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NEW PREY ITEM IN THE DIET OF THE ORANGE-BELLIED SWAMP SNAKE *TRETANORHINUS NIGROLUTEUS* COPE, 1861 (DIPSADIDAE) IN THE SELVA LACANDONA, CHIAPAS, MEXICO

NUEVO REGISTRO DE PRESA EN LA DIETA DE LA SERPIENTE DE PANTANO DE VIENTRE NARANJA *TRETANORHINUS NIGROLUTEUS* COPE, 1861 (DIPSADIDAE) EN LA SELVA LACANDONA, CHIAPAS, MÉXICO

Ana Iris Melgar-Martínez[1], Eduardo Chankin-Chankayun[1], Leonardo Daniel Ponce-Rosales[2], Marco Antonio Rojas-Mendez[3] & Elí García-Padilla[4]

[1]*Centro ecoturístico Santuario del Cocodrilo Tres Lagunas, Lacanjá Chansayab, Ocosingo, Chiapas. 29950, México*

[2]*Laboratorio de Herpetología, Facultad de Ciencias, Universidad Autónoma del Estado de México, Instituto Literario #100 Centro, 5000 Toluca, Estado de México, México*

[3]*Av. Quintana Roo, Las Torres, Tultitlan, Estado de México. 54938, México*

[4]*Biodiversidad Mesoamericana. Oaxaca de Juárez, Oaxaca. 68023, México.*

**Correspondence: iris.melgar02@hotmail.com*

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Resumen.– La serpiente de pantano de vientre naranja (*Tretanorhinus nigroluteus*) es considerada una especie rara en México, se cuenta con pocos registros puntuales de su presencia en territorio nacional. Son conocidas por alimentarse de anfibios (anuros) y peces de distintas especies (Familias Gobidae y Poecilidae). Reportamos el primer registro de caracoles de agua dulce (*Pachychilus largillierti*) como presa de *T. nigroluteus*.

Palabras claves.– Dipsadidae, depredación, caracol de agua dulce, serpiente de manglar.

Abstract.– The orange-bellied swamp snake (*Tretanorhinus nigroluteus*) is considered a rare species in Mexico; there are few specific records of its presence in the country. They are known to feed on amphibians (anurans) and fish of different species (Families Gobidae and Poecilidae). We report the first record of freshwater snails (*Pachychilus largillierti*) as prey of *T. nigroluteus*.

Key words.– Dipsadidae, predation, freshwater snail, mangrove snake.

The Orange-bellied swamp snake (*Tretanorhinus nigroluteus*) is a moderately robust water snake with dark spots or blotches on a pale grayish or dark olive dorsum; venter usually orange-red at least posteriorly; nostrils directed upward; nasal scales enlarged, in contact or narrowly separated; dorsal scales keeled and in 21 or 19 rows at midbody; anal plate divided (Heimes, 2016). This species occurs at low and moderate elevations (up to 500 m a.s.l.) on the Atlantic versant from southern Veracruz and the IIsthmus of Tehuantepec region of Oaxaca through Tabasco, northern Chiapas, western Campeche and extreme southern Quintana Roo southward to Panama (Dunn, 1939; Conant, 1965; Álvarez del Toro, 1973, 1982; Johnson, 1989; Pérez- Higareda & Smith, 1991; Lee, 1996; Vogt et al., 1997 all cited in Heimes, 2016). As many as five subspecies have been recognized (Villa, 1969), but according to Wilson and Hahn (1973) the division into subspecies is insufficiently supported.

These primarily aquatic snakes inhabit humid lowland forests and coastal mangroves, they appear to prefer shallow, slow-moving water, especially where aquatic vegetation is abundant. They have been found in or near streams, in the sluggish oxbows of large rivers, lakes and freshwater as well as brackish tree swamps. They are nocturnal and rarely seen during the day when they remain submerged or hide among aquatic vegetation. They often lie at the surface with only the snout above water and rapidly dive to hide in vegetation, mud

a)

b)

c)

Figura 1. *Tretanorhinus nigroluteus* (a), *T. nigroluteus* alimentándose de un caracol de la especie *Pachychilus largillierti* conocido localmente como "Shuti de río"(b, c). Foto: Ana Iris Melgar-Martínez.

Figure 1. *Tretanorhinus nigroluteus* (a), *T. nigroluteus* feeding on a snail of the species *Pachychilus largillierti* locally known as "Shuti de río" (b, c). Photo: Ana Iris Melgar-Martínez.

or under rocks at the bottom (Villa, 1969; Wilson & Hahn, 1973). *Tretanorhinus nigroluteus* is oviparous. Females with oviductal eggs have been collected in January and July, indicating an extensive breeding season, clutches commonly number 6 to 9 eggs (Villa, 1970; Campbell, 1998). They prey on small fishes of the families Gobiidae and Poeciliidae, tadpoles and small frogs and toads (Villa, 1970; Heimes, 2016). Feeding may involve active swimming, but usually the snakes are anchored to aquatic vegetation or lie on the bottom to ambush their prey (Heimes, 2016).

On August 29, 2021 at 09:09, in the community of Tres Lagunas belonging to the mayan lacandon community of Lacanjá Chansayab in the municipality of Ocosingo, Chiapas at 353 meters above sea level (16.840908° N, 91.144765° W, UTM WGS84), AIMM and ECC observed an adult individual of *T. nigroluteus* (400 mm total length) feeding on a snail of the species *Pachychilus largillierti* known locally as "shuti de río" (Fig.1) about 3 cm. The snake was photographed during the ingestion of the snail, and it took approximately half an hour to proceed to complete ingestion of the prey. After the ingestion of the snail, the snake was captured for some photographs and the total length of the specimen was measured and subsequently released under dead branches on the river bank, no further measurements were made, nor was the specimen sexed in order to not cause more significant stress and avoid regurgitation. To our knowledge, this is the first time this species has been recorded feeding on freshwater snails.

This fortuitous discerning allows us to know more about the preference in their prey. In the river zone in which the snake *T. nigroluteus* was found, the presence of the snail *Pachychilus largillierti* is abundant, so it can be assumed that having a great availability of this resource prefers to make use of it than other organisms such as fish. This snake species is considered rare and this record also represents the third known specimen from the Selva Lacandona (Hernández-Ordoñez et al., 2015; Ferreira-García & Canseco-Márquez, 2006).

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SUPPLEMENTARY INFORMATION

Three videos are provided where you can see a specimen of *T. nigroluteus* preying on the snail *Pachychilus largillierti* (https://drive.google.com/drive/folders/17FanE6PE6koEa_J8ZgUg8zjNRkRPGPr6?usp=sharing)

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