

NOTES ON GEOGRAPHIC DISTRIBUTION

Amphibia, Anura, Centrolenidae, *Centrolene balionotum*, *Centrolene geckoideum*, and *Cochranella cariticommata*: Distribution extension, new provincial records, Ecuador.

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Several species of anurans from Ecuador are known only from their type localities or from restricted distribution ranges. Herein we present information on new localities that extend the distribution of three poorly known species of Glassfrogs from Ecuador. Two records come from the province of Carchi, and the third from the province of Zamora-Chinchipe; these provinces are poorly known in terms of its herpetofaunal diversity, and located in the northern and southern extremes of Ecuador. Specimens herein reported are deposited at the collection of the Division de Herpetología, Museo Ecuatoriano de Ciencias Naturales, Quito (DHMECN). The generic placement of the species follows Ruíz-Carranza and Lynch (1991) as modified by Cisneros-Heredia and McDiarmid (2006).

Centrolene balionotum

Duellman (1981) described this species based on 13 specimens collected at the type locality (3.5 km NE of Mindo, 1540 m elevation, Province of Pichincha) in the northwestern Andean slopes of Ecuador; and one specimen from a locality in the Department of Cauca, Colombia (Duellman 1981). In Colombia, *C. balionotum* is considered as “reasonably common” (Bolívar et al. 2004a), and it is known from localities in the Departments of Cauca and Nariño between 400 and 800 m

elevation (Duellman 1981, Acosta-Galvis 2000, Bolívar et al. 2004a). In Ecuador, although the northwestern lowlands and Andean slopes have been surveyed by different herpetologists, *C. balionotum* remains known only from its type locality. *Centrolene balionotum* is considered a globally threatened species, classified as Vulnerable by the IUCN (Bolívar et al. 2004a). A specimen of *C. balionotum* (DHMECN 0865) was collected at the Cabeceras del Río Baboso (00°53' N, 78°27' W, 1400 m elevation), Province of Carchi, on November 1984 by Luis A. Coloma. This report represents the second locality of this species for Ecuador, the first provincial record for Carchi, and partially fills the gap between the type locality and Colombian localities.

Centrolene geckoideum

Jiménez de la Espada (1872) described this species from the Ecuadorian type locality: “riberas del río Napo”. There are only two additional localities of this giant Glassfrog in Ecuador; at the km 45 on the Chillogallo – Santo Domingo de los Colorados road, Province of Pichincha (Goodman & Goin 1970, the same locality mentioned as Quebrada Zapadores, 1910 m elevation, by Lynch et al. 1983, and Ruiz-Carranza et al. 1986); and 1 km by road SW of San Ignacio, 1920 m elevation, Province of Pichincha (Lynch et al. 1983). *Centrolene geckoideum* is considered a globally threatened species, classified as Vulnerable by the IUCN (Bolívar et al. 2004b). A specimen of *C. geckoideum* (DHMECN 0900) was collected at Río La Plata, on the Maldonado – Tulcán road (00°48' N, 78°02' W, 2525 m elevation), Province of Carchi, on 25 July 1988 by Doug Wechsler. This report corresponds to the third locality of this species for Ecuador, the first provincial record for Carchi, and partially fills the gap between Ecuadorian and Colombian localities. Unfortunately, recent expeditions to the Río La Plata have not found this species, and that population could have undergone local extinction.

Cochranella cariticommata

Wild (1994) described this species from a single locality in the southeastern Andean slopes of Ecuador (11.2 km WSW Plan de Milagro, 2350 m elevation, Province of Morona-Santiago). Cisneros-Heredia and McDiarmid (2006) reported a second

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locality, 23 km NNW from the type locality (El Cruzado, province of Morona-Santiago). Because of the paucity of information on *C. cariticommata*, it was classified as a Data Deficient species by the UICN (Coloma et al. 2004). Two specimens of *C. cariticommata* (DHMECN 1974 and 2429) were collected during recent surveys of the herpetofauna of the Reserva Biológica Tapichalaca, a reserve managed by the Jocotoco Foundation (04°29'31.5" S, 79°07'42.2" W, 2200 m elevation), Province of Zamora-Chinchipe, on 3 December 2003 and 13 May 2004, by Mario Yáñez-Muñoz, Paul Meza-R., Marco Reyes-P., and Juan Pablo Reyes-P. This report corresponds to the third locality of this species for Ecuador, the first provincial record for Zamora-Chinchipe, and extends the distributional range of the species c. 60 km S from localities in Morona-Santiago.

Acknowledgments

We are grateful to F. Sornoza, N. Simpson, and R. Ridgely, for their support to the herpetological surveys of the Jocotoco reserves; to D. Wechsler for allowing the use of his photograph of *Centrolene geckoideum*; and to P. Meza, M. Reyes, J. P. Reyes, F. Ortiz and P. Moreno for field companionship and assistance. Research by DFCH has been supported by the Research Training Program, National Museum of Natural History, Smithsonian Institution, Smithsonian Women's Committee, Universidad San Francisco de Quito, María Elena Heredia, and Laura Heredia. Research by MYM has been supported by Fundación Jocotoco and Museo Ecuatoriano de Ciencias Naturales. Research and collecting permits were provided by Ministerio del Ambiente del Ecuador (N° 018-IC-FAU-DNBAP/MA).



Figure 1. Dorsal view of *Centrolene geckoideum* (DHMECN 0900) from the Río La Plata, on the Maldonado – Tulcán road (2525 m elevation), Province of Carchi. Photo: Doug Wechsler.

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Figure 2. Dorsolateral view of *Cochranella cariticommata* (DHMECN 2429) from the Reserva Biológica Tapichalaca (2200 m elevation), Province of Zamora-Chinchipec. Photo: Mario Yáñez-Muñoz.

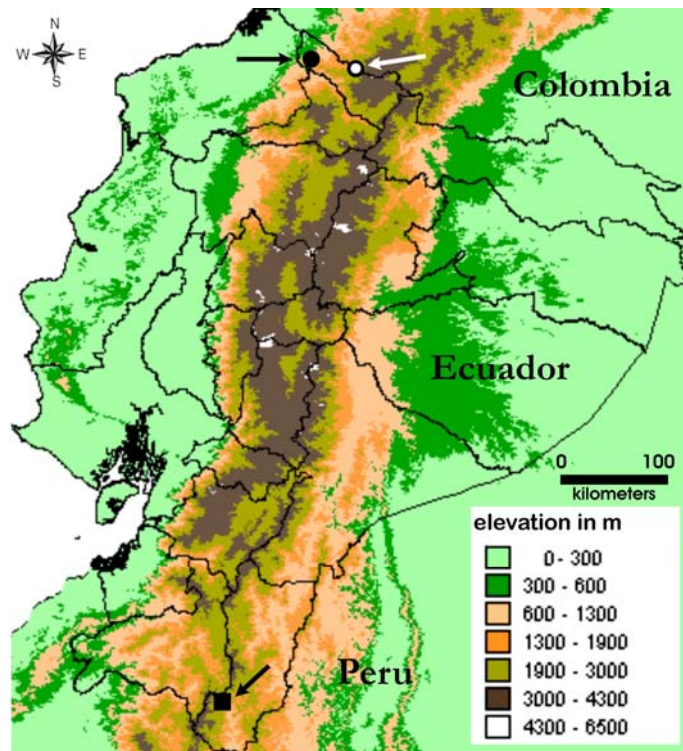


Figure 3. Map of Ecuador showing the new localities (pointed by arrows) of *Centrolene balionotum* (black circle), *Centronele geckoideum* (white circle) (Province of Carchi), and *Cochranella cariticommata* (square) (Province of Zamora-Chinchipec).

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Literature cited

- Acosta-Galvis, A. R. 2000. Ranas, Salamandras y Caecilias (Tetrapoda: Amphibia) de Colombia. *Biota Colombiana* 1(3): 289–319.
- Bolívar, W., L. A. Coloma, S. Ron, D. F. Cisneros-Heredia, J. Lynch, and E. Wild. 2004a. *Cochranella balionota*. IUCN 2006. 2006 IUCN Red List of Threatened Species. Accessible at: <http://www.iucnredlist.org>. Captured on December 2006.
- Bolívar, W., L. A. Coloma, S. Ron, D. F. Cisneros-Heredia, E. Wild, and M. Yáñez-Muñoz. 2004b. *Centrolene geckoideum*. IUCN 2006. 2006 IUCN Red List of Threatened Species. Accessible at: <http://www.iucnredlist.org>. Captured on December 2006.
- Cisneros-Heredia, D. F. and R. W. McDiarmid. 2006. A new species of the genus *Centrolene* (Amphibia: Anura: Centrolenidae) from Ecuador with comments on the taxonomy and biogeography of Glassfrogs. *Zootaxa* 1244: 1–32.
- Coloma, L. A., S. Ron, and D. Almeida. 2004. *Cochranella cariticommata*. IUCN 2006. 2006 IUCN Red List of Threatened Species. Accessed at: <http://www.iucnredlist.org>. Captured on December 2006.
- Duellman, W. E. 1981. Three new species of centrolenid frogs from the Pacific versant of Ecuador and Colombia. *Occasional Papers of the Museum of Natural History of the University of Kansas* 88: 1–9.
- Goodman, D. E. and C. J. Goin. 1970. The habitat of *Centrolene geckoideum* in Ecuador. *Herpetologica* 26(2): 276.
- Jiménez de la Espada, M. 1872. Nuevos batracios americanos. *Anales de la Sociedad Española de Historia Natural* 1: 85–88.
- Ruiz-Carranza, P. M. and J. D. Lynch. 1991. Ranas Centrolenidae de Colombia I. Propuesta de una nueva clasificación genérica. *Lozania* 57: 1–30.
- Ruiz-Carranza, P. M., J. Hernández-Camacho, and M. C. Ardila-Robayo. 1986. Una nueva especie colombiana del género *Centrolene* Jiménez de la Espada 1872 (Amphibia: Anura) y redefinición del género. *Caldasia* XV(71-75): 431–444.
- Wild, E. R. 1994. Two new species of Centrolenid Frogs from the Amazonian slope of the Cordillera Oriental, Ecuador. *Journal of Herpetology* 28(3): 299–310.

Received December 2006

Accepted February 2007

Published online February 2007