## Two new records in the diet of *Ceratophrys cornuta* Linneaus, 1758 (Anura:Ceratophrydae)

Germán Chávez1\*, Pablo J. Venegas1 and Augusto Lescano2

*Ceratophrys cornuta* is a large terrestrial, primarily nocturnal species commonly found in terra firme forest during the rainy season (Duellman 1995; Duellman 2005). The diet of this species was analyzed in a population in the Amazonian forest in southeastern Peru by Duellman and Lizana (1994), they reported predation on a large variety of organisms that inhabit the leaf litter forest floor, including insects and some vertebrates; Vertebrate prey included frogs(*Dendropsophus parviceps, Pristimantis toftae, Rhinella margaritifera* and *Scinax ruber*), a lizard (*Ptychoglossus brevifrontalis*), an unidentified

\*Corresponding author.

snake, and a mice. Frogs of the genus Ceratophrys are commonly kept as pets, and their carnivorous habits are widely known, in captivity adults usually are fed mice. Other species of frogs have been reported to include vertebrates in their diet: an individual of the South African bullfrog Pyxicephalus adspersus ate 17 newly born cobras Hemachatus haemachatus, and another one ate a small chicken (Branch, 1976); The large tree frog Osteocephalus taurinus in Amazonian Colombia and Peru is known to eat small frogs (Duellman, 1995), limb bones of frogs were found in the stomach of a Leptodactylus bolivianus (Duellman, 1995); A Leptodactylus pentadactylus was reported eating frogs at Santa Cecilia, Ecuador (Duellman, 1978); Finally five vertebrate species (one unidentified tadpole, a teleostei fish, and three species of frogs-Hypsiboas albomarginatus, Leptodactylus ocellatus and Physalaemus crombiei) were reported as prey of Leptodactylus ocellatus (Teixeira and Vrcibradic 2003;



Figure 1. Male Ceratophrys cornuta, trying to swallow a Plica plica . Photo by A. Lescano.

División de Herpetología del Centro de Ornitología y Biodiversidad (CORBIDI), Calle Santa Rita 105, Los Huertos de San Antonio, Surco, Lima, Perú; e-mail: vampflack@yahoo.com

<sup>2</sup> Rainforest Expeditions SAC, Av. La Joya s/n, Tambopata, Madre de Dios- Perú.



Figure 2. Male *Ceratophrys cornuta* CORBIDI 05148, 57.4 mm snout-vent length. Photo by P.J. Venegas.

Solé et.al. 2009). Furthermore, a great diversity of anuran prey was found in *Hemiphractus proboscideus* at Santa Cecilia, Ecuador, where 10 of 13 stomachs contained 15 frogs of 12 species (Duellman, 1978).

In amphibians the choice of prey depends on the chance of catching a prey, for example, the analysis of stomach of *Acris crepitans* Baird (1854) in Indiana (Labanick, 1976) and terrestrial stages of *Notophthalmus viridiscens* Rafinesque (1820) in New York, revealed that the abundance of food in the stomach of frogs is correlated with the relative prey abundance in the habitat (MacNamara, 1977). Despite this, the vertebrate prey mentioned before in some species of frogs, are occasional records, and do not constitute the only kind of prey ingested by these species.

At 06:00–10:00 in November 2008 near Tres Chimbadas Oxbow lake, at Infierno's Native Community (Tambopata River Basin, 12°47'15.59"S, 69°20'02.50"W, 193 masl) one of us (Lescano) observed a male of *Ceratophrys cornuta* trying to swallow an arboreal lizard *Plica plica*, which was on the ground, this specimen was observed calling the night before the record. When first observed, the *Plica* was alive; two hours later it was dead. The *Plica* (snout-vent length 61.1 mm) was visibly larger than the *Ceratorphrys* (snout-vent length 58.2 mm) (Figure 1). Ingestion of the lizard was not confirmed., because the frogs was not collected.

At 13:28 on 10 August 2009 one of us (Venegas)

observed at the Inotawa Lodge, Tambopata River (12°48'31.31"S, 69°18'05.63"W, 208 m asl) a *Ceratophrys cornuta* eating a *Leptodactylus dydimus* (Figure 2). After ingesting the prey, the frog was collected and fixed in 10% formalin and stored in 70% ethanol (Centro de Ornitología y Biodiversidad 05148). The prey (SVL 36.3 mm) was almost two thirds of the snout-vent length of the *Ceratophrys* (male, 57.4 mm snout-vent length) and was founded in a semicircular position inside the frog's stomach.

Code for Museum collection is: CORBIDI=, Lima.

Acknowledgements.We are grateful to William E. Duellman for the comments to the manuscript, to Margot Cuyos and Vilma Durand-Centeno for their assistance during field work. Work of AL was supported by Rainforest Expeditions SAC.

## References

- Boulenger, G. A. (1884): On a collection of frogs from Yurimaguas, Huallaga River, northern Peru. Proceedings of the Zoological Society of London, 1883: 635-638.
- Branch, W.R. (1976): Two exceptional food records for the African Bullfrog, *Pyxicephalus adspersus* (Amphibia:Anura:Ranidae). Journal of Herpetology 10: 266-268.
- Duellman, W.E., Lizana, M. (1994): Biology of a sit-and-wait predator, the leptodactylid frog *Ceratophrys cornuta*. Herpetologica 50:51-64
- Duellman, W. E. (1978): The biology of an equatorial herpetofauna in Amazonian Ecuador. Miscellaneous Publications, Museum of Natural History, University of Kansas 65: 1-352.
- Duellman, W. E. (1995): Temporal fluctuations in abundances of anuran amphibians in a seasonal Amazonian rainforest. Journal of Herpetology 29: 13-21.
- Duellman, W. E. (2005): Cusco Amazónico, the lives of amphibian and reptiles in an Amazonian rainforest. Cornell University Press, Ithaca. 470 pp.
- Labanick, G. M. (1976): Prey availability, consumption and selection in the Cricket Frog, *Acris crepitans* (Amphibia, Anura, Hylidae). *Journal of Herpetology* 10: 293-298.
- MacNamara, M. C. (1977): Food habits of terrestrial adult migrants and immature red efts of the red-spotted newt *Notophthalmus viridescens*. Herpetologica 33: 127-132.
- Teixeira, R.L., Vrcibradic, D. (2003): Diet of *Leptodactylus ocellatus* (Anura; Leptodactylidae) from coastal lagoons of southeastern Brazil. Cuadernos de Herpetologia 17: 113-120.
- Solé, M., Dias, I.R., Rodrigues, E.A.S., Marciano, E., Branco, S.M.J., Cavalcante, K.P., Rodder, D. (2009): Diet of *Leptod*actylus ocellatus (Anura:Leptodactylidae) from a cacao plantation in southern Bahia, Brazil. Herpetological Notes 2: 9-15.