

Partial xanthism in the mesoamerican cane toad *Rhinella horribilis*

JORGE A. ZÚÑIGA-BAOS

Independent Researcher, vereda Pomona, Popayán, Cauca, Colombia
Author e-mail: jorzuba@gmail.com

Pigmentary abnormalities occur when there is an absence or predominance of certain pigment cells (chromatophores) or variations in the production of pigments within them (Duellman & Trueb, 1994). In amphibians, the most frequent cases of abnormal pigmentation are albinism and leucism, which result from deficient production of melanin (Lunghi et al., 2017). Albinism is a genetic disorder characterised by partial or complete lack of skin and eye pigmentation (Bechtel, 1995) and xanthism, the subject of this report, is a type of albinism in which individuals produce predominantly yellow pigments (Stephenson & Drace, 2014).

The toad *Rhinella horribilis* Wiegmann, 1833, is distributed from the south of Texas (USA) to the north of Peru, with a western distribution to the Andes mountains (Acevedo et al., 2016). Dorsal coloration varies from light to dark brown with or without yellowish, orange or reddish tones. The toads may have scattered black or dark brown spots on their backs and on the tips of their tubercles and on large red warts (Ron, 2018). This note documents the first record of partial xanthism for *R. horribilis* in Colombia.

During a local fauna observation walk, at 18:56 h on 18 August 2021, in the municipality of Ituango, Department of Antioquia, Colombia (7.16666° N, 75.76186° W; 1534 m a.s.l.), an adult *R. horribilis* was observed, which presented an unusual coloration. From the parotoid glands to the middle region of the back, colouration was largely orange, consistent with partial xanthism (Fig. 1). In the same area, 23 other adults were observed but these all had colouration that is typical of this species.

ACKNOWLEDGEMENTS

I thank Martín Mira for unconditional support during the field trips throughout the department of Antioquia and for taking the photograph of this toad.

REFERENCES

- Acevedo, A.A., Lampo, M. & Cipriani, R. (2016). The cane or marine toad, *Rhinella marina* (Anura, Bufonidae): two genetically and morphologically distinct species. *Zootaxa* 4103(6): 574–586.
- Bechtel, B. (1995). *Reptile and Amphibian Variants: Colors, Patterns and Scales*. Krieger Publishing, Malabar, Florida. 206 pp.
- Duellman, W.E. & Trueb, L. (1994). *Biology of Amphibians*.



Figure 1. Partially xanthic adult *Rhinella horribilis* at Ituango, Department of Antioquia, Colombia

- John Hopkins University Press, Baltimore. 670 pp.
- Lunghi, E., Ficetola, G.F., Barzaghi, B., Vitillo, C., Mulargia, M. & Manenti, R. (2017). Melanism in European plethodontid salamanders (Amphibia, Plethodontidae, Hydromantes). *Spixiana* 40: 157–160.
- Ron, S.R. (2018). Base de datos de la colección de anfibios del Museo de Zoología (QCAZ). Versión 1.0. Pontificia Universidad Católica del Ecuador. Available at <https://bioweb.bio/portal/>
- Stephenson, B.P. & Drace, K.M. (2014). A new report of albinism in the Common Garter Snake (*Thamnophis sirtalis*), and a review of existing records: Is there a geographic bias in observations? *Herpetological Review* 45: 569–577.

Accepted: 30 January 2022