

First record of partial melanism in *Leptodactylus macrosternum* (Amphibia: Anura: Leptodactylidae)

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RESUMEN: En esta nota se describe el primer caso de melanismo parcial en *Rã Manteiga* (rana de mantequilla) de Brasil (*Leptodactylus macrosternum*), correspondiente a un ejemplar adulto encontrado en diciembre de 2021 en Juara, Mato Grosso, (Brazil).

Numerous chromatic mutations have been documented in amphibians worldwide, with melanism being the most prevalent. Melanism is characterized by a black coloration, resulting from a high concentration of melanin in pigment cells (Rivera *et al.*, 2001). Various amphibian species have been reported to exhibit melanism, including salamanders such as *Cacotriton asper* (Arrivas & Rivera, 2014), *Lissotriton boscai* (Bermejo & Otero, 2012), *Salamandra salamandra* (Palau & Soler, 1999), and *Triturus marmoratus* (Domènech, 2001). Additionally, in the case of the anuran *Alytes obstetricans*, both total melanism (Galán *et al.*, 1990) and partial melanism (Espasandín, 2017) have been documented. On the other hand, melanism amphibians, has been suggested as a protection mechanism against ultraviolet and ionizing radiation (Burraco & Orizaola, 2022).

Leptodactylus macrosternum (Miranda-Ribeiro, 1926) is a medium-sized nocturnal anuran that inhabits wet environments and bodies of water (Weiler *et al.*, 2013). It is found in Argentina, Bolivia, Brazil, Colom-

bia, French Guiana, Guyana, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay, Venezuela (AmphibiaWeb, 2023).

The record took place in December 2021 in a wetland area bordered by pasture (10°47'12.06"S / 57°38'9.06"W) near forests, located in the municipality of Juara, Mato Grosso, Brazil during a herpetofauna sampling at around 8:45 p.m. We observed an adult individual of *Leptodactylus macrosternum* with partially black coloration. The specimen had black coloration on the dorsal and lateral regions. The highest concentration of melanin was present in the spots around the body, both on the dorsal and lateral regions, including the hind and front limbs (Figure 1a). The other individuals sampled at the site (n=12) displayed the normal coloration for the species (Figure 1b). The anuran was not handled and was photographed in the same environment where it was found but quickly leaped into the vegetation and concealed itself. *Alytes obstetricans* was also recorded with partial melanism, with some anurans

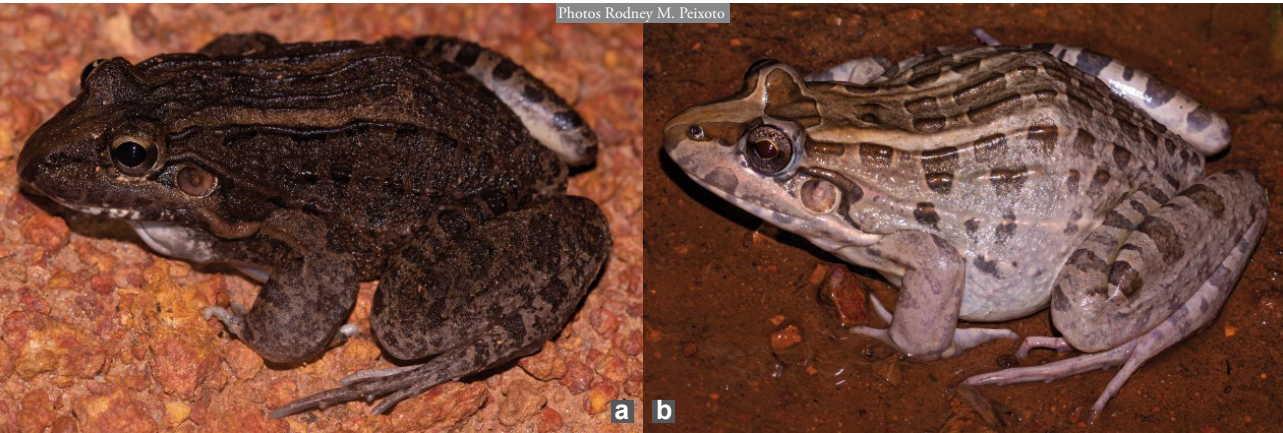


Figure 1: Comparison between two individuals of *Leptodactylus macrosternum* recorded in the same environment: a) Partially melanistic *L. macrosternum* b) Normally colored *L. macrosternum*.

Figura 1: Comparación de dos individuos de *Leptodactylus macrosternum* fotografiados en el mismo ambiente: a) *L. macrosternum* parcialmente melánico. b) *L. macrosternum* con coloración normal.

exhibiting partial melanism on the dorsal region, featuring a high concentration of melanin in small, scattered spots on the back, and another anuran with a greater concentration in large spots on the front and hind limbs (Espasandín, 2017). There are already known cases of partial melanism in *Podarcis bocagei* (Galán

et al., 2011), which is considered common for the species. This is the first record of partial melanism in *Leptodactylus macrosternum*.

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