

REVISION OF *POLIETINA* SCHNABL & DZIEDZICKI (DIPTERA, MUSCIDAE) AND CONSIDERATIONS ON ITS NEW SYSTEMATIC POSITION¹

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ABSTRACT. *Polietina* Schnabl & Dziedzicki, 1911 has been placed in different subfamilies mainly based on chaetotaxy and general morphology of adults. This genus has most recently been placed in Reinwardtiinae on the basis of larval characters. The male terminalia, however, indicates that *Polietina* is phylogenetically close to the basal group of Muscinae. By the analysis of all available type material, the genus and nine species are redescribed: *P. bicolor* Albuquerque; *P. distincta* Couri & Lopes; *P. flavithorax* (Stein); *P. major* Albuquerque; *P. minor* Albuquerque; *P. orbitalis* (Stein); *P. rubella* (Wulp); *P. steini* (Enderlein) and *P. concinna* (Wulp) which is revalided and lectotype designated. Neotypes are proposed to *Polietina flavithorax* and to *Polietina orbitalis*. *Polietina wulpi* is proposed as a new species. A key is also presented.

KEY WORDS. Diptera, Muscidae, *Polietina*, systematic position, taxonomy

Polietina was described by SCHNABL & DZIEDZICKI (1911), based on one species (*Aricia pruinosa* Macquart, 1846) and was considered related to *Polietes* Rondani, 1864. It has been placed in different sub-families according to various authors. Most recently, SKIDMORE (1985) placed this genus in the Reinwardtiinae, mainly based in characters of the immature stages.

The genus comprises 12 species, all neotropical (CARVALHO *et al.* 1993).

In this study, the genus is redefined and its new systematic position among the Muscidae is discussed, based on the analysis of male terminalia. Description of a new species, redescription of nine poorly known ones: *P. bicolor* Albuquerque; *P. concinna* (Wulp); *P. distincta* Couri & Lopes; *P. flavithorax* (Stein); *P. major* Albuquerque; *P. minor* Albuquerque; *P. orbitalis* (Stein); *P. rubella* (Wulp); *P. steini* (Enderlein), and a key to identification of the studied species are also presented.

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P. basicincta, *P. flavidicincta*, *P. mellina*, originally described by STEIN (1911) in *Aricia* Robineau-Desvoidy, 1830, could not be included in this revision as the type material was destroyed (CARVALHO *et. al.* 1993) and the original descriptions do not have sufficient information to identify them. Although *Polietina flavithorax* and *Polietina orbitalis* were also described by STEIN (1911), they were found in the studied material. The male of *P. steini* is described for the first time.

MATERIAL AND METHODS

All available type material was examined. The studied material belongs to the following institutions: BMNH – The Natural History Museum, London, United Kingdom; DZUP – Coleção Pe. Jesus Santiago Moure, Universidade Federal do Paraná, Curitiba, Brazil; INHS – Illinois Natural History Survey, Urbana, Illinois, United States of America; MHNL – Muséum d'Histoire Naturelle, Lille, France; MNHNP-Muséum National d'Histoire Naturelle, Paris, France; MNRJ-Museu Nacional, Rio de Janeiro, Brazil; UMO – Hope Entomological Collections, University Museum, Oxford, United Kingdom; ZMHU – Museum für Naturkunde, Humboldt-Universität, Berlin, Germany.

The abbreviations used were the ones of CARVALHO (1989), complemented with the following: (**aff.**) affinities; (**cons.**) considerations; (**diag.**) diagnosis; (**ifc**) cruciate interfrontal bristle; (**list**) list of the species; (**n.syn.**) new synonymy; (**syn.**) synonymy.

Polietina Schnabl & Dziedzicki, 1911

Polietina Schnabl & Dziedzicki, 1911: 217 e 218 (cit., desc.). – Séguy, 1935: 97 (key). – Séguy, 1937: 238, 324, (key, syn. rdesc., list). – Albuquerque, 1956: 1-3 (syn., diag.). – Hennig, 1965: 70-74 (cons.). – Pont, 1972: 55 (cat.). – Skidmore, 1985: 21, 24, 91-92 (cit.)

Poecilophoania Malloch, 1921a: 171 (desc.). – Malloch, 1923: 232, 233 (key, cons.). – Curran, 1934: 394 (key). – Malloch, 1928: 313 (cons.). – Séguy, 1935: 97 (key). – Séguy, 1937: 238, 339, (key, syn., rdesc., list). – Albuquerque, 1956: 2 (syn.). – Pont, 1972: 55 (cat.)

Smithomyia Malloch, 1921b: 42 (desc.). – Malloch, 1923: 232, 233 (key, desc.). – Curran, 1934: 394 (key). – Séguy, 1937: 324 (cit.). – Albuquerque, 1956: 2,3 (syn.). – Pont, 1972: 55 (cat.)

Chaetypopleura Enderlein, 1927: 52-53 (desc.). – Albuquerque, 1956: 2 (syn.). – Pont, 1972: 55 (cat.)

Lasiomala Enderlein, 1927: 52-53 (desc.). – Malloch, 1928: 313 (**n.syn.**). – Albuquerque, 1956: 3 (syn.). – Pont, 1972: 55 (cat.)

Type-species. *Aricia pruinosa* Macquart (orig.desc.) = *Mydaea concinna* Wulp, 1896. *Aricia pruinosa* Macquart, 1846, preoc. Zetterstedt, 1845.

Diagnosis. Eyes bare or ciliated; holoptic in males; arista with long cilia on both surfaces, cilia longer near base measuring about twice the length of pedicel; ventral row of cilia in arista present or absent; one proclinated orbital bristle (“ors”); palpi filiform or slightly spatulated at apex; pre-sutural acr developed or not; dc 2:3 or 2:4; pra strong and long; prosternum ciliated laterally; membrane around prosternum bare; 1 long proepisternal and 1 long upward proepimeral bristle; notopleuron with 3 bristles, the middle one shorter; postalar wall ciliated; posterior spiracle ciliated at margin; ctpl 1:2; calypter bare on dorsal surface, posterior one

about twice as long as anterior; R₁ ciliated on dorsal surface until apex, R₄₊₅ on dorsal surface with cilia from nodule to apex or near this and ventral surface with sparse cilia until near r-m or near apex; hind tibia on PD surface with a strong calcar and a strong preapical bristle; sternite I ciliated. Male: posterior spiracle larger than knob; sternite V longer than wide; cercal plate on ventral surface with spined processes (Fig. 3). Female: proboscis short, haustellum bare on sclerotized region; labellum developed; pseudotracheae visible in lateral view (Fig. 21); egg *Phaonia*-type (Fig. 8); ovipositor long, with sclerotized cerci and bristled in both margins; tergites elongated, larger at base; sternite VIII with 2 bristles (Fig. 6).

Affinities. In the original description, SCHNABL & DZIEDZICKI (1911: 218) considered *Polietina* near *Polietes*, a temperate-holarctic genus (PONT 1986). COLLIN (1948) moved *Polietes* from Phaoniinae and considered it near *Mesembrina* Meigen, 1826, a Muscinae genus. HENNIG (1965), based on adult characters, suggested that *Polietina*, was a Cyrtoneurinae, but distantly related to the other Cyrtoneurinae genera proposed by SNYDER (1954). This placement was followed by PONT (1972), but SKIDMORE (1985) included it among the Reinwardtiinae, based on the figures of *P. flavithorax* larvae (ALBUQUERQUE 1956).

Obviously *Polietina* is not a Cyrtoneurinae, nowadays understood as a polyphyletic subfamily. By the characters arista plumose and sinuous subcosta, it is placed among the Muscinae rather than in the Reinwardtiinae. Actually those apomorphies occur in other clades of Muscidae, but all species of *Polietina* have spined processes on ventral surface of cercal plate, an apomorphic character which is only found in the Muscini genera. In this tribe, *Polietina* is phylogenetically closer to the basal genus *Polietes* by the shape of cercal plate. *Polietina* is a monophyletic genus based, at least, in the ciliated postalar wall, an apomorphic character to Muscidae.

Considerations. The species of *Polietina* are probably viviparous. ALBUQUERQUE (1956) had found an uterin 2nd instar larva in a specimen of *P. bicolor*, misidentified by him as *P. flavithorax* (Stein), later mentioned by SKIDMORE (1985) and FERRAR (1987). It was also found a female of *P. orbitalis* (Stein) with many eclosed eggs in abdomen and a first larval instar inside terminalia.

Distribution. Neotropical: Mexico and South America.

Key to males of *Polietina*

1. Post-sutural dc bristles 3 2
 – Post-sutural dc bristles 4 5
2. Hind tibia on AV surface with more than 4 bristles on middle third; spined inferior process of cercal plate with 3 downwardly-directed spines, 1 more developed than others (Fig. 16) (PERU, BRAZIL) *flavithorax*
 – Hind tibia on AV surface with less than 4 bristles on middle third (usually 3); spined inferior process of cercal plate different from described above 3
3. Acrostichal pre-sutural bristles not developed; spined inferior process of cercal plate with 3 similar spines (Fig. 44) (MEXICO) *wulpi*

- Acrostichal pre-sutural bristles developed (one or two pairs); spined inferior process of cercal plate with 3 spines, one more developed than others . . . 4
- 4. Spines at inferior process of cercal plate upwardly directed (Fig. 28) (BRAZIL) *minor*
- Spines at inferior process of cercal plate downwardly directed (Fig. 3) (BRAZIL) *bicolor*
- 5. Spined inferior process of cercal plate with less than 4 spines 6
- Cercal plate with spined inferior process of cercal plate with . . . 4 spines well developed (Fig. 38) (BRAZIL) *steini*
- 6. Spined inferior of cercal plate with 2 spines developed, one almost vestigial (Fig. 12) (MEXICO) *concinna*
- Spined inferior of cercal plate with only one spine well developed (Fig. 32) (PERU, BOLIVIA, BRAZIL, ARGENTINA) *orbitalis*

Key to females of *Polietina*

- 1. Post-sutural dc bristles 3 2
- Post-sutural dc bristles 4 4
- 2. Thorax and legs yellowish, tarsi a little darker; tergite V yellow on apical half (PERU, BRAZIL) *flavithorax*
- Thorax and legs with differently colored (see below); tergite V brown 3
- 3. Fore leg yellow; hind tibia on AD surface with 8-9 bristles (BRAZIL, *Mato Grosso* and *Rio de Janeiro*) *bicolor*
- Fore leg brown; hind tibia on AD surface with no more than 5 bristles (BRASIL, *Mato Grosso* and *Rio de Janeiro*) *minor*
- 4. Hind tibia on AV surface with no more than 4 bristles 5
- Hind tibia on AV surface with 5 or more bristles (BRAZIL, *Mato Grosso* and *Rio de Janeiro*) *major*
- 5. Abdomen brown, with yellow translucent areas in tergites I+II and III and tergite V yellow; antennal flagellum brown (MEXICO, VENEZUELA) *rubella*
- Abdomen differently colored (see below), antennal flagellum yellow 6
- 6. Hind tibia on AV surface with 2 bristles at middle third; legs with different colors as described below 7
- Hind tibia on AV surface with 4 bristles on middle third; legs yellow, mid femur brown on apex, hind femur brown at apical half (BRAZIL) *steini*
- 7. Legs and abdomen differently colored (see below) 8
- Legs brown; fore femur, fore tibia and mid femur yellowish brown; abdomen silver pollinose and with yellow lateral spots on basal half of tergites I-III (BRAZIL, *Mato Grosso*) *distincta*
- 8. Legs yellow; abdomen with tergite I translucent yellow, except on posterior margin; tergite III laterally translucent at base; tergites IV-V dark-brown with silver pollinosity (PERU, BOLIVIA, BRAZIL, ARGENTINA) *orbitalis*

- Legs yellow, with apical two-thirds of fore femur, basal two-thirds and apex of mid femur and tarsi darker; abdomen yellowish with dark-brown stripes on apex of tergites I-IV, tergite V with yellow apex (MEXICO) *concinna*

Polietina bicolor Albuquerque

Figs 1-8

Polietina bicolor Albuquerque, 1956: 10-13, Fig. 24-33 (desc. male/female). – Pont, 1972: 55 (cat.). – Carvalho *et al.* 1993: 62 (cat)

Polietina flavithorax; Albuquerque, 1956: 13-16, Fig. 34-50 (rdesc. male/female, desc. larva, misidentification)

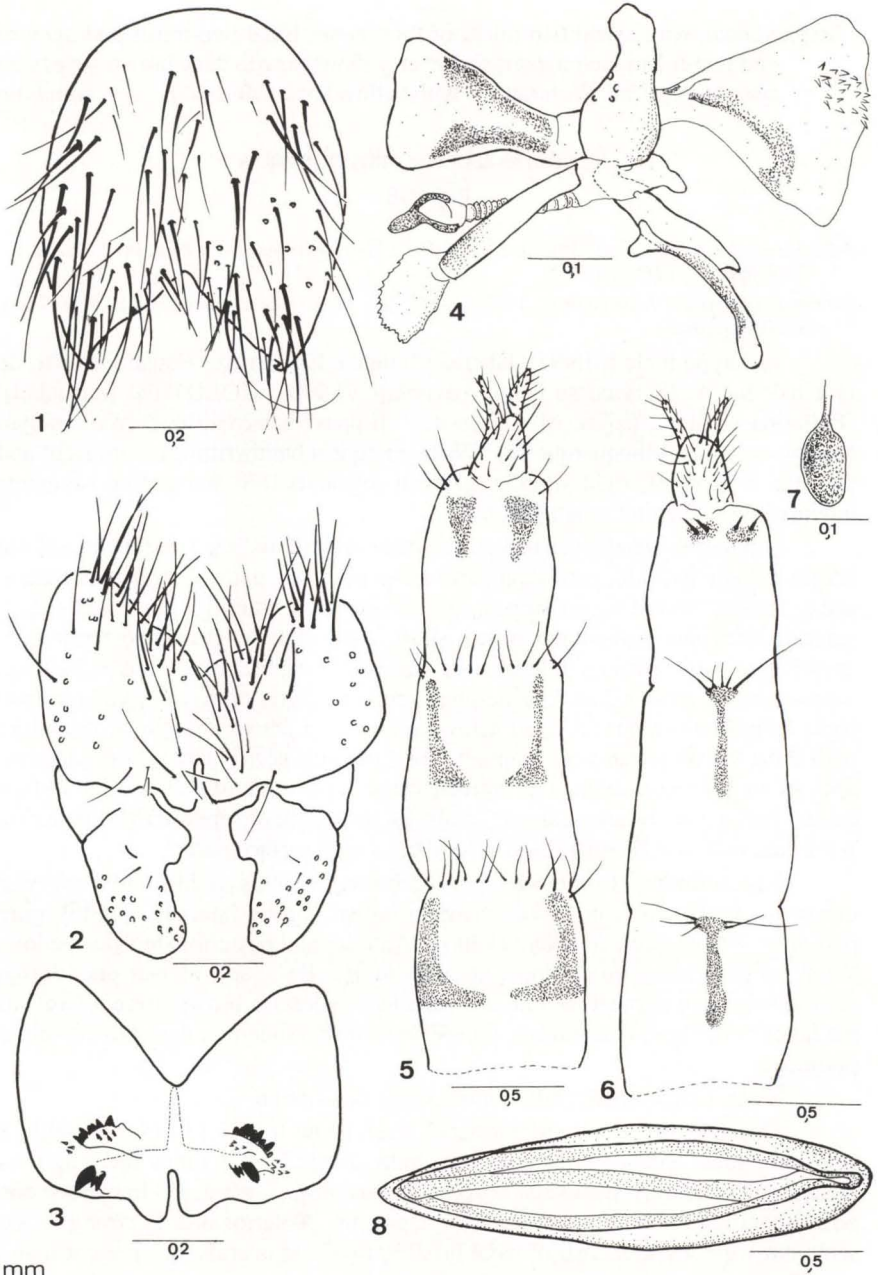
Holotype male [MNRJ], labeled: “Tinguá/ Est. do Rio [Estado do Rio de Janeiro]/ S.F.A. [Serviço da Febre Amarela]/ VI-940”; HOLOTIPO [red label]; “*Polietina bicolor Alb./ S. M. Lopes det.*” [Lopes’ handwriting]; “*Smithomyia bicolor. sp n./ D. Albuquerque det.*” [Albuquerque’s handwriting]. Fore right and left legs broken off; right wing, abdominal segments II-V and genital segments mounted on a slide in Canada balsam.

Diagnosis. Head: eyes bare; 2 reclinate orbital bristles, 1 proclinate orbital bristle, female with ifc, parafacial bare, arista plumose, palpi slightly spatulate at apex. Thorax: paired scutal stripes, more evident presuturally; acr 2:1; dc 2+3; anterior intra-alar post-sutural bristle short, about half length of posterior one; anepimeron with cilia on inferior and superior margins; greater ampulla bare; supra-squamal ridge ciliated; anatergite bare; katatergite pubescent; katepimeron bare; metakatepisternum ciliated below spiracle and above hind coxa; scutellum with short and downward cilia laterally. Base of radial sector bare at both surfaces; apex of radial sector ciliated at both surfaces; R₄₊₅ with cilia at ventral surface ending before r-m; inferior calypter about 1.8 the length of superior. Mid femur on A surface with one preapical bristle, hind coxa on P surface bare.

Redescription. Coloration. Lunule brown, slightly reddish in male and darker at superior half in female. Scutum brown, lighter laterally, slightly gray pollinose. Notopleuron and pleura yellow. Anterior and posterior spiracles yellow. Wing hyaline with brown spots at apex of R₁, R₂₊₃ and at r-m and dm-cu cross-veins. Fore leg yellow, mid and hind legs yellowish brown, except bases of the latter two; claws dark-brown, pulvilli brownish. Abdomen dark brown, silver pollinose.

Male. Length: body: 6.0-7.0mm; wing: 6.5-7.5mm

Distance of eyes at anterior ocelli level, about 0.11-0.13 of head width; 8 frontal bristles; antenna with flagellum long, about 3.3-3.5 times the length of pedicel; palpi slightly spatulated at apex. Thorax: dc 2:3; acr 2:1, 3 humerals; one post-umeral and one strong cilia; 1 sa; 2 psa, the posterior one as strong as sa; scutelum with one short pair of basal bristles, two long laterals, one preapical and one long apical. Fore femur on AD, AV and D surfaces with a complete row of bristles; tibia on A surface with one median bristle. Mid femur on V surface with a series of fine and sparse bristles on basal half; AD, D and PD surfaces with a preapical bristle; tibia on PV surface with a median bristles, P surface with 4 bristles;



Figs 1-8. *Polietina bicolor*. (1) Sternite V, male, dorsal view; (2) cercal plate and surstyli, dorsal view; (3) cercal plate, ventral view; (4) aedeagus and appendices, lateral view; (5) ovipositor, dorsal view; (6) ovipositor, ventral view; (7) spermathecae; (8) egg.

all surfaces with an apical bristle, the V one longer and stronger. Hind femur on AD and AV surfaces with a complete row of bristles, AV surface with 4-5 long, fine and sparse bristles; P and PD surfaces with a preapical bristle; tibia on AV surface with 2-3 bristles on middle third; AD surface with 8-9 bristles with different lengths, the median one longer, the last one is the preapical; PD surface with 2 bristles, the first one short and inserted on basal third and the other one sub-median, long and strong; D, AD and AV surfaces with a long apical bristle, the last one stronger. Abdomen: tergite III with 2 lateral bristles in each side; tergite IV with a series of marginal bristles; tergite V with a series of discal bristles. Sternite V, with long bristles in almost all dorsal surface (Fig. 1).

Terminalia. Cercal plate on dorsal surface with long bristles, more numerous at superior margin, surstyli large (Fig. 2); cercal plate, in ventral surface, with inferior spined process with 3 spines, one stronger and downward; superior spined process elongated, with strong spines at superior margin (Fig. 3). Aedeagus and appendixes as in figure 4.

Female. Length: body: 6.0-7.0mm; wing: 6.5-7.5mm

Similar to male, differing in follow: distance of eyes at anterior ocelli level about 2.8-3.1 times the head width.

Terminalia. Tergites VI-VII larger basally; cerci long, surpassing the apex of epiproct (Fig. 5); sternites VI-VII fine in all extension, sternite VIII with 2 strong spines, the outer one about two times longer than inner (Fig. 6). 3 elongated spermathecae (Fig. 7). Egg *Phaonia*-type (Fig. 8).

Other material examined. Allotype female [MNRJ]: same place as holotype; two paratype female [MNRJ]: "JUSSARAL/ ANGRA – E. DO RIO [Angra dos Reis, Rio de Janeiro State]/ Dario Mendes/ 9.935 [IX/1935]"; one paratype female [MNRJ]: "ITATIAIA/ 800 ms [Itatiaia, Rio de Janeiro State, 800 meters]/ 6-931 [VI/1931]/ D. MENDES [Dario Mendes]"; PARATIPO [green label]; one paratype female [MNRJ]: "Rio de Janeiro/ Dist. Federal [Distrito Federal]/ Brazil/ Julho/ 1958/ Serviço Febre Amarela/ M.E.S., Bras".

Note. One paratype female [MNRJ] labeled: "Maracaju/ Mato Grosso/ Brasil/ Serviço Febre Amarela/ M.E.S., Bras./ Março/ 1957"; PARATIPO [green label]; "*Polietina bicolor* Albuquerque, 1956/ M.S. Couri" [Couri's handwriting]. "*Smithomyia bicolor*, sp.n./ D. Albuquerque det." [Albuquerque's handwriting] has dc 2+4, and is not *P. bicolor* but *P. distincta*.

Distribution. BRAZIL: *Mato Grosso, Rio de Janeiro*.

Polietina concinna (Wulp, 1896), **sp. reval.**

Figs 9-13

Aricia pruinosa Macquart, 1846a: 329 (desc. male/female) [secondary junior homonymy of *Aricia antiqua* var. *pruinosa* Zetterstedt, 1845], **Syn.n.** – Macquart, 1846b: 201 (desc. male/female); Stein, 1907: 284 (rdesc. male/female)

Spilogaster pruinosis; Bigot, 1884: 287 (desc. male). -Albuquerque, 1956: 19 (syn.)

Mydaea concinna Wulp, 1896: 316-318 (desc. male/female). – Malloch, 1921b: 42 (rdesc.female). – Albuquerque, 1956: 19 (syn.)

- Polietina pruinosa*; Schnabl & Dziedzick, 1911: 217-218, Fig. 631-632 (rdesc. male); Stein, 1919: 113 (cat.). – Albuquerque, 1956: 19 (syn. *concinna* Wulp). – Pont, 1972: 55 (cat.). – Carvalho *et al.*, 1993: 63 (cat.)
- Phaonia concinna*; Stein, 1918: 207 (desc. male/female). – Stein, 1919: 113 (cat.). – Albuquerque, 1956: 19 (syn.)
- Smithomyia concinna*; Malloch, 1921b: 42 (rdesc, female). – Malloch, 1923: 233 (cit.). – Albuquerque, 1956: 19 (syn.)
- Phaonia pruinosa*; Séguéy, 1937: 336 (cat.)
- Polietina concinna* Séguéy, 1937: 324 (cit.). – Albuquerque, 1956: 19 (syn.)

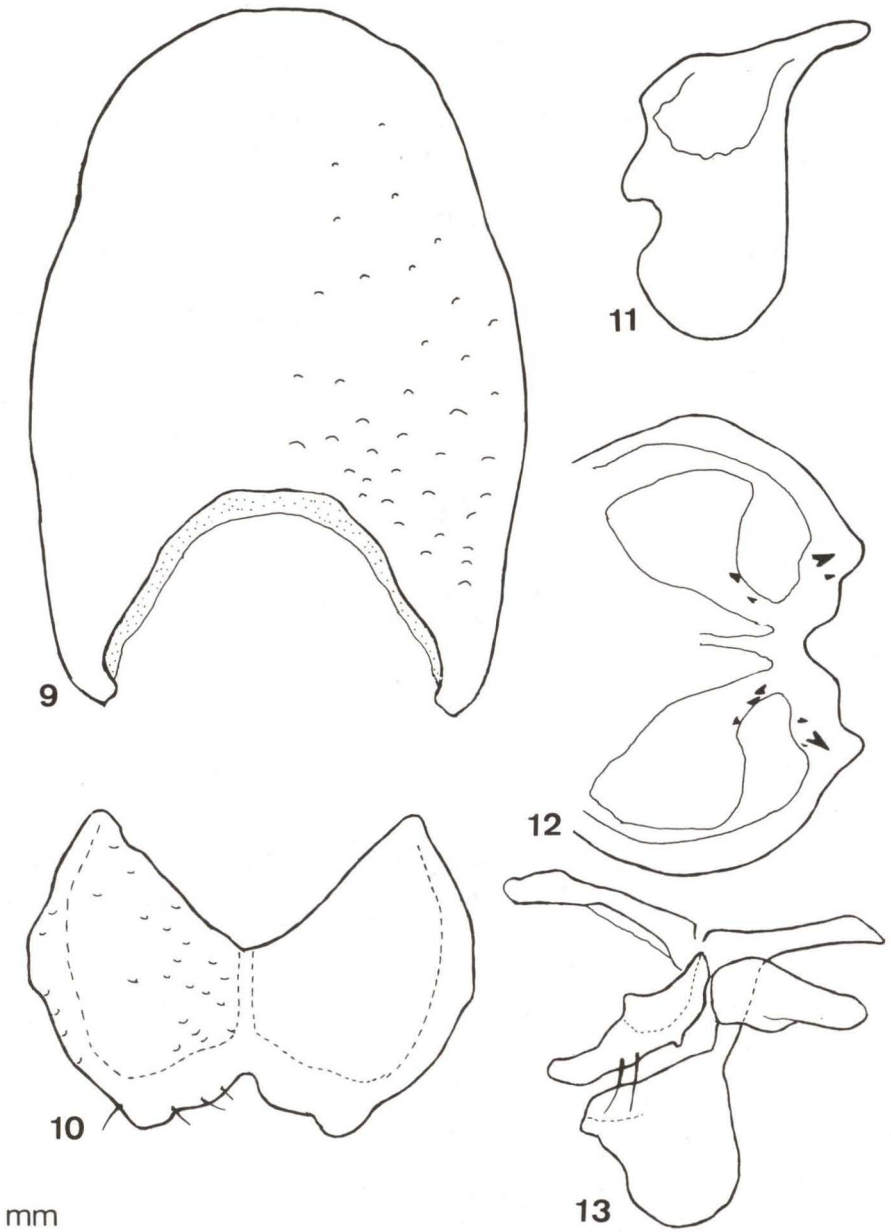
Syntype male [INHS] labeled: "Xucumanatlan,/ Guerrero,/7000 ft/July H. H. Smith"; "male"; B.C.A. Dipt II/ Mydaea /concinna/ v.d.w."; "8 [handwriting, yellow label]; "Smithomyia/ concinna/ (v. d. W) [Malloch's handwriting]"; CO-TYPE/ Mydaea/ concinna/ male v. d. Wulp [handwriting, red label]. It was added to this specimen the following lectotype label: "Lectotype [white label with violet margin]; "Lectotype male/ Mydaea concinna/ Wulp, 1896/ C. J. B. Carvalho des." In good conditions, with fungi on abdomen, specially at apex of tergite V; right anterior tarsi missing. Specimen not dissected.

Diagnosis. Head: 2 reclinate orbital bristles, 1 proclinate orbital bristle, if present, parafacial bare, arista plumose, ventral row of cilia present, palpi filiform, prementum not shiny, pre-stomatal teeth not developed, proboscis retractile. Thorax: scutum with paired stripes, 2 median and 2 lateral, the median ones enlarged after the suture and almost touch the laterals; acr 2:1; dc 2+4; anterior intra-alar post-sutural bristles reduced, almost half length of posterior; anepimeron ciliated at inferior and superior margins; greater ampulla bare; supra-squamal margin ciliated; anatergite bare; katatergite pubescens; katepimeron bare; metakatepisternum ciliated below spiracle and above hind coxa; lateral region of scutellum with many short bristles downwards curved. R₄₊₅ ciliated dorsally until almost apex; sub-costal sclerite with 2 ventral cilia. Mid femur on A surface with a preapical bristle, hind coxa on P surface bare.

Redescription. Coloration: antenna yellow, pedicel and base of flagellum lighter; palpi yellow; thorax dark-brown with stripes, post-alar callus and scutellum yellowish; inferior and superior calypter yellowish; wing hyaline with costal region yellowish; cross veins faintly brown; legs yellow, with apical two-thirds of fore femur, basal two-thirds and apex of mid femur and tarsi darker; abdomen yellowish with dark-brown stripes at apex of tergites I-IV, tergite V with yellow apex.

Female. Length: body: 7.4mm; wing: 7.4mm

Distance of eyes at anterior ocellar level about 1/3 of head width; frontal row with 5 pairs of bristles; antenna with flagellum measuring about 2.5 times of pedicel; palpi falciform; acr 2:1; dc 2+4; 3 humerals, 2 long and strong; 1 post-umeral and a strong cilia; 2 sa; 2 psa; scutellum with one pair of basal bristles, a strong lateral one, one preapical pair an apical one, as strong as lateral one. Fore femur on AD, AV and D surfaces with a complete row of bristles; tibia on AV surface with one sub-median bristle and PD surface with one median bristle weaker than AV one; tarsi without sensitive cilia developed; mid femur on V surface with 3 strong bristles at basal fourth; PD, D and P surfaces, each with a preapical bristle; tibia on P surface with 4 sparse bristles in all extension; PV surface with a sub-median bristle, tarsi as



mm

Figs 9-13, *Polietina concinna*. (9) Sternite V, male, dorsal view; (10) cercal plate, dorsal view; (11) surstylus, dorsal view; (12) cercal plate, ventral view; (13) aedeagus and appendices.

in anterior leg; hind femur on AD surface with a complete row of bristles; AV surface with 7 bristles in all extension; PV surface with 4 bristles at basal half and 7-8 preapicals short; tibia on AD surface with 5 bristles, the 2 median ones stronger; AV surface with 2 median bristles; P surface with a strong bristle at basal fourth; tarsi as in fore leg.

Male. Terminalia. Sternite V longer than large (Fig. 9); cercal plate on dorsal surface with bristles more concentrated at middle (Fig. 10), surstyli large (Fig. 11); cercal plate, in ventral surface, with inferior spined process with 2 developed spines and one almost vestigial, all of them downward directed; superior spined process elongated, with 3 spines of same size (Fig. 12). Aedeagus and appendixes as in figure 13.

Other material examined: Paralectotypes [BMNH]: 1 male *Mydaea pansa* (Giglio-Tos), identified by F. Snyder; 2 females *Helina confins* (Wulp), identified by F. Snyder.

Distribution. MEXICO.

Considerations. Designation of lectotype and synonymic notes. The two syntypes, male and female, of *Aricia pruinosa* Macquart from Texas, USA, are lost. They were collected by Pilate who deposited them in a private collection, from which no information is available. A. C. Pont (personal communication) did not find the syntypes in the MNHNP and in the MHNL. At the BMNH collection there are 3 syntypes from *Mydaea concinna*, reidentified by F. Snyder; the male is *Mydaea pansa?* (Giglio-Tos) and the 2 female are *Helina confinis?* (Wulp). Through kindness of the INHS curator, it was possible to borrow the female syntype of *Mydaea concinna* utilized by MALLOCH (1921b) to erect *Smithomyia*. This specimen is here designated lectotype. The BMNH specimens were labelled as paralectotypes. In the BMNH collection there is another male labelled as syntype, but this specimen is not a syntype, as Wulp (1896: 318) mentioned it only as a variation. It is a new species and is described herein. The syntypes, female and male, of *Aricia pruinosa* are also destroyed (CARVALHO *et al.* 1993: 63).

The specimens at the UMO collection, identified by Bigot as *pruinosis*, are from Mexico. The study of this material (identification of A. C. Pont, confirmed by CJBC) showed that 6 males and 2 females are *P. concinna* Wulp and one female is *Cyrtoneurina uber* Giglio-Tos, 1893.

Polietina distincta Couri & Lopes, 1987

Polietina distincta Couri & Lopes, 1987: 629-631, Fig. 1-4 (desc. female, egg). – Carvalho *et al.*, 1993: 62 (cat.).

Holotype female: [MNRJ] labeled: "Chapada dos Guimarães/ M. [Mato] Grosso/Brasil/ Malaise col/ VII/ 83". HOLOTIPO [red label]. *Polietina distincta* Couri & Lopes, 1987/ M.S. Couri det. [Couri's handwriting]. All legs missing. Abdomen and eggs in a micro-vial with glicerín. Ovipositor lost.

Diagnosis. Head: upper orbital bristles broken, 1 proclinate orbital bristle, ifc present, parafacial bare; arista plumose, ventral row of cilia present, palpi slightly spatulated at apex. Thorax. Paired scutal stripes very faint, 2 median and 2 lateral;

acr 2:1; dc 2+4; pra strong, similar to anterior notopleural; anepimeron with inferior and superior margins ciliated; greater ampulla bare; supra-squamal margin ciliated; anatergite bare; katatergite pubescens; katepimeron bare; metakatepisternum ciliated below spiracle and above hind coxa; lateral region of scutellum with few downwards short bristles. Base of radial sector bare on dorsal and ventral surfaces; apex of radial sector ciliated on dorsal and ventral surfaces; R₄₊₅ with dorsal cilia almost reaching apex; ventral cilia not reaching r-m. Fore tibia on AV surface with one median bristle and PD surface with a preapical one; mid tibia on AD surface with 4 bristles at basal half; AV surface with 2 bristles at middle third; AD and PD surfaces with a preapical bristle.

Redescription. Coloration: antenna yellow, with pedicel and base of flagellum lighter; palpi yellow; thorax dark-brown with faint stripes, post-pronotal callus yellow, post-alar callus and scutellum yellowish; both calypter yellowish; wing hyaline with costal region yellowish; cross vein faintly brown; legs brown, fore femur, fore tibia and mid femur yellowish brown; abdomen silver pollinose and with lateral yellow spots at basal half of tergites I-III.

Female. Length: body: 6.0mm; wing: 6.0mm

Distance of eyes at anterior ocellar level about 2.6 of head width; 5 pairs of frontal bristles; antennae with flagellum measuring about 2.5 times the length of pedicellum; palpi slightly spatulated at apex; acr 2:1; dc 2:4; 3 humerals, 2 stronger; 1 post-humeral and a strong cilia; 2 sa; 2 psa; scutellum with one pair of basal bristles, one lateral strong, one preapical and one apical as strong as lateral one. Fore femur on AD, D and AV surfaces with a complete row of bristles; fore tibia on AV surface with one median bristle and PD surface with a preapical one, D and AV surfaces with an apical bristle; mid femur on AV surface with 5 strong bristles at basal third, ventral surface with one bristle inserted at the limit of basal and middle third; PD and P surfaces, each with a preapical bristle; hind tibia on AD surface with 4 bristles at basal half; AV surface with 2 bristles at middle third; AD and PD surfaces with a preapical bristle, AV surface with an apical bristle.

Terminalia. COURI & LOPES (1987: 631, Fig. 1-2).

Distribution. BRAZIL: *Mato Grosso*.

Considerations: the description of legs are from original paper, as these are broken in the holotype. Male unknown.

Polietina flavithorax (Stein, 1904)

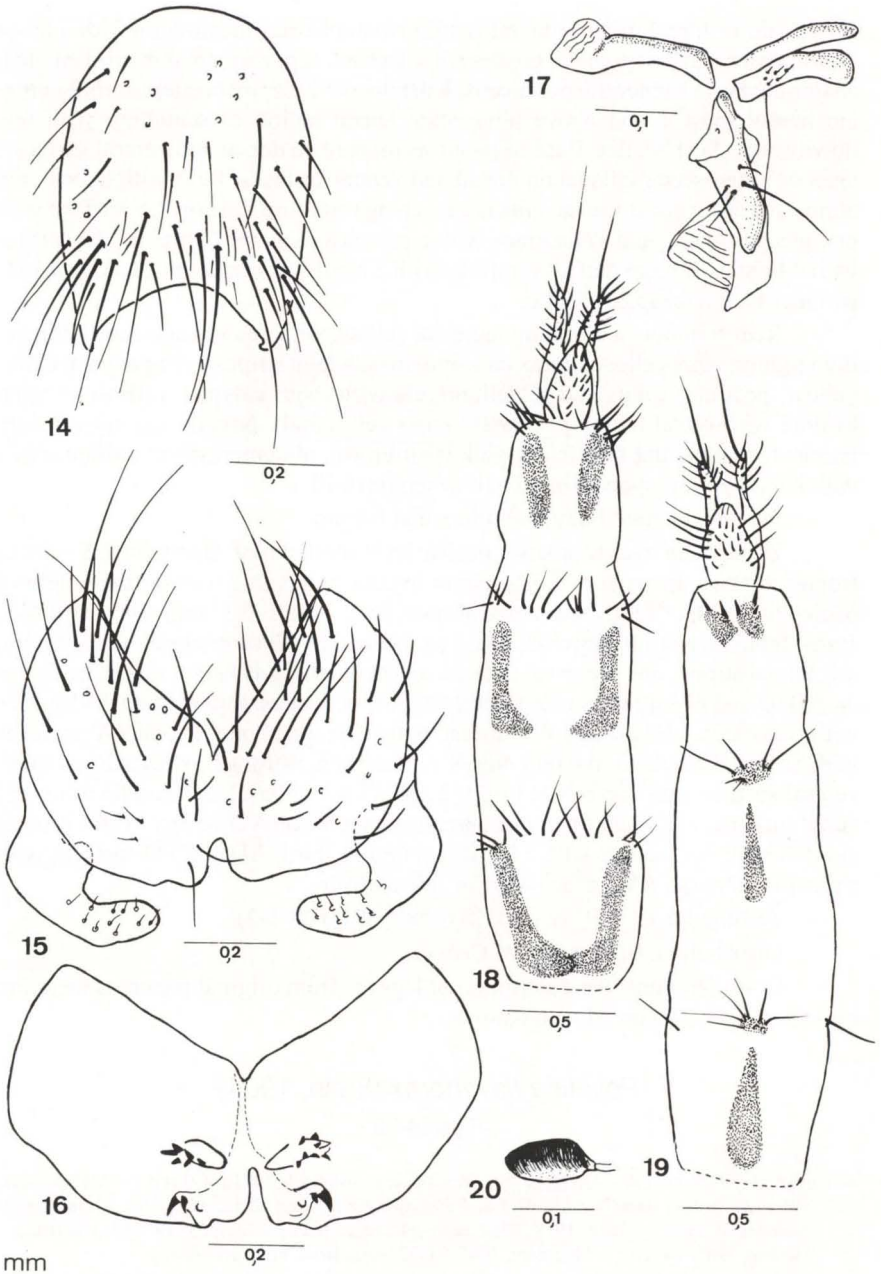
Figs 14-20

Aricia flavithorax Stein, 1904: 416 (desc. male/female, key). -Malloch, 1921a: 171 (cit.). -Albuquerque, 1956: 13 (syn.). -@6.CATALOGO 8 = *Phaonia flavithorax*; Stein, 1911: 62, 67 (diagnosis male/female, key). -Stein, 1918: 208 (comments, rdsc. male). -Stein, 1919: 112, 168 (cat.). -Hennig, 1965: 70 (cit.). -Skidmore, 1985: 91-92 (desc. larva, biol., aff., distr.)

Poecilophaonia flavithorax; Malloch, 1921a: 171 (desig. genotype). -Malloch, 1928: 313 (cit.). -Séguy, 1937: 339 (list)

Lasiomala flavithorax; Enderlein, 1927: 52 (desig. type)

Polietina flavithorax; Pont, 1972: 55 (cat.). -Carvalho *et al.*, 1993: 63.



Figs 14-20. *Polietina flavithorax*. (14) Sternite V, male; (15) cercal plate and surstili, D view; (16) cercal plate, ventral view; (17) aedeagus and appendages, lateral view; (18) ovipositor, D view; (19) ovipositor, ventral view; (20) spermathecae.

Type material. STEIN (1904) examined 3 females and 3 males from Peru (Callanga), deposited at Budapest collection, and two females collected by Bergrich in Brazil, deposited at Berlin collection, which, according to him, are very similar with the others, with few differences. Syntypes are destroyed sec. Carvalho *et al.* (1993: 63).

Neotype is proposed to *P. flavithorax* and was added the neotype label for the following male specimen: Caceres, MT/30.I.1985/C.Elias *leg.*/POLONOROESTE; Polietina/flavithorax/ (Stein, 1904) [Couri's handwriting]. Abdomen in glycerin in micro-vial.

Diagnosis. Head: eyes bare; 2 reclinate upper orbital bristles; 1 proclinate orbital bristle, ifc present, parafacial bare; arista plumose, ventral row of cilia absent, palpi slightly spatulated at apex. Thorax. Paired mesotonal stripes very faint, 2 median and 2 lateral; acr 2:1; dc 2+3; anepimeron with inferior and superior margins ciliated; greater ampulla bare; supra-squamal margin ciliated; anatergite bare; katatergite pubescens; katepimeron bare; metakatepisternum ciliated below spiracle and above hind coxa; lateral region of scutellum with few downwards short bristles. Base of radial sector bare at dorsal and ventral surfaces; apex of radial sector ciliated on dorsal and ventral surfaces; R₄₊₅ with very sparse dorsal cilia almost reaching apex; ventral cilia only in basal third. Fore tibia on AV surface with one median bristle and PD surface with a preapical one; hind tibia on AD and AV surfaces with 5 bristles at middle third; AD and PD surfaces with a preapical bristle.

Redescription. Coloration: Scutum dorsally and pleurae shiny yellow; antenna yellow; legs yellow to yellow-brownish, tarsi dark-yellow. Abdomen dark-brown shiny, tergite I+II yellow with a brown longitudinal stripe at inferior margin, tergite III with 2 yellow elongate lateral spots, tergite V yellow at apical half.

Male. Length: Body: 5.5-6.5mm; wing: 6.6-6.5mm.

Distance of eyes at anterior ocellar level about 0.10-0.12 of head width; 7-8 pairs of frontal bristles; antennae with flagellum measuring about 3 times the length of pedicellum; palpi slightly spatulated at apex; acr 2:1; dc 2:3; 3 humerals, 2 stronger and 1 ciliform; 1 post-humeral and a strong cilia; 2 sa; 2 psa; scutellum with one pair of basal bristles, one lateral strong, one preapical and one apical as strong as lateral one. Fore femur on AD, D and AV surfaces with a complete row of bristles; fore tibia on AV surface with one sub-median bristle, D and AV surfaces with an apical bristle; mid femur on AV surface with 4-5 bristles at basal third, ventral surface with one bristle inserted at the limit of basal and middle third; PD and P surfaces, each with a preapical bristle; hind tibia on AD surface with 4-5 bristles at middle-third; AV surface with 5 bristles at middle third; AD and PD surfaces with a preapical bristle, AV surface with an apical bristle. Sternite V with about 7 long and strong bristles near anterior margin (Fig. 14).

Terminalia. Cercal plate dorsally with bristles in almost all extension; surstyli large with discal short and fine bristles at apical third (Fig. 15). Cercal plate at ventral surface, with inferior spined process with 3 spines, the superior one strong and downward curved, the median one less developed and the inferior one very short (Fig. 16); aedeagus and appendixes as in figure 17.

Female. Length: body: 5.0-5.5mm; Wing: 5.0-5.5mm

Similar to male, differing as follows: Distance of eyes at anterior ocellar level about 1/3 of head width.

Terminalia. Tergites VI-VII long, large at base (Fig. 18); sternites VI-VII pear-shaped, sternite VIII with 2 spines, the outer about twice the length of the inner (Fig. 19). Spermathecae (Fig. 20).

Examined material. BRASIL, *Mato Grosso*: Cáceres, 1 male, 1 female, 17/XII/84; 1 female 24/XII/84; 1 female 18/I/85; 1 female 20/I/85; 1 female, 30/I/85; C. Elias col. (POLONOROESTE) [MNRJ].

Distribution. PERU and BRAZIL: *Mato Grosso*.

Considerations: The analysis of the material utilized by ALBUQUERQUE (1956) in the redescription of this species (deposited at the Museu Nacional collection) showed that there was a of misidentification. The series does not correspond to *P. flavithorax*. Otherwise, in the material studied, specimens of *P. flavithorax* were found and used in this redescription.

Polietina major Albuquerque, 1956

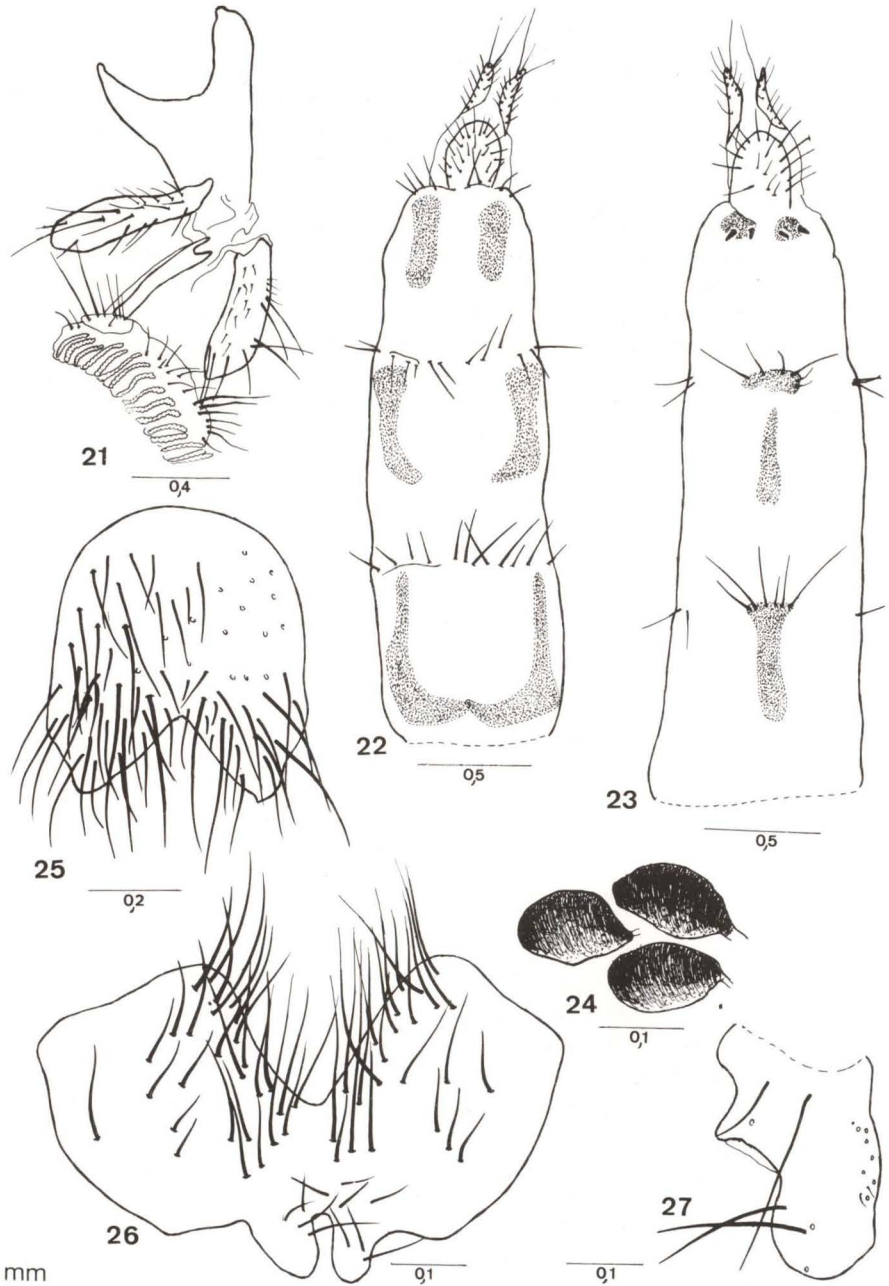
Figs 21-24

Polietina major Albuquerque, 1956: 17-19, Fig. 51-54 (desc. female). – Pont, 1972: 55 (cat.). – Carvalho *et al.*, 1993: 63 (cat.)

Holotype female [MNRJ], labeled: "M. Grosso [Mato Grosso, Brasil]/Salobra/ Exp. C. Z. B./vii.39"; HOLOTIPO [red label]; n° 1207; "*Polietina major* Albuquerque/ S. M. Lopes det" [Lopes's handwriting]; "*Smithomyia major*, sp.n./ D. Albuquerque det." [Albuquerque's handwriting]. In good conditions, left mid leg missing; left wing, abdomen and ovipositor mounted in a slide in Canada Balsam.

Diagnosis. Head: eyes bare; 2 reclinate orbital bristles, 1 proclinate orbital bristle, ifc present, parafacial bare, arista plumose, ventral row of cilia absent; palpi slightly spatulated at apex. Thorax: lateral stripes faint; acr 2:1, the pre-sutural ones very fine in two paratypes; dc 2+4; anterior post-sutural intra-alar reduced; anepimeron with inferior and superior margins ciliated; greater ampulla bare; supra-squama ridge ciliated; anatergite bare; katatergite pubescens; katepimeron bare; mektatepisternum ciliated below spiracle and above hind coxa; lateral region of scutellum with short downwards cilia. Base of radial sector bare on dorsal and ventral surfaces; apex of radial sector ciliated on dorsal and ventral surfaces; R₄₊₅ with dorsal cilia almost reaching apex, ventral cilia not reaching r-m. Mid femur on A surface with a preapical bristle, hind coxa on P surface bare; hind tibia on AD surface with a preapical bristle.

Redescription. Coloration: antenna yellow, with pedicel and base of flagellum lighter; palpi yellow; thorax dark-brown with faint paired stripes, post-pronotal callus yellowish; post-alar callus and scutellum yellowish; calypter yellow; wing hyaline with a brown spot at apical fourth of R₁ and R₂₊₃ and at r-m and dm-cu cross-veins; legs yellow; abdomen brown with silver pollinosity, tergite I+II and apical half of tergite III yellow laterally, tergite V brown.



Figs 21-27. (21-24) *Polietina major*. (21) Proboscis, female, lateral view; (22) ovipositor, dorsal view; (23) ovipositor, ventral view; (24) spermathecae. (25-27) *Polietina minor*. (25) Sternite V male, dorsal view; (26) cercal plate, dorsal view; (27) surstylus, dorsal view.

Female. Length: body: 7.0-7.5mm; wing: 7.0-7.5mm

Distance of eyes at anterior ocellar level about 1/3 of head width; 7 pairs of frontal bristles; flagellomerum measuring about 2.5-2.8 times the length of pedicel; palpi slightly spatulated at apex; proboscis short, haustelum bare at sclerotized region; labelum developed; pseudotracheae visible at lateral view (Fig. 21); acr 2:1; dc 2:4; 1 post-humeral bristle and a strong cilia; 2 sa; 2 psa; scutelum with a short pair of basal bristles, 2 laterals, the anterior one strong, one preapical pair and an apical pair as long as anterior lateral one. Fore femur on AD, AV and D surfaces with a complete row of bristles; tibia on AV surface with a sub-median bristle and PD surface with a median bristle weaker than the AV one; tarsi with sensitive cilia; mid femur on ventral surface with a sparse row of bristles, longer at basal third; PD, D and P surfaces each with a preapical bristle; tibia on P surface with 4 sparse bristles in all extension; PV surface with one sub-median bristle, tarsi as in fore leg; hind femur on AD surface with a complete row of bristles; AV surface with 9 bristles in all extension; PV surface with a complete row of fine and sparse bristles, longer at basal third; tibia on AD surface with 7-8 bristles, AV surface with 5 bristles, the apical 3 ones longer; P surface with one bristle at basal third; tarsi as in other legs.

Terminalia. Tergite VI larger at base, anchor-shaped, tergite VII less larger in base as tergite VI; cerci long, surpassing the apex of hypoproct (Fig. 22); sternites VI and VII fine, sternite VIII with 2 strong and similar downwards spines (Fig. 23). 3 spermathecae pear-like (Fig. 24).

Other material examined: two paratypes female [MNRJ]: same precedence as holotype; one paratype female [MNRJ]: "PARQUE NACIONAL DA SERRA DOS ÓRGÃOS/ TERESÓPOLIS [Rio de Janeiro, Brazil]/ 1.000 m./ 23-27.4.1947/ Wygod.[zinski] col."

Distribution. BRAZIL: *Mato Grosso, Rio de Janeiro.*

Considerations. Male unknown.

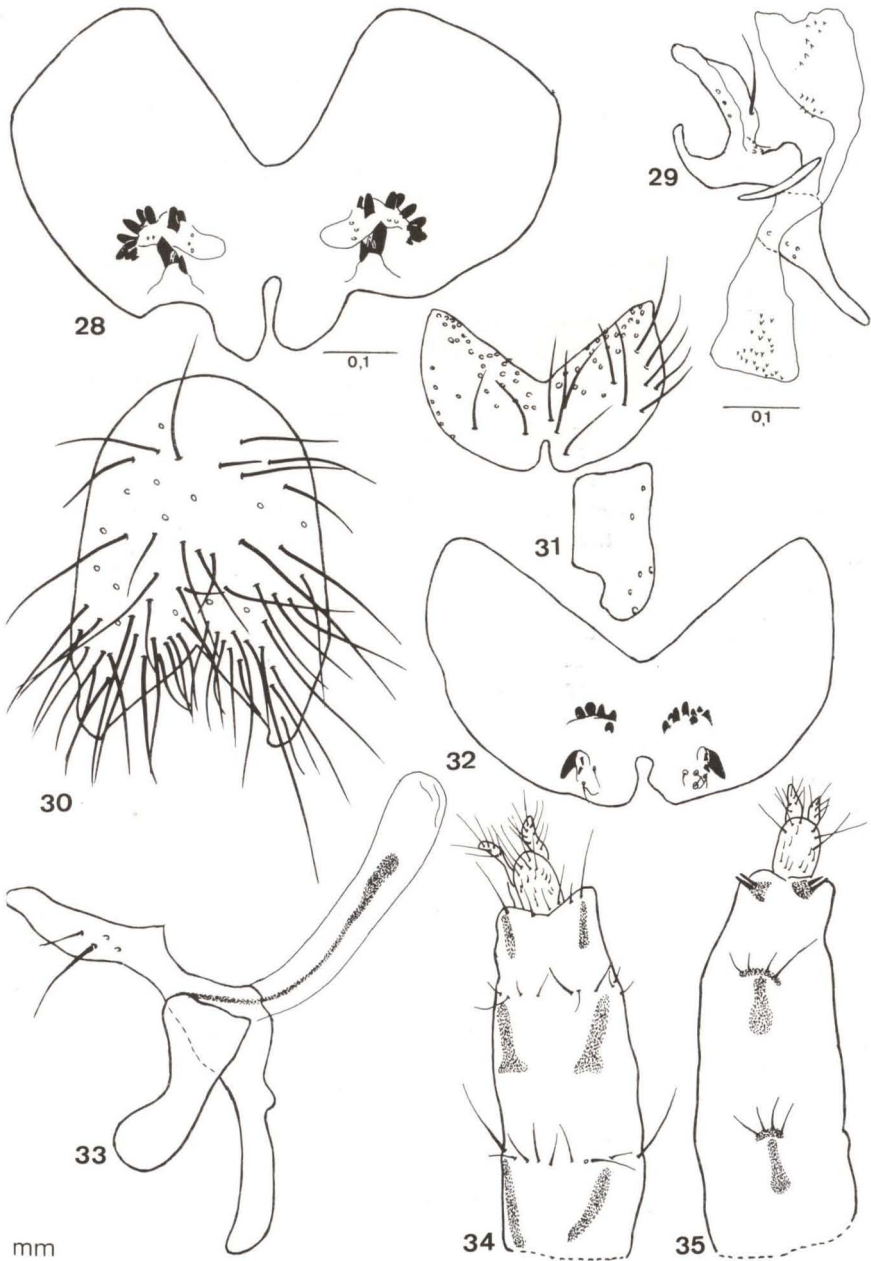
Polietina minor Albuquerque, 1956

Figs 25-28

Polietina minor Albuquerque, 1956: 7-10, Fig. 12-23 (desc.male/female). – Pont, 1972: 55 (cat.). – Carvalho *et al.*, 1993: 63 (cat.).

Holotype male [MNRJ], labeled: "JAPUHYBA/ ANGRA [Angra dos Reis, Rio de Janeiro, Brazil]/ 23-3-940/ J. Lane & Lopes"; HOLOTIPO [red label]; "*Polietina minor* Albuquerque/ S. M. Lopes det" [Lopes' handwriting]; "*Smithomyia minor*, sp.n./ Albuquerque det." [Albuquerque's handwriting]. In good conditions. Right mid leg missing. Right wing, abdomen and terminalia mounted in a slide in Canada Balsam.

Diagnosis. Head: eyes bare; 2 reclinate orbital bristles, 1 proclinate orbital bristles, ifc present in female, parafacial bare, arista plumose, ventral cilia present, but only near base; palpi slightly spatulated at apex. Thorax: paired mesotonal stripes, 2 median and 2 lateral; acr 2:1 (some exemplares with pre-sutural ones very short); dc 2+3; anterior intra-alar post-sutural bristle reduced, about half size of the posterior one; anepimeron with inferior and superior margins ciliated; greater



Figs 28-35. (28-29) *Polietina minor*. (28) Cercal plate, ventral view; (29) aedeagus and appendages, lateral view. (30-35) *Polietina orbitalis*. (30) Sternite V, male, dorsal view; (31) cercal plate and surstylus, dorsal view; (32) cercal plate, ventral view; (33) aedeagus and appendages, lateral view; (34) ovipositor, dorsal view; (35) ovipositor, ventral view.

ampulla bare; supra-squamal ridge ciliated; anatergite bare; katatergite pubescens; katepimeron bare; metakatepisternum ciliated below spiracle and above hind coxa; lateral region of scutellum with short downwards cilia. Base of radial sector bare on dorsal and ventral surfaces; apex of radial sector ciliated on dorsal and ventral surfaces; R_{4+5} with dorsal cilia almost reaching apex. Mid femur on A surface with a preapical bristle, hind coxa on P surface bare; hind tibia on face AD surface with a preapical bristle.

Redescription. Coloration: antenna and palpi yellow; thorax dark-brown with stripes, post-alar callus and scutellum yellow; both calypter yellow, the superior one with darker margins; wing hyaline with very faint brown spots at apex of R_1 and R_{2+3} and around r-m and dm-cu cross-veins; leg I brown, legs II and III darker; abdomen gray pollinose, tergite I+II yellow at base, tergites II and IV dark-brown.

Male. Length: body: 5.0-5.5mm; wing: 6.0-6.5mm

Distance of eyes at anterior ocellar level about 0.05-0.08 times head width; 6 pairs of frontal bristles; antenna with flagellum measuring about 3.3 times the length of pedicellum; palpi slightly spatulated at apex; acr 2:1; dc 2:3; one post-umeral bristle and one strong cilia; 2 sa; 2 psa; scutellum with one pair of basal bristles, one strong lateral, one preapical and one apical as long as lateral one. Fore femur on AD, AV and D surfaces with a complete row of bristles; tibia on AV surface with one sub-median bristle; D, PD and A surfaces with an apical bristle; tarsi with sensitive cilia; mid femur on AV surface with sparse bristles; PD, D and P surfaces, each with a preapical bristle; tibia on P surface with 4 sparse bristles in all extension; PV surface with a sub-median bristle, ventral surface with a strong apical bristle; tarsi as in fore leg; hind femur on AD and AV surfaces with a complete row of sparse bristles; tibia on AD with 5 and AV surfaces with 3 bristles at middle third; D, AD and AV surfaces with an apical bristle; tarsi as in fore leg. Sternite V almost as long as large (Fig. 25).

Terminalia. Cercal plate large, with dorsal bristles numerous near posterior incision (Fig. 26), surstyli large (Fig. 27); cercal plate, at ventral view, with inferior spine process with 3 spines, the outer upwards and stronger than other 2 (one is hidden in figure); superior spine process elongated, with spines along superior margin and at apex (Fig. 28). Aedeagus and appendixes as in figure 29.

Female. 5.5mm; wing: 6.0mm

Distance of eyes at anterior ocellar level about 0.4-0.5 of head width.

Terminalia. ALBUQUERQUE (1956: 10, Fig. 22-23).

Other material examined: Allotype female [MNRJ] labeled: "Maracaju/ M. [Mato] Grosso, / Braz.[Brazil]/ Feb. 937; one paratype female [MNRJ]: same place as holotype; one paratype male [MNRJ]: "THEREZÓPOLIS/ E. DO RIO [Rio de Janeiro State]/ 21/1/940/ FREITAS E LOPES".

Distribution. BRAZIL: *Mato Grosso, Rio de Janeiro*

Considerations. The redescription of female terminalia is not presented because all paratypes lack the abdomen and the allotype's abdomen is lost.

Polietina orbitalis (Stein, 1904)

Figs 30-35

Aricia orbitalis Stein, 1904: 427 (desc. female)*Phaonia orbitalis*; Stein, 1911: 63, 677-678 (diag. female, desc. male, key). – Stein, 1919: 113, 173 (cat.). – Albuquerque, 1956: 3 (syn.)*Lasiomala orbitalis*; Enderlein, 1927: 52 (cit.)*Poecilophaonia orbitalis*; Séguy, 1937: 339 (list of spp.)*Polietina orbitalis*; Albuquerque, 1956: 3, Fig. 1-11 (rdesc. male/female). – Pont, 1972: 55 (cat.). – Carvalho *et al.* 1993: 63 (cat.)Type-material. The holotype is destroyed sec. CARVALHO *et al.* (1993: 63).Neotype is proposed to *P. orbitalis* and was added the neotype label for the following male specimen: GRAJAHÚ/Rio I.XII.40/Lopes & Oliveira; *Smi-thomyia/orbitalis* (Stein) [Albuquerque's handwriting]. Abdomen in glycerin in micro-vial.

Diagnosis. Head: 2 reclinate orbital bristles, 1 proclinate orbital bristles, ifc present in female, parafacial bare, arista plumose, ventral cilia present, but only near base; palpi falciform. Thorax: paired mesotonal stripes, 2 median and 2 lateral; acr 2:1; dc 2+4; anterior intra-alar post-sutural bristle reduced, about half size of the posterior one; anepimeron with inferior and superior margins ciliated; greater ampulla bare; supra-squamal ridge ciliated; anatergite bare; katatergite pubescens; katepimeron bare; metakatepisternum ciliated below spiracle and above hind coxa; lateral region of scutellum with short downwards cilia. Base of radial sector bare on dorsal and ventral surfaces; apex of radial sector ciliated on dorsal and ventral surfaces; R₄₊₅ with dorsal cilia almost reaching apex, ventral cilia not reaching r-m. Mid femur on AV surface with a row of fine bristles at basal third, hind coxa bare on P surface; hind tibia on AD surface with a series of about 9 bristles, 2 of them longer, AV surface with 2 bristles.

Redescription. Coloration: yellowish-brown with last abdominal tergites dark-brown; arista yellow; legs yellow, claws yellow at basal half and black at apical half; wing yellow-grayish, with costal margin, R₁, apex of R₂ e R₃₊₄ and r-m e dm-cu faintly brown; abdomen with tergite I translucent yellow, except on posterior margin, tergite III with base translucent laterally, tergites IV-V dark-brown with silver pollinosity.

Male. Length: body: 7.4mm; wing: 7.5mm

Distance of eyes at anterior ocellar level about 0.10-0.12 of head width; 8-10 pairs of frontal bristles; antenna with flagellum measuring about 3.0-3.4 times the length of pedicellum; palpi falciform; acr 2:1; dc 2:4; one post-umeral bristle and one strong cilia; 2 sa; 2 psa; scutellum with one pair of basal bristles, one strong lateral, one preapical and one apical as long as lateral one. Fore femur on AD, AV and D surfaces with a complete row of bristles; tibia on AV surface with one median bristle; mid femur on AV surface with fine bristles at basal third; PV surface with a sparse row of long bristles at basal half; PD, D and P surfaces, each with a preapical bristle; tibia on P surface with 4 sparse bristles; PV and AV surfaces with one strong apical bristle; hind femur on AV surfaces with a row of bristles ending before apex;

hind tibia on AD surface with a series of about 9 bristles, 2 of them longer, AV surface with 2 bristles. Sternite V with long bristles (Fig. 30).

Terminalia. Cercal plate with bristles at superior margin (Fig. 31); cercal plate, at ventral view, with inferior spine process with 3 spines, the outer downwards and stronger than other 2 which are very small; superior spine process elongated, with spines along superior margin (Fig. 32). Aedeagus and appendixes as in figure 33.

Female. 5.5mm; wing: 6.0mm

Distance of eyes at anterior ocellar level about 1/3 of head width. Frontal row with 8-9 pairs of bristles.

Terminalia. Ovipositor shorter than in other species; tergite VI not enlarged at base; tergite VII a little enlarged at base (Fig. 34); sternites VI and VII pear-shaped, sternite VII with 2 strong and similar spines (Fig. 35).

Material examined. BRAZIL, *Mato Grosso*. Maracaju. 16 females. VI/1937. Serviço Febre Amarela. M.E.S. *Rio de Janeiro*. Rio de Janeiro. 1 male, 28/VII/1941, Lopes & Oliveira col.; Mangaratiba, 1 male, VII/1988, Serviço Febre Amarela, M.E.S. [MNRJ]

Distribution. PERU; BOLIVIA; BRAZIL: *Mato Grosso, Santa Catarina, Rio de Janeiro*; and ARGENTINA

Considerations. This material is the same studied by ALBUQUERQUE (1956), deposited at the Museu Nacional collection. Although it was imposible to see the type, his identification is confirmed. There is also a good series in the BMNH identified by A. C. Pont.

Polietina rubella (Wulp, 1896)

Hyetodesia rubella Wulp, 1896: 314, pl. 8, Fig. 1, 1a (desc. female and key). – Séguy, 1937: 336 (cit.)

Phaonia rubella; Séguy, 1937: 336 (cit.)

Polietina rubella; Pont, 1972: 55 (cat.). – Carvalho *et al.*, 1993: 64 (cat.)

Holotype labeled [BMNH]: "Holo-/type" [red label white in center]; B.C.A. Dipt. II/ Hyetodesia/ rubella,/V.D.W."; "Omiteme,/Guerrero,/8000 ft./July. H.H.Smith"; CENT.AMERICA:/ F.D. Godmann & /O. Salvin/B.M. 1903-172". Right fore leg I and part of right hind femur, pleurites of left side and part of costal region of right wing, near end of R₂₊₃ missing.

Diagnosis. Head: eyes ciliated; 2 reclinate orbital bristles, 1 proclinate orbital bristle, parafacial bare, arista plumose, ventral cilia present, palpi filiform; prementum not shiny, with gray pollinosity; proboscis retractile. Thorax: paired mesotonal stripes, 2 median and 2 lateral, the median ones are larger after suture almost touching the laterals; acr 2:1; dc 2+4; anterior intra-alar post-sutural bristle reduced, about 2/3 of the posterior; pra strong; stronger than notopleural anterior; anepimeron with inferior and superior margins ciliated; greater ampulla bare; supra-squamal ridge setulose; anatergite bare; katatergite pubescens; katepimeron bare; metakatepisternum ciliated below spiracle and hind coxa; lateral region of scutellum with many short downwards bristles. Base of radial sector bare on dorsal and ventral

surfaces; apex of radial sector ciliated on dorsal and ventral; surfaces; R₄₊₅ with dorsal cilia almost reaching apex. Mid femur on A surface with a preapical bristle, hind coxa on P surface bare; tibia on AD surface with a preapical bristle.

Redescription. Coloration: antenna dark-brown with pedicellum and base of flagellum yellowish, palpi yellowish; thorax dark-brown with gray pollinosity and 4 stripes; apex of scutellum yellow reddish, post-pronotal callus yellow, post-alar callus and scutellum yellowish; both calypter whitish; wing hyaline with costal region slightly dark-brown; cross veins dark-browns; legs dark-brown, fore tibia lighter; abdomen brown, with yellow translucent areas in tergites I+II and III; tergite V yellow.

Female. Length: body: 8.2mm; wing: 8.2mm

Eyes ciliated, distance of eyes at anterior ocellar level about 1/3 of head width; 10 pairs of frontal bristles initiated at level of lunule; antenna with flagellum about 2.0 times the length of pedicellum; palpi falciform; acr 2:1; dc 2:4; 3 humerals, 2 of them stronger; one post-humeral bristle and a strong cilia; scutellum with one pair of basal bristles, one strong lateral, one preapical and one apical similar to lateral one. Fore femur on AD, AV and D surfaces with a complete row of bristles; tibia on AV surface with one sub-median bristle and PD surface with one median bristle, weaker than AV one; tarsi without sensorial cilia developed; mid femur on ventral surface with 3 strong bristles at basal fourth; D, PD and P surfaces with preapical bristles, respectively 2 weak, 1 and 1; tibia at P surface with 4 sparse bristles in all extension; PV surface with one sub-median bristle, tarsi as in fore leg; hind femur at AD surface with a complete row of bristles; AV surface with 6 bristles in all extension; PV surface with 2 bristles at basal half; tibia at AD surface with 4 bristles, the 2 first ones stronger; AV surface with 2 median bristles: P surface with a strong bristle at basal fourth; D surface with one preapical bristle; tarsi as in fore leg.

Distribution: MEXICO, VENEZUELA.

Considerations. Male unknown.

Polietina steini (Enderlein, 1927)

Figs 36-40

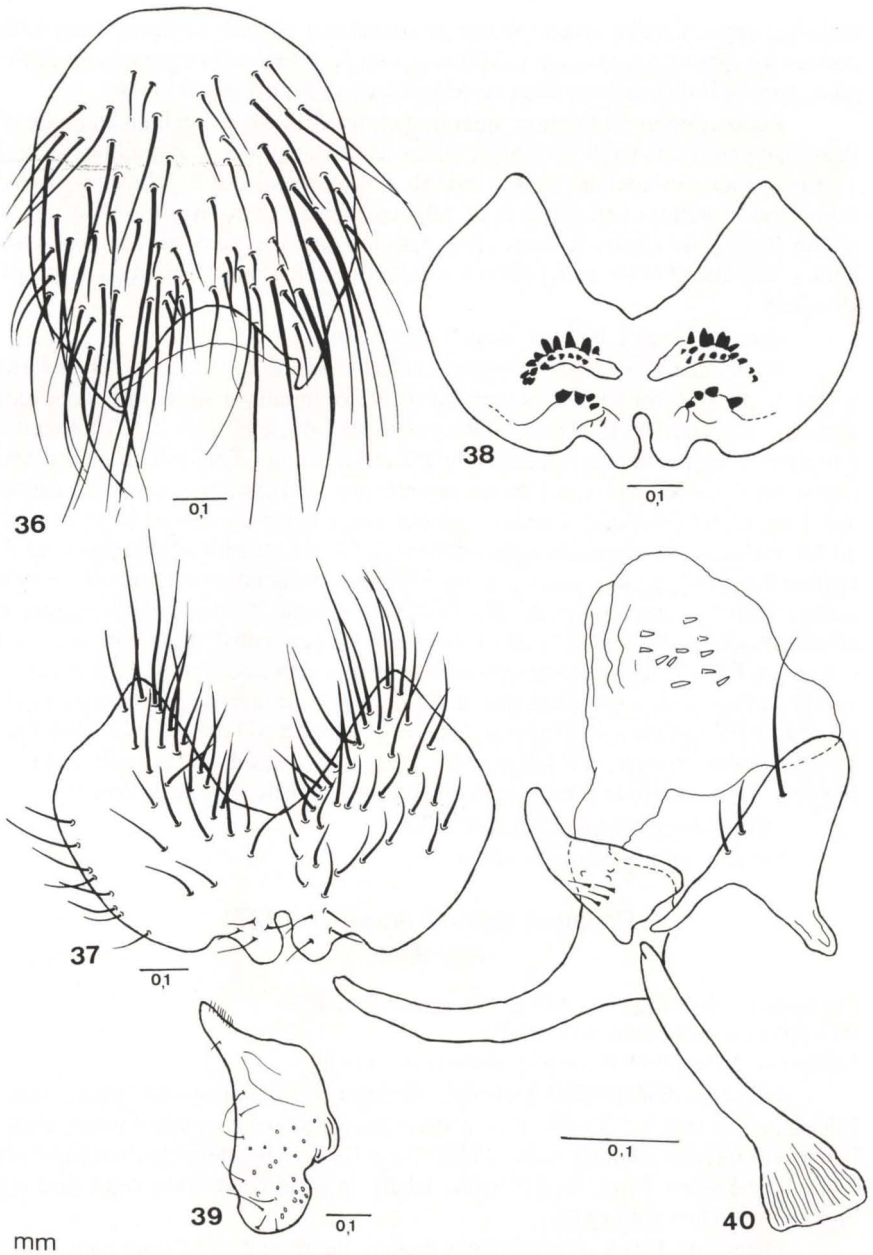
Chaetypopleura steini Enderlein, 1927: 53 (desc. female, desig. type)

Poecilophaonia steini; Séguy, 1937: 339 (list)

Polietina steini; Pont, 1972: 55 (cat.). – Carvalho *et al.*, 1993: 64

Holotype male [ZMHU] labeled: "Brasilia,/ Colonia Hansa [Corupá, Santa Catarina],/Linnaea V."/TYPE" [red label]; *Chaetypopleura/ steini*,/ Enderl. male. [handwriting]/ Dr. Enderlein det., 1926/ "New 1/ Hypopleuraborste [handwriting white label]/ Zool. Mus./ Berlin [white label]. In good conditions; right fore leg broken. Abdomen with fungi.

Diagnosis. Head: orbital bristles broken, ifc present, parafacial bare, arista plumose, ventral row of cilia present, palpi slightly spatulated, prementum not shiny. Thorax: scutum with very faint paired stripes; acr 2:1; dc 2+4; anepimeron ciliated at inferior and superior margins; greater ampulla bare; supra-squamal margin ciliated; anatergite bare; katatergite pubescens; katepimeron bare; metaka-



Figs 36-40. *Polietina steini*. (36) Sternite V, male, dorsal view; (37) cercal plate, dorsal view; (38) cercal plate, ventral view; (39) right surstylus, lateral views; (40) aedeagus and appendices, lateral view.

tepigsternum ciliated below spiracle and above hind coxa; lateral region of scutellum with many short bristles downwards curved. R₄₊₅ ciliated Dly until almost apex; sub-costal sclerite with 2 ventral cilia. Legs yellow, except apex of mid femur and apical half of hind femur. Mid femur on A surface with a preapical bristle, hind coxa on P surface bare.

Redescription. Coloration: antenna yellow; palpi yellow; thorax brown, darker in center, post-alar callus yellowish and scutellum dark-brown; inferior and superior calypter yellowish; wing hyaline, with costal margin, apex of R₂ and R₃₊₄ and r-m e dm-cu with a brown macula; legs yellow, except apex of mid femur and apical half of hind femur; tibia and tarsi darker; abdomen dark-brown, tergites I-II yellow at basal half.

Male. Length: body: 8mm; wing: 7.5mm

Frontal row with 9 pairs of bristles; antenna with flagellum measuring about 2.8 times of pedicel; acr 2:1; dc 2+4; 3 humerals, 2 long and strong; 1 post-umeral and a strong cilia; 2 sa; 2 psa; scutellum with one pair of basal bristles, two strong laterals, one preapical pair an apical one, the last one longer and stronger than others. Fore femur on AD, AV and D surfaces with a complete row of bristles; tibia on AV surface with one sub-median bristle and PD surface with one median bristle weaker than AV one; tarsi with sensitive cilia developed; mid femur on ventral surface with a row of bristles; PD, D and P surfaces, each with a preapical bristle; tibia on P surface with 4 sparse bristles in all extension; PV surface with a sub-median bristle, tarsi like in anterior leg; hind femur on AD surface with a complete row of bristles; AV surface with 9 bristles in all extension; PV surface with 3 short bristles at basal half; tibia on AD surface with 8 bristles at apical two-thirds, the last one is the preapical, the 2 median ones stronger; AV surface with 3-4 at middle-third; tarsi as in fore leg. Sternite V longer than large, with many bristles in all D surface (Fig. 36).

Terminalia. Cercal plate with long bristles at upper third (Fig. 37), ventral surface with 4 spines at inferior spined process (Fig. 38); surstyli long (Fig. 39). Aedeagus as in figure 40.

Female. Length: body: 7.5mm; wing: 7.5mm

Distance of eyes at anterior ocellar level about 1/3 of head width.

Material examined. BRASIL, *Rio de Janeiro*: Petrópolis (Retiro), 1 male, 18/I/1977, H.S. Lopes col. [MNRJ].

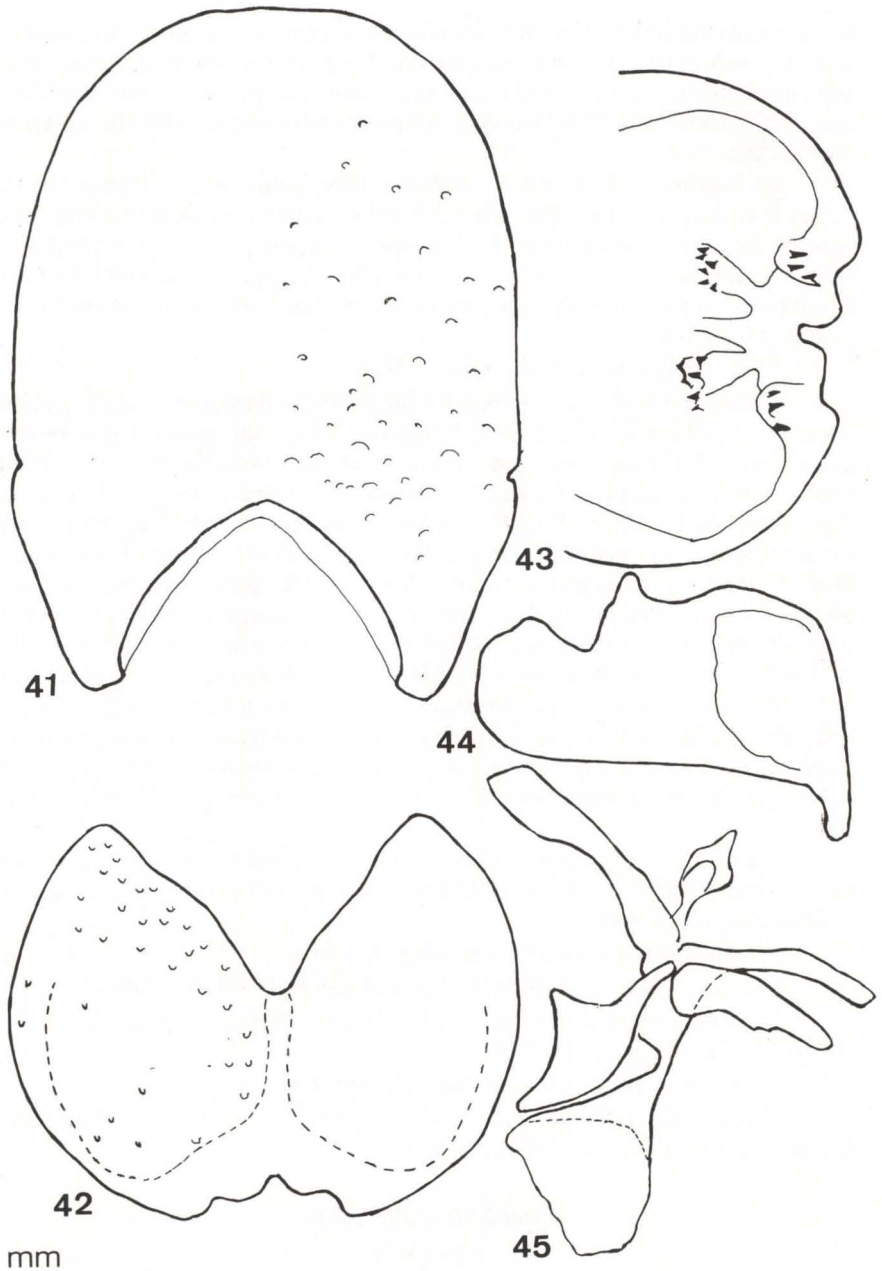
Distribution. BRAZIL: *Rio de Janeiro*, *Santa Catarina*.

Considerations. *Polietina steini* is the only known *Polietina* with 4 posterior dc and with 4 bristles on hind tibia AD surface.

Polietina wulpi sp.n.

Figs 41-45

Holotype male labeled: "B. C. A. Dipt. II"; "Mydaea/ concinna/ v. d. w."/ "Xucumanatlan./ Guerrero/ 7.000 ft/ July. H. H. Smith", "CENT AMERICA/ F. D. GODMAN &/ O. SALVIN/ B.M. 1903. 172"; "Polietina/ concinna Mall/ Van



Figs 41-45. *Polietina wulpi*. (41) Sternite V, male, dorsal view; (42) cercal plate, dorsal view; (43) cercal plate, ventral view; (44) right surstylus, lateral view; (45) aedeagus and appendices, lateral view.

Emdem det. 1938" [BMNH]; "A. C. Pont det 1974/ This male is/ Wulp's var" [label pinned in box]. In good conditions, right wing missing, left wing partially broken at costal margin.

Diagnosis. Head: parafacial bare; arista plumose; ventral cilia present; palpi filiform; prestomal teeth not developed; proboscis retractile. Thorax: paired meso-tonal stripes, acr 0:1; dc 2+3; anterior post-sutural intra-alar bristle reduced, about 2/3 of the posterior; anepimeron with inferior and superior margins ciliated; greater ampulla bare; anatergite bare; katatergite pubescens katepimeron bare; metakatepisternum ciliated below spiracle and above hind coxa; lateral region of scutellum with many short downwards bristles. Base of radial sector bare on dorsal and ventral surfaces; apex of radial sector ciliated on dorsal and ventral surfaces; R₄₊₅ with dorsal cilia until the middle of basal cell, not reaching anterior cross vein. Mid femur on A surface with a preapical bristle, hind coxa on P surface bare; tibia on AD surface with a preapical bristle.

Description. Coloration (specimens a little damaged Dly): antenna yellow, with pedicellum and base of flagellum lighter; palpi yellow, with base dark-brown; thorax dark-brown with paired stripes, post-pronotal callus yellow, post-alar callus and scutellum reddish; both calypter yellowish; cross veins slightly brown; legs yellowish, fore and mid femora dark-brown at basal two-thirds and preapically on D surface; hind femur with a dark-brown stripe at middle third and preapically; tibia and tarsi darker. Abdomen with tergites I+II and III yellow, with inferior margins brown; tergite IV dark-brown, yellowish latero-superiorly, tergite V dark-brown.

Male. Length: body: 7.0mm; wing: 7.0mm.

Distance of eyes at anterior ocellar level about 0.06 of head width; 10 pairs of frontal bristles; antenna with flagellum long, about 2.0 times the length of pedicellum; palpi falciform; acr 0:1; dc 2:3; 3 humerals, 2 of them stronger; 1 post-humeral bristle and one strong cilia; 2 sa; 2 psa; scutellum with one pair of basal bristles, one strong lateral, one preapical and one apical as strong as the lateral one. Fore femur on AD, AV and D with a complete row of bristles; tibia on AV surface with one sub-median bristle and PD surface bare; tarsi with sensitive cilia developed; mid femur on V surface with 4 strong cilia at basal fourth; PD, D and P surfaces, each with one preapical bristle; tibia on P surface with 4 sparse bristles in all extension; PV surface with one sub-median bristle, tarsi as in fore leg; hind femur on AD surface with a row of bristles; AV surface with 9 weak bristles; PV surface with 4 bristles at basal half and 7-8 short preapical ones; tibia on AD surface with 9 bristles, the 2 median ones stronger; AV surface with 2 median bristles; P surface with a strong bristle at basal 1/4; tarsi as in fore leg. Sternite V longer than large (Fig. 41).

Terminalia. Cercal plate with D bristles near incision (Fig. 42), surstyli large (Fig. 43); cercal plate on ventral surface with 3 similar and downwards spines at inferior spined process; superior spine process with 6 similar spines (Fig. 44). Aedeagus and appendixes as in figure 45

Distribution: MEXICO.

Considerations. Female unknown.

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