



Description of the larva of *Simulium lobato* Luna Dias, Hernández, Maia-Herzog & Shelley (Diptera: Simuliidae) from Brazil

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Simulium lobato was described by Luna Dias *et al.* (2004) based on six biting females and 30 females and seven males, all reared, collected in the states of Mato Grosso and Goiás, Brazil. The larva was not described, and the authors stated that the adults and pupa of *S. lobato* were morphologically related to species within *Hemicnetha* Enderlein and *Trichodagmia* Enderlein. However, they refrained from assigning this species to any known subgenus of Neotropical Simuliidae.

In recent studies on the ecology of aquatic invertebrates in Brazil carried out by Neusa Hamada and collaborators at the Instituto Nacional de Pesquisas da Amazônia (INPA), the larva of *S. lobato* was discovered, providing the basis for the description provided herein.

Material & Methods. The techniques for collection, rearing, dissection, measurement of specimens and terminology used are those detailed in Adler *et al.* (2004), Shelley *et al.* (1997) and Pepinelli *et al.* (2006). All images illustrating the morphology were taken by Luis Hernández from specimens using a Synoptics Digital Imaging Analysis System at The Natural History Museum (BMNH) as detailed in Hernández & Shelley (2005) and Hernández *et al.* (2005). Voucher specimens are deposited in the Instituto Nacional de Pesquisas da Amazônia (INPA), Manaus, Brazil and the Entomology Department, The Natural History Museum (BMNH), London, United Kingdom.

Simulium lobato Luna Dias, Hernández, Maia-Herzog & Shelley (Figs. 1–10)

Simulium lobato Luna Dias, Hernández, Maia Herzog & Shelley, 2004: 37. HOLOTYPE ♀ (reared), BRAZIL: Mato Grosso State, Tangará da Serra, Estância Primavera, Cachoeira I, (site 1053); 26.v.1995, (A.P.A. Luna Dias, P.R. Garritano, M.M. Elázaro & M. Leila) (IOC) [Examined.]

Mature larva. Body length 8.7–10.6 mm (n=4); length of head capsule 0.9–1.0 mm (n=4); width of head capsule 0.7–0.8 (n=4). Body colour dark grey dorso-laterally, whitish ventrally (specimens fixed in Carnoy's solution and/or alcohol). General body form as in Fig. 1.

Head—mainly dark brown, anterior region of cephalic apotome yellowish. Numerous small setae present on all surfaces and head capsule slightly wrinkled. Head pattern positive (Fig. 2). Cervical sclerites small, elliptical, free in membrane (Fig. 3). Postgenal cleft deep, bell-shaped, subtriangular apically; postgenal bridge nearly as long as hypostoma (Fig. 4). Hypostoma strongly pigmented on anterior margin, with approximately nine apical teeth distinctly protruding in central region; median tooth sharp, well-developed and most prominent; 3+3 sublateral teeth, with the pair adjacent to base of median tooth longer than remainder; 1+1 lateral tooth, longer than basal sublateral tooth; 2+2 small, lateral serrations; 1+1 lines of approximately fourteen hypostomial setae parallel to lateral margin; 1+1 long, simple setae in posterior half of hypostoma (Figs. 5). Subesophageal ganglion lightly pigmented (Fig. 6). Antenna longer than labral fan stalk, segment I, apex of segment II and segment III dark brown, two thirds of segment II pale whitish (Fig. 7), length of antennal segments I–III excluding the sensillum 0.1:0.1–0.2:0.1 (n=6). Mandible with three apical teeth, first one longer than second and third apical teeth; mandibular comb with approximately eleven teeth, first fourteen more prominent than