








## A NEW RECORD OF *Anisolepsis undulatus* (SQUAMATA, IGUANIDAE) (WIEGMANN, 1834) IN SOUTHERN BRAZIL

Arthur Schramm de Oliveira<sup>1\*</sup> , Rafael Lucchesi Balestrin<sup>2</sup> , Guilherme Bard Adams<sup>2</sup> ,  
Martin Schossler<sup>1</sup> , Cristiano Eidt Rovedder<sup>3</sup> 

<sup>1</sup> Orbis Consultoria Ambiental LTDA, Estrada Pedrolina Firme, Caixa Postal 2681, CEP: 95520-000, Osório, Rio Grande do Sul, Brazil.

<sup>2</sup> Fieldwork Consultoria Ambiental, Huberto de Alencar Castelo Branco, Caixa Postal 1032-2707, CEP: 82530-195, Curitiba, Paraná, Brazil.

<sup>3</sup> Terra Consultoria Ambiental LTDA, Av. Senador Pasqualini Caixa Postal 700 – Sala 102, CEP: 96820-050, Santa Cruz do Sul, Rio Grande do Sul, Brazil.

\*Corresponding author: asoliveira22@gmail.com

Fecha de recepción: 1 de Junio de 2022

Fecha de aceptación: 29 de Julio 2022

### ABSTRACT

In this study we report the second record for the presence of the *Anisolepsis undulatus* in Brazil after 179 years, at the city of Cassino, in state of the Rio Grande do Sul, approximately 100 km away from the other record in the country.

**Key words:** lizard, few records, rare, low detection.

### RESUMEN

**Un nuevo registro de *Anisolepsis undulatus* (Squamata, Iguanidae) (Wiegmann, 1834) en el sur de Brasil.** En este estudio reportamos el segundo registro de presencia de *Anisolepsis undulatus* en Brasil después de 179 años, en la ciudad de Cassino, en el estado de Rio Grande do Sul, aproximadamente a 100 km del otro registro en el país.

**Palabras clave:** lagartija, pocos registros, rara, baja detección.

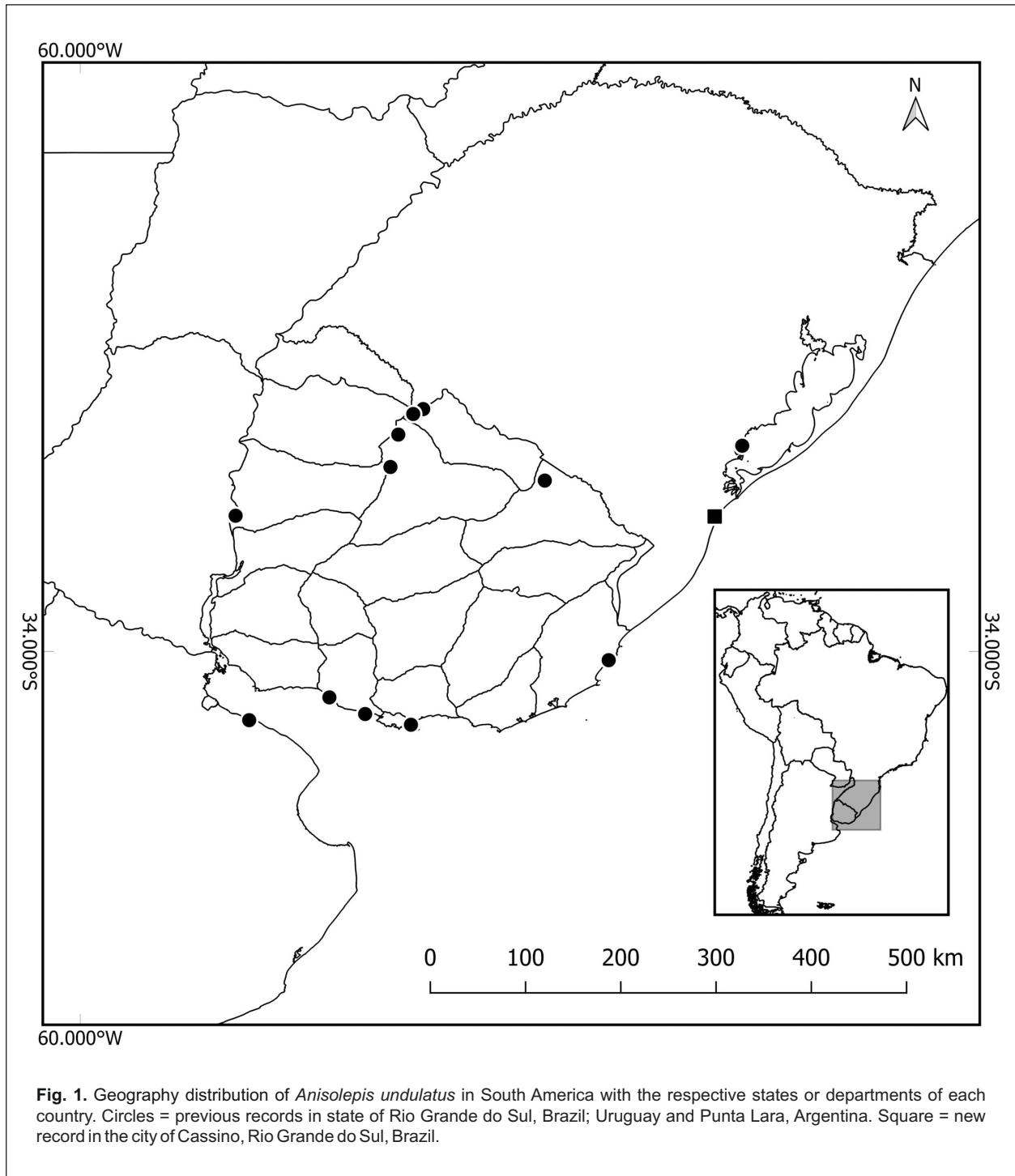
The genus *Anisolepsis* Boulenger, 1891 represents a small group from southern South American Iguania, placed in the family Leiosauridae (Etheridge and Williams, 1991). Currently, the genre *Anisoleps* comprises three species (*Anisolepsis grilli*, *Anisolepsis longicauda* and *Anisolepsis undulates*) distributed in Argentina, Brazil, Uruguay and Paraguay. It is characterized by the presence of keeled ventral scales, and posterior marginal tooth crowns with tapered sides

and reduced secondary cusps (Etheridge and de Queiroz, 1988).

*Anisolepsis undulatus* is a small specie, reaching about 30 cm in total length; the tail is long, corresponding to about 70% of that size (Etheridge and Williams, 1991). It was observed that the species is oviparous and that females can contain four to seven eggs, with a volume of 0,5 ml each (Rand, 1982; Langone et al., 2000). It feeds on arthropods and lives on trees and shrubs, 2 m in height or more, and can move along the ground, the individuals are difficult to see due to their cryptic coloration (Achaval and Olmos, 2003). This species occurs in Brazil, Argentina and Uruguay; however, there are a few records. In Brazil, it was registered only once in 1834, in the state of Rio Grande do Sul in São Lourenço do Sul (type locality), however, it is possible that there were records after that date but with missing information in the museum's collections (GBIF, 2022; SiBBr, 2022). In Argentina, it was registered only once in Punta Lara. In Uruguay, it has already been observed in the Departments Paysandú, Tacuarembó, Cerro Largo, Rocha, Canelones, San José and Riveira (Peters and Donoso-Barros, 1970; Etheridge and Williams, 1991; Langone et al., 2000; Carreira et al., 2005; Carreira et al., 2006) (Fig. 1).

According to the IUCN List of Threatened Species, *Anisolepsis undulatus* is in data deficient category globally. The species was classified as vulnerable in Uruguay (Canavero et al., 2010) and has conservation priority (Carreira and Estrades, 2013). In Brazil, there is no information about possible threats, size and distribution of the population of this lizard (Colli et al.,



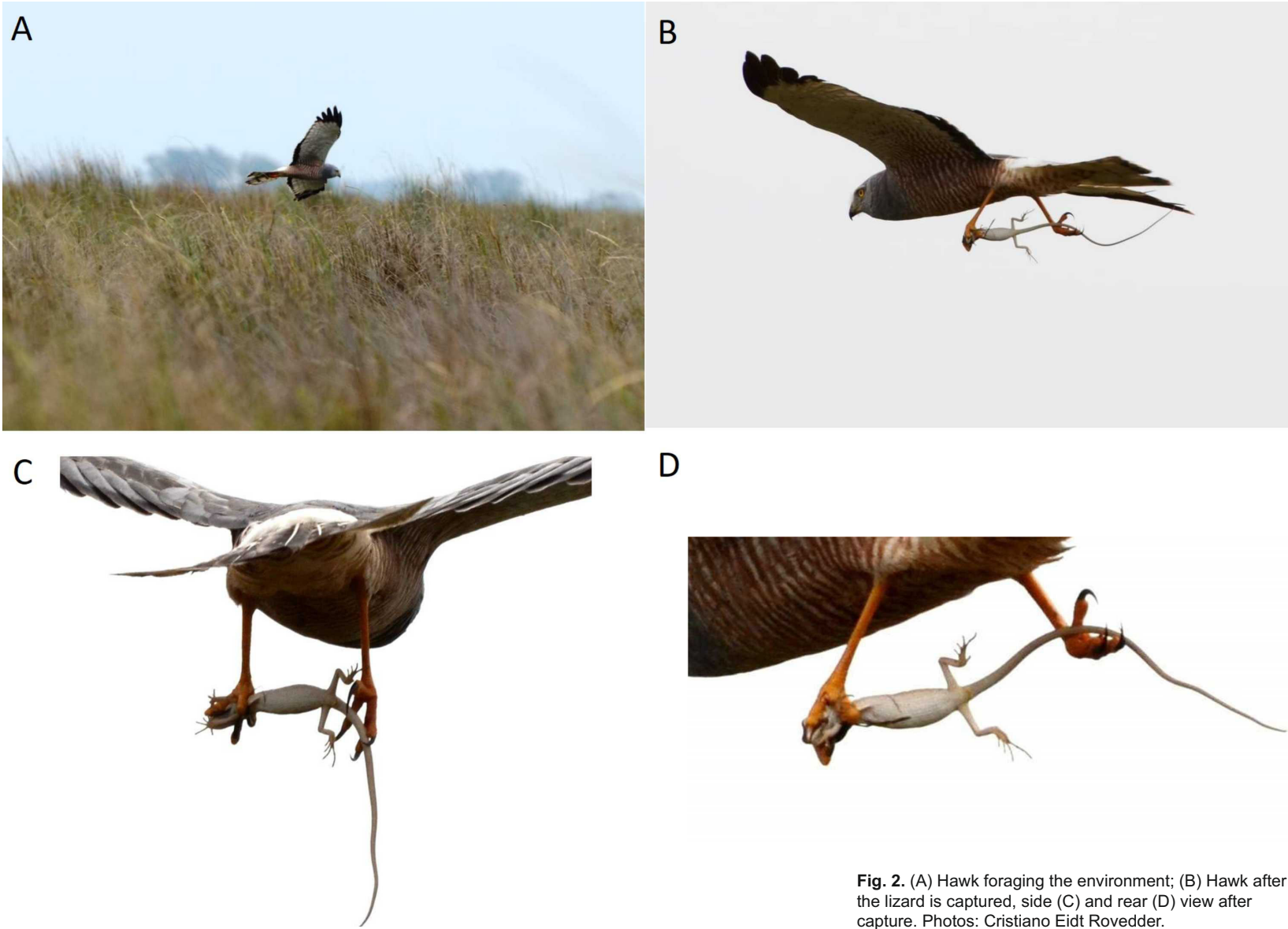


2016). Due to the lack of information, this record is important.

Field observation was conducted on 14<sup>th</sup> of November 2013 in the transition area between Dunes and fields formed by grasses and wetlands in the city of Cassino, state Rio Grande do Sul (32.3762° S; 52.35962° W; Datum WGS84; 5m elevation) (Fig. 1). The city of Cassino is located on the southwest coastal

plain region of Rio Grande do Sul, Brazil. It is a subtropical (Cfa) region (Alvares et al., 2013), located in the pampa biome. It is associated with the coastal plain Restinga, a set of ecosystems dominated by pioneer plant formations with maritime and fluvial influence with forest and grassy field vegetation.

The *A. undulatus* was observed being preyed upon by a Cinereous harrier (*Circus cinereus*). The hawk



**Fig. 2.** (A) Hawk foraging the environment; (B) Hawk after the lizard is captured, side (C) and rear (D) view after capture. Photos: Cristiano Eid Rovedder.

was seen flying over the area as it descended among the grasses and took off with the lizard in its claws (Fig. 2). It landed and pecked the lizard still alive, as the researcher approached the hawk left its prey and flew away. The lizard was not found, possibly, it managed to escape. However, the shape of the lizard's body, similar to an iguana, does not correspond to any other lizard species recorded in this area, except for *Anisolepis undulatus*.

It was register *A. undulatus* about 100 km in a straight line south of the only record in Brazil, in the city of São Lourenço do Sul. This record was carried out after 179 years without information of the species for Brazil and fills a gap between the point in the state of Rio Grande do Sul and registered points located in Uruguay. At the place where the lizard was seen, an offshore wind farm was installed.

The records of this species are scarce, especially in southern Brazil, showing that it might be a rare lizard. This demonstrates that it is possible to have populations in the south of Brazil, however difficult to detect, being necessary to implement specific methods of searching and capturing the species in order to know the current situation of these populations in Brazil.

We thank Marcio Borges-Martins for his help in contacting the curators of the collections. Thank you to Patrick Campbell for providing information in their respective collection.

## REFERENCES

- Achaval, F. and Olmos, A. (2003). Anfíbios y Reptiles del Uruguay. 2a edición. Montevideo, Graphis. 136 pp.
- Alvares, C.A., Stape, J.L., Sentelhas, P.C., de Moraes Gonçalves, J.L., and Sparovek, G. (2013). Köppen's climate classification map for Brazil. *Meteorologische Zeitschrift*, 22(6), 711–728.
- Canavero, A., Carreira, S., Langone, J.A., Achaval, F., Borteiro, C., Camargo, A., ... Ziegler, L. (2010). Conservation status assessment of the amphibians and reptiles of Uruguay. *Iheringia. Série Zoologia*, 100(1), 05–12.
- Carreira, S., Meneghel, M. and Achaval, F. (2005). Reptiles de Uruguay. DI.R.A.C. Facultad de Ciencias, Universidad de la República, Montevideo, 639 pp.
- Carreira, S., Achaval, F. and Meneghel, M. (2006). Nuevo registro de *Anisolepis undulatus* (Wiegmann, 1834) en Uruguay (Squamata, Iguanidae). *Boletín de la Sociedad Zoológica del Uruguay*, 15, 38–28.
- Carreira, S. and Estrades, A. (2013). Reptiles. Pp. 129–147. En: Soutullo A., C. Clavijo and J.A. Marinez-Lanfranco (Eds.). *Especies prioritarias para la conservación en Uruguay. Vertebrados, moluscos continentales y plantas vasculares. SNAP/DINAMA/MVOTMA y DICYT/MEC*, Montevideo. 222 pp.
- Colli, G.R., Fenker, J.A., Tedeschi, L.G., Bataus, Y.S.L., Uhlig, V.M., Lima, ... Avila-Pires, T.C.S. (2016). Avaliação do Risco de Extinção de *Anisolepis undulatus* (Wiegmann, 1834), no Brasil. Processo de avaliação do risco de extinção da fauna brasileira. I C M B i o . <http://www.icmbio.gov.br/portal/faunabrasileira/carga-estado-de-conservacao/8769-repteis-anisolepis-undulatus>.
- Etheridge, R. and de Queiroz, K. (1988). A phylogeny of iguanidae. En: R.D. Estes and G.K. Pregill (Eds.) *Phylogenetic Relationships of the Lizard Families: Essays Commemorating Charles L. Camp*, (pp. 631–631). Stanford University Press.
- Etheridge, R. and Williams, E.E. (1991). A Review of the South American Lizard Genera *Urostrophus* and *Anisolepis* (Squamata: Iguania: Polychridae). *Bulletin of the Museum of Comparative Zoology*, 152(5): 317–361.
- GBIF. Global Biodiversity Information Facility. GBIF Occurrence Download. Available online: <https://www.gbif.org>. (accessed on 21 July 2022).
- Langone, J.A.; Espinosa, B.M. and Rodríguez-Mazzini, R. (2000). Nuevos registros y observaciones sobre *Anisolepis undulatus* (Wiegmann, 1834) (Squamata: Polychrotidae) en Uruguay. *Cuadernos de Herpetología*, 14(1): 83–84.
- Peters, J.A. and Donoso-Barros, R. (1970). Catalogue of Neotropical Squamata. Part II. Lizards and Amphisbaenians. Smithsonian Institution, United States National Museum Bulletin, 297: I-VIII + 1-293.
- Rand, A.S. (1982). Clutch and egg size in Brazilian iguanid lizards. *Herpetologica*, 38: 171–178.
- SiBBR. Sistema de Informação sobre a Biodiversidade Brasileira. Available online: <https://sibbr.gov.br/>. (accessed on 21 July 2022).

Editor de Sección: Raúl Maneyro