



Culicoides parauapebensis, a new species of the subgenus *Hoffmania* Fox from northern Brazil (Diptera: Ceratopogonidae)

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Spinelli *et al.* (1993) in their revision of the Neotropical species of the *guttatus* species group of the subgenus *Culicoides* (*Hoffmania*) Fox, included 30 species of which 17 inhabit the Amazonian Region. Subsequently, Ronderos and Spinelli (1995) described *C. ferreyraei* from Argentina and Spinelli and Borkent (2004) *C. annettae* from Costa Rica. During entomological surveys in the municipalities of Parauapebas and São Geraldo do Araguaia, Pará, Brazil, the collected specimens of *Culicoides* included an undescribed species belonging to the *guttatus* species group. In this paper we describe and illustrate it, arising to 33 the number of the Neotropical species of this group.

Material and methods

The specimens are slide-mounted in phenol-balsam in the manner described by Wirth & Marston (1968). The new species is deposited in the Invertebrates Collection of Museu Paraense Emílio Goeldi (MPEG) and the Ceratopogonidae Collection of Instituto Oswaldo Cruz (CCER), Brazil. Diagnostic characters were illustrated using a *camera lucida*. Microphotographies of the wings were taken with a Nikon Eclipse E-800. The general terminology used is that employed in *Culicoides* by Spinelli *et al.* (1993). Terms for wing veins follow the system of the Manual of Nearctic Diptera (McAlpine *et al.* 1981), with modifications proposed by Szadziewski (1996). Measurements of the spermathecae are in micrometers and those of the wings are in millimeters. Meristic information is given as range, following by the mean and number of specimens examined.

Culicoides parauapebensis sp. nov.

Figs. 1–6

Diagnosis. Only species of the *guttatus* species group with the following combination of characters: medium-size, eyes contiguous by distance equal to diameter of two ommatidia, capitate sensilla distributed in a open and irregular sensory area on distal half or distal 1/3 of palpal segment 3, fore- and mid knees pale, M_1 and CuA_1 pale to apex, m_1 with two distal pale spots, halter deeply infuscated.

Female. Head. Brown. Eyes (Fig. 4) contiguous by distance equal to diameter of two ommatidia. Flagellum (Fig. 2) pale brown; antennal ratio 1.00–1.09 (1.05, n=11); sensilla coeloconica on flagellomeres 1, 9–13, three on 1, one on 9–12, two on 13. Palpus (Fig. 3) brown; segment 3 moderately stout, capitate sensilla distributed on distal half or distal 1/3, forming a open, irregular sensory area; palpal ratio 2.0–2.6 (2.3 n=11). Proboscis moderately long; P/H ratio 0.68–0.75 (0.70, n=11); mandible with 15 (n=3) teeth.

Thorax: Brown. Scutum with pair of dark brown sublateral vittae and pair of posterior ovoid dark brown spots; scutellum yellowish on sides; postscutelum brown. Wing (Fig. 1) with contrasting pattern; r-m pale; R_3 pale, slightly infuscate anteriorly; transverse distal pale spot in r_3 reaching wing margin; two distal pale spots in m_1 (the most distal faint or absent in two specimens); distal pale spot in m_2 reaching wing margin; pale spot in cua_1 not connected with the pale line bordering CuA_1 ; M_1 , CuA_1 pale to apex; apex of M_2 pale; CuA_2 pale except dark apex; macrotrichia, scarce on distal half of the wing and on distal portion of anal cell; wing length 0.84–1.05 (0.97, n= 11) mm; breadth 0.40–0.49