

Rediscovery of *Liolaemus duellmani* Cei, 1978 (Iguania: Liolaemidae): Description of a Female Found Near the Type Locality

Authors: Nenda, Santiago J., Laspiur, Alejandro, Lobo, Fernando, and Abdala, Cristian S.

Source: South American Journal of Herpetology, 18(1) : 42-45

Published By: Brazilian Society of Herpetology

URL: <https://doi.org/10.2994/SAJH-D-18-00042.1>

The BioOne Digital Library (<https://bioone.org/>) provides worldwide distribution for more than 580 journals and eBooks from BioOne's community of over 150 nonprofit societies, research institutions, and university presses in the biological, ecological, and environmental sciences. The BioOne Digital Library encompasses the flagship aggregation BioOne Complete (<https://bioone.org/subscribe>), the BioOne Complete Archive (<https://bioone.org/archive>), and the BioOne eBooks program offerings ESA eBook Collection (<https://bioone.org/esa-ebooks>) and CSIRO Publishing BioSelect Collection (<https://bioone.org/csiro-ebooks>).

Your use of this PDF, the BioOne Digital Library, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Digital Library content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne is an innovative nonprofit that sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Rediscovery of *Liolaemus duellmani* Cei, 1978 (Iguania: Liolaemidae): Description of a Female Found Near the Type Locality

Santiago J. Nenda^{1,*}, Alejandro Laspiur², Fernando Lobo¹, Cristian S. Abdala³

¹ División Herpetología, Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Consejo Nacional de Investigaciones Científicas y Técnicas, Avenida Ángel Gallardo 470, C1405DJR Buenos Aires, Argentina.

² Consejo Nacional de Investigaciones Científicas y Técnicas, Centro Regional Universitario Bariloche, Universidad Nacional del Comahue, Quintral 1250, San Carlos Bariloche, Argentina.

³ Unidad Ejecutora Lillo, Consejo Nacional de Investigaciones Científicas y Técnicas, S.M. de Tucumán, Argentina.

* Corresponding author. Email: snenda@macn.gov.ar

Abstract. *Liolaemus duellmani* is a poorly known, microendemic lizard described from southwestern Mendoza, Argentina, representing the southernmost distribution of the *Liolaemus montanus* species group. We report the rediscovery of the species after 43 years, presenting the fifth voucher specimen and the second female of *L. duellmani*. Data on external morphology, activity, and color photographs are included, and the geographic coordinates of the type locality are discussed.

Keywords. *Liolaemus montanus* species group; Lizard; Morphometry; Northern Patagonia; Squamation.

Resumen. *Liolaemus duellmani* es un lagarto microendémico y poco conocido descrito para el suroeste de Mendoza en Argentina, y representa la distribución más austral del grupo de especies de *Liolaemus montanus*. La especie *L. duellmani* no fue encontrada por un prolongado período de tiempo. En esta contribución, informamos el redescubrimiento de la especie después de 43 años, presentando el quinto espécimen testigo y la segunda hembra de *L. duellmani*. Se incluyen datos sobre morfología externa, actividad y fotografías en color y se discuten las coordenadas geográficas apropiadas de la localidad tipo.

INTRODUCTION

The microendemic species *Liolaemus duellmani* Cei, 1978 has for a long time been considered enigmatic. It was categorized as *Insuficientemente conocida* (insufficiently known) by the Asociación Herpetológica Argentina in 2012 (Abdala et al., 2012) and as “Data deficient” by IUCN (IUCN, 2017). The species has not been collected since 12 December 1974, when W.E. Duellman and J.E. Simmons collected the holotype and two paratypes, all of them males (KU 161126 holotype, KU 161127–128 paratypes). The fourth specimen in the type series, the only known female, was collected previously by Cei on 22 November 1961 (IBA-UNC 139).

Several field trips to the supposed type locality of *Liolaemus duellmani* in Mendoza province were carried out by the authors with the aim of rediscovering the species described by Cei (1978). On 11 January 2017, we found an adult female *L. duellmani* (MACN 51578; Fig. 1) in Pampa del Choique, 36°22'08.6"S, 69°46'01.2"W, 2,432 m above sea level, 3.36 km (airline) east of Paso del Choique, Malargüe department, Mendoza province, Argentina (Fig. 2). Here, we present new data on squa-

mation, morphometry, activity, distribution, and full color photographs of a female of the species for the first time.

MATERIALS AND METHODS

All measurements are expressed in millimeters and were taken with a digital caliper (Schwyz, Electronic Caliper) to the nearest 0.02 mm. Pictures of the live specimen were taken in the field using a digital single-lens reflex camera (Nikon D7000), and most character details were examined under a stereomicroscope (Olympus SZ-ST). Characters used in the description followed standards published in Smith (1946), Cei (1986, 1993), Laurent (1984, 1986), Etheridge (1995, 2000), Abdala and Quinteros (2008), and Abdala et al. (2008, 2009, 2013). Geographic coordinates and elevation were obtained in the field with a GPS device (datum WGS84). The acronym MACN corresponds to Colección Nacional de Herpetología housed at División Herpetología, Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Ciudad Autónoma de Buenos Aires, Argentina.

How to cite this article: Nenda S.J., Laspiur A., Lobo F., Abdala C.S. 2020. Rediscovery of *Liolaemus duellmani* Cei, 1978 (Iguania: Liolaemidae): Description of a female found near the type locality. *South American Journal of Herpetology* 18: 42–45. <http://doi.org/10.2994/SAJH-D-18-00042.1>

Submitted: 21 June 2018

Accepted: 04 April 2019

Available Online: 17 December 2020

Handling Editor: Juan Diego Daza

<http://doi.org/10.2994/SAJH-D-18-00042.1>

RESULTS

Description of MACN 51578

Female, snout–vent length (SVL) 76.64. Trunk length 38.02. Head length 14.86. Head width 12.57. Head height (at parietal) 9.12. Eye diameter 3.63. Interorbital distance 6.28. Orbit–auditory meatus distance 5.53. Auditory meatus height 2.66, width 1.99. Orbit–commis-sure of mouth distance 2.09. Distance between nares 3.03. Subocular scale 4.56. Femur 10.59, tibia 12.53, foot 18.71, humerus 7.72. Humerus width 4.33. Tail length 71.35 (regenerated). Abdominal width 25.83.

Dorsal surface of head smooth, with 16 scales (from occiput to rostral scale). Rostral scale wider than high, bordered by 6 scales. Mental scale larger than rostral, pentagonal, bordered by four scales. Rostral scale not in contact with nasal. Two postrostral scales. Four internasals. Nasal scale surround by eight scales, separated from canthal by two scales. Six scales between rostral and superciliaries. Seven scales between rostral and frontal. Unique frontal scale. Interparietal smaller than or equal to parietals, surrounded by seven scales. Seven superciliaries, 14 upper ciliaries. Supraorbital semicircles complete. Five and six enlarged supraoculars. Preocular scale separated from lorilabial row by one scale. Projecting scales on anterior and superior margin of auditory meatus absent. Twelve smooth horizontal temporals and 10 vertical temporals. Nine lorilabials, four in contact with subocular scale. Nine enlarged supralabials, not in contact with subocular scale. Six infralabials, second ventrally in contact with two scales. Five chinshields; second imbricate separated by two scales. Eighty-seven scales around midbody. Ninety-two dorsal scales, from occiput to hindlimbs, juxtaposed, smooth, with rounded anterior margins. One hundred and sixteen ventrals, larger than dorsals, flat, imbricated in abdominal region, subjuxtaposed in lateral regions. Forty-four gulars between auditory meatus, juxtaposed, smooth. Precloacal pores absent. Antehumeral scales flat, larger than dorsal scales, most with scale organ in anterior margin. Postauricular, rictal, and longitudinal nuchal folds inflated but conspicuous. Scales on lateral neck folds granular with scale organ in each. Forty-two scales along longitudinal fold, 55 scales between margin of antehumeral pocket and arm. Twenty-two subdigital lamellae on IV finger, twenty-six on toe IV. Flank scales rounded, smooth, with several small granular intercalated scales. Femoral patch absent. Infracarpal scales flat, imbricate, trifid. Infratarsals scales flat, imbricate, keeled.

Dorsum of head spotted with small dark gray dots distributed irregularly; subocular scale conspicuously white. Dorsum gray/light brown with transversal rows of dark spots, each bordered by light gray ones. Six to seven rows of dark spots at the middle of the trunk. Most of body speckled with white scales sparsely but homoge-

Table 1. Comparison between the original description of *Liolaemus duellmani* Cei, 1978 and the characters observed in the newly collected female specimen MACN 51578.

Character	Cei, 1978	MACN 51578
Dorsal scales disposition	Subimbricate almost juxtaposed	Juxtaposed
Antehumeral and neck folds	Present	Present
Claws	Strongly clawed	Very conspicuous
Ventral surfaces of forearm and hand, femoral region, and foot	Bright Yellow	Bright yellow
Dorsal color of tail	Pinkish tan	Light pink
Snout–vent length	82.0 (female paratype)	76.64
Head length	19.2 (female paratype)	14.86
Head width	14.6 (female paratype)	12.57
Rostral scale/nasal	Not in contact	Not in contact
Supralabials	10	9
Infralabials	7	6
Gular scales between auditory meatus	48–50	44
Scales around midbody	86–90	87
Subdigital lamellae on IV finger/IV toe	18/20–21	22/26

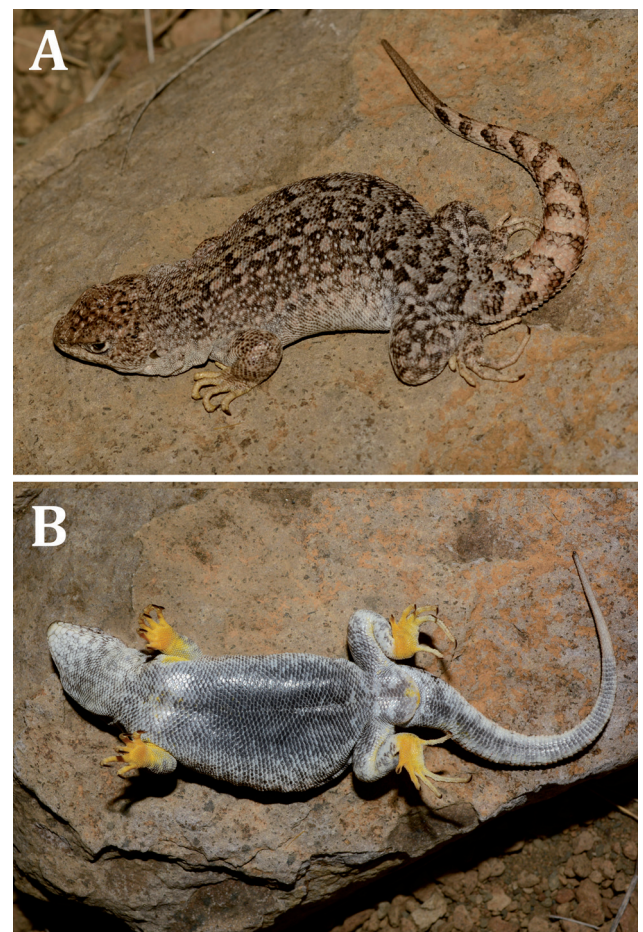


Figure 1. Dorsal (A) and ventral (B) view of the *Liolaemus duellmani* female (MACN 51578) exhibiting color in life.

neously distributed, confined within dark spots. Hands, antebrachium, axilla, foot, and ventral surfaces of thighs bright yellow. Claws very conspicuous dark brown. Pattern of spots continuing over dorsum of tail but fusing

along midline to form transversal bands. The background color of tail lighter than trunk (light pink). Throat pale gray speckled with darker gray spots. Abdominal region homogeneous dark gray, almost black, continuing over

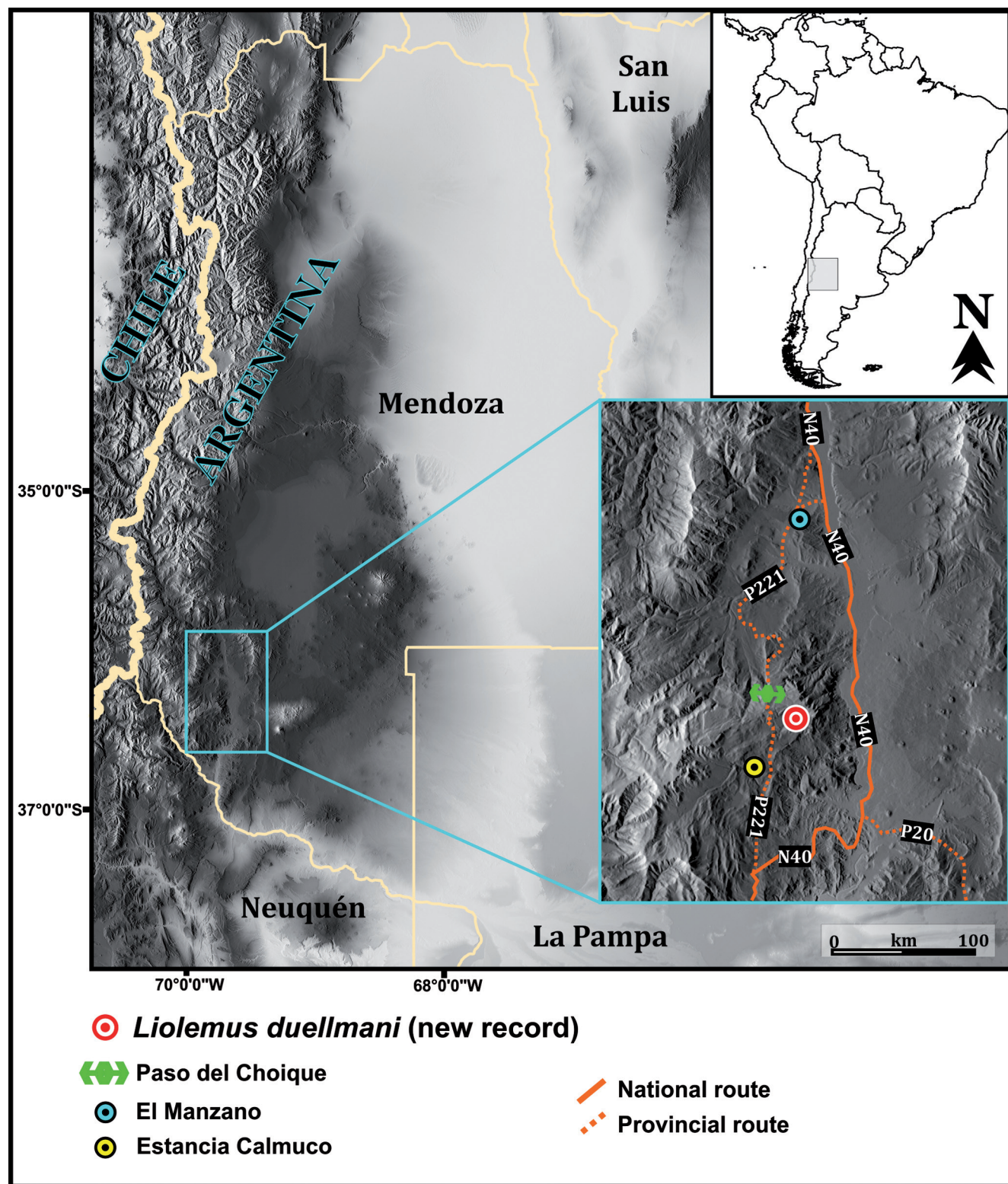


Figure 2. Spatial location and geographical context of the records (red and white circle) of *Liolaemus duellmani* in Malargüe department, central western Argentina.

cloacal area and tail. Center of chest gray with sparse small yellow dots irregular distributed. Posterior margin of cloaca bright yellow.

Color in preservative after fixation resembles live specimens, but bright yellow color is lost. Tail remains light pink.

DISCUSSION

The locality of MACN 51578 is situated 3.36 km airline east of the type locality provided by Cei (1978) in the original description of *Liolaemus duellmani*: Paso del Choique, 50 km SSW El Manzano, 2,260 m, Provincia de Mendoza, Argentina. However, Cei (1978) gave incorrect geographic coordinates (36°27'S, 60°50'W; as a typo he wrote 60 instead of 69) that correspond to an uncertain locality in Buenos Aires province, 804 km to the east. In agreement with the geographical context given by Cei (1978), the capture site in which specimen MACN 51578 was found (36°21'44.51"S, 69°48'12.90"W) could be close to the original area where the type specimens were collected. Moreover, the locality where specimen MACN 51578 was found coincides with habitat details given by Cei (1978): xeric, mountainous, Patagonian steppe environments with volcanic rocky outcrops and soil with loose gravel typical of cryogenic activity in the area.

These data correspond to the southernmost record of the *Liolaemus montanus* group, which has its northernmost distribution in central Peru (Abdala and Quinteros, 2014). MACN 51578 was found active at midday (13:30) near the road, basking on a small basaltic rock. Regarding biological data, other aspects of this species' life history remain unknown.

The color pattern fits the original description, and morphometric and squamation characters of specimen MACN 51578 coincide with the ranges given by Cei (1978), except for the following counts (MACN 51578/original description counts Cei [1978]): supralabials 9/10; infralabials 6/7; gulars 44/48–50; scales around midbody 85/86–90; subdigital lamellae on IV finger 22/18; and subdigital lamellae on IV toe 26/20–21 (Table 1).

ACKNOWLEDGMENTS

We are grateful to J. Faivovich MACN for allowing us to study specimens under his care. Financial support was partially provided to (AL) by Consejo de Investigaciones Científicas y Tecnológicas, a postdoctoral fellowship grant, and PICT 2015-1398. We thank two anonymous reviewers for their comments and suggestions that improved the manuscript.

REFERENCES

- Abdala C.S., Quinteros S. 2008.** Una nueva especie de *Liolaemus* (Iguanidae: Liolemini) endémica de la sierra de Fiambalá, Catamarca, Argentina. *Cuadernos de Herpetología* 22:35–47.
- Abdala C.S., Quinteros A.S. 2014.** Los últimos 30 años de estudios de la familia de lagartijas más diversa de Argentina. Actualización taxonómica y sistemática de Liolaemidae. *Cuadernos de Herpetología* 28:55–82.
- Abdala C.S., Quinteros A.S., Espinoza R.E. 2008.** Two new species of *Liolaemus* (Iguania: Liolaemidae) from northwestern Argentina. *Herpetologica* 64:458–471. [DOI](#)
- Abdala C.S., Acosta J.C., Cabrera M.R., Villavicencio H.J., Marinero J. 2009.** A new Andean *Liolaemus* of the *L. montanus* series (Squamata: Iguania: Liolaemidae) from western Argentina. *South American Journal of Herpetology* 4:91–102. [DOI](#)
- Abdala C.S., Acosta J.L., Acosta J.C., Álvarez B.B., Arias F., Avila L.J., ... Zalba S.M. 2012.** Categorización del estado de conservación de las anfibienas y lagartijas de la República Argentina. *Cuadernos de Herpetología* 26:215–248.
- Abdala C.S., Paz M.M., Semhan R.V. 2013.** Nuevo *Liolaemus* (Iguania: Liolaemidae) fronterizo de Argentina y Chile que exhibe un novedoso carácter morfológico. *Revista de Biología Tropical* 61:1563–1584.
- Cei J.M. 1978.** A new species of *Liolaemus* (Sauria: Iguanidae) from the Andean Mountains of the southern Mendoza volcanic region of Argentina. *Occasional papers of the Museum of Natural History University of Kansas* 76:1–6.
- Cei J.M. 1986.** Reptiles del Centro, Centro-oeste y Sur de la Argentina. *Museo Regionale di Scienze Naturali, Torino. Monografie* 4:1–527.
- Cei J.M. 1993.** Reptiles del Noroeste, Nordeste y Este de la Argentina. *Museo Regionale di Scienze Naturali, Torino, Monografie* 14:1–949.
- Etheridge R. 1995.** Redescription of *Ctenoblepharys adspersa* Tschudi, 1845, and the taxonomy of Liolaeminae (Reptilia: Squamata: Tropiduridae). *American Museum Novitates* 3142:1–34.
- Etheridge R. 2000.** A review of lizards of the *Liolaemus wiegmanni* group (Squamata, Iguania, Tropiduridae), and a history of morphological change in the sand-dwelling species. *Herpetological Monographs* 14:293–352. [DOI](#)
- IUCN. 2017.** The IUCN Red List of Threatened Species. Version 2017-3. Accessible at www.iucnredlist.org. Accessed: 21 June 2018.
- Laurent R.F. 1984.** Tres especies nuevas del género *Liolaemus* (Reptilia, Iguanidae). *Acta Zoológica Lilloana* 37:273–294.
- Laurent R.F. 1986.** Descripciones de nuevos Iguanidae del género *Liolaemus*. *Acta Zoológica Lilloana* 38:87–105.
- Smith H.M. 1946.** Handbook of Lizards: Lizards of the United States and of Canada. Comstock Publ. Co., Ithaca.