



Description of the last instar larva of *Erythrodiplax fervida* (Erichson, 1848) (Anisoptera: Libellulidae), with notes on the biology of the species

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The dragonfly genus *Erythrodiplax* Brauer is distributed mainly in the Neotropics, and includes 56 described species (Garrison *et al.* 2006). Five of seven Antillean species occur in Cuba: *Erythrodiplax berenice naeva* (Hagen, 1861), *E. bromeliicola* Westfall, 2000, *E. fervida* (Erichson, 1848), *E. justiniana* (Selys, 1857) and *E. umbrata* (Linnaeus, 1758) (Trapero & Naranjo 2003). The last stage larva has been described for all species from Cuba except for *E. fervida*.

Erythrodiplax fervida occurs from Mexico to Ecuador and the Guyanas and it has been reported for Cuba, Cayman Islands, Jamaica, Hispaniola and Puerto Rico. In Cuba it is widely distributed, being particularly frequent in lakes and ponds, although it has also been recorded flying over slow streams and rivers (Alayo 1968). With this description, all Antillean and Central American larvae of *Erythrodiplax* are now known.

Materials and methods

On 17 August, 2007, an ultimate stage female larva which after eclosion we determined as *E. fervida*, was found attached to a leaf of *Mikania micrantha* Kunth. (Asteraceae) in the outlet of Chalons basin, located North of Santiago de Cuba (20° 04' 13" N and 75° 48' 47" W). On 4, 5 and 17, August 2007, six exuviae of this species (4 females and 2 males) were collected from the undersides of the leaves of herbaceous plants (*Mikania micrantha* and *Paspalum distachyon* Willd ex Döll) at the margins of Chalons basin. All material is deposited in the entomological collection of the Departamento de Biología, Universidad de Oriente, Santiago de Cuba.

Measurements to the nearest 0.05 mm were made under a MBS-9 stereomicroscope with an ocular micrometer.

Description of the last instar larva

Head: Trapezoidal, 2.5 times as wide as long with anterolateral angles occupied by protruding compound eyes, occipital margin concave, occipital lobes round (Fig. 1). Antenna 1.2 mm long, setiform, seven segments with relative lengths 1:5:7:2:3:4:6 (Fig. 2). Prementum trapezoidal, reaching mid-length of second pair of coxae when folded (Fig. 3), 3 mm long with 10 setae on each side: six long lateral ones and four shorter medial ones. Prominent ligula, with triangular distal margin armed with six setae on each side plus two in center (Fig. 4). Palps with six long setae along outer margin, distal margin slightly crenulate with one in between each undulation, six small setae on base and a pair of spinules on outer margin of its articulation with prementum (Fig. 4). Mandibular formula (see Watson 1956): L 1 2 3 4 y a b / R 1 2 3 4 y a b c d (Fig. 5, 6).

Thorax: Dark brown, 3.5 times as wide as long. Distal end of wing pads reaching mid-length of abdominal segment VI. Hind femur and tibia 3.5 and 4 mm long, respectively, with 2 transverse brown stripes on each (Fig. 1).