

## New Amphibian and Reptile Records from Cojedes State, Venezuela

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Cojedes state, with a surface area of 14,800 km<sup>2</sup>, is situated in the west-central part of Venezuela (northern border with Carabobo state: 10°00'N, upper Tinaquillo River; southern border with Barinas state: 08°35'N; eastern border with Guárico state: 68°00'W; western border with Portuguesa state: 68°50'W). The northwest section is within the Coastal Range, and forms the western limit for some species, such as *Atelopus cruciger* (Rivas 1998), *Hyalinobatrachium antisthenesi*, *Cochranella revocata* (Señaris and Ayarzagüena 2005) and *Anolis squamulatus* (Rivas and Manzanilla 1999 "2001"). The center and south are part of Los Llanos, supporting such species as *Bufo granulatus*, *Hyla crepitans*, *Phrynohyas venulosa*, *Leptodactylus fuscus*, *Tropidurus hispidus*, *Chironius carinatus*, *Leptodeira annulata*, *Liophis melanotus* (Rivero-Blanco and Dixon 1979).

Two main seasons exist in Cojedes, a wet one, from May to October, and a dry one, from November to April. The lowest elevations of Cojedes (ca. 50 m elev.) are found in the south, along the boundary with Portuguesa (Esteros de Chiriguana). The highest point is the Nirgua Massif, north of "Fila Refilete" (1520 m elev.).

Despite its central location in Venezuela and its proximity to the Venezuelan capital, Caracas, Cojedes is one of the least explored states in Venezuela. Only a few works mention its herpetofauna. Prior to this work only 24 amphibian species had been recorded (Barrio-Amorós 1998; Manzanilla et al. 2000; Rada 1989-1990; Rivas 1998; Rivas and Manzanilla 1999a, b; Señaris and Ayarzagüena 2005) along with only 10 species of reptiles (Cole et al. 1990; Dixon et al. 1993; Donoso-Barros 1966; Pritchard and Trebbau 1984; Rivas and Fuentes 2000; Rivas and Manzanilla 1999 "2001"; Roze 1966).

In this work we report five amphibians and 33 reptiles new to Cojedes, based mainly on voucher specimens in the Museo de Historia Natural La Salle, Caracas (MHNSL) and Museo de la Estación Biológica de Rancho Grande, Aragua (EBRG). We have also exhaustively reviewed literature pertaining to Cojedes herpetofauna. We followed La Marca (1997) for the taxonomic treatment of reptiles, except for anoline lizards, where we followed Nicholson (2002). We followed Barrio-Amorós (1998) for the taxonomic treatment of amphibians and major bioregions.

### ANURA BUFONIDAE

*Bufo humboldti* (Sapo Granuloso). Municipio Girardot: Hato Los

Caballos, 68 km S of Tinaco, 210 m elev. 25 February 1978. Miguel Lentino and Alfredo Paolillo. Verified by F. Rojas. MHNSL 6978-6979. First state record, 60 km NNE from nearest known locality, Río Guanare, Portuguesa (Barrio-Amorós 1998).

*Bufo margaritifera* complex. (Sapo Crestado). Municipio San Carlos: Cerro Azul, Fila La Blanquera, 1300 m elev. 25 February 1979. Alfredo Paolillo. Verified by F. Rojas. MHNSL 7493-7494. First state record. This complex is widely distributed in Venezuela and includes several species, with a new taxon recently described as *Bufo sclerocephalus* (Mijares-Urrutia and Arends 2001). In Colombia, at least 13 species are under the name *Bufo typhonius* (Vélez 1995).

### HYLIDAE

*Flectonotus pygmaeus* (Ranita Marsupial Pigmea). Municipio San Carlos: Cerro Azul, Fila La Blanquera 1350 m elev. 03 April 1980. Luis Padz. Verified by A. Paolillo. MHNSL 8100-8101. First state record. This record is between localities in Carabobo and Falcón states (Barrio-Amorós 1998).

*Gastrotheca ovifera* (Rana Marsupial Común). Municipio San Carlos: Cerro Azul, Fila La Blanquera, 1350 m elev. 31 March 1980. Alfredo Paolillo. Verified by F. Rojas. MHNSL 8095. First state record. This record is between previously known localities in Carabobo and Yaracuy states (Barrio 1999a).

*Gastrotheca walkeri* (Rana Marsupial Cornuda). Municipio San Carlos: Cerro Azul, Fila La Blanquera, 1350 m elev. 2 April 1980. Ignacio Agudo. Verified by J. C. Señaris. MHNSL 8106. First state record. This record is between previously known localities in Aragua and Yaracuy states (Barrio 1999b).

### LACERTILIA AMPHISBAENIDAE

*Amphisbaena alba* (Morróna, Culebra de Dos Cabezas). Municipio San Carlos: San Carlos, campus Cojedes, Fundación La Salle de Ciencias Naturales, 148 m elev. 9 April 1979. Unknown collector. Verified by J. C. Señaris. MHNSL 13828. First state record, ca. 190 km NE of the closest record, La Colonia, Portuguesa (Markezich 2002). This specimen was collected during the day after a heavy rain.

### GEKKONIDAE

*Gonatodes vittatus* (Limpia Casa). Municipio San Carlos: San Carlos, 120-140 m elev. 9 September 1997. Gilson Rivas. Verified by J. C. Señaris. MHNSL 13829, adult male. First state record (Rivero-Blanco 1979). This specimen was collected on a building wall. This species shows a continuous distribution along the coast from Trinidad to Colombia, and although the distribution depicted by Rivero-Blanco (1979) includes a dot in Lara state the specimen is not referenced in the appendix of examined material. Anthropogenic transport might be responsible for the presence of *G. vittatus* in San Carlos. These animals have been seen and collected only in association with buildings. The material used in the construction of these structures is known to come from the coast. Gorzula and Señaris (1998) report a similar case in Venezuelan Guayana. Markezich (2002) reported this species from Portuguesa, without speculating on its origin.

*Phyllodactylus ventralis* (Tuqueque). Municipio Girardot: Rio Portuguesa, 15 km S El Baul, 90 m elev. 16 January 1966. Jon Bilbao and Carlos Galan. Verified by A. Paolillo. MHNS 2422, a juvenile. First state record (Dixon and Huey 1970). Extends the range 85 km NW from the nearest locality, Hato Masagual (Staton and Dixon 1977). The species is distributed through north-central Venezuela to some localities in the east (Dixon and Huey, *op. cit.*).

*Thecadactylus rapicauda* (Salamancaqueja). Municipio San Carlos: El Candelero, SW de La Sierra. Tucuragua, 640 m elev. 09 April 1979. Daniel Loureiro. Verified by A. Paolillo. MHNS 7653. First state record. This monotypic species has a wide distribution in Venezuela, but is apparently absent from the Llanos. This bioregion is occupied by other large geckos (*Phyllodactylus ventralis* and *Hemidactylus palaichthus*). It is very possible that *T. rapicauda* contains more than one species (see Mijares-Urrutia and Arends 2000).

#### IGUANIDAE

*Iguana iguana* (Iguana Verde). Municipio Girardot: río Tinaco, 20 km NW El Baul. 06 February 1978. R. Godshalk. EBRG 1078; Municipio Pao de San Juan Bautista: Hato Galeras del Pao, 190 m elev. 24 August 1995. Ramón Rivero. EBRG 3178. All verified by R. Rivero. First state records. This species has a wide distribution in all lowlands of Venezuela, but has few documented records. The Cojedes localities are about 110 km from the closest ones in Guanarito, Portuguesa (Markezich 2002).

#### POLYCHROTIDAE

*Norops auratus* (Cotejo). Municipio San Carlos: San Carlos, 120–140 m elev. 11 February 1998. Alejandro Cuesta. Verified by J. C. Señaris. MHNS 13871. First state record; 150 km NE de Guanare (Markezich 2002). The species is widely distributed north and south of the Orinoco River, in the states of Aragua, Apure, Barinas, Falcón, Guárico, Sucre, Amazonas, and Bolívar (Donoso-Barros 1968; Gorzula and Señaris 1998; Manzanilla et al. 1996; Mijares and Arends 1993; Ramos and Busto 1989–1990).

*Norops chrysolepis* (Cotejo). Municipio San Carlos: Cerro Azul, Fila La Blanquera, 1350 m elev. 02 April 1980. Reinaldo Correa. Verified by A. Paolillo. MHNS 8096, adult male. First state record, ca. 200 km NE from Mesa Cavacas, Portuguesa (Markezich 2002). This species is also known in the literature as *Anolis nitens nitens* (see Avila-Pires 1995; Markezich 2002).

#### TEIIDAE

*Ameiva ameiva* (Cotejo). Municipio Girardot: Hato la Laguna de Junco km 80 road from Tinaco to El Baul. 18 April 1980. Alfredo Paolillo. Verified by F. Rojas. MHNS 8421. First state record, ca. 200 km NE from Portuguesa state records (Markezich 2002). Staton and Dixon (1977) refer to specimens from La Guanota (Apure) and Masagual (Guárico) 120 and 180 km SE, respectively.

*Cnemidophorus lemniscatus* complex (Cotejo). Municipio San Carlos: La Sierra, 06 August 1946. Luis Carbonell. Verified by G. Marcuzzi. MHNS 115. First state record. The species in this complex have a wide distribution in northern South America (Avila-Pires 1995; Donoso-Barros 1966).

*Tupinambis teguixin* (Mato Pollero). Municipio Pao de San Juan Bautista: Hato Galeras del Pao, 190 m elev. 29 August 1995. Ramón Rivero. Verified by R. Rivero. EBRG 3190. First state record. This is another widely distributed species with few documented records in Venezuela. The locality is ca. 170 km NW from closest records in Portuguesa (Markezich 2002).

#### TROPIDURIDAE

*Tropidurus hispidus* (Cotejo). Municipio San Carlos: Hato Itabama, 38 km SW of Las Vegas. 80 m elev. 26 September 1976. Carlos de Lima. Verified by J. C. Señaris. MHNS 6625–6626, juvenile. First state record, ca. 170 km NE from Fundo Sabana Grande, Portuguesa (Markezich 2002).

#### SERPENTES BOIDAE

*Corallus ruschenbergerii* (Falsa Mapanare, Dormilona). Municipio Girardot: Río Tinaco, Hato San Blas. 03 February 1978. Robert Goshalk. EBRG 1090; Municipio Girardot: Hato Mata Clara, between Hato Piñero and El Baul. M. Gonzalez. 03 April 1998. EBRG 3458. All verified by R. Rivero. These specimens are the first records from the state. Hato Mata Clara is 160 km E from closest record in La Colonia, Portuguesa (Markezich 2002). Henderson (1993) plotted some dots on his map of the species that could lie within Cojedes, but no specimens examined were cited. Cojedes samples are not found in the Henderson (1997) appendix of examined material.

*Epicrates maurus* (Tornasol). Municipio San Carlos: San Carlos, 120–140 m. 26 June 1985. Pedro Miraval. Verified by J. C. Señaris. MHNS 13833. First state records, ca. 190 km NE from nearest record in Portuguesa (Markezich 2002), and 157 km NW from Hato Masagual, Guárico (Staton and Dixon 1977). We consider *E. maurus* a valid species (see Chippaux 1986; Gorzula and Señaris 1998).

#### COLUBRIDAE

*Atractus univittatus*. Municipio San Carlos: Potrero Largo, Manrique. 19 April 1979. Verified by Walter Schargel. MHNS 13834. First state record, ca. 160 km NE from La Colonia, Municipio Guanare (Markezich 2002). This species was previously known only from the Coastal Range and from the foothills of Andean cordillera of Mérida in Portuguesa (Markezich 2002; Roze 1966).

*Erythrolampus bizona* (Falsa Coral). Municipio San Carlos: San Carlos, Boca Toma. 16 April 1973. José Blondet. Verified by G. Marquez. MHNS 6058. First state record. This locality is 130 km NE from Mesa de Cavacas, Portuguesa (Markezich 2002), and about 110 km SW from Valencia, Carabobo (Roze 1966).

*Helicops angulatus* (Mapanare de Agua). Municipio Rómulo Gallegos: Parcelamiento La Blanca, 130 m elev. 1996 (exact date not given). Numa Hurtado. Verified by J. C. Señaris. MHNS 14580–14581. First state record. This species is widely distributed throughout the Orinoco Basin in Venezuela, from the state of Sucre to the east (Rivas and Oliveros 1997) to Portuguesa in the West (Markezich 2002).

*Leptodeira annulata ashmeadii* (Falsa Mapanare). Municipio

Girardot: El Baul. 12 September 1995. Fabiola León and Luis Merlo. Verified by J. C. Señaris. MHNS 13296–13299. First state record. 90 km NW from the nearest locality, Hato Masaguaral (Staton and Dixon 1977). This species is widely distributed in Venezuela (Markezich 2002; Roze 1966). These specimens were found DOR. Staton and Dixon (1977) consider this species ubiquitous in the central llanos.

*Leptophis ahaenulla* (Lora). Municipio San Carlos: Hato Itabama, 38 km SW of Las Vegas. 80 m elev. 1 August 1976. Alfredo Paolillo. Verified by J. C. Señaris. MHNS 6446. First state record. Represents a range extension of ca. 150 km NE from Portuguesa (Markezich 2002; Roze 1966). This species is in need of a taxonomic review as some varieties might deserve species status (Markezich 2002; Oliver 1942).

*Liophis lineatus* (Sabana). Municipio San Carlos: Hato Itabama, 38 km SW of Las Vegas. 80 m elev. 14 August 1976. Miguel Lentino and Alfredo Paolillo. Verified by F. Rojas. MHNS 6449. First state record and northern most record for the species in Venezuela, ca. 65 km NE Acariagua, Portuguesa (Michaud and Dixon 1987; Roze 1966), and 148 km NW from Hato Masaguaral, Guárico (Staton and Dixon 1977).

*Liophis melanotus melanotus* (Sabana). Municipio San Carlos: Hato Itabama, 38 km SW of Las Vegas. 80 m elev. 3 August 1976. Alfredo Paolillo. Verified by F. Rojas. MHNS 6457. First state record, ca. 65 km NE Acariagua, Portuguesa (Dixon and Michaud 1992).

*Masticophis mentovarius* (Conejera, Cazadora). Municipio San Carlos: San Carlos. Francisco Delascio. Verified by A. Paolillo. 24 August 1978. MHNS 7070. First state record. This species is widely distributed in semi-arid regions and dry forests through northern Venezuela, including Margarita Island, and lowlands of northern Bolívar (Gorzula and Señaris 1998; Hernández and Rada 1992; Roze 1966). Cojedes locality is 67 km SW of Bejuma (Carabobo) and 310 km NW of Espino in Guárico (Roze 1966).

*Mastigodryas bifossatus striatus* (Tigra). Municipio San Carlos: San Carlos. 23 May 1985. Collector unknown. Verified by J. C. Señaris. MHNS 13870. First record for Cojedes, and 150 km NE of closest record in Portuguesa (Markezich 2002). This species is distributed through dry regions of northern Venezuela (Roze 1966).

*Mastigodryas boddaertii* (Cazadora). Municipio San Carlos: carretera Tierra Caliente-La Sierra. 9 October 1975. Wilson Damo. Verified by J. C. Señaris. MHNS 6359. First state record. This locality is 120 km S of the closest record in Borburata, Carabobo (Hernández and Rada 1993; Roze 1966). The known distribution of this species shows that *M. boddaertii* is the only member of the genus that frequents forests with relatively high humidity.

*Oxyrhopus petola* (Falsa Coral). Municipio Rómulo Gallegos: Parcelamiento La Blanca, 130 m elev. 1996 (specific date not given). Numa Hurtado. Verified by J. C. Señaris. MHNS 15129, juvenile. First state record (Roze 1966). This form is not assigned to any described subspecies, as the great variation of color pattern in the same population makes taxonomic resolution difficult (Starace 1998).

*Pseudoboa newwiedii* (Coral Macho). Municipio Girardot: El Baul. 12 September 1995. Fabiola León and Luis Merlo. Verified by J.

C. Señaris. MHNS 13301–13302. First state record, 90 km NW from Hato Masaguaral, Guárico (Staton and Dixon 1977), and ca. 200 km NE from closest Portuguesa record (Markezich 2002). These specimens were found DOR.

*Sibon nebulata*. Municipio San Carlos: San Carlos. 19 April 1979. Verified by L. F. Navarrete. MHNS 13837–13838. In Venezuela this species is known from the Andes (including the Sierra de Périja), the coastal range (including Margarita island) and southern Venezuela in the state of Bolívar. The species inhabits relatively humid forest and is apparently absent in the dry forest lowland known as los Llanos. These specimens represent a new state record from Cojedes, ca. 60 km E of Agua Blanca and ca. 145 SW from Guárico (see Peters 1960 and Roze 1966 for known Venezuelan records).

*Tantilla melanocephala*. Municipio San Carlos: Quebrada La Lapentera, Cerro Azul. 2 April 1980. Ignacio Agudo and Alfredo Paolillo. Verified by J. C. Señaris. MHNS 8107–8110. First state record and first record for the Venezuelan lowlands known as Los Llanos (Wilson and Mena 1980), this site is at 100 km SW from Belén, Carabobo state (Roze 1966) and 150 km NE de Mesa de Cavacas, Portuguesa (Markezich 2002).

*Thamnodynastes cf. pallidus*. Municipio Rómulo Gallegos: Parcelamiento La Blanca, 130 m elev. 1996 (exact date not given). Numa Hurtado. Verified by J. Manzanilla. MHNS 15130–15131. First state record (Roze 1966). In this genus more than one taxon remains without formal description. We tentatively identify this specimen as *T. pallidus*, as *T. strigilis* is a synonym (Cei et al. 1992).

*Xenodon severus* (Sapa). Municipio San Carlos: Cerro Azul, Fila La Blanquera. 1350 m elev. 1 April 1980. Reinaldo Correa. Verified by J. C. Señaris. MHNS 8163, an adult female. First state record ca. 100 km SW from Puerto Cabello, Carabobo (Roze 1966). This locality is the easternmost in the interior Coastal Range. The specimen contains an adult *Bufo margaritifera* in its stomach.

#### ELAPIDAE

*Micrurus isoconus* (Coral). Municipio Girardot: carretera El Baul-Hato Piñero. 31 December 1989. Rafael Hoogesteijn. EBRG 2406; Municipio: Tinaco. 05 April 2000. Gilson Rivas. EBRG 3651; Municipio Tinaco: Hato Piñero. No date. John Polisar. EBRG 3662. All verified by R. Rivero. First state records (Roze 1966, 1996). This is another widely distributed species in the Llanos region, with a few documented records. The closest known locality is in Maracay, Aragua, ca. 75 km NE (Roze 1966).

#### VIPERIDAE

*Crotalus durissus* (Cascabel). Municipio Pao de San Juan Bautista: Laya, Las Minas. 16 December 1999. Ramón Rivero. EBRG 2310; Municipio Girardot: Hato Piñero. No date: John Polisar. EBRG 3661. All verified by R. Rivero. First state records (Vanzolini and Callo 2002). This species complex is widely distributed in lowlands and uplands throughout Venezuela (Roze 1966). It is likely that the species complex embraces more than one species, and for this reason we do not assign these specimens to any proposed subspecies. In our opinion the subspecies *Crotalus d. cumanensis*, *C. d. rurutima*, and *C. d. pifanorum* are sufficiently different to be

considered full species. Another endemic Venezuelan species of *Crotalus*, *C. vegrandis*, is considered by some authors as a subspecies of *C. durissus* (McDiarmid et al. 1999).

#### LEPTOTYPHLOPIDAE

*Leptotyphlops albifrons* (Cieguita). Municipio Girardot: Hato Piñero, Estación Biológica. 14 November 1996. John Polisar. Verified by J. Manzanilla. MHNSL 13823. First state record, ca. 200 km NE from Guanare, Portuguesa (Markezich 2002). This specimen, along with the next species, represent the first Scolecophidid records from Cojedes (Roze 1966).

*Leptotyphlops macrolepis* (Cieguita). Municipio San Carlos: San Carlos, 120–140 m elev. 11 November 1989. Mariano Blanco. Verified by J. Manzanilla. MHNSL 13831. First state record, ca. 180 km NE from Mesa de Cavacas, Portuguesa (Markezich 2002).

**Acknowledgments.**—We are indebted to J. Celsa Señaris (Museo de Historia Natural La Salle, Caracas) and Allan Markezich (Black Hawk College, Illinois) for some comments on the manuscript and providing additional information to us. We thank Luis Yáñez (Instituto de Geografía y Desarrollo Regional, Universidad Central de Venezuela, Caracas) for his help with Cojedes geography. Finally, we thank Francisco Bisbal and Ramón Rivero (EBRG) for allowing us to review the collection under their care and for the shared information.

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