

Amphibia, Anura, Hylidae, Cruziohyla craspedopus (Funkhouser, 1957): Distribution extension, new state record and distribution map in Brazil

Domingos de Jesus Rodrigues 1,2*, Marcelo de Morais Lima 3 and Ricardo A. Kawashita-Ribeiro 4

- 1 Universidade Federal de Mato Grosso, Instituto de Ciências Naturais Humanas e Sociais, Núcleo de Estudo da Biodiversidade da Amazônia Matogrossense. Avenida Alexandre Ferronato, 1200, Setor Industrial. CEP 78557-267. Sinop, MT, Brasil.
- 2 Instituto Nacional de Ciências e Tecnologia de Estudos Integrados da Biodiversidade Amazônica INCT-CENBAM/CNPq/MCT. Avenida André Araújo, 2936. CEP 69011-970. Manaus, AM, Brasil.
- 3 INPA, Instituto Nacional de Pesquisas da Amazônia, CPEc. Avenida André Araújo 2936. CEP 69011-970. Manaus AM, Brasil.
- 4 Universidade Federal de Mato Grosso, Instituto de Biociências, Coleção Zoológica de Vertebrados. Avenida Fernando Corrêa da Costa, s/n, Coxipó. CEP 78060-900. Cuiabá, MT, Brasil.
- * Corresponding author. E-mail: djmingo23@gmail.com

ABSTRACT: This note reports the presence of *Cruziohyla craspedopus* at the municipality of Cotriguaçu, state of Mato Grosso, central Brazil. This is the second known locality for this species in Brazil.

Cruziohyla craspedopus inhabits the Amazonian lowlands of Colombia, Ecuador, Peru, and Brazil (Hoogmoed and Cadle 1991; Lima et al. 2003; Faivovich et al. 2005; Frost 2010). In Brazil, it is known to occur only in the municipality of Castanho, state of Amazonas (Lima et al., 2003). For the state of Mato Grosso, Brazil, no records have been published, and herein we report the first locality of this species in the state. Voucher specimens reported in this note are housed in the herpetological collection of Universidade Federal de Mato Grosso (UFMT), campus of Sinop - UFMT-S (female), and campus Cuiabá - UFMT (male), MT, Brazil.

On 10 December 2009, one amplectant pair of Cruziohyla craspedopus (female UFMT 053, SVL = 70.4 mm; and male UFMT 10943, SVL = 60.5 mm) was found inside a 60-litre bucket in primary forest at São Nicolau farm, municipality of Cotriguaçu (9°51'16.9" S, 58°14'57.7" W; 200 m), state of Mato Grosso, Brazil (collection permits #10174-1, Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis - IBAMA). This new record extends the range of the species to southern Brazilian Amazonia, approximately 2,100 km NW from the typelocality (municipality of Chicherota, Rio Bobonaza, province of Pastaza, Ecuador, 02°22' S, 76°38' W; 450 m) and 740 km S in a straight-line from the first Brazilian locality (municipality of Castanho, state of Amazonas, Brazil, 03°21'16.8" S, 59°51'37.9" W) (Figure 1).

Both specimens showed the characteristic coloration of Cruziohyla craspedopus (see Hoogmoed and Cadle 1991), having dark green head, body, forearms, thighs, shanks, and dermal fringes; with numerous grayish white blotches scattered on dorsal surfaces in an irregular pattern; varying from thin cobweb-like patterns to large irregular blotches; grayish white iris with fine black reticulations. A narrow, shallowly scalloped dermal fringe is present on the margin of the lower jaw, and on the outer edge of the forearm. The outer edge of the tarsus bears a broad dermal fringe that is expanded distally into a long pointed

calcar and two additional triangular flaps (Figure 2A).

Observed mating behavior and clutch size were similar to those reported by Hoogmoed and Cadle (1991) and Block et al. (2003). Three clutches of Cruziohyla craspedopus were observed in primary forest. One clutch was found attached to small roots inside a pitfall trap scattered through the forest on 14 September. On 10 September 2009, a pair was observed around 05:30h in a pitfall trap (60-Litre bucket) above the water on the bottom of the bucket. The female laid a 21-egg clutch and attached it to small roots above the water with help from the male (Figure 2B). On 10 December 2009, a clutch was found already wrapped in leaves close to the pair.

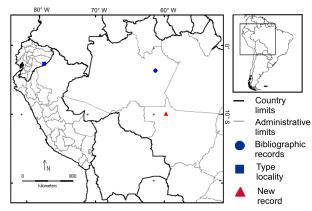


FIGURE 1. Known distribution of Cruziohyla craspedopus in Brazil. The blue circle indicates the previous known locality in Brazil (Castanho, state of Amazonas; Lima et al. 2003), the red triangle indicates the new locality herein reported (São Nicolau Farm, municipality of Cotriguaçu, Mato Grosso state, Brazil), and the blue square shows the type locality (Chicherota, Rio Bobonaza, Ecuador; Funkhouser 1957).

Cruziohyla craspedopus is currently classified as Least Concern by the 2010 IUCN Red List of Threatened Species (Angulo et al. 2004). Unfortunately, some localities where it was recorded (e.g. municipality of Cotriguacú) have suffered significant habitat changes and fragmentation, making it necessary to monitor the populations in order to





FIGURE 2. (A) Cruziohyla craspedopus (UFMT 10943) from São Nicolau farm, municipality of Cotriguaçu, state of Mato Grosso, Brazil, showing the typical coloration pattern, including lichen-like dorsal markings, dermal fringes on hind limbs, and orange-yellow lower flanks with narrow vertical black bars. (B) Egg clutch attached to roots. Photos by R.A. Kawashita-Ribeiro and D.J. Rodrigues, respectively.

study the effects of anthropogenic activities. The presence of C. craspedopus in northern Mato Grosso (southern Amazonia) suggests that it may be more widespread than previously recognized across the Amazon basin (Hoogmoed and Cadle 1991).

ACKNOWLEDGMENTS: We are grateful to Carla L. Velasquez, Luana A. G. Arruda, Anelise, F. Silva, Jaqueline P. Silva and Ricardo Machiner for field assistance; to an anonymous reviewer for valuable comments and suggestions on the manuscript; to São Nicolau farm for logistic support, and to the Oficio Nacional das Florestas - ONF-Brazil for financial support and permission to access the study area. Ricardo A. Kawashita-Ribeiro thanks NIEFA (Núcleo Interdisciplinar de Estudos Faunísticos, FAPEMAT proccess 447441/2009) and Domingos de Jesus Rodrigues thanks CNPq for the Bolsa de produtividade em Pesquisa (Proccess n. 501408/2009-6) for financial support. Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA) provided collection permits. This is publication 07 in the NEBAM technical series.

LITERATURE CITED

Angulo, A., L.A. Coloma, S. Ron, M. Hoogmoed, F. Castro, J.V. Rueda, D. Cisneros-Heredia and J. Icochea. 2004. Cruziohyla craspedopus. In IUCN 2010. IUCN Red List of Threatened Species. Version 2009.2. Electronic Database accessible at www.iucnredlist.org. Captured on 11 February 2010.

Block, J.E., S.L. Unser, J.K. Mooney and E.R. Wild. 2003. Agalychnis craspedopus (Amazon Leaf Frog). Reproduction. Herpetological Review 34(2): 134-135.

Faivovich, J., C.F.B. Haddad, P.C.A. Garcia, D.R. Frost, J.A. Campbell and W.C. Wheeler. 2005. Systematic review of the frog family Hylidae, with special reference to Hylinae: phylogenetic analysis and taxonomic revision. Bulletin American Museum of Natural History 294: 1-113.

Frost, D.R. 2010. Amphibian Species of the World: An online reference. Version 5.3. Electronic Database accessible at ttp://research.amnh. org/herpetology/amphibia/index.html. Captured on 08 February

Funkhouser, A. 1957. A review of the neotropical tree-frogs of the genus Phyllomedusa. Occasional Papers of the Natural History Museum of Stanford University 5: 1-90.

Hoogmoed, M.S. and J.E. Cadle. 1991. Natural history and distribution of Agalychnis craspedopus (Funkhouser, 1957) (Amphibia: Anura: Hylidae). Zoologische Mededelingen 65(8): 129-142.

Lima, A.P., V.M.L. Guida and W. Hoedl. 2003. Agalychnis craspedopus: Brazil: Amazonas. Herpetological Review 34(4): 379 2003.

RECEIVED: April 2010 LAST REVISED: February 2011 ACCEPTED: March 2011 Published online: March 2011

EDITORIAL RESPONSIBILITY: Diego F. Cisneros-Heredia