



Description of the final instar nymph of *Homeoura nepos* (Selys, 1876) (Odonata: Coenagrionidae)

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The description of the nymph of *Homeoura nepos* (Selys, 1876) by Calvert (1948) was based on a single, immature specimen from São Paulo, Brazil which lacked gills. The nymphs of *H. chelifera* (Selys) and *H. lindneri* (Ris) were described by Lozano *et al.* (2009), who considered Calvert's description of the nymph of *H. nepos* doubtful.

The following description and illustrations of the nymph of *H. nepos* are based on reared specimens from Bolivia. The nymphs of the three species now definitely known are compared; the nymphs of *H. sobrina* (Schmidt) and *H. obrieni* (von Ellenrieder) remain unknown.

Methodology. Reared adults were confirmed as *H. nepos* based on characters given by von Ellenrieder (2008). Use of the term nymph instead of larva follows Truman and Riddiford (1999). Drawings of mouthparts were made with aid of a camera lucida. Gills were slide-mounted and photographed with a Nikon D70s digital camera mounted on a Wild stereomicroscope. Measurements (mm) were made with a calibrated ocular micrometer at various magnifications. Head length was measured from anterior-most margin of right compound eye to posterior-most margin of right postero-lateral lobe. Mandibular formula follows Watson (1956). Abbreviations: S1–10 = abdominal segments 1 through 10. Prementum length and width were measured as shown in fig. 1c. Abdomen length and total length were measured only on un-reared nymphs, with each abdominal segment partly telescoped into the preceding segment, approximating the living condition; these measurements do not include cerci or caudal lamellae. S10 was fully extended and its length was measured laterally at level of cercus midline. The specimens are deposited in the Florida State Collection of Arthropods.

Results

Homeoura nepos (Selys, 1976)

Agrion? nepos Selys, 1876: reprint 136–137, 139–140 (description of male).

Homeoura nepos: von Ellenrieder, 2008: 96–97 (complete synonymy).

Description of final instar nymph (figs. 1–5). *Head.* 2.10–2.43 times as wide as long at its widest point. Eyes gray, patterned with 3 rows of dark spots anteriorly and laterally. Postero-lateral lobes rounded, each with at least 15 dark-based, posterior spinules and 10–12 long, fine setae situated more dorsally and anteriorly. Antenna 7-segmented (fig. 1); third antennomere longest (0.37–0.41 mm). Mandibular formula (figs. 2a–b): $L\ 1+2\ 3\ 4\ 5\ y\ a\ b\ (1<3<2<4<5) / R\ 1+2\ 3\ 4\ 5\ y\ a\ (1<3<2<4<5)$. Labium: articulation of pre and postmentum between bases of coxae I; prementum sub-triangular (fig. 3a), ratio of length to maximum width 1.17–1.29; anterior margin convex and finely crenulated; usually 3 large premental setae per side, rarely 2, or 2 with a small inner one; lateral margin with 2–5 spinules; latero-distal margin (at base of palp) with transverse row of 3 or 4 pale spinules. Labial palp: dorsal margin with 4 long setae; distal margin between movable hook and distal tooth with 5 (rarely 6) small teeth decreasing in size toward large ventral tooth (fig. 3b); movable hook 0.60–0.65 times length of outer palpal margin.

Thorax. Wing pads reaching anterior margin of S5. Legs pale, femora with a narrow dark band at distal $\frac{3}{4}$ length; femora I–III with spinules along length of the three longitudinal carinae; tibiae I–III with spinules on carinae also but fewer proximally, distally with ventral patch of bifid and trifid setae.

Abdomen. Cylindrical; S2–8 with 1–7 spinules along lateral carina in a nearly straight row (increasing in number on posterior segments); dorso-posterior margins of S5 and S6 with 1–3 spinules, S7–9 with at least 10 such spinules and S10 with 2–5 spinules confined to median crest (longest 0.07 mm) separated from 12–15 lateral and ventro-lateral spinules (fig. 4). Venter of S1–8 with scattered spinules, less dense medially; venter of S1–7 each with small, dark, rectangular,