

# Amphibia, Anura, Bufonidae, *Atelopus eusebianus* (Rivero & Granados-Díaz, 1993): Distribution extension for Valle del Cauca, Colombia

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**ABSTRACT:** The critically endangered harlequin frog *Atelopus eusebianus* is known from a few locations in the Cauca Department, on the western slope of the Central Andes. We report a new locality in Valle del Cauca department, this location is found on the western slope of the Central Andes, located about 63 km north away from the localities known, it's an important finding due to the need for known the real range of this species.

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In Colombia, there are 44 identified species that belong to the *Atelopus* genus (Frost 2013), several of which are endemic and in some category of threat (IUCN 2012), distributed from 0 to 4800 m (Lötters 1996, Rueda-Almoacid *et al.* 2006), and most, presenting an Andean distribution.

*Atelopus eusebianus* was described by Rivero and Granados in 1993, with the type locality situated on the western slope of the Andean Cordillera Central, in the Malvazá sector, Totoró municipality, Cauca Department. There are also some records of collected specimens in the herpetological collection of the Universidad del Valle, captured near the type locality, such as San Andres de Pisimbalá and Alto de Guanacas in the municipality of Inzá, and the San Rafael Lagoon in the Purace National Park (Valencia and Lopez 2005), this being the latest report for the species. Besides, Bolívar y Granados (2004) mention but not support (specimen and locality information aren't available) some observations for *A. eusebianus* in Valle del Cauca.

According to the description of the species (Rivero and Granados 1993), *A. eusebianus* males measure about 32.5–35.1 mm, and the females, 38.3–45.4 mm SVL. The tympanic

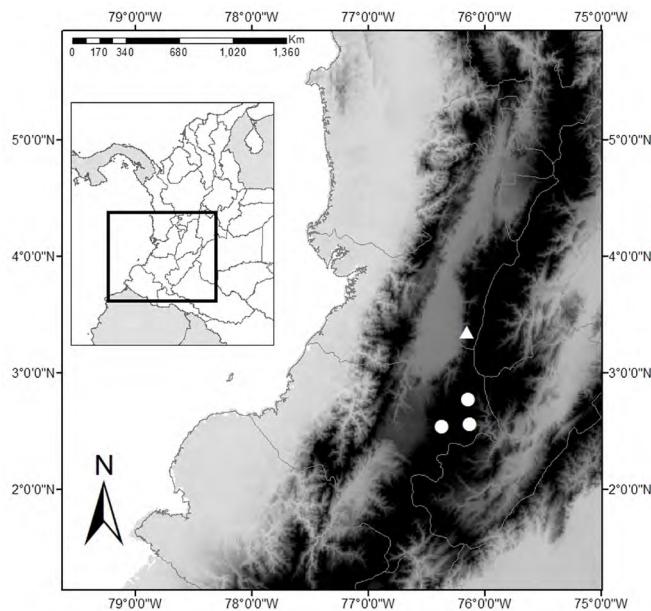
membrane and suprascapular processes are not visible. The species present a bulky and big external metacarpal tubercle on the foot, while the internal tubercle on the hand is elongated; the proximal subarticular tubercles are wide, double on the first three fingers. The coloration of the preserved specimen is brownish with some darker spots, a black stripe is visible on the flanks and the ventral spots are yellow or cream, same as the tubercles in the hands and feet.

In a review of the herpetological collection of the Universidad del Valle, we found a specimen of *A. eusebianus* (UVC-12907, Figure 1), collected in 1993 by J.E. Hernández in the Tinajas Páramo ( $3^{\circ}21'10.10''$  N,  $76^{\circ}9'44.76''$  W), Pradera municipality, Valle del Cauca Department. This location is found on the western slope of the Central Andes, located about 63 km north away from the localities known for this species, thus extending its distribution (Figure 2) and confirming the presence of this species in Valle del Cauca. This finding is important due to the Critically Endangered (CR) conservation status of *A. eusebianus* (IUCN 2012), which has not been registered after the last record made by Valencia and Lopez (2005) on the historical localities where it was abundant (Lopez



FIGURE 1. Preserved specimen (UVC-12907) of *Atelopus eusebianus*, dorsal, ventral and lateral (head) views. SP – State of São Paulo, GO – State of Goiás.

and Granados 2005 ) possibly due to the expansion of agricultural and livestock activities, loss of water sources and fumigation of illicit crops (Bolívar and Restrepo 2004), this report establish a new area for the search of viable populations for the development of conservation plans.



**FIGURE 2.** Map of Colombia showing known locations (dots) from Cauca Department and the new location (triangle) from Valle del Cauca Department.

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#### LITERATURE CITED

- Bolívar W. and J.H. Restrepo 2004 Sapito arlequín de Malvasa. *Atelopus eusebianus*; pp. 185–187, in: J.V. Rueda Almonacid, J.D. Lynch and A. Amezquita (ed.) *Libro Rojo de los Anfibios de Colombia*. Serie de libros rojos de especies amenazadas de Colombia. Bogotá: Conservación internacional Colombia, Instituto de Ciencias Naturales Universidad Nacional de Colombia. Ministerio del Medio Ambiente. 384 p
- Frost, D. 2013. *Amphibian Species of the World: An Online Reference*. Version 5.3. Accessible at <http://research.amnh.org/herpetology/amphibia>. Captured on 12 February, 2013.
- IUCN. 2012. *IUCN Red List of Threatened Species*. Version 2012.2. Accessible at <http://www.iucnredlist.org>. Captured on 23 January, 2013.
- Lopez, F and H. Granados. 2005. Arlequin del Cauca "Atelopus eusebianus", p. 74, in: J.V. Rueda Almonacid, J.V. Rodríguez Mahecha, E. La Marca, S. Lötters, T. Kahn and A. Angulo (ed.) *Ranas Arlequines*. Conservación Internacional Series libretas de Campo. Bogotá: Conservación internacional Colombia.
- Lötters, S. 1996. *The Neotropical toad genus Atelopus. Checklist, Biology and Distribution*. Köln: Vences and Glaw Verlags. 143 pp.
- Rueda Almonacid J.V., J.V. Rodríguez Mahecha, E. La Marca, S. Lötters, T. Kahn and A. Angulo. *Ranas Arlequines*. Conservación Internacional Series libretas de Campo. Bogotá: Conservación internacional Colombia. 158 pp.
- Rivero, J. and H. Granados Diaz. 1993. Nueva especie de *Atelopus* (Amphibia: Bufonidae) del Departamento del Cauca, Colombia. *Caribbean Journal of Science* 29(1–2): 12–17.
- Valencia, M.P. and F.J. Lopez. 2005. Nuevo reporte de *Atelopus eusebianus* (Anura: Bufonidae) para el Municipio de Puracé, Departamento del Cauca, Colombia. *Novedades Colombianas* 8(1): 71–74 (<http://museo.unicauca.edu.co/sites/default/filesfile/N1%20enero%202005%20vol.%208/Valencia%20Rojas%20y%20Lopez%20Lopez.2005.Nuevo%20reporte%20de%20Atelopus%20eusebianus.pdf>).

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