

NOTES ON GEOGRAPHIC DISTRIBUTION

Amphibia, *Epipedobates bilineatus*, *Agalychnis calcarifer*, *Eleutherodactylus croceinguinis*: Distribution extensions.

Diego F. Cisneros-Heredia

College of Biological and Environmental Sciences,
Universidad San Francisco de Quito, Casilla Postal
17-12-841, Quito, Ecuador. e-mail:
diegofrancisco_cisneros@yahoo.com

Knowledge on Ecuadorian amphibians is still fragmented, lacking baseline data on the distribution ranges of several species. The increment of knowledge on the Neotropical herpetofauna is an urgent issue, especially if we understand that several species are becoming endangered or extinct. Herein I report distribution extensions for three species of amphibians from Ecuador. Abbreviations used in the text include: DFCH-USFQ = DF Cisneros-Heredia's collection, housed at the Universidad San Francisco de Quito; and, FHGO = Fundación Herpetológica G. Orcés' collection. Localities and their geographic coordinates and elevations were determined from researchers' field notes and museum records and revised according to the 2000 physical map of the Republic of Ecuador published by the Instituto Geográfico Militar.

DENDROBATIDAE: *Epipedobates bilineatus* occurs in the Amazonia of Ecuador and Colombia, on the Napo and Caqueta river basins (Castro et al. 2004). This species was collected at the Tiputini Biodiversity Station (00°37'05" S 76°10'19" W, 215 m), province of Orellana, on 13 August 1999 and 18-23 April 2000 by D. F. Cisneros-Heredia (DFCH-USFQ 058, 160-61, 223) (Figure 1), representing the easternmost locality for the species, extending its range ca. 40 km E from previous reported localities (Jungfer 1989, Ron 2001). *Epipedobates bilineatus* Jungfer was synonymized with *Epipedobates ingeri* Cochran and Goin by Amézquita et al. (2004) without further comments; I keep both names independent pending further studies on the Dendrobatidae from Amazonian Colombia and Ecuador.

HYLIDAE: A specimen (FHGO 2880) of *Agalychnis calcarifer* was collected at Charco Vicente (2 hrs by boat from (2 hrs by boat from San



Figure 1. Adult *Epipedobates bilineatus* Jungfer (DFCH-USFQ 160) from the Tiputini Biodiversity Station, province of Orellana, Republic of Ecuador, August 1999.

Miguel, Cayapas river basin, 00°44' N 78°53' W, ca. 50 m), province of Esmeraldas, on 05 December 2000 by M. Morales, A. Ortíz, and J. Regalado. This species is known from isolated localities along its geographical distribution range in the Atlantic versant of Central America from eastern Honduras to central Panama, and on the Pacific versant from eastern Panama to northwestern Ecuador. In Ecuador, *A. calcarifer* was known only from its type locality (Río Durango, province of Esmeraldas), and the locality reported herein represents the second record for the species in the country since Boulenger's description, ca. 25 km from the type locality (Boulenger 1902, Duellman 2001, Coloma et al. 2004).

LEPTODACTYLIDAE: *Eleutherodactylus croceinguinis* occurs mainly along the lowland Amazonian rainforests of Ecuador, adjacent Colombia, and Peru (Frost, 2004; Doan and Arizábal, 2002). A specimen (FHGO 3258) was collected at the Imuya wetlands, between Aguarico and Lagartococha rivers (00°40' S 75°20' W, 210 m), province of Sucumbíos, on 07 October 2000 by D. Almeida and A. Ortíz, representing the easternmost record for the distribution of the species in Ecuador and extending its range ca. 100 km NE from previous reported localities (Ron 2001, Cisneros-Heredia 2003).

NOTES ON GEOGRAPHIC DISTRIBUTION

Acknowledgments

I am grateful to J. M. Touzet and A. M. Velasco for allowing access to material deposited at the FHGO; to the Tiputini Biodiversity Station staff, especially D. Romo, C. Barriga de Romo, K. Swing, M. Rodríguez, and the Narváez brothers for support during field work; to J. Simmons and R. McDiarmid for sharing literature. Tiputini Biodiversity Station, Universidad San Francisco de Quito, Maria Elena Heredia, and Laura Heredia provided financial support. The Ministry of Environment of the Republic of Ecuador issued the research and collection permit number 19-IC-FAU-DFN.

Literature Cited

- Amézquita, A., J. V. Rueda, and J. N. Rueda. 2004. Rana venenosa de Inger, *Epipedobates ingeri*. Pp. 346-349. In J. V. Rueda, J. D. Lynch, and A. Amézquita (eds.), Libro Rojo de Anfibios de Colombia. Bogota. CI-Colombia, ICN-Universidad Nacional de Colombia, Ministerio del Medio Ambiente.
- Boulenger, G. A. 1902. Descriptions of new batrachians and reptiles from north-western Ecuador. *Annals and Magazine of Natural History* 7(9):51-57.
- Castro, F., J. V. Rueda, W. Bolívar, R. A. Estupiñan, L. Coloma, S. Ron, and A. Almendáriz. 2004. *Epipedobates bilinguis*. Global Amphibian Assessment. Version 15 October 2004. Electronic Database accessible at <<http://www.globalamphibians.org>>. IUCN, Conservation International, and NatureServe. Accessed on 01 May 2005.
- Cisneros-Heredia, D.F. 2003. Herpetofauna de la Estación de Biodiversidad Tiputini. In S. de la Torre and G. Reck. (eds.) *Ecología y Ambiente en el Ecuador*. Congr. Ecología y Ambiente, Ecuador país megadiverso. CD. Universidad San Francisco de Quito, Ecuador.
- Coloma, L. A., S. Ron, K.-H. Jungfer, B. Kubicki, F. Bolaños, G. Chaves, F. Solís, R. Ibáñez, C. Jaramillo, J. Savage, G. Cruz, L. D. Wilson, and G. Köhler. 2004. *Agalychnis calcarifer*. Global Amphibian Assessment. Version 15 October 2004. Electronic Database accessible at <<http://www.globalamphibians.org>>. IUCN, Conservation International, and NatureServe. Accessed on 01 May 2005.
- Doan, T. M. and W. Arizábal A. 2002. Microgeographic variation in species composition of the herpetofaunal communities of Tambopata Region, Peru. *Biotropica* 34(1): 101-117.
- Duellman, W.E. 2001. *The Hylid Frogs of Middle America*. Society for the Study of Amphibians and Reptiles. Ithaca, New York, USA. Pp. 1159.
- Frost, D. R. 2004. Amphibian Species of the World: an online reference. Version 3.0. Electronic Database accessible at <http://research.amnh.org/herpetology/amphibi/a/index.html>. American Museum of Natural History, New York, USA. Accessed on 01 May 2005.
- Jungfer, K.-H. 1989. Pfeilgiftfrosche der Gattung *Epipedobates* mit rot granuliertem Rücken aus dem Oriente von Ecuador und Peru. *Salamandra* 25(2): 81-98.
- Ron, S. R. 2001. Anfibios de Parque Nacional Yasuní, Amazonía ecuatoriana. Version 1.3. (2 March 2001) Electronic database accessible at <<http://www.bio.utexas.edu/grad/ecuador/web/yasuni/esp/anfyas.htm>>. Museo de Zoología, Universidad Católica del Ecuador, Quito, Ecuador. Accessed on 01 May 2005.

Received May 2005

Accepted July 2005

Published online September 2005