



Description of the last instar larva of *Cannaphila insularis funerea* (Carpenter, 1897) (Anisoptera: Libellulidae), with notes on the habitat of the species

ADRIAN D. TRAPERO-QUINTANA & NILIA CUÉLLAR ARAÚJO

Departamento de Biología. Universidad de Oriente. Ave. Patricio Lumumba. Santiago de Cuba 90500. Cuba.

E-mail: atrapero@cnt.uo.edu.cu; trapero76@gmail.com

Cannaphila Kirby is a neotropical genus with three species; *C. insularis* Kirby, 1889, *C. mortoni* Donnelly, 1992, and *C. vibex* (Hagen, 1861). The first one includes two subspecies; *C. i. insularis* and *C. i. funerea* (Carpenter, 1897). *Cannaphila i. funerea* occurs from southern USA (Texas) to Colombia (Garrison 1986). Reports from The Antilles are exclusive from Cuba. According to Needham *et al.* (2000) the subspecies *C. i. insularis* from Hispaniola and Jamaica is also present in Isla de Pinos (Cuba). *Cannaphila i. funerea* is widely distributed in Cuba, with its frequent habitats being lagoons and ponds with abundant herbaceous vegetation, flying over lentic streams (Alayo 1968, Trapero & Naranjo 2003).

Up to now the only *bona fide* last instar larva described for the genus was that of *C. vibex*. Klots (1932) provided a description of larvae collected in Puerto Rico and Cuba which she identified as *Brachymesia* by supposition and which Limongi (1989) indicated most likely belonged to *C. i. funerea*. Here we describe the last instar larva of *C. i. funerea*, compare it to *C. vibex* and to the immature larvae described by Klots (1932), and provide general data on the habitat of the larva.

Materials and methods

The description is based on two male exuviae (not reared) collected in the outlet of the Chalons basin (20°04'13"N, 75°48'47"W, 108 m), 4-VIII-2007, and the Los Gómez stream (20°02'52"N, 75°49'18"W, 90 m), 30-V-2008, col Trapero. Both locations are in northern Santiago de Cuba. Measurements to the nearest 0.05 mm were made under a MBS-9 stereomicroscope with an ocular micrometer. All material is deposited in the entomological collection of the Departamento de Biología, Universidad de Oriente, Santiago de Cuba. Mandibular formula is after Watson (1956). S1–10 refer to abdominal segments 1 to 10.

Results

Description of the last instar larva of *Cannaphila insularis funerea*

General description: Body brown with no visible pattern or design on abdomen and legs; elongated and hairy, mainly on dorsal surface of head, thorax, legs, and ventro-lateral surface of S9 which shows long hair tufts; femur and tibiae widened.

Head: Sub-rectangular with postero-lateral angles rounded (Fig. 1). Eyes small, rounded, occupying the anterolateral part of the head and slightly lifted. Occiput slightly concave, with tufts of setae distributed on its dorso-central surface. Antenna 2.3 mm long, with seven segments of relative lengths 4:2:1:6:5:7:3, and with long hairs, particularly on segments 4–6 (Fig. 2).

Prementum trapezoidal, wider than long. Two long setae on each side; and around six to nine very short medio-marginal ones. Anterior margin of ligula with ten short spines and a central prominence (Fig. 3). Palps with six long setae, movable spine amber, 0.7 mm long. Distal margin of palp with no crenations, bearing short spines similar to those on ligula. These spines occur in groups of two or three, from the superior margin of the palp towards the joint with the prementum. The remaining spines are single (Fig. 3). Mandibles with five (left) and three (right) incisive teeth and with molar crests, with following formula: L 1 2 2' 3 4 0 a(m)b / R 1 2+3 4 y a a' b, 1.5 mm long, 1 mm wide (Figs. 4, 5).