mongolina* and far shorter than penultimate in *Myzine orientalis*. The pterostigma is far shorter than marginal cell in both of them. The distance ol–O (greater than half diameter of the ol in *Iswara pallidus*, *I. chobauti* and *I. mateui*), in *Meria mongolina* is a little variable, seemingly according to different size of the specimens. Otherwise, in four specimens at BMNH of *Meria timurella* determined *Melaniswara timurella* by GORBATOVKY, the diameter of ol is quite variable, from the double the distance from eye to much less; hence all these characters do not seem too much reliable characters, facing the other characters of the key shared with *Komarowia*. Apart the more pigmented light markings, the unique distinctive characters detected between the males of *Meria tartara* SAUSSURE 1880 (= *Komarowia*) and the couple *Myzine orientalis* / *Meria mongolina* are the absence of graduli and the lateral furrows present up to the 5th metamerus in the last ones. Nevertheless, in the examined specimens of *M. timurella* (all of them with a light brown body coloration and whitish light markings) these character states are the same as in *Komarowia*. More affinities between the males of *Komarowia victoriosa* and *Meria timurella* than between the latter and the couple *Myzine orientalis*/*Meria mongolina* have been found. The specimens here ascribed to *Komarowia fasciata* show an ochreous basic coloration with extended brown and ferruginous shadows, but without clear and well delimited yellow markings. All of them lack any gradulus on the tergal surfaces, like in the couple *M. orientalis*/*M. mongolina*, and have detectable lateral furrows only in the first three terga, like in *M. tartara*. Because of all that, even if the types of *Meria timurella* SAUSSURE 1880, *Meria albipes* MORAWITZ 1888 and *Meria sculpturata* MORAWITZ 1888 (previously ascribed to *Melaniswara* by GORBATOVSKY) have been inaccessible, at the state of the art *Melaniswara* does not appear well settled enough to be preserved as a distinct genus. It is preferable to consider it a junior synonym of *Komarowia*.

Identification key of the Males
(*K. albipes* and *K. sculpturata* have not been included)

1

a body light brown and/or pitch black with large, well pigmented yellow areas
b lateral furrows present on 1st to 5th terga
.... **2**
aa body mostly either straw or light brown coloured; dark brown only head and basalar area; few, ill pigmented whitish areas at most
bb lateral furrows only on 1st to 3rd terga
.... **3**

2

a ratio LA $_{Ca}$ / D $_{om}$ about 9
b notch on the lamella of the clypeus shallow, less deep than half height of the lamella
c ratio L $_{Tap4}$ / L $_{Tap5}$ about 1.3
d digitus with rounded tip
.... *K. orientalis* (SMITH 1879)
aa ratio LA $_{Ca}$ / D $_{om}$ about 6
bb notch on the lamella of the clypeus as deep as the lamella itself
cc ratio L $_{Tap4}$ / L $_{Tap5}$ about 1 or a bit less
dd digitus with sharp tip
.... *K. mongolina* (GUIGLIA 1965)

3

a mostly of the body light brown
b LA_{Ca} / D_{om} between 6 and 7
c marginal cell shorter than pterostigma
d L_{Tap4} / L_{Tap5} about 0.55
.... *K. timurella* (SAUSSURE 1880)
aa body mostly straw coloured
bb LA_{Ca} / D_{om} always less than 6
cc marginal cell longer than pterostigma
dd L_{Tap4} / L_{Tap5} one or more than one
.... 4

4

a terga without any gradulus.. 5
aa terga with graduli well expressed 6

5

a ratio LA_{Ca} / D_{om} about 5.5
b maxillary palpus (Pam) stout, 2nd element almost rounded, 3rd undetectable
c digitus with sharp tip
d straight profile of the cuspis with a clear angle along the lateral border
e less than ten straight bristles on the inner surface of the volsella
f small size (less than 10 mm)
.... *K. immatura* (MORAWITZ 1890)
aa ratio LA_{Ca} / D_{om} about 4.7
bb Pam slender, 2nd element elongated, 3rd well detectable
cc digitus with rounded tip
dd cuspis rounded, no angle along the lateral border
ee much more than ten bristles on the inner surface of the volsella
ff larger size (more than 13 mm up to 16 mm)
.... *K. fasciata* (SMITH 1873)

6

a graduli present only on the 2nd and 3rd terga
b straw to pale brown coloured body with whitish markings on the head and mesosoma
c ratio L_{Tap4} / L_{Tap5} about 1.45
d Pam: length of the 2nd element about as long as 1st
e digitus with sharp tip
.... *K. tartara* (SAUSSURE 1880)
aa graduli present on 2nd to 6th terga
bb body evenly straw coloured without any whitish markings
cc ratio L_{Tap4} / L_{Tap5} 1.15 at most
dd Pam: 2nd element about 1.5 times longer than 1st
ee rounded tip of the digitus.. 7

7

a Lateral ocelli (ol) mostly protruding from the profile of the head in frontal aspect
b ratio L $_{Tap4}$ / L $_{Tap5}$ about 1
c 7th tergum (epipygium): rounded tips of the lobes in dorsal view
d straight profile of the dorsal border of the dististylus
e two rows of long straight bristles on the inner volsellar surface
.... *K. concolor* spec.nov.
aa ol mostly into the the profile of the head in frontal view
bb ratio L $_{Tap4}$ / L $_{Tap5}$ about 1.15
cc 7th tergum: lateral tips of the lobes obtusely angled
dd rounded profile of the dorsall border of dististylus
ee only a simple row of long straight bristles on the inner volsellar surface
.... *K. meridiana* spec.nov.

Komarowia fasciata (SMITH 1873) comb.nov.

Iswara fasciatus SMITH 1873: 253 (Neotypus ♂, here designated in order to ensure the name's proper and consistent use: "Sind", BMNH !)
Melaniswara fasciatus: GORBATOVSKY (1977: 1310)

Material: India = 1♂: /Deesa 4.99/ /P. Cameron Coll 1914-110/ /Iswara fasciatus ? (Smith)/, BMNH; 1♂: /Deesa 3.01/ /Col C.G. Nurse Collection 1920-72/, BMNH; 1♂: /Deesa 3.97/ /Col C.G. Nurse Collection 1920-72/ /*Brit. Mus.*/ /*Iswara Komarowia luteus* West./, MSNG; Pakistan = 1♂: /*Iswara luteus* Sind/ /94 74/, BMNH; 2♂♂: /Pakistan 23-25.4.1993 SE Balouchistan Uthal lgt Becvar/, MZUF.

SMITH described this new species from Sind ("Hab. Sind. This species is in the Indian Museum.") ascribing it to the Westwood's genus *Iswara*. DALLA TORRE (1897) and GORBATOVSKY (1977) confined themselves to list it respectively into the family Thynnidae and into his new genus *Melaniswara*, but they did not give at all any other information. Actually, there is any knowledge about the type depository, originally indicated at the "Indian Museum", where it seems to do not exist anymore. It is impossible to draw out any useful indication from the original description, too much faint and shallow (it lacks any hint to the size of the ocelli) and without any figure. In order to avoid still more entanglements on the taxonomy of the group, the conservation of the specific name *Iswara fasciatus* SMITH 1873 by designation of a neotype on the specimen from Sind at BMNH is here proposed.

Male: Figs 161-169 (Neotype). Measurements (mm): body length = 15; fore wing length = 10.5. Head (but clypeus, Tsa, mandibles and antennae) and basalar area: brown. Clypeus, pronotum, scutum, scutellum, postscutellum, mesopleurae: very pale yellow pigmented. The remainder of the head and mesosoma translucent straw-coloured. Declining 1st tergum: brown, the apical remainder surface whitish pigmented. The basal stripes on 2nd to 7th terga are delimited by a waving line of pits, a bit raised above the apical portions. They are whitish pigmented with dense, small pits all over their surface. The apical surfaces are as light brown, smooth and translucent as the epipygium is. The sterna repeat the same pattern with little variations: the whitish stripes are mostly smooth, with few pits. Head. Genal bridge as long as 2/3 FoO. Mesosoma. Metapleurae smooth and shining with very feeble wrinkles afterwards. Lateral propodeum with more impressed wrinkles. L $_{Tap4}$ / L $_{Tap5}$ a bit more than 1.1. Scattered pits all over the head and mesosoma; denser on the propodeum where there is no space among them.

Female: Unknown

Ecology: Unknown

Note. All of the specimens share the main characters given in the key for *Komarowia*, apart the absence of any gradulus on the terga. The specimens of BMNH from Disa show some difference, especially in the ferruginous colour on mesosoma and metasoma, head, propodeum, mouth parts and genitalia. Nevertheless without knowing any female specimens referred to them there is no justification to separate them; this is well worth for the specimens from Balouchistan too, which show more extended brown and olive colour, with dense long hair on the propodeum.

Komarowia orientalis (SMITH 1879) comb.nov.

Myzine orientalis SMITH 1879: 179-180 [Lectotypus ♂: Pakistan = /Belouchistan / /Belochistan / (rounded label) /*Myzine orientalis* (Type) Sm. / /Type/ (red ringed label)/ B.M. Type Hym. 15.1500 / Lectotypus *Myzine orientalis* F. Smith design. Gorbatovsky, 1981/ /*Melaniswara orientalis* (Sm.) Gorbatovsky det. 1987/, BMNH !.]

Melaniswara orientalis: GORBATOVSKY (1981: 385-386)

Male: Figs 170-177 (The lectotype is the unique so far known specimen. It lacks left flagellum and foreleg; head, hindlegs, meso-metasternum and metasoma are detached from mesosoma and glued to it). It has well pigmented light markings. Pitch black: head and mesosoma. Brown: dark portions of the metasoma. Light brown: flagellum, most of the coxae, trochanters, basal femurs. Yellow: clypeal disk, Tsa, mandibles (with ferruginous tips), scape, Most of the pronotal disk, large spot between notauli, scutellum, postscutellum, tegulae, large spot on mesepisternum, mesosternal lobes, legs, a band with irregular fore profile on 1st tergum, large bands on 2nd to 6th terga and 2nd to 5th sterna. Quite regular and scarce punctuation on the head and mesosoma, but propodeum that is more densely pitted. Very scarce pits on the basal terga and sterna. L_{Tap4} / L_{Tap5} about 1.3. Furrows delimiting lateroterga well detectable on the 1st to 4th, vestigial on 5th. No graduli on the terga.

Female: Unknown

Ecology: Unknown

Note: It shares with all other taxa of the group *Komarowia* the items of the key. It shares the well pigmented yellow markings and number of terga with lateral furrows only with *mongolina*; the om diameter is only 1/9 the width of the head .

Komarowia tartara (SAUSSURE 1880) comb.nov.

Meria tartara SAUSSURE 1880: 38-39 (Lectotypus ♂: Uzbekistan = Kyzyl-Kum, 8.V.1871, 227, ZUM)

Komarowia victoriosa RADOSZKOWSKI 1886: 44 (Lectotypus ♀: Turkmenistan = /Ashabad/ (yellow) /*Komarowia victoriosa*/ (autographic) /Ashabad Transcaspia Radoszkowsky/ (pale green) /Lectotypus *Komarowia victoriosa* Rad. Design. Gorbatovsky/ (red), /Iswara tartarus (Sauss.) Gorbatovsky det. 1978/, MNHU !)

Komarowia victoriosa: RADOSZKOWSKY (1888: 311-312, ♂)

Komarowia victoriosa: SAUSSURE (1892: 249-250, ♀ = *tartara* SAUSSURE ♂)

Iswara tartara: TURNER (1909: 476)

Komarowia victoriosa: KROMBEIN (1937: 27 = *Iswara victoriosa*)

Iswara tartara: SUAREZ (1974: 120)

Iswara tartara: GORBATOVSKY (1977: 1309)

Iswara tartarus: GORBATOVSKY (1981: 386-387)

Material: ♀: Turkmenistan = 1♀: Paralectotypus /Ashabad/ (yellow) /*Komarowia victoriosa*/ (not autographic) /*Iswara tartarus* (Sauss.) Gorbatovsky, 1982/ /Paralectotypus *Komarowia victoriosa* Rad. Design. Gorbatovsky/ (red), PAN. Kazahstan./Uzbekistan = 1♀: /Кизилкумъ/ /Coll. P. Magretti da Schneider 18/ /*Iswara tartarus* (*Sauss.*) ♀ Gorbatovsky det. 1978/, MSNG; 1♀: /*Komarowia victoriosa* Rad. ♀♂/ (autographic), MHNG

♂: Turkmenistan = 1♂: /Ashabad/ (yellow) /*Komarowia victoriosa* ♂ R/ (autographic) /? Radoszkowsky/ (pale blue, autographic) /Type/ (red) /C. ne de Saussure/, MHNG; 1♂: /Trans-Caspia/ (yellow) /Transcaspia Radoszkowsky/ (pale green) /TYPE/ (red) /*victoriosa*/ (not autographic) /Iswara tartarus (Sauss.) Gorbatovsky det. 1978/, MNHU. Kazakhstan = 1♂: /Каракъ/ (Figs 289 & 290), MSNG.

Female: Figs 52, 178-189, 285 (Drawn from the specimen at MSNG, about 15 mm long).

The flattened basal hind tarsomerus is another worthwhile character state to be mentioned, very different from *mongolina*. The dense fringe of the wings is also very differently arranged (in multiple irregular rows, on very small pits, vs. single row on large pits) but we can not know if we are dealing with either only specific autapomorphies or with generic synapomorphies, because of the above said arguments.

Male: Figs 190-200, 289-290. (Description and figures drawn from the specimen at MHNG). Light brown: flagellum and fore surface of 1st tergum. Brown: basalar area, sides of the scutum, lower mesopleurae and most of the head. Pale yellow: clypeus, lateral lower face, Tsa, scape, pronotum, central scutum, scutellum, metanotum, propleurae, upper mesopleurae, tegulae, legs but tarsi, apical surface of 1st tergum, basal stripes on 2nd to 6th terga and sterna (with a fore convergent back profile and quite dense punctuation). The remainder of mesosoma and tarsi is straw-coloured, ill pigmented. The remainder surface of terga and sterna is smooth, pit-less and translucent light brown. Ratio L_{Tap4} / L_{Tap5} about 1.45. Metasoma. Weak graduli, worn sideways, on 2nd to 4th terga. Shallow lateral furrows on 1st to 3rd terga.

Note: In the Gorbatovsky paper (1981) the designated lectotype of *victoriosa* was marked by the symbol "♂", but it was evidently a "lapsus calami".

Ecology: Caught at the lights during night time (RADOSZKOWSKI 1886)

Komarowia timurella (SAUSSURE 1880) comb.nov.

Meria timurella SAUSSURE 1880: 40 (Lectotypus ♂: Uzbekistan = Kyzyl-Kum, 8.V.1871, 227, ZUM)
Melaniswara timurella: GORBATOVSKY (1977, ♀: 1309-1312)
Melaniswara timurella: GORBATOVSKY (1981: 386)

Material: Pakistan = 1♂: /Quetta 8.03/ /Col. C. G. Nurse/ /1920-72/ /Melaniswara timurella (Sauss.) Gorbatovsky det 1987/, BMNH; Tagikistan = 1♂: /Тадж. 20 km 3 Дустипесч. – глин. Пустния Sedlitzia rosmarin. Песенко 11.VIII.979 / /Melaniswara timurella (Sauss.) Gorbatovsky det/, BMNH; Turkmenistan = 1♂: /Trans Caspi G. Turkmenien E. Koenig./ /*timurella* saus/ /R.E. Turner1910-225/ /771/, BMNH; Uzbekistan = 1♂ /Талимарджан Узбек 10.VII.1975 Горбатовскнй/, /Melaniswara timurella (Sauss.) Gorbatovsky det. 1978 ♂/, BMNH.

Male: Figs 201 - 207 (Drawn from the specimen from Uzbekistan). Mesosoma. Ratio L_{Tap4} / L_{Tap5} about 0.55.

Female: GORBATOVSKY (1977)

Ecology: GORBATOVSKY (1977)

Note: The specimens here quoted show stability just about the shape of pronotum, CM and CSM, genitalia. The size of the ocelli, the shape of the head, clypeus, mesosoma and 1st tergum are variable in each one of them. As I could not see neither the typical material at ZMUM nor more specimens it is impossible to draw any conclusion about.

Komarowia immatura (MORAWITZ 1890) comb.nov.

Meria immatura MORAWITZ 1890: (Lectotypus ♂: Turkmenistan = Repetek, 12.VI.1889, A. Semenov Lectotypus Meria immatura F. Morawitz, Gorbatovsky des, ZIN)
Meria immatura: GUIGLIA (1962: 122, 128–130)
Iswara immaturus: GORBATOVSKY (1981: 387)

Material: Turkmenistan = 1♂: /Coll. ne P Magretti Turkmenia 18/ /645/ /*immatura*/ /*Meria immatura Mor* Det Dott D. Guiglia/ MSNG. Figs 208-211.

Female: Unknown

Ecology: Unknown

Komarowia mongolina (GUIGLIA 1965) comb.nov.

Meria mongolina GUIGLIA 1965: 336-340 (Holotypus ♂: Mongolia = Bajanchongor aimak 5 km. S von somon Bogd, am Tujn gol, 1200 m., 24.VI.1964, MNHB)
Iswara mongolicus GUIGLIA 1973: 103-106 (Holotypus ♀: Mongolia = /Mongolia Südgobi aimak 20 km SSW von Somon Zogt – Ovoo 1350 m Exp. Dr. Z. Kaszab 1967/ / Nr790 12.VI.1967/ /*Iswara mongolicus* GUIGLIA, 1972 ♀ *Typus* (red) det Dott. D. Guiglia/ /Holotypus (red) *Iswara mongolicus* GUIGLIA 1972 ♀ PAPP 1977/ /Melaniswara mongolinus (GUIGLIA) ♀ Gorbatovsky det. 1978/, MNHB !)
Melaniswara mongolicus: GORBATOVSKY (1977: 1310, ♀)
Melaniswara mongolinus: GORBATOVSKY (1980: 320)
Melaniswara mongolinus: GORBATOVSKY (1990: 285)

Material: Mongolia = 1♂: /Mongolia: Südgobi aimak 14 km SW von Somon Bajandalaj, 1450 m Exp. Dr. Z. Kaszab, 1967/ /Nr. 803 15.VI.1967/, MSNG; 1♂: /Mongolia: Südgobi aimak Bajan sag20 km NO von Somon Bulgan, 1200 m Exp. Dr. Z. Kaszab, 1967/ /Nr. 892 6.VII.1967/, MSNG; 1♂: /Mongolia: Südgobi aimak 100 km W v. Grenzposten Ovot Chuural, 1250 m Exp. Dr. Z. Kaszab, 1967/ / Nr. 834 22.VI.1967/, MSNG; 3♂: /Mongolia: Bajanchongor aimak, 8 km OSO von Somon Bajonleg, 1350 m Exp. Dr. Z. Kaszab, 1967/ /Nr. 879 2.VII.1967/, MSNG.

Female: Figs 212-219 (Drawn by the Holotype of *Iswara mongolicus*). It needs to underline the heavy difference between the shape of the head in frontal view with the relating figure given by ARGAMAN (1994: p. 101, fig. 60).

Male: Figures 220-225 (Drawn from the specimen numbered 879). The drawings of the head in dorsal and frontal view make well evident the prominent TSA. Mesosoma: ratio L_{Tap4}/L_{Tap5} about 1. Metasoma: terga with no graduli; lateral furrows on 1st to 5th terga.

Komarowia meridiana spec.nov.

Holotypus ♂: Yemen = /Arabia merid. Hadramaut leg G. Scortecci / /Zona di Goraf 6-8.IV.1962/, MSNG.
Paratypi: Yemen = 2♂♂: /E. Aden Hadramout Nr wadi Amd 9.IX.1955 R.A. Hall /, BMNH; 5♂♂: /Arabia merid. Hadramaut leg G. Scortecci/ /Zona di Goraf 6-8.IV.1962/, MSNG.

Male: Holotype. Figs 226-233. Measurements (mm): body length = 12.5; fore wing length = 9. Mesosoma, legs and basal stripes on the terga and sterna translucent straw-coloured; the apical surfaces of the metameri are smooth, translucent light brown. Brown and dark brown: head (but clypeus, Tsa, mandibles and antennae) and basalar area. Lower eyes are ferruginous. No whitish pigmented areas. Scattered pits all over on the body; denser pits only on the sides of the propodeal dorsal surface. Head - PoG as long as ¾ the FoO. Mesosoma - metapleurae finely shagreened; ratio L $_{Tap4}$ / L $_{Tap5}$ about 1.4. Metasoma - weak graduli, worn sideways, on 2nd to 6th terga; lateral furrows hardy detectable only on 1st to 2nd terga.

Female: Unknown

Ecology: Unknown

Komarowia concolor spec.nov.

Holotypus ♂: U.A.E. = /U.A.E. Shibah 28.V.1985 Hamer night /, BMNH
Paratypi: U.A.E. = 1♂: /U.A.E. Shibah 28.V.1985 Hamer night, BMNH
Oman = 1♂: /OMAN Wahiba sands 11 km S Al Qabil 22° 31' ON 58° 41' 2E 8 December 2003 W.J. Pulawski collector/, CP

Male: Figs 234-241 (Holotype). Measurements (mm): body length = 11.5; fore wing length = 8.

Very similar in appearance to *Iswara*: head (but clypeus, mandibles, Tsa and antennae) and basalar area brown; the remainder of the body evenly translucent straw-coloured, without any pigmented area. Head - PoG as long as the FoO. Mesosoma - metapleurae densely and finely shagreened; ratio L $_{Tap4}$ / L $_{Tap5}$ about 1. Metasoma - weak graduli, worn sideward, on 2nd to 6th terga; lateral furrows hardy detectable only on 1st to 2nd terga.

Female: Unknown

Ecology: Unknown

Genus *Lamprowara* gen.nov.

Type species: *Lamprowara leucothorax* ♂, new species.

Its character states, shared also by the group *Iswara/Komarowia*, are given. in the key. Here the states shared with *Poecilotiphia* are listed:

- ratio L / A of the single flagellomerus about 2-2.5 at the most.
- elliptical placoids with sensilla curvata at the base of the last 4 flagellomeri.
- Pal 4- , Pam 6- segmented.
- pronotal disk with a well expressed regular keel on its fore border and pronotal plate.
- strong keel on the upper inner border of the hind coxa.
- 7th tergum with a notch larger than single lobe in dorsal aspect and lobes laterally delimited by a strong keel dividing the upper horizontal surface from vertical lateral ones.

The distally opened marginal cell on the fore wing seems their unique reliable autapomorphy.

The specimens here recorded cannot be happily described into anyone of the known genera and it appears advisable to group them under a new taxon name.

Derivatio nominis. From the synthesis between λαμπρός (= glossy) and the taxon name *Iswara*.

Gender: Masculine.

Lamprowara leucothorax spec.nov.

Holotypus ♂: Oman = /Oman Dhofar 2000 Rd Thumrayt-Shisr 30.IX 1225 ft 17°48'06''N/ 53°56'24'''E leg M. Generani & P.L. Scaramozzino/, MSNP.
Paratypus ♂: Oman = /Oman Dhofar 2000 Rd Thumrayt-Shisr 30.IX 1225 ft 17°48'06''N/ 53°56'24''E leg M. Generani & P.L. Scaramozzino/, MSNP.

Male: Figs 242-251 (Holotype). Measurements: Body length = 10 mm; fore wing length = 6.5 mm. Most of the body is pale yellow pigmented and smooth, giving it a very shining appearance. The sutures among the elements and their contours with more or less enlarged areas near them reveal a basic translucent light brown integument. Ssa, pronotal plate, lower mesopleurae are mostly without pigment. Pregradular areas on the terga, declining area of 1st tergum and subtriangular areas at the base of 2nd to 5th sterna are lighter brown. Flagellum orange. Head - PoG little longer than ½ the length of the FoO; clypeus quite swollen; elliptical placoids at the base of the last 4 flagellomeri. Mesosoma - propleurae almost flattened; fairly hollow declining dorsal propodeal surface, with concentric wrinkles around the propodeal spiracle; metapleurae and lateral areas of the propodeum with dense thin wrinkles; hind coxa with a strong keel along its upper inner border; fore wing with open CM and reduced 3rd CSM; hind wing normal. Metasoma - lateral tergal furrows detectable on the 1st to 4th terga (vestigial on 5th); weak graduli on the 2nd to 6th terga; weakly flattened bristles along the posterior border of 2nd to 6th sterna.

Female: Unknown

Ecology: Collectors referred about their seizure at flight during the daytime after striking a small bush where they were resting

Derivatio nominis: From λευκός (= light) and θωραξ (= cuirass), because of the large pale markings on the body

Note. The paratype has a lesser size (7 mm long) and is much less pigmented; greater portions of the head (but clypeus), pronotal plate, scutum, metanotum, mesopleurae, the whole metapleurae, propodeum are brown; most of the metasoma show a translucent light brown integument, bearing narrow apical strips on 1st to 7th terga and 2nd to 6th sterna. The whole body with very scattered pits and scanty hair; denser pits on the propodeal dorsal surface.

Lamprowara gorbatovskyi spec.nov.

Holotypus ♂: U.A.E. = /U.A.E. 25.VIII.1985 Hamer/ /Holotypus *Poecilotiphia hameri* Gorbatovsky 1990/, BMNH

Male: Figs 252-260 (Holotypus). Measurements: body length = mm 7.5; fore wing length = 5mm. Body with a translucent, ferruginous integument with pale yellow markings. Pale yellow: most of the clypeus and mandibles, large markings on the head, pronotum, scutum, scutellum, postscutellar area of the N_3, legs and narrow apical, transversal belts on 1st to 6th terga, 2nd to 5th sterna. Head - PoG well expressed, its length 3/4 long the FoO; clypeus gently swollen; flagellum with very short and scattered bristles and elliptic placoids at the base of the last 5 elements. Mesosoma – es_1 almost flattened; fore border of the pronotal disk with a low but strong keel well delimiting the underneath pronotal plate; metapleurae and lateral areas of the propodeum with rough wrinkles; declining dorsal surface of the propodeum a little bit concave with rough horizontal wrinkles; fore wing with open CM, reduced and petiolated 3rd CSM; hind wing normal; hind coxa with a strong keel along its upper inner border. Metasoma - lateral tergal furrows detectable only on the 1st and 2nd terga; weak graduli on 2nd to 6th terga: weakly flattened bristles along the posterior border of 2nd to 6th sterna. All the body shining and almost pit less with very scanty hair; denser pits on the propodeal dorsal surface.

Female: Unknown

Ecology: Unknown

Derivatio nominis. Dedicated to Dr. V. Gorbatovsky (ZMUM), author of basic studies about the Myzininae of the Old World

Note: It has been quite difficult to deal with this specimen, as Dr. Gorbatovsky did not issue anything about it. Many attempts to contact him at Moscow have been made unsuccessfully. Because of the strong concern of this specimen about the topic here discussed, to describe it under a new name has been resolved

It differs from *L. leucothorax* in the different shape of head, pronotum, scutum, propodeum and first metamerus in dorsal aspect; also the palpi, volsella and gonostylus are different. The "corner" between propodeal spiracle and the rear border of the metanotum is roughly sculptured with a deep pit just at the anterior tip of the spiracle (simply and weakly wrinkled in *L. leucothorax*); most of its integument is translucent, not well pigmented; lateral tergal furrows detectable only on the 1st and 2nd terga (1st to 4th in *L. leucothorax*)

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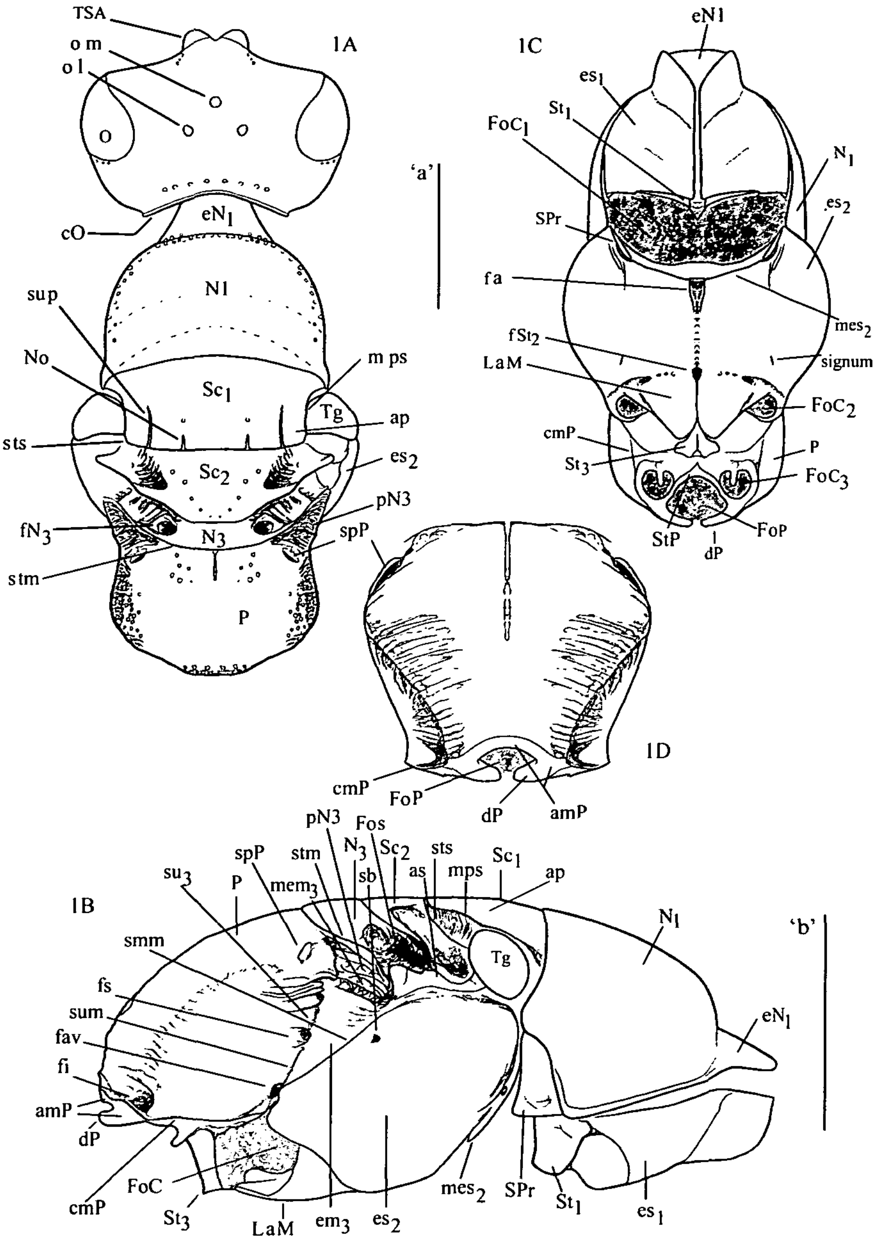


Fig. 1A, 1B, 1C, 1D: *Meria* ♀. 1: mesosoma (A= dorsal aspect; B = lateral aspect; C = ventral aspect; D = back aspect. (1A, 1C : scale bar a = 1 mm) (1B : scale bar b = 1 mm) (1D : scale bar a = 1,25 mm).

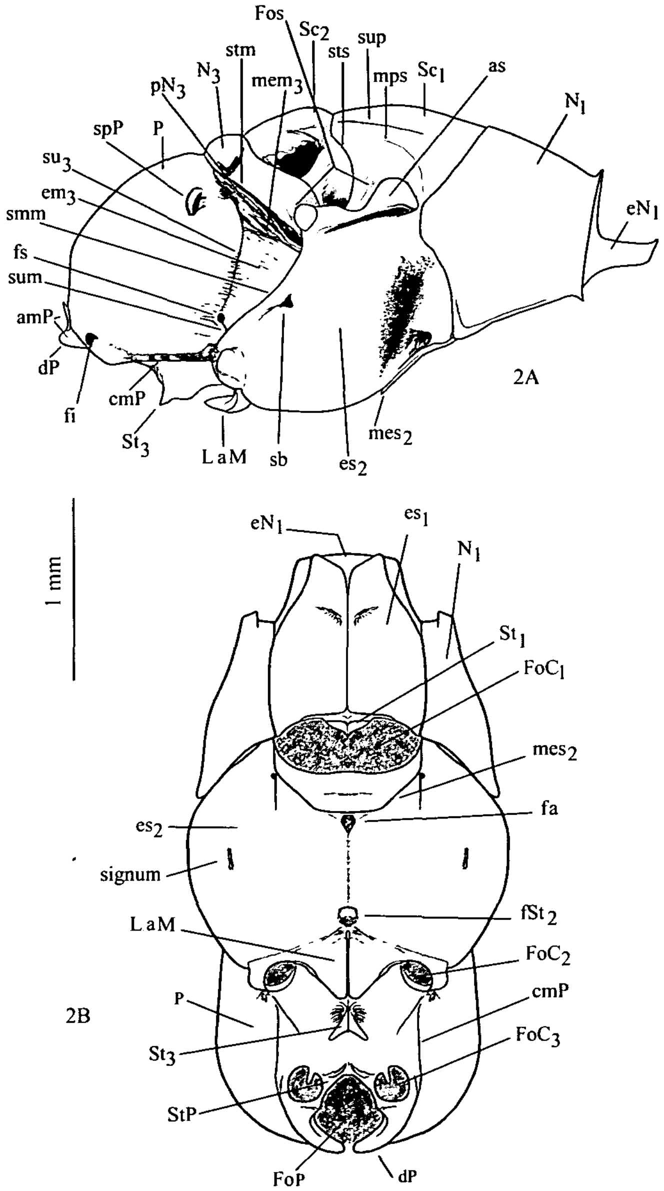


Fig. 2A, 2B. *Meria* ♂. **2**: mesosoma (**A** = lateral aspect; **B** = ventral aspect) (Scale bar = 1 mm).

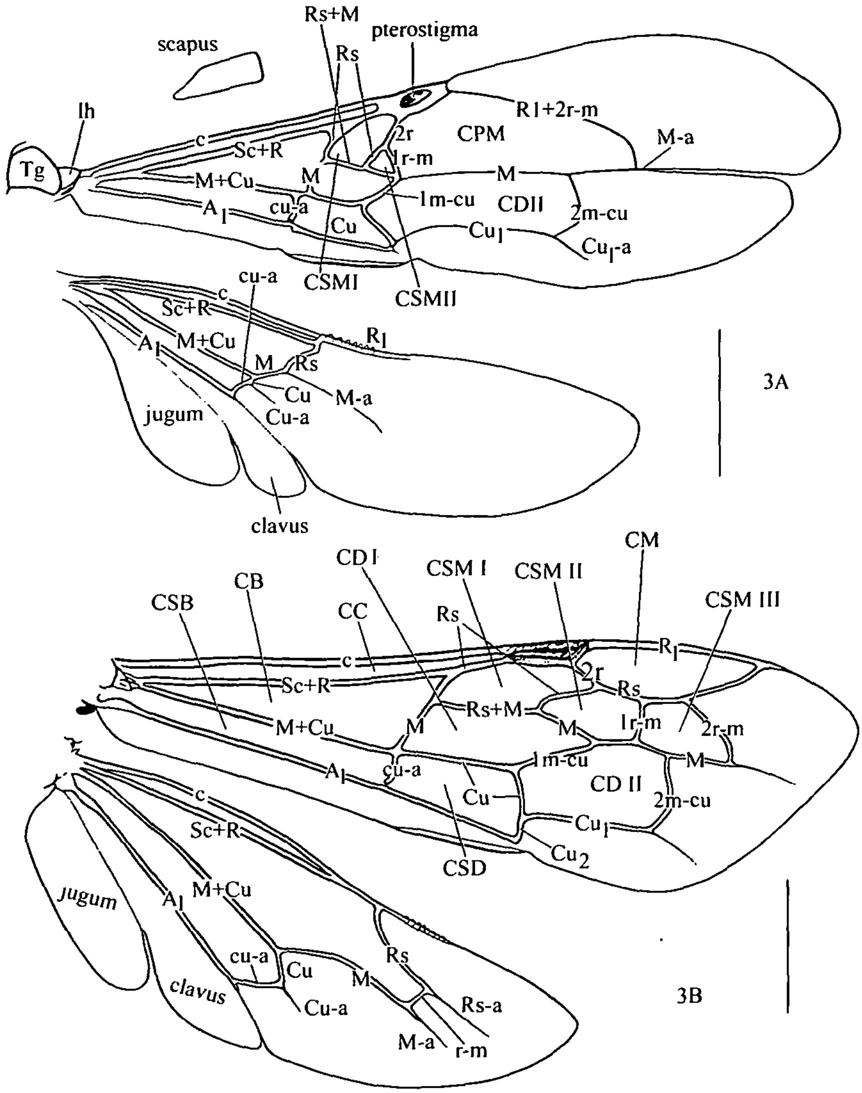
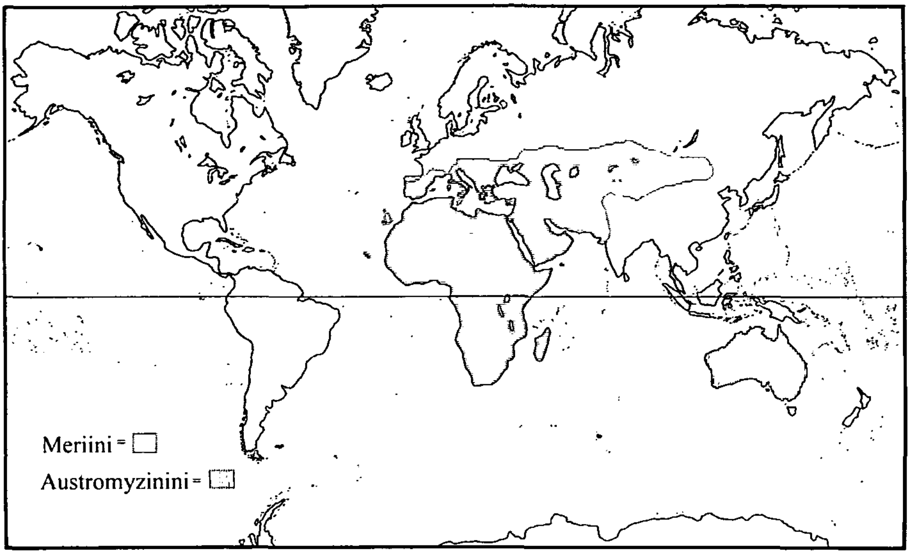


Fig. 3. *Meria* ♀. **3A**: wings. – *Poecilotiphia* ♂. **3B**: wings. (Scale bar = 1 mm).



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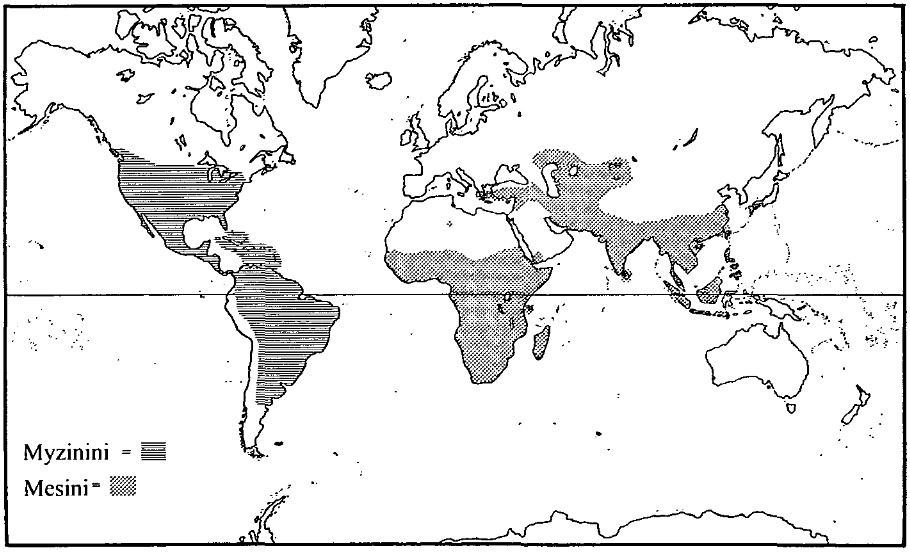

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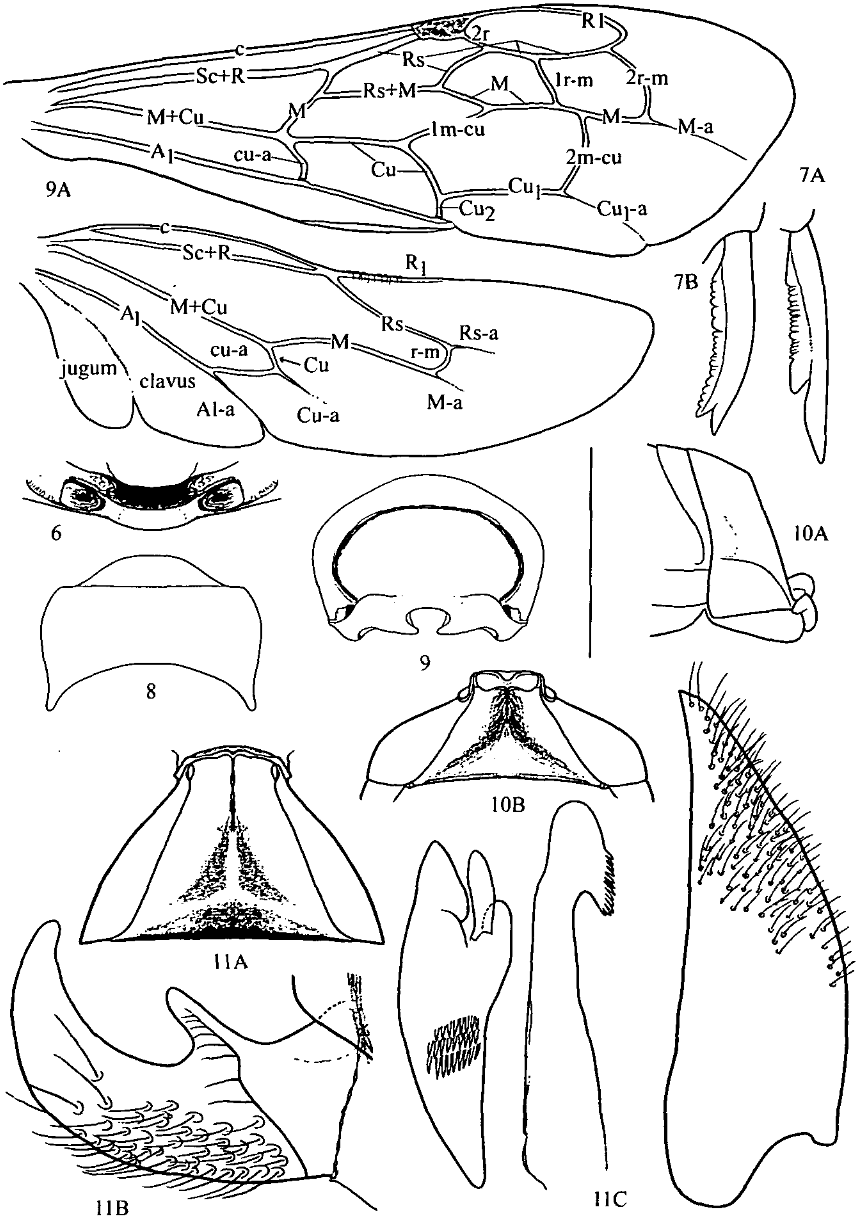
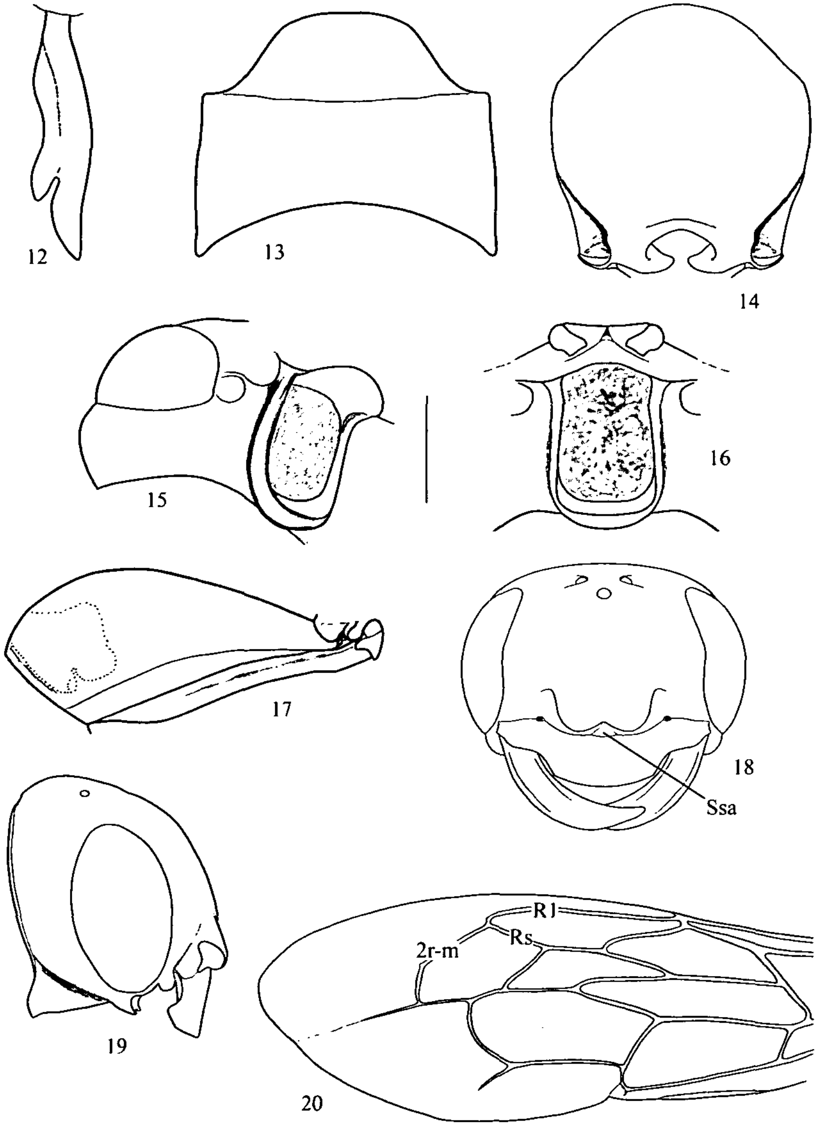
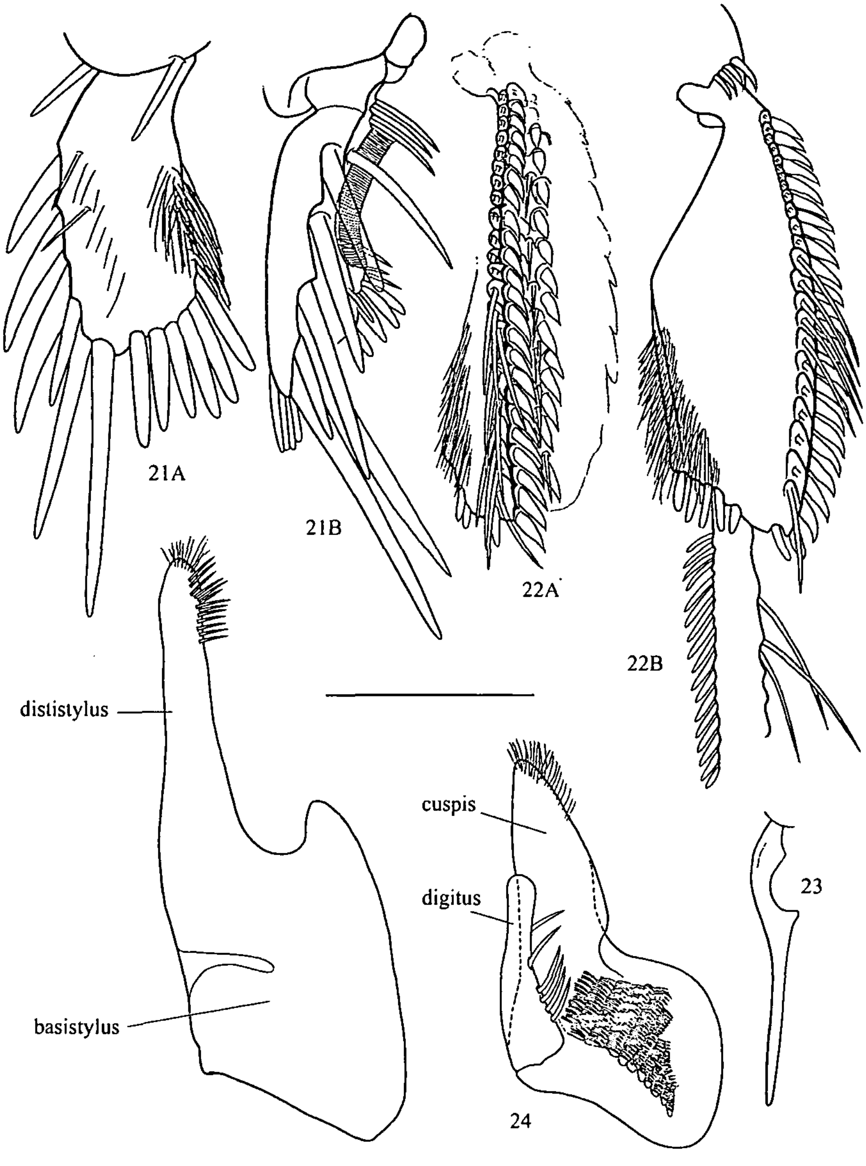
Figs 4-5. Geographical distributions.



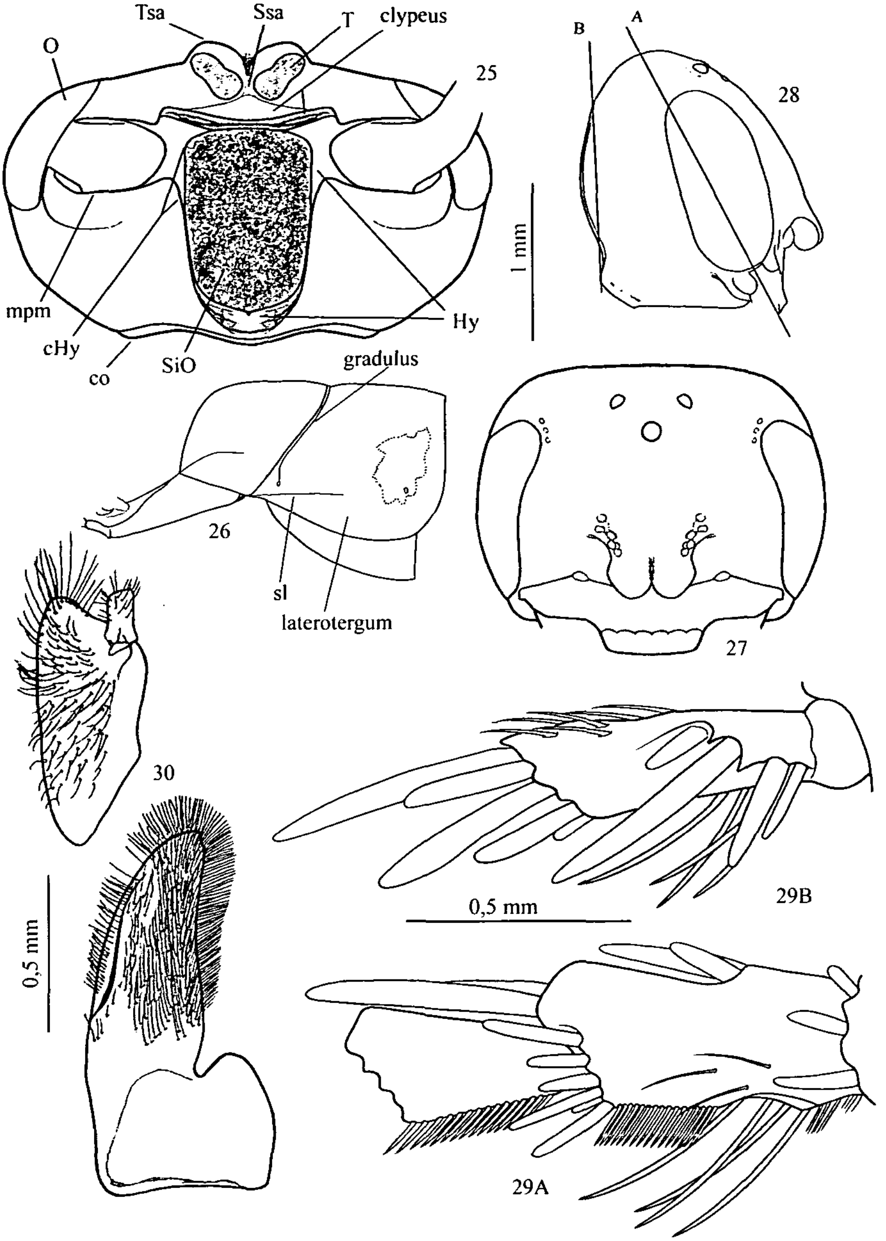
Figs 6-11. *Austromyzinum* ♂. **6**: metanotum; **7B**: foretibial spur; **11A**: 1st sternum, ventral aspect; **11B**: 8th sternum (anal hook); **11C**: gonostylus, volsella, aedeagus. – *Austromyzinum* ♀. **7A**: foretibial spur; **8**: pronotum, dorsal aspect; **9**: propodeum, back aspect, **9A**: wings; **10**: 1st metamere (A: lateral aspect; B: ventral aspect), (6, 10, 11A: scale bar = 1 mm) – (7A, 7B, 11B, 11C: scale bar = 0,5 mm) (8, 9, 9A: scale bar = 2 mm).



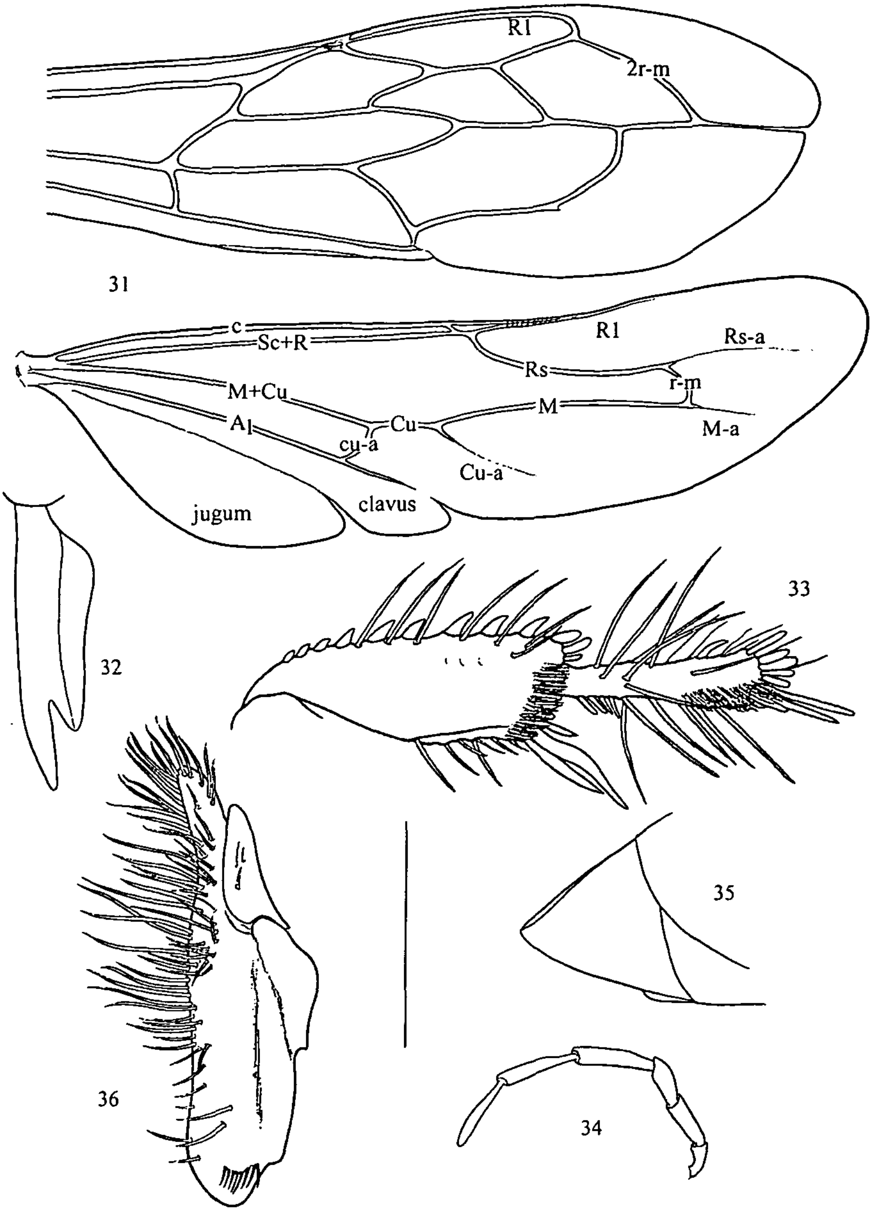
Figs 12-20. *Myzinum* ♀. **12**: Foretibial spur; **13**: pronotum, dorsal aspect; **14**: propodeum, back aspect; **15**: Head, postero ventral aspect; **16** : head, ventral aspect; **17**: 1st metamerus, lateral aspect; **18**: head, frontal aspect; **19**: head, lateral aspect; **20**: fore wing. (12: scale bar = 0,25mm) (13, 14, 15, 16, 17, 18, 19,: scale bar = 1) (20: scale bar 2 mm).



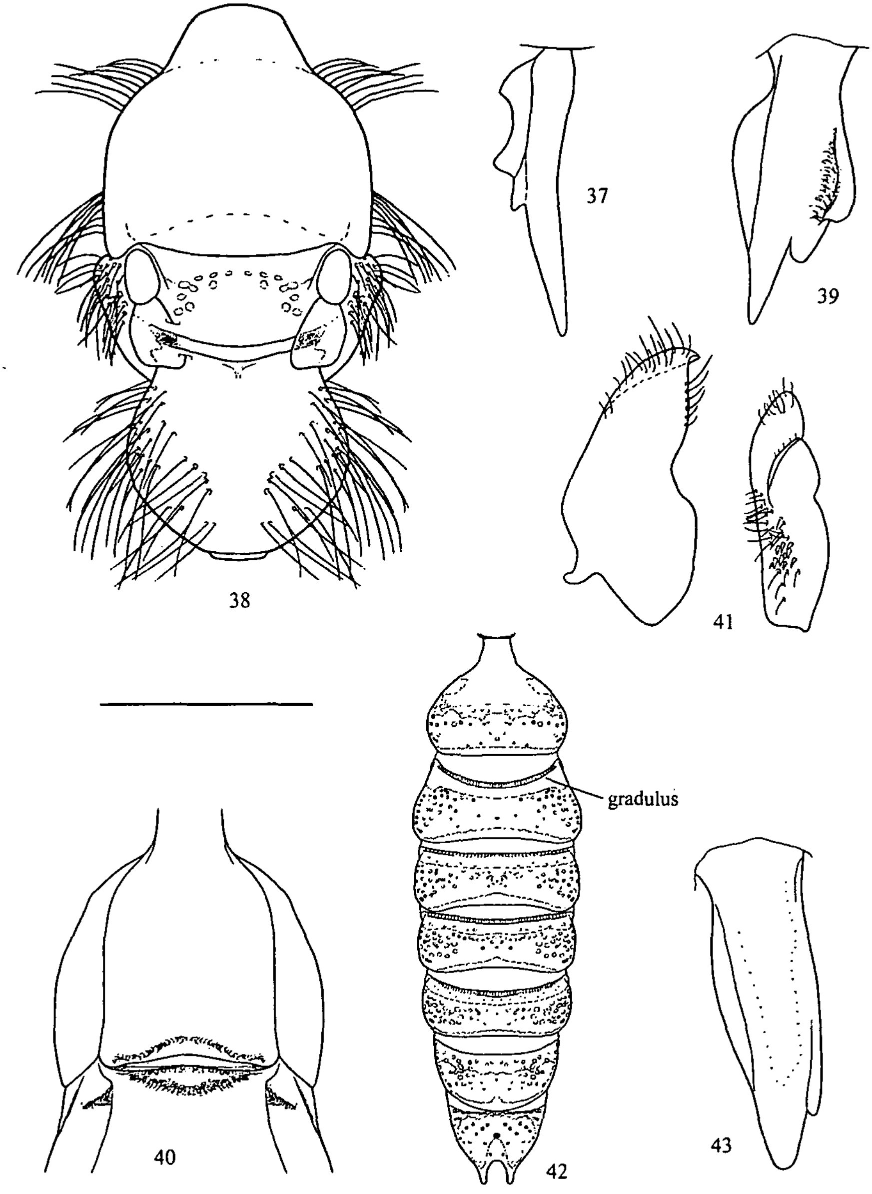
Figs 21-24. *Myzinum* ♀. **21**: fore tarsomerus (A = dorsal aspect; B = outer, lateral aspect); **22**: hind femur (A = dorsal aspect; B = inner lateral aspect); **23**: hind tibial spur – *Myzinum* ♂. **24**: (A = gonostylus; (B = volsella) (21, 24: scale bar = 0,5mm) (22, 23 : scale bar = 1mm).



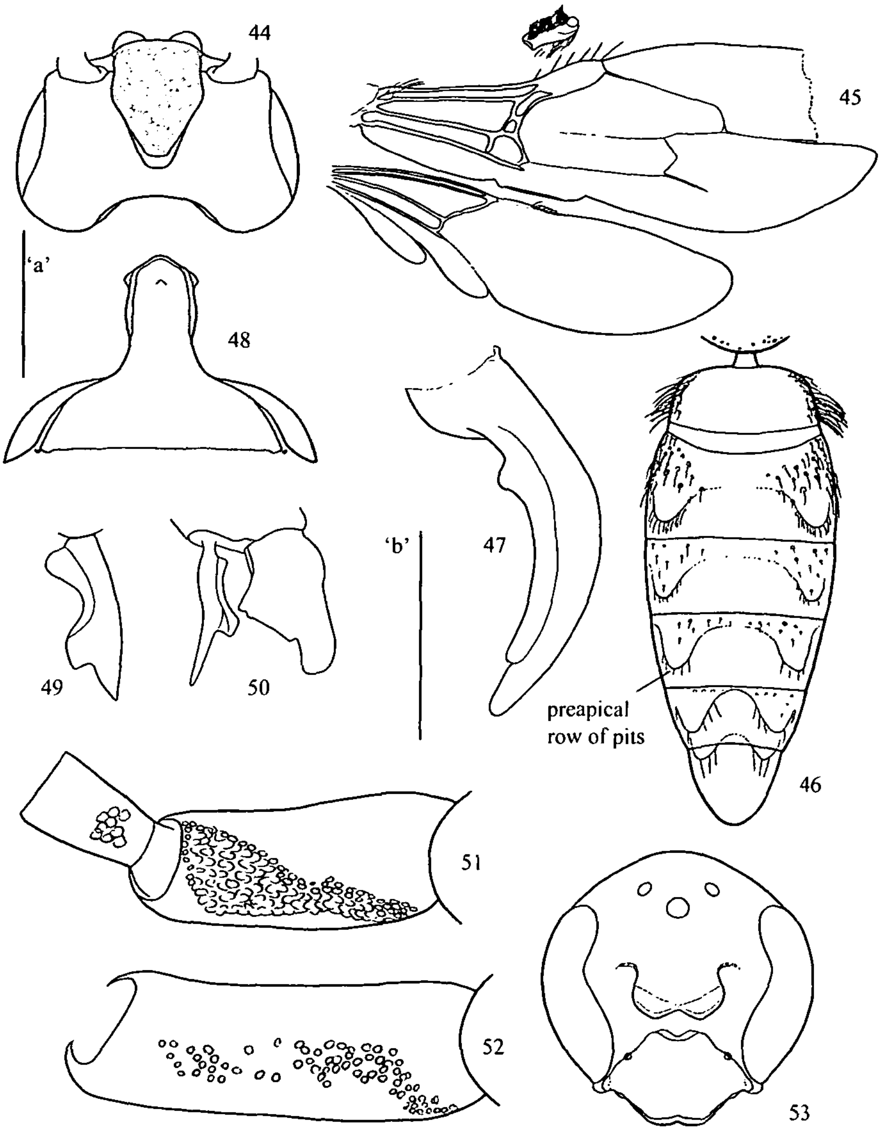
Figs 25-30. *Meria* ♀. **25**: head, ventral aspect; **26**: 1st and 2nd metameri, lateral aspect; **27**: head, frontal aspect; **28**: head, lateral aspect; **29**: fore tarsomerus (A = dorsal aspect; B = outer lateral aspect) – *Meria* ♂. **30**: (A = gonostylus; B = volsella) (25,26,27,28: scale bar = 1mm) (29,30: scale bar = 0,5mm).



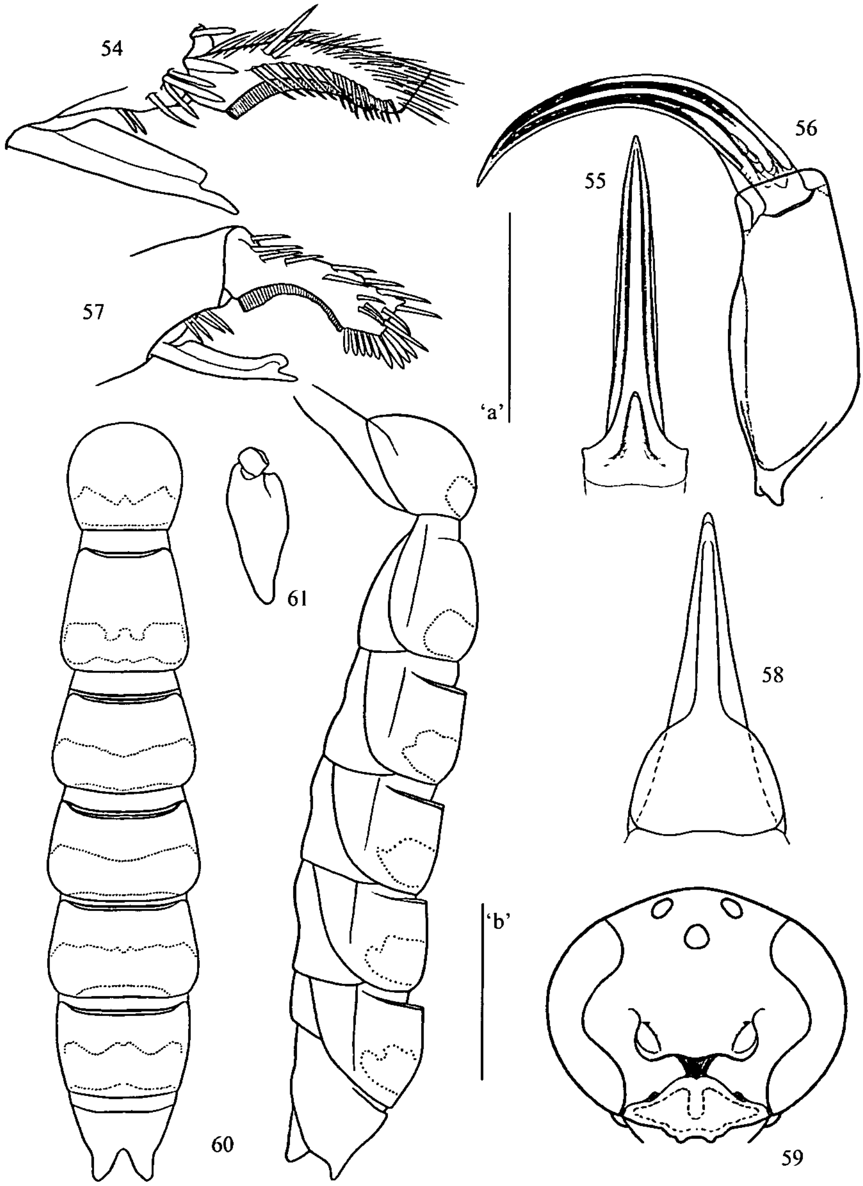
Figs 31-36. *Mesa* ♀. **31**: wings; **32**: foretibial spur; **33**: hindleg – *Mesa* ♂. **34**: Pam; **35**: 7th metamerus, lateral aspect; **36**: volsella (32, 33, 34, 36: scale bar = 0,5mm) (35: scale bar = 1 mm) (31: scale bar = 2,5mm)



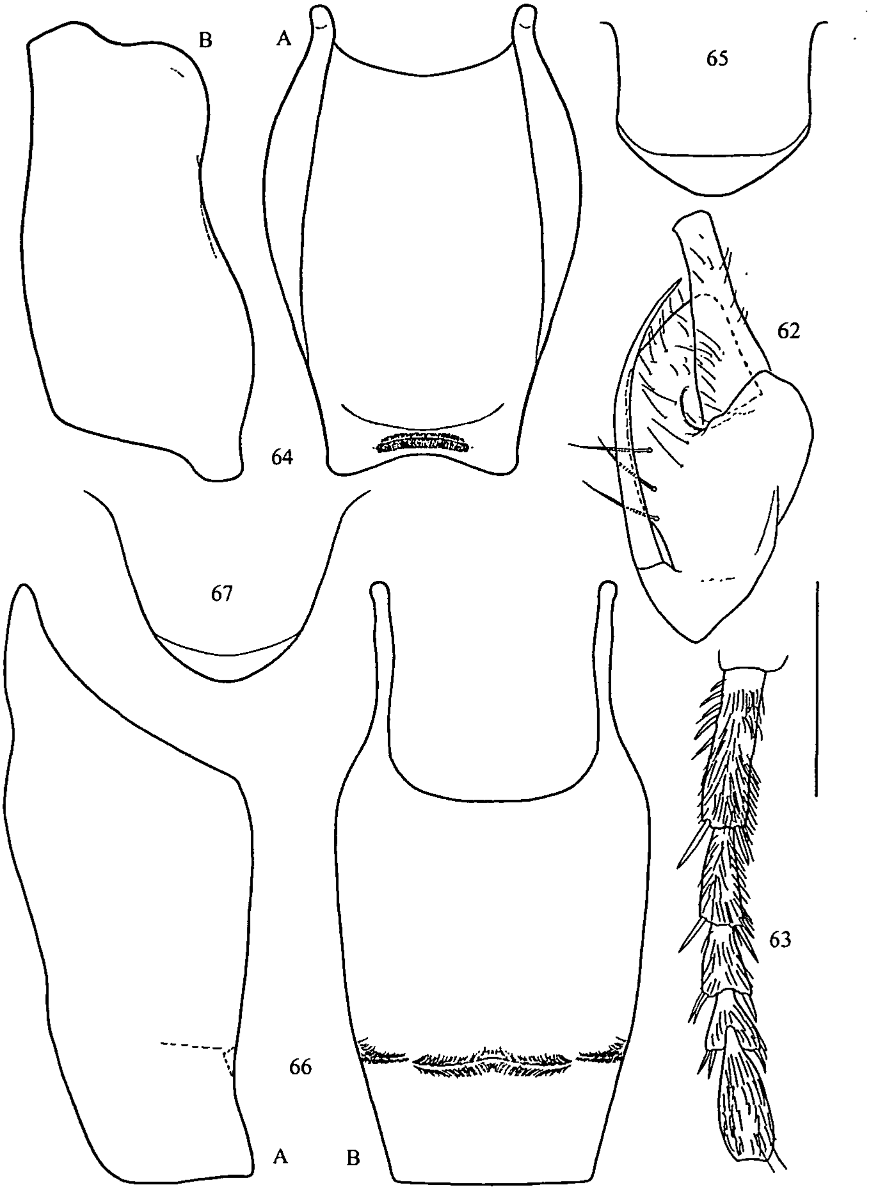
Figs 37-43. *Meria* ♀. **37**: fore tibial spur. – *Braunsomeria* ♀. **38**: mesosoma, dorsal aspect. scale bar = 1 – *Braunsomeria* sp ♂. **39**: mandible, outer, lateral aspect; **40**: basal sterna, ventral aspect; **41**: gonostylus and volsella. – *Poecilotiphia* ♂. **42**: metasoma, dorsal aspect. – *Meria* ♂. **43**: mandible, outer lateral aspect. (38: scale bar = 0,625 mm) (37, 39, 40, 41, 43: scale bar = 0,5 mm) (42 scale bar = 2 mm).



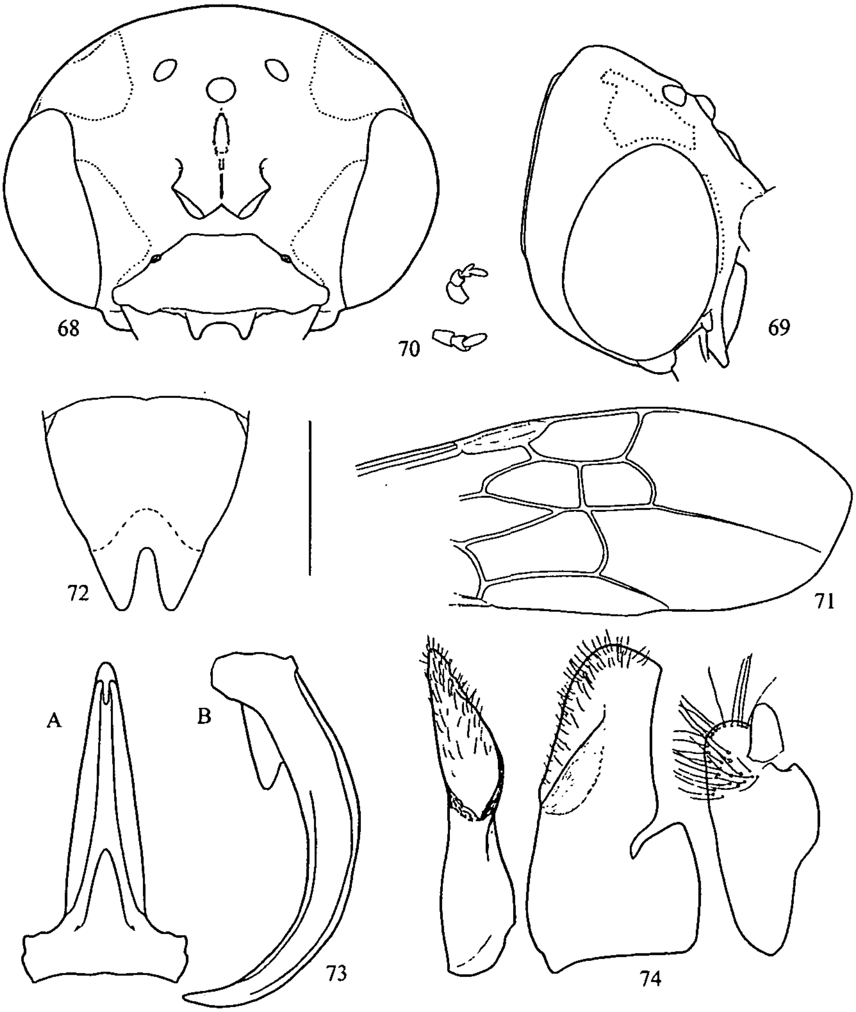
Figs 44-53. *Myzinella* ♀. **44**: head, ventral aspect; **45**: wings; **46**: metasoma, dorsal aspect. – *Meria* ♀. **47**: mandible, frontal aspect; **48**: 1st metamerus, ventral aspect. – *Parameria* ♀. **49**: fore tibial spur – *Poecilotiphia* ♀. **50**: Fore tibial spur and basal fore tarsomerus; **51**: scape, dorsal aspect. – *Komarowia* ♀. **52**: scape, dorsal aspect. – *Meria* sp. ♂. **53**: head, frontal aspect (44: scale bar a = 0,5mm) (48: scale bar a = 1 mm) (45, 46: scale bar b = 1mm) (47, 49, 50, 51, 52: scale bar b = 0,5mm) (53: scale bar b = 2 mm).



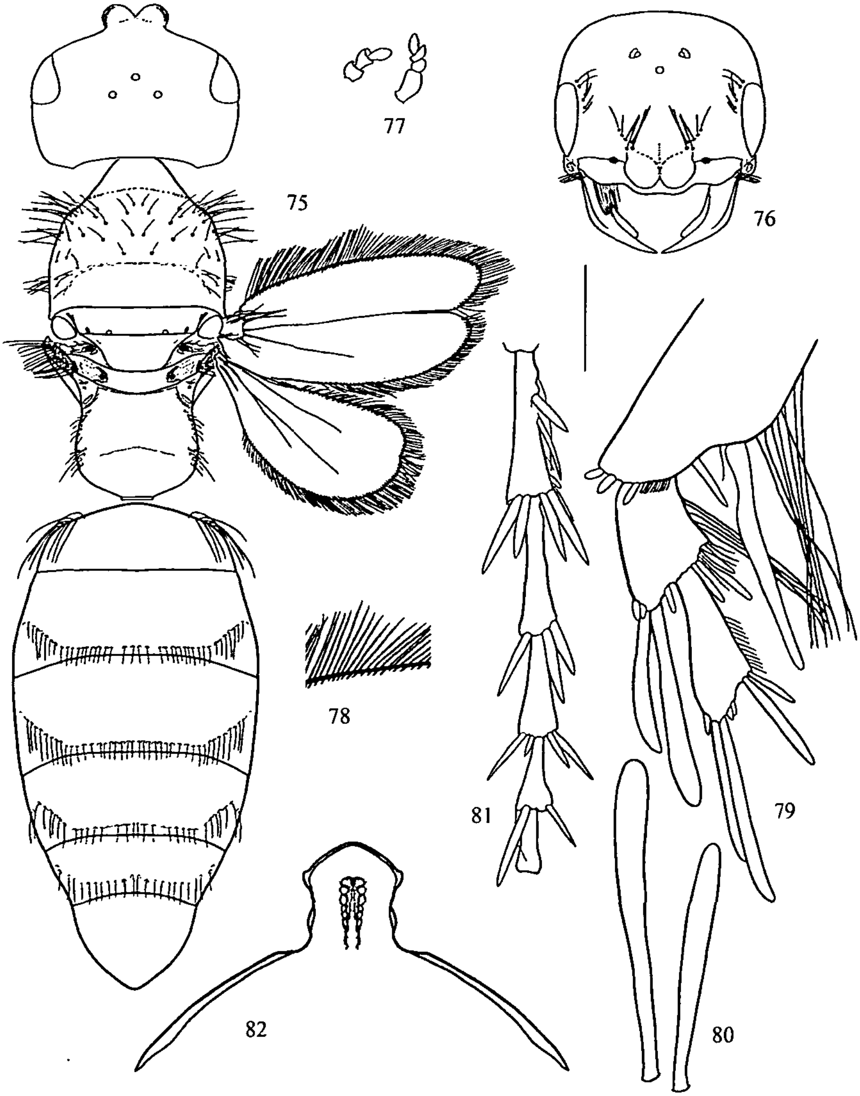
Figs 54-61. *Meria* ♂. **54**: fore tibial spur and basal fore tarsomerus, ventral aspect; **55**: 8th sternum, dorsal aspect; **56**: 7th and 8th sterna, lateral aspect. – *Poecilotiphia* ♂. **57**: fore tibial spur and basal fore tarsomerus, ventral aspect; **58**: 8th sternum, dorsal aspec. – *Myzinella* ♂. **59**: head, frontal aspect; **60**: metasoma, (A = dorsal; B = lateral aspect); **61**: volsella (54, 57, 58: scale bar 'a' = 0,5 mm) (55, 56: scale bar 'a' = 1 mm) (59, 60: scale bar 'b' = 1 mm) (61: scale bar 'b' = 0.5 mm).



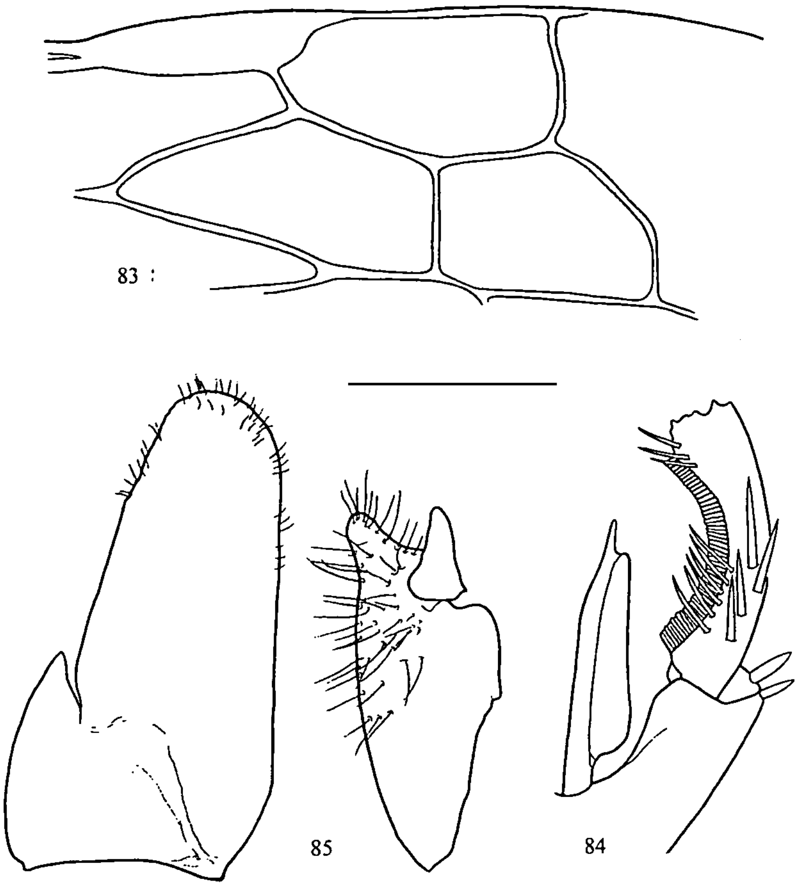
Figs 62-67. *Parameria* ♂. **62**: volsella. – *Poecilotiphia* ♂. **63**: fore tarsus, dorsal aspect; **64**: 7th sternum (A = dorsal aspect; B = lateral aspect); **65**: 7th sternum, back aspect. – *Iswara* ♂. **66**: 7th sternum (A = dorsal aspect; B = lateral aspect); **67**: 7th sternum, back aspect. (62: scale bar = 0,5 mm) (63, 64, 65, 66, 67: scale bar 1 mm).



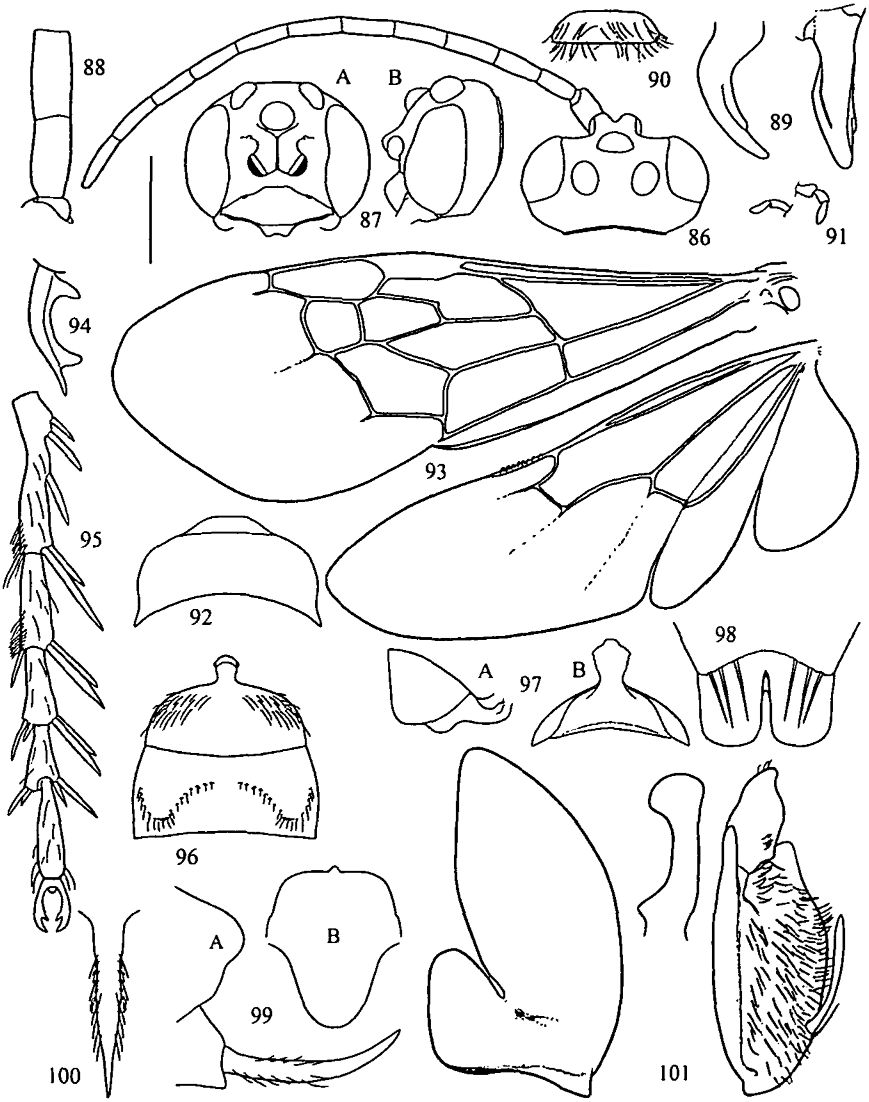
Figs 68-74. *Tamerlanella radialis* (SAUSSURE 1880)] Lectotypus ♂. **68**: head, frontal aspect; **69**: head, lateral aspect; **70**: palps; **71**: apical fore wing; **72**: 7th tergum, dorsal aspect; **73**: 8th sternum (A = dorsal aspect; B = lateral); **74**: gonostylus (dorsal and lateral) and volsella (68, 69: scale bar = 1mm) (70, 73, 74: scale bar = 0,5 mm) (71, 72: scale bar = 2 mm).



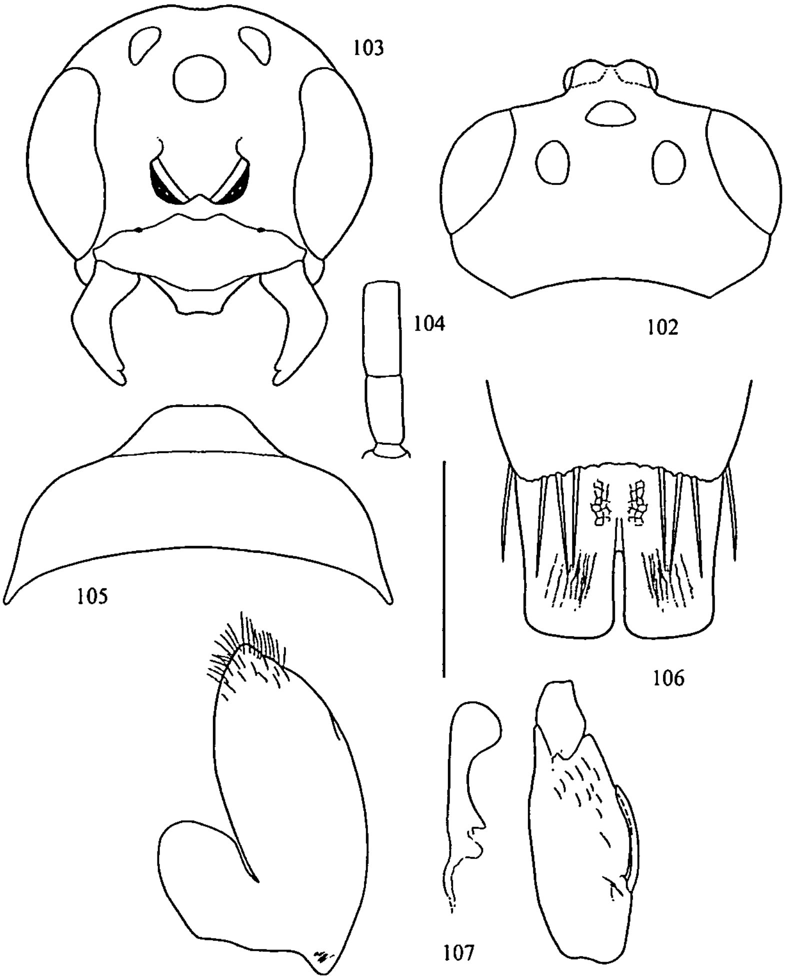
Figs 75-82. *Pseudomeria tamerlanella* [= *Tamerlanellas radialis* (SAUSSURE 1880)] Lectotypus ♀. **75**: habitus, dorsal aspect; **76**: head, frontal aspect; **77**: palps; **78**: wing, particular; **79**: apical fore tibia and basal fore tarsomeri, inner lateral aspect; **80**: hind tibial spurs; **81**: hind tarsus; **82**: basal metamerus, ventral aspect (distal border not expressed) (75, 76: scale bar = 1 mm) (77, 79, 80, 81: scale bar = 0,25) (78, 82 : scale bar = 0,5 mm).



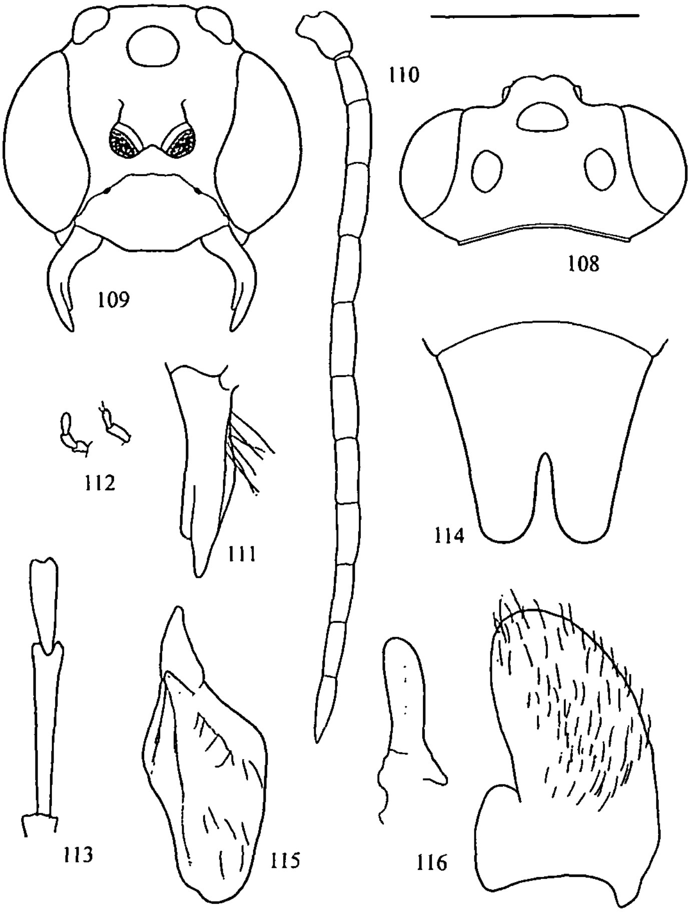
Figs 83-85. *Tamerlanella kurnubiensis* (GUIGLIA 1963) ♂. **83**: apical fore wing; **84**: fore tibia spur and basal fore tarsomerus (ventral aspect); **85**: gonostylus and volsella (83, 84, 85: scale bar = 0,5 mm).



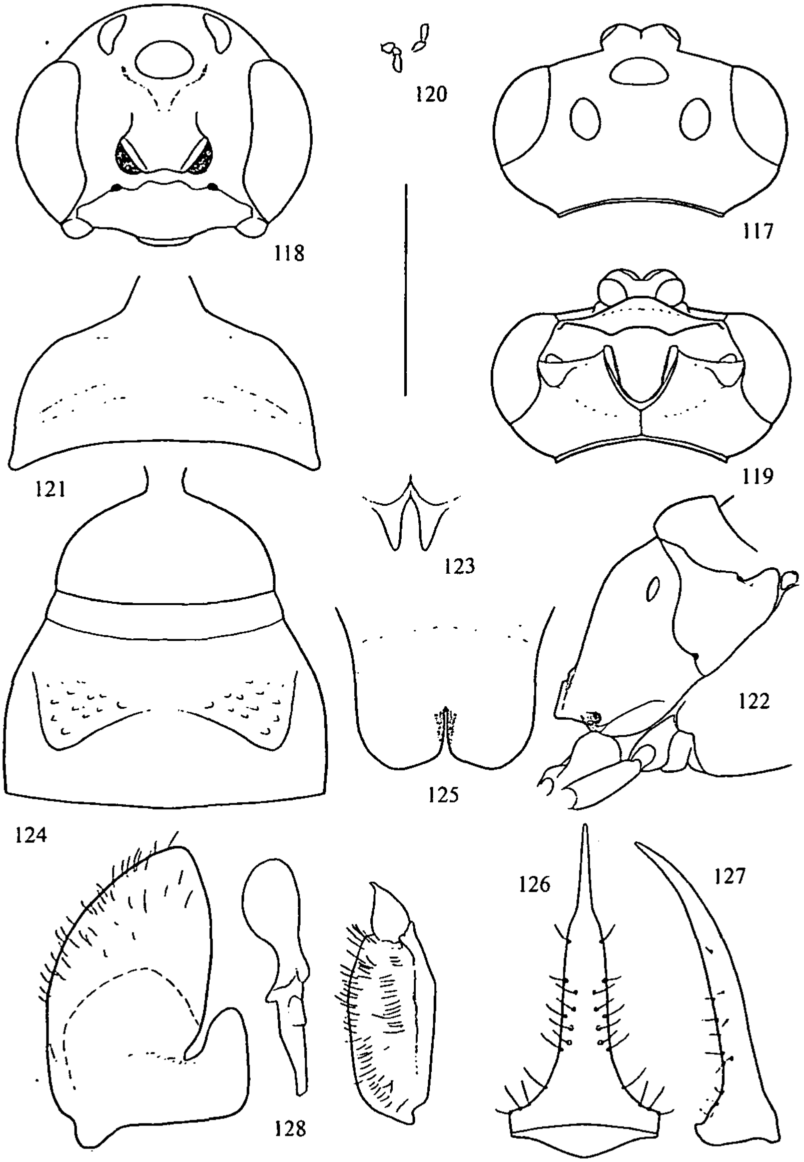
Figs 86-101. *Iswara luteus* WESTWOOD 1851. Holotypus ♂. **86**: head and antenna, dorsal aspect; **87**: head (A = frontal; , B = lateral); **88**: Basal flagellomeri; **89**: mandible; **90**: labrum, ventral aspect; **91**: palps; **92**: pronotum, dorsal aspect; **93**: wings; **94**: fore tibial spur; **95**: fore tarsus, dorsal aspect; **96**: 1st and 2nd terga, dorsal aspect; **97**: 1st metamerus (A = lateral aspect; B = ventral aspect); **98**: 7th tergum (epipygium), dorsal aspect; **99**: apical metamerus (A = lateral aspect; B = back aspect); **100**: 8th sternum (anal hook), dorsal aspect; **101**: gonostylus, aedeagus and volsella (86, 87, 92, 93, 96, 97: scale bar = 1 mm) (88, 89, 90, 91, 94, 95, 98, 99, 100, 101: scale bar = 0,5 mm).



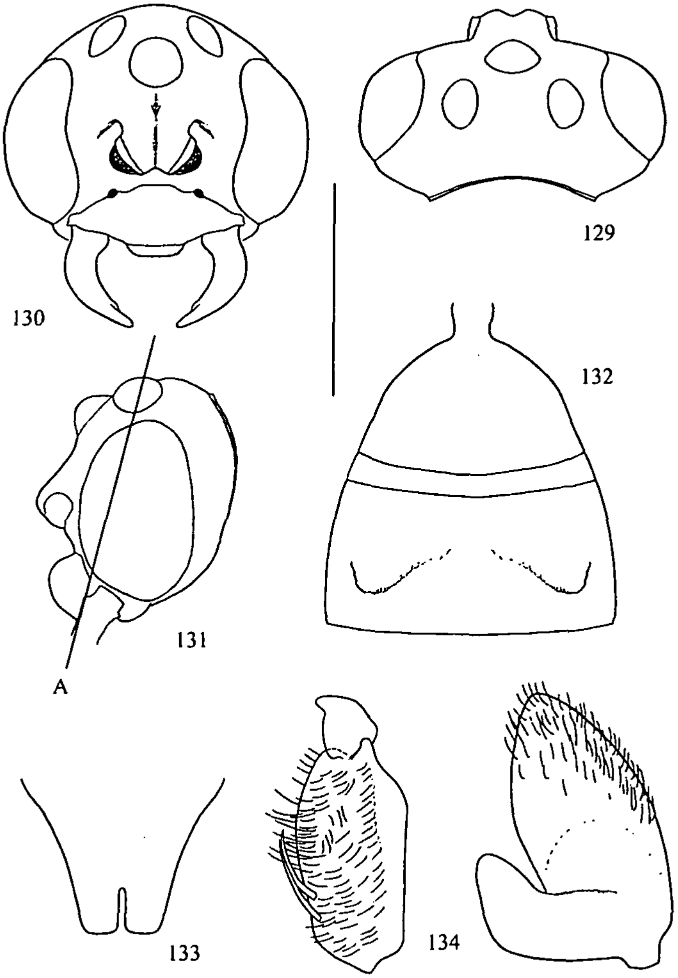
Figs 102-107. *Iswara pallidus* (SMITH, 1879). Lectotypus ♂. **102**: head, dorsal aspect; **103**: head, frontal aspect; **104**: basal flagellomeres; **105**: pronotum, dorsal aspect; **106**: 7th tergum, dorsal aspect; **107**: gonostylus, aedeagus and volsella (102, 103, 105: scale bar = 1 mm) (104, 106, 107: scale bar = 0,5 mm).



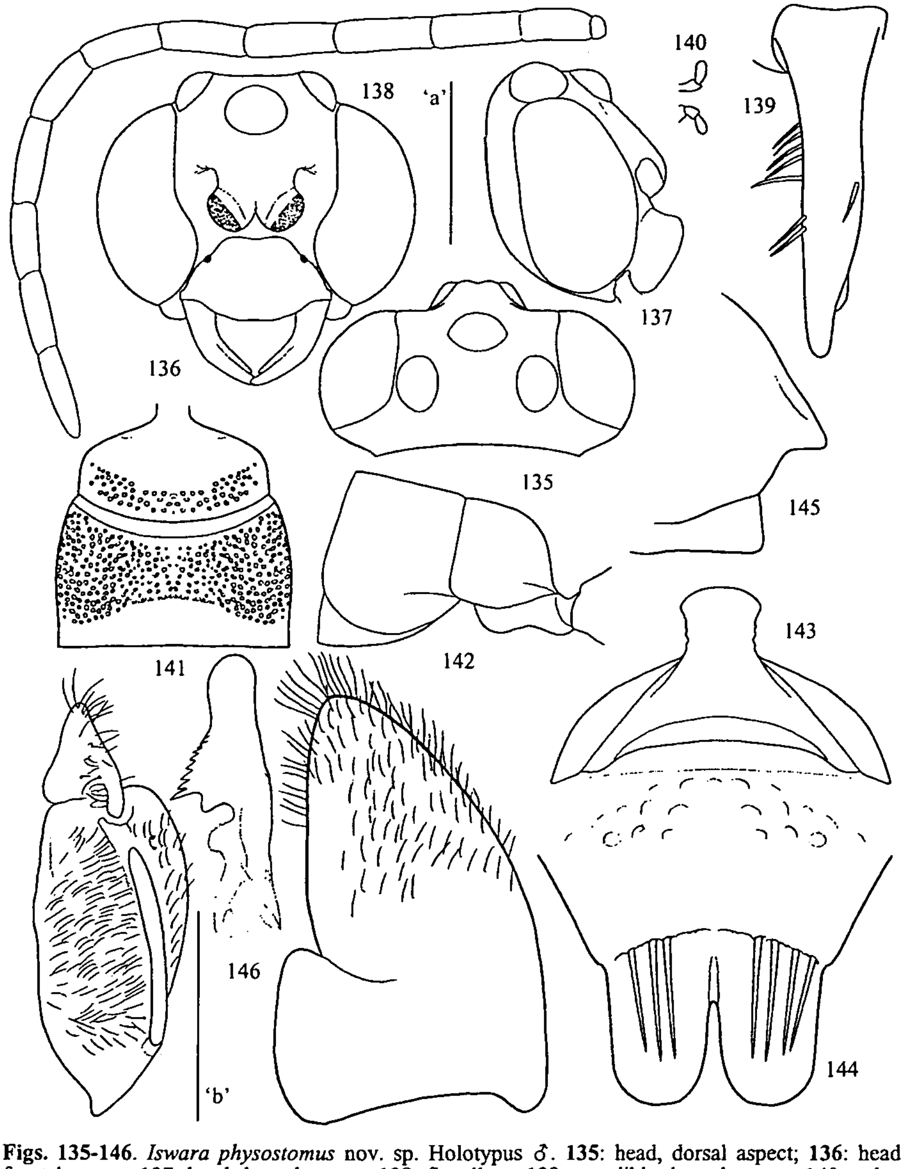
Figs 108-116. *Iswara nocturnus* (MORAWITZ, 1888). ♂. **108**: head, dorsal aspect; **109**: head, frontal aspect; **110**: antenna; **111**: mandible, lateral aspect; **112**: palps; **113**: apical hind tarsomeri; **114**: 7th tergum, dorsal aspect; **115**: volsella; **116**: aedeagus and gonostylus (108, 109, 110: scale bar = 1 mm) (111-116: scale bar = 0,5 mm).



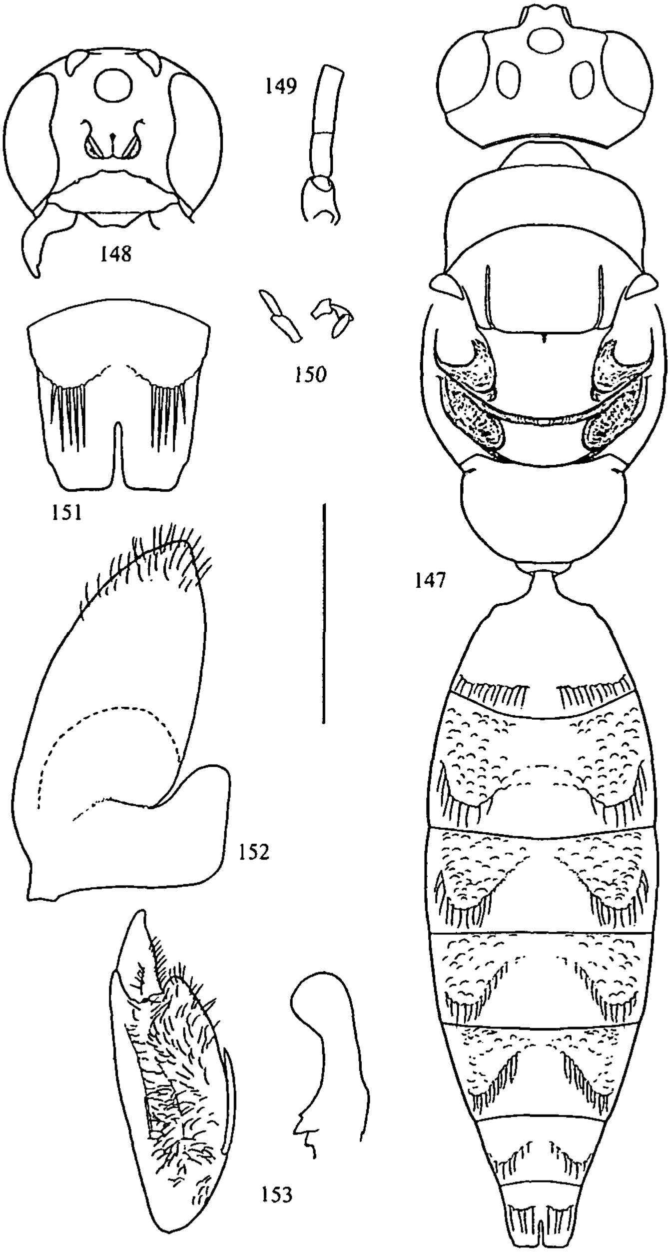
Figs 117-128. *Iswara chobauti* (ANDRÉ 1898). Paralectotypus ♂. **117**: head, dorsal aspect; **118**: head, frontal aspect; **119**: head, ventral aspect; **120**: palps; **121**: pronotum, dorsal aspect; **122**: mesosoma, posterior lateral aspect; **123**: metasternum; **124**: 1st and 2nd terga, dorsal aspect; **125**: 7th tergum, dorsal aspect; **126**: 8th sternum (anal hook) dorsal aspect; **127**: 8th sternum, lateral aspect; **128**: gonostylus, aedeagus and volsella (117, 118, 119, 121, 122, 123, 124: scale bar = 1 mm) (120, 125, 126, 127, 128: scale bar = 0,5 mm).



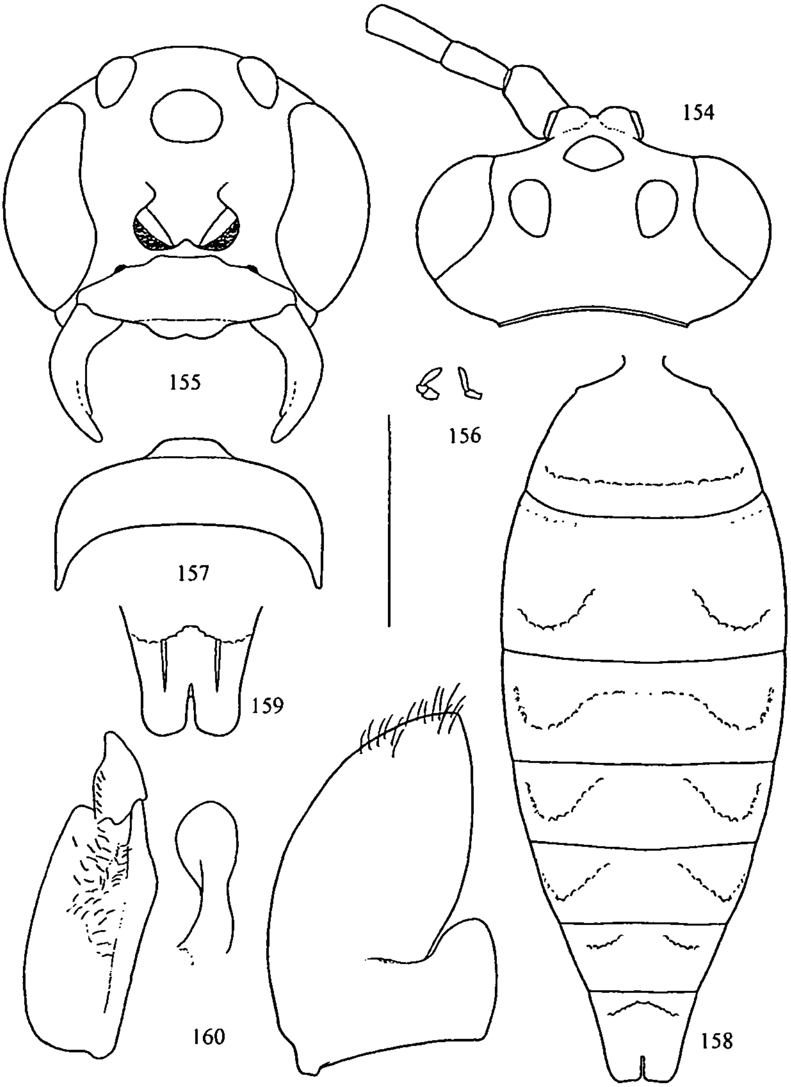
Figs 129-134. *Iswara mateui* SUAREZ 1974 ♂. **129**: head, dorsal aspect; **130**: head, frontal aspect; **131**: head, lateral aspect; **132**: 1st and 2nd terga, dorsal aspect; **133**: 7th tergum, dorsal aspect; **134**: volsella and gonostylus (129, 130, 131, 132, 133: scale bar = 1 mm) (134: scale bar = 0.5 mm).



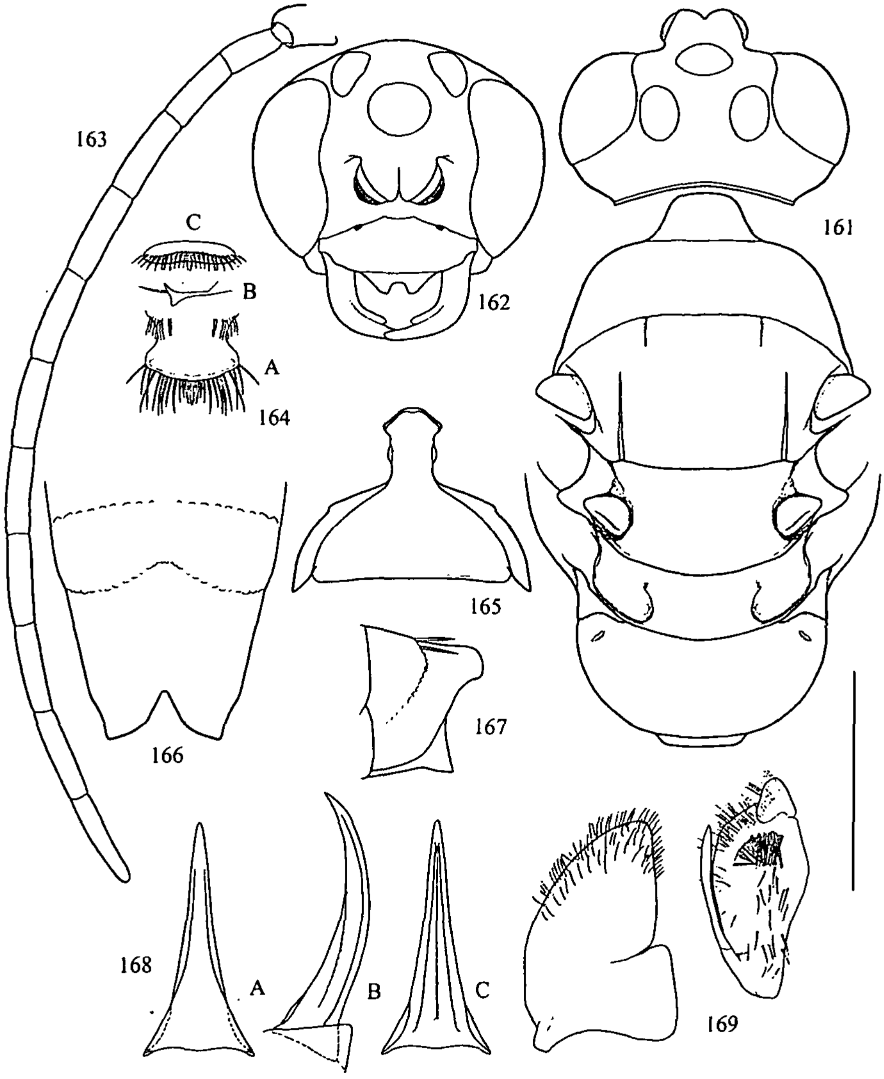
Figs. 135-146. *Iswara physostomus* nov. sp. Holotypus ♂. **135**: head, dorsal aspect; **136**: head, frontal aspect; **137**: head, lateral aspect; **138**: flagellum; **139**: mandible, lateral aspect; **140**: palps; **141**: 1st and 2nd terga, dorsal aspect; **142**: 1st and 2nd metameri, lateral aspect; **143**: 1st metamerus, ventral aspect; **144**: 7th tergum dorsal aspect; **145**: 7th tergum lateral aspect; **146**: volsella, aedeagus and gonostylus (135, 136, 137, 138, 143, 145: scale bar = 1 mm) (139, 140, 144, 146: scale bar = 0,5 mm) (141, 142: scale bar = 2 mm).



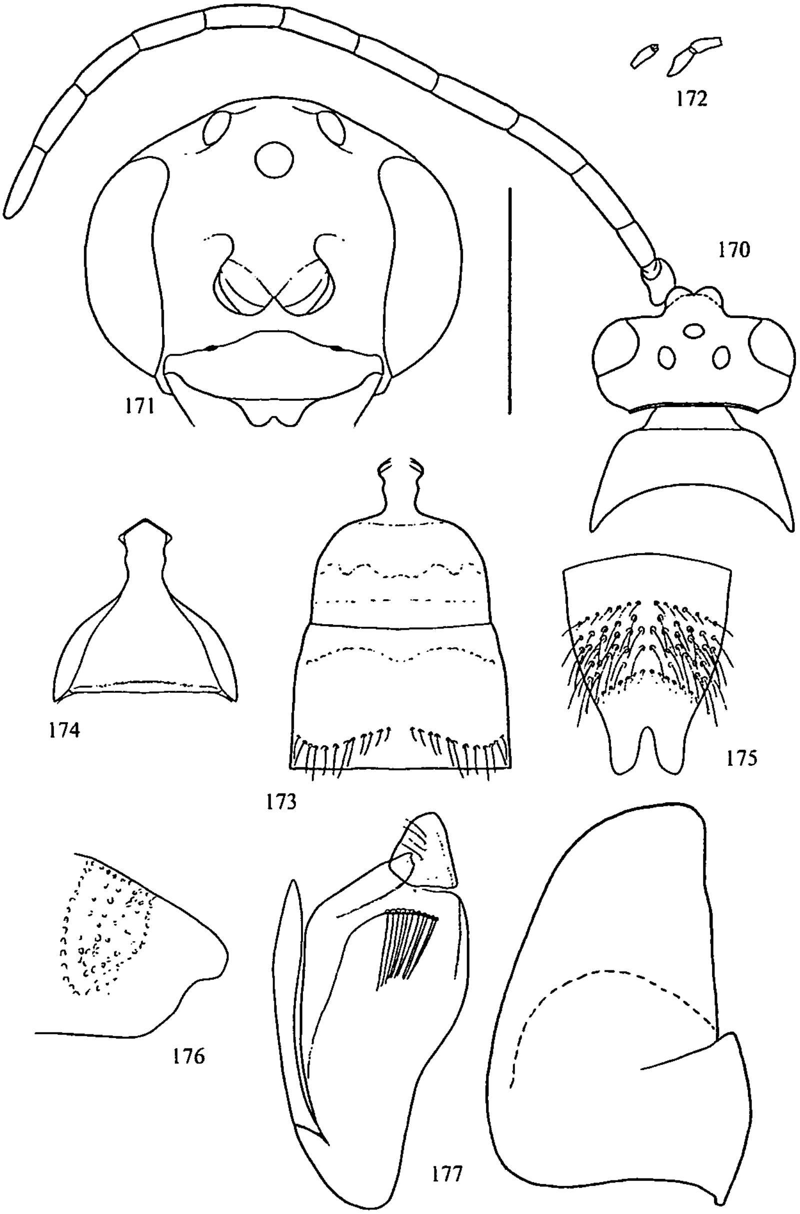
Figs 147-153. *Iswara elongatus* nov. sp. Holotypus ♂. **147**: habitus, dorsal aspect; **148**: head, frontal aspect; **149**: basal antenna; **150**: palps; **151**: 7th tergum, dorsal aspect; **152**: gonostylus; **153**: volsella and aedeagus (147, 148, 149: scale bar = 2 mm) (151: scale bar = 1 mm) (150: scale bar = 0,5 mm) (152, 153: scale bar = 0,75 mm).



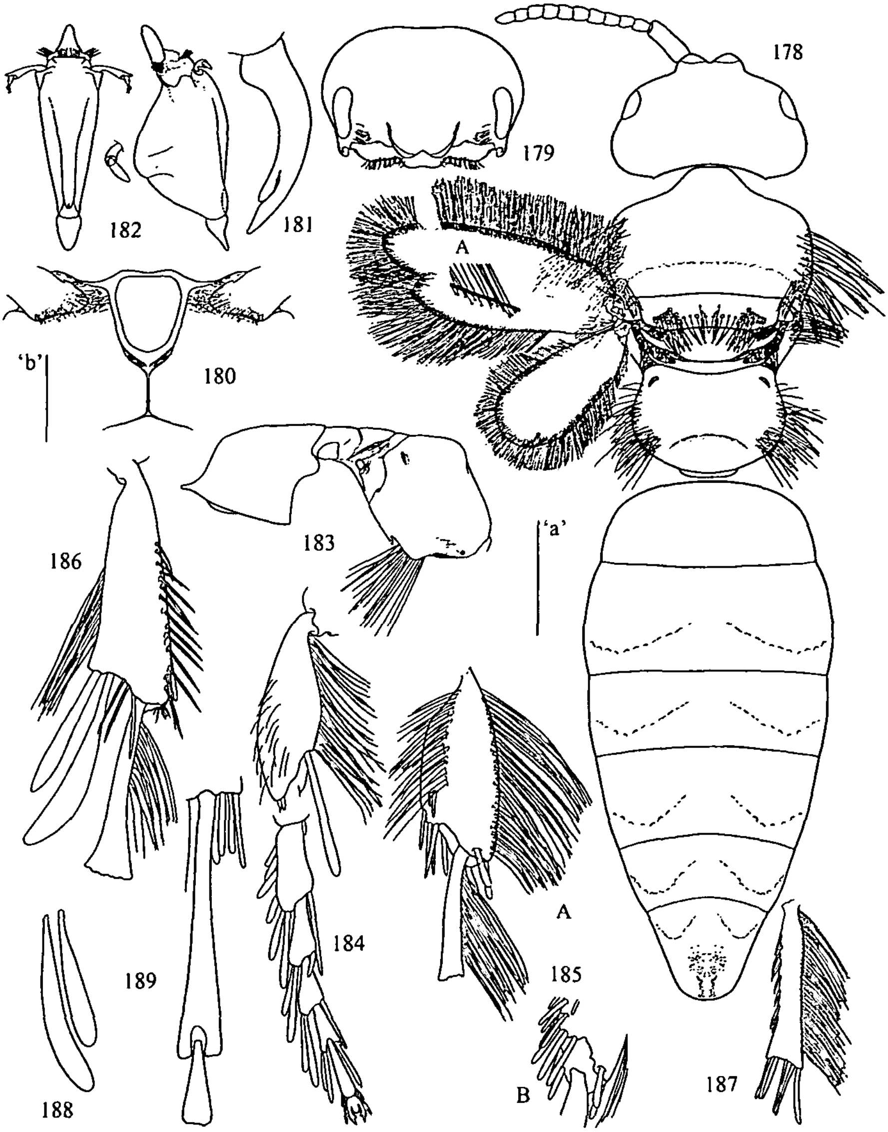
Figs 154-160. *Iswara arabicus* nov. sp. Holotypus ♂. **154**: head, dorsal aspect; **155**: head, frontal aspect; **156**: palps; **157**: pronotum, dorsal aspect; **158**: metasoma, dorsal aspect; **159**: 7th tergum, dorsal aspect; **160**: volsella, aedeagus and gonostylus (154, 155, 157, 159: scale bar = 1 mm) (158: scale bar = 1,25 mm) (156, 160: scale bar = 0,5 mm).



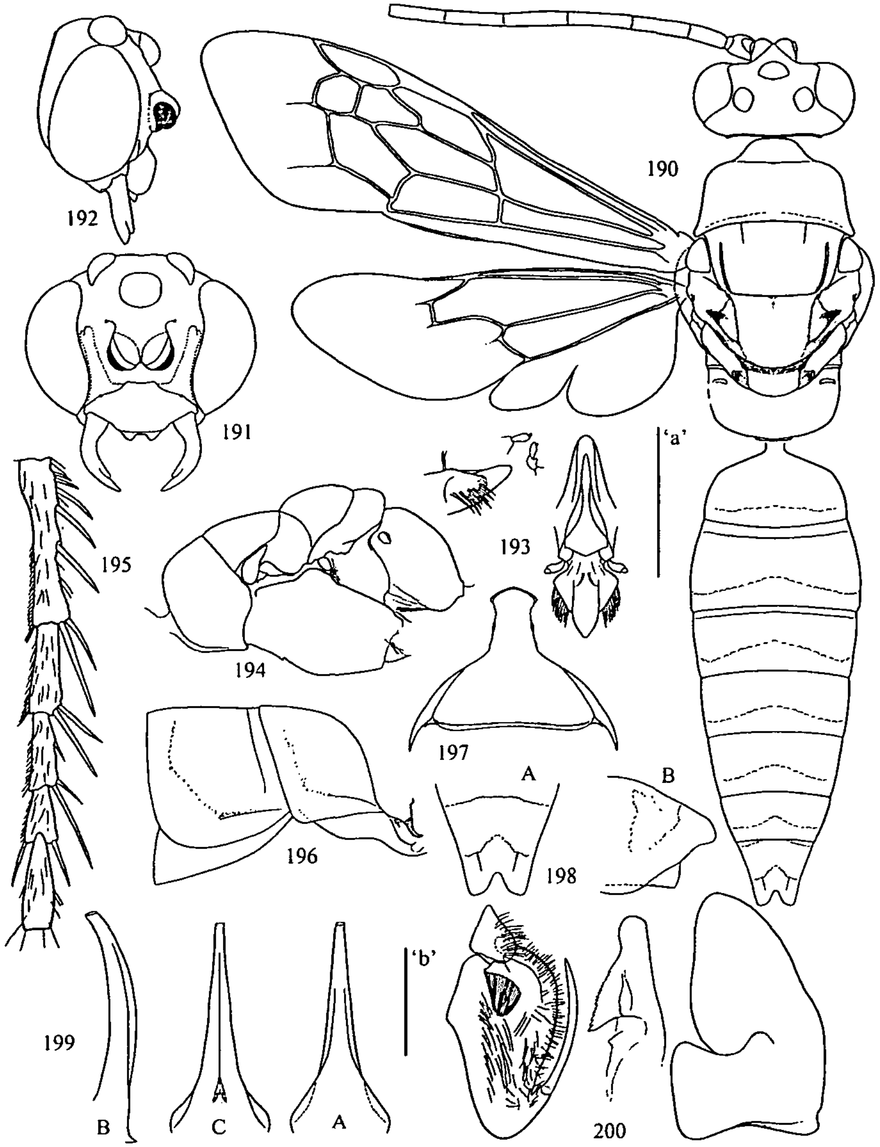
Figs 161-169. *Komarowia fassciata* (SMITH 1873) Neotypus ♂. **161**: head and mesosoma, dorsal aspect; **162**: head, frontal aspect; **163**: antenna; **164**: labrum (A = frontal; B = lateral; C = ventral); **165**: 1st metamerus, ventral; **166**: 7th tergum, dorsal aspect; **167**: last metamerus, lateral aspect; **168**: 8th sternum (A = dorsal; B = lateral; C = ventral); **169**: gonostylus, volsella (161, 162, 163, 165, 167: scale bar = 2 mm) (166: scale bar = 1 mm) (164, 168, 169: scale bar = 0,5 mm).



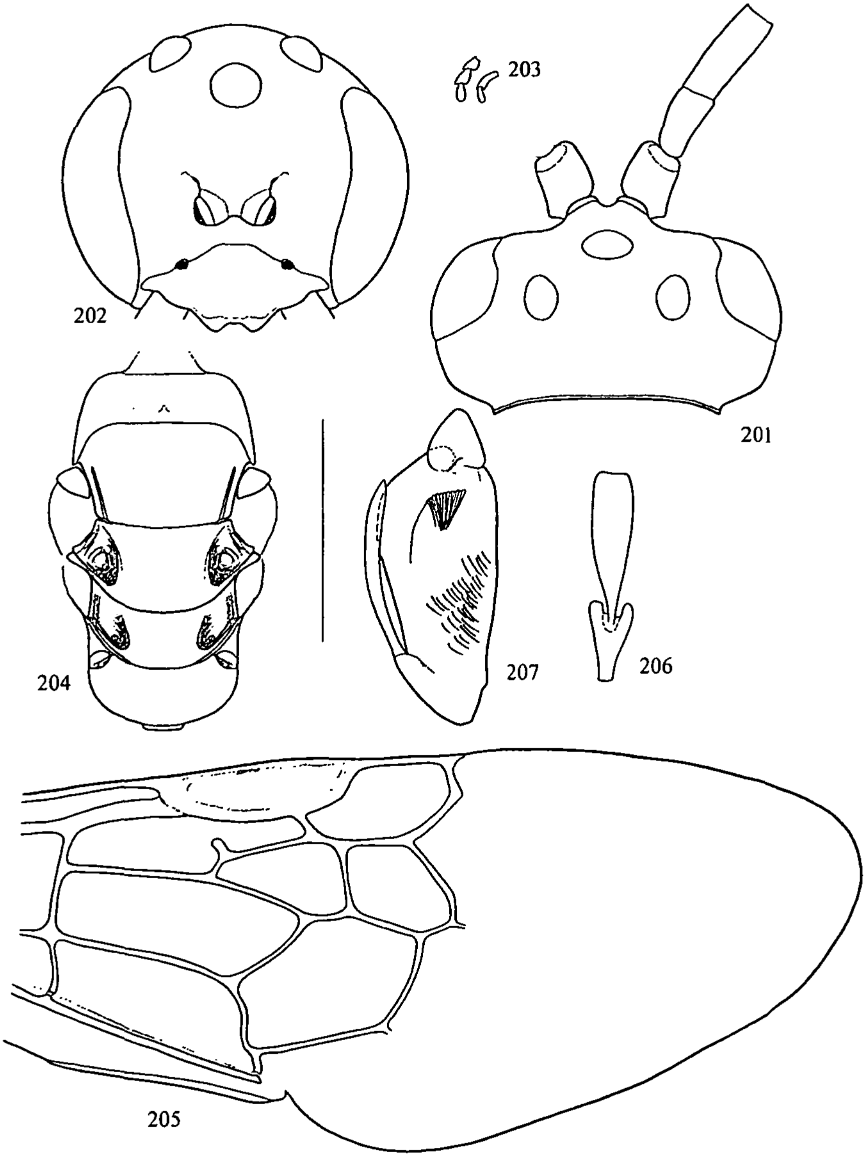
Figs 170-177. *Komarowia orientalis* (SMITH 1879) Lectotypus ♂. **170**: head, antenna and pronotum, dorsal aspect; **171**: head, frontal aspect; **172**: palps; **173**: 1st and 2nd terga, dorsal aspect; **174**: first metamerus, ventral aspect; **175**: 7th tergum, dorsal aspect; **176**: 7th tergum, lateral aspect; **177**: volsella and gonostylus (170, 173, 174: scale bar = 2 mm) (171, 175, 176 : scale bar = 1 mm) (172, 177 : scale bar = 0,5 mm).



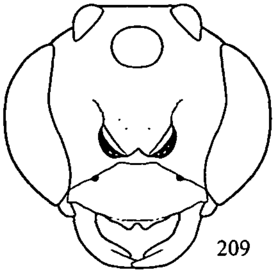
Figs. 178-189. *Komarowia tartara* (SAUSSURE 1880) ♀. **178**: habitus, dorsal aspect; **178A**: wing, particular; **179**: head, frontal aspect; **180**: head, ventral aspect; **181**: mandible; **182**: labium (dorsal and lateral aspect) and Pam; **183**: mesosoma, lateral aspect; **184**: fore tibia, inner lateral aspect) and fore tarsus (dorsal aspect); **185**: mid tibia and basal mid tarsomerus (A = antero ventral aspect; B = inner lateral aspect); **186**: hind tibia and basal tarsomerus (inner lateral aspect); **187**: basal hind tarsomerus (outer lateral aspect); **188**: hind tibial spurs; **189**: apical hind tarsomeri. (178, 179, 183: scale bar 'a' = 2 mm) (181, 184, 185, 186, 187 188: scale bar 'a' = 1 mm) (178A, 182, 189: scale bar 'a' = 0,5 mm) (180: scale bar 'b' = 1 mm).



Figs 190-200. *Komarowia tartara* (SAUSSURE 1880) ♂. **190**: habitus, dorsal aspect; **191**: head, frontal aspect; **192**: head, lateral aspect; **193**: labium (lateral and dorsal aspect) and palps; **194**: mesosoma, lateral aspect; **195**: foretarsus, dorsal aspect; **196**: 1st and 2nd metameri, lateral aspect; **197**: 1st metamerus, ventral aspect; **198A**: 7th tergum (dorsal aspect); **198B** 7th metamerus (lateral aspect); **199**: 8th sternum (A = dorsal; B = lateral; C = ventral aspect); **200**: volsella, aedeagus, gonostylus (190, 194: scale bar 'b' = 2 mm) (191, 192, 196, 197, 198: scale bar 'a' = 1 mm) (193, 195: scale bar 'b' = 0,5 mm) (199, 200: scale bar 'a' = 0,5 mm).



Figs. 201-207. *Komarowia timurella* (SAUSSURE 1880) ♂. **201**: head, dorsal aspect; **202**: head, frontal aspect; **203**: palps; **204**: mesosoma, dorsal aspect; **205**: apical fore wing; **206**: apical hind tarsomeri; **207**: volsella (201, 202, 205: scale bar = 1 mm) (204: scale bar = 2 mm) (203, 206, 207: scale bar = 0,5 mm).



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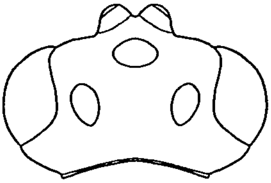

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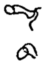

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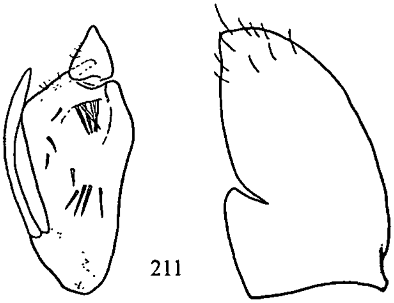

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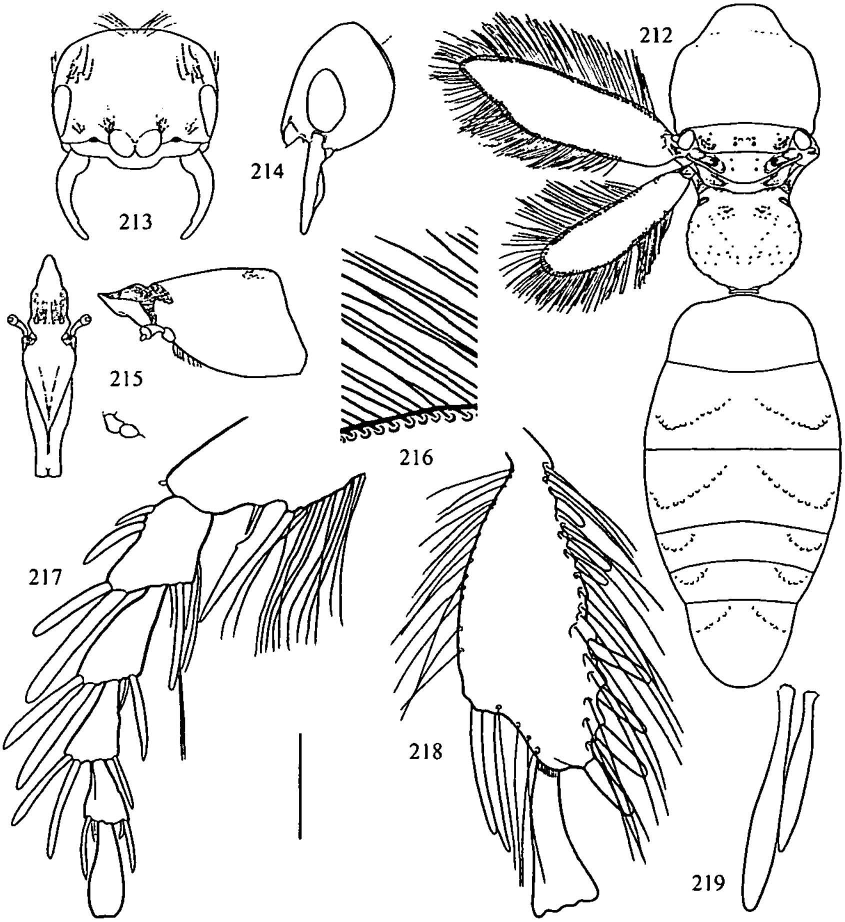
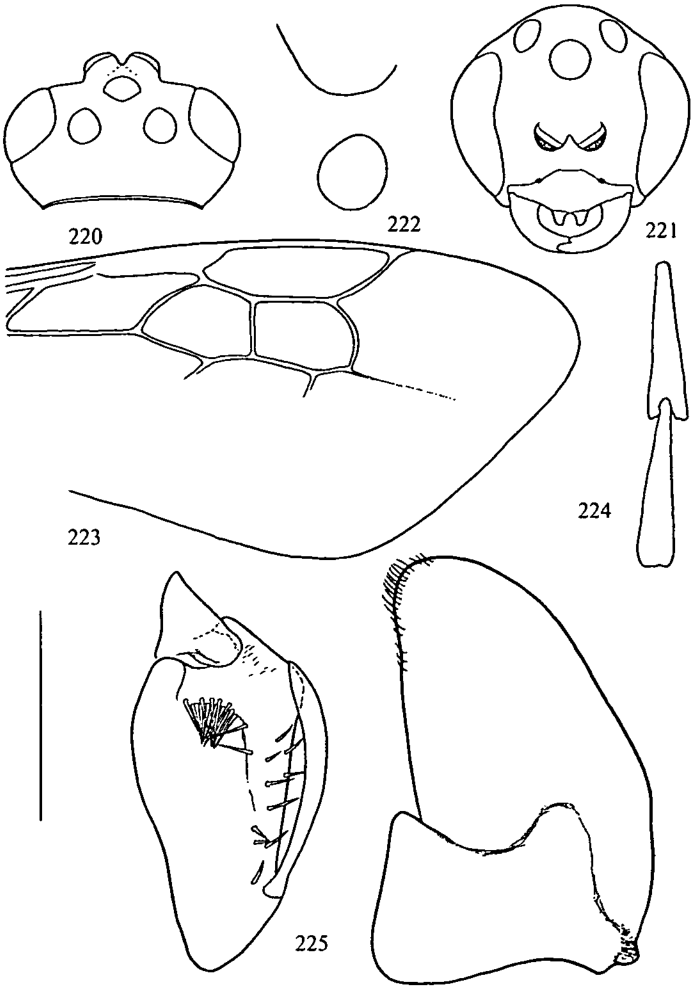
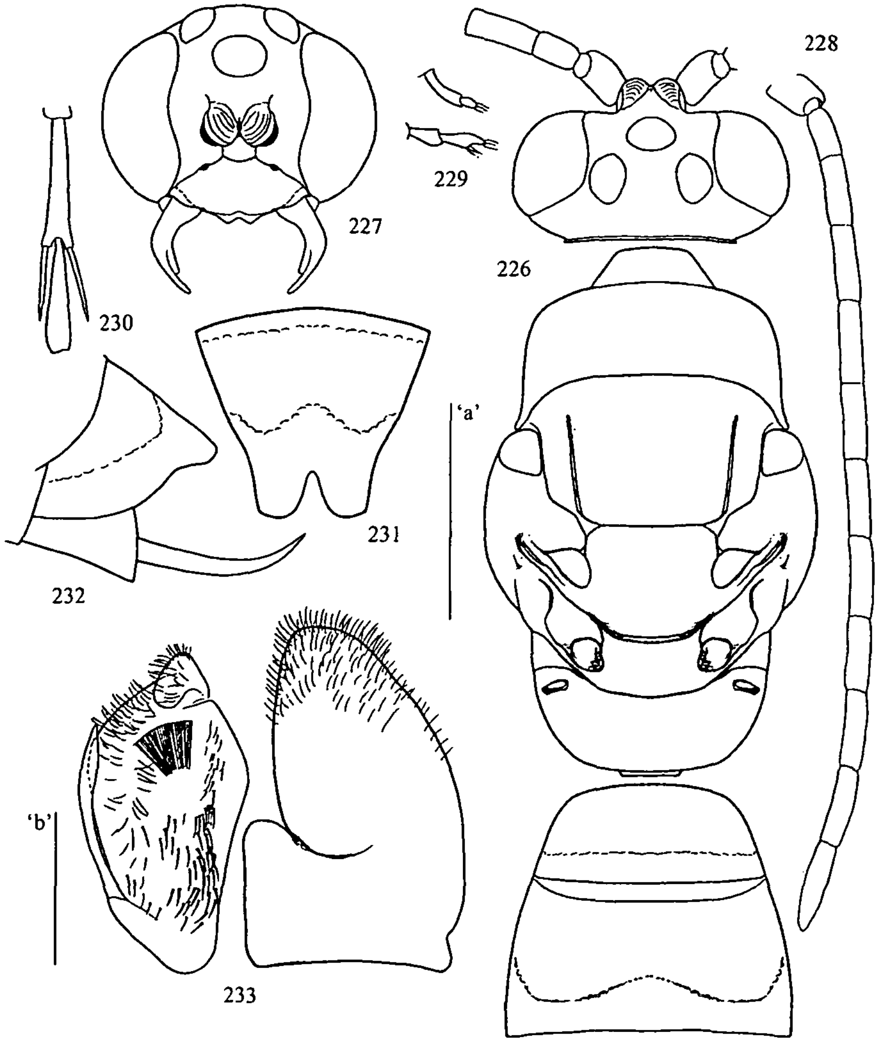
Figs 208-211. *Komarowia immatura* (MORAWITZ 1890) ♂. **208**: head, dorsal aspect; **209**: head, frontal aspect; **210**: palps; **211**: volsella and gonostylus.



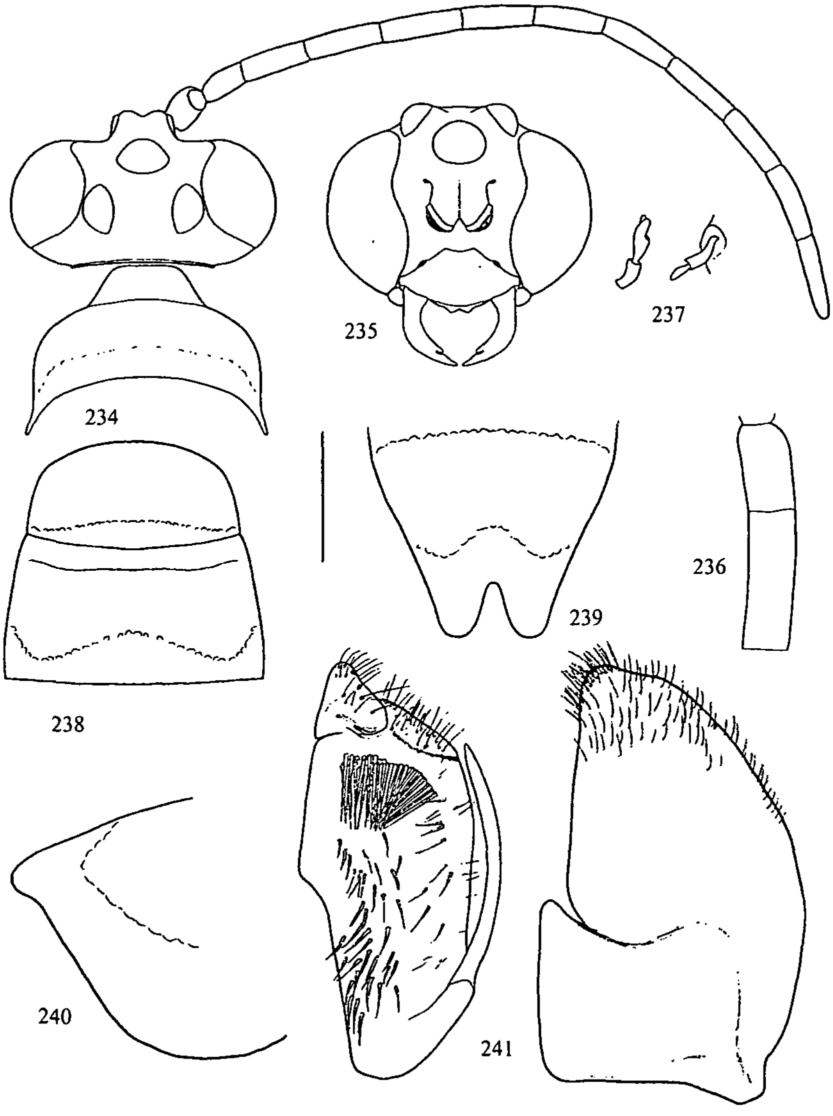
Figs. 212-219. *Komarowia mongolina* (GUIGLIA 1965) Holotypus ♀. **212**: mesosoma and metasoma, dorsal aspect; **213**: head, frontal aspect; **214**: head, lateral aspect; **215**: labium (dorsal and lateral aspect) and Pam; **216** wing, particular; **217** apical fore tibia, inner lateral aspect, and tarsus, dorsal aspect; **218**: hind tibia and basal tarsomerus, inner lateral aspect); **219**: Hind tibial spurs (212, 213, 214: scale bar = 1 mm) (215: scale bar = 0,5 mm) (215, 217, 218, 219: scale bar = 0,25 mm).



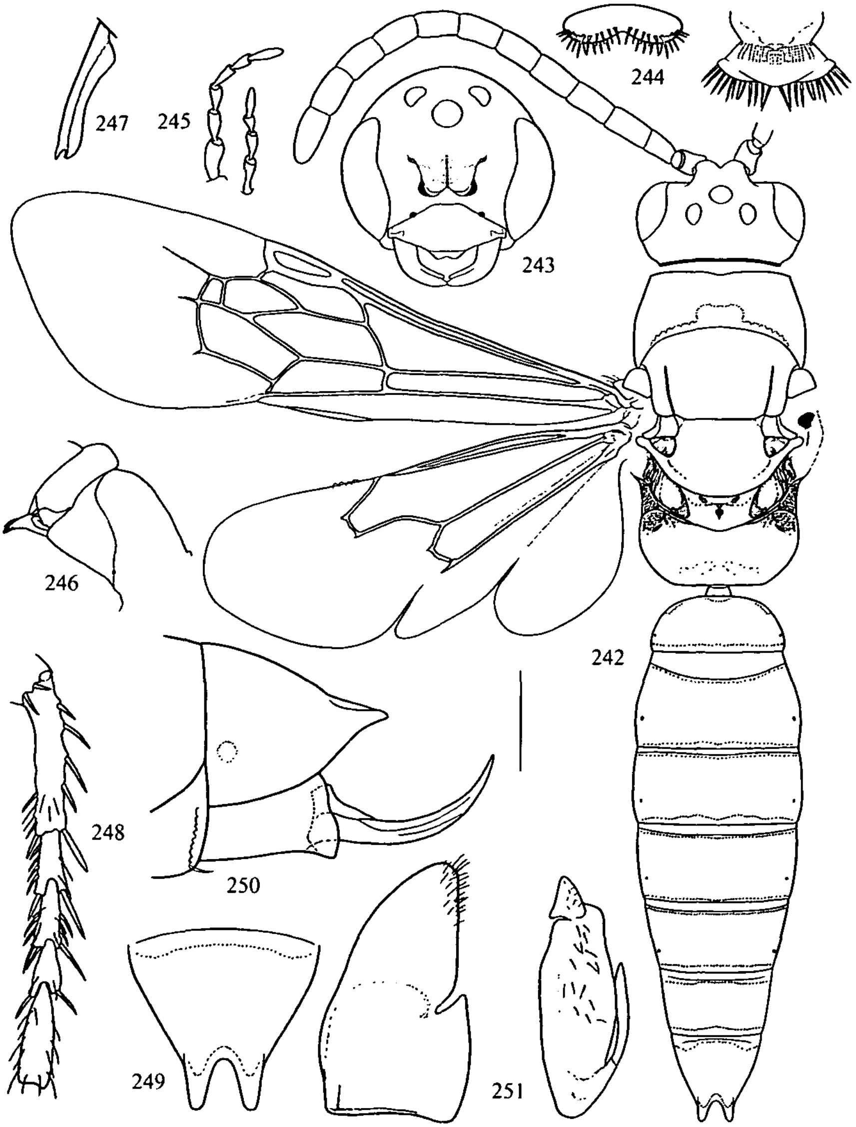
Figs 220-225. *Komarowia mongolina* (GUIGLIA 1965) ♂. **220**: head, dorsal aspect; **221**: head, frontal aspect; **222**: ol and eye border; **223**: apical fore wing; **224**: apical hind tarsomeri; **225**: volsella and gonostylus (220, 221, 223: scale bar = 2 mm) (222,224, 225: scale bar = 0,5 mm).



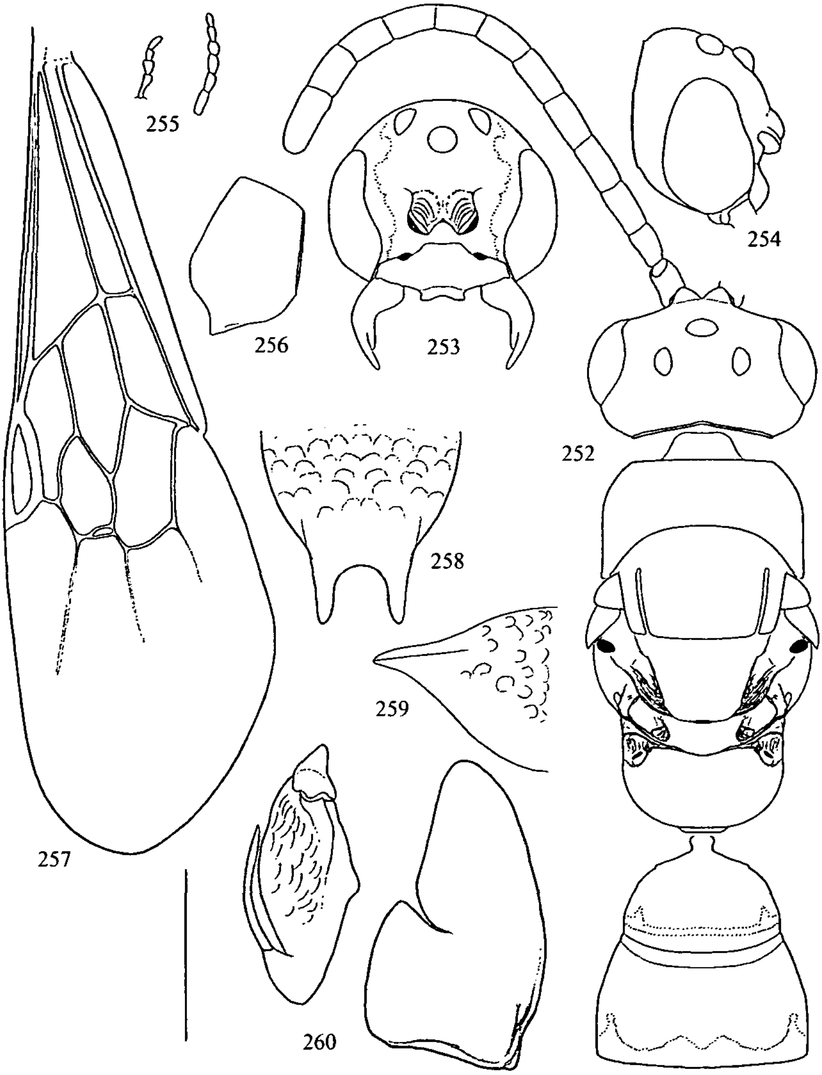
Figs. 226-233. *Komarowia meridiana* nov. sp. Holotypus ♂. **226**: head, mesosoma and basal metameri, dorsal aspect; **227**: head, frontal aspect; **228**: antenna; **229**: palps; **230**: apical hind tarsomeri; **231**: 7th tergum, dorsal aspect; **232**: apical metameri, lateral aspect; **233**: volsella and gonostylus (226, 227, 228: scale bar 'a' = 2 mm) (229, 230: scale bar 'a' = 0,5 mm) (231, 232: scale bar 'a' = 1 mm) (233: scale bar 'b' = 0.5 mm).



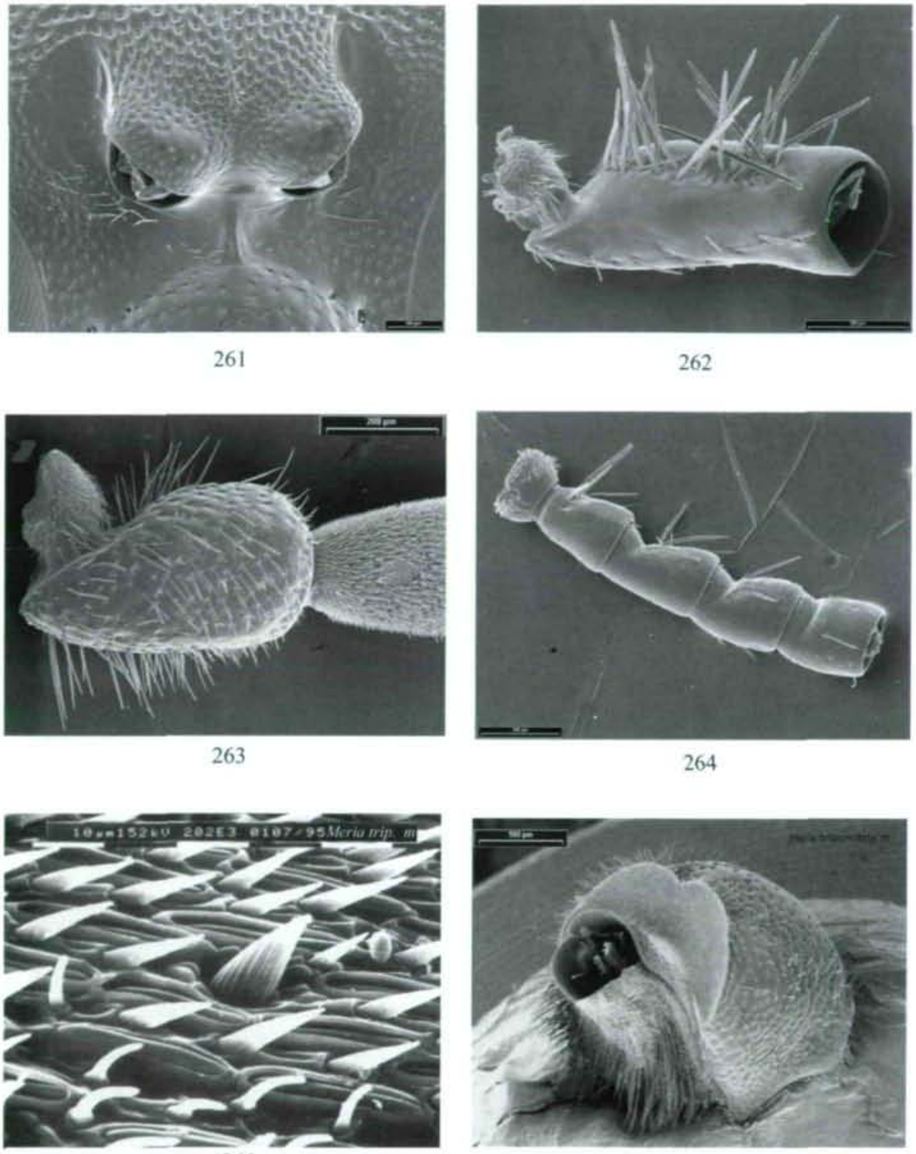
Figs 234-241. *Komarowia concolor* nov. sp. Holotypus ♂. **234**: head, antenna and pronotum, dorsal aspect; **235**: head, frontal aspect; **236**: basal flagellomeri; **237**: palps; **238**: 1st and 2nd terga, dorsal aspecrt; **239**: 7th tergum, dorsal aspect; **240**: 7th tergum, lateral aspect; **241**: volsella and gonostylus (234, 235, 238: scale bar = 1 mm) (236, 237, 239, 240, 241: scale bar = 0,5 mm).



Figs 242-251. *Lamprowara leucothorax* nov. sp. Holotypus ♂. **242**: habitus, dorsal aspect; **243**: head, frontal aspect; **244**: labrum (A = frontal; B = ventral aspect; **245**: palps; **246**: apical mesosoma, lateral aspect; **247**: fore tibial spur; **248**: fore tarsus, dorsal aspect; **249**: 7th tergum, dorsal aspect; **250**: last metamerus and anal hook, lateral aspect; **251**: gonostylus and volsella (242, 246: scale bar = 1 mm) (243: scale bar = 1,25 mm) (244,245, 247, 248, 249, 250, 251: scale bar = 0,5 mm).



Figs 252-260. *Lamprowara hameri* nov. sp. Holotypus ♂. **252**: head, antenna and basal metameri, dorsal aspect; **253**: head, frontal aspect; **254**: head, lateral aspect; **255**: palps; **256**: pronotum, lateral aspect; **257**: fore wing; **258**: 7th tergum, dorsal aspect; **259**: 7th tergum, lateral aspect; **260**: volsella and gonostylus (252, 253, 254, 256, 257: scale bar = 1 mm) (255, 258, 259, 260 . scale bar = 0,5 mm)



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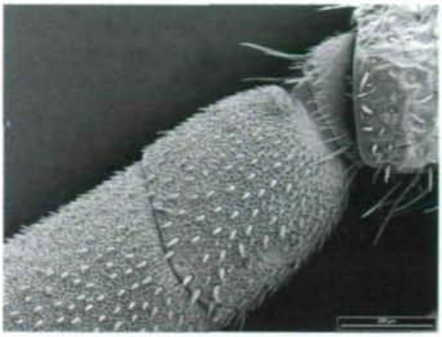
265 266

Figs 261-266. **261**: *Meria tripunctata* ♂: head, frontal view. **262**: *Meria tripunctata* ♀: scape. **263**: *Meria tripunctata* ♂: scape and basal flagellum, frontal aspect. **264**: *Meria tripunctata* ♀: pedicel and basal flagellomeri. **265**: *Meria tripunctata* ♂: seventh flagellomerus, sub ventral aspect. **266**: *Meria tripunctata* ♂: pronotal plate.



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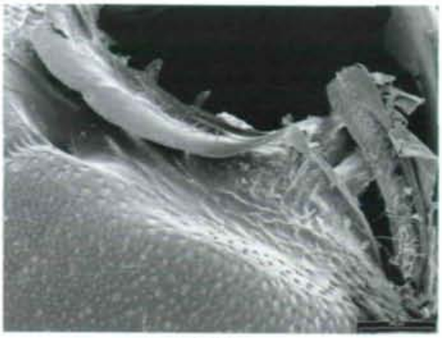

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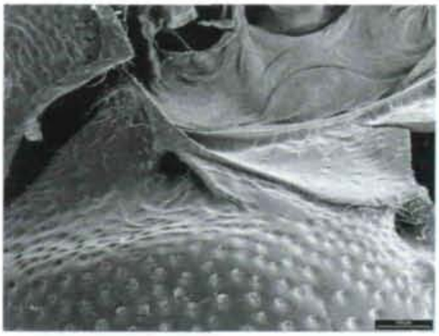

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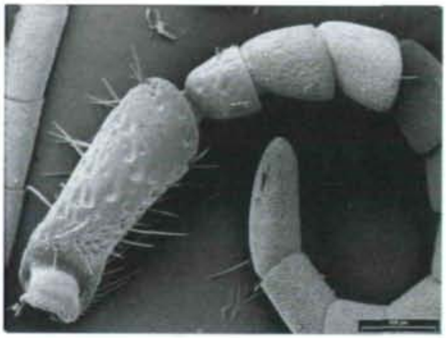

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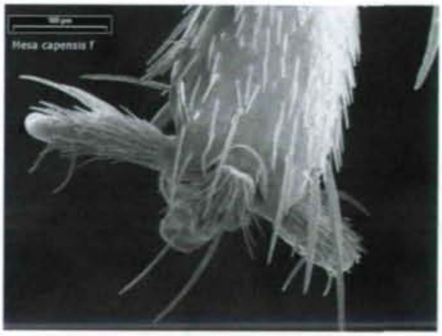

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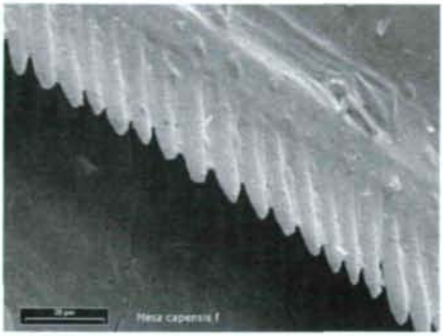
Figs 267-272. 267: *Austromyzinum pyxidatum* ♂: scape, pedicel and basal flagellomerus. **268**: *Myzinum quinquecinctum* ♂: mesepisternal fore border, ventro-lateral aspect. **269**: *Meria tripunctata* ♂: mesepisternal fore border, ventro-lateral aspect. **270**: *Mesa capensis* ♀: antenna, dorsal aspect. **271**: *Mesa capensis* ♀: fifth flagellomere, particular. **272**: *Mesa capensis* ♀: apical tarsomere.



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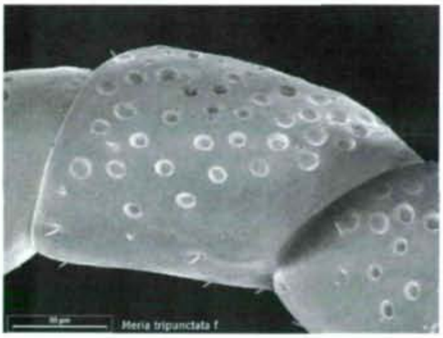

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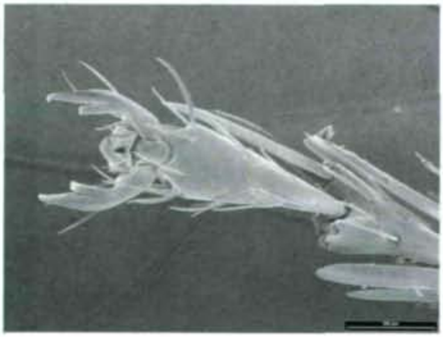

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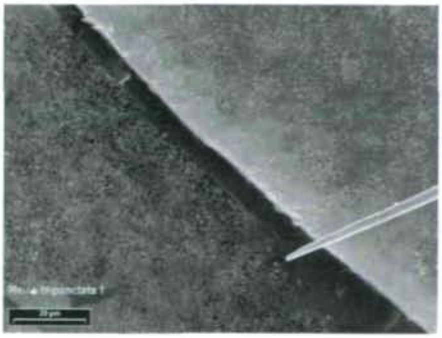

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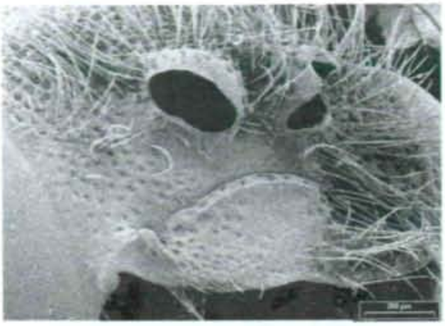
Fig. 273-277. 273: *Mesa capensis* ♀: third tergum, apical border. **274**: *Mesa attica* ♂: head, ventral aspect. **275**: *Meria tripunctata* ♀: 7th flagellomere. **276**: *Meria tripunctata* ♀: foretibial spur and fore basitarsal notch. **277**: *Meria tripunctata* ♀: apical tarsomere. **278**: *Meria tripunctata* ♀: third tergum, apical border.



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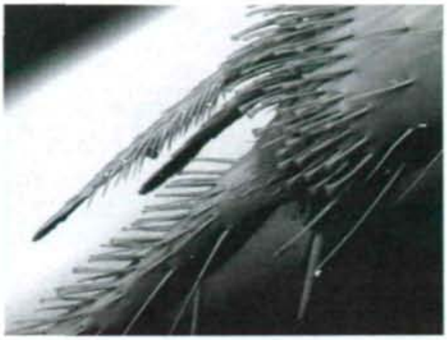

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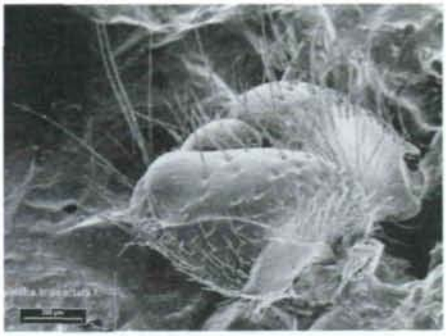

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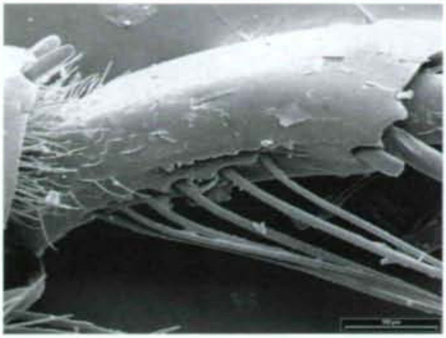
Fig. 279-283. **279**: *Braunsomeria* sp. ♂: head, latero-frontal aspect. **280**: *Braunsomeria* sp. ♂: Hind tibial spurs. **281**: *Meria tripunctata* ♂: Hind tibial spurs and basal hind tarsomere. **282**: *Meria tripunctata* ♀: fore coxa, inner, lateral aspect. **283**: *Meria tripunctata* ♀: first tergum and petiole, latertal-frontal. **284**: *Poecilotiphia rousseli* ♀: fore tarsus.



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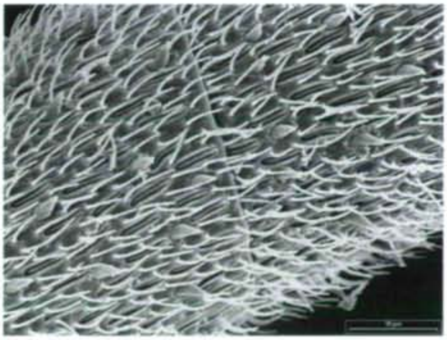

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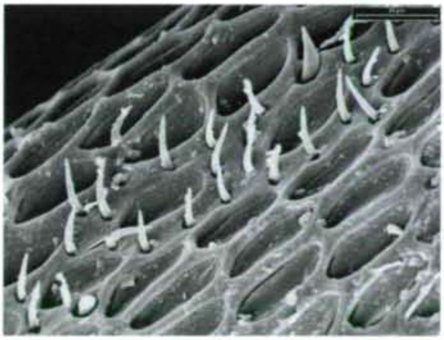

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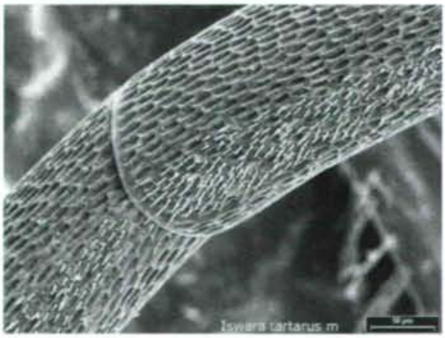

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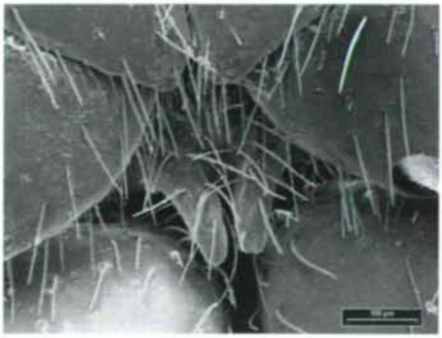

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Fig. 285-290. **285**: *Komarowia tartara* ♀: basal tarsomere, sub ventral aspect. **286**: *Poecilotiphia mogadorensis* ♂: seventh flagellomere, particular. **287**: *Myzinella lybica* ♂: seventh/eight flagellomeres. **288**: *Tamerlanellas radialis* ♂: tenth flagellomere. **289**: *Komarowia tartara* ♂: ninth and tenth flagellomeres. **290**: *Komarowia tartara* ♂: metasternum.