



Description of the male of *Culicoides (Hoffmania) baniwa* Felipe-Bauer of the *hylas* species group (Diptera: Ceratopogonidae)

ELOY GUILLERMO CASTELLÓN¹, FELIPE ARLEY COSTA PESSOA², GUSTAVO SPINELLI³ & MARIA LUIZA FELIPPE-BAUER⁴

¹ Laboratório de Insetos sinantrópicos, Instituto Nacional de Pesquisas da Amazônia. Av. André Araújo, 2936, Aleixo, CEP 69060-001, Manaus, Amazonas, Brazil. E-mail: eloygcb@gmail.com

² Programa de Ecologia de Doenças Transmissíveis na Amazônia, Instituto Leônidas e Maria Deane - Fiocruz Amazônia Rua Terezina, 476. Adrianópolis. CEP: 69.057-070 Manaus, Amazonas, Brazil. E-mail: facpessoa@amazonia.fiocruz.br

³ División Entomología, Museo de La Plata, Paseo del Bosque s/n, 1900 La Plata, Argentina, E-mail: spinelli@fcnym.unlp.edu.ar

Laboratório de Diptera, Instituto Oswaldo Cruz-Fiocruz, Av. Brasil, 4365, CEP 21040-900, Rio de Janeiro, RJ, Brazil. E-mail: mlfbauer@ioc.fiocruz.br

Borkent (2012) recognized 44 Neotropical species of *Culicoides* Latreille in the subgenus *Hoffmania* Fox. Of these, 33 belong to the *C. guttatus* species group and 11 to the *C. hylas* species group. One species in the latter group, *Culicoides baniwa* Felipe-Bauer, was recently described based on a female specimen collected in São Gabriel da Cachoeira, Amazonas, Brazil (Felippe-Bauer *et al.*, 2009). The authors also include a key and a synopsis of the species of this group, which includes seven species inhabiting the Brazilian Amazon Region.

The purpose of this paper is to describe and illustrate the previously unknown male of *C. baniwa* Felipe-Bauer based on specimens collected with a CDC light trap at the type locality and in Peruvian Amazon. For ease of comparison, the diagnosis of the female is also included.

Material and Methods. The males described herein were collected in Brazilian and Peruvian Amazon Area, slide-mounted in Canada Balsam in the manner described by Wirth & Marston (1968) and housed in the Entomological Collection of Instituto de Pesquisas da Amazônia (INPA), and the Museo de La Plata, Argentina (MLP), respectively. A detailed description of the female of *C. baniwa* may be found in Felipe-Bauer *et al.* (2009). Terms for structures follow the Manual of Central America Diptera (Brown *et al.*, 2009).

Culicoides baniwa Felipe-Bauer, 2009 (Figs. 1–10)

Culicoides baniwa Felipe-Bauer, (in Felipe-Bauer *et al.*, 2009): 852 (female; Brazil; figs. antenna, palpus, legs, spermathecae, wing photo; in key; distribution).

Female diagnosis: Only species in the *hylas* group of the subgenus *Hoffmania* Fox with a long proboscis (P/H ratio 1.48), double pale spots in r3, with one crossing the second radial cell and other in distal portion of r3, absence of the pale spot in front of the base of M1, mid femur dark to tip and a pale fifth palpal segment.

Male diagnosis: Similar to female with usual sexual differences. The male genitalia of *C. baniwa* is notched posteromedially, apicolateral processes absent, posterior margin gonostylus pale, broad basally, abruptly tapering to slender apex. Parameres broadly fused at basal half.

Male description: Antennal pedicel dark brown; flagellomeres pale brown, basal portion of flagellomeres pale, distal portion darker. Sensilla coeloconica on each of flagellomeres 1–13, two on 1, one on each of 2–13. Palpus (Figs. 1–2) brown except first, fifth segments entirely pale; third, fourth segments pale basally, P.R. 3.60. P/H ratio: 0.64–0.68 (0.67, n=4) Wing length 1.25–1.33 mm (1.29, n=5), breadth 0.45–0.50 (0.48, n=5) mm, costal ratio 0.54–0.67 (0.67, n=5) pigmentation pattern as in Fig. 3. Legs (Figs. 4–6) with mid- hind femora entirely dark brown, hind tibial comb with seven spines. Terminalia (Figs. 7–9): tergite 9 reaching level of apex of gonocoxite distally, apicolateral processes absent, posterior margin rounded, notched posteromedially; (evident in figs 7 and 8); sternite 9 with shallow posteromedial excavation. Gonocoxite 2 X longer than broad, ventral root small, dorsal root long, slender; gonostylus