



Myzininae from Canary, Madeira, and Cabo Verde Islands (Hymenoptera: Tiphidae)

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Abstract. Data about knowledge of the Myzinin fauna from Canary, Madeira, and Cabo Verde Islands are given. Description of the insofar-unknown females of *Poecilotiphia guichardi* (Guiglia, 1967) and *Poecilotiphia trichogastra* Boni Bartalucci, 2004 are produced.

Riassunto. *Myzininae delle Isole Canarie, Madera e Capo Verde (Hymenoptera: Tiphidae).* Vengono riassunti i dati sulla conoscenza della fauna delle Myzininae degli arcipelaghi atlantici delle Canarie, Madera e di Capo Verde. Viene data la descrizione delle femmine fin qui inedite della *Poecilotiphia guichardi* (Guiglia, 1967) e *Poecilotiphia trichogastra* Boni Bartalucci, 2004.

Key words. Canary Islands, Cabo Verde, Madeira, Myzininae, *Poecilotiphia*.

Introduction

Myzininae specimens insofar recorded from atlantic archipelagos in front of North Western coast of Africa belong to the genus *Poecilotiphia* Cameron, 1902 only and all of them are endemic. Three taxa from Canary islands and one from Cabo Verde have been recorded. Representatives of the genus *Meria*, *Mesa* and *Myzinella* result absent so far.

Material and methods

Abbreviations

A_m = height (**Alt**itudo)

CSM = sub marginal cel (**C**ella **S**ub **M**arginalis)

L = length (**L**ongitudo)

LA = width (**L**Aitudo)

m = median (**m**edianus)

N₁ = proNotum

ol = lateral ocellus (**oc**ellus **l**ateralis)

P = Propodeum

Pal = labial palpus (**P**alpus **l**abialis)

Pam = maxillary palpus (**P**alpus **m**axillaris)

PoG = genal bridge (**P**ons **G**enarum)

Ter = Tergum of metasoma

Abbreviations about terminology are in bold characters; those referred to wing structures are in italics and those about the wing veins are excluded.

! = Types examined; () = digits between round brackets in the chorological items mean number of specimens; / / = delimit the single label. Italic characters in the descriptions of labels mean handwriting.

The frontal aspect of the head is performed perpendicularly to the virtual through **ol** and tip of clypeal disk in lateral aspect (BONI BARTALUCCI, 2012); dorsal and lateral aspects, perpendicular to each other, are performed along the virtual plane along the occipital carina. The drawings of the volsella and gonosquama show respectively their inner and outer aspect, unless otherwise indicated. Gonosquama here means one of the outermost pair of appendages of male genitalia.

Genitalia are settled in a solidified drop of 5,5-dimethyl hidantoin formaldehyd (5,5-DMHF) on a transparent support. Hair, punctuation and light markings have been overlooked in most of the drawings.

Acronyms

BMNH = Natural History Museum - London; LQA = Laboratório de Qualidade Agrícola - Camacha, Madeira; MHNP = Muséum national d'Histoire naturelle - Paris; MNCN = Museum Nacional de Ciencias Naturales - Madrid; MZUF = Museo di Storia Naturale dell'Università degli Studi di Firenze, sezione di Zoologia "La Specola" - Florence; NHMW = Naturhistorische Museum Wien - Vienna; UZM = Statens Naturhistoriske Museum Zoologisk - Copenhagen; ZMA = Zoölogisch Museum Amsterdam - Amsterdam.

Recorded taxa

***Poecilotiphia gracilis* (Brullé, 1840)**

Myzine gracilis: BRULLÉ (1840: 90)

Meria gracilis: GUIGLIA (1965: 110-111)

Meria gracilis: GUIGLIA (1967: 220-226, Figs 4, 6, 8, 9)

Meria gracilis: GUIGLIA (1968: 285)

Dermasothus gracilis: GORBATOVSKY (1979: 616)

Poecilotiphia gracilis: GORBATOVSKY (1981: 384)

Holotypus, ♂: Islas Canarias (Spain) = */gracilis Br Isles Canarias o Canarias/* (autographic) /Museum Paris Canarias Webb et Bartelot 3-41/ (blue) MHNP!

Male: Figs 1-12.

Examined specimens

♀ Islas Canarias (Spain) = (1) /Los Christianos Tenerife 21.IV.1964 leg. K.M. Guichard/ BMNH (Figs 13-17).

Madeira (Portugal) = (1) /The Salvages, Is Madeira/ *new Sphecus/* BMNH; (1) /Selvagens islands/ leg. Antonio Aguiar of LQA-Laboratório de Qualidade Agrícola Divisão de Protecção das Culturas Núcleo de Entomologia Caminho Municipal dos Caboucos, No. 61, 9135-372 Camacha, Madeira, Portugal (Figs 49-50 by Antonio Aguiar).

♂ Islas Canarias (Spain) = (1) /Los Christianos Tenerife 21.IV.1964 leg. K.M. Guichard/ BMNH; (1) /La Gomera VIII.1905 A. Cabrera/ /MNCN 34515/; (1) /Tenerife Médano 20.IX.1905/ /MNCN 34504/; (1) /Bajamar (Tenerife) 18.7-6.8 69 A. Burn/ /MNCN 34330/; (1) /Hierro Sabinosa 10.VIII.1922/ /MNCN 34514/; (1) /Gran Canaria Maspalomas, Barranco del Toro 4-6.12.73/ /MNCN 34329/; (1) /Médano 3.VIII.1910/ /MNCN 34503/; (1) /Tenerife Aguamansa Orotava 30.XI.1931/ /MNCN 34508/; (1) /Tenerife El Medano 2-22.IX.1923/ /MNCN 34501/; (1) /Tenerife Güimar 26.III.1904/ /MNCN 34509/; (1) /Tenerife Güimar Montaña grande 19.II.1933/ /MNCN 34507/; (1) /Tenerife Llano de Maja 18.VI.1933/ /MNCN 34506/; (1) /Tenerife Médano 16.IV.1933/ /MNCN 34500/; (1) /Canary Island Tenerife Insekten Patol. Kurs G. Norlander/ /1 km NW Santaursula 23.I.1976/ UZM; (1) /España, Islas Canarias, Tenerife, A.C. & W.N. Ellis/ /Santa Cruz 5.IV.1984/ ZMA; (1) /Islas Canarias, Gran Canarias, A.C. & W.N. Ellis/ /Maspalomas 22.II-3.IV.1987/, ZMA; (1) /Canr. Ins. Th. Becker/ NHMW.

Note. GUIGLIA (1967) established the neotypus on the specimen from Tenerife, Los Christianos on the ground of the bad conditions of the specimen at Paris Museum. The metasoma stated lacking by her was conversely glued and confused with the writing on the original label by Brullé. So it is compulsory to restore the holotype on the specimen at MHNP. At the same time she described a female taken in copula, whose features are here figured (Figs 13-17) and which is identical to the female from Salvages island.

***Poecilotiphia diffinis* (Turner, 1908)**

Myzine diffinis: TURNER (1908: 498)

Holotypus, ♂: Cabo Verde = */S.V. Cape V./* (rounded) */Myzine diffinis Turn Type/* (autographic) */Type/* (rounded with red outer ring) /B:M: TYPE HYM. 15.1527/ BMNH!

Male: Figs 18-27.

Well featured taxon by the shape of the almost petiolated 3rd **CSM** (unique autapomorphy within the genus) and the bell-shaped 1st **Ter**. It shows a well developed xiphylus on the volsella.

Note. The acronym S.V. on the original label could mean São Vicente, one of the most western island of the archipelago.

Poecilotiphia guichardi (Guiglia, 1967)

Meria guichardi: GUIGLIA (1967: 217-220)

Meria guichardi: GUIGLIA (1968: 286)

Dermasothus guichardi: GORBATOVSKY (1979: 616)

Poecilotiphia guichardi: GORBATOVSKY (1981: 384)

Holotypus, ♂: Islas Canarias (Spain) = /Canaries Fuerteventura Coti 7.V.1964 K.M. Guichard B.M. 1965-161/ /*Guichardi typus* Guiglia det. Dott. D. Guiglia/ /*Meria guichardi* n. sp. det. Dott. D. Guiglia/ /Holotype/ (rounded whit outer red ring) /B.M. Type Hym. 15.14.98/ BMNH! (Figs 28-38) .
Paratypi, ♂♂: Islas Canarias (Spain) = (1) /Canaries Fuerteventura Coti 7.V.1964 K.M. Guichard B.M. 1965-161/ /Typus/ (red digits) /Paratype/ (rounded with yellow outer ring) /*Meria guichardi* ♂ *Gui*. Det. M.C. Day 1978/ /*Dermasothus gracilis guichardi* Gorbatoovsky det 1974/ BMNH!; (1) /Canaries Fuerteventura Coti 7.V.1964 K.M. Guichard B.M. 1965-161/ /*Gu*/ /Typus/ (red digits) /Paratype/ (rounded with yellow outer ring) /*Meria guichardi* ♂ *Gui*. Det. M.C. Day 1978/ /*Dermasothus gracilis* Gorbatoovsky det 1978/ BMNH!

Examined specimens

♀ Islas Canarias (Spain) = (1) /Islas Canarias Tenerife A. Cabrera - 10.VIII.1911/ /MNCN 104231/ (Figs 39-43).

♂ Islas Canarias (Spain) = (1) /Fuerteventura, Tarajalejo 7.III.1935/ /MNCN 34510/; (1) /Fuerteventura Catalina Garcia 15.IV.1934/ /MNCN 34393/; (1) /Fuerteventura, barranco de Catalina G^a 28.IX.1933/ /MNCN 34512/; (1) /Fuerteventura Rio Cabra 30.IX.1933/ /MNCN 34511/; (1) /Lanzarote San Bartalomè 16.IX.1933/ /MNCN 34513/; (1) /Tenerife Médano 14.IV.1933/ /MNCN 34502/; (1) /Islas Canarias, Fuerteventura, M. & C. Kruseman/ /Tindaya, 21.IV.1978/ ZMA; (1) /Islas Canarias, Lanzarote, M.C. & G. Kruseman/ /Playa de famara high ground 18.VI.1981/ ZMA; (1) /Islas Canarias, Lanzarote, M.C. & G. Kruseman/ /Orzola 20-24.VI.1981/ ZMA.

Female: body length 6.5 mm.

Habitus and coloration by Fig. 51. Besides to the differences from the female of *Poecilotiphia guichardi* well depicted by the drawings in the shape of the head, palpomeri, clypeal disk, fore wing veins and coloration, it differs also in having dense light brown hair along the contour of pronotal disk. Together with *P. gracilis* they belong to the *P. albomaculata* group (BONI BARTALUCCI, 2004) with palpal formula 4-3 at best and pronotal disk only poorly wider than high in dorsal aspect.

Note. The Guiglia's taxon (GUIGLIA, 1967) has been sometimes considered as subspecies of *P. gracilis* since it was found insofar in Lanzarote and Fuerteventura only. Effectively we are dealing with very similar males. *Poecilotiphia guichardi* differs from *P. gracilis* mainly in the shape of clypeal disk in frontal aspect, pronotal disk, different ratio **LA/A_m** of 2nd **Ter**, 7th **Ter** in dorsal aspect, the mostly haired inner surface of gonosquama, besides the lighter habitus. The first record from Tenerife together with the finding of a female specimen well distinct from *P. gracilis* (which the "convention ad excludendum" compels us to attribute nominally to Guiglia's taxon) confirm their reciprocal segregation.

Both of them show unarmed volsella lacking xiphylus, a character state shared with *P. lacteipennis* (Saunders, 1901) a common species through the whole of Northern Africa.

Poecilotiphia trichogastra Boni Bartalucci, 2004

Poecilotiphia trichogastra: BONI BARTALUCCI (2004: 420-423, Figs 191-199)

Examined specimens

♀ Canary islands (Spain) = (1) /Tenerife Médano 23.IX.1905/ /♀/ /Myzine sp. A. Cabrera/ /MNCN Ent 34505/.

♂ Canary islands (Spain) = (1) /Tenerife Igorda Médano 23.IX.1905/ /MNCN 34498/; (1) /Tenerife La Barqueta, Medano 25.IX.1905/ /MNCN 34497/; (2) /Las Montañitas, Medano 25.IX.1905/ /MNCN 34495 & 34496/; (1) /Tenerife Granadilla Madredelagua 28.VIII.1933/ /MNCN 34499/ MZUF.

Female: body length 11.5 mm; Figs 44-48.

Besides the feature well depicted by drawings the following characters should be underlined: **PoG** suture like a stitch, lateral **P** smooth and shining, tufts of whitish hair around the attachment of fore tibial spur and at the apical inner edge of basal fore tarsomerus (like in *Meria*), several (about 4-6 still detectable) long (as long as the aggregate of 1st to 3rd fore tarsomeri) bristles on the inner side of fore tarsomerus. Hair with cupreous reflections all over the body.

Note. The palpal formula 5-4 (with some variability in relative size between right and left palpomeri), the ratio $LA/A_m = 2$ of pronotal disk, the tufts of whitish hair, the long bristles on the inner ventral side of basal fore tarsomerus, the good pigmentation and strong size indicate its belonging to the *P. nigripes* (Guérin-Méneville, 1837) group, in full correspondence with the male to which it is coupled here (BONI BARTALUCCI, 2004).

Discussion

Without territorial connections with the continent during the whole of their existence (neither land bridge hypothesis has been proposed, neither the existence of an island arch has been proved), a sweepstakes route model of over-water dispersal of ancestors through rafting could explain their presence in the islands. Nevertheless we are dealing with “soil depending” taxa, since Myzinin wasps prey on coleopteran larvae dwelling in the soil, since the hypothesis that their dispersal could occur through the strong winds which blow from Sahara toward South America seems more fit to explain the matter.

Species of the genus *Mesa* do not live in NW Africa. *Myzinella* is present insofar with only two recorded taxa from that area. Absence of representatives of the genus *Meria* is quite amazing. No ecological nor tectonics data can be found to unfold it. Even the poorly lower (6) number of species of the genus *Meria* in atlantic western African areas compared to *Poecilotiphia* representatives (9) (BONI BARTALUCCI, 2016) can not explain it.

The presence in the Madeira archipelago is confined to the Selvagens island which geographically has to be considered part of the Canary volcanic province.

The presence of only one taxon from Cabo Verde islands could be explained by the lack of enough field research and both by their large gap from African continent and relative recent settlements of the volcanic shields of the islands.

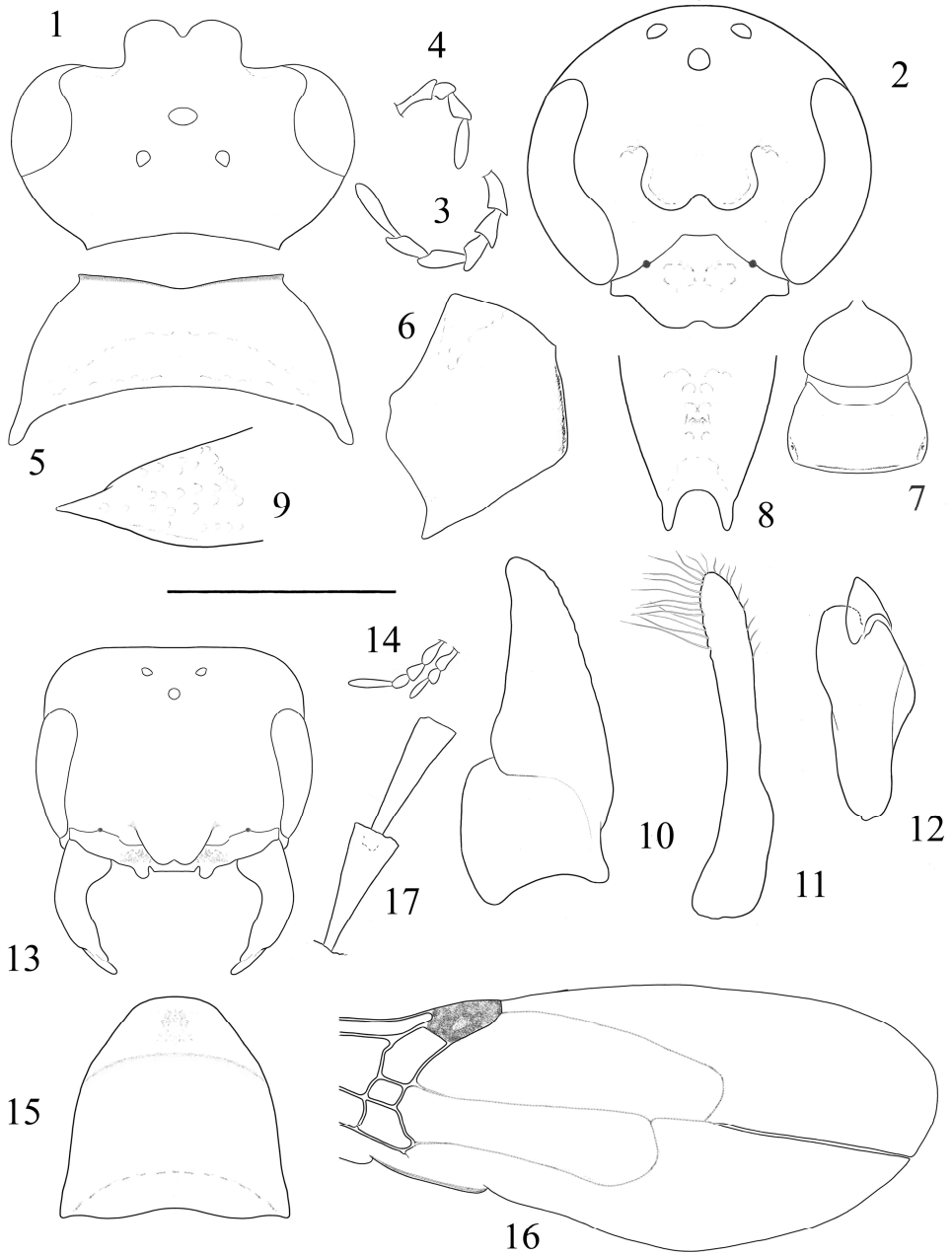
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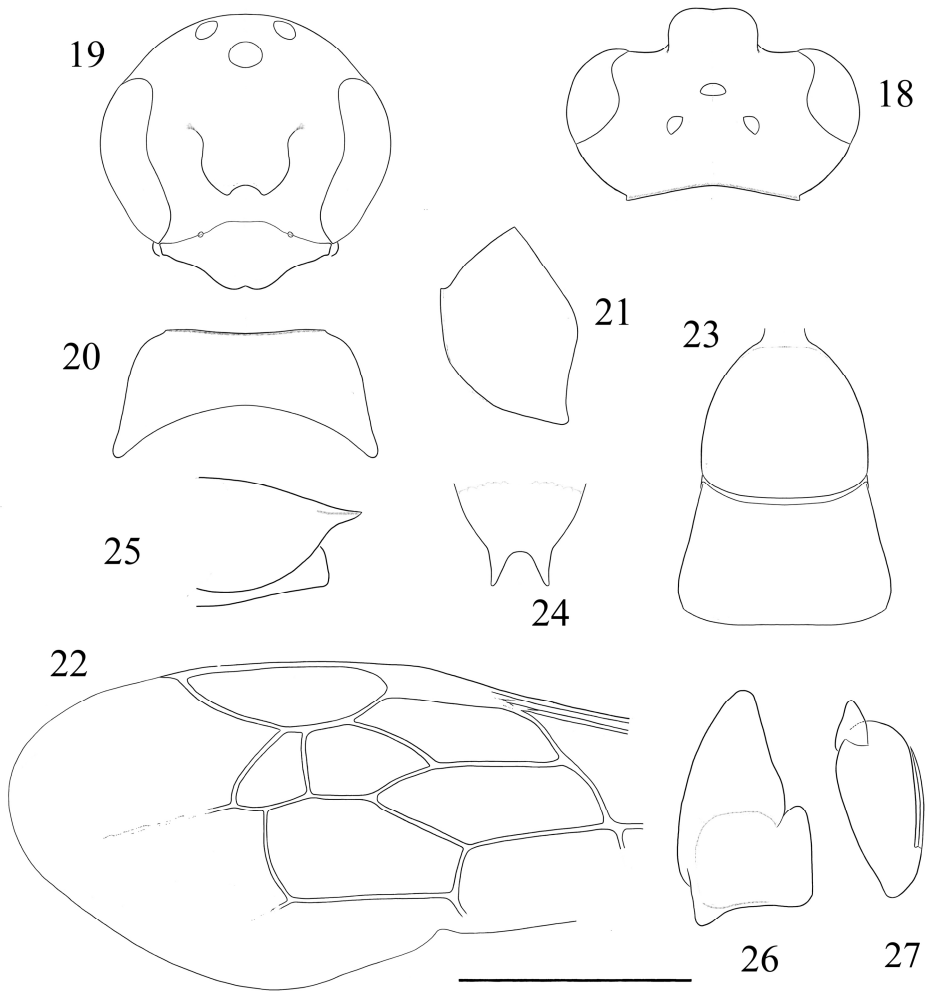
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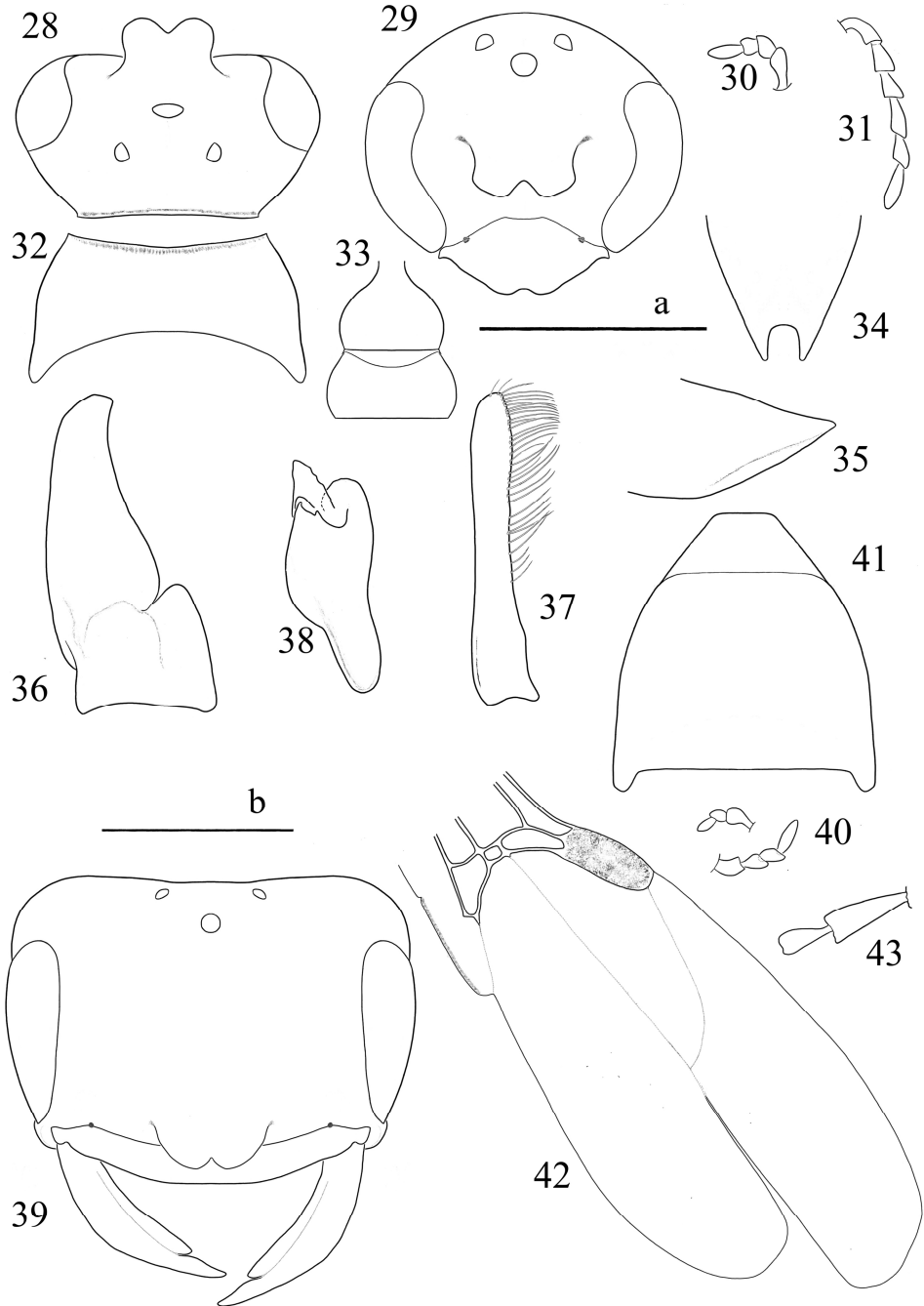
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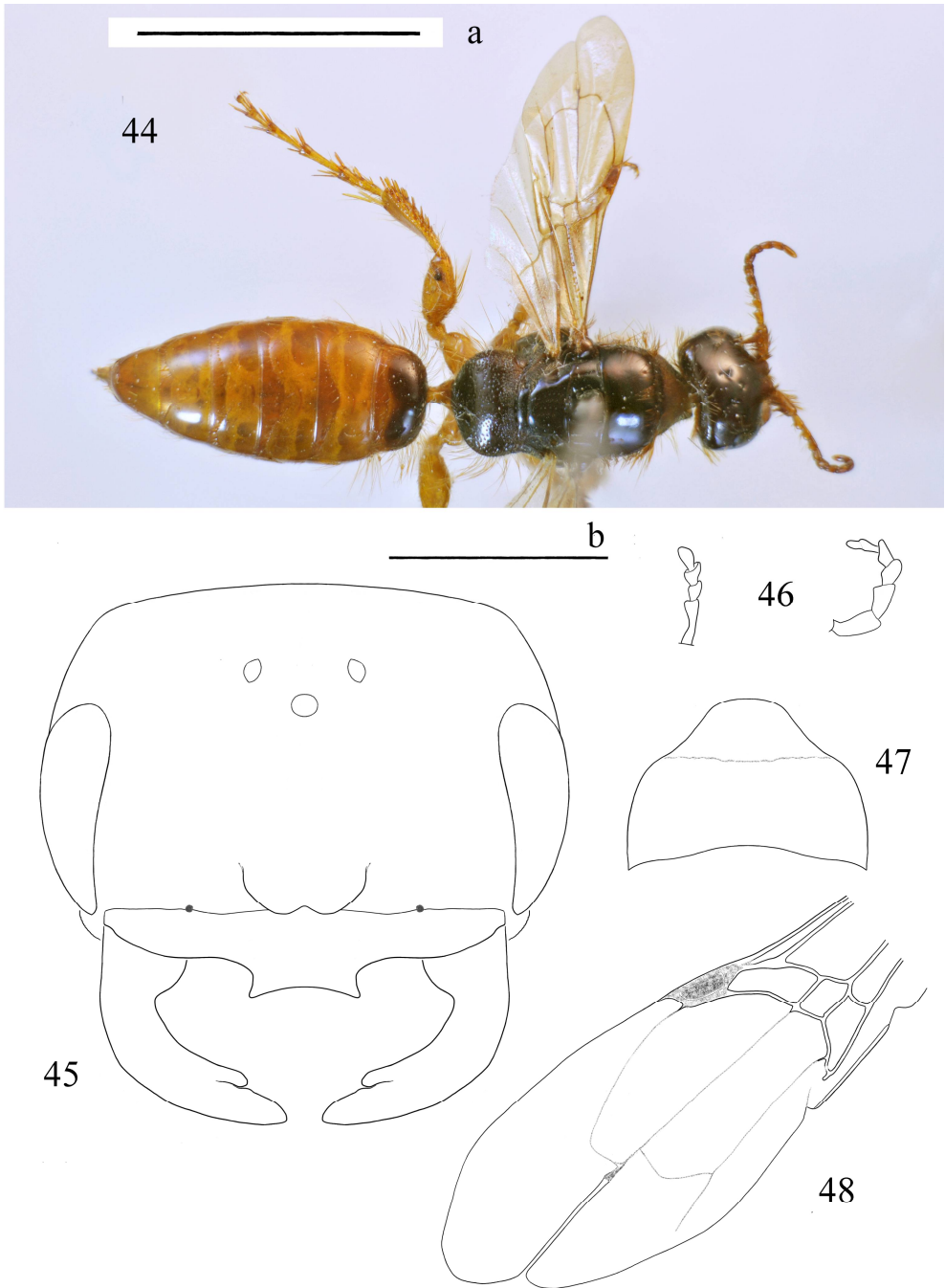
Figs 1-17. 1-12: *Poecilotiphia gracilis* (Brullé, 1840) ♂. 1: head, dorsal aspect; 2: head, frontal aspect; 3: **Pam**; 4: **Pal**; 5: pronotum, dorsal aspect; 6: pronotum, lateral aspect; 7: basal **Ter**, dorsal aspect; 8: 7th **Ter** (epipygium), dorsal aspect; 9: 7th **Ter**, lateral aspect; 10: gonosquama, outer lateral aspect; 11: gonosquama, ventral aspect; 12: volsella, inner aspect. 13-17: *Poecilotiphia gracilis* (Brullé, 1840) ♀. 13: head, frontal aspect; 14: **Pam** and **Pal**; 15: pronotum, dorsal aspect; 16: fore wing, apical 2/3; 17: apical hind tarsomeri (Figs 1, 2, 5, 6, 8, 9, 13, 15, 16: scale bar = 1 mm; Figs 3, 4, 10, 11, 12, 14, 17: scale bar = 0.5 mm; Fig. 7: scale bar = 2 mm).



Figs 18-27. *Poecilotiphia diffinis* (Turner, 1908) ♂. 18: head, dorsal aspect; 19: head, frontal spect; 20: pronotum, dorsal aspect; 21: pronotum, lateral spect; 22: forewing, apical 2/3; 23: basal Ter, dorsal aspect; 24: 7th Ter, dorsal aspect; 25: 7th Ter, lateral aspect; 26 gonosquama; 27: volsella (Figs 18, 19, 20, 21, 22, 23, 24, 25: scale bar = 1 mm; Figs 26, 27: scale bar = 0.5 mm).



Figs 28-43. 28-38: *Poecilotiphia guichardi* (Guiglia, 1967) ♂. 28: head, dorsal aspect; 29: head, lateral aspect; 30: **Pal**; 31: **Pam**; 32: pronotum, dorsal aspect; 33: basal **Ter**, dorsal aspect; 34: 7th **Ter**, dorsal aspect; 35: 7th **Ter**, lateral aspect; 36: gonosquama; 37: gonosquama, ventral aspect; 38: volsella. 39-43: *Poecilotiphia guichardi* (Guiglia, 1967) ♀. 39: head, frontal aspect; 40: **Pal** and **Pam**; 41: pronotum, dorsal aspect; 42: fore wing, apical 2/3; 43: apical hind tarsomeri (Figs 28, 29, 32, 34, 35, 41, 42: scale bar "a" = 1 mm; Figs 30, 31, 36, 37, 38, 40, 43: scale bar "a" = 0.5 mm; Fig. 33: scale bar "a" = 2 mm; Fig. 39: scale bar "b" = 1 mm).



Figs. 44-48. *Poecilotiphia trichogastra* Boni Bartalucci, 2004 ♀. 44: habitus; 45: head, frontal aspect; 46: **Pal** and **Pam**; 47: pronotum, dorsal aspect; 48: fore wing, apical 2/3 (Fig. 44: scale bar "a" = 5 mm; Fig. 45: scale bar "b" = 1 mm; Fig. 46: scale bar "b" = 0.5 mm; Figs 47, 48: scale bar "b" = 2 mm).



Figs. 49-51. 49-50: *Poecilotiphia gracilis* (Brullé, 1840) ♀. 49: dorsal habitus; 50: head, subfrontal aspect. 51: *Poecilotiphia guichardi* (Guiglia, 1967) ♀, dorsal habitus (Fig. 49: scale bar = 2.5 mm; Fig. 50: scale bar = 0.5 mm; Fig. 51: scale bar = 2.5 mm).

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