

SHORT COMMUNICATION

# Rediscovery of *Dipsas peruana* (Serpentes: Dipsadidae) in Bolivia and extension of its distribution

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**Palavras-chave:** Dipsadini, Extensão de área de distribuição, Novo registro, Serpente-comedora-de-caracóis-peruana.

The genus *Dipsas* is one of the most diverse groups of snakes and includes more than 50 species distributed throughout Central and South America. Most of them are arboreal, nocturnal, and specialized in feeding on gastropods (Harvey and Embert 2008, Lima and Prudente 2009, Arteaga *et al.* 2018, Uetz *et al.* 2025). Information on systematics about species of *Dipsas* remains poor, resulting in a lack of understanding of their morphological variation from scales to color pattern (Silva *et al.* 1985, Cadle and Myers 2003, Cadle 2005). In Bolivia, 10 species of the genus

*Dipsas* are currently recognized: *D. bucephala* (Shaw, 1802), *D. catesbyi* (Sentzen, 1796), *D. chaparensis* Reynolds and Foster, 1992, *D. cisticeps* (Boettger, 1885), *D. indica* Laurenti, 1768, *D. lavillai* (Scrocchi, Porto and Rey, 1993), *D. pavonine* Schlegel, 1837, *D. peruana* (Boettger, 1898), *D. turgida* (Cope, 1868), and *D. variegata* (Duméril, Bibron and Duméril, 1854) (González and Reichle 2003, Aguayo 2009, Arteaga *et al.* 2018, Reichle 2019, Gómez-Murillo *et al.* *in press*). However, very little is known about the biology and distribution of these 10 species, in contrast to their congeners in other South American countries.

Originally, Boettger (1898) described *Leptognathus peruana* Boettger, 1898 from the

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Santa Ana region, Cuzco, Peru, and Werner (1901, 1909) followed by describing *Leptognathus boettgeri* Werner, 1901, and later added *Leptognathus boliviana* Werner, 1909 (= *Dipsas peruana*) from Beni River, Bolivia. Decades later, Peters (1960) synonymized *L. boliviana* with *L. boettgeri*. Similarly, Peters and Orejas-Miranda (1970) placed *L. boliviana* within *Dipsas boettgeri* and continued to recognize *Dipsas peruana* (*L. peruana*) as a distinct taxon. Harvey and Embert (2008) placed *L. boettgeri* as a synonym of *D. peruana*. Amaral (1929) synonymized *L. praeornata* Werner, 1909, from Venezuela with *Sibynomorphus*. Fernandes et al. (2002) synonymized *D. latifasciata* with *D. polylepis*. Harvey and Embert (2008) resurrected the name *D. praeornata* (Werner, 1909) for the Venezuelan coastal range population and relegated *D. latifrontalis* (Boulanger, 1905) to a synonym of *D. peruana*. Arteaga et al. (2018) removed *D. palmeri* (Boulanger, 1912) (as well as *D. latifasciata* and *D. latifrontalis*) from the synonymy of *D. peruana* (Uetz et al. 2025). Therefore, the specimen (*L. boliviana*) described by Werner in 1909 was the first specimen of *D. peruana* recorded in Bolivia, which was

subsequently housed at the Museum für Tierkunde in Dresden, Germany. Although the type specimen was destroyed during World War II, it remained the only documented specimen from Bolivia for many years and served as the reference for all subsequent records of it (Harvey and Embert 2008, Aguayo 2009, Arteaga et al. 2018, Reichle 2019). Until this publication, no other specimen attributable to this species could be located in a Bolivian or external collection aside from those deposited by us.

During several field trips between 2016 and 2025, six new specimens of *Dipsas peruana* have been found in Bolivia after more than 100 years since its last observation. All the specimens were captured while active at night between 19:00 and 24:00 h. Four specimens from the Department of Cochabamba (Figures 1A and 2) were collected on an unpaved road adjacent to a mature secondary mountain forest in the Yungas ecoregion, Chaquisacha, Carrasco National Park (17°25'30.73" S, 65°14'5.41" W; 1800 m a.s.l.). Two additional specimens were captured from the Departments of Beni and La Paz. One, a male, was found under a rock on an unpaved road near the Waicani Hill, Coripata, (16°11'47.9" S, 67°53'38.1"



**Figure 1.** Specimens of *Dipsas peruana*, (A) MNHC-R 3082 from Chaquisacha (Carrasco National Park), Cochabamba, Bolivia, and (B) CBF 4521 from Coripata, La Paz, Bolivia. Photographs by Oliver Quinteros-Muñoz (A) and James Aparicio (B).



**Figure 2.** Female specimen (MHNC-R 3082) of *Dipsas peruana* in preservative, from Chaquisacha Carrasco National Park, Cochabamba, Bolivia. (A) Dorsal view; (B) ventral view; (C) dorsal view of the head; (D) ventral view of head; (E) right view of the head; (F) left view of the head. Scale bar (head only) = 10 mm.

W; 2750 m a.s.l.), which is located in the Yungas ecoregion of La Paz (Figure 1B). The other, a female, from the Department of Beni, Municipality of San Borja (14°50'21.8" S, 66°44'25.2" W; 200 m

a.s.l.), was collected near a road between the branches of a small tree, interestingly representing the only low elevation record from the Amazon ecoregion. Specimens from Cochabamba were

collected under permit MMAYANMABCCGDF/DGBAP/MEG No. 0053/2019 and deposited in the herpetological collection at the Museo de Historia Natural Alcide d’Orbigny (MHNC-R 3081; MHNC-R 3082; MHNC-R 3142; MHNC-R 3143), Cochabamba, Bolivia. Specimens from Beni and La Paz were deposited in the Colección Boliviana de Fauna (CBF 4352; CBF 4521), La Paz, Bolivia.

All specimens fit the diagnosis of Arteaga *et al.* (2018). *Dipsas peruana* differs from all described species of *Dipsas* by the following combination of characters (Table 1). Scales: (1) 15/15/15 smooth dorsals with moderately enlarged vertebral row; (2) one loreal and one preocular in contact with orbit; (3) 8–9 supralabials with 4–6 or 3–5 contacting orbit; (4) one pair of infralabials in contact behind symphyisial; (5) 177–200 ventrals in males, 180–203 in females; (6) 75–127 divided subcaudals in males, 79–105 in females; color pattern: (7) dorsal and ventral ground color brown to dark brown (light brown in juveniles) with 33–43 blackish brown to complete black, white to cream-edged circular to vertically elliptical blotches that are longer than interspaces; head

dark brown with dirty cream reticulations and different degrees of whitish edging on labial scales, and a thin (1–3 scales long) white to light grayish brown irregular nuchal collar; dorsal blotches extending marginally onto ventrals and rarely fusing midventrally; (8) 199 mm SVL in males, 610–725 mm in females; (9) 85 mm TL in males, 155–241 mm in females.

The distribution of *D. peruana* includes the Andes Mountains, throughout Venezuela, Colombia, Ecuador, Peru, and Bolivia (Harvey and Embert 2008, Harvey *et al.* 2008, Pazmiño-Otamendi and Rodríguez-Guerra 2019). Wallach (2014: 237) reported the distribution of this species in the Departments of La Paz and Pando in Bolivia, without citing any evidence for the presence of this species in these Departments. Arteaga *et al.* (2018) restricted the distribution of the populations of *D. peruana* to the eastern slopes of the Peruvian and Bolivian Andes south of the Huancabamba Depression at elevations between 1279 and 2671 m a.s.l. These authors mentioned no evidence for this species in Bolivia. Literature data and the new specimens presented herein also allow us to confirm the presence of the species in the Department of

**Table 1.** Meristic characters of all collected specimens of *Dipsas peruana* from Bolivia.

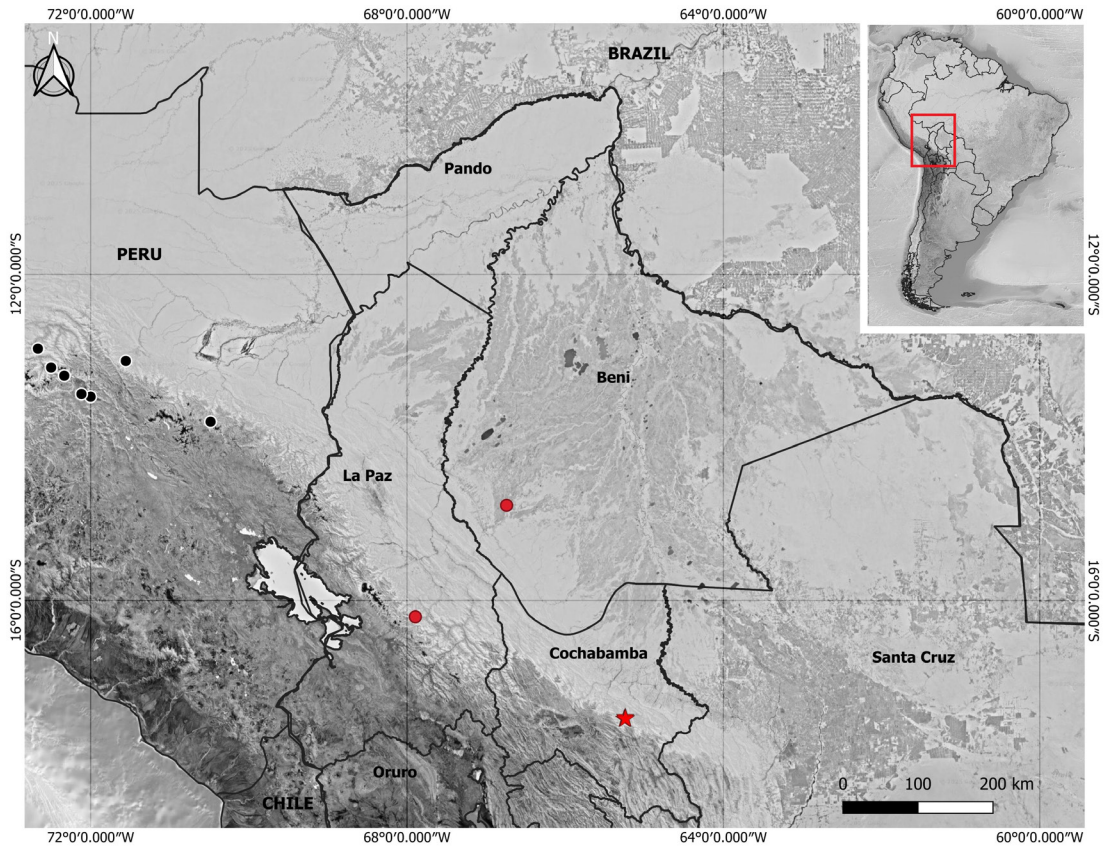
Characters	MHNC-R 3081 (Female)	MHNC-R 3082 (Female)	CBF-4352 (Female)	CBF-4521 (Male)	MHNC-R 3142 (Female)	MHNC-R 3143 (Male)
SVL (mm)	368	568			795	715
TL (mm)	500	780			1067	99
Maxillary teeth	12	14				
Dorsals	15/15/15	15/15/15	15/15/15	15/15/15	15/15/15	15/15/15
Ventrals	203	201	200	199	197	204
Subcaudals	106	111	101	115	94	99
Preoculars	1/1	1/1	1/1	1/1	1/1	2/2
Postoculars	3/3	2/2	2/2	2/2	2/2	3/2
Temporals	2+3/2+1+2	2+3/2+3	2+3/1+3	2+3/2+3	2+3/1+3	2+3/2+3
Supralabials	9/10	9/8	9/9	9/10	9/9	8/8
Infralabials	13/13	12/13	13/12	12/12	12/12	10/10
Anal Plate	Undivided	Undivided	Undivided	Undivided	Undivided	Undivided

Beni, Bolivia, with a new low altitude record of 200 m a.s.l. Furthermore, our records extend the geographic distribution of *D. peruana* to the Departments of Cochabamba and La Paz, respectively (Figure 3).

In Bolivia, *Dipsas peruana* appears to be a rare species, known only from the holotype of *Leptognathus boliviana* (Harvey and Embert 2008). Although *D. peruana* has consistently been cited as a species present in Bolivia, no specimens have been deposited in any Bolivian collection to date. This report represents the first formal record of the species after more than 100


years since this species was reported for the first time in Bolivia. In addition, this record extends the distribution of the species by 640 km in a southwest direction from Peru (Puno) to Bolivia. The record from the Cochabamba Department is the southernmost record of *D. peruana* in South America (Figure 3).

*Dipsas peruana* was classified as Least Concern (LC) in the IUCN Red List of Threatened Species by Caicedo *et al.* (2016), but an update is necessary because its categorization considered the wide distribution proposed by Harvey and Embert (2008). Nonetheless, the



**Figure 3.** Geographic distribution of *Dipsas peruana* in Bolivia. Red star corresponds to the southernmost record of the species in South America (Cochabamba, Bolivia); red circles correspond to records in the Departments of Beni and La Paz. Black circles represent records of *D. peruana* in Peru reported by Harvey and Embert (2008).

presence of *Dipsas peruana* in Bolivia is confirmed. We suggest that further morphological and molecular evidence is necessary to better understand and clarify its relationship with other *Dipsas* species and evaluate its geographic variation throughout its entire distribution.

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