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DESCRIPTION OF THE LAST LARVAL INSTAR OF *ISCHNURA ULTIMA* RIS (ZYGOPTERA: COENAGRIONIDAE)

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The description is based on a ♀ specimen from Argentina (Mendoza prov.) and the morphology is compared with the other *Ischnura* larvae known from Argentina, viz. *I. capreola* (Hag.) and *I. fluviatilis* Sel. In addition *I. ultima* is reported here for the first time from Chile.

INTRODUCTION

The cosmopolitan genus *Ischnura* Charpentier is represented in the neotropical region by 12 species, seven of which are also known from their last larval instar, viz. *I. capreola* (Hag.), *I. cervula* Sel., *I. denticollis* (Burm.), *I. fluviatilis* Sel., *I. hastata* (Say), *I. posita* (Hag.) and *I. ramburii* (Sel.) (GEIJSKES, 1941; SANTOS, 1988; WESTFALL & MAY, 1996; VON ELLENRIEDER & MUZÓN, 2003).

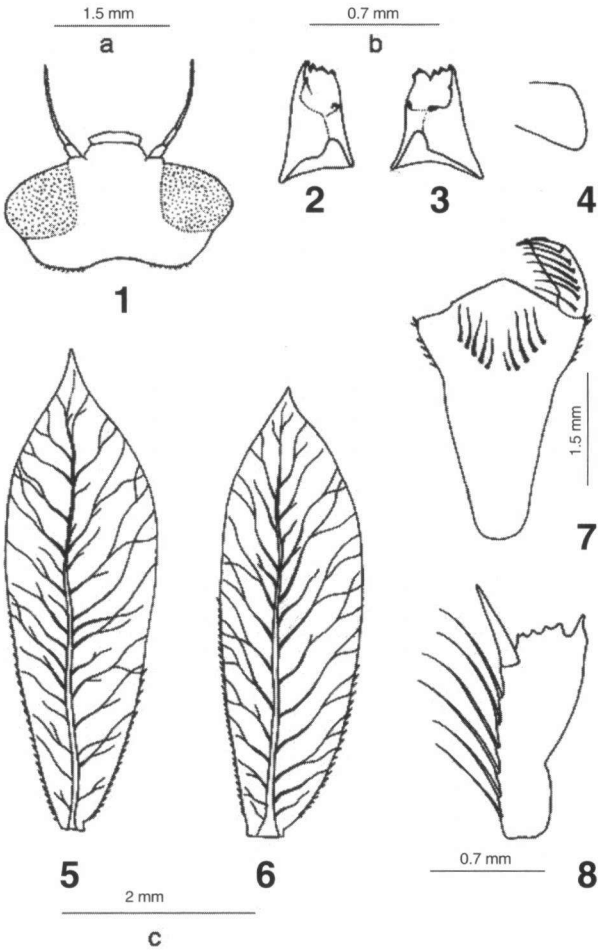
Ischnura ultima is a poorly known species; so far it was recorded only from Argentina along the Andean range from Jujuy to Mendoza provinces (MUZÓN & VON ELLENRIEDER, 1998; VON ELLENRIEDER & MUZÓN, 2003). It occurs in permanent lentic and lotic habitats in the Monte biogeographic province, a large arid area, encompassed between 27° and 44° S.

In the present paper, the last larval instar of *I. ultima* is described, the larvae of the three *Ischnura* species so far known from Argentina are keyed, and the first record of *I. ultima* from Chile is provided.

ISCHNURA ULTIMA RIS

Figures 1-9

M a t e r i a l. – ARGENTINA: Mendoza prov., Estancia Tambillos, (32°19′S; 69°27′W), irrigation ditch, alt. 2400 m, 1 ♀ last instar larva, 28-I-2004, J. Muzón leg.; – CHILE: Valparaiso region, San Felipe de Aconcagua prov., Llaillay, (32°50′S, 70°59′W), 10-III-1970, 4 ♂, 1 ♀ adults. – The specimens are deposited in MLP, La Plata.



Figs 1-9. *Ischnura ultima* Ris, female, last larval instar: (1) head, dorsal view; – (2) left mandible, inner view; – (3) right mandible, inner view; – (4) cercus, lateral view; – (5) median caudal lamella, lateral view; – (6) lateral caudal lamella, lateral view; – (7) prementum, dorsal view; – (8) labial palp, dorsal view.

LAST LARVAL INSTAR. – H e a d (Fig. 1) broad, widest at eye level, posterior lateral margin concave. Hind lobe rounded and slightly prominent, with 30--35 setae. Antenna 7--segmented (0.4: 0.8: 1: 0.5: 0.5: 0.4: 0.2). Labium (Fig. 7) triangular, almost 0.63 times as wide as long, reaching caudad to 2nd coxae; median lobe prominent, uncleft, finely serrated; sides of dilated portion with 7--8 setae. Premental setae 5 on each side, the internal ones shorter. Labial palp (Fig. 8) with 6 setae, movable hook slightly curved, as long as 0.44 of palp length; anterior margin with well developed end hook and 4 teeth, externally with 3-4 denticles; inner margin finely serrated. Mandibular formula (Figs 2-3) (sensu WATSON, 1956):

L 1+2 3 4 5 y a b / R 1 2 3 4 y a.

T h o r a x. – Prothorax and pterothorax without dark markings. Wingpads reaching the anterior margin of the 4th abdominal segment. Legs relatively long and pale.

A b d o m e n. – Cylindrical, long and slender, without dark markings. Dorsal surface of segments with setae uniformly distributed. Female cerci in lateral view as in Figure 4. Caudal lamellae (Figs 5-6) broadly lanceolate with acuminate tips. Nodus not well marked. Dorsal margin of median caudal lamella with 27 stiff setae, extending along basal 0.46 of its length; ventral margin with 20 setae, extending along 0.36 of its length. Remainder of caudal lamellae margins with longer thin hairs. Dorsal margin of lateral caudal lamella with 22 stiff setae, extending along 0.42 of its length; ventral margin with 34 setae, extending along about 0.55 of its length. Tracheae dark.

M e a s u r e m e n t s (mm; n = 1). – Head maximum length 1.6; max. width 3.0. Prementum max. length 2.1; max. width 1.7. Wingpads length: inner 3.5, external 3.2; femora length: I = 1.3, II = 1.7-1.9, III = 2.5; tibiae length: I = 1.6, II = 1.9, III = 2.3. Caudal lamellae length: median 4.7, lateral 4.3.

DISCUSSION. – The specimen here described was collected in a 2-3 m deep irrigation ditch, simultaneously with several adult *I. ultima* of both sexes, as well as larval and adult *Rhionaeschna absoluta* (Calv.). The assignation of this larva to *I. ultima* was based on the circumstance that it was the single zygopteran species flying in this limnotope, and its morphology agrees well with that given for the genus (GEIJSKES, 1941; WESTFALL & MAY, 1996), being different from that of the other zygopteran larva possibly present in the area, *Andinagrion peterseni* Ris (description provided by BULLA, 1973).

The genus *Ischnura* is presently known from Chile only by *I. ramburii* and *I. fluviatilis* (JURZITZA, 1989). With this new record of *I. ultima* from the Valparaiso region the odonate fauna of Chile stands at 47 species.

KEY TO LAST INSTAR LARVAE OF ARGENTINE *ISCHNURA* SPECIES

1 Large larvae, with femur III longer than 2 mm and lateral caudal lamellae longer than 4 mm; right mandible (Fig. 3) with one molar tooth; dorsal surface of abdominal segments with uniformly distributed setae 2

– Small larvae, with femur III shorter than 2 mm and lateral caudal lamellae shorter than 4 mm; right mandible with two molar teeth; dorsal surface of abdominal segments with setae confined to apex. Northern and central provinces of Argentina to 38°S ..... ***capreola***

2 Caudal lamellae usually with a dark spot at nodus level. Ventral series of stiff setae on lateral lamellae extending for less than 0.40 of lamellae length, dorsal series for less than 0.30. Widely distributed in Argentina North to 42° S ..... ***fluviatilis***

– Caudal lamellae without dark spots (Figs 5-6). Ventral series of stiff setae on lateral lamella extending for more than 0.40 of lamellae length, dorsal series for more than 0.30 (Fig. 6). In Argentina only recorded from the Monte biogeographic province from Mendoza to Salta provinces ..... ***ultima***

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