

## Feeding observation on *Bothriechis marchi* in Parque Nacional Cusuco, Honduras

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### INTRODUCTION

The geographic distribution of the green Palm-Viper genus *Bothriechis* is from south-eastern Oaxaca, Mexico, southward through Central America and into South America as far as south-western Venezuela, east of the Andes and north-western Peru west of the Andes, (McCranie 2011; Wallach, et al., 2014). The little-studied endemic Palm-Viper from Honduras, *Bothriechis marchi sensu lato*, occurs in disjunct populations at low, moderate, and intermediate elevations on the Atlantic versant from north-western to north-central, on localities as the Cordillera Nombre de Dios, Cordillera de Merendon, and Sierra Sulaco, (Köhler, 2009; McCranie, 2011; Townsend et al., 2013). This moderate-size pit-viper is relatively slender, essentially uniformly coloured (in adults, blotched in juveniles), arboreal (rarely seen on the ground), with a relatively long prehensile tail, (Campbell and Lamar, 2004; McCranie, 2011) may utilise a variety of microhabitat when hunting or resting, also found in vegetation above streams or rivers (1-2m high) and crawling across boulders in streambeds, (McCranie, 2011; Townsend and Wilson, 2008). In this note we report on three observations of predation by this snake in the cloud forest at Parque Nacional Cusuco, located between the departments of Cortes and Santa Barbara in north-western of Honduras, (Townsend and Wilson, 2008).

The Mexican mouse *opossum Marmosa mexicana* is widely distributed across tropical and subtropical forests and shrubby habitats below 1,600 m elevation from Mexico to Panama. (Rossi et al., 2010). The Mexican deer mouse, *Peromyscus mexicanus* occurs from Mexico, along the Atlantic coast, from south San Luis Potosí to the Isthmus of Tehuantepec, and along the Pacific coast, from the Guerrero-Oaxaca border to central Chiapas; the upper foothills and middle elevation mountains in Guatemala, through El Salvador, Honduras, and Nicaragua, to the highlands of Costa Rica and west Panamá (Chiriquí region), (Musser and Carleton, 2005). *Plectrohyla dasypus*, is an endemic moderate sized tree-frog, that is known from 1300 to 1900 m elevation in the lower montane wet forest formation in the Sierra de Omoa of northwestern of Honduras, (McCranie and Castañeda, 2007; Townsend and Wilson, 2008).



**Figure 1.** Sub-adult *B. marchi* (ca. 600 mm approximate SVL) predating on a *P. mexicanus* in El Parque Nacional Cusuco, Honduras. Photograph: T. Brown.



**Figure 2.** Sub-adult *B. marchi* (ca. 400 mm approximate SVL) predating on a *P. dasypus* in El Parque Nacional Cusuco, Honduras. Photograph: T. Brown.

## OBSERVATIONS

No previous studies have described the natural diet of *B. marchi*. Our first observation was made on 15th July 2013, around 06:25hrs, when the first author observed and photographed an adult *B. marchi* (ca. 800mm total length) taken by the head and trying to swallow one *M. mexicana*, the snake was on the ground in the middle of the path at El Danto Camp (15 31 40.8 N, 88 16 41.7 O, 1562 m above the sea level). The second observation was on 25th July 2013 at 20:36, when the second author observed and photographed a sub-adult *B. marchi* (ca. 600mm total length) in the process of eating one *P. mexicanus*, (Fig. 1), alongside a stream at El Danto Camp (15 31 29.5 N, 88 16 36.3 O, 1565m above the sea level), the individual was roughly 2 meters above ground level; loosely coiled in an open, sparsely vegetated, low branching tree. The third observation was made on 30th June 2015, at around 16:04hrs, when the second author photographed a sub-adult *B. marchi* (ca. 500mm total length) predating a *P. dasypus metamorph*, at Guanales Camp (15 29 21.6 N, 88 14 01.9 O, 1271m above the sea level). The frog emerged from a stream on a branch in front of the viper when it was grasped and held (Fig. 2).

To the best of our knowledge these are the first recorded instances of *B. marchi* predating on small mammals (*M. mexicana* and *P. mexicanus*), and also this is the first confirmed predation on frogs of the genus *Plectrohyla*. The indication of dietary diversification within this species diet is promising for its long-term survival, and improves our knowledge of this species.

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## REFERENCES

- Campbell, J.A. & Lamar, W.W. (2004). *The Venomous Reptiles of the Western Hemisphere*. Comstock. Publ. Assoc., Ithaca, New York. Vol. I: i-xviii, 1-476.
- Kohler, G. (2009). *Reptiles of Central America*. Herpetonon. Offenbach, Germany. 361 pp.
- McCranie, J.R. & Castañeda, F.E. (2007). *Guía de Campo de los Anfibios de Honduras*. Bibliomania, Salt Lake City, Utah. USA. x + 304 pp.
- McCranie, J.R. (2011). The Snakes of Honduras. Systematics, Distribution, and Conservation. Society for the Study of Amphibians and Reptiles. *Contributions to Herpetology* 26: 1-714.
- Musser, G.G., & Carleton, M.D. (2005). Superfamily Muroidea. Pp. 894-1531 in *Mammal Species of the World: a Taxonomic and Geographic Reference* (D.E. Wilson & Reeder, D.M. eds.). 3rd ed. Johns Hopkins University Press, Baltimore, Maryland.
- Rossi, R.V., Voss, R.S. & Lunde, D.P. (2010). A revision of the didelphid marsupial genus *Marmosa*. Part 1. The species in Tate's "Mexicana" and "Mitis" sections and other closely related forms. *Bulletin of the American Museum of Natural History* 334: 1-83.
- Townsend, J.H., & Wilson, L.D. (2008). *The Amphibians & Reptiles of Cusuco National Park, Honduras/ Los Anfibios y Reptiles del Parque Nacional Cusuco, Honduras*. Bibliomania, Salt Lake City, Utah. USA. x + 322.
- Townsend, J.H., Medina-Flores, M., Wilson, L.D., Jadin, R.C. & Austin, J.D. (2013). A relict lineage and new species of green palm-pitviper (Squamata, Viperidae, *Bothriechis*) from the Chortís Highlands of Mesoamerica. *ZooKeys*: 77-105. <http://dx.doi.org/10.3897/zookeys.298.4834>.
- Wallach, V., Williams, K. L., & Boundy, J. (2014). *Snakes of the World: Catalogue of the Living and Extinct Species*. Taylor and Francis, CRC Press, 1237 pp.

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