

Ischnura ultima Ris, 1908 (Odonata: Coenagrionidae): New records from southern South America

Javier Muzón*, Alejandro del Palacio and Lía Ramos

Instituto de Limnología "Dr. R.A. Ringuelet" (CONICET-CCT La Plata), C.C. 712. 1900. La Plata, Argentina.

* Corresponding author. E-mail: muzon@ilpla.edu.ar

ABSTRACT: *Ischnura ultima* Ris, 1908 is recorded for the first time from Buenos Aires Province, Argentina, 750 km southeast from the southernmost previous known localities (Córdoba Province). This finding supports a stronger biogeographical relationship between the southern hills of Buenos Aires (surrounded by the Pampas lowlands) and the Monte province. In addition, this record supports the odonate endemic areas scheme previously proposed for Argentina.

Southern South America has been defined as the area south to 30° S and the Andean highlands North of this latitude; it encompasses large areas of Argentina, Chile, Uruguay and southern Brazil (Crisci *et al.* 1991). From a biogeographical point of view this area has a Neotropical and Subantarctic component. From an odonatological point of view, the Subantarctic component is characterized by high diversity at a family level, but a low species richness and a high degree of endemism, whereas the Neotropical one is represented by almost 250 species, with only a few of them exclusive to Argentina and Chile.

Taking into account the odonate species exclusive to Argentina, von Ellenrieder and Muzón (2008) proposed five areas of endemism. One of these areas is supported by the presence of *Andinagrion peterseni* (Ris, 1908) and *Ischnura ultima* (Coenagrionidae), *Rhionaeschna haarupi* (Ris, 1908) and *Rhionaeschna pallipes* (Fraser, 1947) (Aeshnidae) and *Progomphus joergenseni* Ris, 1908 (Gomphidae) (Figure 1). All the five mentioned species inhabit streams with moderate energy in hill landscapes or associated small ponds. This area extends from the north of Argentina along the eastern slope of the Andes, hills and plateaus systems to northern Patagonia (approximately 42° S) where it turns to the East up to the southern hills of Buenos Aires Province (Ventania and Tandilia systems) (Figure 1). This large and heterogeneous area which is characterized by arid or semi arid conditions crosses several biogeographical provinces (*i.e.*, Prepuna, Monte, Patagonian, Espinal and Pampean) and integrates several biodiversity hotspots (*e.g.*, Pampa de Achala, Payunia and Somuncura) (Roig Juñent and Debandi 2004; Muzón *et al.* 2005).

The cosmopolitan genus *Ischnura* Charpentier is represented in southern South America by three described and one undescribed species: *I. capreolus* (Hagen, 1861), *I. fluviatilis* Selys, 1876 and *I. ultima* (von Ellenrieder and Muzón 2008). The first two species have large distribution areas in the Neotropical region, being common inhabitants of still waters on the northern half of Argentina. On the other hand, *I. ultima* has been recorded for the eastern slope of the Andes (Argentina), from Salta and Jujuy

to Mendoza Provinces and in the Central Provinces of Tucumán and Córdoba, being an inhabitant of still waters associated with streams or small rivers; on the western slope of the Andes (Chile) it has been recorded only for Llaillay (Valparaiso) (Muzón and Pessaq 2005) (Figure 1).

Ischnura ultima Material examined:

Argentina: Buenos Aires, Sierra de la Ventana, Estación Base del Cerro Bahía Blanca (38°04'08.1" S, 61°58'27.9" W), leg. A. del Palacio. Córdoba, Huerta Grande (31°04'28.84" S, 64°30'34.44" W). Córdoba, Mina Clavero (31°42'34.1" S, 64°53'50" W). Mendoza, Arroyo Aguanda, Paso de las Carretas, (34°00'01"S, 69°01'15" W). Mendoza, Malargüe, (35°28'33.1" S, 69°31'54.3" W). Mendoza, Potrerillos (32°57'2.6" S, 69°12'20.26" W). Mendoza, Uspallata, Arroyo Uspallata (32°35'24" S, 69°21'04"W). Salta, Lesser, (24°40'57" S, 65°28'39" W). Salta, Cachi, Río Calchaquí, (25°06'14.04" S, 66°11'19.02" W). Tucumán, Ruta a Taff (26°52'36.3" S, 65°26'21.73" W). All the specimens are deposited at the Museo de La Plata entomological collection. The specimens from Buenos Aires were collected with the authorization of the OPDS (Organismo Provincial para el Desarrollo Sostenible # 2145-9222/11).

The new findings in Salta, Tucumán, Córdoba and Mendoza Provinces are consistent with the previously known distribution area of this species. Nevertheless, the record from Sierra de la Ventana represents the first one from Buenos Aires Province, about 750 km southeast from the nearest known localities (Córdoba Province). This new record supports the endemic area proposed by von Ellenrieder and Muzón (2008) and suggests a closer biogeographical relationship between the southern hills of Buenos Aires and the Monte, than between the former and the surrounding lowlands (the Pampas). On the other hand, and considering Uspallata (Mendoza province, Argentina) and Llaillay (Valparaiso region, Chile) records, which are separated by the highest portion of the Andes, it is suggested that *Ischnura ultima* could have a larger distribution area in Chile.

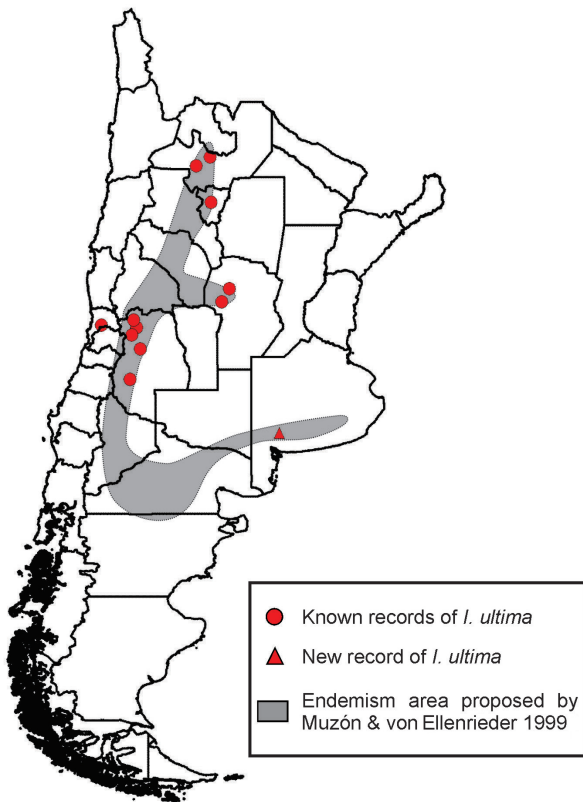


FIGURE 1. Political division of Argentina and Chile showing distribution of *Ischnura ultima* overlapping endemism proposed by von Ellenrieder and Muzón (2008).

LITERATURE CITED

- Crisci, J.V., M.M. Cigliano, J.J. Morrone and S. Roig Juñent. 1991. Historical biogeography of southern South America. *Systematic Botany* 40(2): 152–171.
- Muzón, J. and P. Pessacq. 2005. Description of the last larval instar of *Ischnura ultima* Ris (Zygoptera: Coenagrionidae). *Odonatologica* 34(3): 303–307.
- Muzón, J., G.R. Spinelli, P. Pessacq, N. von Ellenrieder, A.L. Estevez, P.I. Marino, P.J. Pérez Goodwyn, E. Angrisano, F. Díaz, L. Fernández, S. Mazzucconi, G. Rossi and O.D. Salomón. 2005. Insectos acuáticos de la Meseta del Somuncura, Patagonia, Argentina. Inventario preliminar. *Revista de la Sociedad Entomológica Argentina* 64(3-4): 47–67.
- Roig Juñent, S. and G. Debandi. 2004. Prioridades de conservación aplicando información filogenética y endemividad: un ejemplo basado en Carabidae (Coleoptera) de América del Sur austral. *Revista Chilena de Historia Natural* 77: 695–709.
- von Ellenrieder, N and J. Muzón. 2008. An updated checklist of the *Odonata* from Argentina. *Odonatologica* 37(1): 55–68.

RECEIVED: January 2013

ACCEPTED: January 2014

PUBLISHED ONLINE: February 2014

EDITORIAL RESPONSIBILITY: Alonso Ramirez