

SHORT COMMUNICATION

Taxonomic notes on the poorly known South American lizard *Placosoma cordylinum* (Squamata: Gymnophthalmidae)

Marcelo José Sturaro

Laboratório de Herpetologia, Museu Paraense Emílio Goeldi, CZO, Caixa Postal 399, 66017-970, Belém, Pará, Brazil.
E-mail: marcelosturaro@gmail.com.

Keywords: Cercosaurinae, distribution, microteiids, Neotropics, reptiles.

Palavras-chave: Cercosaurinae, distribuição, microteídeos, neotrópicos, répteis.

The gymnophthalmid lizard genus *Placosoma* Tschudi, 1847 is only known from few localities and is restricted to eastern Brazil. Currently, the genus comprises four species: *Placosoma cordylinum* Tschudi, 1847, *P. glabellum* (Peters, 1870), *P. cipoensis* Cunha, 1966, and *P. champsonotus* (Werner, 1910).

Tschudi (1847) described *Placosoma cordylinum*, based on a single specimen collected by Johann Natterer, and reported the collection site as “nördlichen Brasilien” (= northern Brazil). Later, in the only available revision for this genus, Uzzell (1959) discussed the type locality of *P. cordylinum* and revised the taxonomy of the genus. Based on the known records of *Placosoma*, he suggested that “northern Brazil” was not the type locality of *P. cordylinum*, because based on the original description, the name corresponded to specimens from the

environs of Rio de Janeiro, an area also visited by Natterer. Uzzell (1959) further considered *Ecpleopus lutzae* Loveridge, 1944, a junior synonym of *P. cordylinum*, and transferred *Prionodactylus champsonotus* Werner (1910) to *Placosoma* as a subspecies of *P. cordylinum*. Moreover, he placed *Euspondylus cupreus* Andersson, 1916, and *Elaphrosaura spitzi* Amaral, 1932, in the synonymy *P. c. champsonotus*. Subsequently, Uzzell (1962) examined the holotype of *Elaphrosaura spitzi* (MZUSP 762, former DZSP 762), along with two additional specimens from São Paulo, confirming that *E. spitzi* was a synonym of *P. c. champsonotus*. The subspecies of *Placosoma cordylinum* differed from one another in the number of dorsal scales at the level of shoulders (4–8 in *P. c. cordylinum* and 8 or 9 in *P. c. champsonotus*) and in the condition of the median dorsal scale (usually wider than long in *P. c. cordylinum*, and longer than wide in *P. c. champsonotus*) (Uzzell 1959). The data provided by Uzzell (1962) indicate that number of ventrals in a transverse, midbody row vary from six to eight in *P. c.*

Received 4 February 2016
Accepted 19 April 2016
Distributed June 2016

championotus, whereas in all specimens of the nominal subspecies that he examined, there were eight ventrals in this position (Uzzell 1959). Several later studies that dealt with *P. cordylinum* did not comment on the subspecific names (Pellegrino *et al.* 2001, Bérnils *et al.* 2007, Almeida-Gomes *et al.* 2008, Araujo *et al.* 2010). Zaher *et al.* (2011) considered *P. c. cordylinum* and *P. c. championotus* to be full species, based on sympatric occurrences and morphological characters reported by Uzzell (1959).

Examining some specimens identified as *Cercosaura ocellata* Wagler, 1830, from the Herpetological Collection of the National Museum of Natural History, Washington D.C. (USNM), I found a specimen of *Placosoma* misidentified as *C. ocellata* (USNM 97240: Figures 1 and 2). This specimen represents the most northern locality record for *P. cordylinum*. Herein, I provide a distribution map for *Placosoma cordylinum* based on data compiled from the literature (Ihering 1898, Werner 1910, Loveridge 1944, Uzzell 1959, 1962, Pellegrino *et al.* 2001, Almeida-Gomes *et al.* 2008, Araujo *et al.* 2010) and specimens examined from the University of Michigan, Museum of Zoology, Ann Arbor, Michigan, USA (UMMZ) and the Coleção Herpetologica Oswaldo Rodrigues da Cunha, Museu Paraense Emílio Goeldi, Belém, Pará, Brazil (MPEG) (Appendix I). The map was made using software Quantum GIS, version 2.4.0—Chugiak (<http://www.qgis.org/>). Measurements and scale counts follow Uzzell (1959) and Ávila-Pires (1995).

Morphologically, the specimen USNM 97240 from Pernambuco possesses the diagnostic features of *Placosoma cordylinum*. The male lizard has: a snout-vent length of 46.6 mm; 34 dorsals between occipitals and anterior margin of hind limbs; 25 ventrals between the anterior margin of forelimbs and anterior margin of hind limbs; 28 scales around midbody (of which 8 or 9 are dorsals and 8 are ventrals); six dorsal scales at shoulder level; 15 lamellae under Finger IV and 20 or 21 under Toe IV (count includes claw); 11 femoral (on each side) and nine precloacal

pores (31 in total); and dorsal scales quadrangular, with medial longitudinal rows wider than lateral ones, smooth (weakly keeled on lateral ones) and imbricate (Figures 1 and 2).

In the original description of *Placosoma cordylinum*, Tschudi (1847) described the dorsal scales as having two medial rows that are wider than the other dorsals. He noted that the dorsals are smooth and slightly imbricate, other longitudinal rows are weakly keeled and the lateral scales are keeled. In contrast, Uzzell (1959) noticed keeled or weakly keeled dorsal scales in all of the specimens of *P. cordylinum* he examined; however, he did not examine the type, which reportedly is lost (Peters 1862, Uzzell 1959). The dorsal scales of the specimen from Tapera resemble those described for the holotype by Tschudi (1847).

Caramaschi (2008) provided detailed information about the Tapera locality and the collector “P.” Pickel (= Dom Bento Pickel). Tapera was an old train station about 36 km east of Recife (capital of the State) in the municipality of Moreno (8°10' S, 35°05' W, 100 m a.s.l.) Pernambuco state, Brazil (Figure 3). The locality is near the Escola Superior de Agricultura São Bento, an old secondary school. In 1973, a dam was constructed in the area and the area around the school was completely submerged. Dom Bento Pickel was a friend of Adolpho Lutz and sent him several anuran specimens, collected during his stay in Pernambuco; in his collections, he probably also collected this lizard and sent it to Adolpho Lutz. This specimen of *P. cordylinum* may have been donated by Adolpho Lutz to Doris Mable Cochran, in her travel to Brazil (Cochran 1955) and therefore deposited in the USNM.

Although the type locality of *Placosoma cordylinum* was reported to be “northern Brazil,” the species was not known to occur north of Rio de Janeiro until the record reported herein. The collector of the holotype of *P. cordylinum*, Johann Natterer, traveled widely in Brazil, except for the southern and northeastern regions because of political problems (“Cabanagem”

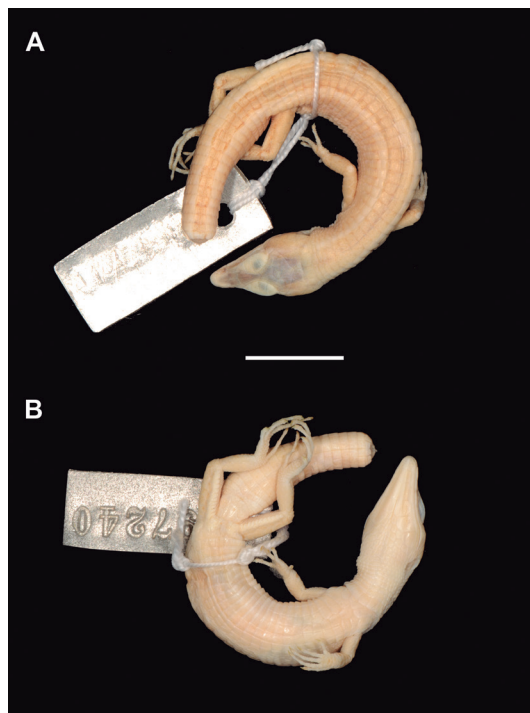


Figure 1. *Placosoma cordylinum* from Tapera, state of Pernambuco, Brazil (USNM 97240). (A) Dorsal and (B) ventral views. Scale bar = 10 mm.

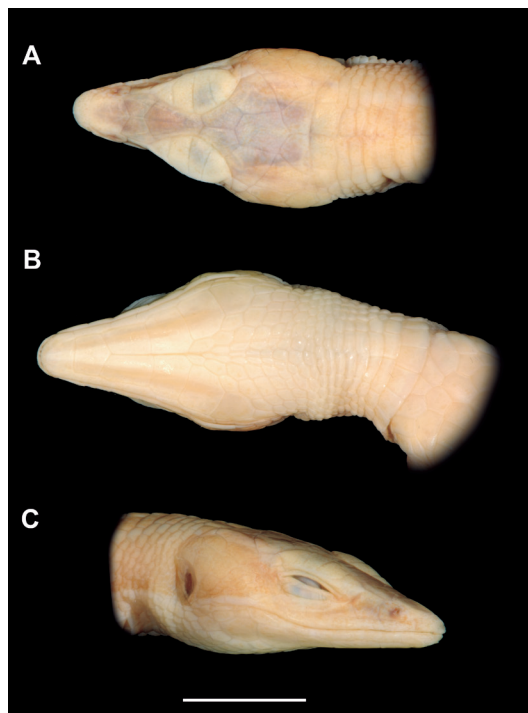


Figure 2. *Placosoma cordylinum* from Tapera, state of Pernambuco, Brazil (USNM 97240). (A) Dorsal, (B) ventral and (C) lateral views of head. Scale bar = 5 mm.

Revolution) during his stay in state of Pará (Goeldi 1896). Thus, it seems unlikely that he collected *P. cordylinum* in northeastern Brazil. Nevertheless, the new record extends the northern distribution 1800 km from Rio de Janeiro (Figure 3), suggesting that we have much to learn about this species.

This report of *Placosoma cordylinum* emphasizes the importance of natural history collections and how “repatriating” important historical information can improve our knowledge about species distributions and conservation status. The slight differences and wide overlap between diagnostic scale counts of *P. cordylinum* and *P. champeonotus* underscore

the necessity of detailed taxonomic studies, including additional morphological characters (e.g., hemipenes) and molecular data.

Acknowledgments.—Ron Heyer and Robert Wilson (USNM) kindly loaned the specimens to me while I was at the UMMZ. Daniel L. Rabosky and Greg Schneider generously opened their lab during my stay at UMMZ. Adriano Oliveira Maciel, Pedro L. V. Peloso, and Teresa C. S. Ávila-Pires critically read the manuscript. This study was supported by Conselho Nacional de Desenvolvimento Científico e Tecnológico - CNPq (process numbers: PROTAX 159253/2010-1, SWE 245593 /2012-8, and PDJ 150279/2015-9).



Figure 3. Distribution of *Placosoma cordylinum* and *P. champsonotus*. White squares = records of *P. champsonotus* based on literature (see text for details). Black circle = record of *P. cordylinum* based on material examined. Black triangle = new record (Tapera, Pernambuco state, Brazil). Question marks = records of *P. cordylinum* without subspecies identification based on literature, before Zaher *et al.* (2011).

References

- Almeida-Gomes, M., D. Vrcibradic, C. C. Siqueira, M. C. Kiefer, T. Klaion, P. Almeida-Santos, D. Nascimento, C. V. Ariani, V. N. T. Borges-Junior, R. F. Freitas-Filho, M. Van Sluys, and C. F. D. Rocha. 2008. Herpetofauna of an Atlantic rainforest area (Morro São João) in Rio de Janeiro state, Brazil. *Anais da Academia Brasileira de Ciências* 80: 291–300.
- Araujo, C. O., T. H. Condez, R. P. Bovo, F. C. Centeno, and A. M. Luiz. 2010. Amphibians and reptiles of the Parque Estadual Turístico do Alto Ribeira (PETAR), SP: an Atlantic Forest remnant of Southeastern Brazil. *Biota Neotropica* 10: 257–274.
- Ávila-Pires, T. C. S. 1995. Lizards of Brazilian Amazonia (Reptilia: Squamata). *Zoologische Verhandelingen* 299: 1–706.
- Bérnils, R. S., A. R. Giraudo, S. Carreira, and S. Z. Cechin. 2007. Répteis das porções subtropical e temperada da região Neotropical. *Ciência & Ambiente* 35: 101–136.
- Caramaschi, U. 2008. Taxonomic status of *Leptodactylus ochraceus*, a forgotten species (Anura: Leptodactylidae). *Revista Brasileira de Zoologia* 25: 523–528.
- Cochran, D. M. 1955. Frogs of southeastern Brazil. *United States National Museum Bulletin* 206: 1–423.
- Goeldi, E. A. 1896. Johannes von Natterer: biographia. *Boletim do Museu Paraense de Historia Natural e Ethnographia* 1: 189–217.
- Ihering, H. V. 1898. Contributions to the Herpetology of Sao Paulo, Brazil: I. *Proceedings of the Academy of Natural Sciences of Philadelphia* 50: 101–109.
- Loveridge, A. 1944. A new Teiid lizard of the genus *Ecleopus* from Brazil. *Proceedings of the Biological Society of Washington* 57: 97–98.
- Pellegrino, K. C. M., M. T. Rodrigues, Y. Tonenaga-Yassuda, and J. W. Sites Jr. 2001. A molecular perspective on the evolution of microteiid lizards (Squamata, Gymnophthalmidae), and a new classification for the family. *Biological Journal of the Linnean Society* 74: 315–338.
- Peters, W. 1862. Über *Cercosaura* und die mit dieser Gattung verwandten eidechsen aus Südamerika. *Akademie der Wissenschaften zu Berlin* 1862: 162–225.
- Tschudi, J. J. von. 1847. Die Familie der Ecleopoda. *Archiv für Naturgeschichte* 13: 41–60.
- Uzzell, T. M. 1959. Teiid lizards of the genus *Placosoma*. *Occasional Papers of the Museum of Zoology University of Michigan* 606: 1–16.
- Uzzell, T. M. 1962. Additional notes on teiid lizards of the genus *Placosoma*. *Copeia* 1962: 833–835.
- Werner, F. 1910. Über neue oder seltene Reptilien des Naturhistorischen Museums in Hamburg: II Eidechsen. *Mitteilungen aus dem Naturhistorischen Museum in Hamburg* 27: 1–46.
- Zaher, H., F. E. Barbo, P. S. Martínez, C. Nogueira, M. T. Rodrigues, and R. J. Sawaya. 2011. Répteis do Estado de São Paulo: conhecimento atual e perspectivas. *Biota Neotropica* 11: 67–81.

Editor: Jaime Bertoluci

Appendix I. Specimens examined.

Placosoma cordylinum (4): BRAZIL: **Pernambuco**: Tapera (USNM 97240). **Rio de Janeiro**: Teresópolis: Serra dos Órgãos (UMMZ 115640–115641, MPEG 1916).