

## SHORT COMMUNICATION

# A new threat for the endangered frog *Atelognathus reverberii* (Anura: Batrachylidae) in Argentinean Patagonia

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*Atelognathus reverberii* (Ceí, 1969) is an endemic terrestrial frog that inhabits volcanic clay lagoons (mostly semi-permanent or temporary). These lagoons are scattered throughout the desertic Somuncura Plateau of Argentinean Patagonia (Ceí 1969, Martinazzo *et al.* 2011). This frog species was listed as Endangered in the IUCN's red list (IUCN 2014) and as Vulnerable in the last categorization of Argentinean amphibian fauna (Vaira *et al.* 2012).

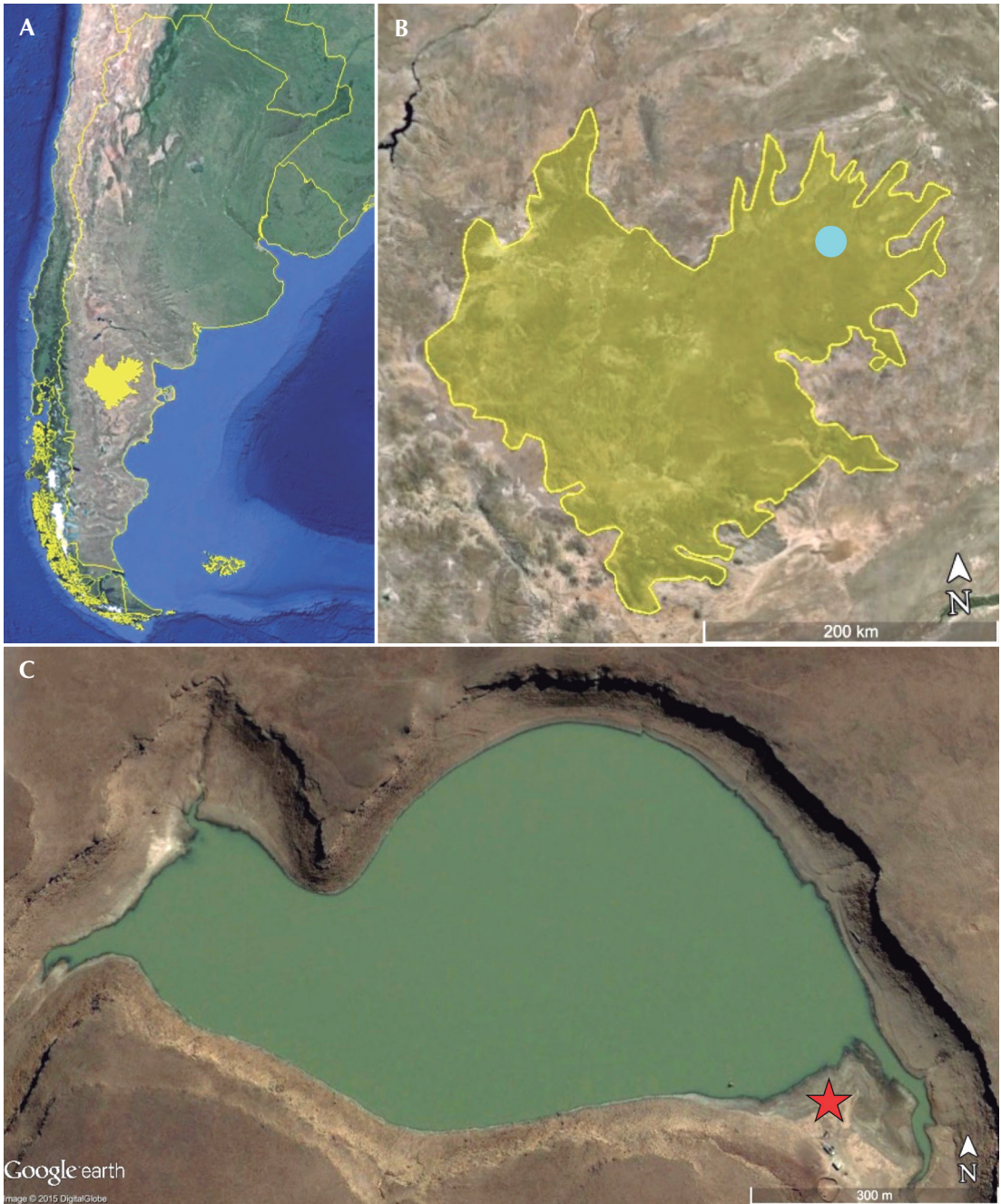
On 19 February 2015 during fieldwork conducted to assess the population status of the Laguna Raimunda Frog (*Atelognathus reverberii*), we registered a source of mass mortality for this species at the locality of Laguna Azul

(-41.288738° S, -66.831912° W; 1182 m a.s.l.), Somuncura Plateau, Río Negro Province, Argentina (Figure 1).

A total of 441 individuals of *Atelognathus reverberii* was found trapped in a water pit dug in the ground about 15 m from the shore of a semi-permanent volcanic clay lagoon, with an extension of about 0.4 km<sup>2</sup> (Figure 2). Eleven of them were already dead. These specimens were deposited as voucher in La Plata Museum (MLP A5758-68). After the incident, we released the 430 live individuals in the shore of the lagoon and we placed a fence around the pit to avoid more incidental mortality of Laguna Raimunda Frogs.

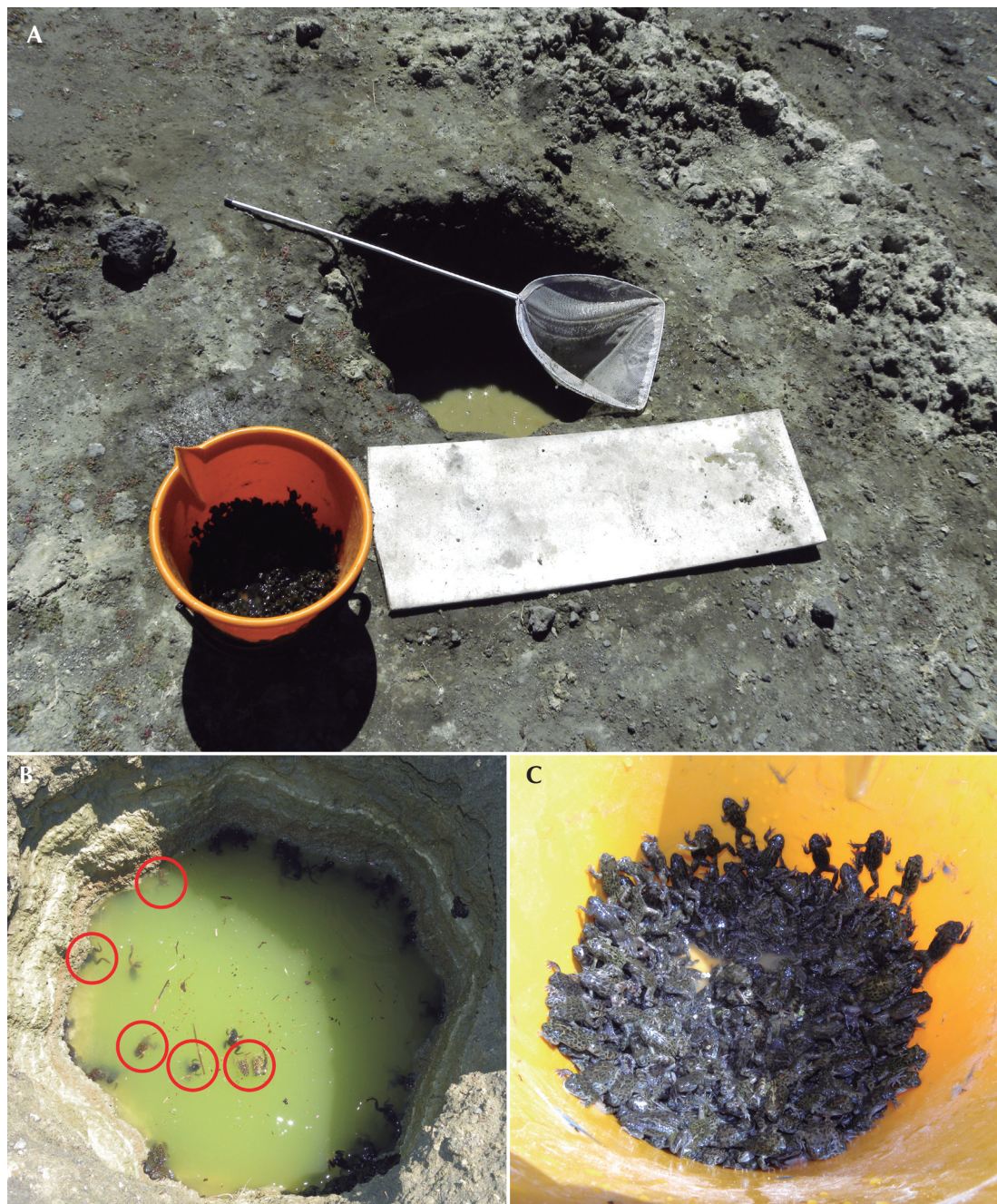
The water pit was 0.6 m in diameter and 1.5 m deep, and the height of the water level was 30 cm. These water pits, named “jagüeles,” are dug by local residents near the water sources to obtain naturally filtered water for human and

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**Figure 1.** (A) Geographic location (in yellow) of Somuncura Plateau in Patagonia, Argentina. (B) Detail of Somuncura Plateau; blue dot indicates the location of the Laguna Azul. (C) Water pit location in Laguna Azul.






**Figure 2.** (A) General view of the Jagüel (water pit) where the specimens of *Atelognathus reverberii* were found trapped. (B) A closer view of the Jagüel (circles show dead frogs). (C) A better look of the rescued frog specimens.

cattle consumption; they act as pitfalls for frogs. Because the frogs cannot climb out of them, they either drown or dehydrate. Dehydration inside these water pits has been observed twice: in November 2013 in the same area and in other “jagüel” located at the type locality of the species, at Estancia El Puntudo (Ceí 1969).

Ceí (1969) mentioned having found dead frogs drowned in jagüeles, but he did not suggest that this might be a threat for the populations of *Atelognathus reverberii*. Our observations provide a realistic outlook of the possible impact of jagüeles on frog populations. This human intervention should be considered as a threat to this terrestrial frog in its natural habitat.

Other threats to the Laguna Raimunda Frog are its reduced geographical distribution, restricted up to 100 m from the edge of water bodies, and the degradation of its reproductive habitat by the extensive cattle farming. Moreover, subpopulations of this species are isolated and thus vulnerable to inbreeding, genetic drift, and stochasticity (i.e., climatic change).

Despite the low density of people in the Somuncura Plateau, the impact of poor water management could drive the decline of the populations of *Atelognathus reverberii*. It would be useful to implement a population monitoring program for the Laguna Raimunda Frog. Concrete conservation plans should be developed to provide local residents a water-extraction/storage system for supplying water to cattle that does not contribute to anuran mortality.

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## References

- Ceí, J. M. 1969. The Patagonian telmatobiid fauna of the volcanic Somuncura Plateau of Argentina. *Journal of Herpetology* 3: 1–18.
- IUCN. 2014. The IUCN Red List of Threatened Species. Version 2014.3. <http://www.iucnredlist.org>. Captured on 6 April 2015.
- Martizazzo, L. B., N. G. Basso, and C. Úbeda. 2011. *Atelognathus reverberii*. Argentina: Rio Negro. *Herpetological Review* 42: 236.
- Vaira, M., M. S. Akmentins, M. Attademo, D. Baldo, D. Barrasso, S. Barrionuevo, N. Basso, B. Blotto, S. Cairo, R. Cajade, J. Céspedes, V. Corbalán, P. Chilote, M. Duré, C. Falcione, D. Ferraro, F. R. Gutierrez, M. R. Ingaramo, C. Junges, R. Lajmanovich, J. N. Lescano, F. Marangoni, L. Martinazzo, R. Marti, L. Moreno, G. S. Natale, J. M. Perez Iglesias, P. Peltzer, L. Quiroga, S. Rosset, E. Sanabria, L. Sanchez, E. Schaefer, C. Úbeda, and V. Zaracho. 2012. Categorización del estado de conservación de los Anfibios de la República Argentina. *Cuadernos de Herpetología*, 26 (Supl. 1): 131–159.

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