Generic synopsis of Myziniidae (Hymenoptera: Scolioida)

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Abstract – The classification of Myziniidae is reviewed and a key to genera is presented. Three new subfamilies (Iswarinae, Meriinae, Mesinae) and 13 new tribes: (Hylomesini, IUoswiini, Iswarini, Komarowiini, Macromeriini, Merini, Mesini, Myziniellini, Panmerini, Poeclitrophini, Warayoini, Weerpagina, Yooloini) are described, as are 23 new genera (Arapatka, Cocovasna, Ekepirka, Fikoplesa, Fongiba, Fukpokta, Gomordula, Hahiya, Illoswia, Ivazuga, Jurja, Keyovaska, Nurmiya, Nyuka, Taywala, Tolaya, Tokoparta, Upaterka, Warayoa, Weerpaga, Xiunka, Yooloa, Zezelda) and 3 new species (Jurja limpida, Weerpaga udomanca, Yooloa vircola). A replacement name, Warayoa citreosigna, is proposed for Braunsomeria quadraticeps TURNER, 1912 male only. Neotypes are selected and redescribed for Myzine arcuata and M. spinosa. With 89 figures.

INTRODUCTION

The family Myziniidae, as conceived here, is differentiated from Tiphiidae, with which it was united once by PATE (1947), by the following apomorphous character states: 1. Antennae apparently 12-segmented in male and 11-segmented in female, since the pedicel is invaginated into the apex of scape. 2. Antennal toruli covered by (or entirely removed from plane of front) the strongly developed antennal tubercles. 3. Propodeal spiracles situated close to base of the unbordered propodeal disc, perpendicular to metanoto-propodeal suture. 4. Prepectal carina of mesopleuron not fully developed in either sex, although it is often traceable through a delicate ridge. 5. Scape of male twice longer ventrally than dorsally. 6. Marginal cell of female forewing, when developed, removed from the costa. 7. Female hind tibia without sensorial pit, instead the longer spur modified into a calcar. For the corresponding character states in Tiphiidae see ARGAMAN & ÖZBEK (1992). KROMBEIN (1937) noticed the subsequent separation of Myziniidae from Brachycistidinae (Tiphiidae). Some representatives of Thynnidae, however, share the same reduced number of antennal segments as it occurs in Myziniidae. Separation of Myziniidae from Thynnidae will be discussed elsewhere.

The supraspecific nomenclature of myziniids has its own intrinsic problems. Generic-group names of RAFINESQUE were considered lapses or emendations for a long time. KROMBEIN (1937), however, designated Tipha tripunctata ROSSI, 1790 as type of Meriana RAFINESQUE, 1815, thus validated it. KROMBEIN’s intention was to sink Meriana, making it isogenotypic and synonymous with Meria ILLIGER, 1807. At that time, latreillei FABRICIUS, 1804 was considered a junior synonym of tripunctata, and the latter, due to the synonymy, a type of the genus Meria. As a result of the present study, I do not consider latreillei and tripunctata to be synonymous or congeneric. Hence the type of Meria is not tripunctata but latreillei by monotypy, Meriana becomes a valid genus with tripunctata as type. Moreover, in virtue of KROMBEIN’s (1937) validation, other names proposed by RAFINESQUE: Tiphiana and Myzina (latter with its first included species, hispanica, by SPINOLA in 1843, as type), are regarded to be valid as well. The name Meira of CAMERON (1902), in combination with the species quadrimaculata CAMERON, 1902, but without an explicit indication that he intended to propose a new generic-group name, was surely an ordinary lapse frequently found in the notes of that author, which must be rejected.
The most tangled problem of Myzinidae, however, arises from the difficulty, and in some instances, the impossibility of accurate association of sexes. While fully winged males are collected on flowers, blossoms and honeydew, the females are frequently captured on the soil surface, where they search for hosts: darkling ground beetle larvae (Tenebrionidae) or white grubs (Scarabaeidae). Most of the earlier investigators described the sexes separately due to their accentuated sexual dimorphism. There were no attempts to find correlations. The main purpose of the present study was to delimit the genera and to facilitate the association of sexes in the future. In the majority of the cases I have achieved this task, but some genera remain represented only by males. Their corresponding females could not be reliably identified confidently, or these females, living in some cryptic biotopes, have not yet been collected at all. In some instances, the association is tentative, and although highly probable, may prove to be wrong. The male genitalia as a whole, share characteristics so slightly in the Palaearctic Region, that it may be barely useful for separation of the taxa on generic level. A considerable amount of new, taxonomically reliable features were discovered and utilized in the present key. Two new characters are used here for the first time and therefore require a proper terminology: tignar sulcus is the delicate furrow which ventrally borders the lateral pronotal lobe (when complete) from the collar down and, after a curve, up to the pretegular edge of pronotum; colpus is a deep, pocket-like invagination of the gradulus of the abdominal sterna or terga, with the tegument actually cut in two separate layers.

Within the tribe Meriini, one may encounter some difficulties of species identification. This is due to the fact that some males share resemblance with another, not closely related ones. For instance, a lot of males with a spine extending downward the tignar sulcus, were collected together with the females of Pseudomeria graeca SAUNDERS, at the same time and place: Trajan Valley Nature Reserve, Dobrudja, Romania, in June 1978, by the author and his wife. Although a mating pair was not captured, their conspecificity is highly probable. The second kind of males, with the pronotal spine not nearly reaching the level of tignar sulcus ventrally, were sporadically collected in Austria, Greece, Romania, Russia and Switzerland. This male, already known as Meria geniculata BRULLÉ, differs in no other essential feature except the pronotal spine, from the presumed male of Pseudomeria and easily confused with it. Actually, the female of geniculata is sanguinicolli MORAWITZ, 1899, with which it was collected together at once in Sarepta, Russia.

In the present study, a key to genera of Myzinidae is presented (Part I). Only two genera, Austromyzinum and Cleftomyzinum are omitted because of their scarcity in collections, and because they were accurately described by BROWN (1985). For the sake of brevity, the new genera are only concisely described in the key. All the new names proposed are arbitrary combinations of letters, gender feminine. Part II deals with five species. Three are described as new. For two more species of FISCHER DE WALDHEIM, whose types are considered to be lost, neotypes are designated and they are redescribed from the material deposited in the Department of Zoology of the Hungarian Natural History Museum, Budapest.

**KEY TO GENERA OF MYZINIDAE**

1 (18) Abdominal petiole constituted from both tergum and sternum (Figs 2, 5); first latero-terga reach the point of abdominal articulation. Hypostoma broadly intersect occipital carina medio-ventrally. Male acetabular carina separated from disc of mesosternum by a distance comparable to width of fore coxa. Both sexes macropterous. Diurnal forms. Parasitic on larvae of Scarabaeidae. New World. Subfamily Myzininae.

2 (3) Male fore coxa ending in a triangularly acute and densely pubescent spine (Fig. 1). Female terga 2-4 with gradulus (Fig. 2), viz. sliding surface delimited by an acute ridge from tergal disc. – Neotropic Region. Type-species: Myzine flavopicta SMITH, 1855

**Cocovasna** gen. n.
3 (2) Male fore coxa simple. Female terga 2-3 only with gradulus.

4 (5) Male abdomen broadly sessile (Fig. 6); first tergum smooth, short and bulky; surface of first tergum rather densely pubescent throughout, without carinae, pits, foveolae or prominent ridges (Figs 5-6). Female head on outer eye orbit with only few, randomly scattered large punctures.

5 (6) Male mid coxa with a blunt longitudinal keel on inner edge ending in a more or less flat truncation, surface of coxa covered with a brush of long and erect pubescence (Fig. 4). Female pygidial area wholly covered with tidy longitudinal costulae (Fig. 3). – Nearctic and Neotropic Regions. Type-species: Scolia sexcincta Fabricius, 1775

6 (5) Male mid coxa plump on inner edge, pubescence short and scarce (Fig. 8). Female pygidial area with reticulate network of irregular rugosities, except a broad apical stripe shagreened (Fig. 7). – Neotropic Region. Type-species: Myzina lateralis Cresson, 1865

Gonordula gen. n.

7 (4) Male abdomen long petiolate (Fig. 22); first tergum provided with glabrous depressi-
ons, pits or foveolae, very often flanked by prominent ridges or carinae (Figs 21-22). Female outer eye orbit with a rather compact row of minute setigerous punctures.

8 (9) Male mid coxa, in ventral view (Fig. 10), produced on inner side in a dorso-ventrally flattened, semicircular and sharp keel or lobe. Female pronotal declivity without dense patch of micropunctures mesally; medio-dorsal ridge of mandible developed on basal half or less (Fig. 9). – Nearctic Region. Type-species: *Myzine frontalis* CRESSON, 1875

**Keyovaska gen. n.**

9 (8) Male mid coxa straight on inner side, not produced (Fig. 20). Female pronotal declivity provided with a rather dense patch of micropunctures mesally; medio-dorsal ridge of mandible developed up to apical third or more (Fig. 13).

10 (11) Male terga 2-6 provided with a deep colpus, viz. a pocket-like invagination; sterna 3-4 with a lateral gradulus (Fig. 14). Female lateral propodeum smooth, polished and shining mirror-like, micropunctate on sides, with no trace of costulae; tignar sulcus separated from lateral pronotum by a sharp ridge. – Nearctic Region. Type-species: *Tiphia namea* FABRICIUS, 1805

**Plesia JURINE, 1807**

11 (10) Male terga without colpus; sterna with no gradulus. Female lateral propodeum obliquely costulate throughout; tignar sulcus separated from lateral pronotum by a blunt ridge.

12 (13) Male mid coxa, on apex of its inner-ventral edge, produced in an outwardly directed sharp and acute tubercle (Fig. 12). Female pygidial area irregularly rugulose or confusedly striolate, with apical stripe shagreened (cf. Fig. 7). – Nearctic and Neotropic Regions. Type-species: *Plesia sexmaculata* GUERIN, 1838

**Tokoparta gen. n.**

13 (12) Male mid coxa on apex of its inner-ventral edge not produced (Fig 20). Female pygidial area wholly, regularly striolate lengthwise (cf. Fig. 3).

14 (15) Male trochanter of hind leg, on ventral aspect, straight and perfectly flat, produced apically in a conspicuous tubercle (Fig. 16); frontal lobe separated from the front by an oblique, deep and polished furrow (Fig. 15). Female sterna 2-4 between apical margin and subapical row of large setigerous punctures provided with numerous transverse rows of isolated minute punctures (Fig. 17). – Neotropic Region. Type-species: *Myzine elegans* BURMEISTER, 1876

**Fikoplesa gen. n.**

15 (14) Male trochanter of hind leg, on ventral aspect, globular and arcuate, inconspicuously produced apically (Fig. 23); frontal lobe continuous to front (Fig. 19). Female sterna 2-4 between apical margin and subapical row of large punctures with only one row of minute, transversely coalescent punctures (Fig. 18).

16 (17) Mesoscutal notauli transversely costulate in both sexes; if sometimes weakly so in females, the prespiracular area of propodeal disc always delicately aciculate. – Nearctic and Neotropic Regions. Type-species: *Tiphia maculata* FABRICIUS, 1793

**Myzinum LATREILLE, 1803**

17 (16) Male unknown; female mesoscutal notauli smooth, without transverse costulae; longitudinal carinules of metapleuron continuous dorsally, covering entire prespiracular area of propodeum (Fig. 11). – Neotropic Region. Type-species: *Myzine robusta* BURMEISTER, 1876

**Ekepirka gen. n.**

18 (1) Abdominal articulation constituted only of sternum (Figs 36-37, 46, 50-51), tergum abbreviated and reduced to a ribbon-like band covering sternal petiole; in female this stripe being separated in a distinct sclerite; first lateroterga far removed from the point of articulation. Male acetabular carina wholly consolidated to mesosternum. Hypostoma never intersect occipital carina. Old World.
19 (28) Male antennal toruli vertical, confined to plane of front (Fig. 26). Female ocellar triangle close to occipital margin, separated by a distance less than postocellar line (Fig. 60). Mostly nocturnal or crepuscular, exceptionally diurnal forms. Parasitic on larvae of Tenebrionidae. Subfamily Iswarinae subfam. n.

20 (21) Claws bidentate, inner tooth shorter than, and distant from the outer tooth (Fig. 28). Male hypostoma broad, reaching laterally up to base of mandibles (Fig. 62). Female antennal tubercles separated mesally by width of a tubercle (Fig. 61). Tribe Myzinellini trib. n. Diurnal. – Palaearctic Region. Type-species: (Myzinella patrizii Guiglia, 1959) = Hemimeria lybica Masi, 1933

Myzinella Guiglia, 1959

21 (20) Claws cleft, inner tooth parallel, closely associated, and almost as long as outer tooth (Fig. 42). Male hypostoma narrow, far removed laterally from base of mandibles, by basal width of a mandible. Female antennal tubercles touching or consolidated mesally, forming a frontal lobe (Fig. 60). Tribe Iswarini trib. n.

22 (23) Hind tibial spurs exceedingly dilated and conspicuously spatulated apically in both sexes (Fig. 43), more expressively in female. Nocturnal. – Palaearctic Region. Type-species: Meria nocturna Morawitz, 1888

Magrettina Ashmead, 1901

23 (22) Hind tibial spurs simple, parallel-sided or tapering to be very acute toward apex (Fig. 25).

Figs 15-28. Figs 15-17: Fikoplesa elegans Burmeister, 15 = male frontal lobe lateral aspect, 16 = male hind trochanter from behind, 17 = female apex of fourth sternum. – Figs 18-23: Myzinum maculatum Fabricius, 18 = female apex of fourth sternum, 19 = male frontal lobe lateral aspect, 20 = male mid coxa, 21 = male first abdominal segment lateral, 22 = male first tergum dorsal, 23 = male hind trochanter from behind. – Fig. 24: Nyuka picticollis Morawitz, female pygidal area. – Fig. 25: Iswara tartara Saussure, male mid tibial spurs. – Fig. 26: Iswara mongolina Guiglia, male head. – Fig. 27: Illoswia braunsi Turner, male mid coxa inner side. – Fig. 28: Myzinella lybica Masi, male claw
24 (25) Male clypeus deeply emarginate and sharply bituberculate apically (Fig. 26). Female hind tibia as long as, and about as wide as hind femur. Nocturnal. – Palaearctic and Oriental Regions. Type-species: *Iswara luteus* WESTWOOD, 1850

*Iswara* WESTWOOD, 1850

25 (24) Male clypeus transversely truncate and perfectly straight apically (Fig. 57, 59). Female hind tibia, where known, twice as long as, and also about twice as wide as hind femur (Fig. 58).

26 (27) Last tarsal segment of hind leg conspicuously shorter than penultimate one in both sexes. Male forewing with marginal cell and three submarginal cells enclosed by sclerotized veins. Putative female with monstrously inflated hind tibia (Fig. 58). Crepuscular. – Palaearctic Region. Type-species: *Milluta chobauti* ANDRE, 1898

*Milluta* ANDRE, 1898

27 (26) Last tarsal segment of male hind leg very much longer than penultimate one. Forewing without marginal cell and with only an enclosed submarginal cell. Female unknown. Diurnal. (Fig. 59). – Afrotropical Region. Type-species: *Myzine stigma* TURNER, 1912

*Zezelda* gen. n.

28 (19) Male antennal toruli horizontal, confined to ventral face of the projecting frontal lobe or pair of tubercles (Figs 32, 34-35). Female with ocellar triangle removed from occipital margin by a distance always greater than postocellar line (Fig. 29).

29 (38) Male submandibular triangle well developed, broadly polished and shining, arcuately directed to, and reaches sideward base of mandibles (Fig. 48). Marginal cell of female forewing complete and enclosed (Fig. 29). Diurnal. Subfamily *Mesinae* subfam. n.

30 (31) First tergum with sharp transverse ridge developed between anterior declivity and dorsal disc in both sexes (Fig. 29). Tribe *Hylomesini* trib. n. Parasitic on wood-borer Cerambycidae larvae. – Palaearctic, Oriental and Afrotropical Regions. Type-species: *Myzine tricolor* SMITH, 1858

*Hylomesa* KROMBEIN, 1968


32 (33) Female lateral propodeum polished and shining mirror-like; pygidial area sharply bordered on sides by a carina and provided medially with a blunt, V-shaped transverse ridge (Fig. 24). Male unknown. – Palaearctic Region. Type-species: *Plesia picticollis* MORAWITZ, 1890

*Nyuka* gen. n.

33 (32) Female lateral propodeum densely and regularly, obliquely costulate; pygidial area unbordered and without ridge.

34 (35) Male first tergum, beyond the petiole, 1.5-2.2 X as long as wide; with obtuse angle between declivity and dorsal disc (Fig. 50). Female metanotum transversely truncate apically (Fig. 49). – Palaearctic, Oriental and Afrotropical Regions. Type-species: *Mesa heterogamia* SAUSSURE, 1892

*Mesa* SAUSSURE, 1892

35 (34) Male first tergum, beyond the petiole, at most as long as wide; with a right angle between declivity and dorsal disc (Figs 51-52). Female metanotal disc produced backward over its apical truncation (Fig. 53).

36 (35) Male terga 2-5 excavated laterally in a deep colpus; clypeus connected directly to frontal lobe, supraclypeal triangle not developed. Female with occipital carina vanished dorsally; pygidium costulate lengthwise (Fig. 56). – Afrotropical Region. Type-species: *Costa donaldsoni* FOX, 1896

*Xilunka* gen. n.

37 (36) Male abdomen without colpus; clypeus separated from frontal lobe by a large supraclypeal triangle. Female with occipital carina complete above; pygidium sparsely
punctate basally, rugose to rugulose apically (Fig. 54). – Palaearctic Region. Type-species: *Mesa palestinella* GUIGLIA, 1963

**Taywola** gen. n.

38 (29) Male hypostoma without trace of submandibular triangle (Fig. 38). Female forewing without marginal cell (Figs 55, 80, 84, 89). Diurnal. Subfamily *Meriinae* subfam. n.

39 (50) Male hind coxa on inner ventral edge with longitudinal keel or blunt ridge always developed (Fig. 27); if blunt, and less conspicuous, then hind wing cu-a vein interstitial. Female eye, in lateral view of head, much shorter to about as long, at its maximum, as distance between eye tops and vertex crest.

40 (43) Male hind coxa with only one keel or blunt ridge situated on the inner ventral edge (Fig. 27); flagellar segments smooth, lustrous, not spinulose. Female unknown.

41 (42) Male hind coxa with a blunt, almost indistinct ridge; forewing with two submarginal cells; hind wing cu-a vein interstitial; antenna filiform, extremely long, well reach beyond middle of abdomen; inner eye orbit not emarginate within; abdominal terga not constricted at base (Fig. 36). Tribe *Warayoini* trib. n. – Afrotropical Region. Type-species: (*Braunsomeria quadraticeps* TURNER, 1912, male only) = *Waraya citreosigna* nom. n.

**Warayoa** gen. n.

42 (41) Male hind coxa with an acute keel. Forewing with three submarginal cells; hind wing cu-a vein postfurcal; antenna clavate distally, short, reach base of abdomen; inner eye orbit emarginate within; abdominal terga constricted at base; in addition, terga 3-6 with
vertical platform anteriorly, delimited from tergal disc by a ridge (Fig. 37). Tribe Illoswiini trib. n. – Afrotropical Region. Type-species: Myzine braunsi TURNER, 1912

Illoswia gen. n.

43 (40) Male hind coxa with two sharp, acute longitudinal carinules both on inner ventral and inner dorsal edge (Fig. 39); flagellar segments opaque, often strongly and randomly, sometimes delicately but always conspicuously spinulose in longitudinal rows (Fig. 65).

44 (45) Male unknown. Female with pronotum, propodeum and abdominal terga 1-4 costulate; apex of mandible with an acute lower tooth, and with a strong, grip-like upper tooth, inner border with minute serration (Fig. 47); apterous, tegulae retained. Tribe Weerpaginini trib. n. – Afrotropical Region. Type-species: Weerpaga udomanca sp. n.

Weerpaga gen. n.

44 (45) Male known. Female tegument smooth, often delicately alutaceous but never costulate; mandible without minute serration on inner border (Figs 41, 44); brachypterous or micropterous.

46 (47) Scape of male with two sharp carinules (Fig. 66); flagellar segments as long as thick (Fig. 65); tibial spur formula 1-1-2. Female unknown. Tribe Yooloinini trib. n. – Palaeartic Region. Type-species: Yooloa vircola sp. n.

Yooloa gen. n.

47 (46) Male scape without carinules; flagellar segments much longer than thick; tibial spur formula 1-2-2. Tribe Komarowiini trib. n.

49 (48) Male sterna 3-6 semicircularly impressed by an arcuate transverse furrow, terminating on each side in a rather deep colpus (Fig. 40). Female mandible bidentate apically, and with another two acute teeth on inner border (Fig. 41); wings scale-like. – Afrotropical Region. Type-species: Braunsomeria quadricapitae TURNER, 1912. (female only)

Braunsomeria TURNER, 1912

49 (48) Male sterna 3-6 with a straight transverse furrow, no colpus (Fig. 45). Female mandible bidentate, inner border smooth, edentate (Fig. 44); micropterous or brachypterous. – Palaeartic and Afrotropical Regions. (= Dermasothes MENOZZI, 1941, syn. n.). Type-species: (Komarowia victorioida Radoszkowski, 1886) = Sclerodermia ruficornis LUCAS, 1846

Komarowia Radoszkowski, 1886

50 (39) Male hind coxa also with one acute keel, but which is situated always on its inner dorsal edge. Female eye, in lateral view of head, much longer than distance between eye tops and vertex crest.

51 (52) Combined length of maxillary palpi shorter, to about half as long as hypostoma. Male clypeus 3X as wide as long. Female with conspicuously inflated hind tibia (Fig. 30); last segment of hind tarsi short, about as long as the claw (Fig. 31). Tribe Parameriini trib. n. – Palaeartic Region. Type-species: Parameria femorata GUERIN, 1837

Parameria GUERIN, 1837

52 (50) Combined length of maxillary palpi as long as hypostoma. Male clypeus less than 2X as wide as long. Female hind tibia normal; last segment of hind tarsi at least half as long as penultimate (Fig. 33).

Parameria femorata GUERIN, 1837

53 (72) Male oral cavity roughly V-shaped, its sides diverge toward base of mandibles (cf. Fig. 70); flagellum smooth; inner eye orbit not, or only shallowly emarginate within; abdomen fusiform, sterna fully, terga only on sides with subapical row of lanceolate setulae (cf. Fig. 67). Female always macropterous; forewing with only two submarginal cells: first rectangular, second large, indicated by a spurious vein (Fig. 55); inner border of mandible edentate (Fig. 71); last segment of hind tarsi always shorter than penultimate one (Fig. 33).
54 (61) Male with lateral pronotal lobe produced ventrad, mostly to almost entirely flanking the tignar sulcus in lateral view of thorax (Figs 32, 34, 35). Abdomen of female with the transverse row of large punctures on terga 3-5 confined and parallel to the apical margin (c.f. Fig. 87). Tribe

**Poecilotiophiini** trib. n.

55 (58) Male propodeum suddenly declivous with no dorsal surface medially (Figs 32, 35); frontal lobe situated perpendicularly to the plane of fronto-vertex (Figs 32, 35). Female not yet associated.

56 (57) Male anterior pronotal margin produced in a lamelliform and subhyaline gular carina, directed horizontally forward, covering most of the occiput (Fig. 32); seventh tergum with one pair of epipygial spines. – Palaearctic Region. Type-species: *Myzine aegyptiaca* GUERIN, 1837

57 (56) Male anterior pronotal margin with gular carina directed vertically upward (Fig. 35); seventh tergum with two pairs of epipygial spines (Figs 67, 68). – Palaearctic and Afrotropical Regions. Type-species: *Jurja limpida* sp. n.

58 (55) Male propodeum flattened, with dorso-median surface at least as long as metanotum; frontal lobe tilted to be in same plane with fronto-vertex and median ocellus (Fig. 34).

59 (60) Male propleuron slightly convex (Fig. 34); lateral ocelli situated behind upper top of

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**Fongiba** gen. n.

**Jurja** gen. n.

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Figs 36-47. Fig. 36: *Waraya citreosigna* nom. n., male abdomen lateral aspect. – Fig. 37: *Illoswia braunsi* TURNER, male abdomen lateral aspect. –

Figs 38-41: *Bransomertia quadraticeps* TURNER, 38 = male head ventral aspect, 39 = male hind coxa inner aspect, 40 = male fourth sternum, 41 = female head facial aspect. –

Figs 42-43: *Magrettiina nocturna* MORAWITZ, male, 42 = claw, 43 = mid tibial spurs. –

Figs 44-45: *Komarowia ruficornis* LUCAS, 44 = female head facial aspect, 45 = male fourth sternum. – Fig. 46: *Tilkaya arcuata* FISCHER DE WALDHEIM, female abdomen. –

Fig. 47: *Weerpaga udomanca* sp. n., female mandible
eyes. Female with ocellar triangle entirely placed beyond eyes. – Palaearctic, Oriental and Afrotropical Regions. Type-species: *Poecilotipha albomaculata* CAMERON, 1902

*Poecilotipha* CAMERON, 1902.

60 (59) Male propleuron developed in an extremely large, thin vertical lamella (Fig. 69), or in anteriorly flat conical tubercle, comparable to size of fore coxa; lateral ocelli on line with upper top of eyes. Female with lateral ocelli beyond, median ocellus between inner orbits. – Palaearctic and Afrotropical Regions. Type-species: *Myzina hispanica* SPINOLA, 1843

*Myzina* RAFINESQUE, 1815

61 (62) Male with lateral pronotal lobe not produced, the tignar sulcus entirely exposed in lateral view of thorax (cf. Fig. 79). Female abdomen with transverse row of large punctures on terga 3-5 bisinuate, broadly interrupted mesad, and semicircularly bent toward middle of terga (cf. Fig. 88).

Tribe

**Macromeriini** trib. n.

62 (63) Male trochanter of hind leg compressed dorso-ventrally, produced inwardly in sharp ridge, acute keel or semicircular lamella (Fig. 63). Female ocellar triangle placed beyond eyes (Fig. 64); antennal tubercles consolidated in a frontal lobe (Fig. 64); lateral propodeum costulate. – Palaearctic Region. Type-species: *Meria brevicauda* MORAWITZ, 1890

**Hahiya** gen. n.

63 (62) Male trochanter of hind leg simple, neither compressed nor produced laterad. Female ocellar triangle placed between inner orbits (cf. Fig. 76); antennal tubercles separated mesally by a furrow; lateral propodeum polished and shining mirror-like.

64 (65) Male postgenal bridge 1.8 times longer than hypostomal notch (Fig. 70); inner eye orbit entire, not emarginate within; propodeum wholly costulate. Female unknown. – Palaearctic Region. Type-species: *Dermasothes trjapitzini* GORBATOVSKY, 1979

**Ivazuga** gen. n.

65 (64) Male postgenal bridge shorter than hypostomal notch (cf. Fig. 38); inner eye orbit emarginate within; propodeum rugoso-punctate behind.

66 (67) Male eye sinus at middle of inner orbit; antennal tubercles separated by width of first flagellar segment (Fig. 83); dorsal emargination of epipygium wider than deep (Fig. 74). Female known but was not available. – Palaearctic Region. Type-species: *Meria contrastata* GUICLIA, 1963

**Nurmiya** gen. n.

67 (66) Male eye sinus in upper third of inner orbit; antennal tubercles consolidated basally (Fig. 73); dorsal emargination of epipygium deeper than wide apicly.

68 (69) Male mesopleuron with dense small punctures on upper half; flagellar segments 6-11 with longitudinal sulcus or large ovoidal pit (Fig. 72); lateral lobes of epipygium striolate. Female mesopleuron black pubescent. (Figs 73, 80). – Palaearctic, Oriental and Afrotropical Regions. Type-species: *Meria klugii* WESTWOOD, 1835

**Macromeria** SAUNDERS, 1850

69 (68) Male mesopleuron with large punctures and interspaces throughout; flagellar segments 7-11 at most with a small ovoidal sensorial pit; lateral lobes of epipygium smooth or macropunctate. Female mesopleuron, where known, with glittering white pubescence.

70 (71) Male propodeum abruptly declivous, much shorter than scutellum (Fig. 85); anterior pronotal margin often deeply incised medio-dorsally (Fig. 86); wings hyaline, vitreous or milky. Female propodeum as long dorsally as metanotum. – Palaearctic, Oriental and Afrotropical Regions. Type-species: *Myzina arabica* GUERIN, 1837

**Arapatka** gen. n.

71 (70) Male propodeum convex, much longer than scutellum (Fig. 81); anterior pronotal margin truncate, neither incised nor ridged; wings conspicuously infuscated. Female
propodeum about twice as long dorsally as metanotum. – Palaearctic Region, endemic to Sicily. Type-species: Myzine latifasciata PALMA, 1869

**Upaterka gen. n.**

72 (53) Male oral cavity U-shaped, sides parallel (cf. Fig. 38); flagellar segments spinulose (cf. Fig. 65); inner eye orbit deeply emarginate; abdomen cylindrical, with subapical rows of thin, normal hairs. Female macropterous, brachypterous (Fig. 84) or micropterous; when fully winged, forewing (Fig. 89) with three submarginal cells: first rectangular, second triangular, third large, indicated by a spurious vein; inner border of mandible with a small triangular tooth (Figs 76, 77, 78); last segment of hind tarsi always longer than penultimate. Tribe

**Meriini trib. n.**

73 (74) Male pronotal margin truncate, bordered by a blunt, low, nowhere lamelliform, densely macropunctate and pubescent ridge. Female ocellar triangle between inner orbits, well before upper top of eyes (Figs 88-89). – Afrotropical Region. Type-species: Meria semirufa GERSTAECKER, 1857

**Hemimeria SAUSSURE, 1892**

74 (73) Male pronotal margin bordered by a gular carina always lamelliform on sides (cf. Fig. 79), broadly polished and sparsely covered with small piliferous punctures, pubescence scattered. Female lateral ocelli on line with upper top of eyes (Fig. 76) or beyond it (Fig. 84).

75 (78) Male clypeus with median lobe transversely truncate and 1.5X as long as lateral lobe; antero-lateral pronotal margin with a right angle between its vertical and horizontal rami. Female mandible without medio-dorsal longitudinal keel (Fig. 78).

76 (77) Male mesopleuron with an oblique postpecta carina developed above mid coxa. Female head, thoracic dorsum and abdomen polished and shining, without microsculpture; brachypterous. – Palaearctic Region. Type-species: Tachus staphylinus JURINE, 1807

**Tachus JURINE, 1807.**

77 (76) Male mesopleuron without prepectal carina above mid coxa. Female head, thoracic dorsum and abdomen opaque, covered with delicately engraved, polygonal micoreticulation; micropterous, wings scale-like. – Palaearctic Region. Type-species: (Meria lineata SICHEL, 1858) = Scolia cylindrica FABRICIUS, 1793

**Fukpokta gen. n.**

78 (75) Male clypeus with median lobe much narrower to about as wide as width of lateral lobe; antero-lateral pronotal margin always with an obtuse angle between its vertical and horizontal rami (Fig. 79). Female mandible with a sharp medio-dorsal longitudinal keel (Fig. 77).

79 (82) Male antero-lateral pronotal margin produced ventrad in a spine or acute corner, which exceeds and cover tignar sulcus in lateral view of thorax (cf. Figs 32, 34-35). Female either brachypterous (Fig. 84) and eye small, or else, macropterous, then eye large, distinctly wider in lateral view of head than distance between eye tops and occipital carina (Fig. 76).

80 (81) Male gular carina broadly vanished medio-dorsally and substituted by large setigerous punctures (cf. Fig. 82). Female brachypterous (Fig. 84); mesosternum only one quarter length of precoxal lobes; ocellar triangle situated beyond upper top of eyes (Fig. 84); terga with transverse row of large punctures straight and confined to apical margin (cf. Fig. 87). – Palaearctic Region. Type-species: Parameria graeca SAUNDERS, 1850

**Pseudomeria SAUNDERS, 1850**

81 (80) Male gular carina lamelliform throughout dorsally (Fig. 75). Female macropterous (cf. Fig. 89); mesosternum at least as long as precoxal lobes; ocellar triangle between inner orbits (Fig. 76); terga with transverse row of large punctures sharply bent toward the
middle (cf. Fig. 88). – Palaearctic, Oriental and Afrotropical Regions. Type-species: *(Bethylus latreillii* FABRICIUS, 1804) = *Meria latreillei* (FABRICIUS, 1804) comb. & emend. n.

**Meria** ILLIGER, 1807

82 (79) Male antero-lateral pronotal corner not produced, tignar sulcus wholly exposed in lateral view of thorax (Fig. 79). Female macropterus (cf. Fig. 89); eye small, narrower in lateral view of head than minimum distance between eye tops and occipital carina; lateral ocelli situated behind upper top of eyes.

83 (84) Male gular carina broadly emarginate (Fig. 82) to entirely vanished medio-dorsally and substituted by large setigerous punctures; mesoscutum with notaulices almost always traceable. Female terga 2-3 with gradulus at base. – Palaearctic Region. Type-species: *Myzine spinosa* FISCHER DE WALDHEIM, 1843

**Tilkuya** gen. n.

84 (83) Male gular carina lamelliform throughout (Fig. 75); anterior third of pronotal disc devoid of large setigerous punctures medio-dorsally; mesoscutum mostly without notaulices. Female terga 2-4 with gradulus at base. – Palaearctic Region. Type-species: *Tiphia tripunctata* ROSSI, 1790

**Meriana** RAFINESQUE, 1815

DESCRIPTION OF THE NEW SPECIES

**Jurja limpida** sp. n.  
(Figs 35, 67-68)

Male. Length 8.0 mm; length of forewing 5.0 mm. Body black. The following parts are creamy yellow: clypeus, mandible – except apical teeth, bordering ridge of frontal lobe, inner face of scape, pronotal disc except three black spots, a rectangular spot on mesoscutum between notaulices, a narrow longitudinal stripe parallel to parapsidal furrows outwardly, scutellum, median disc of metanotum, scutello-metanotal and metanotal-propodeal suture narrowly, tegula, a large spot on mesopleuron, ventral aspect of coxae, precoxal lobes of mesosternum, legs except femora basally, a transverse stripe apically on terga 1-7 and sterna 3-6, three spots on second and two on last sternum. Palpi, apical teeth of mandible and flagellum orange, infuscated with brown here and there. Femora basally, declivity of first tergum and second sternum almost entirely light castaneous. Wings hyaline to milky, veins and pterostigma yellowish basally, brownish apically. Wings membrane sparsely clothed with short whitish pubescence, except on apical third dark. Pubescence of body silver white, moderately long throughout; except on fronto-vertex, scutellum and propodeum rather long and dense, subdecumbent, often masking tegumental sculpture. On lateral third of terga and a complete subapical row on sterna 2-6 provided with yellow, laterally compressed, curved, lanceolate setulae.

Head somewhat ovoidal in outline, 1.2X as wide as high. Eye bulging, 0.7X as long as height of head; glabrous, inner eye orbits diverging upward and distinctly emarginate within. Clypeal disc sparsely punctate, lower margin prolonged in a semitransparent rim moderately incised medially. Mandibles bidentate apically, medio-dorsal keel weak, almost indistinct. Face rugosely, front moderately, vertex sparsely punctate; punctures and interpunctal spaces conspicuously increase in size from frontal lobe toward ocellar triangle. Antennal tubercles entirely consolidated mesally, frontal lobe perpendicular to plane of fronto-vertex (Fig. 35). Front angle of ocellar triangle right angle; OOL = POL. Occipital carina complete. Hypostomal notch slightly longer than postgenal bridge. Palpal formula 6-4. Flagellum weakly clavate, first segment as long as scape; second twice as long as thick, following ones almost equal with second one; all are covered with extremely small, short decumbent pile; segments 7-11 with a shallow, ovoidal sensorial pit basally.

Pronotal disc arcuately declivous anterad, 2.3X as wide as long mesally; sides very weakly (to conspicuously in paratypes) converge anterad; gular carina complete, lamelliform throughout; latero-ventral corner produced below the tignar sulcus in a small, twisted spine (without spine in paratypes). Thorax sparsely punctate, with relatively large, dimpled setigerous punctures. Propleuron inflated, produced in a transverse, anteriorly vertical lamella. Propodeum steeply declivous, without distinct dorsal surface medially (Fig. 35); punctures rugosely dense except on lateral propodeum widely spaced above hind coxa. Metapleural longitudinally costulate above (throughout in paratypes). Pterostigma of forewing 3X as long as wide. Marginal cell slightly narrower than length of second intercalibrival vein. Sectors of radial vein in a ratio as 2.0:1.0:3.0:3.0. Tibial spur formula 1-2-2. Claws cleft. Hind tibia with thin, pale spinulae in irregular rows.
Abdomen subsessile, covered with large dimpled punctures, except apical half of terga and sterna smooth or nearly so. Sides of seventh tergum parallel, deeply but narrowly incised apically, with the lobes situated horizontal to longitudinal axis (Fig. 68). Lateroterga of last tergum strongly sclerotized above, also incised apically and produced in a second pair of epipygial spines under the first (Figs 67, 68). Upcurved spine of hypopygium rather short and wide.

Female and biology unknown.


Variation: The genitalia of holotype male are entirely soft, not sclerotized, its structure cannot be compared with those of the paratypes. The paratypes are of 10.5 and 12.2 mm body length. In Israeli specimens the gular carina is not produced in a spine, instead the margin of latero-ventral pronotal lobe overlaps the tignar sulcus almost entirely. Propleuron is similarly inflated in the paratypes but does not produce in a vertical lamella anteriorly, as this is developed so in the holotype. The upcurved spine of subgenital plate is considerably much shorter and broader in paratypes. The peculiar shape of epipygium is unique in the family Myzinidae.

**Yooloa vircola** sp. n.

(Figs 65-66)

Male. Length 10 mm; length of forewing 5.7 mm. Body black with light brown abdomen, and extended pale yellowish-white markings on: clypeus, mandibles, ventral aspect of scape narrowly, apical ridge of antennal tubercles,

Figs 48-59. Figs 48-49: *Mesa atopogamia* SAUSSURE, 48 = male head ventral aspect, 49 = female metanotum. – Fig. 50: *Mesa claripennis* BINGHAM, male first abdominal segment lateral. – Figs 51-52: *Taywola palestinella* GUIGLIA, male, 51 = first tergum lateral, 52 = first tergum dorsal. – Figs 53-54: *Taywola* sp. female, 53 = metanotum, 54 = pygidium. – Fig. 55: *Poecilotiphia* sp., female forewing. – Fig. 56: *Xilunka donaldsoni* FOX, female pygidium. – Figs 57-58: *Milluta chobauti* ANDRE, 57 = male head, 58 = female hind leg. – Fig. 59: *Zezelda stigma* TURNER, male head
dorsal pronotum except three black spots, tegula, a V-shaped spot on mesoscutum between the notaulices, a triangular spot lateral to the parapsidal furrows and behind the tegula, scutellum, disc of metanotum, a spot on upper half of mesopleuron, a stripe along the lateral edge of propodeum, a small round spot on propodeal declivity, apex of coxae rather narrowly, precoxal lobes of mesoscutum, legs entirely except base of femora, pterostigma, a broad transverse stripe on terga 1-6, two lateral spots on last terga, and a rather narrow apical band on sterna 2-7. Palpi, apical teeth of mandibles, wing venation and spine of hypopygium are yellowish brown. First flagellar segment dark brown, segments 2-11 orange. Body clothed with silver white pubescence, nowhere decumbent, rather long on fronto-vertex, scutellum and propodeum, short and conspicuously erect on abdomen. Wings hyaline with nacreous iridescence, membrane clothed with short pale pubescence except on apical third dark. Abdominal segments with subapical rows of white, lanceolate hairs.

Head somewhat ovoidal, 1.2X as wide as high. Eye 0.6X as long as height of head. 1.4X as long as wide, practically glabrous. Inner orbits rather shallowly emarginate, significantly diverge toward the vertex. Antennal tubercles joined at the very base, not consolidated in a frontal lobe. Clypeal disc convex, sparsely punctate, a semitransparent apical rim weakly incised. Mandibles acutely bidentate, medio-dorsal keel delicate. Sides of hypostoma feebly diverge toward clypeal margin, hypostomal notch somewhat longer than postgenal bridge. Palpal formula 6-4. Front densely, vertex more sparsely covered with uniformly sized, moderately deep setigerous punctures; interpunctal spaces nowhere wider than the punctures themselves. Front angle of ocellar triangle right angle; OOL = POL. Occipital carina complete. Ventral aspect of scape flattened, framed by a thin carina, enclosing a roughly ovoidal area (Fig. 66), with slightly concave surface. First flagellar segment 0.5X as long as scape; second 1.3X as long as thick, the following ones gradually became thicker but not longer (Fig. 65); pubescence short and erect; ventral aspect of flagellar segments 1-11 covered with extremely sharp, acute and conspicuous purple spinulae (Fig. 65).


Abdomen slightly dorso-ventrally flattened, densely but shallowly puncturate throughout, except posterior half of second sternum sparsely. Interpunctal spaces of all terga delicately alutaceous, of sterna polished and shining. Terga 2-7 with a very sharp basal gradulus. Sterna 3-7 excavated on each side in a deep colpus, separated mesally by a sharp keel developed on basal third of the exposed disc. Seventh tergum conical, with a V-shaped incisure and with a semitransparent platform around it; lobes truncate, at least as wide as the incisure. Hypopygium ovoidal basally, spine narrow and elongate.

F e m a l e. B i o l o g y unknown.

M a t e r i a l: Holotype male, intact specimen on pin, and 5 paratype males from ISRAEL, labelled "Israel, Mikhmoret, Miramare Hotel Garden, 16-18. VI. 1980, leg. Q. ARGAMAN". Holotype and 1 paratype in the author's collection. Two paratypes in Hungarian Natural History Museum, Budapest; Hym. Typ. Nos. 6958, 6959; 1 paratype in Tel Aviv University, Tel Aviv; 1 in National Museum of Natural History, Washington, D.C.; 1 in Museo Civico di Storia Naturale, Genova.

V a r i a t i o n: Size of paratypes 7.0-9.5 mm. Otherwise they are uniform in shape and color. This probably due to the restricted area they came from. The unknown female seemingly will have alutaceous abdomen, short last tarsal segment on hind leg and only one spur on mid tibia.

Weerpaga udomanca sp. n.
(Fig. 47)

F e m a l e. Length 6.7 mm. Head, including mandible, antenna, thorax, legs, abdominal petiole and the sting sheath are reddish brown. Abdomen dark brown to black. Apical teeth of mandible, front side to frontal lobe and ocelli infuscated. Glittering white tegument occurs on: dorsal aspect of scape, tegula, scutellum, upper platform of mesopleuron, dorsum of mid and hind coxa, apical third of fore femur, outer aspect of fore tibia, whole second tergum except for a narrow apical stripe triangularly enlarged mesally, anterior half of fifth tergum, and a large ovoidal spot on each side of the sixth tergum. Pubescence of body as long as scape, except tarsal segments a little shorter. Fronto-vertex, pronotal disc and scutellum clothed with subdecumbent metallic gold hairs; propodeum with light
purple hairs. Abdominal terga clothed with acutely bent setulae which are laterally flattened; of purple black color and steel bluish iridescence. Antenna, mandible, ventral and lateral aspect of body, legs and declivity of first tergum clothed with erect silver white hairs.

Head dorso-ventrally flattened; quite as long as wide. Eye 0.38X as long as head, 0.95X as distance between eye tops and vertex crest, 1.35X longer than wide. Width of front, at minimum distance between eyes, 0.75X width of head, 2.1X length of eye. Temples almost parallel, insignificantly converge toward occiput, postero-lateral corners broadly rounded, so that the occipital margin straight on a very short distance medially. Clypeus vertical, apically truncate and bordered by a fairly emerging ridge, without differentiated median lobe or keel. Mandible parallel-sided, provided with an apical ventral tooth, a somewhat blunt one above it, and a very conspicuous grip-like tooth on upper, apical inner margin; inner border provided with 5-6 minute, triangular serrations (Fig. 47). Medio-dorsal keel indistinct; ventral aspect of mandible with a strong, straight keel developed from base to apex. I was able to detect only one small segment both on maxillary and labial palpus. Hypostomal notch half as long as postgenal bridge. Occipital carina not developed except very subtly, on a short distance, at postero-ventral corner of head. Malar space narrow, linear. Surface of head definitely alutaceous; covered with irregular rows of punctures, both with small and large interpunctal spaces occurring here and there. Median ocellus situated between inner orbits, lateral ocelli behind; front angle of ocellar triangle scarcely greater than right angle; ocelli minute, smaller than diameter of setigerous punctures; each bordered inwardly by a black spot. OOL = 2X POL. Antennal tubercles consolidated in a frontal lobe, shallowly bisinuate apically. Scape 2X as long as wide; flagellum cylindrical, shiny, almost entirely glabrous, segments almost equal, about 1.5X as long as thick.

Pronotum rectangular, as long as wide. Mesoscutum reduced to a transverse furrow. Scutellum large, convex. Metanotum in form of a shining ridge. Propodeum ovoidal, converging both anteriorly and posteriorly. Surface of pronotum and propodeum lengthwise costulate, costulae undulate and intermixed with large setigerous punctures. Lateral propodeum wholly, delicately and densely, longitudinally costulate. Apterous, tegula extremely small. Legs normal, nowhere inflated; mid and hind tibia spinulose; fore tarsi with a rather short rake. Tibial spur formula 1-2-2, spurs tapering toward apex. Claws bidentate but inner tooth very small, nearly indistinct. Last segment of hind tarsi exactly as long as penultimate.

First tergum globular, 2-5 transverse, sixth triangular. Second tergum with a weak basal gradulus. Surface of abdomen sculptate like thorax, except the costulae very often fragmented in papillae. Last tergum and all sterna alutaceous. No specialized pygidial area.

**Male and biology unknown.**


**Variation:** Size varies between 4.7-8.2 mm. In small specimens front strongly infuscated, brownish, while vertex became orange to light yellow. One female differs from the holotype in having frontal lobe spotted with white, on each side basally. Another female has a small white spot on left side of third tergum. One with a small spot on left side of fourth tergum. Two females have a small white spot on both side of fourth tergum; and one female have four white spots in a line on fourth tergum. All these spotted specimens were collected at Mora.

**Tilkuya arcuata** (FISCHER DE WALDHEIM), comb. n.

(Fig. 46)

*Myzine arcuata* FISCHER DE WALDHEIM, 1843, Magas. de Zool. 13:122, male. Locus classicus: "Russia meridionalis".

**Male.** Length 12.0 mm, length of forewing 8.3 mm. Body black, with the following parts pale sulphur yellow: clypeus except a narrow apical rim, mandible except apical teeth, a narrow transverse stripe on inner aspect of scape, a pair of anterior spots and a posterior stripe of pronotum, tegula, a triangular spot on mesoscepron on above, a rather small spot on each coxa ventrally, precoxal lobes of mesosternum, legs entirely except base of femora and an inner spot on tibiae, an apical broad stripe on terga 1-6 and sterna 2-6, and a pair of lateral spots on last tergum. Apical teeth of mandible piceous. Body clothed with glittering white pubescence, not decumbent. Wings hyaline, vitreous, pubescence of wing membrane dark, veins dark brown, pterostigma orange.

Head circular in outline, practically as high as wide. Inner orbits slightly diverging above, deeply emarginate within. Eye 1.7X as long as wide. Clypeus convex, apex shallowly emarginate; surface with moderately dense punctures. Front densely punctate, interspaces narrow, mere septa. Vertex sparsely punctate, punctures dimpled. Front angle of ocellar triangle right angle; OOL = 1.4X POL. Occipital carina complete. Frontal lobe slightly emarginate...
mesally. Scape 1.4X as long as wide; flagellum slightly elevate apically; first flagellar segment 1.2X as long as thick; second and following ones almost equal, about 1.5X as long as thick.

Pronotal disc 2.7X as wide as long medi ally, sides definitively converge anteriorly; gular carina sharp, lamelliform throughout, but deeply emarginate medio-dorsally, low, almost vanishing.; antero-lateral margin not produced and neither reach nor cover the tignar sulcus. Surface of pronotal disc with uniformly scattered dimpled punctures, interspaces as wide as the punctures themselves; provided with a median-longitudinal stripe, about as wide as an ocellus, entirely without punctures; on the pronotal disc, except for the stripe, large punctures closely approximate gular carina medio-dorsally. Mesoscutum and scutellum much more densely punctate than pronotum, and the punctures have sharp contours. Notaulices developed. Metanotum rugosely punctate. Median surface of propodeum as long as metanotum, surface rugulose, laterally wrinkled. Metapleuron obliquely costulate. Mesopleuron punctate like pronotal disc, with no dense patch of minute punctures. Legs normal. Pterostigma of forewing 4.3X as long as wide; sectors of radial vein in a ratio as 1.0:2.6:2.0:3.3.

Abdomen cylindrical. First segment globular, abruptly declivous. Terga covered with obliquely impressed small punctures except a broad apical stripe impunctate medially. Sterna 1-2 with moderately dense large punctures. Sterna 3-6 with transverse furrow medially; the disc anterior to the furrow minutely punctate, on the furrow macropunctate, behind the furrow almost completely impunctate. Epipygium strongly convex transversely, moderately emarginate apically, the emargination U-shaped, as wide as a lateral lobe.

Female. Length 9.5 mm, length of forewing 5.3 mm. Body and appendages, including wing membrane and veins, mahogany red with pubescence of same colour, except the following: front, scutellum and metanotum darkened, almost black; mesopleuron and propodeum black; terga 2-3 with a large ovoidal ivory spot on their lateral quarter (Fig. 46); long erect setulae of mesopleuron white.

Head subquadrate, only a bit wider than long (1.14X); sides weakly converge both anteriorly and posteriorly. Temples join under a broad arch into the straight vertex. Eye 1.6X as long as wide; only 0.88X as wide as minimum distance between eye tops and occipital carina. Inner orbits shallowly emarginate, converging toward the vertex. Surface of fronto-vertex smooth, without sculpture except for setigerous punctures above the antennal scrobe and at upper border of inner orbits. Median eyeal lobe transversely truncate at apex, surface smooth except for an arcuate row of medium-sized punctures. Medio-dorsal keel of mandible strong. Front angle of ocellar triangle right angle; median ocellus situated on line with upper top of eyes, lateral ocelli behind inner orbits; OOL = 1.7X POL. Frontal lobe slightly emarginate mesally and longitudinally impressed by a furrow. Relative length of first four antennal segments in a ratio as 3.2:1.0:1.2:1.0; following segments as long as fourth one, last segment a little longer. Palpal formula 6-4; hypostomal notch twice as long as postgenal bridge, sides parallel. Occipital carina broadly incomplete medio-dorsally, behind ocellar triangle.

Pronotal disc 1.7X as wide as long; almost impunctate, with a median stripe smooth; lateral pronotum more densely covered with large seigerous punctures. Mesoscutum with notaulices and parapsidal furrows developed on posterior half, parallel; only with few punctures along the furrows. Scutellum punctate on sides, metanotum smooth. Medi- dor sal area of propodeum 1.5X as long as disc of metanotum; surface smooth, with a deep longitudinal furrow and oblique carinules beyond the spiracle. Mesopleuron sparsely punctate. Lateral propodeum smooth, with 6-7 oblique carinules on upper half. Legs normal. Mid and hind tibial spurs parallel-sided. Last segment of hind tarsi longer than penultimate one. Second submarginal cell of forewing triangular, 0.4X as high as length of first intercubital vein.

Abdominal terga 2-3 with basal gradulus. Terga scarcely punctate with medium-sized punctures. Apical row of seigerous punctures bent toward the middle (Fig. 46). Sterna 2-5 with some punctures medially and a regular row apically, triangularly bent toward the middle. Pygidial area polished and shining.

Host not known.

Material: Neotype male, intact specimen on pin, from TURKEY, labelled: "Asia Minor, Dr. LENDL" and "Tshajan, (19)906. VII 26"); deposited in Hungarian Natural History Museum, Budapest; Hym. Typ. No. 6962; 1 female in the same collection; 5 males and 6 females from ISRAEL, labelled: "Israel, Mt. Hermon". VII-VIII. 1971-86, Leg. A. FREIDBERG, H. BYTINSKI-SALZ, D. FURTH, M. KAPLAN; males and females in Tel Aviv University and in Coll. ARGAMAN.

Variation: Males often with anterolateral yellow spot on pronotal disc large, joining the posterior yellow stripe (3 specimens); sometimes frontal lobe and scape entirely black (2 specimens), or the transverse yellow band on terga 1-2 fragmented in three isolated spots. Female abdomen often mostly black (5 specimens), rarely scutellum dark red medially (1 specimen).

Note: This species has no outstanding features. Male superficially resembles Meria latreillei FABRICIUS, except for the lateo-ventrally shortened gular carina, posteriorly impunctate abdominal terga, longer ocello-ocular line (almost equal with postoccular line in latreillei), and for the small punctures on the terga. Female differs from latreillei with placement of ocellar triangle, dark pubescence of body and long ocello-ocular line.
Tilkuya spinosa (FISCHER DE WALDHEIM) comb. n.  
(Figs 79, 82)

Myzine spinosa FISCHER DE WALDHEIM, 1843, Magas. de Zool. 13:122, male. Locus classicus: "Russia meridionalis".

Male. Length 16.2 mm, length of forewing 11.0 mm. Body black, with the following parts sulphur yellow: clypeus except a narrow apical rim, mandible except apical teeth, a small spot on scape and on frontal tubercle, antero-lateral corner of pronotal disc triangularly and its basal narrow band, tegula, upper half of mesopleuron, a spot on coxae ventrally, precoxal lobes of mesosternum, legs completely except base of femora, a wide apical band on terga 1-7 and sterna 2-6. Palpi and apical teeth of mandible piceous. Marginal rim of clypeus, trochanter, base of femora, pterostigma and wing venation brown. Pubescence of body white, rather long on fronto-vertex, scutellum and propodeum, not decumbent. Wings milky, conspicuously infuscated along the veins, pubescence dark.

Head perfectly circular in outline. Eye 0.6X as long as eye height, 1.7X as long as wide, glabrous. Inner eye orbit emarginate, slightly divergent toward the vertex. Basal half of clypeal disc densely punctate, apical half almost impunctate; marginal rim semitransparent, shallowly emarginate medially. Face densely punctate, front rugoso-punctate, vertex sparsely, with shiny interspaces here and there. Mandibles bidentate, dorso-median keel distinct. Front angle of ocellar triangle right angle. OOL = 1.15X POL. Occipital carina complete. Antennal tubercles consolidated on basal half, separated on apical one; frontal lobe situated on same plane with front and median ocellus. Scape 1.6X as long as wide; first flagellar segment 1.3X as long as thick, second twice longer, following ones almost equal with second; flagellum almost indistinctly clavate toward apex; pubescence and spinulae extremely short. Palpal formula 6-4. Hypostoma parallel-sided, hypostomal notch a little more than twice as long as postgenal bridge.

Pronotal disc slightly declivous anterad; sides wide at middle, converging both anteriorly and posteriorly; 2.5X as wide basally as long medially. Anterior pronotal margin bordered by a lamelliform gular carina, broadly vanished medially and substituted by large setigerous punctures (Fig. 82). Pronotal disc with deeply impressed, round macro-
punctures, more numerous on sides than in center. Lateral pronotum rugoso-punctate. Gular carina produced latero-
ventrally in an obtusely triangular spine, situated far above tignum sulcus in lateral view of thorax (Fig. 79). Mesos-
cutum more densely and irregularly punctate than pronotum; postero-lateral lobes tilted, distinctly declivious. Scutel-
lum with median-longitudinal polished stripe, rugosely dense punctures on sides. Disc of metanotum similarly
sculptate but punctures are much smaller. Propodeum rugoso-punctate throughout, dorso-median surface shorter than
metanotum. Mesopleuron uniformly sparsely punctate, with broad shining interspaces. Metapleuron obliquely costu-
late, delicately on upper half, dull on lower. Pterostigma of forewing 6X as long as wide. Marginal cell as wide as
length of second intercubital vein. Sectors of radial vein in a ratio as 1.0:2.1:1.8:3.0. Legs normal. Tibial spur formula
penultimate one.

Abdomen cylindrical, strongly constricted at base of each segment. Terga relatively densely covered with trans-
versely ovoidal punctures, except middle of apical half more sparsely. First sternum rather densely, second moderately
covered with deep and round large punctures. Sterna 3-7 alutaceous and with small punctures on basal half; with an
obscure transverse furrow medially; smooth surface with scattered and dimpled setigerous punctures on apical half.
Epipygium parallel-sided in dorsal view; with a narrow incision medially, about as wide as the lateral lobes.

Female. Length 14.0 mm, length of forewing 8.2 mm. Body piceous red. Scape, clypeus, inner aspect of hind
femur and first tergum blackish. Terga 2-4 with a pair of rather large, sulphur yellow lateral spots. Body clothed
with unusually long and erect purple pubescence. Wings strongly infuscated, pterostigma and veins dark piceous.

Head 1.1X as wide as long; rectangular, temples straight and parallel on a long distance behind eyes; postero-lateral
corners broadly rounded, occipital margin straight. Eye half length of head, 2.5X as long as wide; inner orbits broadly
but shallowly emarginate, slightly converge toward vertex. Median clypeal lobe transverse, with lateral corners
weakly upcurved; surface smooth except for a short subapical row of setigerous punctures. Mandibles bidentate
apically and with a small triangular tooth on inner border; medio-dorsal keel sharp. Head surface smooth, with stuff
of setulae on face and sensorial hairs at upper top of eye. Vertex along occipital margin sparsely punctate. Front angle
of ocellar triangle somewhat greater than right angle (about 100°); median ocellus situated between inner orbits,
lateral ocelli beyond line connecting upper top of eyes. OOL = 1.5X POL. Occipital carina incomplete medio-dorsally.
Frontal tubercles consolidated basalvly. Scape 2.7X as long as wide; first flagellar segment 1.3X, second 1.6X as long

Figs 72-80. Figs 72-73: Macromeria klugi WESTWOOD, male, 72 = apical flagellar segments, 73 = head in oblique subdorsal aspect. – Fig. 74: Nurmiya contrastata GIULIA, male, left half of epipygium. – Fig. 75: Meriana nitidula KLUG, male. – Figs 76-77: Meria latreillei FABRICIUS, female, 76 = head, 77 = mandible. – Fig. 78: Tachus staphylinus JURINE, female mandible. – Fig. 79: Tilkuya spinosa FISCHER DE WALDHEIM, male lateral pronotum and gular carina. – Fig. 80: Macromeria klugi WESTWOOD, female forewing

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as thick; following ones a bit shorter than second one, almost entirely glabrous. Palpal formula and shape hypostoma as in male.

Pronotum 2.1X as wide as long; sides converge both anteriorly and posteriorly; surface smooth except anterior third with scattered, large and round setigerous punctures, more numerous on sides. Lateral pronotum polished and shining mirror-like except dorsal patch of large punctures. Mesoscutum smooth, impunctate; parapsidal furrows parallel, notaulices half as long as mesoscutal disc, diverging anterior. Scutellum shallowly punctate on sides. Thoracic dorsum 1.6X as long as wide. Disc of metanotum 0.3X as long as scutellum, impunctate. Dorso-median area of propodeum as long as scutellum; with a deep, foveolate median furrow; surface of propodeal disc rugoso-punctate lateral to the furrow, obliquely costulate beyond spiracle. Propodeal declivity abrupt, rugulose on lower half. Outer disc of mesopleuron smooth, densely punctate on a vertical stripe both anteriorly and posteriorly. Metapleuron smooth, lateral propodeum irregularly costulate on posterior half or less. Macropterous; pterostigma of forewing ovoidal, about twice as long as wide. Second submarginal cell half the height of first intercubital vein. Legs short spinose and long pilose; fore tarsal rake strong. Spurs of mid and hind tibia pale, tapering toward apex. Claws cleft. Last segment of hind tarsi 1.2X longer than penultimate.

Abdomen smooth; apical row of large setigerous punctures on terga 2-5 bent toward middle. Sterna sparsely punctate, an apical stripe impunctate. Pygidial area polished and shining, not bordered.

**Biology** not known.

**Material**: Neotype male, intact specimen on pin, from TURKMENIA, labelled: "Turkestan, Aulie-Ata", deposited in the Hungarian Natural History Museum, Budapest; Hym. Typ. No. 6962; 28 males from ISRAEL, Golan Heights, Rafid (= Rawiya) and Nabach (= Horbat Nappah), June to August; Leg. J. KUGLER, A. FREIDBERG, F. KAPLAN, D. GERLING, Tel Aviv University, Tel Aviv; 1 female, from TURKEY, labelled "Budjak Kestel-Gol, Kleinasien"; 1 male from TURKEY, labelled: "Hassan-Dagh, Kleinasien"; 1 male from SYRIA, labelled: "Der'esch-Schomel Hamidije, Syrien"; 1 male from AZERBAIJAN, labelled: "Kubinka, Aserbeidschan"; 1 male from RUSSIA, labelled: "Kjachta, Transbajkalien" in Coll. ARGAMAN.

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**Figs 81-89.**

- **Fig. 81**: Upaterka latifasciata PALMA, male propodeal declivity lateral aspect.
- **Fig. 82**: Tilkuya spinosa FISCHER DE WALDHEIM, male pronotum dorsal aspect.
- **Fig. 83**: Nunniya contrastala GUIGLIA, male head oblique subdorsal aspect.
- **Fig. 84**: Pseudomeria greeca SAUNDERS, female.
- **Figs 85-86**: Arapatka arabica GUERIN, male, 85 = propodeal declivity lateral aspect. 86 = occiput and pronotum dorsal aspect.
- **Fig. 87**: Myzina sp., female second tergum.
- **Figs 88-89**: Hemimeria sp., female, 88 = second tergum, 89 = forewing
Variation: Male pronotal disc and ventral aspect of scape often entirely yellow.

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