

# First records of *Homonota underwoodi* Kluge, 1964 (Squamata: Phyllodactylidae) for the province of Córdoba, Argentina

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**Localities**— Argentina. Province of Córdoba, Department of San Alberto, Las Toscas (30°09'30.32"S, 64°53'29.99"W; WGS84, 183 m a.s.l.). Date: December 10, 2019. Collected by N. Pelegrin, R. A. Lara-Reséndiz, and J. M. Sánchez. Vouchers: LECOHO0732 and LECOHO0733.

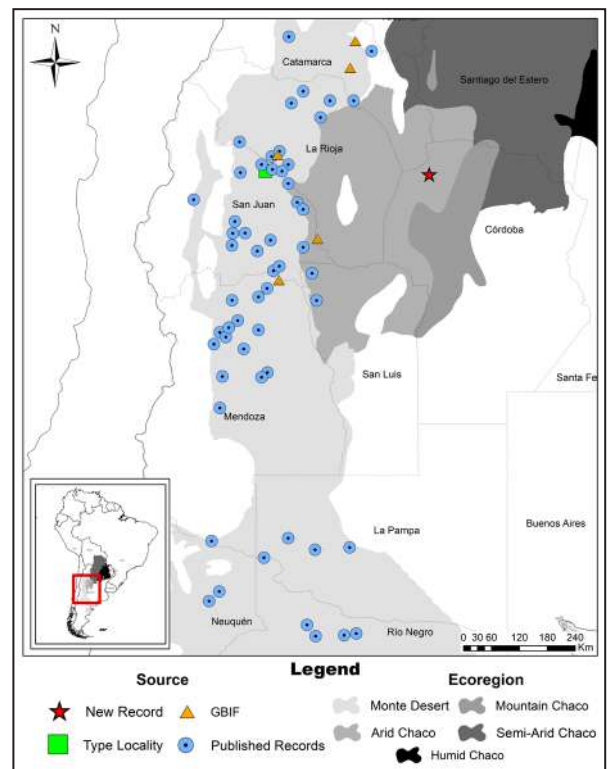
Argentina. Province of Córdoba, Department of San Alberto, Las Toscas (30°10'42.36"S, 64°53'23.66"W; WGS84, 192 m a.s.l.). Date: January 18, 2020. Collected by J. M. Sánchez and G. P. Pesci. Voucher: LECOHO 00734. All specimens are deposited in the collection of Laboratory of Ecology and Conservation of Herpetofauna (IDEA, CONICET-UNC).

**Comments**— The genus *Homonota* is distributed from 15° to 54° latitude South in the Monte, Chaco, Espinal, Andes, and Pampas biomes, with records in Bolivia, Paraguay, Brazil, Argentina, and Uruguay (Ceí 1978, Abdala 1993, Morando *et al.* 2014). *Homonota underwoodi* belongs to the *horrida* group along with *H. horrida*, *H. septentrionalis*, and *H. marthae* (Cacciali *et al.* 2018), and is the only in this group with irregular coloration in the dorsum (opposed to a banded coloration pattern). It can be distinguished from *H. darwinii*, *H. uruguayensis*, *H. taragui*, *H. williamsii*, *H. borelli*, and *H. rupicola*, by the lack of keeled scales, and from *H. andicola* and *H. withii*—morphologically most similar to *H. underwoodi*—by the absence of chromatophores in the belly (Cacciali *et al.* 2018).

*Homonota underwoodi* is endemic to Argentina, with records for the provinces of Catamarca, La Rioja, San Luis, La Pampa, San Juan, Mendoza, Neuquén, and Río Negro (Ceí 1978, Abdala 1993, Ceí 1993, Tiranti y Avila 1997, Ávila *et al.* 1998, Guerreiro *et al.* 2005, Perez *et al.* 2005, Corbalán y

Debandi 2008, Sanabria y Quiroga 2009, Sanabria y Quiroga 2010, Perez *et al.* 2011, Medina *et al.* 2012, Morando *et al.* 2014, Daza *et al.* 2017) (Fig. 1, Table 1). It is a species of psammophile habits and typical of the dry conditions of the Monte desert (Ceí 1978). The species known distribution is mainly restricted to the Monte desert and in Monte desert-Arid Chaco ecotonal areas (Fig. 1, Table 1).

During a sampling carried out in Salinas Grandes Multiple Use Reserve (Salinas Grandes reserve), nineteen specimens of *H. underwoodi* were



**Figure 1.** Distribution of *Homonota underwoodi* based on records from different data sources (listed in Table 1). Locality for the new records in Salinas Grandes is shown as a red star.

**Table 1.** List of records showed in Figure 1, including Province, georeference, type of record, and bibliographic source. Some points were extracted from maps included in publications; these points are noted in the table with an asterisk. From GBIF, only records with preserved specimens were included.

Province	Longitude	Latitude	Type of record	Source
La Rioja	-67.611612	-29.989231	Published Records	Cei, 1993*
La Rioja	-67.554186	-28.802028	Published Records	Cei, 1993*
La Rioja	-66.807654	-28.756366	Published Records	Cei, 1993*
La Rioja	-67.324484	-28.573719	Published Records	Cei, 1993*
La Rioja	-66.991244	-29.079211	Published Records	Cei, 1986*
La Rioja	-68.550000	-29.550000	Published Records	Cajade <i>et al.</i> , 2013
La Rioja	-67.933333	-29.833333	Published Records	Kass <i>et al.</i> , 2018
La Rioja	-67.783333	-29.733333	Published Records	Kass <i>et al.</i> , 2018
La Rioja	-67.733333	-30.116667	Published Records	Kass <i>et al.</i> , 2018
La Rioja	-67.047472	-31.423639	GBIF	Gbif, 2019
La Rioja	-67.816670	-29.800000	GBIF	Gbif, 2019
Catamarca	-66.003697	-27.797471	Published Records	Cei, 1993*
Catamarca	-66.348250	-28.756366	Published Records	Cei 1993*
Catamarca	-67.600000	-27.520000	Published Records	Cajade <i>et al.</i> , 2013
Catamarca	-66.316700	-27.600000	GBIF	Gbif, 2019
Catamarca	-66.416700	-28.116700	GBIF	Gbif, 2019
Córdoba	-64.889906	-30.178433	New Record	this work
San Luis	-67.152208	-32.089668	Published Records	Cei, 1993*
San Luis	-67.066667	-32.616667	Published Records	Guerreiro <i>et al.</i> , 2005
La Pampa	-67.094782	-37.432084	Published Records	Cei, 1993*
La Pampa	-66.427214	-37.387089	Published Records	Tiranti and Avila, 1997
La Pampa	-68.082125	-37.583319	Published Records	Tiranti and Avila, 1997
La Pampa	-67.615019	-37.207383	Published Records	Tiranti and Avila, 1997
San Juan	-68.054820	-30.110290	Type Locality	Kluge, 1964
San Juan	-67.439335	-30.719817	Published Records	Cei and Castro, 1978*
San Juan	-67.324484	-30.856802	Published Records	Cei and Castro, 1978*
San Juan	-67.898739	-32.044006	Published Records	Cei and Castro, 1978*
San Juan	-67.783889	-31.952683	Published Records	Cei, 1993*
San Juan	-67.324484	-31.587390	Published Records	Cei, 1993*
San Juan	-67.956165	-31.450405	Published Records	Cei, 1993*
San Juan	-67.611612	-30.354525	Published Records	Cei, 1993*
San Juan	-68.128442	-29.989231	Published Records	Cei, 1993*
San Juan	-68.642108	-31.088525	Published Records	Ávila <i>et al.</i> , 1998
San Juan	-68.534272	-30.144342	Published Records	Ávila <i>et al.</i> , 1998
San Juan	-69.438994	-30.667300	Published Records	Ávila <i>et al.</i> , 1998
San Juan	-68.683333	-31.316667	Published Records	Marinero <i>et al.</i> , 2003
San Juan	-68.683333	-31.316667	Published Records	Marinero <i>et al.</i> , 2003
San Juan	-67.916667	-30.083333	Published Records	Sanabria and Quiroga, 2009
San Juan	-68.700000	-31.550000	Published Records	Sanabria and Quiroga, 2010
San Juan	-68.446000	-31.313000	Published Records	Cacciali <i>et al.</i> , 2017
San Juan	-68.209000	-31.662000	Published Records	Cacciali <i>et al.</i> , 2017

San Juan	-67.791626	-32.218735	GBIF	Gbif, 2019
Mendoza	-68.587846	-33.002901	Published Records	Cei and Castro, 1978*
Mendoza	-68.932399	-33.231209	Published Records	Cei and Castro, 1978*
Mendoza	-68.817548	-33.322533	Published Records	Cei and Castro, 1978*
Mendoza	-69.047250	-33.459518	Published Records	Cei and Castro, 1978*
Mendoza	-68.013590	-34.007458	Published Records	Cei and Castro, 1978*
Mendoza	-68.932399	-34.692383	Published Records	Cei and Castro, 1978*
Mendoza	-68.128442	-34.098782	Published Records	Cei, 1993*
Mendoza	-68.472995	-33.550842	Published Records	Cei, 1993*
Mendoza	-68.185867	-33.185548	Published Records	Cei, 1993*
Mendoza	-68.760123	-33.139886	Published Records	Cei, 1993*
Mendoza	-68.185867	-32.546285	Published Records	Cei, 1993*
Mendoza	-68.020000	-32.380000	Published Records	Werner <i>et al.</i> , 1996
Mendoza	-68.883333	-34.083333	Published Records	Corbalán and Debandi, 2008*
Mendoza	-68.698121	-32.610713	Published Records	Corbalán and Debandi, 2008*
Río Negro	-67.083333	-39.100000	Published Records	Perez <i>et al.</i> , 2005
Río Negro	-66.300000	-39.050000	Published Records	Perez <i>et al.</i> , 2011
Río Negro	-66.533333	-39.083333	Published Records	Perez <i>et al.</i> , 2011
Río Negro	-67.250000	-38.883333	Published Records	Perez <i>et al.</i> , 2011
Neuquén	-69.140056	-38.422891	Published Records	Medina <i>et al.</i> , 2012
Neuquén	-68.237762	-38.237762	Published Records	Medina <i>et al.</i> , 2012
Neuquén	-69.092336	-37.262336	Published Records	Medina <i>et al.</i> , 2012

registered (12 adults, 5 juveniles, and 2 newborns), from which three were collected, and 16 were released after identification and measurement. Voucher specimens LECO0732 (SVL: 44 mm) and LECO0733 (SVL: 46 mm) are adult individuals captured with drift fence-pitfall traps in an Arid Chaco forest surrounding the Salinas Grandes reserve. Voucher specimen LECO0734 is a juvenile (SVL: 29.45 mm) captured by hand in a nocturnal survey along internal paths near the park ranger station at Las Toscas.

All captured individuals of *H. underwoodi* presented yellow coloration in parts of the body, mainly in the head above the eyes—forming yellow eyebrows sometimes extended to the nose—and in the tail. Some individuals presented yellow scales on flanks, the vertebral line, the occipital region, and around nostrils (Fig. 2).

Our records extend the species known distribution ~ 215 km to the southeast of the closer published record in Catamarca (Fig. 1) and are the first records for the Province of Córdoba, increasing its total number of lizard species to 30 (Cabrera *et al.* 2018). Most individuals were recorded in areas with

sandy soil (Fig. 2A), typical vegetation of transitional Arid Chaco forest composed by thorny shrubs, cacti, and woody plants like *Parkinsonia praecox*, *Geoffrea decorticans*, *Prosopis* sp., and *Aspidosperma quebracho-blanco*. Some individuals were observed in a sparse semi-halophytic shrubland located in a drainage area with calcrete floor (Fig. 2B). In these areas, *H. underwoodi* was found in syntopy with typical Chaco lizard species like *Teius teyou*, *Stenocercus doellojuradoi*, *Vanzosaura rubricauda*, and other two *Homonota* species, *H. borelli* and *H. horrida*.

Our records locate *H. underwoodi* in an Arid Chaco area with extremely dry conditions (rains around 300 mm/yr and summer maximum temperatures around 50° C). Sandy soils along with local climatic conditions resemble those of the Monte desert where the species is common. The more structurally complex vegetation of the Arid Chaco seems not to be a constraining factor for the presence of the species.

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**Figure 2.** *Homonota underwoodi* from Salinas Grandes, Córdoba (Argentina), showing individuals on sandy (A) and calcrete substrate (B). Note the yellow coloration in head and tail.

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