

Genetic and reproductive evidence of natural hybridization between the sister species *Rhinella atacamensis* and *Rhinella arunco* (Anura, Bufonidae)

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Rhinella atacamensis and *Rhinella arunco* are sister species which, together, are distributed from 25°S to 38°S in Chile. Until recently they were considered to be allopatric, with the dividing line around 32°S, but in 2007 a possible zone of secondary contact was found in the Estero Pupío (32°S). We investigated the species status of adult individuals of three localities along this creek using AFLP markers. Data were analyzed with a Bayesian method that allowed the identification of different types of hybrids in a population. In two of the localities in the lower part of the watershed, the majority of the individuals were identified as backcrosses of hybrids with *R. arunco* or first generation hybrids, although a few individuals were classified as pure *R. arunco*. This information, supplemented by mitochondrial sequences and reproductive observations in both the laboratory and in the field, shows that hybridization has been a recurrent phenomenon at these two localities. By contrast, in