

New records and geographic distribution map of *Bothropoides diporus* Cope, 1862 (Reptilia: Viperidae)

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ABSTRACT: We provide two new records of *Bothropoides diporus* for Neuquén province, northern Patagonia, Argentina. Both records are the second and third for this species in this province. One of these records, from the northern slope of Auca Mahuida Mountain, extends approximately 120 km to the north the present known geographic distribution of this species in Neuquén province.

Bothropoides diporus (Cope, 1862) is a medium-sized viperid snake (maximum SVL = 700 mm; Cei 1986) widely distributed from south-western Brazil through Paraguay to central Argentina (Giraudo and Scrocchi 2002; Fenwick *et al.* 2009). In Argentina it has been cited from Catamarca, Córdoba, Corrientes, Chaco, Formosa, Jujuy, La Pampa, La Rioja, Mendoza, Misiones, Neuquén, Río Negro, Salta, San Luis, Santa Fe, Santiago del Estero and Tucumán provinces (Cei 1986, 1993; Pérez and Avila 2000; Giraudo and Scrocchi 2002; Perez *et al.* 2003; da Silva and Rodrigues 2008). This species is found in a variety of habitats including Chaco, wet palm-grasslands, semitropical

deciduous forest, Araucaria forest, Monte and Pampas. The southernmost records of this species are from La Pampa, Neuquén and Río Negro provinces (Tiranti and Avila 1997; Pérez and Avila 2000; Pérez *et al.* 2003), with an apparent southern limit close to parallel 39° south. Here we present two new records of *B. diporus* from northeastern Neuquén province. On March 5th 2011, we spotted and collected a dead animal on the Provincial Road 7 (Figure 1, locality 4), 21.2 km NW Añelo (38°13'32.3" S, 68°59'00.3" W; 260 m elevation), Añelo Department. The snake was in very bad condition on the paved road but we were able to identify the typical coloration of this species. Habitat of the collected site was a field of sand dunes, with *Sporobolus* grass and some brushy areas where the dominant plant is salt bush (*Atriplex* spp.). The second specimen (Figures 1 and 2, locality 5) was spotted, photographed and collected (permit number 0154/10) while trying to hide in a small burrow, in the base of a creosote bush (*Larrea divaricata*), on the edge of a temporary stream flowing along a sandy area in the northern slope of Auca Mahuida Volcano, around 3.9 km S of Provincial Road 6 (37°30'50.3" S, 68°49'03.9" W; 755 m elevation), Pehuenches Department.

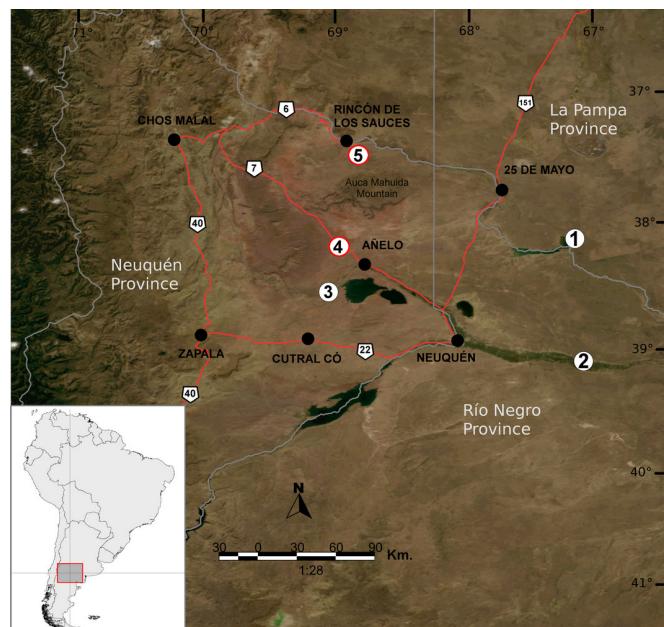


FIGURE 1. (1) record for La Pampa province from Tiranti and Avila (1997), (2) first record in Río Negro province from Pérez and Avila (2000), (3) first record for *Bothropoides diporus* in Neuquén province from Pérez *et al.* (2003). New records of *B. diporus*: (4) 21.2 km NW Añelo, Añelo Department (LJAMM-CNP 14344) and (5) 3.9 km S of Provincial Road 6, Pehuenches Department (LJAMM-CNP 14279). Main roads, province boundaries, and main human population centers are shown.



FIGURE 2. *Bothropoides diporus* from 3.9 km S of Provincial Road 6, Pehuenches Department, Neuquén province, Argentina (LJAMM-CNP 14279).

This locality is situated 120 km (airline) north of the first citation of the species for this province (Pérez *et al.* 2003), and 165 km SW of the southernmost locality cited in Puelén Department, La Pampa province. Voucher specimens are deposited in the herpetological collection of Centro Nacional Patagónico (CENPAT-CONICET) under numbers LJAMM-CNP 14344 (locality 4) and LJAMM-CNP 14279 (locality 5).

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Literature Cited

- Cei, J.M. 1986. Reptiles del Centro, Centro-Oeste y Sur de la Argentina. Herpetofauna de las zonas áridas y semiáridas. *Museo Regionale di Scienze Naturali Torino. Monografie IV*: 1-427.
- Cei, J.M. 1993. Reptiles del nordeste y este de la Argentina. Herpetofauna de las selvas subtropicales, Puna y Pampas. *Museo Regionale di Scienze Naturali Torino. Monografie XIV*: 1-951.
- Cope, E.D. 1862. Catalogues of the reptiles obtained during the explorations of the Parana Paraguay, Vermejo and Uruguay rivers, by Capt. Thos. J. Page, U.S.N.; and of those procured by Lieut. N. Michier, U. S. Top. Eng., Commander of the expedition conducting the survey of the Atrato River. *Proceedings of the Academy Natural Sciences of Philadelphia* 14: 346-359.
- Da Silva, V.X. and M.T. Rodrigues. 2008. Taxonomic revision of the *Bothrops neuwiedi* complex (Serpentes, Viperidae) with description of a new species. *Phyllomedusa* 7(1): 45-90.
- Fenwick, A.M., R.L. Gutberlet Jr, J.A. Evans and C. L. Parkinson. 2009. Morphological and molecular evidence for phylogeny and classification of South American pitvipers, genera *Bothrops*, *Bothriopsis*, and *Bothrocophias* (Serpentes: Viperidae). *Zoological Journal of the Linnean Society* 156(3): 617-640.
- Giraudo, A.R. and G.J. Scrocchi. 2002. Argentinean snakes. An annotated checklist. *Smithsonian Herpetological Information Service* 132: 1-53.
- Perez, D.R. and L.J. Avila. 2000. Geographic distribution: *Bothrops neuwiedi diporus*. *Herpetological Review* 31(4): 254.
- Perez, D., L. Martínez and L.J. Avila. 2003. *Bothrops neuwiedi diporus*. Geographic distribution. *Herpetological Review* 34(4): 386.
- Tiranti, S.I. and L.J. Avila. 1997. Reptiles of La Pampa province, Argentina: an annotated checklist. *Bulletin of Maryland Herpetological Society* 33(3): 97-117.

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