Miambera miae n. gen., n. sp. from southern Brazil
(Diptera: Chironomidae, Orthocladiinae)

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Abstract: Miambera miae n. gen., n. sp. is described and figured based on adult males from Mata Atlântica in southern Brazil. This genus can be separated from other Orthocladiinae based on the combination of hairy eyes; antenna with strong, subapical seta; decumbent acrostichals in the anterior third of scutum; bare wing and squama; R4+5 ending proximal to M3+4; anal point lacking; and tuft of strong, flattened macrotrichia on low, dorsal protuberance of tergite IX.

Keywords: Chironomidae, Orthocladiinae, Miambera, new genus, new species, Brazil, Neotropical region, Mata Atlântica.


Resumo: Miambera miae n. gen., n. sp. é descrito e ilustrado com base em machos adultos coletados na Mata Atlântica do sul do Brasil. Este gênero pode ser separado dos demais Orthocladiinae com base na combinação de olhos com pelos entre os omatídeos; antena com seta subapical desenvolvida; acrosticais decumbentes no terço anterior do escudo; asas e squama nusas; R4+5 terminando proximal em relação ao ápice de M3+4; ponta anal ausente e macrotríquios longos e achatados numa pequena protuberância dorsal do tergito IX.

Palavras-chave: Chironomidae, Orthocladiinae, Miambera, gênero novo, espécie nova, Brasil, região Neotropical, Mata Atlântica.
Introduction

In their catalog of the Neotropical and Mexican chironomids Spies & Reiss (1996) listed seven species of Orthocladiinae belonging to five genera from Brazil. Today nearly 100 species of orthoclads have been described or recorded from Brazil and several new genera have been added (see Mendes & Pinho 2011). However, many new Brazilian Orthocladiinae species still await description. When collecting in Brazil many of the orthoclads encountered do not readily fit into any described genus and below we describe one of these species showing unique character combinations, placing it in a new genus.

Material and Methods

The specimens were mounted in Canada Balsam following the procedures outlined by Sæther (1969). The general morphology follows Sæther (1980).

The types will be deposited in Museu de Zoologia da Universidade de São Paulo (MZUSP) and in The Department of Natural History, University Museum of Bergen, University of Bergen, Bergen, Norway (ZMBN).

Miambera new genus

Type species: Miambera miae new species

Etymology: Named after the senior author’s four year old grand daughter Mia Rieber-Mohn for all her “help” and suggestions while drawing the species; and mberui, from Tupi meaning midge, mosquito; meaning Mia’s midge. Gender of the genus name: feminine.

Diagnostic characters: The combination of hairy eyes; antenna with strong, subapical seta; decumbent acrostichals in the anterior third of scutum; bare wing and squama; R₁; ending proximal to M₂₊₃; anal point lacking; and tuft of strong, flattened macrotrichia on low dorsal protuberance of tergite IX will separate the genus from all other Orthocladiinae.

Description: Small sized species, wing length 0.74-0.86 mm. Head. Eye hairy, reniform, without dorsomedian extension. Antenna with ten flagellomeres, in some specimens division of ultimate flagellomere is indicated giving an eleven segmented antenna; sensilla chaetica present on flagellomeres 3 and ultimate; groove beginning at flagellomere 2; plume sparse; with strong subapical seta. Palpomeres normal, third palpomere widened in middle portion, with few sensilla clavata in sensillum coeloconicum. Temporal setae in single row, inner verticals weak, outer verticals strong, postorbitals absent. Frontal tubercle absent. Tentorium and stipes normal. Cibarial pump as in Figure 2. Tentorium 61-84, 71 µm long, 10-15, 12 inner verticals. Temporal setae 6-7, 6 including 3-4, 3 inner verticals and 3-4, 3 outer verticals. Clypeus with 3-6, 5 setae. Temporal setae 6-7, 6 including 3-4, 3 inner verticals and 3-4, 3 outer verticals. Clypeus with 3-6, 5 setae. Tentorium, stipes, and gonostylus normal. Scutellum with few scattered strong setae. Thorax. Antepronotum reduced, with lobes widely separated at anterior margin of scutum; anterior third of scutum; bare wing and squama; R₁; ending proximal to M₂₊₃; anal point lacking; and tuft of strong, flattened macrotrichia on low dorsal protuberance of tergite IX will separate the genus from all other Orthocladiinae.

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Leg. Tibial spurs and comb normal. Tarsal pseudospurs and sensilla chaetica absent. Pulvilli vestigial.

Abdomen. Abdominal setation reduced. Tergite I with few strong median setae, tergites II-VIII with anterior and posterior irregular rows of few strong setae. Sternite I-III bare, sternite IV without or with single strong median seta, sternite V-VII with single to few strong median setae, sternite VIII with few scattered strong setae.

Miambera miae new species


Etymology: The species is named after Mia Rieber-Mohn, see etymology for genus name.

Diagnostic characters: See diagnostic characters for the genus.

Description: Male (n = 10, except when otherwise stated). Total length 1.08-1.26, 1.17 mm. Wing length 746-857, 791 µm. Total length/wing length 1.37-1.59, 1.48 (8). Wing length/length of profemur 2.43-2.96, 2.81.

Coloration. Brown, without darker markings; palps slightly lighter than body.

Head (Figure 1). Antenna (Figure 4) with 10 flagellomeres, AR 0.54-0.65; 0.59 (8), ultimate flagellomere 158-194, 176 (8) µm long; if regarded as with 11 flagellomeres, AR 0.57-0.62 (2), ultimate flagellomere 173-176 (2) µm long; subapical seta 20-36, 29 (9) µm long. Temporal setae 6-7, 6 including 3-4, 3 inner verticals and 3-4, 3 outer verticals. Clypeus with 3-6, 5 setae. Tentorium, stipes, and cibarial pump as in Figure 2. Tentorium 61-84, 71 µm long, 10-15, 13 µm wide; stipes 59-82, 71 µm long, 25 (1) µm wide. Palp segments lengths / widths (in µm): 11-15, 13-10 / 12, 11; 20-29, 25/11-14, 12; 41-50, 44/13-20, 17; 43-57, 49/9-12, 11; 59-88, 76/8-12, 9. Third palpomere (Figure 3) with 4-5, 5 sensilla clavata subapically in sensillum coeloconicum, longest 9-11, 10 µm long.

Thorax (Figure 5). Antepronotum with 1-3, 2 setae. Dorsocentrales 7-10, 8; acrostichals 2-3, 2, decumbent, in anterior third of the scutum,
Figures 1-6. *Miambera miae* n. gen., n. sp., male. 1) Head; 2) Tentorium, stipes and cibarial pump; 3) Third palpomere, ventral view; 4) Ultimate flagellomeres of antenna; 5) Thorax; 6) Wing.
Miambera miae new genus, new species

Table 1. Lengths (in µm) and proportions of legs of Miambera miae n. gen., n. sp. (n = 10).

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<td>22-27, 25</td>
<td>0.37-0.40, 0.38</td>
<td>4.37-4.87, 4.62</td>
<td>4.75-5.12, 4.89</td>
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<td>16-25, 21</td>
<td>0.38-0.42, 0.41</td>
<td>4.93-5.25, 5.09</td>
<td>4.84-5.16, 5.01</td>
<td>2.2-2.9, 2.5</td>
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<td>p3</td>
<td>22-29, 24</td>
<td>0.47-0.55, 0.51</td>
<td>3.67-4.20, 3.91</td>
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apparently in shallow grooves and sometimes difficult to observe; prealars 3. Scutellum with 4 setae.

Wing (Figure 6). VR 1.31-1.39, 1.35. Costal extension 0-16, 8 µm long, with false vein reaching wing tip. Brachiolum with 1 seta, remaining veins and cells bare. Squama bare.

Legs (Figures 7-9). Spur of fore tibia 24-32, 28 µm long, spurs of mid tibia 10-16, 12 µm and 9-11, 10 µm long, spurs of hind tibia 27-36, 32 µm and 10-14, 11 µm long. Width at apex of fore tibia 16-21, 19 µm, of mid tibia 18-23, 21 µm, of hind tibia 21-26, 24 µm. Comb with 10-12, 11 setae, longest 21-25, 23 µm long, shortest 15-18, 16 µm long. Length and proportions of legs as in Table 1.

Abdomen (Figures 10-11). Strong setae on tergites I-VIII as: 2-4, 4; 2-8, 7; 5-8, 7; 6-8, 7; 6-8, 7; 5-8, 7; 6-8, 7; 4-6, 5; 4-7, 6. Strong setae on sternites I-VIII as: 0; 0; 0-1, 1; 1-2, 2; 2; 3-6, 5.

Hypopygium (Figures 12-13). Tergite IX with tuft of 20-40 strong, flattened macrotrichia and 4-8, 5 weak setae along posterior margin. Laterosternite IX with 2-3, 2 setae. Transverse sternapodeme curved with strong oral projections, 27-39, 34 µm long; phallapodeme 50-60, 55 µm long. Virga composed of single spine, 18-23, 20 µm long. Gonocoxite 83-95, 87 µm long. Gonostylus 43-57, 50 µm long; megaseta 7-9, 8 µm long. HR 1.58-1.95, 1.74. HV 2.14-2.53, 2.31.

Distribution

The species is known only from its type locality, Morro da Igreja (Urubici) in Santa Catarina State, southern Brazil, where it was collected in a Malaise trap in an area with cloud forest above 1800 meters altitude. The region belongs to the Brazilian Pine (Araucaria) Forest endemism region of the Mata Atlântica (Silva & Casteleti, 2003).

Acknowledgements

We are indebted to Dr. Luiz Carlos Pinho, Universidade Federal de Santa Catarina, for providing us with the material described above, and to Carlos J. E. Lamas, Museu de Zoologia, Universidade de São Paulo and Dr. Dalton S. Amorim, Faculdade de Filosofia Ciências e Letras de Ribeirão Preto, Universidade de São Paulo campus Ribeirão Preto for the loan of additional material from the BIOTA–FAPESP project [”limites geográficos e fatores causais de endemismo na Floresta Atlântica em Diptera” proc. 03/12074–9 within The Biodiversity Virtual Institute Program (www.biota.org)]. Gladys Ramirez made the slide preparations. The study was partly funded through the Brazilian Research Council of São Paulo State (FAPESP 2011/50162-1).

References


Received 10/11/2011
Revised 17/02/2012
Accepted 27/02/2012