

NATURE NOTES

Amphibia: Gymnophiona

***Gymnopsis multiplicata*. Size.** The distribution of *G. multiplicata* extends from southeastern Guatemala to western Panama, on the Atlantic versant, and on the Pacific versant from northwestern Costa Rica to western Panama, at elevations from sea level to 1,400 m (McCranie and Wilson, 2002). Wake (1988) provided a definition and diagnosis for the genus *Gymnopsis*, which then was considered monotypic, and indicated the maximum total length (TOL) as “to 500 mm” (= 50 cm). Savage (2002) reported the maximum TOL of *G. multiplicata* as “to 480 mm” (= 48 cm). The longest specimen presently in the museum collection at the University of Costa Rica (UCR 17096) measures 47.4 cm.

Róger Blanco, the research coordinator of Área de Conservación Guanacaste, informed me that at Sector Santa Rosa, Provincia de Guanacaste, Costa Rica, the rainfall recorded during the rainy season of 2010 (2,819.3 mm) was more than twice the amount that fell the previous year. A portion of the park’s administrative area remained flooded throughout much of the rainy season, which made the soil softer than usual, and under these conditions on 21 November 2010, Johan Vargas and Roberto Espinoza collected a very large *G. multiplicata* (Figs. 1A, B). The individual measured 56 cm in TOL and 6 cm in circumference at midbody. Because of its possible record length, the caecilian was maintained for study and placed in a terrarium, but several days later it escaped and was not seen again.



Fig. 1. (A) The large *Gymnopsis mexicana* found in Sector Santa Rosa on 25 November 2010; and (B) a close-up of the anterior portion of its body.

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On 29 October 2014, an even longer individual of *G. multiplicata* was found at Río Oro de Santa Ana, Provincia de San José, Costa Rica (Figs. 2A, B.). Although the exact total length was difficult to determine because the caecilian constantly kept expanding and contracting different parts of its body, a conservative estimate is that the animal measures at least 70 cm in TOL, by far the longest known individual of this species. Other measurements and the weight of the animal are as follows: diameter at midbody = 2.8 cm; circumference at midbody = 10.5 cm; and weight = 334.1 g. The individual is being maintained alive, but will be deposited at the UCR collection upon its death.



Fig. 2. (A) The record-length *Gymnopsis mexicanus* recently found at Río Oro de Santa Ana, Provincia de San José, Costa Rica, held so as to provide a perspective on its length; and (B) a dorsal body view of the animal. © Alejandro Solórzano

Acknowledgments.—I thank Róger Blanco, María Marta Chavarría, Felipe Chavarría, Daniel H. Janzen, Johan Vargas, and Roberto Espinoza for their help in providing the information for the caecilian found at Sector Santa Rosa, and Francisco Castro for his assistance with logistics associated with the second caecilian.

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***Oscaecilia osae*. Predation and Habitat.** Caecilians generally are difficult to find and their biology remains largely unknown. Most species are fossorial, and often live in moist soils adjacent to streams, lakes, and swamps (Zug, et al., 2001). The distribution of the genus *Oscaecilia* extends from southwestern Costa Rica to northern Colombia, western Ecuador, and east of the Andes in Guyana, Brazil, and Peru (Lahanas and Savage, 1992). *Oscaecilia osae*, the northernmost member of the genus, is endemic to Costa Rica and its distribution is restricted to Lowland Wet Forest in the Península de Osa, Provincia de Puntarenas, at elevations from near sea level to 40 m (Savage, 2002); outside of the peninsula, Hödl (2005) recorded this species at Estación Biológica La Gamba, but did not provide an elevation. The Esquinas Rainforest Lodge at La Gamba, however, lies at an elevation of 240 m.

In caecilians, the inner layer of skin contains numerous mucous glands, as well as poison glands that can be toxic to predators, including humans (Wake, 1986). Thus, although few predators are known to feed on caecilians, Taylor (1968) indicated that snakes and carnivorous birds undoubtedly are their most active predators. Neotropical coral snakes (genus *Micrurus*) are the most commonly reported snakes to include caecilians in their diet (Gower et al. 2004). Eleven species of coral snakes have been reported to feed on caecilians, including two species of *Oscaecilia* (Roze 1996; Campbell and Lamar, 2004; Huertas and Solórzano, 2014). Herein, we report an incident of a White-nosed Coati (*Nasua narica*) preying on an individual of *O. osae*.

On 29 July 2014, at 1050 h, one of us (RNE) observed a group of *N. narica* walking along the beach at Playa San Pedrillo, Corcovado National Park, Peninsula de Osa, patrolling the beach as these procyonids often do while searching for sea turtle eggs. One of the coatis suddenly started digging in sand near the forest edge, and exposed a caecilian (Fig. 1-A). The coati chewed on the caecilian (Fig. 1-B) before running away with it (Fig 1-C), and then stopped to stretch it, presumably to make sure it was dead. At that point the coati chewed along the body of the caecilian before ingesting it (Fig. 2); the chewing and feeding process lasted less than 1 min. Soon after, RNE examined the location where the coati dug up the caecilian. The hole was ca. 40 cm deep and in sand, suggesting that in



Fig. 1. (A) A White-nosed Coati (*Nasua narica*) sniffing and digging in sand near the forest edge in search of food; (B) the coati finds a caecilian (*Oscaecilia osae*) and begins to bite it; and (C, D) the coati runs away with the caecilian, and stops to stretch its body. © Raby Nuñez Escalante

addition to inhabiting soils in forest, *O. osae* also occupies sandy substrates.

About a week after this incident, RN observed another coati eating an *O. osae*, but this time the location was within the forest, ca. 150 m from the beach.

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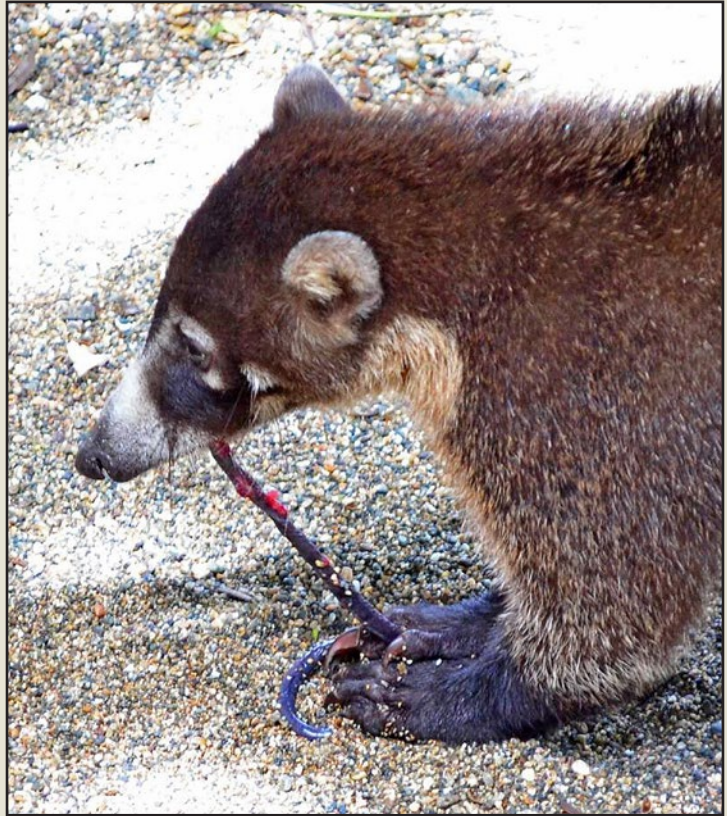


Fig. 2. Close up of a coati chewing on the caecilian's body before ingesting it. © Raby Nuñez Escalante

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Reptilia: Squamata (lizards)

Basiliscus basiliscus. Predation.

Three species of basilisk lizards are found in Costa Rica, of which one, *Basiliscus basiliscus*, is restricted to the Pacific versant of the country. A relatively large lizard, *B. basiliscus* is an abundant species that spends most of its time basking, foraging, and resting along streams (Savage, 2002). This species is known to feed on active prey such as insects, freshwater shrimp, fishes, lizards, snakes, birds, and mammals, but its diet also includes flowers and the fruits of streamside plants (Barden, 1943; Van Devender, 1983; Savage, 2002).

On 13 February 2014, at 1145 h, one of us (LAH) encountered an adult male *B. basiliscus* feeding on an adult *Thamnophis proximus* (Fig. 1) along the Río Bebedero, Parque Nacional Palo Verde, in the Provincia de Guanacaste. The basilisk was perched on a root that extended diagonally into the river, about 3 m from the water and 1 m from the bank. This note represents the first report of *B. basiliscus* preying on *T. proximus*.



Fig. 1. An adult male *Basiliscus basiliscus* feeding on an adult *Thamnophis proximus* along the Río Bebedero, Parque Nacional Palo Verde, Provincia de Guanacaste, Costa Rica. © Laurens A. Hidalgo

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Reptilia: Squamata (snakes)

***Clelia clelia*. Predation.** Mussuranas (genus *Clelia*) are well-known snake predators and immune to the venom of venomous species; in addition to lizards and mammals, vipers constitute an important part of their natural diet (Scott, 1983; Campbell and Lamar, 2004; Solórzano, 2004). In Costa Rica, *C. clelia* has been reported to feed on vipers of the genera *Atropoides*, *Bothrops*, *Crotalus*, *Lachesis* (in captivity), and *Porthidium* (Savage 2002; Solórzano 2004), but has not been reported to prey on vipers of the genus *Bothriechis*. On 17 July 2013, at Esquinas Rainforest Lodge, La Gamba, Provincia de Puntarenas, Costa Rica (08°44'00"N, 83°17'00"W, WSG84; elev. 57 m), one of us (MC) witnessed a young *C. clelia* actively foraging early in the evening, after it had turned dark (ca. 1825 h). The snake apparently was following an odor track left by some type of prey and found a young *Bothriechis schlegelii* coiled on a branch about 1 m from the ground. The *Clelia* bit the viper, coiled around the snake and the branch, and began to constrict (Fig. 1). Once the viper was subdued, the *Clelia* began to ingest the snake; the entire swallowing process lasted ca. 40 min. In total length the *Clelia* measured ca. 80 cm, and the *Bothriechis* ca. 45 cm.

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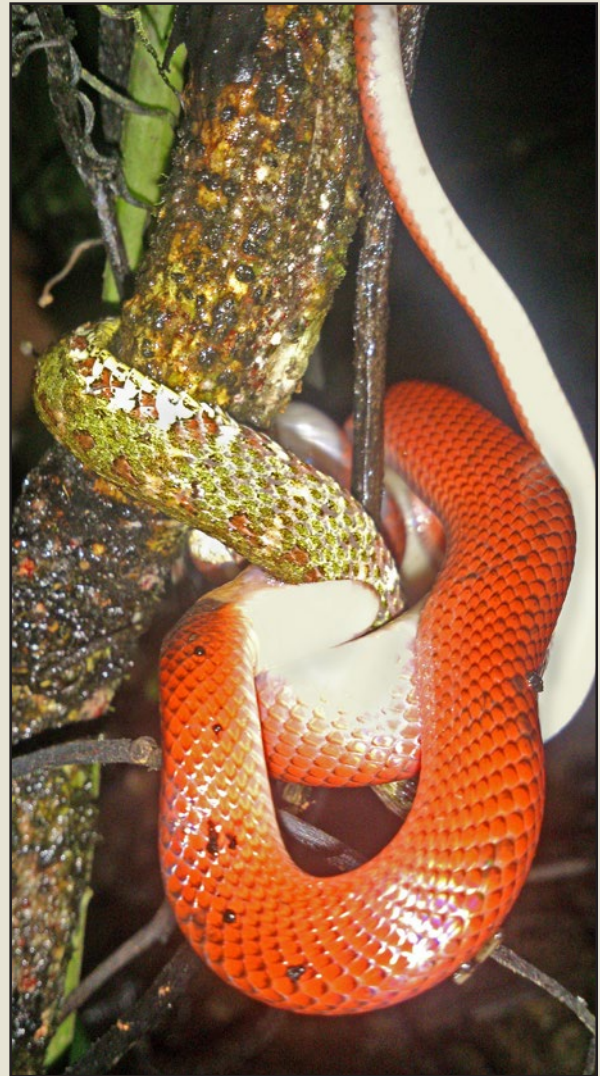


Fig. 1. A young *Clelia clelia*, still in its red juvenile coloration, subdues and begins to feed on a young *Bothriechis schlegelii*. © Mario Chavarría

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***Corallus ruschenbergi*. Behavior.** The distribution of *C. ruschenbergi* is in lowland areas extending from west-central Costa Rica to extreme northwestern Colombia, on the Pacific versant, and on the Atlantic versant, from central and eastern Panama through northern Colombia to the basin of the Río Orinoco in Venezuela, and in Trinidad and Tobago (Henderson, 2002). On 05 May 2014 we collected a young female (snout–vent length = 68.0 cm, tail length = 17.5 cm) of this treeboa within a nest of the Yellow-olive Flycatcher, *Tolmomyias sulphureus* (Tyrannidae), a bird that builds a pear-shaped nest made out of rootlets, fungal rhizomes, and grass, and usually near an active wasps' nest (www.neotropical.birds.cornell.edu). We found the nest hanging on the tip of a tree branch at a height of 2.5 m from the ground, in a riparian forest surrounded by pastures at Llano Verde, Bolas, Buenos Aires, Provincia de Puntarenas, Costa Rica (09°02'55.46"N, 83°11'02.75"W, elev. 177 m). *Corallus ruschenbergi* is an arboreal species that forages on the distal portion of branches, and its diet is known to consist of lizards, birds, and small mammals (Henderson, 2002; Solórzano, 2004). During the day this primarily nocturnal species usually rests coiled in a tight spherical mass at the tip of tree branches overhanging open water, such as reservoirs and rivers (Moonen, 1977; Boos, 2001).

The nest was found abandoned by the parents, without eggs or chicks inside. The treeboa was not detected when the nest was collected for the ornithological collection of Museo de Zoología, Universidad de Costa Rica (UCR N-249). The treeboa remained inside the nest for three days at the museum, when the senior author discovered it as it moved. The snake then was deposited in the museum's herpetological collection (UCR 21950).

This report represents the first time *C. ruschenbergi* has been observed to use a bird's nest in which to rest. The specimen was palpated to determine the presence of recent prey in its digestive system, but no food items were found. For this reason, we suspect the snake had been using the nest to rest for some time, perhaps after eating the eggs or chicks. Our record also is the first to report *C. ruschenbergi* outside of mangrove forests in Costa Rica and within the valley of the Río Grande de Terraba, which represents a distance of about 35 km from the mangrove habitat along the coast.

Acknowledgments.—We collected the nest and treeboa under SINAC permit SINAC-SE-GASP-PI-R-072-2014.

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***Leptodeira rhombifera*. Diet.** This species formerly was considered a subspecies of the wide-ranging *L. annulata*, but its distribution now is known to extend from central Guatemala to central Panama (McCranie, 2011). In Costa Rica, *L. rhombifera* is a common inhabitant of tropical dry to humid forests, and its diet has been reported to consist primarily of anurans and their eggs, as well as small lizards (Savage, 2002; Solórzano, 2004). Savage (2002) reported that individuals often gorge themselves with anurans during anuran breeding aggregations, and can consume as many as 30–40 small frogs in a single evening. The dietary habits of this species during the dry season or at times when anurans are not abundant, however, remain poorly known. Here we report feeding and prey acquisition behavior in *L. rhombifera* along a forested stream at Reserva Forestal Andromeda, Balsa, Atenas, Provincia de Alajuela, Costa Rica (9.950°N, 84.384°W, datum WGS84; elev. 519 m).



Figs. 1, 2. A *Leptodeira rhombifera* drags a catfish (*Rhamdia* sp.) along the side of a stream and holds it by midbody.

Fig. 3. The snake examines the body of the fish, including the tail.

Fig. 4. Once the snake locates the head, it begins to consume the fish.

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On 6 May 2014 at 2200 h we observed an adult *L. rhombifera* (total length ca. 65 cm) moving and attempting to consume a catfish of the genus *Rhamdia* (total length ca. 22 cm) along a stream. We first observed the snake biting the fish along the side of its body (Figs. 1, 2). The fish appeared to have been dead for some time, as its eyes were white and the skin looked somewhat decomposed.

After about three minutes, the snake released the fish and moved around it for several more minutes. The snake then examined the body and tail of the fish (Fig. 3), and after about 10 minutes located the head and began to consume it (Fig. 4). The snake appeared to have difficulty, as it took ca. 45 minutes for it to swallow about 65% of its length. We did not witness the complete the swallowing process, but based on the amount of time the snake spent attempting to consume the fish, and its persistence, we presume it completed the task.

Fish eating has been reported in the closely related *L. rubricata* (Solórzano, 2004), but this is the first report of *L. rhombifera* consuming a fish; it is also the first observation of opportunistic feeding by this species on dead prey. Other snakes are known to feed on dead prey opportunistically or when the availability of a specific food item is reduced, which can lead to changes in their diet and cause them to eat carrion (Filippi et al., 2003) or other types of prey (McKelvy et al., 2013). The consumption of fish and dead prey items in *L. rhombifera* is important, because it suggests the ability of this species to select a broader diet when anurans are less abundant, such as during the height of the dry season (Watling and Donnelly, 2002).

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***Tropidodipsas fischeri*. Reproductive Behavior.** Scant reproductive data has been published on snakes of the genus *Tropidodipsas*. Stuart (1942) reported collecting a male and female *T. fischeri* in Guatemala from adjacent bromeliads on 23 April, and speculated they were about to mate. Kofron (1985) reported clutch sizes of six and seven in two females of *T. fischeri*, but did not indicate the collection date for these specimens. Six hatchling *T. fasciata* were collected in central Guerrero, Mexico, in June and July, during the wet season (Kofron, 1987). Without providing details, Campbell (1998) stated that *T. sartorii* lays 3–5 eggs in the late dry season or early rainy season. Finally, a female *T. philippii* collected in southwestern Jalisco, Mexico, on 23 October contained 10 enlarged ovarian follicles, with ovulation likely due early in the dry season (Kofron, 1987). Here, we report an instance of reproductive behavior in wild *T. fischeri*.

On 25 September 2014 at 1235 h, we observed a mating pair and an attendant male of *T. fischeri* at an elevation of 1,640 m in closed-canopy primary cloud forest on the southwestern slope of Cerro Baúl, Municipality of Cintalapa, Chiapas, Mexico (16.55746°N, -94.17027°W; WGS 84). All three snakes were loosely intertwined and motionless, partially hidden among wet leaf litter in dappled sun, next to a large rock outcrop. The day was clear, and the leaf litter surface temperature was 17.8°C. Heavy rains had fallen the previous evening. The snakes did not respond to our approach, but the copulating pair rapidly disengaged upon capture (Fig. 1.).



Fig. 1. Male (left) and female (right) *Tropidodipsas fischeri*, shortly after interruption of coitus.

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Our observation of reproductive behavior in *T. fischeri* supports a fall breeding phenology in *Tropidodipsas*, similar to reproductive data reported for *T. fasciata*, *T. philippii*, and *T. sartorii* (op. cit.). We deposited the snakes at the Museo de Zoología “Alfonso L. Herrera”, Facultad de Ciencias, Universidad Nacional Autónoma de México, México, D.F., Mexico. The female (MCFZ 28853), copulating male (MCFZ 28854), and attendant male (MCFZ 28855) measured 373 mm, 395 mm, and 428 mm snout–vent length, respectively.

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DISTRIBUTION NOTES

Amphibia: Anura

Family Eleutherodactylidae

***Eleutherodactylus planirostris* (Cope, 1862).** ATLÁNTIDA: La Ceiba, (15.45'87"N, 87.12'51"W; WGS84); elev. 27 m; 13 August 2012. José M. Solís and José Darinel Láinez. We found an individual of this introduced species (UNAH 5671) active at night in the yard of a private residence, and heard several others calling. FRANCISCO MORAZÁN: Tegucigalpa, (14.06'29"N 87.11'19"W; WGS84); elev. 974 m; 30 October 2014. Mario Bardales Salmerón. We encountered two individuals (UNAH 5687–5688) under a rock at night in the yard of his private residence, which represent the 3rd and 4th records for this species in the country. The first two records are from (1) CORTÉS: San Pedro Sula, which is the closest locality for the records reported here and extends range ca. 135 km NE from the 3rd locality and ca. 179 km NW in from the 4th and (2) ISLAS DE LA BAHÍA: Guanaja, Savannah Bight (McCranie et al., 2008; McCranie and Valdez-Orellana, 2014).

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Reptilia: Squamata (lizards)

Family Dipsadidae

***Enulius flavitorques* (Cope, 1869).** OLANCHO: El Barro, Corral Viejo, San Esteban, (15.12462°N, 85.49251°W; WGS84) elev. 460 m; 17 August 2012. Mario R. Espinal, José M. Solís, and Carlos M. O'Reilly. We found two adult males active at night on the ground in a cattle farm, in an area formerly consisting of Tropical Dry Forest (Holdridge, 1967). One of the snakes was preserved (UNAH 5666) and represents the first record for this department, with the nearest reported locality 78 km to the NNW in Trujillo, Departamento de Colón (McCranie, 2011).

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Noteworthy distributional records for the herpetofauna of Chiapas, Mexico

The herpetofauna of Chiapas, Mexico, is relatively well known, although more species are expected to be reported from the state (Reynoso et al., 2011). In recent years, several major studies have encompassed the geographic distribution of the Chiapan herpetofauna (e.g., Kohler, 2008; 2011 [in part]; Johnson et. al., 2010 [in part]; Wilson and Johnson, 2010 [in part]; Reynoso et al., 2011); however, considerable gaps in the distribution of many species likely remain within the state, and such information can be vital for attaining accurate conservation assessments. In an effort to augment this distributional information, from 2011 through 2013 we searched for amphibians and reptiles in different parts of the state. Herein, we report new municipality records for one salamander, one frog, two lizards, and three snakes. All of the specimens were photographed in situ and released. Photographic vouchers were deposited in The University of Texas at El Paso Biodiversity Collections (UTEP) and the Laboratorio de Herpetología, Facultad de Estudios Superiores Iztacala, Universidad Nacional Autónoma de México (MCBFESI). The taxonomy follows that of Wilson et al. (2013 a, b).

Amphibia: Caudata Family Plethodontidae

***Bolitoglossa mexicana* Duméril, Bibron, and Duméril, 1854.** OVENTIC: Oventic Caracol Zapatista (16.916592°N, 92.817675°W; WGS 84), elev. 2,054 m; 19 January 2011. Elí García-Padilla. Laboratory for Environmental Biology, Centennial Museum, The University of Texas at El Paso (photo voucher UTEP G-2014.1). The individual was found under a log in Humid Pine-Oak Forest, and represents a new municipality record that fills a gap of ca. 12 km N near the vicinity of Jitotol, in the municipality of the same name (3 mi [= 4.8 km] SE of Jitotol; CAS 159063, CAS 159064), and ca. 37 km E in the vicinity of Pokolum (= Sibaniiljá Pocolum), in the municipality of Tenejapa (CAS 159052, CAS 15903; www. herpnet.org; accessed 6 February 2014). This report also represents the maximum known elevation for the species; the previous maximum reported elevation was 1,900 m (Wilson and Johnson, 2010).

Amphibia: Anura Family Eleutherodactylidae

***Eleutherodactylus pipilans* (Taylor, 1940).** OCOZOCUAUTLA: Inside a cave in Centro Ecoturístico El Aguacero (16.774217°N 93.458278°W; WGS 84), elev. 790 m; 02 February 2011. Elí García-Padilla. Laboratory for Environmental Biology, Centennial Museum, The University of Texas at El Paso (photo voucher UTEP G-2014.6). The cave where the frog was found is located in Tropical Deciduous Forest. This individual represents a new municipality record that fills a gap of ca. 18 km SW in the vicinity of San Ricardo, in the municipality of Jiquipilas, and of ca. 30 km E near Tuxtla Gutiérrez, in the municipality of the same name (Lynch, 1970).

Reptilia: Squamata (lizards)
Family Anguidae

***Mesaspis moreletii* (Bocourt, 1872)** OVENTIC: Oventic Caracol Zapatista (16.916592°N, 92.817675°W; WGS 84), elev. 2,054 m; 19 January 2011. Elí García-Padilla. Laboratory for Environmental Biology, Centennial Museum, The University of Texas at El Paso (photo voucher UTEP G-2014.4). The lizard was found in Humid Pine-Oak Forest, and represents a new municipality record that fills a gap of ca. 37 km NNW near the vicinity of Rayón (6.2 km S of Rayón [KUH 59565]) in the municipality of the same name, and of ca. 21 km SE in the vicinity of Las Minas, in the municipality of San Juan Chamula (KUH 296369; www.herpnet.org; accessed 4 February 2014).

Family Sphaerodactylidae

***Gonatodes albogularis* (Duméril and Bibron, 1836)** ACAPETAHUA: Isla de la Concepción, Reserva de la Biósfera La Encrucijada (15.062081°N 92.743897°W; WGS 84), elev. 1 m; 28 June 2013. Humberto Yee. Laboratory for Environmental Biology, Centennial Museum, The University of Texas at El Paso (photo voucher UTEP G-2014.5). The individual was observed on the floor inside a home, and represents a new municipality record and range extension of ca. 30 km W of Huixtla, in the municipality of the same name (UCM 45674; www.herpnet.org; accessed 4 February 2014).

Reptilia: Squamata (snakes)
Family Dipsadidae

***Coniophanes alvarezii* (Campbell, 1989)**. ZINACANTÁN: Presa Zinacantán (16.758244° N, 92.716056° W; WGS 84), elev. 2,171 m; 28 March 2011. Elí García-Padilla. Laboratory for Environmental Biology, Centennial Museum, The University of Texas at El Paso (photo voucher UTEP G-2014.3). The snake was found in Humid Pine-Oak Forest, and represents a new municipality record that also extends the range ca. 8 km WNW of the nearest record in San Cristóbal de las Casas, in the municipality of the same name (MVZ 65915; www.herpnet.org; accessed 4 February 2014).

***Rhadinella kinkelini* (Boettger, 1898)**. OCOSINGO: Nahá, near Laguna Nahá (16.982828° N, 91.587956° W; WGS 84), elev. 835 m; 23 February 2011. Elí García-Padilla. Laboratory for Environmental Biology, Centennial Museum, The University of Texas at El Paso (photo voucher UTEP G-2014.2). The individual was found under a log in Tropical Evergreen Forest, and represents the second report of this species in Mexico, and lowest known elevation for the entire range of the species (Wilson and Johnson, 2010). The voucher also represents a new municipality record that extends the range ca. 100 km N of the closest reported locality in Lago Montebello, in Parque Nacional Lagunas de Montebello, in the municipality of La Trinitaria (Mendelson and Kizirian, 1995).

Family Viperidae

***Crotalus simus* Latreille, 1801**. PIJJIAPAN: Pijijiapan, Quesería San Francisco (15.534206° N, 92.986461° W; WGS 84), elev. 9 m; 05 August 2013. Rafael Paredes Montesinos. Laboratorio de Herpetología, Facultad de Estudios Superiores Iztacala, Universidad Nacional Autónoma de México (photo voucher MCBFESI280). The rattlesnake was found near a housing development and represents a new municipality record that fills a gap of ca. 72 km NW in the vicinity of Tonalá, in the municipality of the same name, and of ca. 130 km in the vicinity of Comitán de Domínguez, in the municipality of the same name (Gloyd, 1940).

Acknowledgments.—We thank Rafael Paredes Montesinos (CONANP), and Humberto Yee (Turismo de Naturaleza Isla La Concepción, Chiapas) for field assistance, and Tom Devitt and Jonathan A. Campbell for species verification. Arthur Harris and Alejandro Calzada Arciniega kindly provided the photo voucher numbers.

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New record and comments on the distribution of the Mexican colubrid snake *Coniophanes melanocephalus* (Peters, 1869)

The colubrid snake *Coniophanes melanocephalus* is a brightly colored species characterized by the following pattern: a nearly uniform black cape covers the top and sides of the head and anteriormost portion of the body, and extends onto the lateral portion of the anterior ventrals; a dark-edged pale collar extends about four scales in length posterior to the black cape; and a white bar is present across throat just anterior to the first ventral (Smith and Grant, 1958; Fig. 1). This poorly known species is endemic to Mexico, where it has been recorded from only a few localities. Described by Peters (1869) from “Puebla, Mexico” (type-locality restricted to Matamoros, Puebla, by Smith and Taylor, 1950), other definite localities include: 12 miles S of Puente de Ixtla (EHT 5198; Bailey, 1939; see below); Cuernavaca, Morelos (UTA-R 56408; Flores-Villela and Smith, 2009; see below); and Hoyo del Aire, Taretan, Michoacán (UAA-CV 0323; Carbajal-Márquez et al., 2011). The specimen from 12 miles south of Puente de Ixtla originally was designated as a neotype of *C. lateritius*, but later was shown to be *C. melanocephalus* (Smith and Grant, 1958; Wellman, 1959).

The holotype of *C. melanocephalus* (ZMB 6656) apparently is lost (Bauer et al., 1995; Ponce-Campos and Smith, 2001). Thus, the only specimens available to science are the ones from the three localities mentioned above.

Information regarding some of the localities for *C. melanocephalus* is uncertain. The exact locality for specimen UTA-R 56408 is “Calera Chica, Jiutepec, Morelos” (C. Franklin, pers. comm.) and not “Cuernavaca, Morelos,” as stated in Flores-Villela and Smith (2009). Also, some confusion exists about the exact locality of the first specimen reported from Guerrero (EHT 5198). Bailey (1939) mentioned the locality as “12 miles south of Puente de Ixtla,” but did not indicate the state. Taylor (1941) further stated that the locality was “near Huajintlán (km 133), about 12 miles south of Puente de Ixtla, Morelos,” whereas Smith and Taylor (1945) stated that the specimen was from “north-central Guerrero (Huajintlán, south of Puente de Ixtla, Morelos).”

Wellman (1959) assumed, however, that the exact locality was “Huajintlán, Morelos,” and Ponce-Campos and Smith (2001) and Ponce-Campos (2007) additionally stated this locality as 12 miles SW of Puente de Ixtla.

In order to confidently infer the geographic origin of specimen EHT 5198, we used Google Earth™ to measure 133 km along Mexican Federal Highway 95 from Mexico City, passing through Huajintlán, Morelos, and heading toward Taxco, Guerrero, and also 12 miles along the same road from Puente de Ixtla, Morelos, passing through Huajintlán, and heading toward Taxco. Both measurements indicated almost the same locality in the state of Guerrero, about 1.5 km (airline) W of the Morelos-Guerrero border and about 4.8 km W of Huajintlán. This information confirms that the exact locality is in Guerrero, as Bailey (1939) and Smith and Taylor (1945) previously stated, although Puente de Ixtla and Huajintlán are in Morelos. Furthermore, the locality is west, not south or southwest, of Puente de Ixtla.

On 11 September 2013, we collected a juvenile female (ISZ 946) ca. 400 m along the turnoff to Tecolapa from the Olinalá-Papalutla road, municipality of Olinalá, Guerrero, Mexico (17.9992222°N, -98.8378333°W, WGS 84; elev. 1,542 m). The specimen was found under a rock on the edge of a dirt road surrounded by remnants of *Quercus* dry forest. The specimen was deposited in the herpetological collection of the Museo de Zoología “Alfonso L. Herrera”, Facultad de Ciencias, Universidad Nacional Autónoma de México (MZFC 28840). This record represents the fifth for the species, and the second for the state of Guerrero (see above), extending the known distributional range ca. 95.5 km (airline) SE of the previous record from Guerrero (Bailey, 1939), ca. 77.7 km (airline) SW of the record from Matamoros, Puebla (Smith and Taylor, 1950), and ca. 102.5 km (airline) SSE of the record from Calera Chica, Jiutepec, Morelos (Fig. 2).

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Fig. 1. *Coniophanes melanocephalus* (MZFC 28840) in life.

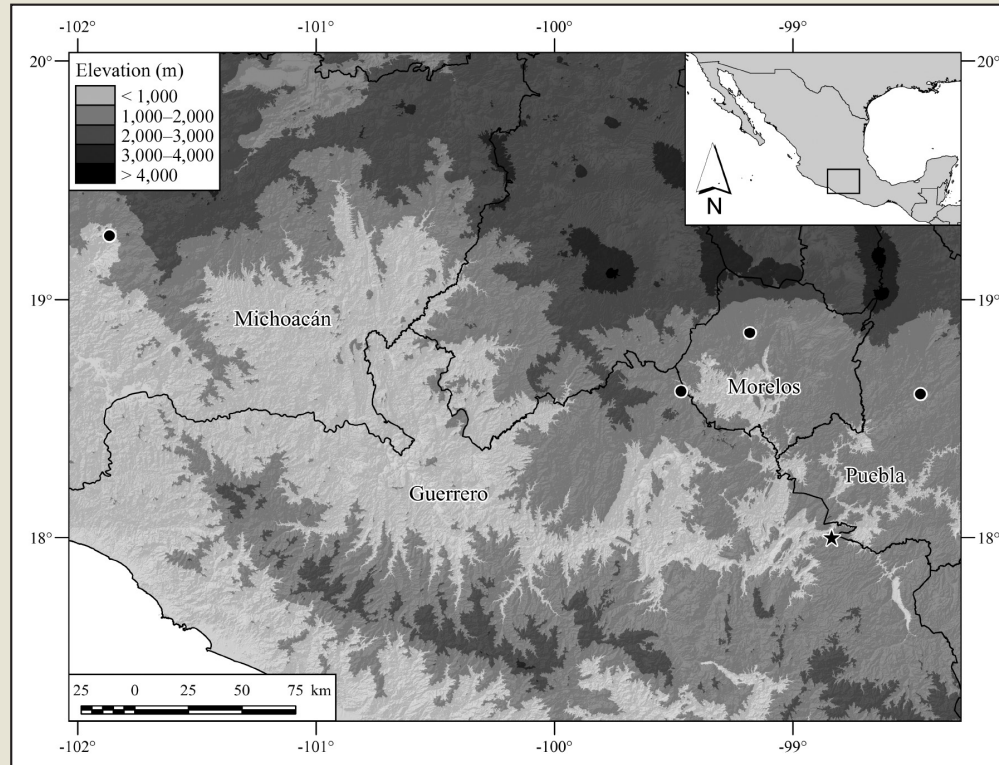


Fig. 2. Geographic records for the snake *Coniophanes melanocephalus*. Circles represent the previous records, and the star the new record.

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New distributional records for amphibians and reptiles from the department of Choluteca, Honduras

The herpetofauna of Honduras is an example of the diversity found throughout the Mesoamerican biodiversity hotspot (Townsend and Wilson, 2010a; Wilson and Johnson, 2010; Wilson et al., 2012). Presently, 396 species of amphibians and reptiles have been recorded from the country, of which 107 are endemic (Solís, et al. 2014). Most of the 123 herpetofaunal species recorded from subhumid forest are terrestrial, and their distributions are widespread in eight ecophysiological regions (Townsend and Wilson, 2010b). Some areas of Honduras remain poorly sampled in terms of biological diversity, reflective of the regularity in which new species of amphibians and reptiles are being discovered (Townsend et al., 2013).

During the months of November 2013 and March–April 2014 we conducted herpetofaunal surveys in the department of Choluteca. All of the collecting sites were located on the Pacific slope of Honduras, primarily in areas of moderate relief (1,000–1,600 m). We deposited all but one of the specimens collected (see below) in the reference collection of the Carnegie Museum of Natural History (CM).

Amphibia: Anura Family Hylidae

***Dendropsophus microcephalus* (Cope, 1886).** CHOLUTECA: Municipio de San Marcos de Colón, Júcaro Largo (13°24'07"N, 86°54'12"W, WGS84); elev. 1,011 m; 22 April 2014. Mario R. Espinal, Carlos M. O'Reilly, and Rony Valle. We found three frogs (CM 157698–157700) at night, calling from vegetation near a small stream in a disturbed riparian habitat. These specimens represent a new departmental record, with the closest localities in the departments of Francisco Morazán and El Paraíso (McCranie and Castañeda, 2007).

***Tlalocohyla loquax* (Gaike and Stuart, 1934).** CHOLUTECA: Municipio de San Marcos de Colón, Laguna de Caire (13°25'50.0"N, 86°55'59.4"W, WGS84); elev. 1,067 m; 29 July 2012. We captured a specimen (deposited in the Museo de Historia Natural, Universidad Nacional Autónoma de Honduras; UNAH 5672) in a bush at night, in a seasonal roadside pond. CHOLUTECA: Las Moras (13°21'29.3"N, 86°45'37.8"W; WGS84); elev. 1,634 m; 18 November 2013. We collected a single specimen (CM 157701) on the ground. CHOLUTECA: La Cahuasca (13°19'26"N, 86°42'34"W, WGS84); elev. 1,422 m; 19 March 2014. Mario R. Espinal, Carlos M. O'Reilly, José Mario Solís, and Leonel Marineros. We collected two specimens (CM 157702–157703) in a tree at night, in bromeliads about two meters off the ground. These frogs represent a new departmental record, with the closest localities in the department of Francisco Morazán (McCranie and Castañeda, 2007).

Reptilia: Squamata (lizards) Family Dactyloidae

***Norops laevis* (Wiegmann, 1834).** CHOLUTECA: Municipio de San Marcos de Colón, La Cahuasca (13°19'26"N, 86°42'39"W, WGS84); elev. 1,396 m; 5 April 2014. Mario R. Espinal, Carlos M. O'Reilly, and Rony

Valle. We found a single specimen (CM 157704) active on the road at sunset, which represents a new departmental record.

Family Sphenomorphidae

***Scincella cherriei* (Cope, 1893).** CHOLUTECA: Municipio de San Marcos de Colón, Las Mesas (13°20'04"N, 86°43'31"W, WGS84); elev. 1,297 m; 20 March 2014. Mario R. Espinal, Carlos M. O'Reilly, and Rony Valle. We found one specimen (CM 157705) in leaf litter in a coffee farm, which represents a new departmental record.

Reptilia: Squamata (snakes)

Family Colubridae

***Leptophis mexicanus* (A. M. C. Duméril, Bibron, and Duméril, 1854).** CHOLUTECA: Municipio de San Marcos de Colón, Las Moras (13°21'29.3"N, 86°45'37.8"W: WGS84); elev. 1,634 m; 18 November 2013. José Mario Solís, Carlos M. O'Reilly, and Mario R. Espinal. We collected a single specimen (CM 157704) moving along the branches of a tree; it represents a new departmental record, with the closest localities in the departments of El Paraiso and Francisco Morazán (McCranie, 2011).

***Mastigodryas dorsalis* (Bocourt, 1890).** CHOLUTECA: Municipio de San Marcos de Colón, Las Mesas (13°20'04"N, 86°43'31"W, WGS84); elev. 1,297 m; 3 April 2014. Mario R. Espinal, Carlos M. O'Reilly and Rony Valle. We collected one specimen (CM 157707) in leaf litter in a coffee farm. This snake represents a new departmental record, with the closest localities in the departments of Francisco Morazán and El Paraiso (McCranie, 2011).

Family Dipsadidae

***Imantodes cenchoa* (Linnaeus, 1758).** CHOLUTECA: Municipio de San Marcos de Colón, Mancha de Roble (13°22'59"N, 86°48'17"W, WGS84); elev. 1,299 m; 23 March 2014. Mario R. Espinal, Carlos M. O'Reilly, Fausto Elvir, and Rony Valle. We collected one specimen (CM 157708) during the day, on the ground in a cattle field. It represents a new departmental record, with the closest locality in the department of El Paraiso (McCranie, 2011).

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New distributional records for amphibians and reptiles from the department of Santa Bárbara, Honduras

As result of recent field surveys in Honduras, herein we report several range extensions and departmental records for amphibians and reptiles from the Departamento de Santa Bárbara. Four of us (ME, JMS, CMO, and LM) conducted field surveys in the basin of the Río Ulúa and surrounding region in May, June, and October of 2012, and the fifth author (HV) made field observations from January to September of 2012, and in June of 2013. Collectively, we report 13 records for the department (one salamander, four anurans, one lizard, and seven snakes). Voucher specimens were deposited in the collection of National Museum of Natural History of National Autonomous University of Honduras (UNAH). Digital vouchers were deposited at The University of Texas at Arlington Collection of Vertebrates Digital Collection (UTADC).

Amphibia: Caudata Family Plethodontidae

***Bolitoglossa nympha* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010.** SANTA BÁRBARA: Municipio de San Luis, Quebrada La Mina (15°03'20.9"N, 88°29'37.2"W, WGS84); elev. 1,098 m; 22 October 2012. Carlos M. O'Reilly, Mario R. Espinal, José M. Solís, and Rony Valle. A single individual (UTADC-8466; Fig. 1A) was observed at 2100 h, as it walked on a branch ca. 2 m above the ground in a disturbed patch of forest near a stream. This salamander represents a new departmental record, with the closest reported locality in the department of Cortés (Rovito et al., 2012).

Amphibia: Anura Family Bufonidae

***Incilius coccifer* (Cope, 1866).** SANTA BÁRBARA: Municipio de San Luis, Quebrada Honda, Yamala (15°01'49.4"N, 88°24'36.2"W, WGS84); elev. 290 m; 12 May 2012. Carlos M. O'Reilly, Mario R. Espinal, and José M. Solís. We collected three individuals (UNAH 5684–5686) and observed several others active at night in Premontane Dry Forest (Holdridge, 1967). The closest reported localities for this species are in the departments of Comayagua, La Paz, and Intibucá (McCranie and Castañeda, 2007).

***Incilius luetkenii* (Boulenger, 1891).** SANTABÁRBARA: Municipio de San José de Colinas, La Isla, (14°59'33.6"N, 88°15'35.1"W, WGS84); elev. 192 m; 14 May 2012. José M. Solís, Carlos M. O'Reilly, and Mario R. Espinal. We collected two individuals (UNAH 5682, 5683) and observed several others at night in small streams, calling from the water or nearby vegetation. The closest reported localities for this species are in the departments of Comayagua and La Paz (McCranie and Castañeda, 2007).

Family Hylidae

***Agalychnis callidryas* (Cope, 1862).** SANTA BÁRBARA: Municipio de San Nicolás, Cruz Grande, near El Jute (14°53'58.5"N, 88°23'10.2"W, WGS84; elev. 1,090 m; 10 January 2012. Hermes Vega. A single individual (UTADC-8468; Fig. 1B) was found at night in a coffee plantation, perched on a leaf ca. 1 m above the ground. This voucher represents a new departmental record, with the closest reported locality in the department of Cortés (McCranie and Castañeda, 2007).

Family Rhinophrynidae

***Rhinophrynus dorsalis* Duméril and Bibron, 1841.** SANTA BÁRBARA: Municipio de Sula, Macuelizo, La Vegona (15°14'20.1"N, 88°32'24.2"W, WGS 84); elev. 222 m; 14 August 2014. Hermes Vega. We encountered one individual (UTADC-8469; Fig. 1C) on a dirt road at night, during a heavy rain. A few populations of this species have been recorded in Honduras, in the departments of Cortés, Atlántida, Francisco Morazán, and Olancho (McCranie and Castañeda, 2007; McCranie et al. 2012; Henriquez-Aguilar and Townsend, 2013). Little information on the natural history of this species in Honduras is available. This voucher represents a new departmental record, with the closest reported locality in the department of Cortés (McCranie and Castañeda, 2007)

Reptilia: Squamata (lizards)

Family Dactyloidae

***Norops sagrei* (Duméril and Bibron, 1837).** SANTA BÁRBARA: Municipio de Santa Bárbara (14°55'01.3"N, 88°14'04.4"W, WGS84); elev. 262 m; 5 October 2012. José M. Solís, Carlos M. O'Reilly, and Mario R. Espinal. We observed several individuals of this introduced lizard in the environs of a home in the community of Santa Barbara. This voucher (UTADC-8470; Fig. 1D) represents a new departmental record, with the closest reported localities in the departments of Cortés and Atlántida (Köhler, 2008; Wilson et al., 2012; Solís et al., 2014).

Reptilia: Squamata (snakes)

Family Colubridae

***Leptodrymus pulcherrimus* (Cope, 1874).** SANTA BÁRBARA: Municipio de San Nicolás, El Salitre (14°55'27.6"N, 88°16'23.0"W, WGS84); elev. 341 m; 11 June 2012. José M. Solís, Carlos M. O'Reilly, and Mario R. Espinal. We found an adult female (UNAH 5690) at night, perched on a floating branch ca. 1 m above the water in a permanent pond surrounded by tall grass. Other species in the vicinity included *Dendropsophus microcephalus*, *Scinax staufferi*, *Smilisca baudinii*, *Tlalocohyla loquax*, and *Trachycephalus typhonius*. This specimen represents a new departmental record, with the closest reported localities in the departments of La Paz and Cortés (McCranie, 2011).

***Leptophis ahaetulla* (Linnaeus, 1758).** SANTA BÁRBARA: Municipio de San Luis, Montaña El Joconal (15°03'23.3"N, 88°30'56.2"W, WGS84); elev. 1,130 m; 15 June 2012. José M. Solís, Carlos M. O'Reilly, and Mario R. Espinal. We found an adult male (UNAH 5693) at ca. 1200 h in a coffee plantation near a stream, while it was basking on a rock. SANTA BÁRBARA: Municipio de El Nispero, Laguna de El Tontolo (14°47'29.4"N, 88°17'27.3"W, WGS84); elev. 684 m; 18 October 2012. Mario R. Espinal, Carlos M. O'Reilly, and José M. Solís. We observed another individual (not collected) sleeping on a branch, ca. 2 m from the ground. These snakes (one voucher, one observation) represent a new departmental record, with the closest reported locality in the department of Cortés, (McCranie, 2011).

***Leptophis mexicanus* (Duméril, Bibron, and Duméril, 1854).** SANTA BÁRBARA: Municipio de San Nicolás, Los Llanos (14°55'56.4"N, 88°16'04.0"W, WGS84); elev. 308 m; 3 October 2012. José M. Solís, Carlos M. O'Reilly, and Mario R. Espinal. We found one individual (UTADC-8471; Fig. 1E) swimming in a pond at night. This voucher represents a new departmental record, with the closest reported localities in the departments of Comayagua, Intibucá, and Cortés, (McCranie, 2011).

***Masticophis mentovarius* (Duméril, Bibron, and Duméril, 1854).** SANTA BÁRBARA: Municipio de San José de Colinas (15°01'28.3"N, 88°14'01.1"W, WGS84); elev. 130 m; 30 May 2012. Leonel Marineros and Fausto Elvir. One adult female (UNAH 5689) was found dead on a road. The specimen represents a new departmental record, with the closest reported localities in the departments of Cortés and Comayagua, (McCranie, 2011).



Fig. 1. (A) *Bolitoglossa nympha*; (B) *Agalychnis callidryas*; (C) *Rhinophrynus dorsalis*; (D) *Norops sagrei*; (E) *Leptophis mexicanus*; and (F) *Senticolis triaspis*.

📷 © Mario Espinal (A, D, E), Hermes Vega (B, C, F)

***Oxybelis fulgidus* (Daudin, 1803).** SANTA BÁRBARA: Municipio de San Luis, Aldea de San Francisco-Totoca (15°01'54.6"N, 88°28'11.4"W, WGS84); elev. 949 m; 15 June 2012. Carlos M. O'Reilly, José M. Solís, and Mario R. Espinal. We encountered an adult female (UNAH 5692) at ca. 1200 h on a dirt road in Premontane Wet Forest (Holdridge, 1967). The closest reported localities are in the department of Cortés and Yoro, (McCranie, 2011)

***Senticolis triaspis* (Cope, 1866).** SANTA BÁRBARA: Municipio de San José de Colinas, La Joya (15°04'00.2"N, 88°18'55.5"W, WGS84); elev. 450 m; 24 September 2012. Hermes Vega. A single individual (UTADC-8472; Fig. 1F) was observed moving along the branches of a tree. This specimen represents a new departmental record, with the closest reported localities in the departments of Intibucá and Cortés, (McCranie, 2011).

Family Viperidae

***Porthidium ophryomegas* (Bocourt, 1868).** SANTA BÁRBARA: Municipio de San Nicolás, Los Llanos (14°55'56.4"N, 88°16'04.0"W, WGS84); elev. 308 m; 3 October 2012. Mario R. Espinal, José M. Solís, and Carlos M. O'Reilly. We collected a single snake (UNAH 5691) at night, on the ground in a cornfield. The specimen represents a new departmental record, with the closest reported locality in the department of Cortés, (McCranie, 2011).

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MISCELLANEOUS NOTES

Reptilia: Squamata (snakes)

Tantilla reticulata Cope, 1860. NICARAGUA—RÍO SAN JUAN: Refugio Bartola (10.97139°N, 84.33222°W, WGS84); elev. 50 m; 27 July 2014. Eric van den Berghe and Marco Solís. Fig. 1. We collected an adult male of this species on a sunny morning (ca. 0900 h) on leaf litter while crossing a path in well-preserved Lowland Wet Forest (Holdridge, 1967). The specimen (MHUL 171) represents the fourth recorded specimen from Nicaragua, as well as the westernmost record for this species in the country; the other known localities are Colorado Junction and Laguna La Playuela, both in the department of Río San Juan (Köhler, 2001; Sunyer et al., 2014), and Bachas Creek, in the department of Zelaya (McCranie, 2011). We are unaware of the exact location of Bachas Creek, as the former department of Zelaya now corresponds to the vast autonomous regions of Atlántico Norte and Atlántico Sur, which along with the department of Río San Juan constitute the entire Atlantic versant of Nicaragua. Additionally, we present the second published photograph of *T. reticulata* from Nicaragua, and the first of the hemipenis of a Nicaraguan specimen (Fig. 1).



Fig. 1. *Tantilla reticulata* (MHUL 171): Nicaragua, Departamento de Río San Juan, Refugio Bartola. Inset shows the everted hemipenis.  © Milton Salazar-Saavedra.

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The type locality of *Tantilla johnsoni* Wilson, Vaughan, and Dixon, 1999 (Squamata, Colubridae) and related issues

Wilson et al. (1999) described *Tantilla johnsoni* from two male snakes collected at Musté, Municipality of Motozintla, Chiapas, Mexico; elev. ca. 450 m. The holotype in the Carnegie Museum of Natural History (CM 51741) reportedly was collected on 11 August 1968, and the paratype (CM 51742) from the same locality on 11 September 1968, both by E. C. Welling; field notes for the type locality or other information are not available in the CM archives. The exact locality of Musté could not be located on any maps available to the describers, but because of the reported elevation and geographical positions of the Municipality of Motozintla and the town by that name, tentatively it was placed on the road leading into the Central Depression of Chiapas north of Motozintla. That position placed Musté on the lower Atlantic versant, where the Sierra Madre de Chiapas and Central Depression adjoin each other in the southeastern portion of the state. The Municipality of Motozintla encompasses areas on both the Pacific and Atlantic versants of the southeastern Sierra Madre de Chiapas. Recently, Wilson and Mata-Silva (2014) reiterated the confusion regarding the type locality, which we address herein, along with comments about the environmental vulnerability for such a snake occurring at the redefined type locality.

Johnson et al. (2010) questioned the position of the type locality, because an elevation of 450 m on the Atlantic slopes would place it in a subhumid environment in an area (the Central Depression) that until recently contained no endemic species. Several authorities have considered the Central Depression to be part of a mostly ecologically uniform dispersal corridor for dry-adapted and generalist species from Mexico into Central America, and *vice versa*, which is not conducive to speciation from non-existent ecological barriers; see Johnson (1990) and Johnson et al. (2010) and references therein for historical and biotic insights on the Central Depression. Many Central Depression species are relatively common and found in other areas of Mexico and Central America. Recently, however, Iverson et al. (2013) resurrected an endemic Central Depression mud turtle (*Kinosternon abaxillare*) from a subspecies of *K. scorpioides*. Still, that turtle is known only from subhumid environments, and Iverson et al. (2013) did not fully establish its geographic range within the Central Depression. Spinks et al. (2014), because of alleged insufficient geographic and molecular sampling by Iverson et al. (2013), recommended that *K. abaxillare* should be retained as

a population of *K. scorpioides*. In any event, if *T. johnsoni* was a member of the Central Depression herpetofauna it would be expected to occur more broadly there and elsewhere, instead of only from its purported type locality.

In their account of the pitviper *Atropoides occiduus*, Campbell and Lamar (2004) reported a town named Musté from the Pacific versant of the southeastern Sierra Madre de Chiapas, above the city of Mapastepec, which is located about 90 km northwest of Tapachula, the large regional city on the border with Guatemala; *A. occiduus* also ranges into southern Guatemala and western El Salvador. They listed an elevational range for the species as 1,000 to 1,600 m, however, and considered the environment occupied as subtropical wet forest (montane rain forest in Chiapas; Johnson et al., 2010) on the Pacific side, assumedly including Chiapas locations. The discrepancy of Musté occurring within that elevational range and located above Mapastepec suggests that either it was a different town having the same name as the type locality of *T. johnsoni*, or that the elevational range listed in Campbell and Lamar (2004) was incomplete.

Mapastepec is located on the Pacific Coastal Plain 61 km northwest of Huixtla, Chiapas (elev. ca. 50 m), which is near the foothills of the Sierra Madre on the Pan-American Highway (Mexican Highway 200) at a point where Mexican Highway 211 extends northward and slightly eastward up and across the continental divide (elev. ca. 1,990 m), and then down the Atlantic-facing versant to Motozintla (elev. 1,260 m). The habitat above Huixtla in that portion of the Sierra Madre de Chiapas, at an elevation of 450 m (the reported type locality of *T. johnsoni*), originally consisted of evergreen seasonal forest to lower montane rain forest (Johnson et al., 2010), which was classified within the range of tropical wet forest and tropical moist forest by Wilson and Johnson (2010). Coffee is grown in the area, so most of the natural vegetation is disturbed. The only town named Musté (15°15'39.00"N, 92°24'5.00"W) that recently was listed and shown on a map of the general area (www.telepaisa.com/pueblos.php?action=poblacion_ver&poblacion_id=66565) is located on the Pacific versant in the Municipality of Motozintla, on Mexican Highway 211, about 14 km north of Huixtla, at an elevation of 518 m. The hamlet is small, and as of 21 July 2014 contained a population of only nine persons according to www.PueblosAmerica.com (Mexico, Chiapas), so it is not surprising that the place was not included on older maps. See Fig. 1 for the location of the above-mentioned localities.

Tantilla johnsoni is a member of the *taeniata* species group (Wilson et al., 1999), whose members occurring on or near the southeastern Sierra Madre de Chiapas primarily occupy humid environments (Johnson et al., 2010). Judging from their known distributions, two of them could be sympatric with *T. johnsoni*, or nearly so. Specifically, *T. tayrae*, the purported sister species to *T. johnsoni* (Wilson et al., 1999), occurs in the general area in humid situations at slightly higher elevations (500–1,000 m), and *T. vulcani*, which is known from along the Pacific versant from southeastern Oaxaca into south-central Guatemala occurs in humid to semi-humid conditions (at least in Chiapas) at elevations ranging from about 500 to 700 m (Johnson et al., 2010). The reported elevation of the type locality of *T. johnsoni* (ca. 450 m) is very close to the lower range of both *T. vulcani* and *T. tayrae*. No distinctive ecological breaks are present in the natural vegetation communities at elevations between 450 and 518 m around the hamlet of Musté, located above Huixtla. In addition, *Tantilla impensa*, another *taeniata* group species, also occurs in humid and semihumid environments (Wilson and Johnson, 2010), but on the Atlantic versant is found from eastern Chiapas to Honduras at elevations from near sea level to 1,600 m. Therefore, it seems extremely unlikely that *T. johnsoni* would occupy a subhumid physiographic region on the Atlantic versant that contains no known place called Musté, has no endemic species of reptiles, except for possibly a dry-adapted mud turtle whose distribution within the Central Depression is not well-known, and whose close relatives occur almost exclusively in humid environments. Therefore, until additional information is available to counter the evidence presented here, we recommend restricting the type locality of *T. johnsoni* to the above mentioned Musté, located in the Municipality of Motozintla, about 14 km north of Huixtla Chiapas, Mexico, on the Pacific slope of the southeastern Sierra Madre de Chiapas, at an approximate elevation of 518 m (Fig. 1).

Taxonomic and distributional standings of any species is immaterial if extinction eliminates it as an ecosystem constituent, so information on the viability status of *T. johnsoni* is relevant for persons concerned with these issues. In the latest edition (14.2) of the IUCN Red List of Threatened Species, *T. johnsoni* is listed as Data Deficient because its population trends were unknown. This classification fails to diagnose the seriousness of the situation for this species, which is found within an area whose native vegetation has been severely disturbed by human agrarian practices, and which presently is known only from the type locality. Wilson et al. (2013) devised a way of estimating and scoring, from three totaled scales, the status of environmental vulnerability (EVS) of Mexican reptiles from

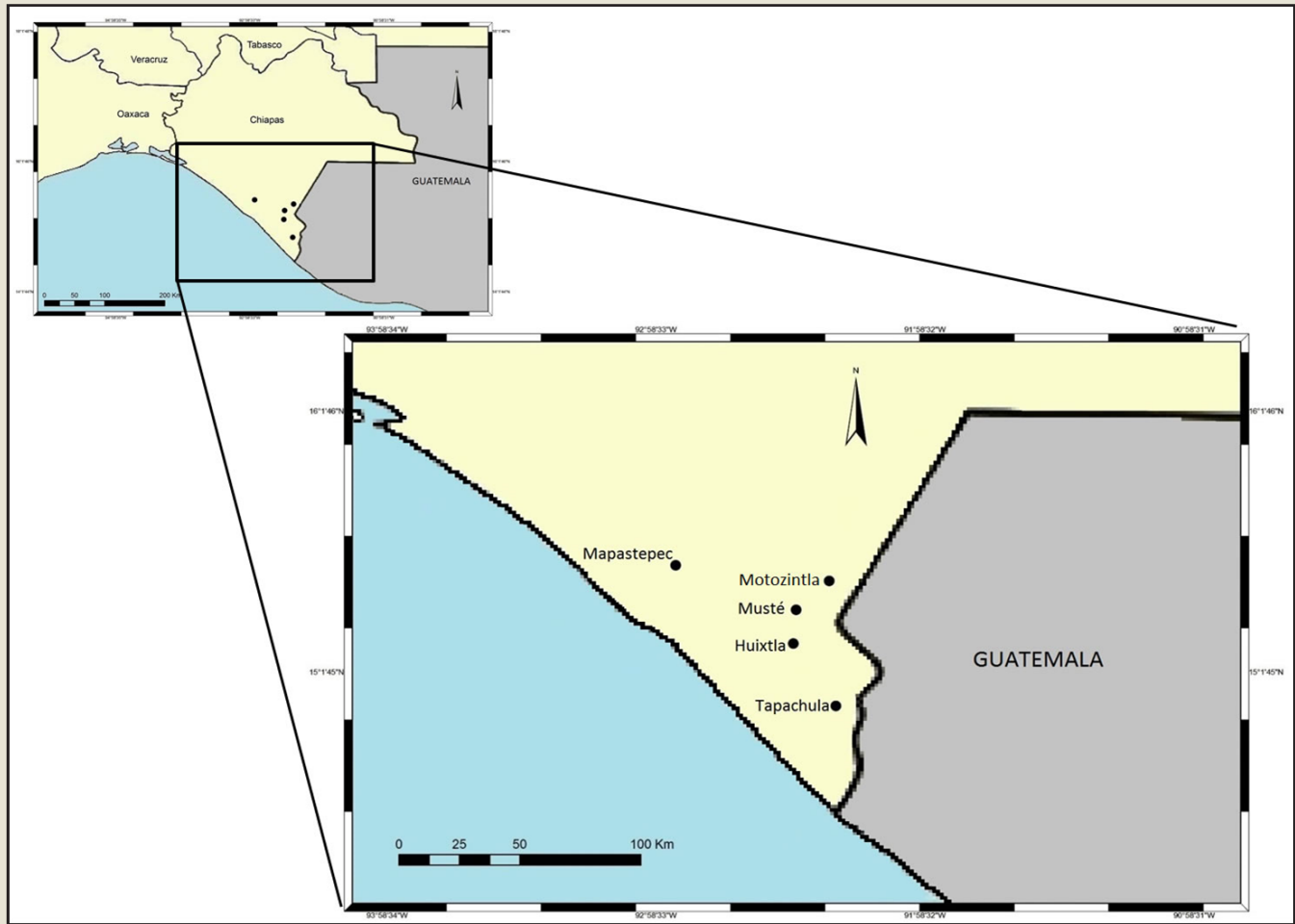


Fig. 1. Geographical positions of Musté and other towns in southeastern Chiapas, Mexico, indicated in the text. Present evidence supports Musté as the actual type locality of *Tantilla johnsoni* referred to in Wilson et al. (1999).

information known at any specific time in their historical framework, from species description through well-studied positions. Wilson et al. (2013) calculated the EVS of *T. johnsoni* as 16 out of a possible total of 20, which falls into the high vulnerability category. Its value could have been higher, but it scored less (2 out of 6) on the third scale related to human persecution, because the species is semifossorial, nonvenomous, non-mimicking, and sometimes escapes human notice. The scores were maximal on the first two scales: (1) geographic distribution (known only from the area of type locality [6 of 6]), and (2) occurs in one vegetation type (tropical wet or moist forest [8 of 8]). Searches for *T. johnsoni* are vital at low to moderate elevations on the humid Pacific slopes of the southeastern Sierra Madre de Chiapas, to determine the population trends of this apparently difficult to find species, as well as for *T. tayrae* (IUCN status = Data Deficient) and *T. vulcani* (IUCN status = Least Concern); both have been assessed lower EVS scores, 15 and 12, respectively, than *T. johnsoni*.

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Distributional and natural history notes on five species of amphibians and reptiles from Isla Ometepe, Nicaragua

Relative to the size of the country, the herpetofauna of Nicaragua remains one of the most understudied in Central America (Sunyer et al., 2014). The discovery of new herpetofaunal species in the country and distributional records for certain taxa, however, are not uncommon (Sunyer and Köhler, 2007; Sunyer et al., 2008; 2011). Isla Ometepe is located in Lago de Nicaragua, with the heavily populated land area of the Pacific versant to the west (Fig. 1). The island consists of two volcanoes, Maderas (elev. 1,394 m) and Concepción (elev. 1,610 m), and the wide range of habitats allow for a diverse fauna. Volcán Concepción is active and only a small amount of forest is present at the highest elevations, but the lower elevations contain the largest expanse of dry forest on the island (2,450 ha). Conversely, Volcán Maderas is dormant and contains expanses of lowland dry forest (1,120 ha) and humid forest (1,640 ha), and the higher elevations support the largest expanse of cloud forest (1,166 ha) on the island (Pérez et al., 2004). A wetland isthmus connects the two volcanoes. New species and distributional records for known species of flora, invertebrates, and vertebrates have been reported from Ometepe, including the discovery and description of an endemic salamander, *Bolitoglossa insularis* (Woodman et al., 2002; McCrary et al., 2005; Scheffrahn et al., 2005; Sunyer et al., 2008). These discoveries are an indication of the species richness of Ometepe, and the potential for more discoveries. The objective of our study was to conduct a herpetofaunal survey of the island, with an emphasis on examining species richness and species distribution. We did not collect any specimens, but voucher photographs are deposited at The University of Texas at Arlington Collection of Vertebrates Digital Collection (UTADC).

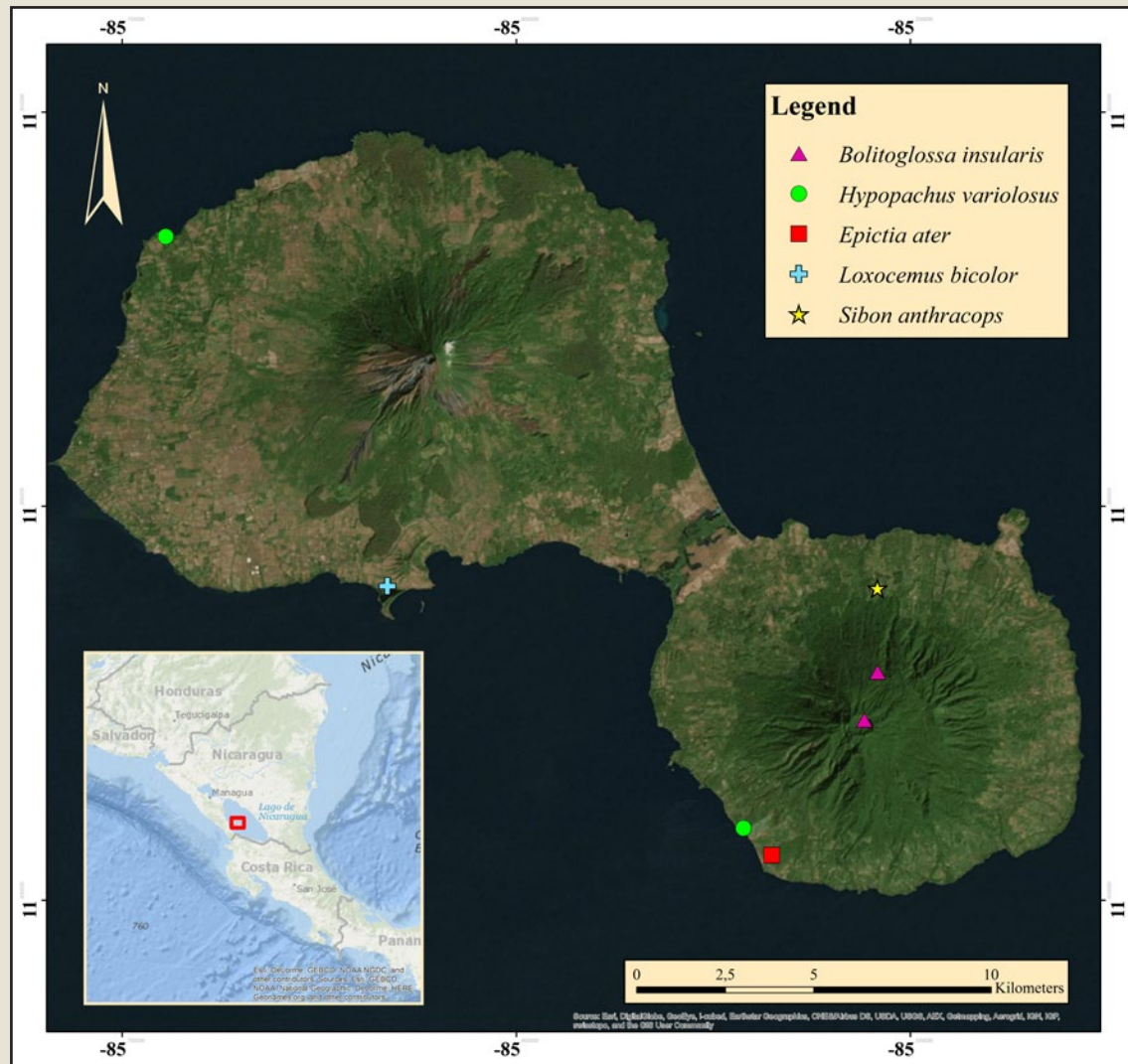


Fig. 1. Map of Isla de Ometepe, Nicaragua, with localities for the species mentioned in the text. Source of larger map = ESRI, DigitalGlobe, GeoEye, i-cubed, USDA, FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; Source of insert = ESRI, GEBCO, NOAA, National Geographic, DeLorme, HERE, Geonames.org, and other contributors.

Amphibia: Anura Family Microhylidae

***Hypopachus variolosus* (Cope, 1866).** RIVAS: Volcán Maderas, SW slope (11.41827°N, 85.54235°W, WGS84); elev. 37 m; 20 September 2011. Tariq Stark, Carlijn Laurijssens, Marc Monsanto, and Neftalí Paizano Ortiz. We encountered this frog (UTADC-8242; Fig. 2A) at night along the edge of a permanent pond used by cattle. RIVAS: Volcán Concepción, lower portion (11.56845°N, 85.68899°W, WGS84); elev. 38 m; 22 July 2011. This individual was active on a rainy night, in a temporary pond in a barren field used by cattle.



Fig. 2. (A) *Hypopachus variolosus*; (B, C) *Bolitoglossa insularis*; (D) *Sibon anthracops*; (E) *Epictia ater*; and (F) *Loxocemus bicolor*.
 📷 © Marc Monsanto (A, C, E, F), Tariq Stark (B) and Carlijn Laurijssens (D)

Amphibia: Caudata
Family Plethodontidae

***Bolitoglossa insularis* Sunyer, Lotzkat, Hertz, Wake, Alemán, Robleto, and Köhler, 2008.** RIVAS: Volcán Maderas, N slope (11.45785°N, 85.50830°W, WGS84); male; elev. 901 m; 4 July 2011. Tariq Stark and Carlijn Laurijssens. This individual (UTADC-8243; Fig. 2B) was found in cloud forest on a cloudy night, resting on a decaying log (height 52 cm) covered with epiphytes and ferns, along the main trail from Finca Magdalena to the crater. RIVAS: Volcán Maderas, grassy area adjacent to La Laguna, the lagoon in the crater (11.44569°N, 85.51171°W, WGS84); male; elev. 1,203 m; 7 July 2011. Tariq Stark, Carlijn Laurijssens, Javier Sunyer, and Roberto García-Roa. This individual (UTADC-8244; Fig. 2C) represents an elevational record of this species (Sunyer et al., 2012). The salamander was perched on a flowering grass stem (height 80 cm) during a relatively cold night (13°C) with heavy fog. These vouchers represent the third and fourth published records for the species, and the first records (and a photograph) for males of this species.

Reptilia: Squamata (snakes)
Family Colubridae

***Sibon anthracops* (Cope, 1868).** RIVAS: Volcán Maderas, N slope, near Finca Magdalena (11.48435°N, 85.55142°W, WGS84); elev. 124 m; 12 September 2011. Tariq Stark and Carlijn Laurijssens. We encountered the snake (UTADC-8245; Fig. 2D) at night ca. 2 m off the ground in a tree, in a remnant patch of dry forest.

Family Leptotyphlopidae

***Epictia ater* (Taylor, 1940).** RIVAS: Volcán Maderas, SW slope (11.41619°N, 85.55406°W, WGS84); elev. 51 m; 21 September 2011. Tariq Stark, Carlijn Laurijssens, Marc Monsanto, and Neftalí Paizano Ortiz. We encountered a single individual (UTADC-8246; Fig. 2E) in grass at ca. 1200 h, near the biological station at San Ramón.

Family Loxocemidae

***Loxocemus bicolor* Cope, 1861.** RIVAS: Volcán Concepción, lower S slope, Charco Verde (11.28348°N, 85.38600°W, WGS84); elev. 38 m; 27 September 2011. Tariq Stark, Carlijn Laurijssens, and Marc Monsanto. We encountered one individual (UTADC-8247; Fig. 2F) at night, on a sand bank that separates Lago de Nicaragua from a small inland lake.

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