

FIRST RECORD OF SCINAX FUSCOMARGINATUS (ANURA: HYLIDAE) FOR THE PROVINCE OF MISIONES, ARGENTINA

PRIMER REGISTRO DE SCINAX FUSCOMARGINATUS (ANURA, HYLIDAE) PARA LA PROVINCIA DE MISIONES, ARGENTINA

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Argentina, Misiones, Department Capital, Municipality of Posadas, Locality: Reserva Natural Urbana Arroyo “El Carpincho”. 27.35853° S, 56.00394° W, WGS84, 86 m a.s.l. Two male specimens of *Scinax fuscomarginatus* (Fig. 1) were captured on February 22, 2024, around 21:00 h, vocalizing in a suburban area of “El Carpincho” stream, which contains flooded grassland

and aquatic macrophytes, partially surrounded by a small patch of native forest, near the Paraná River. Specimens of *Boana punctata*, *B. raniceps*, *Dendropsophus nanus*, *Lysapsus limellum*, *Oolygon berthae*, *Leptodactylus fuscus*, and *L. podicipinus* were also vocalizing. This site is in the biogeographical region of Southern Cone Mesopotamian Savanna sensu Olson et al. (2001). This is



Figura 1. Ejemplares de referencia colectados en la Reserva Natural Urbana Arroyo “El Carpincho”, Posadas, Misiones, Argentina. Barra: 10 mm. Foto: Diego Baldo.

Figure 1. Voucher specimens collected in the Reserva Natural Urbana Arroyo “El Carpincho”, Posadas, Misiones, Argentina. Scale bar: 10 mm. Photo: Diego Baldo.

the first record in the province of Misiones. The specimens are housed in the herpetological collection of the Laboratorio de Genética Evolutiva (LGE) of the Instituto de Biología Subtropical (CONICET-UNaM). The voucher numbers are LGE 26626–7. The nearest record is 47 km to the Southwest, in the locality of Garape, province of Corrientes (27.61628° S, 56.38333° W) (Fig. 2). Vouchers specimens of this record are housed in the Museo Argentino de Ciencias Naturales (MACN) “Bernardino Rivadavia” (MACN 37180–8) (Faivovich, pers. comm.). Species identification was made in the field by recognizing the advertisement call (not recorded), and once the specimens were collected, the taxonomic revision was confirmed by the following combination of characters: small size in males (15.7–26.7 mm), subelliptical snout in dorsal view, head longer than wide, dorsal pattern with continuous divergent or parallel brown dorsolateral stripes on a light brown background, uniform light brown color on the posterior surfaces of thighs, immaculate or finely pointed chest and belly, longitudinal dark stripes on the forearm and shank external surface, loreal region steeply sloping toward the lip, diagonal stripes on the dorsal surface of the shank (Brusquetti et al., 2014).

The genus *Scinax* is one of the most diverse within the Hylidae family, composed of 77 species distributed from eastern and southern Mexico to Argentina and Uruguay, including Trinidad and Tobago and St. Lucia (Frost, 2024). The Brown-bordered Snouted Treefrog (Frank & Rausch, 1995), *Scinax fuscomarginatus* (Lutz, 1925), belonging to the *S. fuscomarginatus* group, is a species widely distributed in South America, occurring in Argentina, Bolivia, Brazil, Guyana, Paraguay, Suriname, and Venezuela (Araujo-Vieira et al., 2023; Frost, 2024). This species is a small treefrog that inhabits open areas, making it one of the most widely distributed Neotropical anuran species (Brusquetti et al., 2014). It occupies open habitats of several biomes with varying gradients of temperature, humidity, and seasonality; from the drier and highly seasonal Chaco and Caatinga, through Cerrado and Pantanal, to transition zones between these and the Atlantic and Amazon Forests, which are less seasonal and have much higher humidity levels (Pupin et al., 2020; Brusquetti et al., 2023). *Scinax fuscomarginatus* tolerates anthropogenic disturbances and has been found in rice cultivation areas (Duré et al., 2008; Oliveira Pacheco et al., 2018). Breeding occurs during the summer season (December to March) with tadpole development in water bodies (Brusquetti et al., 2014).



Figura 2. Imagen satelital que representa el registro más cercano conocido para *Scinax fuscomarginatus*. La estrella verde indica el nuevo registro en Misiones, Argentina. El círculo azul claro indica el registro previamente conocido en Garapé, Corrientes, Argentina.

Figure 2. Satellite image depicting the nearest record known for *Scinax fuscomarginatus*. The green star indicates the new record from Misiones, Argentina. The light blue circle indicates the previously known record from Garapé, Corrientes, Argentina.



(Toledo & Haddad, 2005). In Argentina, *S. fuscomarginatus* occurs in open areas in the northeastern part of the country, in the provinces of Corrientes, Chaco, Formosa and Santa Fe (Vaira et al., 2012).

When the Yacyretá dam reached its maximum level in 2011, it created new lentic and semi-lentic environments in tributary streams of the Paraná River. These novel habitats, suitable for colonization by hylid frogs (Torres et al., 2021), may have facilitated the expansion of the distribution of *S. fuscomarginatus* in this area.

Over the last two decades, our understanding of amphibian diversity in Misiones has grown significantly. This surge is fueled by the discovery of new species (Cardozo & Pereyra, 2018; Baldo et al., 2019; Rosset et al., 2021; Cardozo et al., 2023) and the identification of previously unknown amphibian populations within Misiones and Argentina (Ferro et al., 2018; Torres et al., 2021). With this new record, the number of amphibians in Misiones reaches 64 species (63 natives and one exotic) (Vaira et al., 2012; Pereyra et al., 2006), solidifying its position as the most diverse province of Argentina.

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CITED LITERATURE

Araujo-Vieira, K., A.C.C. Lourenço, J.V.A. de Lacerda, M.L. Lyra, B.L. Blotto, S.R. Ron, D. Baldo, M.O. Pereyra, Á.M. Suárez-Mayorga, D. Baéta, R.B. Ferreira, C.L. Barrio-Amorós, C. Borteiro, R.A. Brandão, C.A. Brasileiro, M.A. Donnelly, M.J.M. Dubeux, J. Köhler, F. Kolenc, F.S.F. Leite, N.M. Maciel, I. Nunes, V.G.D. Orrico, P.L.V. Peloso, T.L. Pezzuti, S. Reichle, F.J.M. Rojas-Runjaic, H.R. da Silva, M.J. Sturaro, J.A. Langone, P.C. de A. Garcia, M.T. Rodrigues, D.R. Frost, W.C. Wheeler, T. Grant, J.P. Pombal Jr., C.F.B. Haddad & J. Faivovich. 2023. Treefrog diversity

in the Neotropics: Phylogenetic relationships of Scinaxini (Anura: Hylidae: Hylinae). South American Journal of Herpetology 27:1-143.

Baldo, D., K. Araujo-Vieira, D.E. Cardozo, C. Borteiro, F. Leal, M.O. Pereyra, F. Kolenc, M.L. Lyra, P.C. de A. Garcia, C.F.B. Haddad & J. Faivovich. 2019. A review of the elusive bicolored iris Snouted Treefrogs (Anura: Hylidae: *Scinax uruguayus* group). PLoS One 14:e0222131.

Brusquetti, F., M. Janzen, C. Barrio-Amorós, M. Segalla & C.F.B. Haddad. 2014. Taxonomic review of *Scinax fuscomarginatus* (Lutz, 1925) and related species (Anura; Hylidae). Zoological Journal of the Linnean Society 171:783-821.

Cardozo, D.E. & M.O. Pereyra. 2018. A new species of *Physalaemus* (Anura, Leptodactylidae) from the Atlantic Forest of Misiones, northeastern Argentina. Zootaxa 4387:580-590.

Cardozo, D.E., C. Tomatis, A.S. Duport-Bru, F. Kolenc, C. Borteiro, A. Pansonato, V., Confalonieri, L.B. Lourenço, C.F.B. Haddad & D. Baldo. 2023. The taxonomic status of *Physalaemus cuqui* Lobo, 1993, with the description of a new species of *Physalaemus* (Anura: Leptodactylidae) from Argentina and Paraguay. Herpetological Monographs 37:95-128.

Duré, M.I., A.I. Kehr, E.F. Schaefer & F. Marangoni. 2008. Diversity of amphibians in rice fields from northeastern Argentina. Interciencia 33:523-527.

Ferro, J.M., D.E. Cardozo, P. Suárez, J.M. Boeris, A. Blasco-Zúñiga, G. Barbero, A. Gomes, T. Gazoni, W. Costa, C.Y. Nagamachi, M. Rivera, P.P. Parise-Maltempi, J.E. Wiley, J.C. Pieczarka, C.F.B. Haddad, J. Faivovich & D. Baldo. 2018. Chromosome evolution in Cophomantini (Amphibia, Anura, Hylinae). PLoS One 13:e0192861.

Frank, N. & E. Ramus. 1995. Complete Guide to Scientific and Common Names of Amphibians and Reptiles of the World. Pottsville, Pennsylvania: N. G. Publishing Inc.

Frost, D.R. 2024. Amphibian Species of the World: An Online Reference. Version 6.2. Electronic Database accessible at <https://amphiansoftheworld.amnh.org/index.php>. American Museum of Natural History, New York, USA [Consulted on April 16 2024].

Oliveira Pacheco, E., S. Mângia & D.J. Santana. 2018. Diversity and distribution of anurans among different vegetation



- physiognomies in a savannah landscape in Central Brazil. *Herpetology Notes* 11:255-262.
- Olson, D.M., E. Dinerstein, E.D. Wikramanayake, N.D. Burgess, G.V.N. Powell, E.C. Underwood, J.A. D'Amico, I. Itoua, H.E Strand, J.C. Morrison, C.J. Loucks, T.F. Allnutt, T.H. Ricketts, Y. Kura, J.F. Lamoreux, W.W. Wettenberg, P. Hedao & K.R. Kassem. 2001. Terrestrial ecoregions of the world: a new map of life on Earth. *BioScience* 51:933-938.
- Pereyra, M.O., D. Baldo & E.R. Krauczuk. 2006. La "Rana Toro" en la Selva Atlántica Interior Argentina: Un Nuevo Problema de Conservación. *Cuadernos de herpetología* 20:37-40.
- Pupin, N.C., F. Brusquetti & C.F.B. Haddad. 2020. Seasonality drives body size variation in a widely distributed Neotropical treefrog. *Journal of Zoology* 312:85-93.
- Rosset, S.D., R.M. Fadel, C. da S. Guimarães, P.S. Carvalho, K. Ceron, M. Pedrozo, R. Serejo, V. dos S. Souza, D. Baldo & S. Mângia. 2021. A new Burrowing Frog of the *Odontophrynus americanus* species group (Anura, Odontophryidae) from subtropical regions of Argentina, Brazil, and Paraguay. *Ichthyology & Herpetology* 109:228-244.
- Toledo, L.F. & C.F.B. Haddad. 2005. Reproductive biology of *Scinax fuscomarginatus* (Anura, Hylidae) in south-eastern Brazil. *Journal of Natural History* 39:3029-3037.
- Torres, P.J., J.M. Boeris, J.A. Insaurralde, D. Baldo & A.E. Brunetti. 2021. Potential effects of dams in the geographic range expansion of Hylid frogs associated with aquatic macrophytes. *Herpetological Conservation and Biology* 16:259-270.
- Vaira, M., M.S. Akmentins, M. Attademo, D. Baldo, D. Barrasso, S. Barrionuevo, N. Basso, B. Blotto, S. Cairo, R. Cajade, J. Céspedes, V. Corbalán, P. Chilote, M. Duré, C. Falcione, D. Ferraro, F.R. Gutierrez, M.R. Ingaramo, C. Junges, R. Lajmanovich, J.N. Lescano, F. Marangoni, L. Martinazzo, R. Martí, L. Moreno, G.S. Natale, J.M. Perez Iglesias, P. Peltzer, L. Quiroga, S. Rosset, E. Sanabria, L. Sánchez, E. Schaefer, C. Úbeda & V. Zaracho. 2012. Categorización del estado de conservación de los anfibios de la República Argentina. *Cuadernos de Herpetología* 26:131-159.

