

AMPHIBIANS OF VENEZUELA SYSTEMATIC LIST, DISTRIBUTION AND REFERENCES, AN UPDATE

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ABSTRACT

A commented checklist of the Venezuelan batrachofauna is presented. The last checklist was in 1998 (Barrio-Amorós 1998) and counted a total of 284 species. The current number is 298 species (284 anurans, nine caecilians, and five salamanders). 32 species are added compared with the previous list, 15 species are eliminated for different reasons, and there are 20 cases of nomenclatural change.

Key Words: Amphibians. Systematics. Venezuela

ANFIBIOS DE VENEZUELA LISTA SISTEMÁTICA, DISTRIBUCIÓN Y REFERENCIAS, UNA APROXIMACIÓN

RESUMEN

Se presenta una lista comentada de la batracofauna de Venezuela. La última lista fue en 1998 (Barrio-Amorós 1998) con un total de 284 especies. El número actual asciende a 298 (284 anuros, nueve cecilias y cinco salamandras). Se añaden 32 especies comparando con la lista previa, 15 especies son eliminadas de la lista por diferentes razones, y 20 más cambian su nomenclatura.

Palabras Clave: Anfibios. Sistemática. Venezuela.

INTRODUCTION

Venezuela is currently the eighth most diverse country in the world in Amphibian diversity. Several checklists, more or less detailed, have been appearing since the first serious version by Ginés (1959), in which 89 amphibians (four caecilians, three salamanders and 74 anurans) were reported. Rivero's (1961) catalogue of anurans continue being the most complete treatment by species, although he only reported 96 taxa. Most modernly, two general catalogues by Harding (1983) and Frost (1985) were necessary to look over the Venezuelan amphibian diversity. In 1992, two lists appeared; one by Péfaur (1992) counting 199 amphibians (187 anurans, two salamanders and 10 caecilians); and another by La Marca (1992), who reported 202 species of anurans. La Marca (1995) augmented the number of anurans to 237, counting also two salamanders and 10 caecilians. La Marca (1997) reported 272 amphibians (263 anurans, two salamanders and nine caecilians). Péfaur & Rivero (2000) offered a checklist with a biogeographic scope, with 252 species of amphibians. The number is low because was sent in 1997 and published in 2000. Barrio-Amorós (1998) is the most recent list, with 284 species (272 anurans, 10 caecilians and two urodeles). The updated online reference (Frost 2004)

is a valid source of data of all amphibians per country in the world; however, we see that it is not very precise in many aspects. In that checklist, looking for Venezuela, 305 species appear, but 15 have never been reported from Venezuela, and 16 taxa more needs to be updated in many aspects. Six years after the last published checklist (Barrio-Amorós 1998), the panorama has changed again in many ways, with several new species described, others reported as new for the country, and some deleted from the list by synonymies or just wrong previous data. The number we recognize is 298, 284 anurans, nine caecilians and five salamanders (21 species more of anurans, one caecilian less, and three more urodeles). We do not refer to undescribed species that we are working or we know somebody is, although the number of those is approximately 50. We follow Barrio-Amorós (1998) in his checklist, adding and deleting the involved taxa. We only refer for each species the Type, Type locality, Distribution only in Venezuela in general terms, adding new localities when necessary; selected relevant literature dealing only with Venezuelan taxa (but not only checklists) in

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alphabetic order. Taxonomic or biogeographic comments are added (as Remarks) only when strictly necessary. See Barrio-Amorós (1998) for a more detailed account and geographic localities for each species (that reference does not appear in each species). An asterisc after the species name indicates that the species is endemic of Venezuela.

Barrio-Amorós (1998) presented the biogeographic patterns of Venezuela (mainly based on Rivero's previous work), adapted for amphibians, as being seven major bio-regions: 1- The Andes; 2- the Coastal mountain range; 3- the Llanos (or great plains); 4- the Amazonian region (including the eastern piedmont of the Andes); 5- The Venezuelan Guayana (Venezuelan part of the Guiana Shield); 6- The Orinoco Delta, and 7- the Maracaibo lake basin. I do not change this arrangement at the moment.

Acronyms follow Barrio-Amorós (1998).

Class *AMPHIBIA* Linnaeus 1758

Order *ANURA* Rafinesque, 1815

Family *Allophrynidae* Goin, Goin et Zug, 1978.

Genus *Allophryne* Gaige, 1926.

• *Allophryne ruthveni* Gaige, 1926.

Type: UMMZ 63419.

Type locality: "Tukeit Hill, below Kaiteur Falls, British Guiana".

Distribution: Southern Venezuela, Amazonas and Bolívar states.

Selected references: Barrio (2002); Fabrezi & Langone (2000); Hoogmoed (1969); Lynch & Freeman (1966); Rivero *et al.* (1986); Savage (1986).

Family *Bufo* Gray, 1825.

Genus *Atelopus* Dumeril et Bibron, 1841.

• *Atelopus carbonerensis** Rivero, 1972

Type: BM 1968.940.

Type locality: «La Carbonera (San Eusebio), 2330 m., Estado Mérida, Venezuela».

Distribution: Surroundings of the type locality.

Remarks: Considered the most endangered species of the genus in Venezuela, probably extinct. The last sight of a living specimen was in 1998.

Selected references: Barrio (1996b); Barrio-Amorós (2001c); Dole & Durant (1974a); Durant & Dole (1974a-1974b); La Marca (1984a, 1992); La Marca & Lötters (1997); Lötters (1996); Rivero (1972b-1980); Rodríguez & Rojas-Suárez (1995-1999); Torres & Barrio (2001).

• *Atelopus chrysocorallus** La Marca, 1994

Type: ULABG 1814.

Type locality: "Venezuela: Estado Trujillo: Distrito Boconó: La Aguada, afluente de la Quebrada El Molino (tributario del río Burate), aproximadamente 2,5 km sur Niquitao, 2200 msnm."

Distribution: Surroundings of the type locality.

Selected references: Barrio-Amorós (2001); La Marca (1994d); La Marca & Lötters (1997).

• *Atelopus cruciger** (Lichtenstein et Martens, 1856)

Neotype: ZSM 93/1947/10

Type locality: Veragua, Panamá (Error); Corrected to "vicinity of Rancho Grande on the road from Maracay to Ocumare de la Costa (ca. 1000 m above sea level), estado Aragua, Venezuela".

Distribution: Cordillera de la Costa, from estado Vargas to Cojedes. See a recent distribution map in Bonaccorso *et al.* (2003).

Remarks: Nomenclatural history in Lötters *et al.* (1998) and Lötters & La Marca (2001). Another highly endangered species, recently sighted.

Selected references: Barrio (1996b); Barrio-Amorós (2001); Bonaccorso *et al.* (2003); Cocroft *et al.* (1990); Ginés (1959); Günther (1858); La Marca (1992-1995a-1995c); La Marca *et al.* (1989); La Marca & Lötters (1997); Lötters & La Marca (2001); Lötters *et al.* (1998-2004); Lichtenstein & Martens (1856); Lötters (1996); Lutz (1927); Manzanilla & La Marca (2002 "2004"); Müller (1935); Rivas (1998); Rivero (1961-1964a); Rodríguez & Rojas-Suárez (1995-1999); Röhl (1959); Sexton (1958); Tello (1968).

• *Atelopus mucubajiensis** Rivero, 1972

Type: BM 1971.763.

Type locality: "Región de Mucubají, Santo Domingo, 3100 m., Estado Mérida, Venezuela".

Distribution: Surroundings of the type locality.

Remarks: Recently rediscovered by the author in the Santo Domingo valley. Currently under study.

Selected references: Barrio (1996b); Barrio-Amorós (2001); Durant & Díaz (1996); La Marca (1991b"1994"-1992-1995a-1995c); La Marca *et al.* (1989); La Marca & Lötters (1997); Lötters (1996); Rivero (1972b-1980); Rodríguez & Rojas-Suárez (1995-1999).

• *Atelopus oxyrhynchus** Boulenger, 1903

Lectotipos: BM 1947.2.14.66.

Type locality: Río Albarregas, La Culata, Sierra Nevada de Mérida, Venezuela (3330 m).

Distribution: Sierra de la Culata, estado Mérida.

Remarks: Apparently extinct.

Selected references: Barrio-Amorós (2001); Boulenger (1903); Durant (1993); Ginés (1959); La Marca (1991b"1994"-1992-1995a-1995c); La Marca *et al.* (1989); La Marca & Lötters (1997); Lötters (1996); Piñero & Durant (1993); Rivero (1961-1963b-1964d-1972b); Rodríguez & Rojas-Suárez (1995-1999).

• *Atelopus pinangoi** Rivero, 1980

Type: UPRM 5354.

Type locality: "Piñango, 2920 m., Estado Mérida, Venezuela".

Distribution: Surroundings of the type locality.

Remarks: Sighted for last time in 1997.

Selected references: Barrio-Amorós (2001); La Marca *et al.* (1989); La Marca & Lötters (1997); Lötters (1996); Rivero (1980); Rodríguez & Rojas-Suárez (1995-1999).

• *Atelopus sorianoii** La Marca, 1983

Type: CVULA: IV-2783.

Type locality: “Bosque nublado 10 km. SSE. de Tovar, 2718 m., Estado Mérida, Venezuela”.

Distribution: Surroundings of the type locality.

Remarks: Not seen since 1990; probably extinct.

Selected references: Barrio (1996b); Barrio-Amorós (2001); La Marca (1983-1992-1995a-1995c); La Marca *et al.* (1989); La Marca & Lötters (1997); Lötters (1996); Rodríguez & Rojas-Suárez (1995-1999).

• *Atelopus tamaense* La Marca, Perez *et Renjifo*, 1989.

Type: ULABG 1820.

Type locality: Estado Apure, Distrito Páez, Cercanías del «Boquerón del río Oirá», Páramo de Tamá, Parque Nacional El Tamá, aproximadamente 7° 25' N y 72° 23' W, 2950 m.

Distribution: Surroundings of the type locality.

Remarks: Population status unknown, but probably surviving.

Selected references: Barrio-Amorós (2001); La Marca (1992-1995c); La Marca *et al.* (1989); La Marca & Lötters (1997); Lötters (1996); Rodríguez & Rojas-Suárez (1995-1999).

• *Atelopus vogli** Müller, 1934

Type: ZSM 3/1933.

Type locality: “cascadas superiores del río Güey, en la región llamada Las Peñas, cerca de la Hacienda de la Trinidad, Maracay, 700m”, estado Aragua, Venezuela.

Distribution: Surroundings of the type locality.

Remarks: Elevated recently (Lötters *et al.*, 2004) to full species status from subspecies of *A. cruciger*. Apparently extinct (see Lötters *et al.*, op. cit.).

Selected references: Lötters *et al.* (2004); Müller (1935).

Genus *Bufo* Laurenti, 1768.

• *Bufo ceratophrys* Boulenger, 1882.

Type: BM 80.12.5.151.

Type locality: “Ecuador”.

Distribution: Only one record in Venezuela, at Temiche, Mte Marahuaka (Rivero 1961). Mijares-Urrutia & Arends (2001), confuse an specimen of *B. nasicus* from La Escalera with *B. ceratophrys*.

Selected references: Rivero (1961-1964b).

• *Bufo glaberrimus* Günther, 1968.

Type: BM 1947.2.20.56 (antes 68.3.4.9).

Type locality: “Bogota”, Cundinamarca, Colombia (probably in error).

Distribution: Amazonian piedmont of eastern slopes of the Venezuelan Andes, estado Táchira.

Selected references: Chacón *et al.* (2000, 2001).

• *Bufo granulosus* Spix, 1824.

Type: ZSM 40/0.

Type locality: “Bahia, Brasil”.

Distribution: Widespread in the country, throughout all open areas.

Remarks: Patrícia Narvaes (2003) made her Doctoral Thesis on this species complex, erecting different former subspecies to full species status, and invalidating some other forms. But until this will be published, we must retain the classic assignment. The former subspecies known in Venezuela are: *B. g. barboursi* from Isla Margarita, *B. g. beebei*, distributed throughout the Orinoco basin and the north of the country (also considered by some authors as a full species, *B. beebei* (Rivero *et al.*, 1986; Murphy 1997), *B. g. humboldti*, from the NW of the country, and *B. g. merianae*, from a few localities in the SE (estado Bolívar) (Gallardo, 1965).

Selected references: Boettger (1892); Cochran & Goin (1970); Duellman (1979a-1997); Gallardo (1965); Ginés (1959); Gorzula & Señaris (1998); Hoogmoed (1979b-1990a); Hoogmoed & Gorzula (1979); La Marca (1992); Lutz (1927); Manzanilla *et al.* (1995); Murphy (1997); Parker (1936); Péfaur & Díaz de Pascual (1982-1987); Péfaur & Pérez (1995); Ramo & Busto (1989-1990); Rivero (1961-1964a-1964b-1964c-1967c); Rivero *et al.* (1986); Roze (1964); Staton & Dixon (1977); Tello (1968); Yústiz (1996).

• *Bufo guttatus* Schneider, 1799.

Type: ZMB 3517.

Type locality: “India Orientali”.

Distribution: Typical Guayano-Amazonian element, widespread at estados Amazonas, Bolívar and recently sighted in the limit of estado Apure (Barrio *et al.* 2001).

Selected references: Barrio *et al.* (2001); Duellman (1997); Ginés (1959); Gorzula & Señaris (1998); Hoogmoed & Gorzula (1979); La Marca (1992); Rivero (1961-1964b-1967a); Rivero *et al.* (1986).

• *Bufo haematiticus* Cope, 1862.

Syntypess: USNM 48448-49.

Type locality: “Region of the Truando (Chocó), New Grenada [Colombia]”.

Distribution: Only known in Venezuela from one locality at Sierra de Perijá, the northernmost outreach of the Andes in the border with Colombia.

Selected references: Barrio (2001).

• *Bufo margaritifera* (Laurenti, 1768).

Type: by indication including frogs illustrated by Seba, 1734, Loc. Rer. Nat. Thesaur. Descript. Icon., 1: pl. 71, fig. 6, 7, and (var. beta) 8.

Type locality: “Brazil”.

Distribution: Widespread in the country, except in Los Llanos region.

Remarks: A complex of species involving several taxa. The erection of *Bufo alatus* by La marca (1997) as the representative of the complex north of the Orinoco river is an unjustified act. La Marca (1992, 1997) include *B. acutirostris* in the batracofauna of Venezuela, but no populations of this species have never been stated.

Selected references: Ginés (1959); Gorzula & Señaris (1998); Hass *et al.* (1995); Hoogmoed (1977-1986-1989-1990); Hoogmoed & Gruber (1983); Péfaur & Díaz De Pascual (1982-1987); Rivero (1961-1964a-1964b-1964d-1967a-1971a); Rivero *et al.*, (1986); Velez (1995); Yústiz (1976a-1996).

• *Bufo marinus* (Linnaeus, 1758).

Type: Not available (originally in Seba's collection).

Type locality: "America".

Distribution: Widespread in the country from 0 to 3000 m.

Selected references: Alemán (1952); Duellman (1997); Evans & Lampo (1996); Ginés (1959); Gorzula & Señaris (1998); Gremone *et al.* (1986); Heatwole *et al.* (1965); Hoogmoed & Gorzula (1979); Hoogmoed & Gruber (1983); Hoogmoed (1989); La Marca (1992); Lichtenstein & Martens (1856); Lutz (1927); Manzanilla *et al.* (1995); Péfaur & Díaz de Pascual (1982-1987); Péfaur & Pérez (1995); Rivero (1961-1964a-1964b-1964c-1964d-1967a); Rivero *et al.* (1986); Rivero-Blanco & Dixon (1979); Rohl (1959); Staton & Dixon (1977); Tello (1968); Zug & Zug (1979).

• *Bufo nasicus* Werner, 1903.

Type: MRHN I.G. 9422 reg. 1015.

Type locality: without locality data

Distribution: Known from La Escalera region, estado Bolívar.

Remarks: See remark of *B. ceratophrys*.

Selected references: Duellman (1997); Hoogmoed (1977-1979b-1986-1990a).

• *Bufo sclerocephalus** Mijares-Urrútia et Arends, 2001.

Type: EBRG 3415.

Type locality: "1.5 km (by road) from Curimagua to Cerro Galicia, municipio Petit, Sierra de San Luis, estado Falcón, Venezuela (about 11° 10'N, 69°41'W), about 1150 m".

Distribution: Apparently endemic from the cloud forests at Sierra de San Luis, estado Falcón.

Selected references: Mijares-Urrútia & Arends (2001).

• *Bufo sternosignatus* Günther, 1859 "1858".

Syntypes: BM 1947.2.21.68-69; 1947.2.21.70; 1947.2.21.87; 1947.2.21.88.

Type locality: «Venezuela»; «Puerto Cabello»; «Córdova»; «México»; restricted to Puerto Cabello by Cochran & Goin (1970).

Distribution: Cloud to rainforests of Cordillera de la Costa and eastern Andean piedmont.

Selected references: Boettger (1892); Boulenger (1882); Cochran & Goin (1970); Ginés (1959); Hoogmoed (1990); La Marca (1992); La Marca & Manzanilla (1997); La Marca & Mijares (1996); Lutz (1927); Manzanilla *et al.* (1995); Rivero (1961-1964a-1964d); Vélez (1999); Yústiz (1996).

Genus *Metaphryniscus* Señaris, Ayarzagüena et Gorzula, 1994.

• *Metaphryniscus sosae** Señaris, Ayarzagüena et Gorzula, 1994.

Type: MHNLS 12347.

Type locality: «Tepuy Marahuaca-Sur, Estado Amazonas, Venezuela (3° 40'N-65° 27'W). 2600 m.s.n.m.»

Distribution: Endemic to Marahuaca, a tepui in estado Amazonas.

Selected references: Señaris *et al.* (1994).

Genus *Oreophrynella* Boulenger, 1895

• *Oreophrynella críptica** Señaris, 1993.

Type: EBRG 2956.

Type locality: "Sector este, cima del Auyan-tepui, Estado Bolívar, Venezuela (05°53'36"N-62°29'12"W), 1750 msnm.

Distribution: Endemic to Auyan-tepui, a tepui in estado Bolívar.

Selected references: Myers (1997); Señaris (1993).

• *Oreophrynella huberi** Diego-Aransay et Gorzula, 1987.

Type: MHNLS 11148.

Type locality: Cerro El Sol, al noreste del Auyán-tepui (06°06'N-62°32'W). Estado Bolívar. Venezuela. 1700 m.

Distribution: Endemic to Cerro El Sol, a tepui in estado Bolívar.

Selected references: Diego-Aransay & Gorzula (1985); Gorzula & Señaris (1998); Señaris *et al.* (1994).

• *Oreophrynella macconelli* (Boulenger, 1895).

Type: BM 1947.2.14.49.

Type locality: "Base of Mount Roraima, 3500 feet" [Venezuela].

Distribution: Known from the type locality.

Selected references: Boulenger (1900); Ginés (1959); McDiarmid (1971); Rivero (1961-1964b); Señaris *et al.* (1994); Warren (1971).

• *Oreophrynella nigra** Señaris, Ayarzagüena et Gorzula, 1994.

Type: MHNLS 10583.

Type locality: "Kukenan-tepui I, Estado Bolívar, Venezuela (09° 51'N-60° 48'W). 2500 msnm."

Distribution: Endemic to Kukenan, a tepui in estado Bolívar.

Selected references: Gorzula & Señaris (1998); McDiarmid & Gorzula (1989); Señaris *et al.* (1994); Solano (1989).

• *Oreophrynella quelchii** (Boulenger, 1895).

Syntypes: BM 95.4.19.1-5; 99.3.25.7-13; UK 126081-82; ZFMK, MCZ 3500-02.

Type locality: "Summit of Mt. Roraima, between British Guiana and Venezuela, at an altitude of 8500 feet".

Distribution: Known from Roraima, a tepui in estado Bolívar.

Selected references: Boulenger (1895a, 1895b); Ginés (1959); Gorzula & Señaris (1998); Hoogmoed (1979b); La Marca (1992); McDiarmid (1971); McDiarmid & Gorzula (1989); Rivero (1961-1964b); Señaris *et al.* (1994).

• *Oreophrynella vasquezzi** Señaris, Ayarzagüena et Gorzula, 1994.

Type: MHNLS 10244.

Type locality: "Ilú-tepui "I". Estado Bolívar. Venezuela (05° 25'N-60° 58'W). 2650 msnm."

Distribution: Endemic to Ilú, a tepui in estado Bolívar.

Selected references: Gorzula & Señaris (1998); Señaris *et al.* (1994).

Family *Centrolenidae* Taylor, 1951.

Remarks: All authors have followed the generic proposal of Ruiz-Carranza & Lynch (1991) in which Centrolenidae is divided in three genera (see below). However, Savage (2002) resurrected *Centrolenella* for those centrolenids with humeral

spines, small size but big eyed, *contra Centrolene*, with big size, but small eyes. This arrangement is not followed here; in that case, all Venezuelan *Centrolene* should belong to *Centrolenella*.

Genus *Centrolene* Jiménez de la Espada, 1872.

- *Centrolene altitudinale** (Rivero, 1968).

Type: MCZ 72500.

Type locality: «Quebrada cerca de Río Albarregas, 2400 m. Estado Mérida, Venezuela».

Distribution: Andes of estado Mérida.

Selected references: Rivero (1968b).

- *Centrolene andinum* (Rivero, 1968).

Type: MCZ 72502.

Type locality: «La Azulita, 1050 m., estado Mérida, Venezuela».

Distribution: Andes of Venezuela, including Sierra de Perijá.

Selected references: Mijares-Urrútia (1990a); Rivero (1968b-1985); Ruíz-Carranza y Lynch (1995).

*Centrolene gorzulai** (Ayarzagüena, 1992).

Type: MHNLS 11221.

Type locality: “Cerro Auyantepuy-Centro. Edo. Bolívar. Venezuela. (5° 56’N-62° 34’W). 1850 m.s.n.m.”

Distribution: Endemic to Auyan-tepui, a tepui in estado Bolívar. Remarks: Duellman & Señaris (2003) place *Centrolenella auyantepuiana* Ayarzagüena, 1992 (reported as *Hyalinobatrachium auyantepuianum* in Barrio-Amorós 1998), in the synonymy of *Centrolene gorzulai* based on its trilobate liver and a small humeral spine which was not seen before.

Selected references: Ayarzagüena (1992); Duellman & Señaris (2003); Gorzula & Señaris (1998);

- *Centrolene lema** Duellman et Señaris, 2003.

Type: KU 181128.

Type locality: Km 127 on the road from El Dorado to Santa Elena de Uairén (5° 59’ N, 61° 24’ W, 1250 m), north slope of Sierra de Lema, estado Bolívar, Venezuela.

Distribution: Known from the type locality.

Selected references: Duellman (1997); Duellman & Señaris (2003).

- *Centrolene venezuelense** (Rivero, 1968).

Holotype: MCZ 77503.

Type locality: “Valle de la Culata, bosque a 2700 m., Estado Mérida, Venezuela”.

Distribution: Spread in the Venezuelan Andes, from Táchira to Mérida states.

Remarks: Myers & Donnelly (1997) erected the previously subspecies of *C. buckleyi*, *C. b. venezuelense* to species level, without explanation. Señaris (PhD Thesis, and pers. com.) supported the theory.

Selected references: Ayarzagüena (1992); Ginés (1959); Gremone *et al.* (1986); La Marca (1991b”1994”-1996c); Myers & Donnelly (1997); Péfaur & Díaz De Pascual (1982); Rivero (1961-1963b-1964a-1968b); Ruíz-Carranza & Lynch (1991).

Genus *Cochranella* Taylor, 1951.

- *Cochranella castroviejoi** Ayarzagüena et Señaris, 1996.

Type: MHNLS 13356.

Type locality: “Cerro El Humo, Península de Paria, estado Sucre, Venezuela. (10°42’N-62°37’W). 750 msnm.”

Distribution: Apparently endemic from peninsula de Paria, estado Sucre.

Selected references: Ayarzagüena & Señaris (1996).

- *Cochranella duidaeana** (Ayarzagüena, 1992).

Type: MHNLS 12000.

Type locality: «Cumbre sur del Monte Duida. Territorio Federal Amazonas. Venezuela. (3° 19’N-65° 38’W). 2140 msnm.»

Distribution: Endemic to Cerro Duida, a tepui in estado Amazonas.

Selected references: Ayarzagüena (1992); Ayarzagüena & Señaris (1996).

- *Cochranella oyampiensis** (Lescure, 1975)

Type: MNHNP 1973-1673.

Type locality: “Village Zidok (Haut-Oyapok), Guyane Française”.

Distribution: Only known in Venezuela from a locality in Gran Sabana, estado Bolívar.

Selected references: Lescure (1975a); Señaris (1997).

- *Cochranella revocata** (Rivero, 1985).

Type: UPRM 5295.

Type locality: Colonia Tovar, 1800 m., D. F., Venezuela.

Distribution: Surroundings of type locality.

Selected references: Myers & Donnelly (1997); Rivero (1985); Ruíz-Carranza & Lynch (1991-1998).

- *Cochranella riveroi** (Ayarzagüena, 1992).

Type: MBUCV 6190.

Type locality: Cumbre Cerro Aracamuni. Estado Amazonas. 1600 m.

Distribution: Endemic to Cerro Aracamuni, a tepui in estado Amazonas.

Selected references: Ayarzagüena (1992); Ayarzagüena & Señaris (1996).

- *Cochranella vozmedianoi** Ayarzagüena et Señaris, 1996.

Type: MHNLS 13355.

Type locality: Cerro El Humo, Península de Paria, estado Sucre, Venezuela. (10 grados 42’N-62 grados 37’W), 750 msnm.

Distribution: Apparently endemic from peninsula de Paria, estado Sucre.

Selected references: Ayarzagüena & Señaris (1996).

Genus *Hyalinobatrachium* Ruíz-Carranza et Lynch, 1991.

- *Hyalinobatrachium antisthenesi** (Goin, 1963).

Type: MBUCV 4033.

Type locality: «Parque Nacional de Rancho Grande, Aragua, Venezuela».

Distribution: Cordillera de la Costa.

Selected references: Cannatella & Lamar (1986); Goin (1963); Manzanilla *et al.* (1995); Rivero (1968b).

- *Hyalinobatrachium crurifasciatum** Myers et Donnelly, 1997.
Type: AMNH 131329.
Type locality: “north base of Pico Tamacuari. 1160-1200 m. Sierra Tapirapécó, Amazonas, Venezuela (01° 13' N, 64° 42' W).
Distribution: Apparently widespread in the Venezuelan Guayana (Señaris, pers. com.).
Selected references: Duellman & Señaris (2003); Myers & Donnelly (1997).
 - *Hyalinobatrachium durantei** (Rivero, 1985).
Type: UPRM 5811.
Type locality: La Mucuy, 2172 m., Estado Mérida, Venezuela (also the type locality of the synonyms *H. loreocarinatum* y *H. ostracodermoides*).
Distribution: Andes of estado Mérida.
Remarks: *Hyalinobatrachium loreocarinatum*, *H. pleurostriatum* and *H. ostracodermoides* were considered synonyms of *H. durantei* by Señaris (1999).
Selected references: Rivero (1985); Señaris (1999).
 - *Hyalinobatrachium eccentricum** Myers et Donnelly, 2001.
Type: EBRG 3049.
Type locality: “forest stream on Cerro Yutajé, 1750 m (5°46' N, 66°08' W), Amazonas, Venezuela”.
Distribution: Apparently endemic to Cerro Yutajé, a tepui in estado Amazonas.
Selected references: Myers & Donnelly (2001).
 - *Hyalinobatrachium fragile** (Rivero, 1985).
Type: UPRM 5938.
Type locality: Mundo Nuevo, entre Manrique y La Sierra, 396 m., Estado Cojedes, Venezuela.
Distribution: Surroundings of type locality.
Selected references: Rivero (1985).
 - *Hyalinobatrachium guairarepanensis** Señaris, 1999
Lectotipo: MHNLS 13731.
Type locality: “Quebrada Chacaíto, Parque Nacional El Ávila, (10° 30'36" N- 66°51'44" W), 980 m, Distrito Federal, Venezuela”.
Distribution: Cordillera de la Costa.
Remarks: *Hyalinobatrachium fleishmanni* has been mentioned in Venezuela until recently. Most of these records were misidentifications with the recent described *H. guairarepanensis*. Most of the selected references deal with *Hyalinobatrachium* or *Centrolenella fleishmanni*.
Selected references: Cannatella & Lamar (1986); Ginés (1959); Goin (1964); Manzanilla *et al.* (1995); Myers & Donnelly (1997); Rivero (1961-1964a-1968b); Tello (1968).
 - *Hyalinobatrachium helenae** (Ayarzagüena, 1992).
Type: MHNLS 9431
Type locality: “Quebrada Jaspe, San Ignacio de Yuruaní, Edo. Bolívar, Venezuela”.
Distribution: Surroundings of type locality.
Selected references: Ayarzagüena (1992); Duellman (1993).
 - *Hyalinobatrachium iaspidiense** (Ayarzagüena, 1992).
Type: EBD 28803.
Type locality: «Quebrada Jaspe, San Ignacio de Yuruaní. Edo. Bolívar, Venezuela».
Distribution: Surroundings of type locality.
Selected references: Ayarzagüena (1992); Señaris & Ayarzagüena (2004 “2002”).
 - *Hyalinobatrachium mondolfii** Ayarzagüena et Señaris, 2001.
Type: MHNLS 12710.
Terra typica: “Primer raudal del Caño Acoima, afluente del río Grande (8°22' N, 61°32' W), 15 msnm, estribaciones de la serranía de Imataca, estado Delta Amacuro”.
Distribution: forested slopes of Sierra de Imataca to the Orinoco Delta.
Selected references: Señaris & Ayarzagüena (2001-2004 “2002”).
 - *Hyalinobatrachium orientale** (Rivero, 1968).
Type: MCZ 72497.
Type locality: «Cerro Turumiquire, 1200 m., Estados Sucre-Monagas, Venezuela».
Distribution: Northeastern Venezuela, estados Monagas and Sucre.
Remarks: *Hyalinobatrachium orientale* must be a complex of taxa; the original species must be endemic.
Selected references: Ayarzagüena & Señaris (1996); Cannatella & Lamar (1986); Duellman (1997); Gorzula & Señaris (1998); Manzanilla *et al.* (1995); Rivero (1968b); Ruiz-Carranza & Lynch (1991); Señaris & Ayarzagüena (1993).
 - *Hyalinobatrachium pallidum** (Rivero, 1985).
Type: UPRM 4554.
Type locality: “Guacharaquita, entre La Grita y Páramo de La Negra, 1768 m., Estado Táchira, Venezuela”.
Distribution: Surroundings of type locality.
Selected references: Rivero (1985).
 - *Hyalinobatrachium taylori* (Goin, 1968).
Type: BM 1939.1.1.65.
Type locality: “750 ft. along the New River, Guyana”
Distribution: Widespread in the Venezuelan Guayana.
Selected references: Ayarzagüena (1992); Goin (1968); Gorzula & Señaris (1998); Noonan & Bonet (2003); Ruíz-Carranza & Lynch (1991); Señaris & Ayarzagüena (1993).
- Family *Dendrobatidae* Cope, 1865 (1850).
Remarks: Darst & Cannatella (2004) reject the previous statement that *Dendrobatidae* was part of *Ranoidea*, falling into *Hylloidea*.
- Genus *Aromobates* Myers, Paolillo et Daly, 1991.
- *Aromobates nocturnus** Myers, Paolillo et Daly, 1991.
Type: AMNH 130005.
Type locality: “cloud forest at 2250 m. elevation, about 2 km. airline ESE Agua de Obispos, Estado Trujillo, Venezuela (9°42' N, 70°05' W)”.

Distribution: Known only from the type locality.
 Remarks: Apparently highly endangered, not found in its type locality since its original discovery. Several parties have failed in finding the species.

Selected references: Barrio-Amorós (2001c); Barrio & Fuentes (1999a); Myers *et al.* (1991).

Genus *Colostethus* Cope, 1866.

Remarks: The systematics of this paraphyletic genus is controversial, with many phenetic groups defined, including poor supported genus, such as *Nephelobates* La Marca (1991 "1994"); which I do not include here because its non-definitory external characters. A most comprehensive phylogeny is needed than Vences *et al.* (2003) for supporting such taxa. The common name of this non-poisonous paraphyletic assemblage should be no more "poison frogs" (as in La Marca *et al.* 2002), but the more used "Rocket frogs".

• *Colostethus alboguttatus** (Boulenger, 1903).

Type: BM 1947.2.13.88.

Type locality: «Mérida, Estado Mérida, Venezuela, a 1600 m.».
 Distribution: Andes of estado Mérida.

Remarks: Rivero (1982a) includes *Colostethus inflexus* Rivero, 1978 in the synonymy of *C. alboguttatus*. La Marca (1997) revive the species as *Nephelobates inflexus*, without further explanation. We do not take this in count until this action will be clarified.

Selected references: Barrio & Fuentes (1999a); Boulenger (1903); Ginés (1959); La Marca (1991a"1994"-1991b"1994"-1992); Mijares & La Marca (1997); Myers *et al.* (1991); Péfaur (1985); Piñero & La Marca (1996); Rivero (1961-1963b-1978-1988).

• *Colostethus ayarzaguenai** La Marca, 1996.

Type: MHNLS 12949.

Type locality: "Sector central del Cerro Jaua, Estado Bolívar (4°49'55"N-64°25'54"W)".

Distribution: Endemic to Cerro Jaua, a tepui in estado Bolívar.
 Selected references: Barrio-Amorós *et al.* (2005); La Marca (1996e).

• *Colostethus bromelicola** (Test, 1956).

Type: UMMZ 113027.

Type locality: «1310 m., on Pico Periquito, Rancho Grande, Estado Aragua, Venezuela».

Distribution: Surroundings of the type locality.

Selected references: Barrio & Fuentes (1999a); Ginés (1959); La Marca & Mijares-Urrútia (1997); Manzanilla *et al.* (1995); Myers *et al.* (1991); Rivero (1961-1964a-1988); Test (1956).

• *Colostethus brunneus** (Cope, 1887).

Syntypess: ANSP 11241-11261.

Type locality: "Chupada", Estado do Mato Grosso, Brazil.

Distribution: Cordillera de la Costa; southern Venezuela.

Remarks: Morales (2000) restricted the apparently Amazonian-wide distribution of this species to the south of Amazonas river. Thus, the classic Venezuelan localities would be not valid, and those specimens, pertaining to other, yet undescribed, species. However, due to the difficulty in understand this species

complex, I maintain at the moment the former nomenclature. Also, has been mentioned two disjunct populations in Venezuela, one south of the Orinoco (Amazonian) and other from the Coastal range, which has been announced to be a different taxa several years ago by La Marca (1996e).

Selected references: Barrio-Amorós *et al.* (2004); Ginés (1959); La Marca (1996e); Manzanilla *et al.* (1995); Morales (1994); Rivero (1961-1964a-1964b-1964d-1988); Tello (1968).

• *Colostethus capurinensis** Péfaur, 1993.

Type: CVULA IV.1063

Type locality: "Páramo El Molino, vía Canaguá, Sierra Nevada, 2420m, Distrito Arzobispo Chacón, Municipio Libertad, Estado Mérida, Venezuela".

Distribution: Known from the type locality.

Selected references: Péfaur (1993).

• *Colostethus dunni** (Rivero, 1961).

Type: FMNH 35987.

Type locality: "Caracas, Distrito Federal, Venezuela".

Distribution: Cordillera de la Costa.

Selected references: Myers *et al.* (1991); Rivero (1961-1964a-1988); Tello (1968).

• *Colostethus durante** (Péfaur, 1985).

Type: CVULA IV-1608.

Type locality: "Páramo de La Culata, Distrito Libertador, Estado Mérida, Venezuela, 2880 m."

Distribution: Surroundings of type locality.

Selected references: Mijares & La Marca (1997); Myers *et al.* (1991); Péfaur (1985); Rivero (1988).

• *Colostethus fuliginosus* (Jiménez de la Espada, 1871).

Syntypess: MNCN 276.

Type locality: Ecuador; "ad nemores pagi S. Jose de Moti", Cantón de Quijos, Provincia Napo, Ecuador.

Distribution: Extreme southern Venezuela.

Remarks: The presence of this species in Venezuela must be in error (L. Coloma, pers. com).

Selected references: Barrio-Amorós *et al.* (2004); Barrio & Fuentes (1999a); McDiarmid & Paolillo (1988); Rivero (1988).

• *Colostethus guanayensis** La Marca, 1996e.

Type: MHNLS 10708.

Type locality: "Alto río Parguaza, Serranía de Guanay (5°55'N y 66°23'W), Estado Amazonas [in error= Estado Bolívar]".

Distribution: Endemic to Guanay, a tepui in estado Amazonas.
 Remarks: Considered by Gorzula & Señaris (1998) as pertaining to Group IV of Rivero (1988), which is a lapsus, as it pertains to Group VI.

Selected references: Barrio-Amorós *et al.* (2004); Gorzula & Señaris (1998); La Marca (1996e).

• *Colostethus haydeae** (Rivero, 1976).

Type: UPRM 4706.

Type locality: «El Vivero, entre Páramo El Zumbador y Mesa del Aura, 2570 m., Estado Táchira, Venezuela».

Distribution: Andes of estado Táchira.

Selected references: La Marca (1991a»1994"); Mijares & La Marca (1997); Myers *et al.* (1991); Rivero (1976-1988).

- *Colostethus humilis** Rivero, 1978.
Type: UPRM 3526.
Type locality: “Boconó (Laguneta artificial del Ministerio de Agricultura), Edo. Trujillo, 1470 m., Venezuela”.
Distribution: Eastern slopes of Venezuelan Andes, in estados Trujillo, Barinas and Táchira.
Selected references: Barrio-Amorós & García Porta (2003); La Marca *et al.* (2002); Myers *et al.* (1991); Rivero (1978-1988).
- *Colostethus leopardalis** Rivero, 1976.
Type: UPRM 5157.
Type locality: “Mucubají, 3300 m., Edo. Mérida, Venezuela”.
Distribution: Surroundings of type locality.
Remarks: Not seen for the last years, probably very endangered.
Selected references: Barrio-Amorós (2001c); La Marca (1991b); Mijares-Urrútia (1991); Myers *et al.* (1991); Rivero (1976-1988).
- *Colostethus mandelorum** (Schmidt, 1932).
Type: FMNH 17788.
Type locality: «Monte Turumiquire, 2630 m., Estados Sucre y Monagas, Venezuela».
Distribution: Endemic to Monte Turimiquire, a mountain in Cordillera de la Costa Oriental, estados Monagas-Sucre.
Selected references: Ginés (1959); Hardy (1984); La Marca (1993); Myers *et al.* (1991); Rivero (1961-1982a-1988); Schmidt (1932).
- *Colostethus* aff. *marchesianus* (Melin, 1941).
Syntypes: NHMG 509.
Type locality: “Taracuá, Río Vaupés, Brazil”.
Distribution: Known from Cerro Marahuaka (probably at its base), a tepui in estado Amazonas.
Remarks: The animals reported by Morales (1994) are not exactly *C. marchesianus*, but very close, probably a new species (Caldwell *et al.* 2002). However, the type locality of the species is close of the Venezuelan southern border; the possibility of its presence is high.
Selected references: Caldwell *et al.* (2002); Morales (1994); Rivero (1988).
- *Colostethus mayorgai** (Rivero, 1978).
Type: UPRM 5160.
Type locality: “El Chorotal (El Sirenal), Carretera Mérida a La Azulita, 1800 m., Edo. Mérida, Venezuela”.
Distribution: Surroundings of type locality.
Selected references: Barrio-Amorós (2001c); La Marca (1991a”1994”); La Marca & Mijares (1988); Mijares & La Marca (1997); Myers *et al.* (1991); Rivero (1978-1988).
- *Colostethus meridensis** Dole et Durant, 1972.
Type: MBUCV 6168.
Type locality: «Chorotal, 15 km. al SE de La Azulita, 1880 m., Estado Mérida, Venezuela».
Distribution: Surroundings of type locality.
Selected references: Barrio-Amorós (2001c); Dole & Durant (1972); La Marca (1991a”1994”); Mijares & La Marca (1997); Myers *et al.* (1991); Rivero (1988).
- *Colostethus molinarii** (La Marca, 1985).
Type: CVULA 2820.
Type locality: «Las Playitas, 2270 m., near Bailadores (8°15’N, 71°50’W), Estado Mérida, Venezuela».
Distribution: Surroundings of type locality.
Selected references: Barrio & Fuentes (1999); La Marca (1985-1991a”1994”); Mijares & La Marca (1997); Myers *et al.* (1991); Rivero (1988).
- *Colostethus murisipanensis** La Marca, 1996.
Type: MHNLS 11385.
Type locality: Murisipan-tepui (05°53’N y 62°04’W), estado Bolívar, Venezuela, 2350 m.s.n.m.
Distribution: Endemic to Murisipán, a tepui in estado Bolívar.
Selected references: Barrio-Amorós *et al.* (2004); Gorzula & Señaris (1998); La Marca (1996e).
- *Colostethus orostoma** (Rivero, 1976).
Type: UPRM 4509.
Type locality: “Boca del Monte, Camino del Pregonero, 2615 m., Estado Táchira, Venezuela”.
Distribution: Known at the type locality.
Selected references: La Marca (1991a”1994”); Mijares & La Marca (1997); Péfaur (1985); Rivero (1976-1988).
- *Colostethus parimae** La Marca, 1996.
Type: ULABG 4221.
Type locality: Pista Constitución (02°13’49”N y 63°20’00’W) en las cercanías del Cerro Delgado Chalbaud, [Estado Amazonas, Venezuela], 670 msnm.
Distribution: Known only at the type locality.
Selected references: Barrio-Amorós *et al.* (2004); La Marca (1996e).
- *Colostethus parkerae** Meinhardt et Parmelee, 1996.
Type: KU 167332.
Type locality: “km 112, El Dorado-Santa Elena de Uairén road (06°01’N, 61°24’W; 860m), Estado Bolívar, Venezuela”
Distribution: La Escalera, estado Bolívar.
Selected references: Barrio-Amorós *et al.* (2004); Duellman (1997); Gorzula & Señaris (1998); La Marca (1996e); Meinhardt & Parmelee (1996).
- *Colostethus praderioi** La Marca, 1996.
Type: ULABG 4196.
Type locality: Monte Roraima, tercera quebrada a partir de la base (5°10’N y 60°47’W). Parque Nacional Canaima, sector Oriental (Gran Sabana), estado Bolívar, Venezuela. 1950 msnm.
Distribution: Endemic to Roraima, a tepui in estado Bolívar.
Selected references: Barrio-Amorós *et al.* (2004); La Marca (1996e).
- *Colostethus roraima** La Marca, 1996.
Type: ULABG 4197.
Type locality: “Paso de la Muerte”, 60-70 m antes de la cumbre del tepuy, en el camino “La Rampa”, que conduce desde la base a la cima del Monte Roraima, Estado Bolívar, Venezuela. 2700 msnm.
Distribution: Endemic to Roraima, a tepui in estado Bolívar.
Selected references: Barrio-Amorós *et al.* (2004); La Marca (1996e).

- *Colostethus saltuensis** Rivero, 1978.

Type: UPRM 5147.

Type locality: “de la Fría a Michelena, Edo. Táchira, Venezuela, 830 m.”

Distribution: Know at the type locality.

Selected references: Myers *et al.* (1991); Péfaur (1985); Rivero (1978-1988).

- *Colostethus sanmartini** Rivero, Langone et Prigioni, 1986.

Type: MHNM 540.

Type locality: Las Majadas, río Orinoco, estado Bolívar, Venezuela.

Distribution: Known at the type locality.

Selected references: Barrio-Amorós *et al.* (2004); La Marca (1996e); Myers *et al.* (1991); Rivero (1988); Rivero *et al.* (1986).

- *Colostethus serranus** (Péfaur, 1985).

Type: CVULA: IV-2847.

Type locality: “El Morro, Distrito Libertador, Estado Mérida, Venezuela, 2300 m.”

Distribution: Surroundings of type locality.

Selected references: Mijares & La Marca (1997); Myers *et al.* (1991); Péfaur (1985); Rivero (1988).

- *Colostethus shrevei** (Rivero, 1961).

Type: MCZ 28567.

Type locality: Monte Marahuaca (1524-1829 m.), Estado Amazonas, Venezuela.

Distribution: Cerros Duida and Marahuaca, estado Amazonas.

Selected references: Barrio-Amorós *et al.* (2004); La Marca (1996e); Rivero (1961-1964b-1967a-1988).

- *Colostethus tamacuarensis** Myers et Donnelly, 1997.

Type: AMNH 131347.

Type locality: “North base of Pico Tamacuari, 1160-1200 m elevation. Sierra Tapirapécó, Amazonas, Venezuela (1°13'N-64°42'W)”.

Distribution: Known at the type locality.

Selected references: Barrio-Amorós *et al.* (2004); Myers & Donnelly (1997).

- *Colostethus tepuyensis** La Marca, 1996.

Type: ULABG 2557.

Type locality: “entre Danto y Piñón, a casi una hora caminando desde Danto, en el trayecto desde Kamarata hasta las laderas del Auyán-tepui, Estado Bolívar, Venezuela, 1650 msnm”.

Distribution: Endemic to Auyan tepui, a tepui in estado Bolívar.

Selected references: Barrio-Amorós *et al.* (2004); La Marca (1996e); La Marca *et al.* (2002); Grant *et al.* (1997).

- *Colostethus triunfo* Barrio-Amorós, Fuentes et Rivas, 2004.

Type: EBRG 4756.

Type locality: “summit of Cerro Santa Rosa, serranía del Supamo, 685 m, 6°40'39" N, 62°24'26" W, Estado Bolívar, Venezuela”.

Distribution: Known at Cerro Santa Rosa summit and slopes.

Selected references: Barrio-Amorós *et al.* (2004)

- *Colostethus undulatus** Myers et Donnelly, 2001.

Type: EBRG 3021.

Type locality: “forest stream on Cerro Yutajé, 1750 m (5°46'N, 66°08'W), Amazonas, Venezuela”.

Distribution: Endemic to Yutajé, a tepui in estado Amazonas.

Selected references: Barrio-Amorós *et al.* (2004); Myers & Donnelly (2001).

- *Colostethus wothuja** Barrio-Amorós, Fuentes et Rivas, 2004.

Type: MBUCV 6689.

Type locality: “base of Cerro Sipapo, Tobogán del Cuao, 150 m, 5°05'09" N, 67°27'07" W, Estado Amazonas, Venezuela”.

Distribution: Only known at the type locality.

Selected references: Barrio-Amorós *et al.* (2004)

Genus *Dendrobates* Wagler, 1830.

- *Dendrobates leucomelas* Steindachner, 1864. Sapito minero

Type: NHMW 19188.

Type locality: “Colombia”.

Distribution: Widespread south of the Orinoco (see map in Barrio & Fuentes 1999).

Selected references: Barrio & Fuentes (1998-1999a); Duellman (1997); Fuentes & Rodríguez-Acosta (1997); Ginés (1959); Gorzula & Señaris (1998); Gremone *et al.* (1986); Heatwole *et al.* (1965); Hoogmoed & Gorzula (1979); Paolillo (1977); Rivero (1961-1964b-1964d-1967a); Rivero *et al.* (1986); Rodríguez & Rojas-Suárez (1995); Señaris & Ayarzagüena (2004 “2002”); Silverstone (1975); Steindachner (1864); Walsh (1994).

Genus *Epipedobates* Myers, 1987.

- *Epipedobates guayanensis* Heatwole, Solano et Heatwole 1965

Type: MBUCV 3112.

Type locality: forest between Rancho Alegre and base of Altiplanicie [de Nuria], on trail to Quebrada Cabeza de Burro, 5 km east of Las Chicharras, 47 km north of Tumeremo. Altiplanicie de Nuria, 100-250 m [Estado Bolívar, Venezuela].

Distribution: Northeastern estado Bolívar.

Remarks: This species has been considered as a subspecies of *E. pictus*, until Schulte (1999) suggested it was a proper species. *Allobates femoralis* was mentioned from Venezuela on the basis of an *E. guayanensis* (Duellman 1997).

Selected references: Barrio & Fuentes (1999a); Duellman (1997); Gorzula & Señaris (1998); Gremone *et al.* (1986); Heatwole *et al.* (1965); Schulte (1999); Señaris & Ayarzagüena (2004 “2002”); Silverstone (1976); Walsh (1994).

- *Epipedobates rufulus** (Gorzula, 1988).

Type: MHNLS 10361.

Type locality: “porción central de Murey Tepui en el Macizo de Chimantá (Chimantá XVIII) 05°22'N-62°05'W. 2600 m., Estado Bolívar, Venezuela”.

Distribution: Endemic to Chimantá, a tepui in estado Bolívar.

Selected references: Barrio-Amorós (2001c); Barrio & Fuentes (1999a); Gorzula (1988-1992); Myers (1997); Walsh (1994).

- *Epipedobates trivittatus* (Spix, 1824).
Syntype: ZSM 43/0; RMNH 1836 (lectotipo).
Type locality: "iuxta flumen Teffé", Brazil.
Distribution: Northeastern estado Bolívar.
Remarks: Considered as *Phobobates* by Zimmermann & Zimmermann (1988), and subject of controversy until the definite phylogenetic resolution by Vences *et al* (2003).
Selected references: Barrio & Fuentes (1999a); Gorzula (1991); Gorzula & Señaris (1998); Señaris & Ayarzagüena (2004 "2002"); Walsh (1994); Zimmermann & Zimmermann (1988).

- Genus *Mannophryne* La Marca, 1992.
Remarks: A poorly defined genus. I consider it due to its apparent synapomorphies.

- *Mannophryne caquetio** Mijares et Arends, 1999.
Type: EBRG 3570.
Type locality: "toma de agua de Mapararí, Municipio Federación, Sierra de Churuguara, estado Falcón, Venezuela (aprox. 10° 47' N, 69° 25' W), 800 m."
Distribution: Apparently endemic from Sierra de Churuguara, estado Falcón.
Selected references: Mijares & Arends (1999b).

- *Mannophryne collaris** (Boulenger, 1912).
Syntype: BM 1947.2.14.29-39, BM 1947.2.14.40-42.
Type locality: "Mérida, 5200 feet, and Río Albarregas [Albarregas], 11300 feet, Venezuela".
Distribution: Andes of Venezuela.
Selected references: Barrio (1996a); Barrio & Fuentes (1999a); Boulenger (1912); Dole & Durant (1974b); Durant & Dole (1975); Ginés (1959); La Marca (1991c"1994"-1992-1994a-1995a-1995b); Myers *et al.* (1991); Péfaur (1987); Péfaur & Díaz de Pascual (1982-1987); Rivero (1961-1963b-1988); Röhl (1959).

- *Mannophryne cordilleriana** La Marca, 1994.
Type: ULABG 763.
Type locality: «Presa Hidráulica Jose Antonio Páez, 1600 m, near La Mitusús on road Santo Domingo-Barinas, Estado Mérida, Venezuela».
Distribution: Surroundings of type locality.
Selected references: La Marca (1994a-1995b).

- *Mannophryne herminae** (Boettger, 1893).
Type: Probablemente SMF 7286, *vide* Edwards, 1974.
Type locality: "Puerto Cabello in Venezuela".
Distribution: Cordillera de la Costa.
Selected references: Alemán (1952); Boettger (1893); Ginés (1959); Gremone *et al.* (1986); La Marca (1991c"1994"-1992-1994a-1995b); Lutz (1927); Manzanilla *Et Al.* (1995); Mertens (1957b); Myers *et al.* (1991); Rivero (1961-1964a-1988); Schmidt (1932); Sexton (1960); Stejneger (1901); Test (1962).

- *Mannophryne lamarcai** Mijares et Arends, 1999.
Type: EBRG 3281.
Terra typica: Cerro Sopocó, 30 km SW de Guajiro, Municipio Mauroa, estado Falcón, Venezuela (10° 28' N, 70° 48' W), 1250 m.
Distribution: Known from the type locality.
Selected references: Barrio & Fuentes (1999a); Mijares & Arends (1999a).

- *Mannophryne larandina** (Yústiz, 1991).
Type: UCLA 0087.
Type locality: "Hato Arriba, Distrito Morán, Sierra de Barbacoas, 1800 msnm.". Estado Lara, Venezuela.
Distribucion: Surroundings of type locality.
Selected references: Mijares & Arends (1999); Yústiz (1991).

- *Mannophryne neblina** (Test, 1956).
Type: UMMZ 113001.
Type locality: Paso Portachuelo (900-1000 m.), Estado Aragua, Venezuela.
Distribution: Cordillera de la Costa.
Selected references: Ginés (1959); La Marca (1991c"1994"-1994a-1995b); Manzanilla *et al.* (1995); Myers *et al.* (1991); Rivero (1961-1964a-1988).

- *Mannophryne oblitterata** (Rivero, 1984).
Type: UPRM 3492.
Type locality: "Carretera de Sta. Teresa a Higuerote, 10 km. hacia abajo del cruce Santa Teresa-Altigracia, 150 m., Edo. Miranda, Venezuela".
Distribution: Endemic to Guatopo, in the Interior Coastal Range.
Remarks: *Colostethus guatopoensis* Dixon et Rivero-Blanco, 1985 is a synonym of *M. oblitterata*.
Selected references: Dixon & Rivero-Blanco (1985); La Marca (1991c"1994"-1992-1994a-1995b); Myers *et al.* (1991); Rivero (1984a-1988).

- *Mannophryne riveroi** (Donoso-Barros, 1964).
Type: CDS 307.
Type locality: "Cerro Azul, Macuro", Estado Sucre, Venezuela.
Distribution: Endemic of peninsula de Paria, estado Sucre.
Selected references: Donoso-Barros (1964); La Marca (1991c"1994"-1994a-1995b); Myers *et al.* (1991); Rivero (1967c-1968a-1988).

- *Mannophryne trinitatis* (Gorman, 1887).
Syntypes: BM 1947.2.14.23-24; UMMZ 47218; MCZ 2181.
Type locality: "Trinidad".
Distribution: Cordillera de la Costa.
Remarks: We doubt about the presence of *M. trinitatis* out of the island of Trinidad. Kaiser *et al.* (2003) demonstrate that the karyotypes of *M. trinitatis* from near Caracas and from Trinidad are dissimilar.
Selected references: Alemán (1952); Frost (1985-2002); Ginés (1959); Gremone *et al.* (1986); Kaiser *et al.* (2003); La Marca (1991c"1994"-1992-1994a-1995b); Myers *et al.* (1991); Praderío & Robinson (1990); Rada (1976); Rivero (1961-1963c-1964a-1988); Sexton (1960); Test (1962-1963); Wells (1980).

- *Mannophryne yustizi** (La Marca, 1989).
Type: CVULA: IV-2842.
Type locality: "14 km. SSE Sanare, on stream along road Sanare-Parque Nacional Yacambú, 1475 m., (ca. 9°43' N; 69°39' W), Distrito Jiménez, Estado Lara, Venezuela".
Distribution: Surroundings of the type locality.
Selected references: La Marca (1989-1992-1994a-1995b); Myers *et al.* (1991); Yústiz (1996).

Genus *Minyobates* Myers, 1987.

Remarks: Erected for those small dendrobatids (less than 20 mm) with piperidine alkaloids, commonly pumiliotoxins-A; with no teeth, finger I shorter than II, usually aposematic with bright colors, cephalic amplexus; and aquatic larvae in bromelias. After some discussion Vences *et al.* (2003) finally demonstrated that *Minyobates* is a valid genus with only one species, *M. steyermarki*. All other former *Minyobates* are retained currently in *Dendrobates*.

• *Minyobates steyermarki** (Rivero, 1971).

Type: UPRM 3399.

Type locality: «Cerro Yapacana, 1200 m. Territorio Federal Amazonas, Venezuela».

Distribution: Endemic to Yapacana, a tepui in estado Amazonas. Selected references: Barrio & Fuentes (1999a); Gorzula & Señaris (1998); Gremone *et al.* (1986); Rivero (1971c); Rodríguez & Rojas-Suárez (1995); Silverstone (1975); Vences *et al.* (2000-2003); Walsh (1994).

Family *Hylidae* Rafinesque, 1815.

Remarks: Maximum likelihood phylogram of Darst & Cannatella (2004) show that the family as currently understood is polyphyletic.

The genus *Cryptobatrachus* Ruthven, 1916 is known from the Perijá mountains, western Venezuela, and the species is being described by the author and T. Barros.

Subfamily *Hemiphractinae* Peters, 1862.

Genus *Flectonotus* Miranda-Ribeiro, 1920

• *Flectonotus fitzgeraldi* (Parker, 1933).

Type: BM 1947.2.22.41.

Type locality: "Mt. Tucuche, Trinidad".

Distribution: Península de Paria (and Trinidad).

Selected references: Duellman & Gray (1983); Duellman & Maness (1980); Duellman *et al.* (1988).

• *Flectonotus pygmaeus* (Boettger, 1893).

Lectotype: SMF 2679.

Type locality: "Puerto Cabello, Estado Carabobo, Venezuela". Distribution Cordillera de la Costa; the specimens from the Venezuelan and Colombian Andes actually represent a different species, which is being described by Barrio-Amorós and J. M. Guayasamín.

Selected references: Boettger (1893); Duellman & Gray (1983); Duellman & Maness (1980); Duellman *et al.* (1988); Lutz (1927); Manzanilla *et al.* (1995); Mertens (1967); Mijares-Urrútia & Arends (1993); Péfaur & Díaz de Pascual (1987); Rivero (1961-1964a-1971a); Yústiz (1996).

Genus *Gastrotheca* Fitzinger, 1843.

Remarks: Darst & Cannatella (2004), using 12S and 16S mitochondrial DNA sequences, show that *Gastrotheca* could be very close phylogenetically to the subfamily Telmatobiinae of Leptodactylidae.

• *Gastrotheca helenae* Dunn, 1944.

Type: MLS (Bogotá, Colombia) 268.

Type locality: Paramo de Tamá, Departamento Norte de Santander, Colombia.

Distribution: Endemic of páramo de Tamá, between Colombia and Venezuela.

Selected references: Duellman (1980-1989b); Duellman *et al.* (1988); Duellman & Ruíz-Carranza (1986).

• *Gastrotheca nicefori* Gaige, 1933.

Type: UMMZ 73242.

Type locality: Pensilvania, Departamento Caldas, Colombia.

Distribution: Venezuelan Andes.

Selected references: Duellman (1980-1989b); Duellman *et al.* (1988); La Marca (1991b»1994", 1992).

• *Gastrotheca ovifera** Lichtenstein et Weinland, 1854.

Type: ZMB 3073.

Type locality: Puerto Cabello, Carabobo, Venezuela.

Distribution: Cordillera de la Costa.

Selected references: Barrio (1999b); Barrio-Amorós (1998-2001); Duellman (1980); Duellman *et al.* (1988); Ginés (1959); La Marca (1995a); Lutz (1927); Manzanilla & Sánchez (2003); Manzanilla *et al.* (1995); Mertens (1957a-1957b-1967); Rivero (1961-1964a-1964d); Tello (1968); Weinland (1854).

*Gastrotheca walkeri** Duellman, 1980.

Type: UMMZ 117177.

Type locality: «entre la Estación Biológica Rancho Grande y Paso Portachuelo, Estado Aragua, Venezuela, 1100 m.».

Distribution: Cordillera de la Costa.

Selected references: Barrio (1999c); Duellman (1980); Duellman *et al.* (1988); Manzanilla *et al.* (1995).

• *Gastrotheca williamsoni** Gaige, 1922.

Type: UMMZ 55559.

Type locality: San Esteban, Carabobo, Venezuela.

Distribution: Known from the type locality.

Remarks: Not collected again since its description. Or it is extremely rare, or has disappeared, of *G. walkeri* is a junior synonym. A review of this species is needed to clarify the taxonomic and conservation situation.

Selected references: Duellman (1980); Duellman *et al.* (1988); Gaige (1922); Ginés (1959); Lutz (1927); Rivero (1961-1964a); Rohl (1959).

• *Gastrotheca yacambuensis** Yústiz, 1976.

Type: MBUCO 6015.

Type locality: "Quebrada El Cedral, Parque Nacional Yacambú, ladera Sur de Sierra Portuguesa, Estado Lara, Venezuela, 1700m".

Distribution: Surroundings of the type locality.

Remarks: Duellman (1989b) synonymize *G. yacambuensis* with *G. nicefori*, but without referring his reasons. Although we believe that it is very probably true, a more formal statement is needed in order to accept this decision.

Selected references: Duellman (1989b); Yústiz (1976a-1976b-1996).

Genus *Stefania* Rivero, 1968 “1966”.

- *Stefania breweri** Barrio-Amorós et Fuentes, 2003.

Type: MBUCV 6574.

Type locality: “summit of Cerro Autana (Wahari Kuaway), near the north ridge (4° 52' N, 67° 27' W), 1250 m elevation, Municipio Atures, Estado Amazonas, Venezuela”.

Distribution: Endemic to Autana, a tepui in estado Amazonas.

Selected references: Barrio-Amorós & Fuentes (2003).

- *Stefania ginesi** Rivero, 1968 “1966”.

Type: FMNH 74041.

Type locality: “Chimanta-Tepui, Venezuela, rock outcrops near E. branch of headwater Río Tirica, 7300 ft.”.

Distribution: Endemic to Chimantá, a tepui in estado Bolívar.

Selected references: Barrio-Amorós & Fuentes (2003); Duellman & Hoogmoed (1984); Gorzula (1992); Gorzula & Señaris (1998); Rivero (1966-1967c-1970); Señaris *et al.* (1996).

- *Stefania goini** Rivero, 1968 “1966”.

Type: AMNH 23193.

Type locality: “Vegas Falls, Mte. Duida, Amazonas, Venezuela, 4600 ft.”

Distribution: Endemic from Duida and Huachamakari, tepuis in estado Amazonas.

Selected references: Barrio-Amorós & Fuentes (2003); Duellman & Hoogmoed (1984); Rivero (1966-1967c-1970); Señaris *et al.* (1996).

- *Stefania marahuacensis** (Rivero, 1961).

Type: MCZ 285566.

Type locality: Caño Cajú, Cerro Marahuaca, Estado Amazonas, Venezuela, 1200m.

Distribution: Endemic of Duida and Marahuaca, tepuis in estado Amazonas.

Selected references: Barrio-Amorós & Fuentes (2003); Duellman & Hoogmoed (1984); Rivero (1961-1964b-1970); Señaris *et al.* (1996).

- *Stefania oculosa** Señaris, Ayarzagüena et Gorzula, 1996.

Type: MHNLS 12961.

Type locality: “Tepuy Jaua, Estado Bolívar, Venezuela (04°49'55"N-64°25'59"W). 1600 m.s.n.m.”.

Distribution: Endemic to Jaua, a tepui in estado Bolívar.

Selected references: Barrio-Amorós & Fuentes (2003); Señaris *et al.* (1996).

- *Stefania percristata** Señaris, Ayarzagüena et Gorzula, 1996.

Type: MHNLS 12952.

Type locality: “Tepuy Jaua, Estado Bolívar, Venezuela (04°49'55"N-64°25'59"W). 1600 m.s.n.m.”.

Distribution: Endemic to Jaua, a tepui in estado Bolívar.

Selected references: Barrio-Amorós & Fuentes (2003); Señaris *et al.* (1996).

- *Stefania riae** Duellman et Hoogmoed, 1984.

Type: KU 174688.

Type locality: «Cerro Sarisariñama, 1400 m., Estado Bolívar, Venezuela».

Distribution: Endemic to Sarisariñama, a tepui in estado Bolívar.

Selected references: Barrio-Amorós & Fuentes (2003); Duellman & Hoogmoed (1984); Señaris *et al.* (1996).

- *Stefania riveroi** Señaris, Ayarzagüena et Gorzula, 1996.

Type: MHLNS 10413.

Type locality: Yuruaní-tepui, Estado Bolívar, Venezuela (05°19'N-60°51'W). 2300 m.s.n.m.

Distribution: Endemic to Yuruaní, a tepui in estado Bolívar.

Selected references: Barrio-Amorós & Fuentes (2003); Gorzula & Señaris (1998); Señaris *et al.* (1996).

- *Stefania satelles** Señaris, Ayarzagüena et Gorzula, 1996.

Type: MHNLS 10433.

Type locality: “Aprada-tepui I, Estado Bolívar, Venezuela (05°24'N-62°27'W). 2500 msnm”.

Distribution: Endemic to several small tepuis in estado Bolívar: Aprada-tepui, Angasima-tepui (Adanta), Upuigma-tepui (El Castillo).

Selected references: Barrio-Amorós & Fuentes (2003); Gorzula (1992); Gorzula & Señaris (1998); Señaris *et al.* (1996).

- *Stefania scalae* Rivero, 1970.

Type: MCZ 64373.

Type locality: “La Escalera, road between El Dorado and Sta. Elena de Uairén, around 1200m., Estado Bolívar, Venezuela”.

Distribution: Spread in uplands of eastern estado Bolívar.

Remarks: *Stefania evansi* was considered part of the Venezuelan batrachofauna, especially because *S. scalae* was synonymized with *S. evansi* by Duellman & Hoogmoed (1984). However, as Barrio-Amorós & Fuentes (2003) pointed out, after the resurrection of *S. scalae* by Señaris *et al.* (1996), there is no further reason to believe that *S. evansi* inhabits Venezuela, although is a very probable species to occur.

Referencia: Barrio-Amorós & Fuentes (2003); Duellman (1997); Duellman & Hoogmoed (1984); Gorzula & Señaris (1998); Gorzula *et al.* (1983); Rivero (1970); Señaris *et al.* (1996).

- *Stefania schuberti** Señaris, Ayarzagüena et Gorzula, 1996.

Type: MHNLS 12917.

Type locality: Sector este, cima del Auyan-tepui, Estado Bolívar, Venezuela (05°53'36"N-62°29'12"W), 1750 msnm.

Distribution: Endemic to Auyan tepui, a tepui in estado Bolívar.

Selected references: Barrio-Amorós & Fuentes (2003); Señaris *et al.* (1996).

- *Stefania tamacuarina** Myers et Donnelly, 1997.

Type: AMNH 131428.

Type locality: “camp on ridge north Pico Tamacuari, 1270 m elevation, Sierra Tapirapecó, Amazonas, Venezuela (1°13'N-64°42'W)”.

Distribution: Apparently endemic of Serranía Tapirapecó; possibly also in the Brazilian side.

Selected references: Barrio-Amorós & Fuentes (2003); Myers & Donnelly (1997).

Subfamily *Hylinae* Rafinesque, 1815.

Genus *Aparasphenodon* Miranda-Ribeiro, 1920.

• *Aparasphenodon venezolanus* (Mertens, 1950).

Type: SMF 22168.

Type locality: San Fernando de Atabapo, Estado Amazonas, Venezuela.

Distribution: Amazonian lowlands of Venezuela and nearby Colombia and Brazil.

Selected references: Ginés (1959); Mertens (1950-1967); Paolillo & Cerda (1981); Rivero (1961-1964b).

Genus *Hyla* Laurenti, 1768.

Remarks: Clearly a non monophyletic genus, especially expressed by a maximum parsimony phylogram by Darst & Cannatella (2004).

• *Hyla alemani** Rivero, 1964.

Type: MHNLS 238.

Type locality: Cagua, Estado Aragua, Venezuela.

Distribution: Cordillera de la Costa.

Selected references: Manzanilla *et al.* (1995); Mijares-Urrútia (1992); Rivero (1964d-1967c).

• *Hyla amicorum** Mijares-Urrútia, 1998.

Type: USNM 216677

Terra typica: Cerro Socopó, 84 km al NO de Carora, estado Falcón, Venezuela (10°28'N, 70°48'O).

Distribution: Known from its type locality.

Selected references: Mijares-Urrútia (1998).

• *Hyla aromatica** Ayarzagüena et Señaris, 1993.

Type: MHNLS 12510

Type locality: «Cumbre del Tepuy Huachamacari, Estado Amazonas, Venezuela (03°50'N-65°45'O) 1700 msnm».

Distribution: Endemic to Huachamacari, a tepui in estado Amazonas.

Selected references: Ayarzagüena & Señaris (1993).

• *Hyla battersbyi** Rivero, 1961.

Type: BM 53.2.4.165.

Type locality: Caracas, Venezuela.

Distribution: Surroundings of the type locality.

Remarks: Not collected again since its original description. Possibly disappeared because the quick expansion of Caracas.

Selected references: Rivero (1961-1964a).

• *Hyla benitezi* Rivero, 1961.

Type: MCZ 28564.

Type locality: Caño Wanadi, Cerro Marahuaca, Estado Amazonas, Venezuela.

Distribution: Western Guayana uplands and highlands.

Remarks: A vicariant species from eastern Guayana uplands is being described by Barrio-Amorós and Brewer-Carías.

Selected references: Donnelly & Myers (1991); Gorzula & Señaris (1998); Heyer (1994b); Rivero (1961-1964b-1967a-1971b).

• *Hyla boans* (Linnaeus, 1758).

Type: ZIUU 27. Neotype: RMNH 16603, Brownsweeg, Brokopondo, Surinam.

Type locality: "America".

Distribution: Widespread in Southern Venezuela (Amazonas, Bolívar and Delta Amacuro to as far north as Península de Paria). Also in the eastern piedmont of the Venezuelan Andes.

Selected references: Arrington & Arrington (2000); Barrio-Amorós (1999g-2001a); Donnelly & Myers (1991); Duellman (1971a-1997); Ginés (1959); Gorzula & Señaris (1998); Gremone *et al.* (1986); Heatwole *et al.* (1965); Hoogmoed (1990b); Lynch & Suárez-Mayorga (2001); Magdefrau *et al.* (1991); Rivero (1961-1964b-1967a).

• *Hyla calcarata* Troschel, 1848.

Type: desconocido.

Type locality: "British Guiana".

Distribution: Widespread in Southern Venezuela, in Amazonas, Bolívar and Delta Amacuro.

Selected references: Donnelly & Myers (1991); Duellman (1973); Señaris & Ayarzagüena (2004 "2002"); Señaris & Barrio (2002).

• *Hyla cinerascens* Spix 1824.

Type: not designated; syntypes: ZSM 2498/0 (2 specimens), destroyed.

Type locality: "Ecga prope flumen Teffe" (= Ega, Tefé), Amazonas, Brazil.

Distribution: Widespread in Southern Venezuela, in Amazonas, Bolívar and Delta Amacuro. Populations in northern Venezuela remain to be confirmed.

Remarks: Placed in the synonymy of *Hyla granosa* by Hoogmoed & Gruber (1983) waiting for a formal application to the International Commission for Zoological Nomenclature. This never happened, and thus, *H. cinerascens* has priority on *H. granosa*. All literature references refer to *H. granosa*.

Selected references: Boulenger (1882); Duellman (1974a-1997); Frost (2004); Gorzula & Señaris (1998); Hoogmoed (1979a); Hoogmoed & Gruber (1983); Rivero (1961-1964b-1964d-1967c-1971b).

• *Hyla crepitans* Wied-Neuwied, 1824.

Type: AMNH 785.

Type locality: Tamburil, Jiboya and Areal da Conquista, Bahia, Brazil.

Distribution: Widespread in the country, from 0 to 2300 m.

Remarks: Is clear that this species is a complex, and many forms called to date *H. crepitans* in Venezuela are indeed different taxa. We are aware of at least four different populations that should deserve full species status.

Selected references: Alemán (1952-1953); Barrio (1996a); Boettger (1892-1893-1896); Boulenger (1903); Donoso-Barros & León- Ochoa (1972); Duellman (1997); Ginés (1959); Gorzula & Señaris (1998); Günther (1858); Heatwole *et al.* (1965); Hoogmoed & Gorzula (1979); La Marca (1991b"1994"-1992-1996a); Lutz (1927); Lynch & Suárez-Mayorga (2002); Magdefrau *et al.* (1991); Manzanilla *et al.* (1995); Péfaur y Díaz De Pascual (1987); Péfaur & Pérez (1995); Rada (1981); Ramo & Busto (1989-1990); Rivero (1961-1963c-1964a-1964b-1964c-1964d-1967a-1971a); Rivero & Esteves (1969); Rivero-Blanco & Dixon (1979); Rohlf (1959); Staton & Dixon (1977); Tello (1968); Yústiz (1996).

- *Hyla geographica* Spix, 1824.
Type: ZSM 35/0 (perdido)
Type locality: Río Tefé, Amazonas, Brasil.
Distribution: Widespread in southern and eastern Venezuela.
Selected references: Azevedo-Ramos (1995); Duellman (1971a-1973-1997); Gorzula & Señaris (1998); Hoogmoed & Gorzula (1979); Gremone *et al.* (1986); Günther (1858); Lutz (1927); Lynch (1979b); Rivero (1961); Spix (1824).
- *Hyla hobbsi* Cochran et Goin, 1970.
Type: MCZ 28052.
Type locality: “Cano Goacayá, a tributary of the Río Apaporis, in Amazonas, Colombia”.
Distribution: Known in Venezuela from extreme southern Amazonas state.
Selected references: Cochran & Goin (1970); Duellman (1974a); Mcdiarmid & Paolillo (1988); Pyburn (1978).
- *Hyla inparquesi** Ayarzagüena et Señaris, 1993.
Type: MHNLS 12338.
Type locality: «Cumbre del Tepuy Marahuaca Sur, Estado Amazonas, Venezuela (3°40'N-65°27'O) 2600 m.s.n.m.”
Distribution: Endemic to Marahuaca, a tepui in estado Bolívar.
Selected references: Ayarzagüena & Señaris (1993).
- *Hyla jahni** Rivero, 1961.
Type: UMMZ 46465.
Type locality: Escorial, Estado Mérida, Venezuela.
Distribution: Andes of estado Mérida.
Selected references: Duellman (1989a); La Marca (1985a-1991b»1994”); Rivero (1961-1963b).
- *Hyla lanciformis* (Cope, 1870).
Type: unknown.
Type locality: “Pebas, Ecuador”.
Distribution: Amazonia, eastern slopes of the Andes, southern slopes of Cordillera de la Costa, península de Paria.
Subspecies: *Hyla lanciformis guerreroi* was described by Rivero (1971) for the Venezuelan form. I strongly doubt about the validity of any subspeciation in this species..
Selected references: Barrio *et al.* (1999); Duellman (1971a-1973); Gorzula & Señaris (1998); Péfaur & Díaz de Pascual (1987); Rivero (1971a).
- *Hyla lascinia* Rivero, 1969.
Type: MCZ 65901.
Type locality: Tabor, por encima de Delicias, Páramo de Tamá, Táchira, Venezuela.
Distribution: Andes of Venezuela.
Selected references: Duellman (1989a); Rivero (1969d).
- *Hyla lemai** Rivero, 1971.
Type: UPRM 3179.
Type locality: “Paso del Danto, La Escalera, entre El Dorado y Santa Elena de Uairen, 1300-1400 m., Serranía de Lema, estado Bolívar, Venezuela”.
Distribution: Eastern Guayana uplands.
Selected references: Duellman (1997); Rivero (1971b).
- *Hyla loveridgei** Rivero, 1961.
Type: MCZ 28565.
Type locality: Pico Culebra, Cerro Duida, Estado Amazonas, Venezuela.
Distribution: Known from its type locality.
Selected references: La Marca & Smith (1982b); Rivero (1961-1963d-1964b-1971b).
- *Hyla luteocellata** Roux, 1927.
Type: NHMB 3900.
Type locality: «El Mene, Provincia Falcón, Venezuela».
Distribution: Endemic to the Andes and Cordillera de la Costa.
Selected references: Duellman & Crump (1974); Ginés (1959); Rivero (1961-1963c-1969c-1971a); Roux (1927); Yústiz (1996).
- *Hyla marmorata* (Laurenti, 1768).
Type: unknown.
Type locality: “Surinam”.
Distribution: Amazonian lowlands.
Selected references: Bokermann (1964); Rivero (1961-1964b).
- *Hyla meridensis** (Rivero, 1961).
Type: MCZ 2527.
Type locality: “Mérida, 1630 m.”
Distribution: Andes of estado Mérida.
Remarks: M. Kaplan and C. Barrio-Amorós have in progress a review of the *Hyla labialis* group.
Selected references: Duellman (1989a); La Marca (1991b”1994”-1992); Mijares-Urrutía (1990b); Rivero (1961-1963b-1964d).
- *Hyla microcephala* Cope, 1886.
Type: USNM 13473 (lost).
Type locality: “Chiriquí”, Panamá.
Distribution: Widespread in open areas of northern Venezuela.
Selected references: Duellman (1974a-1997); Duellman & Fouquette (1968); Fouquette (1968); Gorzula & Señaris (1998); Heatwole *et al.* (1965); Hoogmoed & Gorzula (1979); Lutz (1927); Rada (1981); Rivero (1961-1963c-1964d); Rivero-Blanco & Dixon (1979); Staton & Dixon (1977); Yústiz (1996).
- *Hyla minuscula* Rivero, 1971.
Type: UPRM 3377.
Type locality: Nirgua, Estado Yaracuy, Venezuela.
Distribution: Widespread in Venezuela, from Los Llanos to the Amazonian lowlands.
Selected references: Duellman (1997); Gorzula & Señaris (1998); Hoogmoed & Gorzula (1979); Ramo & Busto (1989-1990); Rivero (1971a); Rivero-Blanco & Dixon (1979).
- *Hyla minuta* Peters, 1872.
Syntypes: ZMB 7456.
Type locality: Nova Friburgo, Rio de Janeiro, Brasil.
Distribution: Widespread in Venezuela.
Remarks: Although non demonstrated yet, *H. minuta* can be a complex of species in Venezuela.

Selected references: Donnelly & Myers (1991); Duellman (1997); Gorzula & Señaris (1998); Heatwole *et al.* (1965); Hoogmoed & Gorzula (1979); Magdefrau *et al.* (1991); Rivero (1961-1964b-1971b); Rivero & Esteves (1969).

• *Hyla multifasciata* Günther, 1858.

Type: BM 1947.2.23.6

Type locality: “Para”, Brasil.

Distribution: Eastern Venezuela.

Remarks: The presence of *Hyla raniceps* in Venezuela was based in misidentifications of *H. multifasciata* and *H. lanciformis*.

Selected references: Duellman (1997); Gorzula & Señaris (1998); Hoogmoed & Gorzula (1979); Rivero (1961-1964a-1967a).

• *Hyla ornatissima* Noble, 1923.

Type: AMNH 13491.

Type locality: “Meamu, Mazarumi river, Guyana”.

Distribution: Known in Venezuela from a couple of localities, one in the Gran Sabana, another from Surumoni river (Amazonas), at the canopy. Lynch and Vargas (2000) report it from Guanfa, Colombia, in a close locality from Venezuela. The species must be present in rainforest lowlands through southern Venezuela.

Selected references: Señaris & Vernet (1997); Hoogmoed (1979a).

• *Hyla parviceps* Boulenger, 1882.

Type: BM 1947.2.13.5

Type locality: “Sarayacú”, Provincia Pastaza, Ecuador.

Distribution: Southern Venezuela.

Selected references: Magdefrau *et al.* (1991); Schlüter & Magdefrau (1991).

• *Hyla pelidna* Duellman, 1989.

Type: KU 181109.

Type locality: “Betania (07°30'N, 72°27'W, 2220 m.), Estado Táchira, Venezuela”.

Distribution: Andes of Táchira.

Remarks: M. Kaplan and C. Barrio-Amorós have in progress a review of the *Hyla labialis* group.

Selected references: Duellman (1989a).

• *Hyla platydactyla** Boulenger, 1905.

Type: BM 1947.2.13.14.

Type locality: “Merida, Andes of Venezuela”.

Distribution: Andes of Venezuela.

Selected references: Boulenger (1905); Duellman (1972a-1979b-1989a); Ginés (1959); La Marca (1985a-1991b”1994”-1994c); Péfaur & Díaz de Pascual (1987); Rivero (1961-1963b-1969d).

• *Hyla pugnax* Schmidt, 1857.

Type: KM 1009.

Type locality: “Chiriquí, Flusse unneit Bocca (*sic!*) del Toro”

Distribution: Maracaibo lake basin, Llanos (A. Chacón, pers. com). Probably widespread in open and lowlands of Venezuela and confounded in many places with *H. crepitans*.

Selected references: Chacón (2001); La Marca (1996a); Lynch & Suárez-Mayorga (2001).

• *Hyla punctata* (Schneider, 1799).

Syntypes: NHRM 155 (two individuals)

Type locality: “Surinam”.

Distribution: Widespread in open and lowlands of Venezuela, except in the Maracaibo lake basin.

Selected references: Barrio *et al.* (2000); Duellman (1974a); Gorzula & Señaris (1998); Hoogmoed (1972-1979a).

• *Hyla rufitela* Fouquette, 1961.

Type: FMNH 13053.

Type locality: Barro Colorado Island, Canal de Panamá, Panamá.

Distribution: A few localities all along Caribbean coastal range and Maracaibo Lake basin.

Remarks: This species was confused in all previous lists of Venezuelan Amphibians with *H. albomarginata*, a species found in southeastern Brazil. I compared with the kind help of José Rosado from MCZ (Harvard) the Venezuelan specimen MZC 15369 with *Hyla albomarginata* from southern Brasil and with *H. rufitela* from Panamá and I only can conclude that it is conspecific with the last. Life Venezuelan animals are required to confirm the distinctive living coloration of Central American *H. rufitela*.

Selected references: The following references refer to *H. rufitela* as *H. albomarginata*, with the exception of Fouquette (1968). Ginés (1959); Lutz (1927); Rivero (1961); Tello (1968); Spix (1824).

• *Hyla rythmica** Señaris et Ayarzagüena, 2002.

Type: MHNLS 12957.

Type locality: “Cerro Jaua, Parque nacional Jaua-Sarisariñama, Bolívar state, Venezuela (4°49'55”N, 64°25'54”W), 1600 m”.

Distribution: Endemic to Cerro Jaua, a tepui in estado Bolívar. Remarks: The original specific name of the species was masculine (*Hyla rythmicus*); *Hyla* is a feminine genus; thus, following the article 31b of the Code of Zoological Nomenclature, it must be treated as feminine.

Selected references: Señaris & Ayarzagüena (2002).

• *Hyla sarayacuensis* Shreve, 1935.

Type: MCZ 19729.

Type locality: “Sarayacu, Provincia Pastaza, Ecuador”.

Distribution: Reported in Venezuela from extreme southern Amazonas state.

Selected references: Duellman (1974a); McDiarmid & Paolillo (1988).

• *Hyla sibleszi** Rivero, 1971.

Type: UPRM 3177.

Type locality: “Paso del Danto, La Escalera, entre El Dorado y Santa Elena de Uairén, 1300-1400 m., Serranía de Lema, Estado Bolívar, Venezuela”.

Distribution: Eastern Guayana uplands.

Selected references: Duellman (1997); Gorzula (1992); Gorzula & Señaris (1998); Hoogmoed (1979a); Rivero (1971b).

• *Hyla vigilans* Solano, 1971.

Type: MBUCV IV-6163

Type locality: km. 20 de la carretera entre Coloncito y El Vigía, estado Zulia [Error=Mérida], Venezuela.

Distribution: Maracaibo Lake basin, Llanos, eastern foothills of Venezuelan Andes to Falcón state.

Remarks: We doubt about the generic assignation of this species. It has been also called *Ololygon* by La Marca in Frost (1985). The senior author along with A. Díaz de Pascual and A. Chacón is working on the final assignment.Selected references: Barrio (1996a); Frost (1985); La Marca (1992); Mijares & Hero (1997); Mijares *et al.* (1998); Solano (1971); Suárez-Mayorga & Lynch (2001).• *Hyla wavrini* Parker, 1936.

Type: MRHN 1028.

Type locality: "Upper Orinoco, in the province of Amazonas, Venezuela".

Distribution: Southern Venezuela.

Selected references: Ginés (1959); Gorzula & Señaris (1998); Hoogmoed (1990); La Marca (1992); Parker (1936); Rivero (1961-1967a-1967c).

• *Hyla yaracuyana** Mijares-Urrútia et Rivero, 2000.

Type: EBRG 3311.

Type locality: Los Bacos, Municipio Bolívar, Sierra de Aroa, estado Yaracuy, Venezuela.

Distribution: Endemic to Sierra de Aroa, estado Yaracuy.

Selected references: Mijares-Urrútia et Rivero (2000).

Genus *Osteocephalus* Steindachner, 1862.• *Osteocephalus buckleyi* (Boulenger, 1882).

Lectotype: BM 1947.2.13.44.

Type locality: "Canelos", Ecuador.

Distribution: Amazonian lowlands.

Selected references: Boulenger (1882); Trueb & Duellman (1971).

• *Osteocephalus cabrerai* (Cochran et Goin, 1970).

Type: USNM 152759.

Terra typica: Caño Guacayá, tributario del bajo río Apaporis, Amazonas, Colombia.

Distribution: Amazonian lowlands to Delta of the Orinoco.

Remarks: I report the species in Santa María de Erebató, upper Caura river basin, as the first report for Estado Bolívar, but no specimen was collected. The slides in Fundación AndígenA (FA 123-7) serve as vouchers.

Selected references: Cochran & Goin (1970); Duellman & Mendelson (1995); Gorzula & Señaris (1998); Señaris & Ayarzagüena (2004 "2002"); Trueb & Duellman (1971).

• *Osteocephalus leprieurii* (Dumeril et Bibron, 1841).

Type: MNHNP 4629.

Type locality: "Cayenne", Guayana Francesa.

Distribution: Amazonian lowlands to Gran Sabana.

Remarks: *Osteocephalus ayarzagüenai* Gorzula et Señaris (1996) is a synonym (Jüngfer & Hödl 2002).

Selected references: Barrio & Fuentes (2000a); Duellman (1997); Gorzula & Señaris (1996-1998); Jüngfer & Hödl (2002); Rivero (1971a); Trueb & Duellman (1971).

• *Osteocephalus taurinus* Steindachner, 1862.

Type: NHMW 16492.

Type locality: Barra do Rio Negro, Manaus, Amazonas, Brasil.

Distribution: Widespread in southern Venezuela.

Selected references: Donnelly & Myers (1991); Duellman (1997); Ginés (1959); Gorzula & Señaris (1998); Rivero (1961-1964b); Trueb & Duellman (1971).

Genus *Phrynohyas* Fitzinger, 1843.• *Phrynohyas resinifictrix* (Goeldi, 1907).

Type: BM 1947.2.23.24.

Type locality: "Mission of San Antonio do Prata, at the River Maracanã", Brasil.

Distribution: Amazonian lowlands and Delta of the Orinoco.

Selected references: Mcdiarmid & Paolillo (1988); Señaris & Ayarzagüena (2004 "2002").

• *Phrynohyas venulosa* (Laurenti, 1768).

Type: desconocido.

Type locality: "America".

Distribution: Widespread in lowland Venezuela.

Selected references: Barrio (1996a); Duellman (1956-1971b-1997); Hoogmoed & Gorzula (1979); Lutz (1927); Ramo & Busto (1989-1990); Rivero (1961-1964a-1964b-1964c-1964d); Rivero & Esteves (1969); Rivero-Blanco & Dixon (1979); Rohl (1959); Staton & Dixon (1977); Tello (1968); Yústiz (1996).

Genus *Pseudis* Wagler, 1830.• *Pseudis paradoxa* (Linnaeus, 1758).

Syntypes: MHRM 114-148.

Type locality: Surinam.

Distribution: Widely distributed in lowland Venezuela.

Remarks: The family Pseudidae was recently passed to subfamily of Hylidae by Duellman (2001) and supported by Haas (2003) based in larval characters. Darst & Cannatella (2004), however, link *Pseudis* with *Scarthyla* and thus, with hylinae frogs.Selected references: Barrio (1996a); Ginés (1959); Gorzula & Señaris (1998); Gremone *et al.* (1986); Heatwole *et al.* (1965); Hoogmoed & Gorzula (1979); Lutz (1927); Ramo & Busto (1989-1990); Rivero (1961-1964a); Rivero & Esteves (1969); Staton & Dixon (1977).Genus *Scinax* Wagler, 1830.Remarks: The International Code of Nomenclature (1999) resolved arbitrarily by Art. 30.1.4.2 that the gender of *Scinax* is masculine, after a controversy (see Duellman & Wiens 1992, Kohler & Bohme 1996, Frost 2002, and Kwet 2001).• *Scinax baumgardneri** (Rivero, 1961).

Type: MCZ 28563.

Type locality: Casa de Julián, entre Tapara y Caño Chana, 609 m., Estado Amazonas, Venezuela.

Distribution. Amazonian Venezuela.

Selected references: Barrio-Amorós *et al.* (2004); Duellman (1997); Duellman & Wiens (1992); Fouquette & Delahoussaye (1977); Rivero (1961-1964b).

• *Scinax boesemani* (Goin, 1966).

Type: RMNH 12601.

Type locality: Zanderij, Distrito Surinam, Surinam.

Distribution: Southern Venezuela.

Selected references: Barrio-Amorós *et al.* (2004); Duellman (1986-1997); Duellman & Wiens (1992); Goin (1966); Gorzula & Señaris (1998); Rivero (1971b).

• *Scinax danae** (Duellman, 1986).

Type: KU 167073.

Type locality: “km. 127 on El Dorado-Santa Elena de Uairen Road, Estado de Bolívar, Venezuela, 1250 m.(05°57’N, 61°27’W)”.

Distribution: Eastern Venezuela.

Selected references: Barrio-Amorós *et al.* (2004); Duellman (1986-1997); Duellman & Wiens (1992); Gorzula & Señaris (1998).

• *Scinax exiguus** (Duellman, 1986).

Type: KU 167094.

Type locality: “km. 144 on the El Dorado-Santa Elena de Uairen Road in the Gran Sabana, Estado Bolívar, Venezuela, 1210 m.(05°53’N, 61°23’W)”.

Distribution: Eastern Venezuela.

Selected references: Barrio-Amorós *et al.* (2004); Duellman (1986-1997); Duellman & Wiens (1992); Gorzula & Señaris (1998).

• *Scinax garbei* (Miranda-Ribeiro, 1926).

Type: MZUSP 277.

Type locality: Eirunepé, rio Juruá, Amazonas, Brasil.

Distribution: 4.

Selected references: Duellman (1970-1972b).

• *Scinax kennedyi* (Pyburn, 1973).

Type: UTA A-3697.

Type locality: Alrededor de 110 millas ESE de Puerto Gaitán, Departamento Meta, Colombia).

Distribution: Southern Venezuela.

Selected references: Duellman & Wiens (1992); Pyburn (1973).

• *Scinax manriquei* Barrio-Amorós, Orellana et Chacón, 2004.

Type: CVULA IV-1094.

Type locality: Mesa Quintero, Guaraque, estado Mérida, Venezuela, 1700 m.

Distribution: Andes of Venezuela.

Remarks: I consider *Scinax flavidus* (La Marca 2004) as junior synonym; this will be demonstrated and explained elsewhere else. Selected references: Barrio-Amorós *et al.* (2004), Nieto-Castro (1999).

• *Scinax nebulosus* (Spix, 1824).

Neotype: MN 4055.

Type locality: “in sylvis prope flumen Teffé”, Amazonas, Brasil.

Distribution: Eastern Venezuela.

Selected references: Barrio-Amorós *et al.* (2004), Duellman (1997); Duellman & Wiens (1992).

• *Scinax rostratus* (Peters, 1863).

Type: ZMB 3175.

Type locality: Caracas, Venezuela.

Distribution: Widespread in lowland Venezuela.

Remarks: A complex of species, involving at least three different ones. C. Barrio-Amorós have in progress a review of Venezuelan *Scinax*.

Selected references: Duellman (1970-1972b-1997); Duellman & Wiens (1992); Fouquette & Delahoussaye (1977); Ginés (1959); Hero & Mijares (1995); Rivero (1961-1964a-1964b-1967a-1968g); Tello (1968); Yústiz (1996).

• *Scinax ruber* (Laurenti, 1768).

Type: not traced; neotype: RMNH 15922B.

Type locality: “America”. Neotype from Paramaribo, Surinam.

Distribution: Eastern Venezuela.

Remarks: Distribution of this species has been confused with that of *S. aff. x-signatus*. According to our data, *S. ruber* is confined in Venezuela to the eastern and northeastern part.

Selected references: Barrio-Amorós *et al.* (2004); Daudin (1803); Donoso-Barros (1966); Duellman (1972b-1979a-1986-1997); Duellman & Wiens (1992); Fouquette & Delahoussaye (1977); Ginés (1959); Gorzula (1985a); Günther (1858); Heatwole *et al.* (1965), Hoogmoed & Gruber (1983); Hoogmoed & Gorzula (1979); Kohler & Böhme, (1996); Rivero (1961-1964a-1964b-1967c-1968g-1969a).

• *Scinax trilineatus* Hoogmoed et Gorzula, 1979.

Type: RMNH 18257.

Type locality: 12 km SE from El Manteco, Estado Bolívar, Venezuela.

Distribution: Eastern Venezuela.

Remarks: *Scinax trilineatus* was synonymized with *S. fuscomarginatus* without explanation by Martins (1998). Until this statement will be proved, I do not follow it.

Selected references: Barrio-Amorós *et al.* (2004); Duellman (1986); Duellman & Wiens (1992); Gorzula & Señaris (1998); Hoogmoed & Gorzula (1979); Martins (1998).

• *Scinax wandae* (Pyburn et Fouquette, 1971).

Type: USNM 192305.

Terra typica: 12 km NNE of Villavicencio, Meta, Colombia, 580 m.

Distribution: Amazonian lowlands and eastern slopes of Andean Venezuela.

Selected references: Barrio & Fuentes (2003); Barrio & Chacón-Ortiz (2004); Barrio-Amorós *et al.* (2004); Pyburn & Fouquette (1971).

• *Scinax x-signatus* (Spix, 1824).

Type: ZSM 2494/0 (lost).

Type locality: Bahia, Brazil.

Distribution: Widespread in northern Venezuela.

Remarks: Probably *S. x-signatus* does not occur in Venezuela, where a complex of species, with at least three different taxainvolved. I have in progress a review of Venezuelan *Scinax*. Selected references: Barrio-Amorós *et al.* (2004); Duellman (1986-1997); Duellman & Wiens (1992); Fouquette & Delahoussaye (1977); Gorzula & Señaris (1998); Hoogmoed & Gorzula (1979); Hoogmoed & Gruber (1983); Kohler & Böhme, (1996); León-Ochoa (1975); Rada (1981); Ramo & Busto (1989-1990); Rivero (1969a); Spix (1824).

Genus *Sphaenorhynchus* Tschudi, 1838.

- *Sphaenorhynchus lacteus* (Daudin, 1802).

Type: MNHNP 4871.

Type locality: Brazil.

Distribution: Southern and Eastern Venezuela.

Selected references: Barrio & Rivero (1999b); Duellman (1997); Duellman & Lynch (1981); Hoogmoed & Gorzula (1979); Rivero (1961-1969b).

Genus *Tepuihyla* Ayarzagüena, Señaris et Gorzula, 1992.

- *Tepuihyla aecii** (Ayarzagüena, Señaris et Gorzula, 1992).

Type: MHNLS 12014.

Type locality: Cumbre Sur del Monte Duida, Estado Amazonas. Venezuela (3° 19'N- 65° 38'W). 2150 m.s.n.m.

Distribution: Endemic to Cerro Duida, a tepui in estado Amazonas.

Selected references: Ayarzagüena *et al.* (1992a-1992b).

- *Tepuihyla celsae** Mijares, Manzanilla et La Marca, 1999.

Type: EBRG 3424.

Terra typica: Cerro Galicia (11°10'N, 69°42'W), Curimagua, Sierra de San Luis, Municipio Miranda, estado Falcón, Venezuela, aproximadamente 1250 m.

Distribution: Known from its type locality (see remarks).

Remarks: The distribution of this species, known from preserved animals, and never seen alive by the descriptors, is doubtful. Most probably it comes from somewhere in the Guiana Shield, and was mislabeled.

Selected references: Mijares *et al.* (1999).

- *Tepuihyla edelcae** (Ayarzagüena, Señaris et Gorzula, 1992).

Type: MHNLS 10626.

Type locality: «Auyan-tepuy, 10,8 km. al este del Salto Angel. Estado Bolívar. Venezuela (5° 58'N-62° 29'W). 1970 msnm.»

Distribution: Endemic to Auyan tepui and Chimantá tepui, two sandstone massifs in estado Bolívar.

Selected references: Ayarzagüena *et al.* (1992a-1992b); Gorzula (1992); Gorzula & Señaris (1998).

- *Tepuihyla galani** (Ayarzagüena, Señaris et Gorzula, 1992).

Type: MHNLS 10608.

Type locality: «Sabanas del Talud del Guadacopiapuy-tepuy, cerca del Yuruaní-tepuy. Estado Bolívar. Venezuela. 1250 msnm.»

Distribution: Endemic to foothills of Guadacopiapuy tepui, in estado Bolívar.

Selected references: Ayarzagüena *et al.* (1992a-1992b); Gorzula & Señaris (1998).

- *Tepuihyla luteolabris** (Ayarzagüena, Señaris et Gorzula, 1992).

Type: MHNLS 9376.

Type locality: Tepuy Marahuaca Norte, Estado Amazonas. Venezuela. (3° 45'N-65° 30'W). 2550 m.s.n.m.

Distribution: Endemic to Marahuaca, a tepui in estado Amazonas.

Selected references: Ayarzagüena *et al.* (1992a-1992b).

- *Tepuihyla rimarum** (Ayarzagüena, Señaris et Gorzula, 1992).

Type: MHNLS 10646.

Type locality: “Ptari-tepuy. Estado Bolívar. Venezuela, (5° 47'N-61° 47'W), 2400 m.s.n.m.”

Distribution: Endemic to Ptari tepui, a tepui in estado Bolívar.

Selected references: Ayarzagüena *et al.* (1992a-1992b); Gorzula & Señaris (1998).

- *Tepuihyla rodriguezii** (Rivero, 1968).

Type: MCZ 64740.

Type locality: Paso del Danto, Región de La Escalera, entre El Dorado y Santa Elena de Uairén, 1300-1400 m., Serranía de Lema, Estado Bolívar, Venezuela.

Distribution: Gran Sabana, eastern Venezuela.

Selected references: Ayarzagüena *et al.* (1992a-1992b); Duellman (1997); Duellman & Yoshpa (1996); Gorzula & Señaris (1998); Rivero (1968d).

Subfamily *Phyllomedusinae* Günther, 1859 “1858”.

Genus *Phyllomedusa* Wagler, 1830.

- *Phyllomedusa bicolor* (Boddaert, 1772).

Type: desconocido.

Type locality: “Surinam” (*fide* Funkhouser, 1957).

Distribution: Widespread in southern Venezuela.

Selected references: Duellman (1968-1974b-1997); Funkhouser (1957); Ginés (1959); Gorzula & Señaris (1998); Heatwole *et al.* (1965); Rivero (1961-1964b); Röhl (1959).

- *Phyllomedusa hypocondrialis* (Daudin, 1802).

Type: desconocido.

Type locality: “Surinam”.

Distribution: Widespread in the country, in open areas.

Selected references: Duellman (1968-1974b-1997); Funkhouser (1957); Gorzula & Señaris (1998); Heatwole *et al.* (1965); Hoogmoed & Gorzula (1979); Pyburn & Glidewell (1971); Ramo & Busto (1989-1990); Rivas & Manzanilla (1999); Rivero (1961-1964b); Rivero-Blanco & Dixon (1979).

- *Phyllomedusa medinai** Funkhouser, 1962.

Type: EBRG 37.

Tera typica: “the biological station ‘Henri Pittier’”, Estado Aragua, Venezuela.

Distribution: Endemic to the surroundings of the type locality. Remarks: Barrio-Amorós (2001c) indicates that the species has been not sighted since 1973, and can be highly endangered or extinct.

Selected references: Barrio-Amorós (2001c); Cannatella (1980); Duellman (1968-1969-1979b); Funkhouser (1962); Manzanilla *et al.* (1995); Rivero (1967c).

- *Phyllomedusa tarsius* (Cope, 1868).

Type: USNM 6652; lost.

Type locality: “Rio Napo, or Upper Amazon, below the mouth of the former” (Loreto, Perú).

Distribution: Known from a few localities in the eastern foothills of the Venezuelan Andes.

Selected references: Duellman (1968-1974b-1997); Funkhouser (1957); La Marca (1996b).

- *Phyllomedusa tomopterna* (Cope, 1868).

Syntypes: USNM 6651 (dos individuos; extraviados).

Type locality: «Rio Napo, or Upper Amazon, below the mouth of the former», Departamento Loreto, Perú.

Distribution: Southern Venezuela.

Selected references: Barrio & Rivero (1999a); Cannatella (1980); Duellman (1968-1974b-1997); Funkhouser (1957).

- *Phyllomedusa trinitatis* Mertens, 1926.

Type: SMF 2633.

Type locality: “Port of Spain”, Trinidad.

Distribution: Northern Venezuela except Los Llanos.

Selected references: Duellman (1968-1974b); Funkhouser (1957-1962); Ginés (1959); Heatwole *et al.* (1965); Kenny (1966-1969); Manzanilla *et al.* (1995); Mertens (1926); Mijares-Urrútia & Arends (1993); Rivero (1961-1964a-1969c); Tello (1968).

- *Phyllomedusa vaillanti* Boulenger, 1882.

Type: BM 1947.2.22.34.

Type locality: “Santarem, Brasil”.

Distribution: Reported from extreme southern Venezuela.

Selected references: Duellman (1968-1974b); Funkhouser (1957), Macdiarmid & Paolillo (1988).

Family *Leptodactylidae* Werner, 1896 (1838).

Remarks: Darst & Cannatella (2004) show that the family is polyphyletic.

Subfamily *Ceratophryinae* Tschudi, 1838.

Genus *Ceratophrys* Wied-Neuwied, 1824.

- *Ceratophrys calcarata* Boulenger, 1890.

Type: No catalogado (BM).

Type locality: «Colombia».

Distribution: Maracaibo Lake basin, Falcón and Lara states; a disjunct population in the surroundings of Puerto Ayacucho.

Remarks: The presence of *C. cornuta* in Venezuela has been not confirmed, as no voucher is known.

Selected references: Boulenger (1890); Ginés (1959); La Marca (1986-1995a); Lutz (1927); Lynch (1982); Mijares-Urrútia & Arends (1993); Rivero (1961-1964b).

Subfamily *Eleutherodactylinae* Lutz, 1954.

Remarks: Considered formerly as a tribe within the subfamily Telmatobiinae.

Genus *Adelophryne* Hoogmoed et Lescure, 1984.

- *Adelophryne gutturosa* Hoogmoed et Lescure, 1984.

Type: BM 1983.1139.

Type locality: “between camp IV and V, northern slopes of Mount Roraima, Guyana (60°46’W, 5°17’N) 3000 feet (914 m.)”.

Distribution: Known from a few localities in Gran Sabana, eastern Venezuela.

Selected references: Ayarzagüena & Diego-Aransay (1985); Duellman (1997).

Genus *Craugastor* Cope, 1862.

- *Craugastor biporcatus** (W. Peters, 1863).

Type: ZMB 3330B.

Type locality: “Veragua”, in error for “norte de Venezuela”.

Distribution: Cordillera de la Costa (see a map in Barrio-Amorós & Kaiser, *in press*).

Remarks: The species name *Eleutherodactylus maussi* was changed by Savage & Myers (2002) for *E. biporcatus*. Crawford & Smith (2005) resurrected the genus *Craugastor* from subgenus level, based on its monophyly, including the *biporcatus* species group, which is mostly Centro-American, with only this species in Northern Venezuela.

Selected references: Barrio-Amorós & Kaiser (*in press*); Boettger (1893); Crawford & Smith (2005); Ginés (1959); Heatwole (1962); La Marca (1992); Lutz (1927); Lynch (1975b-1976); Manzanilla *et al.* (1996); Mertens (1967); Rivero (1961-1964a-1964d); Rivero & Mijares (2004); Savage & Myers (2002).

Genus *Dischidodactylus* Lynch, 1979.

- *Dischidodactylus colonnelloi** Ayarzagüena, 1983.

Type: MHNLS 9378

Type locality: “Cima del Tepui Marahuaca, Estado Amazonas, Venezuela. 2550 m”.

Distribution: Endemic to Cerro Marahuaca, a tepui in estado Amazonas.

Selected references: Ayarzagüena (1983).

- *Dischidodactylus duidensis** (Rivero, 1968).

Type: AMNH 23190.

Type locality: “summit at Vegas Falls, 4600 feet, Mt. Duida, Venezuela”.

Distribution: Endemic to Cerro Duida, a tepui in estado Amazonas.

Selected references: Lynch (1979a); Rivero (1968a-1971b).

Genus *Eleutherodactylus* Dumeril et Bibron, 1841.

Remarks: Clearly a paraphyletic group (Darst and Cannatella 2004).

Eleutherodactylus urichi has been mentioned many times from Venezuela (see Barrio-Amorós 1998 for a resumé), Kaiser *et al.* (1994) restricted the species distribution to Trinidad. Thus, I do not mention it anymore in the Venezuelan list. The specimens attributed to *E. urichi* in Venezuela remain without a proper identification.

- *Eleutherodactylus anolirex* Lynch, 1983.
Type: KV 168626
Type locality: "18.5km (by road) S Chitajá, Departamento de Norte de Santander, Colombia, 2850m".
Distribution: Páramo de Tamá, Táchira state.
Selected references: Lynch (1983).
- *Eleutherodactylus anotis** Walker et Test, 1955.
Type: UMMZ 109876.
Type locality: Little stream at Rancho grande, 1090 m, Estado Aragua, Venezuela.
Distribution: Cordillera de la Costa.
Selected references: Ginés (1959); Manzanilla *et al.* (1995); Rivero (1961-1964a); Walker & Test (1955).
- *Eleutherodactylus avius** Myers et Donnelly, 1997.
Type: AMNH 131481.
Type locality: "North base of Pico Tamacuari, 1160-1200 m elevation. Sierra Tapirapecó, Amazonas, Venezuela (1°13'N-64°42'W)".
Distribution: Endemic to sierra Tapirapecó, estado Amazonas.
Selected references: Myers & Donnelly (1997).
- *Eleutherodactylus bicumulus** (Peters, 1863).
Syntypes: ZMB 4899 (dos individuos).
Type locality: Caracas, Venezuela.
Distribution: Cordillera de la Costa.
Selected references: Ginés (1959); Lutz (1927); Lynch & La Marca (1993); Manzanilla *et al.* (1995); Rivero (1961-1964a); Tello (1968).
- *Eleutherodactylus boconoensis** Rivero et Mayorga, 1973.
Type: UPRM 4932.
Type locality: Páramo Guaramacal, Boconó, Estado Trujillo, Venezuela, 9400 feet.
Distribution: Andes of Venezuela: estado Trujillo.
Selected references: Duellman (1979b); Lynch (1976); Rivero (1982b); Rivero & Mayorga (1973).
- *Eleutherodactylus briceni** (Boulenger, 1903).
Syntypes: MCZ 3888 y 7601; NHMW 2287 (3 ejemplares); UMMZ 46471.
Type locality: «Merida, Venezuela, at an altitude of 1600 metres».
Distribution:
Selected references: Boulenger (1903); Ginés (1959); Lutz (1927); Lynch (1976); Rivero (1961-1983-1982c).
- *Eleutherodactylus cantitans** Myers et Donnelly, 1996.
Type: EBRG 3005.
Type locality: "summit of Cerro Yaví, 2150 m, Amazonas, Venezuela".
Distribution: Endemic to Cerros Yaví and Yutajé, a tepui in estado Amazonas.
Selected references: Myers & Donnelly (1996, 2001).
- *Eleutherodactylus cavernibardus** Myers et Donnelly, 1997.
Type: AMNH 131537.
Type locality: "North base of Pico Tamacuari, 1160-1200 m elevation. Sierra Tapirapecó, Amazonas, Venezuela (1°13'N-64°42'W)".
Distribution: Endemic to sierra Tapirapecó, estado Amazonas.
Selected references: Myers & Donnelly (1997).
- *Eleutherodactylus chlorosoma** Rivero, 1982.
Type: UPRM 4958.
Type locality: La Loma, entre el Zumbador y Queniquea, Estado Mérida, Venezuela, 2225 m.
Distribution: Andes of Venezuela.
Selected references: Rivero (1982c-1983).
- *Eleutherodactylus colostichos** La Marca et Smith, 1982.
Type: UMMZ 173044.
Type locality: «Páramo de los Conejos at the intersection of Quebrada Las Gonzales with the trail Manzano Alto-Las Gonzales, 2½ hours on foot from the water pipe line know as «Las Canalejas», Serranía del Norte, Estado Mérida, Venezuela».
Distribution: Páramos at Sierra de la Culata, estado Mérida.
Selected references: La Marca & Smith (1982).
- *Eleutherodactylus ginesi** (Rivero, 1964).
Type: MHNLS (MHNLS) 250, *vide* Frost (1985) y La Marca (1992).
Type locality: Laguna Mucubají, Estado Mérida, Distrito Rangel, Venezuela.
Distribution: Páramos at Sierra Nevada, estado Mérida.
Selected references: La Marca (1991b»1994"); Lynch (1976); Rivero (1964d-1967c-1982b-1983); Rivero & Mayorga (1973).
- *Eleutherodactylus incertus** (Lutz, 1927).
Type: Probably at MN, but not located, *vide* La Marca (1992).
Type locality: Mamo, near La Guaira, (Venezuela).
Distribution: Cordillera de la Costa.
Remarks: This species can be find in the literature as *E. anonymus*.
Selected references: La Marca (1992); Lutz (1927); Lynch (1976).
- *Eleutherodactylus johnstonei* Barbour, 1914.
Syntypes: MCZ 2759 (dos individuos).
Type locality: St George Parish, Grenada.
Distribution: Introduced in many cities and towns of Venezuela. See a resumé in Kaiser *et al.* (2002).
Selected references: Gorzula (1989); Gorzula & Señaris (1998); Hardy & Harris (1979); Kaiser *et al.* (2002); La Marca (1992); Rada (1981b).
- *Eleutherodactylus lancinii** Donoso-Barros, 1968.
Type: USNM 165604.
Type locality: "Apartaderos, Estado Mérida", Venezuela.
Distribution: Páramos at Sierra Nevada, estado Mérida.
Selected references: Donoso-Barros (1965-1968); Duellman (1979b); La Marca (1991b»1994"); La Marca & Smith (1982); Lynch (1976); Rivero (1967c-1982b); Rivero & Mayorga (1973).

- *Eleutherodactylus lentiginosus** Rivero, 1982.
Type: UPRM 6060.
Type locality: Guacharaquita, 1768 m., entre La Grita y Páramo de La Negra, Estado Táchira, Venezuela.
Distribution: Known from its type locality.
Selected references: Rivero (1982c).
- *Eleutherodactylus marahuaka** Fuentes et Barrio-Amorós, 2004.
Type: MBUCV 6637.
Type locality: summit of Cerro Marahuaka (N 03° 55' -W 65° 27'), aprox. 2450 m, estado Amazonas, Venezuela.
Distribution: Known from its type locality.
Selected references: Fuentes et Barrio-Amorós (2004).
- *Eleutherodactylus marmoratus* (Boulenger, 1900).
Type: BM 1947.2.16.92.
Type locality: “foot on mt. Roraima, 3500 feet”, Guyana.
Distribution: Lowlands and uplands in the Guayana Shield.
Selected references: Boulenger (1900); Ginés (1959); Lynch (1976-1980); Rivero (1961-1964b).
- *Eleutherodactylus melanoproctus** Rivero, 1982.
Type: UPRM 4407.
Type locality: km. 15 Delicias a Rubio, 1800 m., Estado Táchira, Venezuela.
Distribution: Cloud forests in estado Táchira.
Selected references: Rivero (1982c).
- *Eleutherodactylus memorans** Myers et Donnelly, 1997.
Type: AMNH 131466.
Type locality: “ridge N Pico Tamacuari, 1270 m elevation, Sierra Tapirapécó, Amazonas, Venezuela (1°13'N-64°42'W)”.
Distribution: Endemic to sierra Tapirapécó, estado Amazonas.
Selected references: Myers & Donnelly (1997).
- *Eleutherodactylus mondolfii** Rivero, 1982.
Type: UPRM 6082.
Type locality: Matamula, Municipio Delicias, 1120 m., Estado Táchira, Venezuela.
Distribution: Andes of estado Táchira.
Selected references: Rivero (1982c).
- *Eleutherodactylus nicefori* Cochran et Goin, 1970.
Type: USNM 147012.
Type locality: «Páramo del Almorzadero, Santander, Colombia».
Distribution: Páramo de Tamá, estado Táchira.
Selected references: La Marca (1992); Lynch (1981).
- *Eleutherodactylus paramerus** Rivero, 1982.
Type: UPRM 2926.
Type locality: Páramo de Santo Domingo, región de Mucuchíes, Estado Mérida, Venezuela, 3330 m.
Distribution: Páramos at Sierra Nevada, estado Mérida.
Selected references: Rivero (1982b).
- *Eleutherodactylus pedimontanus** La Marca 2004.
Type: ULABG 3221.
Type locality: Parque Nacional Chorro del Indio, 16.5 km in the road San Cristóbal-Macanilla, approx. 8 km SE of San Cristóbal, Municipio San Cristóbal, Estado Táchira, Venezuela.
Distribution: Eastern slopes of Andean Venezuela.
Selected references: La Marca (2004).
- *Eleutherodactylus pleurostriatus** Rivero, 1982.
Type: UPRM 4971.
Type locality: San Eusebio, La Carbonera, 2316 m., Estado Mérida, Venezuela.
Distribution: Surroundings of the type locality.
Selected references: Rivero (1982c-1983).
- *Eleutherodactylus prolixodiscus** Lynch, 1978.
Type: KU 132726.
Type locality: 30 km ENE de Bucaramanga, carretera a Cúcuta, Departamento Santander, Colombia, 2485 m.
Distribution: Andes of Táchira.
Selected references: Lynch (1978).
- *Eleutherodactylus pruvinatus** Myers et Donnelly (1996).
Type: EBRG 3006.
Type locality: “summit of cerro Yaví, 2150 m, Amazonas, Venezuela”.
Distribution: Endemic to Cerro Yaví, a tepui in estado Amazonas.
Selected references: Myers & Donnelly (1996).
- *Eleutherodactylus pulidoi** Rivero, 1982.
Type: UPRM 6085.
Type locality: Matamula, Municipio Delicias, 1120 m., Estado Táchira, Venezuela.
Distribution: Andes of Táchira.
Selected references: La Marca (1992); Rivero (1982c).
- *Eleutherodactylus pulvinatus* Rivero, 1968.
Type: MCZ 64741.
Type locality: “Paso del Danto, región de La Escalera around 1400 m. above San Isidro, road from El Dorado to Sta. Elena de Uairén, Estado Bolívar, Venezuela”.
Distribution: Gran Sabana in eastern Venezuela.
Selected references: Duellman (1997); Gorzula & Señaris (1998); Lynch (1976); Myers & Donnelly (1997); Rivero (1968c).
- *Eleutherodactylus reticulatus** Walker et Test, 1955.
Type: UMMZ 109872.
Type locality: Ladera del pico Periquito, 1275 m, Rancho grande, Estado Aragua, Venezuela.
Distribution: Cordillera de la Costa.
Selected references: Ginés (1959); Lynch (1976); Lynch & La Marca (1993); Rivero (1961-1964a); Walker & Test (1955).
- *Eleutherodactylus riveroi** Lynch et La Marca, 1993.
Type: AMNH 70599.
Type locality: Rancho Grande, Estado Aragua, Venezuela.
Distribution: Known at its type locality.
Selected references: Lynch & La Marca (1993).
- *Eleutherodactylus rozei** Rivero, 1961.
Type: MBUCV 2018.
Type locality: Curucuruma, Estado Aragua, Venezuela.
Distribution: Cordillera de la Costa.
Selected references: La Marca (1992); Lynch (1976-1979b); Lynch & La Marca (1993); Rivero (1961-1964a).

- *Eleutherodactylus stenodiscus** Walker et Test, 1955.
Type: UMMZ 109866.
Type locality: Pico Periquito, Rancho Grande, Estado Aragua, Venezuela.
Distribution: Cordillera de la Costa.
Selected references: Ginés (1959); Lynch (1976); Rivero (1961); Walker & Test (1955).
 - *Eleutherodactylus terraebolivaris** Rivero, 1961.
Type: MCZ 31062.
Type locality: Rancho grande, Estado Aragua (Venezuela).
Distribution: Cordillera de la Costa.
Selected references: Barrio (1996a); Heatwole (1963a); Lutz (1927); Lynch (1976-1979b); Rivero (1961-1964a-1964d); Tello (1968).
 - *Eleutherodactylus tubernasus** Rivero, 1982.
Type: UPRM 4349,
Type locality: Boca del Monte, Camino a Pregonero, 2393 m., Estado Mérida, Venezuela.
Distribution: Andes of Venezuela.
Selected references: Rivero (1982c).
 - *Eleutherodactylus turumiquirensis** Rivero, 1961.
Type: AMNH 22557.
Type locality: La Trinidad, Monte Turumiquire, in a cave at 1830 m approx. between Sucre and Monagas states, Venezuela.
Distribution: Apparently endemic of Turumiquire, a Mountain in the eastern part of the Coastal Range.
Selected references: La Marca (1992); Rivero (1961-1964a).
 - *Eleutherodactylus vanadisae** La Marca, 1984.
Type: CVULA 2805.
Type locality: «stream in cloud forest above Truchicultura La Mucuy, 2350 m., Sierra Nevada de Mérida, western Venezuela».
Distribution: Andes of estado Mérida.
Selected references: La Marca (1984b-1985a-1991b»1994”); Rivero (1982c).
 - *Eleutherodactylus vilarsi* (Melin, 1941).
Syntypes: NHMG 491 (two specimens).
Type locality: Taracúa, Rio Uapés, (Estado do Amazonas), Brasil.
Distribution: Widespread in southern Venezuela.
Remarks: A redescription of the species and a map of distribution will appear in Barrio-Amorós and Molina (in press).
Selected references: Barrio (1996a); Gorzula & Señaris (1998); La Marca (1992); Lynch (1975a-1976-1979b-1980); Melin (1941); Rivero (1961-1964b-1967a); Rivero *et al.* (1986).
 - *Eleutherodactylus yaviensis** Myers et Donnelly (1996).
Type: EBRG 3017.
Type locality: “summit of Cerro Yaví, 2150 m, Amazonas, Venezuela”.
- Distribution: Endemic to Cerros Yaví and Yutajé, tepuis in northern Amazonas state.
Selected references: Gorzula & Señaris (1998); Myers & Donnelly (1996, 2001).
 - *Eleutherodactylus yustizi** Barrio-Amorós et Chacón, 2004.
Type: CVULA IV 2150.
Type locality: Cerro Alto, La Soledad, estado Barinas, 1500 m.
Distribution: Eastern slopes of Andean Venezuela.
Selected references: Barrio-Amorós et Chacón (2004).
 - *Eleutherodactylus zeuctotylus* Lynch Et Hoogmoed, 1977.
Type: RMNH 17701.
Terra typica: “West slope, Vier Gebroeders Mountain, Sipaliwini, Nickerie District, Suriname”.
Distribution: Southern Venezuela.
Selected references: Lynch (1980); Lynch & Hoogmoed (1977).
- Subfamily *Leptodactylinae* Werner, 1896 (1838).
Genus *Adenomera* Fitzinger, 1867.
- *Adenomera andreae* Muller, 1923.
Type: ZSM 136/1911.
Type locality: “Peixeboi (a. d. Bragançabahn), Staat Pará, Brasilien”.
Distribution: South of the Orinoco and eastern slopes of Andean Venezuela.
Selected references: Heyer (1973-1977); Rivero *et al.* (1986).
 - *Adenomera hylaedactyla* (Cope, 1868).
Type: ANSP 2240.
Type locality: “From the Napo or upper Marañon River”, Perú.
Distribution: Southern Venezuela.
Selected references: Duellman (1997); Ginés (1959); Gorzula & Señaris (1998); Heyer (1973-1977); Rivero (1961-1963c-1964a-1964b-1964c-1967a); Rivero *et al.* (1986).
- Genus *Leptodactylus* Fitzinger, 1826.
- *Leptodactylus bolivianus* Boulenger, 1898.
Lectotype: MSNG 28875A.
Type locality: “Barraca”, Río Madidi, y “Misiones Mosetenes”, Bolivia; assigned to Barraca, Río Madidi, by lectotype designation-
Distribution: Widespread in lowland Venezuela.
Selected references: Alemán (1952); Duellman (1997); Ginés (1959); Heatwole *et al.* (1965); Hoogmoed & Gorzula (1979); Rivero (1961-1964a-1964b-1964c-1964d-1967a); Rivero *et al.* (1986); Staton & Dixon (1977); Tello (1968); Yústiz (1996).
 - *Leptodactylus colombiensis* Heyer, 1994.
Type: ICN 7409.
Type locality: Charalá, Virolín (=Inspección Policía Cañaverales), confluencia del río Cañaverales con el río Guillermo, vertiente occidental, 1600-1700 m, 6°13’N, 73°05’W, Santander, Colombia.
Distribution: Eastern slopes of Táchira state.
Selected references: Barrio & Chacón (2001); Heyer (1994a).

- *Leptodactylus diedrus* Heyer, 1994.
Type: UTA-A 3726.
Type locality: Vaupés, media milla NE de Timbó, aproximadamente 1°06'N, 70°01'W, Colombia.
Distribution: Southern Venezuela.
Remarks: The presence of *Vanzolinius discodactylus* in Venezuela was confused with *L. diedrus* (R. Heyer, in litt.).
Selected references: Heyer (1994a-1998).
- *Leptodactylus fragilis* (Brocchi, 1877).
Type: MNHNP 6316..
Type locality: “Tehuantepec, Oaxaca, Mexico”.
Distribution: Venezuela north of the Orinoco.
Remarks: Nomenclatorial history in Heyer & Dubois (1992) and Heyer (2002).
Selected References: Dubois & Heyer (1992); Heyer (1978-2002); Ramo & Busto (1989-1990); Staton & Dixon (1977).
- *Leptodactylus fuscus* (Schneider, 1799).
Neotype: MNHNP 680.
Type locality: not designed. Neotype from “Surinam”.
Distribution: Widespread in lowland Venezuela.
Selected references: Bogart (1974); Duellman (1997); Heyer (1978); Ginés (1959); Gorzula & Señaris (1998); Heatwole *et al.* (1965); Hoogmoed & Gorzula (1979); Magdefrau *et al.* (1991); Manzanilla *et al.* (1995); Péfaur y Díaz De Pascual (1987); Ramo & Busto (1989-1990); Rivero (1964a-1964b-1964c-1964d-1967a); Solano (1987a-1987b); Staton & Dixon (1977); Tello (1968).
- *Leptodactylus insularum* Barbour, 1906.
Type: MCZ 2424.
Type locality: Isla de San Miguel e Isla Saboga, Bahía de Panamá.
Distribution: Northern Venezuela.
Remarks: Considered synonym of *L. bolivianus* by Heyer (1968) and Savage (2002); Rivero (1967a, 1967c), however, found differences, as are the presence of one spine on the thumb in *L. bolivianus*, while there are two in *L. insularum*.
Selected references: Bogart (1974); Heyer (1968); Manzanilla *et al.* (1995); Rivero (1967a-1967c); Rivero *et al.* (1986); Savage (2002); Sexton (1962).
- *Leptodactylus knudseni* Heyer, 1972.
Type: LACM 72117.
Type locality: “Limoncocha, 0°24'S, 76°37'W, Provincia de Napo, Ecuador”.
Distribution: Southern Venezuela.
Selected references: Barrio (1996a); Gorzula & Señaris (1998); Hero & Galatti (1990); Heyer (1972-1979).
- *Leptodactylus labyrinthicus* (Spix, 1824).
Type: ZSM. Destruído.
Type locality: Rio de Janeiro, Brasil.
Distribution: Endemic from estados Anzoátegui, Monagas and Sucre, NE of the country.
Remarks: Has been doubted for a long time that the NE Venezuelan specimens could be the same *L. labyrinthicus* than in Brazil. R. Heyer (in litt.) confirms that he is naming the Venezuelan population.
Selected references: Gorzula & Señaris (1998); Gunther (1858); Heyer (1979); Pefaur & Sierra (1995); Spix (1824).
- *Leptodactylus leptodactyloides* (Andersson, 1945).
Type: NHRM, no number.
Type locality: Río Pastaza, E de Ecuador.
Distribution: Southern Venezuela.
Selected references: Duellman (1997); Heyer (1994).
- *Leptodactylus lithonaetes* Heyer, 1995.
Type: AMNH. 100656.
Type locality: “Amazonas, SW sector Cerro Yapacana, 600m, 3°57'N, 67°00'W”.
Distribution: Western Guayana shield.
Selected references: Donnelly & Myers (1991); Heyer (1995); Heyer & Heyer (2001).
- *Leptodactylus longirostris* Boulenger, 1882.
Type: BM 76.5.26.4.
Type locality: “Santarem”, Brasil.
Distribution: Southeastern Venezuela.
Selected references: Crombie & Heyer (1983); Donnelly & Myers (1991); Duellman (1997); Gorzula & Señaris (1998); Heyer (1978); Heyer & Heyer (2001); Magdefrau *et al.* (1991); Rivero (1971a).
- *Leptodactylus macrosternum* Miranda-Ribeiro, 1926.
Type: MZUSP 448.
Type locality: Bahia (Brazil).
Distribution: Northern Venezuela, in open areas.
Selected references: Dixon & Staton (1976); Gorzula & Señaris (1998); Hoogmoed & Gorzula (1979); La Marca (1992); Rada (1981); Ramo & Busto (1989-1990); Rivero (1967c); Staton & Dixon (1977).
- *Leptodactylus magistris** Mijares-Urrútia, 1997.
Type: EBRG 3284.
Terra typica: Cerro Socopó, cerca de 30 km (por carretera) al SO de Guajiro, Municipio Mauroa, estado Falcón, Venezuela.
Distribution: Known from its type locality.
Selected references: Mijares-Urrútia (1997).
- *Leptodactylus mystaceus* (Spix, 1824).
Lectotipo: ZSM 2504/0.
Type locality: Bahia, Brazil.
Distribution: Southern Venezuela; localities north of the Orinoco must be reviewed.
Selected references: Bogart (1974); Duellman (1997); Ginés (1959); Gorzula & Señaris (1998); Heyer (1978, 1983); Heatwole *et al.* (1965); La Marca (1992); Rivero (1961-1964b-1968e); Rivero *et al.* (1986); Roze (1964).
- *Leptodactylus ocellatus* (Linnaeus, 1758).
Type: NHRM (sin número).
Type locality: America.
Distribution: Northern Venezuela.

Remarks: This species has been (and is still being) confused with *L. macrosternum*.

Selected references: Bogart (1974); Heatwole *et al.* (1965); Rivero (1961-1964b-1964c-1964d); Tello (1968).

• *Leptodactylus pallidirostris* Lutz, 1930.

Lectotype: AL-MN 1829.

Type locality: "British Guiana; Kartabo".

Distribution: Widespread in lowland Venezuela.

Selected references: Most of the references dealing with *L. pallidirostris* were formerly on *L. podicipinus* and *L. wagneri* in Venezuela. Bogart (1974); Donnelly & Myers (1991); Ginés (1959); Gorzula & Señaris (1998); Heatwole *et al.* (1965); Heyer (1994); Hoogmoed & Gorzula (1979); Rivero (1961-1963c-1964a-1964b-1964c-1964d-1968e); Rivero & Esteves (1969); Rivero *et al.* (1986).

• *Leptodactylus pentadactylus* (Laurenti, 1768).

Type: perdido.

Type locality: "Indiis"; error.

Distribution: Southern Venezuela.

Selected references: Bogart (1974); Duellman (1997); Gorzula & Señaris (1998); Heatwole *et al.* (1965); Hero & Galatti (1990); Heyer (1979); Muedeking & Heyer (1976); Rivero (1964b-1964d-1969a).

• *Leptodactylus petersii* (Steindachner, 1864).

Type: Lost; formerly in the NMW.

Type locality: "Brazil, Amazonas".

Distribution: This species is confused with the rest of the *wagneri* complex, and thus, former localities can be wrong. Can be widespread in lowlands of all the country.

Selected references: Duellman (1997); Ginés (1959); Heatwole *et al.* (1965); Heyer (1994); Rivero (1963c-1964a-1964b-1964c-1964d-1971b).

• *Leptodactylus poecilochilus* (Cope, 1862).

Type: USNM 4347.

Type locality: Turbo, Antioquía, Colombia.

Distribution: Northern Venezuela.

Selected references: Heyer (1978); La Marca (1992); Rivero (1961-1963a-1963c-1964a-1971a); Rivero & Esteves (1969); Yústiz (1996).

• *Leptodactylus riveroi* Heyer et Pyburn, 1983.

Type: USNM 232400.

Type locality: "Colombia, Vaupés, Timbó, 01°06'S 70°01'W, elevation 170 m."

Distribution: Southern Venezuela.

Remarks: *Leptodactylus rhodomystax* was reported from Venezuela based on specimens of *L. riveroi*.

Selected references: Gorzula & Señaris (1998); Heyer & Pyburn (1983); Lima (1992); Rivero (1968e).

• *Leptodactylus rugosus* Noble, 1923.

Type: AMNH 1169.

Type locality: "Kaieteur Falls, British Guiana".

Distribution: Eastern Guayana uplands.

Selected references: Donnelly & Myers (1991); Duellman (1997); Ginés (1959); Gorzula & Señaris (1998); Heatwole *et al.* (1965); Heyer (1979-1995); Heyer & Thompson (2000); Hoogmoed & Gorzula (1979); Magdefrau *et al.* (1991); Rivero (1961-1964b-1964d-1968d).

• *Leptodactylus sabanensis** Heyer, 1994.

Type: KU 166559.

Type locality: Km 127 de la carretera El Dorado-Santa Elena de Uairén, Estado Bolívar, Venezuela.

Distribution: Gran Sabana in eastern Venezuela.

Selected references: Duellman (1997); Gorzula & Señaris (1998); Heyer (1994).

Genus *Lithodytes* Fitzinger, 1843.

• *Lithodytes lineatus* (Schneider, 1799).

Type: desconocido.

Type locality: "British Guiana".

Distribution: Southern Venezuela; eastern slopes of the Andes; Maracaibo basin.

Selected references: Barrio-Amorós (1999d); Barros & Barrio (2001); Ginés (1959); Lynch (1979b); Rivero (1961-1964b).

Genus *Physalaemus* Fitzinger, 1826.

Remarks: A major review of this genus is needed in Venezuela.

• *Physalaemus* cf. *cuvieri* Fitzinger 1826.

Type: Not stated.

Type locality: Brasil.

Distribution: Only known from one locality in estado Bolívar: Hato Terecay, 16 km N of El Manteco (savanna).

Selected references: Gorzula & Señaris (1998).

• *Physalaemus ephippifer* (Steindachner, 1864).

Type: Not stated.

Type locality: "Parà und Caiçara" (en Mato Grosso, probablemente en error (Frost, 1985)).

Distribution: Only known from one locality in estado Bolívar: Calceta de Perro (rainforest).

Selected references: Gorzula & Señaris (1998).

• *Physalaemus fischeri* (Boulenger, 1890).

Type: perdido (BM).

Type locality: «Venezuela».

Distribution: Widespread in Northern Venezuela. Scattered in Southern Venezuela.

Remarks: This species has preeminence on *P. enesefae* Heatwole, Solano et Heatwole, 1965.

Selected references: Boulenger (1890); Duellman (1997); Gorzula & Señaris (1998); Heatwole *et al.* (1965); La Marca (1992); Parker (1927); Rivero (1961-1967a).

• *Physalaemus pustulosus* (Cope, 1864).

Type: Lost; could be at ANSP or USNM.

Type locality: "Guayaquil, Ecuador".

Distribution: Widespread in Northern Venezuela.

Selected references: Cannatella & Duellman (1984); Duellman (1997); Ginés (1959); Gorzula & Señaris (1998); Heatwole *et al.* (1965); Hoogmoed & Gorzula (1979); Lutz (1927); Lynch (1970); Rivero (1961-1963a-1964a-1964c-1964d); Rivero & Esteves (1969); Staton & Dixon (1977); Tello (1968); Yústiz (1996).

Genus *Pleurodema* Tschudi, 1838.

• *Pleurodema brachyops* (Cope, 1869 “1868”).
Syntypess: ANSP 2260-2264.
Type locality: “Magdalene River, New Grenada”.
Distribution: Widespread in lowland northern Venezuela.
Selected references: Barrio (1996a); Duellman & Veloso (1977); Ginés (1959); Gorzula & Señaris (1998); Hoogmoed & Gorzula (1979); León-Ochoa & Donoso-Barros (1970); Lutz (1927); Molina (2004 “2002”); Ramo & Busto (1989-1990); Rivero (1961-1963a-1963c-1964b-1964d-1969a); Roze (1964); Staton & Dixon (1977); Tello (1968); Yústiz (1996).

Genus *Pseudopaludicola* Miranda-Ribeiro, 1926.

• *Pseudopaludicola boliviana* Parker, 1927.
Type: BM 1927.8.1.1.
Type locality: “Sta. Cruz, Bolivia”.
Distribution: Southern Venezuela.
Selected references: Gorzula & Señaris (1998); Lynch (1989); Myers & Donnelly (2001).

• *Pseudopaludicola llanera* Lynch, 1989.
Type: ICN 13576.
Type locality: «Puerto Gaitán, Departamento Meta, Colombia».
Distribution: Southern Venezuela; eastern slopes of the Andes in open areas.
Selected references: Barrio & Chacón (2002); Gorzula & Señaris (1998); Lynch (1989); Myers & Donnelly (2001).

• *Pseudopaludicola pusilla* (Ruthven, 1916).
Type: UMMZ 48305.
Type locality: «Fundación, (Sierra de Santa Marta), Colombia».
Distribution: Maracaibo basin.
Selected references: Ginés (1959); Lynch (1989); Rivero (1961-1963a-1964b-1964d).

Family *Microhylidae* Günther, 1859 “1858”.
Remarks: Darst & Cannatella (2004) show that the family is non monophyletic.

SubFamily *Microhylinae* Günther, 1858.

Genus *Adelastes* Zweifel, 1986.

• *Adelastes hylonomos** Zweifel, 1986.
Type: AMNH 123696.
Type locality: “near the Neblina Base Camp on the Rio Baria, 140 m elevation, 00°49’50”N, 66°09’40”W, Rio Negro Department, Amazonas Federal Territory, Venezuela”.
Distribution: Known at its type locality.
Selected references: Zweifel (1986).

Genus *Chiasmocleis* Mehely, 1904.

• *Chiasmocleis hudsoni* Parker, 1941.
Type: BM 1939.1.1.3.
Type locality: “New River, British Guiana (750 feet)”.
Distribution: Southern half of estado Amazonas.
Selected references: Barrio-Amorós & Schargel (2003); Zweifel (1986).

Genus *Ctenophryne* Mocquard, 1904.

• *Ctenophryne geayi* Mocquard, 1904.
Type: MNHNP 03-84.
Type locality: “la rivière Sarare en Colombie”.
Distribution: Only known in Venezuela from a few localities in estado Bolívar, eastern Venezuela.
Selected references: Carvalho (1954); Duellman (1997); Zweifel & Myers (1989).

Genus *Elachistocleis* Parker, 1927.

Remarks: A review of the genus is needed to clarify the taxonomic status of some northern South American forms. Duellman (1997) assigned to *E. bicolor* the form which has a immaculate venter, but recently, Lavilla *et al.* (2003) restricted *E. bicolor* to southern South America. In the same way, *E. ovalis* is not the species with spotted venter, as Schneider (1799) clearly states, but one with “inferne flavidus” (belly yellow).

• *Elachistocleis ovalis* (Schneider, 1799).
Type: Unknown..
Type locality: Not assigned.
Distribution: Apparently northern Venezuela in open areas.
Remarks: See remarks under the genus.
Selected references: Barrio & Durant (2000); Bogart & Nelson (1976); Carvalho (1954); Ginés (1959); Gorzula & Señaris (1998); Gremone *et al.* (1986); Hoogmoed & Gorzula (1979); Lavilla *et al.* (2003); Lutz (1927); Rada (1981a); Ramo & Busto (1989-1990); Rivero (1961-1964b-1964c-1964d); Staton & Dixon (1977); Yústiz (1996).

• *Elachistocleis surinamensis* (Daudin, 1802).
Type: Not available.
Type locality: “Surinam”.
Distribution: Probably southern Venezuela in open areas.
Remarks: All populations of *Elachistocleis* with gray venter and orange spots should be assigned to this species. A comprehensive review is needed to clarify the complex.
Selected references: Rivero *et al.* (1986).

Genus *Hamptophryne* Carvalho, 1954.

• *Hamptophryne boliviana* (Parker, 1927).
Type: Not available. The specimen BM 1927.8.1.1 is considered type by Parker (1934).
Type locality: “Buena Vista, Santa Cruz, Bolivia”.
Distribution: Know from a single record in Venezuela: Reserva Forestal Río Grande, between Río Grande and El Palmar, estado Bolívar (Paolillo 1986).

Remarks: I had the opportunity to check the only specimen of this species in Venezuela through the courtesy of David Wake and Chris Conroy from Berkeley. I confirm its identity, thanks also to the help of Juan Carlos Chaparro (Cusco, Perú).
Selected references: Bogart & Nelson (1976); Carvalho (1954); Paolillo (1986).

Genus *Synapturanus* Carvalho, 1954.

- *Synapturanus mirandaribeiroi* Nelson Et Lescure, 1975.
Type: MZUSP 49981.
Type locality: “Kanashen (a Waiwai Indian village and mission) in the Upper Essiquibo River, Rupuni, District, Guayana”.
Distribution: Only known from a single locality in Venezuela (Barrio & Brewer-Carías 1999).
Selected references: Barrio & Brewer-Carías (1999); Nelson & Lescure (1975); Pyburn (1975).
- *Synapturanus salseri* Pyburn, 1975.
Type: UTA A-401
Type locality: “Timbó, Vaupés”, Colombia.
Distribution: Amazonian Venezuela.
Selected references: Pyburn (1975); Señaris et al. (2003); Zweifel (1986).

Subfamily *Otophryinae* Wassersug et Pyburn, 1987.
Remarks: The status of this subfamily has been discussed by Wild (1995). I recognize it based in its well sustained synapomorphies.
Genus *Otophryne* Boulenger, 1900.

- *Otophryne pyburni* Campbell et Clarke, 1998.
Type: UTA A-3814.
Type locality: “in rainforest at 213 m elevation at Wacará, Vaupés, Colombia [...] 01°09'N, 69°55'W”.
Distribution: Amazonian Venezuela.
Selected references: Barrio (1999e); Campbell & Clarke (1998); Nelson (1971); Rivero (1967a).
- *Otophryne robusta** Boulenger, 1900.
Type: BM 99.3.25.18.
Type locality: “foot on Mt. Roraima, 3500 ft.”, Guyana.
Distribution: Gran Sabana, estado Bolívar, in eastern Venezuela.
Selected references: Bogart et al. (1976); Boulenger (1900); Campbell & Clarke (1998); Carvalho (1954); Ginés (1959); Gorzula (1985b-1992); Gorzula & Señaris (1998); Gremone et al. (1986); Nelson (1971); Rivero (1961-1964b-1967a-1967b); Wassersug & Pyburn (1987).
- *Otophryne steyermarki** (Rivero, 1967).
Type: FMNH 74031.
Type locality: “from the forest along río Tirica..., 5900 ft., falls below summit camp, Chimantá tepui massif, Venezuela”.
Distribution: Known from three different tepuis: Chimantá, Roraima and Jaua.
Remarks: This species was previously considered endemic of the Chimantá massif in Venezuelan Guayana. Barrio (1999f)

and Gorzula & Señaris (1998) report other localities, demonstrating a wider distribution.
Selected references: Barrio (1999f); Campbell & Clarke (1998); Gorzula (1985b-1992); Gorzula & Señaris (1998); Rivero (1967b).

Family *Pipidae* Gray, 1825.
Subfamily *Pipinae* Gray, 1825.
Genus *Pipa* Laurenti, 1768.

- *Pipa arrabali* Izeckson, 1976.
Type: EI 5311.
Type locality: «Vila Amazonia, Municipio de Parintins, Estado do Amazonas, Brasil».
Distribution: Eastern Venezuela.
Remarks: Specimens referred anteriorly as *P. aspera* by La Marca (1992) are in fact, *P. arrabali*.
Selected references: Duellman (1997); Trueb & Cannatella (1986).
- *Pipa parva* Ruthven et Gaige, 1923.
Type: UMMZ 57443.
Type locality: Sabana de Mendoza (Estado Trujillo), Venezuela.
Distribution: Natural population in the Maracaibo lake basin. Introduced in Lago de Valencia, Carabobo state.
Selected references: Barbour (1923); Barrio (1996a); Barrio & Fuentes (2000b); Ginés (1958); Lutz (1927); Rivero (1961); Royero & Hernández (1996); Ruthven & Gaige (1923); Trueb (1984); Trueb & Cannatella (1986).
- *Pipa pipa* (Linnaeus, 1758).
Type: Plate in Seba (1734)(sic!)(1735), sensu La Marca (1992).
Type locality: Surinam.
Distribution: Amazonian Venezuela, including eastern foothills of Venezuelan Andes at Barinas state.
Selected references: Dunn (1948); Ginés (1958); Gorzula & Señaris (1998); La Marca (1992); Péfaur & Díaz de Pascual (1987); Rivero (1961); Röhl (1959); Trueb & Cannatella (1986).

Family *Ranidae* Rafinesque-Schmaltz, 1814.
SubFamily *Raninae* Rafinesque-Schmaltz, 1814.
Genus *Rana* Linnaeus, 1758.

- *Rana catesbeiana* Shaw, 1802.
Type: Unknown.
Terra typica: Norte América, restricted to “vicinity of Charleston, South Carolina”, USA.
Distribution: Introduced. Located in the surroundings of La Carbonera, estado Mérida).
Remarks: Since its introduction, this species is subject of a population control program by the ULA (Universidad de los Andes), the IVIC (Instituto Venezolano para la Investigación Científica), and the MARN (Ministerio del Ambiente y de los Recursos Naturales).
Selected references: Barrio-Amorós (2001c); Hanselmann et al. (2004); Lampo et al. (2004).

- *Rana palmipes* Spix, 1824.

Syntypes: perdidos.

Type locality: “Amazonenfluss”, Brasil.

Distribution: Widespread in Venezuela except in Los Llanos.

Selected references: Duellman (1997); Ginés (1959); Gorzula & Señaris (1998); Gremone *et al.* (1986); Heatwole *et al.* (1965); Hillis & De Sá (1988); Hoogmoed & Gorzula (1979); Lutz (1927); Rivero (1961-1964a-1964b-1967a-1971a); Rivero *et al.* (1986); Röhl (1959); Spix (1824); Tello (1968).

Order CAUDATA Scopoli, 1777.

Family Plethodontidae Gray, 1850.

Subfamily Plethodontinae Gray, 1850.

Genus *Bolitoglossa* Dumeril, Bibron et Dumeril, 1854.

Remarks: All members of Venezuelan *Bolitoglossa* pertain to the subgenus *Eladinea* Miranda Ribeiro, 1937 (Parra-Olea *et al.* 2004).

- *Bolitoglossa altamazonica* (COPE, 1874).

Syntypes: ANSP or USNM, now lost or destroyed.

Terra typica: “Nauta, Departamento Loreto, Perú”.

Distribution: Amazonian slopes of Táchira state.

Remarks: Probably a complex of species.

Selected references: Schargel & Rivas (2003).

- *Bolitoglossa borburata** Trapido, 1942.

Type: USNM 115509.

Type locality: «Valle del Río Borburata, Estado Carabobo, Venezuela, 1200 m.».

Distribution: Cordillera de la Costa.

Remarks: Probably a complex of species.

Selected references: Barrio (1999a); Barrio & Fuentes (1999b); Brame & Wake (1963); Hanken & Wake (1982); Manzanilla *et al.* (1995); Rodríguez & Rojas-Suárez (1995); Röhl (1959); Trapido (1942).

- *Bolitoglossa guaramacalensis** Schargel, García-Pérez et Smith, 2002.

Type: MCNG A-2121.

Terra typica: “Boconó-Guaramacal road, Quebrada el Pollo (9°13'N, 70°10'W), south slope of the Macizo de Guramacal, 2400 m, Trujillo, Venezuela”.

Distribution: Endemic from Guaramacal, estado Trujillo.

Remarks: The *B. savagei* reported by Brame & Wake (1962) must be based on this species.

Referencias: Schargel *et al.* (2002).

- *Bolitoglossa orestes** Brame et Wake, 1962.

Type: BM 1905.5.31.103.

Type locality: «Culata, 9810 feet (3000 meters), Cordillera de Mérida, Estado de Mérida, Venezuela».

Distribution: Andes of Venezuela.

Selected references: Barrio & Fuentes (1999b); Brame & Wake (1962-1963); Péfaur & Díaz de Pascual (1982); Rodríguez & Rojas-Suárez (1995).

- *Bolitoglossa spongai** Barrio-Amorós et Fuentes, 1999.

Type: MBUCV 6570.

Terra typica: Carretera Mérida La Azulita, frente al Hato La Carbonera, Fila La Cuchilla, Municipio Campo Elías, La Carbonera, estado Mérida, Venezuela, 2200 msnm., 8°38'02"N-71°22'25"W.

Distribution: Surroundings of the type locality.

Selected References: Barrio-Amorós & Fuentes (1999b, 2004).

Order GYMNOPTERON Rafinesque-Schmaltz, 1814.

Family Caeciliidae Rafinesque, 1814.

SubFamily Caecilinae Gray, 1825.

Genus *Caecilia* Linnaeus, 1758.

- *Caecilia flavopunctata** Roze et Solano, 1963.

Type: MBUCV 5358.

Type locality: Albarico, Yaracuy, Venezuela.

Distribution: Surroundings of its type locality.

Selected references: Nussbaum & Wilkinson (1989); Roze & Solano (1963); Taylor (1968).

- *Caecilia subnigricans* Dunn, 1942.

Type: ANSP 4921 (not 4821 as it is seen in its description, *sensu* Taylor, 1968).

Type locality: “Magdalena River, Colombia”.

Distribution: Andes of Venezuela and Falcón state.

Selected references: Dunn (1942); Ginés (1959); Nussbaum & Wilkinson (1989); Péfaur & Díaz de Pascual (1987); Péfaur *et al.* (1992); Taylor (1968).

- *Caecilia tentaculata* Linnaeus, 1758.

Type: NHRM (lost).

Type locality: America.

Distribution: Apparently widespread in lowland Venezuela.

Selected references: Dunn (1942); Nussbaum & Wilkinson (1989); Péfaur *et al.* (1987-1992); Taylor (1968).

Genus *Microcaecilia* Taylor, 1968.

- *Microcaecilia rabei** (Roze et Solano, 1963).

Type: MBUCV 5126.

Type locality: Río Chicanán, at the base of Serranía de Lema, Bolívar, Venezuela.

Distribution: Eastern Venezuela.

Selected references: Nussbaum & Wilkinson (1989); Péfaur *et al.* (1992); Roze & Solano (1963); Taylor (1968).

Subfamily Dermophinae Taylor, 1969.

Genus *Siphonops* Wagler, 1830.

- *Siphonops annulatus* (Mikan, 1820).

Type: Unknown.

Type locality: “Sebastianopolis, Brasil”.

Distribution: Only known in Venezuela from the eastern slopes of the Andes in Barinas and Portuguesa states.

Selected references: Dunn (1942); Ginés (1959); Nussbaum & Wilkinson (1989); Péfaur & Díaz de Pascual (1982); Péfaur *et al.* (1992); Röhl (1959); Taylor (1968).

Family *Rhinatremitidae* Nussbaum, 1977.

Genus *Epicrionops* Boulenger, 1883.

• *Epicrionops niger* (Dunn, 1942).

Type: AMNH (lost); neotype MBUCV 5360 (Taylor, 1968).

Type locality: “Arundabara, British Guiana, elevation 2200 feet”; locality of neotype is “El Dorado, Bolívar, Venezuela”.

Distribution: Southeastern Venezuela.

Selected references: Dunn (1942); Nussbaum & Wilkinson (1989); Péfaur *et al.* (1992); Taylor (1968).

Family *Tiphlonectidae* Taylor, 1968.

Genus *Nectocaecilia* Taylor, 1968.

• *Nectocaecilia petersii* (Boulenger, 1882).

Type: BM 1946.9.5.68 (formerly 61.9.2.6.)

Type locality: “Upper Amazon”.

Distribution: Southern half of Amazonas state.

Selected references: Dunn (1942); Gorzula & Señaris (1998); Nussbaum (1977); Nussbaum & Wilkinson (1989); Taylor (1968).

Genus *Potomotyphlus* Taylor, 1968.

Potomotyphlus kaupii (Berthold, 1859).

Type: Probably at ZFMK.

Type locality: «Angostura», Ciudad Bolívar, Venezuela.

Distribution: Northern Amazonas state; Delta of the Orinoco.

Selected references: Nussbaum & Wilkinson (1989); Péfaur *et al.* (1992); Taylor (1968).

Genus *Typhlonectes* Peters, 1879.

• *Typhlonectes natans* (Fischer, 1879).

Sintipos: ZMB (dos especímenes).

Terra typica: Río Cauca, Colombia.

Distribution: Maracaibo lake basin.

Remarks: *Nectocaecilia haydeae* is a synonym of this species. Nussbaum & Wilkinson (1989) do not consider the species *T. venezuelensis*, but *T. natans* for all *Typhlonectes* from Northern South America.

Selected references: Lancini (1969); Nussbaum & Wilkinson (1989); Péfaur *et al.* (1992); Roze (1963); Roze & Solano (1963); Taylor (1968); Wilkinson (1996a-1996b).

Table 1.- Additions of new species for Venezuela between 1998-2004.

Species	Reference
<i>Atelopus vogli</i>	Lötters <i>et al.</i> (2004).
<i>Bufo glaberrimus</i>	Chacón <i>et al.</i> (2000).
<i>Bufo haematiticus</i>	Barrio (2001).
<i>Bufo sclerocephalus</i>	Mijares-Urrutía & Arends (2001).
<i>Centrolene lema</i>	Duellman & Señaris (2003).
<i>Hyalinobatrachium crurifasciatum</i>	Myers & Donnelly (1997).
<i>Hyalinobatrachium eccentricum</i>	Myers & Donnelly (2001).
<i>Hyalinobatrachium guairarepanensis</i>	Señaris (1999).
<i>Hyalinobatrachium mondolfii</i>	Señaris & Ayarzagüena (2001).
<i>Colostethus triunfo</i>	Barrio-Amorós <i>et al.</i> (2004)
<i>Colostethus wothuja</i>	Barrio-Amorós <i>et al.</i> (2004)
<i>Mannophryne caquetio</i>	Mijares & Arends (1999).
<i>Mannophryne lamarcai</i>	Mijares & Arends (1999).
<i>Stefania breweri</i>	Barrio-Amorós & Fuentes (2003).
<i>Hyla amicorum</i>	Mijares-Urrutía (1998).
<i>Hyla rythmica</i>	Señaris & Ayarzagüena (2002).
<i>Hyla yaracuyana</i>	Mijares-Urrutía & Rivero (2000).
<i>Osteocephalus cabrerai</i>	Gorzula & Señaris (1998).
<i>Scinax manriquei</i>	Barrio-Amorós <i>et al.</i> (2004).
<i>Scinax wandae</i>	Barrio & Fuentes (2003).
<i>Tepuihyla celsae</i>	Mijares <i>et al.</i> (1999).
<i>Leptodactylus colombiensis</i>	Barrio & Chacon (2001).
<i>Leptodactylus magistris</i>	Mijares-Urrutía, 1997.
<i>Physalaemus cf. cuvieri</i>	Gorzula & Señaris (1998).
<i>Physalaemus ephippifer</i>	Gorzula & Señaris (1998).
<i>Eleutherodactylus marahuaka</i>	Fuentes & Barrio-Amorós (2004).
<i>Eleutherodactylus pedimontanus</i>	La Marca (2004).
<i>Eleutherodactylus yustizi</i>	Barrio-Amorós & Chacón (2004).
<i>Rana catesbeiana</i>	Barrio (2001).
<i>Bolitoglossa altamazonica</i>	Schargel & Rivas (2003).
<i>Bolitoglossa guaramacalensis</i>	Schargel <i>et al.</i> (2002).
<i>Bolitoglossa spongai</i>	Barrio-Amorós & Fuentes (1999).

DISCUSSION

It is shocking how fast the systematics can change in tropical countries like Venezuela. Since the last list published by me (Barrio-Amorós 1998 “1999”), 69 changes have occurred, affecting the amphibian systematic panorama. Table 1. shows all new additions to the Venezuelan batrachofauna. Table 2 consider the species deleted from the Venezuelan panorama. Table 3 refers to the name changes. I will refer to the less known nomenclatural changes and losses of species, that can be explained by different reasons. All species deleted from the previous list are explained in the account of a close relative or under the genus remarks. But some are explained herein.

Allobates femoralis was reported to Venezuela by Duellman (1997) based on KU 167335. Barrio-Amorós (1998) and Barrio-Amorós & Fuentes (1999a) doubted about this assignation. W. E. Duellman gently sent me a slide of the animal, and I could recognize the typical pattern of the Venezuelan *Epipedobates pictus* (= *guayanensis*). R. Schulte, an specialist on aposematic dendrobatids also agreed with me in the identification.

The presence of *Ceratophrys cornuta* has been confused (with *C. calcarata*) and assumed for a long time, especially after Rivero (1961) included it in his list (but stating that no specimens were examined!) and Lynch (1982), where in his map appear the southern half of Venezuela inferred in its distribution. However, I reviewed all *Ceratophrys* in Venezuelan collections, and I asked to different foreign museums in order to see if there was some voucher of this species without luck. Even Amazonian populations of *Ceratophrys* in Venezuela appear to be *C. calcarata*, with an important distributional gap between the typical Maracaibo basin and surroundings localities and the Amazonian ones. I reviewed Amazonian specimens and I cannot find distinction with *C. calcarata*; however, the specimens I revised were in bad shape; a more comprehensive revision would be desirable with fresh Amazonian material. There is a confusion also in one locality given by Rivero (1961) as San Fernando [de Atabapo] that was confused with San Fernando de Apure in los Llanos region, where the species is unknown.

Vanzolinius discodactylus was reported by Mc Diarmid & Paolillo (1988) from the base of Neblina, but this specimen was later examined by R. Heyer and assigned *verbatim* to *Leptodactylus diedrus*.

Centrolenella revocata Rivero was assigned to *Hyalinobatrachium* by Duellman (1993), and posteriorly reallocated in *Cochranella* by Ruiz-Carranza & Lynch (1998).

Centrolenella (= *Hyalinobatrachium*) *fleishmanni* was also mentioned continuously as present in Venezuela. However, Señaris (1999) pointed out that the apparently similar species in the Coastal range of Venezuela was specifically distinct, as *H. guairarepanensis*.

The decision in not adopting the genus *Nephelonates* La Marca 1991 “1994” here is not based in any objective feature, but in protesting for the way a new genus was described, without any strong synapomorphy, and in an obscure and irregular

magazine. As I expressed before (Barrio-Amorós 2001d), the only two characters chosen as diagnostic for this genus are: fang-like teeth (which is not unique, also *Aromobates* have them), and the presence of an anal sheath (which is either a unique character in dendrobatids: many *Mannophryne* and *Colostethus* have them!). Apparently Vences *et al.* (2003) demonstrated that *Nephelobates* form a phylogenetic clade, but much more *Colostethus* and dendrobatids are needed to see a real panorama of Dendrobatid phylogeny!

Epipedobates pictus guayanensis was a subspecies erected by Heatwole *et al.* (1965). In comparing them with *pictus* from its type locality, they recognized some differences. A phylogenetic study is needed to assess the final assignment of this taxon, but *a priori*, and based in biogeography, the Guyanese population of *E. pictus*, which is separated from the Amazonian one, should receive a specific status, as was pointed out by Schulte (1999).

After some years discussing the validity of the genus *Phobobates* Zimmermann *et al.* Zimmermann, the last phylogenies by Summers & Clough (2001), Santos *et al.* (2003), and Vences *et al.* (2000, 2003), demonstrated that *Phobobates* is not a good genus, falling all three species (*P. bassleri*, *P. silverstonei*, *P. trivittatus*) in the same clade as other *Epipedobates*.

Hyla granosa, a well known Amazonian species, should be now named *H. cinerascens*, as this name has priority on *granosa*, and never an application was presented to the International Commission for Zoological Nomenclature in order to preserve the name *granosa*, that was used for a long time!

Another long confusing case was that of *Hyla albomarginata* in the Caribbean. Fouquette (1961) already stated that the Central American “*Hyla albomarginata*” were indeed a different species that he named *H. rufitela*. Nobody to date was able to elucidate the status of the Caribbean populations. I only examined pictures of MZC 15369 from Maracaibo and some data gently obtained by José Rosado (MCZ). I conclude, by both, morphological and biogeographical reasons, that the Caribbean *H. albomarginata* only can be *H. rufitela*. However, I would like to see live animals to assess if they have the typical red coloration in the webs.

PROBABLE SPECIES

Venezuela limits with four major ecotopic formations. One, the solid Pre-Cambrian granites of the Guianan Shield, which extend to the south to Brazil and to the East to Guyana. The Colombian-Brazilian Amazon arch, to the SW would be the second. The Andes of the Cordillera Oriental of Colombia to the W, the third. The Colombian plains of the Departamentos Vichada, Arauca and Boyacá reflect the continuity of the Llanos ecosystem of Venezuela, with added Amazon elements. Finally, a few species exist in the Colombian part of the Maracaibo Lake basin which have not still been reported for Venezuela.

From localities in the frontier or very close to the Venezuelan border are known a series of species that have not been reported yet in Venezuela, but that should not be strange to find.

Table 2.- Species deleted from previous list (Barrio-Amorós 1998).

Species and reason of deleting	References
<i>Hyalinobatrachium auyantepeuanum</i> (synonym of <i>Centrolene gorzulai</i>)	Duellman & Señaris (2003)
<i>Hyalinobatrachium loreocarinatum</i> (synonym of <i>H. durantei</i>)	Señaris 1999
<i>Hyalinobatrachium pleurostriatum</i> (synonym of <i>H. durantei</i>)	Señaris 1999
<i>Hyalinobatrachium ostracodermoides</i> (synonym of <i>H. durantei</i>)	Señaris 1999
<i>Allobates femoralis</i> (wrong report)	This work
<i>Stefania evansi</i> (no vouchers)	Barrio-Amorós & Fuentes (2003)
<i>Hyla raniceps</i> (no vouchers; confusion)	This work
<i>Osteocephalus ayarzaguenai</i> (synonym of <i>O. lepieurii</i>)	Jungfer & Hodl (2002)
<i>Ceratophrys cornuta</i> (no vouchers)	This work
<i>Vanzolinius discodactylus</i> (wrong report)	Heyer in litt.
<i>Leptodactylus rhodomystax</i> (confusion with <i>L. riveroi</i>)	Gorzula & Señaris (1998); This work
<i>Eleutherodactylus urichi</i> (wrong reports)	Kaiser <i>et al.</i> (1994)
<i>Elachistocleis bicolor</i> (confusion)	Lavilla <i>et al.</i> (2003).
<i>Typhlonectes venezuelensis</i> (synonym of <i>T. natans</i>)	Nussbaum & Wilkinson (1989)
<i>Nectocaecilia haydeae</i> (synonym of <i>Typhlonectes natans</i>)	Wilkinson (1996)

Table 3.- Nomenclatural changes and references since previous list (Barrio-Amorós 1998).

Former and current species status	References
<i>Centrolene buckleyi</i> - <i>C. venezuelense</i>	Myers & Donnelly (1997); C. Señaris, pers. com.)
<i>Hyalinobatrachium revocatum</i> - <i>Cochranella revocata</i>	Ruiz-Carranza & Lynch (1998)
<i>Hyalinobatrachium fleishmanni</i> - <i>H. guairarepanensis</i>	Señaris (1999)
<i>Nephelobates alboguttatus</i> - <i>Colostethus alboguttatus</i>	This work
<i>N. durantei</i> - <i>C. durantei</i>	This work
<i>N. haydeae</i> - <i>C. haydeae</i>	This work
<i>N. mayorgai</i> - <i>C. mayorgai</i>	This work
<i>N. meridensis</i> - <i>C. meridensis</i>	This work
<i>N. molinarii</i> - <i>C. molinarii</i>	This work
<i>N. orostoma</i> - <i>C. orostoma</i>	This work
<i>N. serranus</i> - <i>C. serranus</i>	This work
<i>Epipedobates pictus guayanensis</i> - <i>E. guayanensis</i>	Schulte (1999)
<i>Phobobates trivittatus</i> - <i>Epipedobates trivittatus</i>	Santos <i>et al</i> (2003); Vences <i>et al</i> (2003)
<i>Hyla granosa</i> - <i>H. cinerascens</i>	Frost (2004)
<i>Hyla albomarginata</i> - <i>H. rufitela</i>	This work
<i>Scinax trilineatus</i> - <i>S. fuscomarginatus</i>	Martins (1994)
<i>Leptodactylus labialis</i> - <i>L. fragilis</i>	Heyer (2002)
<i>Physalaemus enesefae</i> - <i>P. fischeri</i>	Gorzula & Señaris (1998)
<i>Eleutherodactylus maussi</i> - <i>E. biporcatus</i> - <i>Craugastor biporcatus</i>	Savage & Myers (2003); Crawford & Smith (2005)
<i>Typhlonectes venezuelensis</i> - <i>T. natans</i>	Nussbaum & Wilknsn (1989)

From parts of Guyana and N of Brazil have been referred the hylids *Stefania roraima* Duellman et Hoogmoed, 1984, *Stefania woodleyi* Rivero, 1968, *Stefania evansi* (Boulenger 1904), *Hyla roraima* Duellman et Hoogmoed, 1992 *Hyla kanaima* Goin et Woodley, 1965 and *Osteocephalus exophthalmus* Smith et Noonan, 2001; besides the leptodactilids *Eleutherodactylus chiastonotus* Lynch et Hoogmoed, 1977, *E. gutturalis* Hoogmoed, Lynch et Lescure, 1977 and *Adenomera lutzi* Heyer, 1975. The bufonid *Atelopus spumarius* Cope, 1871, occurs at the westernmost border of Guyana, in the frontier with Brazil, to the southeast of the Sierra Pacaraima, in an area claimed by Venezuela, for what would not be surprise its presence in the Venezuelan part (McDiarmid, 1973). The same argument is valid for *Dendrobates tinctorius* (Schneider, 1799). Also, the pseudine *Lysapsus laevis* Parker, 1935 could appear in the southern of Estado Bolívar.

In the Amazon basin have originated and/or dispersed many species of amphibians. Venezuela doesn't have an extensive part of the Amazon basin, but the upper Orinoco basin, united by the Brazo Casiquiare and the Río Negro to the Amazon, shows very similar characteristic to those that can be in the Brazilian or Colombian lands from where species like the bufonids *Bufo acutirostris* Spix, 1824 (which is mentioned as present in the country for La Marca 1992 and 1997 without any voucher; see Hoogmoed, 1986) and *Dendrophryniscus minutus* (Melin, 1941); the dendrobatids *Colostethus beebei* (Noble, 1923), *C. degranvillei* Lescure, 1975 and *Dendrobates ventrimaculatus* (Shreve, 1935); the hylids *Hyla leucophyllata* (Beireis, 1783), *H. tintinnambulum* Melin 1941, *Osteocephalus oophagus* Jungfer et Schiesari, and *Scinax lindsayi* Pyburn, 1992; the pipid *Pipa snethlageae* Müller, 1914, or the leptodactilids *Leptodactylus dydimus* Heyer, García et Cardoso, 1996 and *Eleutherodactylus zimmermanae* Heyer et Hardy, 1991, have been reported. *Eleutherodactylus lymani* Barbour et Noble, 1920 were also reported by Cochran & Goin (1970) for the Salto de Húa, in the frontier between Brazil and the state of Amazonas, Venezuela. It seems not very probable the presence of this species in that area, if we keep in mind the appreciations of Lynch (1979c), which confer him a xerophilous habitat, a different altitudinal range (690-2500 m) and a totally allopatric distribution in Ecuador. I revised the voucher USNM 83576 and it proofs to be *Eleutherodactylus vilarsi*.

Seven species of hylids of the genus *Phyllodytes* are known, occurring six in Brazil and the remaining one in Trinidad. It would not be a surprise to find some species of the genus, close to *Phyllodytes auratus* (Boulenger, 1917) in the east of the country, especially in the Serranía de Paria (Estado Sucre).

Hyla mathiasoni Cochran et Goin, 1970, and *Scinax blairi* Fouquette et Pyburn, 1972, hylids from the Colombian Llanos could occur equally in the Venezuelan part of this eco-region.

More unlikely it would be the presence of *Dendrobates truncatus* (Cope, 1861"1860") but not impossible to the north of the Montes de Oca or in the valley of the Río Paraguachón (Estado Zulia). *Scinax boulengeri* (Cope, 1887) extends from Central America to the Colombian spurs of the Sierra de Perijá. It should be examined if the reported *S. rostratus* from the

Maracaibo lake basin don't correspond to this species. *Eleutherodactylus palmeri* (Boulenger, 1912) is mentioned by Cochran & Goin (1970) in La Selva, Departamento Norte de Santander, Colombia, in an area of influence of the Maracaibo Lake. *Relictivomer pearsei* (Ruthven, 1914), as already has been indicated should confirm its presence in the Venezuelan territory with vouchers coming from the Maracaibo Lake basin; it was referred from Venezuela by Gorzula in Gremone *et al.* (1986) but without vouchers. I am currently reviewing some animals from the Maracaibo basin with colleagues. Many other well-known species from Caribbean Colombian and of Central American or Chocoan influence can occur in the Sierra de Perijá, a northern outreach of the Andes. This was recently demonstrated for *Bufo haematiticus* (Barrio 2001b). In the same way, it would not be of surprise the presence in the area of *Eleutherodactylus raniformis* (Boulenger, 1896), *Eleutherodactylus fitzingeri* (Schmidt, 1858), *Phyllomedusa venusta* Duellman et Trueb, 1967, *Hyalinobatrachium colymbiphylum* (Taylor, 1949), *Scinax elaeochroa* (Cope, 1876), *Rana vaillanti* Brocchi, 1877 *Hyla ebracatta* Cope, 1874, *Hyla phlebodes* Stejneger, 1906, some *Agalichnys*, *Smilisca*, or the recently described *Eleutherodactylus* from the páramos of Perijá *E. cuentasi* Lynch 2003, and *E. reclusus* Lynch 2003. I am currently working with Tito Barros about the only *Cryptobatrachus* found in Venezuela.

Finally, some species known from close localities in the Cordillera oriental de Colombia could be present in the Tamá National Park, in estado Táchira, like *Cryptobatrachus nicefori* Cochran et Goin, 1970, and *Eleutherodactylus ingeri* Cochran et Goin, 1963, which was recently reported from the Colombian side of this bi-national Park (Ramírez-Pinilla 2004).

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Finally, Gabriel Uguetto commented about the MS and made some useful changes in my English.

Fe de Errata

El artículo apareció con la identificación del Volumen errado, donde dice: Vol 9 N° 3 Art. 1 ... debe decir: Vol. 11 N° 3 Art. 1 ...

CHECKLIST OF THE AMPHIBIANS OF VENEZUELA PER NATURAL BIOREGIONS OF IMPORTANCE TO BATRACHOFAUNA

Table of distribution per bioregions. 1.-Andean. 2.-Coastal Range. 3.-Llanos. 4.- Amazon. 5.-Guayana. 6.-Orinoco's Delta. 7.- Maracaibo Basin. Asterisks after binomen show that the species is endemic. Asterisk after genus show that the genus is endemic

	1	2	3	4	5	6	7	altitude		1	2	3	4	5	6	7	altitude
<i>Allophryne</i>				X	X			100-130	<i>-C. bromelicola*</i>		X						1310
<i>-A. ruthveni</i>				X	X			100-130	<i>-C. brunneus</i>		X			X			300-1660
<i>Atelopus</i>	X	X						600-3500	<i>-C. capurinensis*</i>	X							2350-2700
<i>-A. carbonerensis*</i>	X							2000-2800	<i>-C. dummi*</i>		X						800-1000
<i>-A. chrysochorallus*</i>	X							2200-2700	<i>-C. durantii*</i>	X							2880-3100
<i>-A. cruciger*</i>		X						26-2100	<i>-C. fuliginosus</i>					X			±90-140
<i>-A. mucubajiensis*</i>	X							2800-3500	<i>-C. guanayensis*</i>					X			±1000
<i>-A. oxyrhynchus*</i>	X							2100-3500	<i>-C. haydeae*</i>	X							1825-2670
<i>-A. pinangoi*</i>	X							2500-2920	<i>-C. humilis*</i>	X							600-1470
<i>-A. sorianoii*</i>	X							2400	<i>-C. leopardalis*</i>	X							2435-3300
<i>-A. tamaense</i>	X							2950	<i>-C. mandelorum*</i>		X						2630
<i>-A. vogli</i>		X						700	<i>-C. aff.marchesianus</i>					X			±300
<i>Bufo</i>	X	X	X	X	X	X	X	0-2000	<i>-C. mayorgai*</i>	X							1700-2400
<i>-B. ceratophrys</i>					X			1350	<i>-C. meridensis*</i>	X							1880-1950
<i>-B. glaberrimus</i>	X			X				300-1400	<i>-C. molinariii*</i>	X							1800-2600
<i>-B. granulatus</i>	X	X	X	X	X	X	X	130-1230	<i>-C. murisipanensis*</i>					X			2350
<i>-B. guttatus</i>				X	X			300-860	<i>-C. orostoma*</i>	X							2300-2615
<i>-B. haematiticus</i>							X	¿	<i>-C. parimae*</i>					X			670
<i>-B. margaritififer</i>	X	X		X	X			100-1500	<i>-C. parkerae*</i>					X			860
<i>-B. marinus</i>	X	X	X	X	X	X	X	0-2000	<i>-C. praderioi*</i>					X			1800-1950
<i>-B. nasicus</i>					X			1250	<i>-C. roraima*</i>					X			2700
<i>-B. sclerocephalus*</i>		X						1150-1500	<i>-C. saltuensis*</i>	X							830
<i>-B. sternosignatus</i>	X	X						100-1800	<i>-C. sanmartini*</i>					X			±70
<i>Metaphryniscus*</i>					X			2600	<i>-C. serranus*</i>	X							1800-2300
<i>-M. sosae*</i>					X			2600	<i>-C. shrevei*</i>					X			350-1829
<i>Oreophrynella*</i>					X			1160-2800	<i>-C. tamacuarensis*</i>					X			1160-1200
<i>-O. cryptica*</i>					X			1750	<i>-C. tepuyensis*</i>					X			1600-1650
<i>-O. huberi*</i>					X			1700	<i>-C. triunfo*</i>					X			300-700
<i>-O. macconelli</i>					X			1160	<i>-C. undulatus*</i>					X			1750
<i>-O. nigra*</i>					X			2500	<i>-C. wothuja*</i>					X			150
<i>-O. quelchii</i>					X			2800	<i>Dendrobates</i>				X	X			0-1300
<i>-O. vasquezii*</i>					X			2650	<i>-D. leucomelas</i>			X	X				0-500
<i>Centrolene</i>	X				X			840-3000	<i>Epipedobates</i>					X			0-2600
<i>-C. altitudinale*</i>	X							2225-2400	<i>-E. guayanensis</i>					X			±0-500
<i>-C. andinum</i>	X							840-2500	<i>-E. rufulus*</i>					X			2100-2600
<i>-C. gorzulai*</i>					X			1850	<i>-E. trivittatus</i>					X			200-400
<i>-C. lema*</i>					X			1250	<i>Mannophryne</i>	X	X						40-1950
<i>-C. venezuelense*</i>	X							2100-3000	<i>-M. caquetio*</i>		X						800
<i>Cochranella</i>		X			X			750-2140	<i>-M. collaris*</i>	X							200-1800
<i>-Cochranella castroviejoii*</i>		X						750-780	<i>-M. cordilleriana*</i>	X							1600-1950
<i>-C. duidaeana*</i>					X			2140	<i>-M. herminae*</i>		X						350-1610
<i>-C. oyampiensis</i>					X			900	<i>-M. lamarcai*</i>		X						1250
<i>-C. revocata*</i>		X						1200-1800	<i>-M. larandina*</i>	X							1800
<i>-C. riveroi*</i>					X			1600	<i>-M. neblina*</i>		X						900-1100
<i>-C. vozmedianoii*</i>		X						750	<i>-M. oblitterata*</i>		X						150-750
<i>Hyalinobatrachium</i>	X	X			X	X		15-2300	<i>-M. riveroi*</i>		X						600-1000
<i>-H. antisthenesi*</i>		X						600-1200	<i>-M. trinitatis</i>		X						40-1525
<i>-H. crurifasciatum*</i>					X			1160-1200	<i>-M. yustizi*</i>	X							1400-1800
<i>-H. durantii*</i>		X						1800-2300	<i>Minyobates</i>					X			600-1300
<i>.H. eccentricum*</i>					X			1700	<i>-Minyobates steyermarki*</i>					X			600-1300
<i>-H. fragile*</i>		X						396	<i>Flectonotus</i>	X	X						240-1800
<i>-H. guairarepanensis*</i>		X						720-1000	<i>-F. fitzgeraldi</i>		X						600-800
<i>-H. helenae*</i>					X			850-1000	<i>-F. pygmaeus*</i>		X						±300-1200
<i>-H. iaspidiense*</i>					X			25-1000	<i>Gastrotheca</i>	X	X						400-3250
<i>-H. mondolfii*</i>						X		15-25	<i>-G. helenae</i>	X							2300-3250
<i>-H. orientale</i>		X						200-1200	<i>-G. nicefori</i>	X							1330-2000
<i>-H. pallidum*</i>	X	X						396-1768	<i>-G. ovifera*</i>		X						±900-2000
<i>-H. taylori</i>					X			1000-1350	<i>-G. walkeri*</i>		X						650-1100
<i>Aromobates*</i>	X							2250	<i>-G. williamsoni*</i>		X						±400-800
<i>-A. nocturnus*</i>	X							2250	<i>-G. yacambuensis*</i>	X							1700
<i>Colostethus</i>	X	X			X			70-3300	<i>Stefania</i>					X			340-2600
<i>-C. alboguttatus*</i>	X							1600-3090	<i>-S. breweri*</i>					X			1250
<i>-C. ayarzaguenai*</i>					X			±1400-2000	<i>-S. ginesi*</i>					X			1850-2600

AMPHIBIANS OF VENEZUELA SYSTEMATIC LIST, DISTRIBUTION AND REFERENCES, AN UPDATE

	1	2	3	4	5	6	7	altitude		1	2	3	4	5	6	7	altitude
- <i>S. goini</i> *					X			1400-1700	- <i>S. trilineatus</i>					X			1-1000
- <i>S. marahuacuensis</i> *					X			340-1200	- <i>S. wandae</i>			X	X				±100-300
- <i>S. oculosa</i> *					X			1600	- <i>S. x-signatus</i>		X	X		X	X		±0-600
- <i>S. percristata</i> *					X			1600	<i>Sphaenorhynchus</i>					X	X		±50-500
- <i>S. riae</i> *					X			1000-1400	- <i>S. lacteus</i>					X	X		±50-500
- <i>S. riveroi</i> *					X			2300	<i>Tepuihyla</i>								800-2550
- <i>S. satelles</i> *					X			2500	- <i>T. aecii</i> *						X		2150
- <i>S. scalae</i>					X			600-1360	- <i>T. celsae</i> *		X						1250
- <i>S. schuberti</i> *					X			1750-2400	- <i>T. edelcae</i> *						X		1970-2000
- <i>S. tamacuarina</i> *					X			1160-1270	- <i>T. galani</i> *						X		1250
<i>Aparasphenodon</i>				X	?			100	- <i>T. luteolabris</i> *						X		2550
- <i>A. venezolanus</i>				X	?			100	- <i>T. rimarum</i> *						X		2400
<i>Hyla</i>	X	X	X	X	X	X	X	0-3000	- <i>T. rodriguezi</i> *						X		800-1360
- <i>H. alemani</i> *		X						200-1000	<i>Phyllomedusa</i>	X	X	X	X				0-1200
- <i>H. amicum</i> *		X						±1250	- <i>P. bicolor</i>				X	X			±100-400
- <i>H. aromatica</i> *					X			1700	- <i>P. hypocondrialis</i>			X	X	X			50-1230
- <i>H. battersbyi</i> *		X						±800-1000	- <i>P. medinae</i> *		X						1100
- <i>H. benitezii</i> *					X			400-1600	- <i>P. tarsius</i>				X	X			250
- <i>H. boans</i>				X	X	X		0-650	- <i>P. tomopterna</i>					X			100-400
- <i>H. calcarata</i>				X	X			0-400	- <i>P. trinitatis</i>		X			X			0-1200
- <i>H. cinerascens</i>				X	X			±0-600	- <i>P. vaillanti</i>					X			90-140
- <i>H. crepitans</i>	X	X	X	X	X	X	X	0-2300	<i>Ceratophrys</i>	X				X		X	0-500
- <i>H. geographica</i>				X	X			±0-500	- <i>C. calcarata</i>	X				X		X	0-500
- <i>H. hobbsi</i>					X			90-140	<i>Adelophryne</i>					X			900-1300
- <i>H. inparquesi</i> *					X			2600	- <i>A. gutturosa</i>					X			900-1300
- <i>H. jahni</i> *	X							1800-3000	<i>Craugastor</i>		X						250-1600
- <i>H. lanciformis</i>	X	X		X				100-1300	- <i>C. biporcatus</i> *		X						250-1600
- <i>H. lascinia</i>	X							1250-1700	<i>Dischidodactylus</i> *					X			1000-2550
- <i>H. lemai</i> *					X			600-1400	- <i>D. colomelloi</i> *					X			2550
- <i>H. loveridgei</i> *					X			1000	- <i>D. duidensis</i> *					X			1000-1530
- <i>H. luteocellata</i> *	X	X						200-1600	<i>Eleutherodactylus</i>	X	X		X	X			
- <i>H. marmorata</i>				X	X	X		±100-400	- <i>Eleutherodactylus anolirex</i>	X							2300
- <i>H. meridensis</i> *	X							1700-3000	- <i>E. anotis</i> *		X						800-1300
- <i>H. microcephala</i>	X	X	X	X	X	X	X	0-1300	- <i>E. avius</i> *					X			1160-1460
- <i>H. minuscula</i>			X	X	X			0-600	- <i>E. bicumulus</i> *		X						577-2060
- <i>H. minuta</i>	X	X	X		X			0-1700	- <i>E. boconoensis</i> *	X							2800-3100
- <i>H. multifasciata</i>					X			150-1400	- <i>E. briceni</i> *	X							1600-3300
- <i>H. ornatissima</i>					X			100-900*	- <i>E. cantitans</i> *					X			2150
- <i>H. parviceps</i>				X	X			100-300	- <i>E. cavernibardus</i> *					X			1160-1200
- <i>H. pelidna</i>	X							2220	- <i>E. chlorosoma</i> *	X							900-2500
- <i>H. platydactyla</i>	X							1050-3000	- <i>E. colostichos</i> *	X							3600
- <i>H. pugnax</i>							X	0-700	- <i>E. ginesi</i> *	X							2800-4000
- <i>H. punctata</i>			X	X	X	X		0-900	- <i>E. incertus</i> *		X						¿
- <i>H. rufitela</i>		X					X	0-1000	- <i>E. johnstonei</i>	X	X			X			0-1300
- <i>H. rythmica</i> *					X			1600	- <i>E. lancinii</i> *	X							2500-3430
- <i>H. sarayacuensis</i>					X			90-140	- <i>E. lentiginosus</i> *	X							1550-1768
- <i>H. sibleszi</i> *					X			500-1850	- <i>E. marahuaka</i> *					X			2450
- <i>H. vigilans</i>							X	0-200	- <i>E. marmoratus</i>					X			300-1400
- <i>H. wavrini</i>				X	X			0-400	- <i>E. melanoproctus</i> *	X							1800
- <i>H. yaracuyana</i> *		X						1580-1600	- <i>E. memorans</i> *					X			1160-1270
<i>Osteocephalus</i>				X	X			0-1000	- <i>E. mondolfii</i> *	X							1120
- <i>O. buckleyi</i>				X				±0-500	- <i>E. nicefori</i>	X							2500-3000
- <i>O. cabrerai</i>					X	X		1-150	- <i>E. paramerus</i> *	X							2900-3330
- <i>O. leprieurii</i>				X	X			±0-1000	- <i>E. pedimontanus</i>	X							980-1700
- <i>O. taurinus</i>				X				0-1250	- <i>E. pleurostriatus</i> *	X							2316
<i>Phrynohyas</i>	X	X	X	X	X	X	X	0-500	- <i>E. prolixodiscus</i>	X							1600-2490
- <i>P. resinifictrix</i>				X	X	X		90-140	- <i>E. pruinatus</i> *					X			2150
- <i>P. venulosa</i>		X	X	X	X	X	X	±0-500	- <i>E. pulidoi</i> *	X							1120
<i>Pseudis</i>			X	X	X	X	X	0-300	- <i>E. pulvinatus</i>					X			950-1600
- <i>P. paradoxa</i>			X	X	X	X	X	0-300	- <i>E. reticulatus</i> *		X						1190-1275
<i>Scinax</i>	X	X	X	X	X	X		0-1700	- <i>E. riveroi</i> *		X						1100
- <i>S. baumgardneri</i> *				X	X			±50-300	- <i>E. rozei</i> *		X						±800
- <i>S. boesemani</i>				X	X			±50-400	- <i>E. stenodiscus</i> *		X						±700-1400
- <i>S. danae</i> *					X			180-1250	- <i>E. terraebolivaris</i> *		X						±800-1500
- <i>S. exiguus</i> *					X			650-1230	- <i>E. tubernasus</i>	X							1900-2393
- <i>S. garbei</i>								100	- <i>E. turuniquirensis</i> *		X						1830
- <i>S. kennedyi</i>			X	X				100	- <i>E. vanadisae</i> *	X							1800-2600
- <i>S. manriquei</i>	X							600-1700	- <i>E. vilarsi</i>				X	X			100-1230
- <i>S. nebulosus</i>					X			±100-400	- <i>E. yaviensis</i> *					X			2150
- <i>S. rostratus</i>		X	X		X			±0-600	- <i>E. yustizi</i> *	X							600-1600
- <i>S. ruber</i>					X	X		±0-600	- <i>E. zeuctotylus</i>					X			90-140

	1	2	3	4	5	6	7	altitude		1	2	3	4	5	6	7	altitude	
<i>Adenomera</i>							X	50-500	<i>Ctenophryne</i>								X	130
- <i>A. andreae</i>				X	X			±50-500	- <i>C. geayi</i>								X	130
- <i>A. hylaedactyla</i>					X	X		±50-500	<i>Elachistocleis</i>	X	X	X	X	X	X	¿		0-500
<i>Leptodactylus</i>	X	X	X	X	X	X	X	0-1720	- <i>E. ovalis</i>	X	X			X	X			±0-500
- <i>L. bolivianus</i>	X	X	X	X	X	X	X	±100-800	- <i>E. surinamensis</i>				X	X	X	?		±0-500
- <i>L. colombiensis</i>	X							630	<i>Hamptophryne</i>								X	60
- <i>L. diedrus</i>						X		90-400	- <i>H. boliviana</i>								X	±60
- <i>L. fragilis</i>		X	X					±50-400	<i>Synapturanus</i>								X	140-340
- <i>L. fuscus</i>	X	X	X	X	X	X	?	±0-1200	- <i>S. mirandaribeiroi</i>								X	340
- <i>L. insularum</i>		X	X					±0-600	- <i>S. salseri</i>								X	90-140
- <i>L. knudseni</i>				X	X			±90-500	<i>Otophryne</i>				X	X				200-2150
- <i>L. labyrinthicus</i>		X						0-800	- <i>O. pyburni</i>				X	X				200-1100
- <i>L. leptodactyloides</i>					X			±100	- <i>O. robusta*</i>								X	700-1400
- <i>L. lithonaetes</i>				X	X			100-1250	- <i>O. steyermarki *</i>								X	1800-2150
- <i>L. longirostris</i>					X			±100-1300	<i>Pipa</i>				X	X	X	X		0-860
- <i>L. macrosternum</i>		X	X		X			±0-400	- <i>P. arrabali</i>								X	350-860
- <i>L. magistris*</i>		X						1250	- <i>P. parva</i>								X	0-300
- <i>L. mystaceus</i>		X		X	X	X		±0-500	- <i>P. pipa</i>					X	X	X		0-400
- <i>L. ocellatus</i>		X			X			±0-400	<i>Rana</i>		X	X	X	X	X	X		100-1100
- <i>L. pallidirostris</i>	X	X	X	X	X	X	X	±0-1700	- <i>Rana catesbeiana</i>	X								2200
- <i>L. pentadactylus</i>				X	X	?		±0-600	- <i>R. palmipes</i>		X	X	X	X	X	X		±100-1100
- <i>L. petersii</i>	X	X	X	X	X	X		±0-1700	<i>Bolitoglossa</i>	X	X							800-3000
- <i>L. poecilochilus</i>	X	X	X					±0-700	- <i>B. altamazonica</i>				X					600
- <i>L. riveroi</i>				X	X			100-450	- <i>B. borburata*</i>		X							800-1300
- <i>L. rugosus</i>					X			350-1720	- <i>B. guaramacalensis*</i>	X								2400
- <i>L. sabanensis</i>			?		X			800-1250	- <i>B. orestes*</i>	X								2000-3000
<i>Lithodytes</i>				X	X			100-1200	- <i>B. spongai*</i>	X								2200-2700
- <i>L. lineatus</i>				X	X		X	100-1200	<i>Caecilia</i>	X	X		X	X				100-1040
<i>Physalaemus</i>	X	X	X	X	X	X	X	0-700	- <i>C. flavopunctata*</i>			X						±400
- <i>P. cf. cuvieri</i>					X			240	- <i>C. subnigricans</i>	X	X							300-1040
- <i>P. ephippifer</i>					X			265	- <i>C. tentaculata</i>	X			X	X				±100-1000
- <i>P. fisheri</i>			X		X			±0-400	<i>Microcaecilia</i>								X	±100-300
- <i>P. pustulosus</i>	X	X	X	X	X	X	X	±0-700	- <i>M. rabei</i>								X	±100-300
<i>Pleurodema</i>	X	X	¿	X	X	X		±0-500	<i>Siphonops</i>			X		X				100-700
- <i>P. brachyops</i>	X	X	¿	X	X	X		±0-500	- <i>S. annulatus</i>			X		X				100-700
<i>Pseudopaludicola</i>			X	X	X		X	0-1220	<i>Epicrionops</i>					X				100-1700
- <i>P. boliviana</i>				X	X			±50-300	- <i>E. niger</i>					X				100-1700
- <i>P. llanera</i>			X		X			100-1220	<i>Nectocaecilia</i>					?				±100
- <i>P. pusilla</i>							X	±0-300	- <i>N. petersii</i>					X				±100
<i>Adelastes*</i>					X			140	<i>Potomotyphlus</i>			X		X	X			0-100
- <i>A. hylonomos*</i>					X			140	- <i>P. kaupii</i>			X	X	X	X			0-100
<i>Chiasmocleis</i>					X			100-140	<i>Typhlonectes</i>			X		X	X	X		0-100
- <i>C. hudsoni</i>				X	X			90-140	- <i>T. natans</i>					X	X			0-100

LITERATURE

- ALEMÁN, C., 1952.- Apuntes sobre reptiles y anfibios de la región Baruta- El Hatillo. *Mem. Soc. Cien. Nat. La Salle* 12 (31): 11-30.
- ALEMÁN, C., 1953.- Contribución al estudio de los reptiles y batracios de la Sierra de Perijá. *Mem. Soc. Cien. Nat. La Salle* 13 (35): 205-225.
- ARRINGTON, A. and ARRINGTON, J.L., 2000.- Natural History (Anura): *Hyla boans*. *Herp. Rev.* 31(1): 170.
- AYARZAGÜENA, J., 1983.- Una nueva especie de *Dischidodactylus* LYNCH (Amphibia, Leptodactylidae) en la cumbre del Tepui Marahuaca, Territorio Federal Amazonas, Venezuela. *Mem. Soc. Cien. Nat. La Salle* 43 (119): 215-220.
- AYARZAGÜENA, J., 1992.- Los centrolénidos de la Guayana Venezolana. *Publ. Asoc. Amigos Doñana* 1: 1-48.
- AYARZAGÜENA, J. y DIEGO-ARANSAY, A., 1985.- Primer reporte para Venezuela de *Adelophryne gutturosa* (Leptodactylidae) y datos sobre su biología. *Mem. Soc. Cien. Nat. La Salle* 14 (123):159-161.
- AYARZAGÜENA, J. y SEÑARIS, J. C., 1993.- Dos nuevas especies de *Hyla* (Anura, Hylidae) para las cumbres tepuyananas del Estado Amazonas, Venezuela. *Mem. Soc. Cien. Nat. La Salle* 53 (139): 127-146.
- AYARZAGÜENA, J. y SEÑARIS, J.C., 1996.- Dos nuevas especies de *Cochranella* (Anura; Centrolenidae) para Venezuela. *Publ. Asoc. Amigos Doñana* 8: 1-16.
- AYARZAGÜENA, J., SEÑARIS, J. y GORZULA, S., 1992a.- El grupo *Osteocephalus rodriguezi* de las tierras altas de la Guayana venezolana: Descripción de cinco nuevas especies. *Mem. Soc. Cien. Nat. La Salle* 52 (137): 113-142.
- AYARZAGÜENA, J., SEÑARIS, J. y GORZULA, S., 1992b.- Un nuevo género para las especies del "Grupo *Osteocephalus rodriguezi*" (Anura: Hylidae). *Mem. Soc. Cien. Nat. La Salle* 52 (138): 213-221.
- AZEVEDO-RAMOS, C., 1995.- Defense behaviors of the Neotropical treefrog *Hyla geographica* (Anura: Hylidae). *Rev. Brasil. Biol* 55 (1): 45-47.
- BARBOUR, T., 1923.- A new *Pipa*, Pl. 2, f. 3 (*Pipa parva* RUTHVEN & GAIGE). *Proc. New-England Zool. Club*, 9: 3-5.
- BARRIO, C.L., 1996a.-Anfibios de Venezuela:visión aproximativa. *Reptilia* 6: 24-32.
- BARRIO, C.L., 1996b.- *Atelopus*, ¿sólo un recuerdo? *Reptilia* 8:26-28.
- BARRIO-AMORÓS, C.L., 1998.- Sistemática y Biogeografía de los anfibios (Amphibia) de Venezuela. *Acta Biol. Venez.* 18(2): 1-93.
- BARRIO, C.L., 1999a.- Geographic Distribution (Caudata): *Bolitoglossa borburata*. *Herp. Rev.* 30 (2) 105.
- BARRIO, C.L., 1999b.- Geographic Distribution (Anura): *Gastrotheca ovifera*. *Herp. Rev.* 30 (2) 106.
- BARRIO, C.L., 1999c.- Geographic Distribution (Anura): *Gastrotheca walkeri*. *Herp. Rev.* 30 (2) 106.
- BARRIO, C.L., 1999d.- Geographic Distribution (Anura): *Lithodytes lineatus*. *Herp. Rev.* 30 (1) 50.
- BARRIO, C.L., 1999e.- Geographic Distribution (Anura): *Otophryne pyburni*. *Herp. Rev.* 30 (3) 173.
- BARRIO, C.L., 1999f.- Geographic Distribution (Anura): *Otophryne steyermarki*. *Herp. Rev.* 30 (3) 173.
- BARRIO, C.L., 1999g.- Geographic Distribution (Anura): *Hyla boans*. *Herp. Rev.* 30 (4): 230.
- BARRIO, C. L., 2001a.- Geographic Distribution (Anura): *Hyla boans*. *Herpetological Review.* 32 (2): 113-114.
- BARRIO, C. L., 2001b.- Geographic Distribution (Anura): *Bufo haematiticus*. *Herp. Rev.* 32(3): 189.
- BARRIO AMORÓS, C.L., 2001c.- State of knowledge on the declination of amphibians in Venezuela. *FROGLOG* 47: 2-4.
- BARRIO-AMORÓS, C. L. 2001d. Some aspects of Dendrobatids in Venezuela: declines and nomenclature. *British Dendrobatid Group Newsletter* 44 (December): 1-5. <http://www.thebdg.org/library/conservation/venezuela.htm>
- BARRIO, C.L. & BREWER-CARIÁS, Ch., 1999.- Geographic Distribution (Anura): *Synapturanus mirandaribeiroi*. *Herp. Rev.* 30 (1) 51.
- BARRIO, C. L. and CHACON, A., 2001.- Geographic Distribution: Anura. *Leptodactylus colombiensis*. *Herp. Rev.* 32 (1): 55.
- BARRIO AMORÓS, C. L. and A. CHACÓN-ORTIZ. 2002.- Geographic distribution. *Pseudopaludicola llanera*. *Herp. Rev.* 33(3):222.
- BARRIO-AMORÓS, C.L. y CHACÓN, A. 2003. Un nuevo *Eleutherodactylus* (Anura: Leptodactylidae) de la Cordillera de Mérida, Andes de Venezuela. *Graellsia* 60 (1): 3-11.
- BARRIO AMORÓS, C. L. and A. CHACÓN-ORTIZ, (2004).- Geographic distribution. *Scinax wandae*. *Herp. Rev.* 35(2):185.
- BARRIO A., C. L. and P. DURANT., 2000.- Geographic distribution. Anura: *Elachistocleis ovalis*. *Herpetological Review.* 31(1): 50.
- BARRIO, C.L. y FUENTES, O., 1998.- Distribución de *Dendrobates leucomelas* (Anura: Dendrobatidae) en Venezuela. *Acta Biol. Venez.* 18(3): 35-41.
- BARRIO, C. L., & FUENTES, O., 1999a.- Sinopsis de la familia Dendrobatidae (Amphibia: Anura) de Venezuela. *Acta Biol. Venez.* 19 (3): 1-10.
- BARRIO, C.L., & FUENTES, O., 1999b.- *Bolitoglossa spongai*. Una nueva especie de salamandra (Caudata: Plethodontidae) de los Andes venezolanos, con comentarios sobre el género en Venezuela. *Acta Biol. Venez* 19 (4): 9-19.
- BARRIO, C.L. & FUENTES, O., 2000a.- Geographic Distribution (Anura): *Osteocephalus ayarzaguenai*. *Herp. Rev.* 31 (3): 182.
- BARRIO, C.L. & FUENTES, O., 2000b.- Geographic Distribution (Anura): *Pipa parva*. *Herp. Rev.* 31 (3): 183.
- BARRIO-AMORÓS, C.L., & FUENTES, O., 2003.- A new species of *Stefania* (Anura: Hylidae: Hemiphraactinae) from the summit of the cerro Autana, Estado Amazonas, Venezuela. *Herpetologica* 59 (4): 506-514.
- BARRIO, C.L. & FUENTES, O. 2003.- Geographic Distribution: Anura: *Scinax wandae*. *Herpetological Review* 34 (2): 163.
- BARRIO-AMORÓS, C.L., & FUENTES-RAMOS, O., 2004.- Amphibia: Caudata: Plethodontidae: *Bolitoglossa spongai*. *Catalogue American Amphibians Reptiles* 781: 1-2.

- BARRIO-AMORÓS, C. L. and GARCIA-PORTA, J., 2003.- Geographic Distribution: Anura: *Colostethus humilis*: *Herp. Rev.* 34 (4): 380.
- BARRIO-AMORÓS, C. L. and KAISER, H., *in press*.- Distribution of *Eleutherodactylus biporcatus* (Anura: Leptodactylidae) in northern Venezuela, with comments on its phenotypic variation. *Herp. Rev.*
- BARRIO, C.L. & RIVERO, R., 1999a.- Geographic Distribution (Anura): *Phyllomedusa tomopterna*. *Herp. Rev.* 30 (4): 231.
- BARRIO, C.L. & RIVERO, R., 1999b.- Geographic Distribution (Anura): *Sphaenorhynchus lacteus*. *Herp. Rev.* 30 (4): 232.
- BARRIO-AMORÓS, C. L. and SCHARGEL, W., 2003.- Geographic Distribution: Anura: *Chiasmocleis hudsoni*. *Herpetological Review* 34 (4): 380.
- BARRIO, C. L., BARROS, T. & PAEZ, J.C. 2001.- Geographic Distribution: Anura: *Bufo guttatus*. *Herpetological Review.* 32 (2): 112.
- BARRIO-AMORÓS, C.L., FUENTES, O. y RIVAS, G., 2004. Two new species of *Colostethus* (Anura, Dendrobatidae) from Venezuelan Guayana. *Salamandra* 40 (3/4): 1-18.
- BARRIO-AMORÓS, C. L., ORELLANA, A., and CHACÓN, A., 2004. A new species of *Scinax* (Anura: Hylidae) from the Andes of Venezuela. *J. Herpetol.* 38 (1): 104-111.
- BARRIO A., C. L., R. RIVERO and R. MANRIQUE, 2000.- Geographic distribution. *Hyla punctata*. *Herpetological Review.* 31(1): 50.
- BARRIO, C.L., ORELLANA, A. & MANRIQUE, R., 1999.- Geographic Distribution (Anura): *Hyla lanciformis*. *Herp. Rev.* 30 (2): 106-107.
- BARROS, T. & BARRIO, C. L., 2001.- Geographic Distribution: Anura: *Lithodytes lineatus*. *Herp. Rev.* 32 (2): 114-115.
- BOETTGER, O., 1892.- *Katalog der Batrachier-Sammlung im Museum der Senckenbergischen Naturforschenden Gesellschaft, Frankfurt am Main*: 1-73.
- BOETTGER, O., 1893.- Reptilien und Batrachien aus Venezuela. *Ber. Senck. Naturf. Ges.:* 35-42.
- BOETTGER, O., 1896.- Geschenke und Erwerbungen, Juni 1895 bis Juni 1896, Reptilien und Batrachiersammlung. *Ber. Sencken. Naturf. Ges.*, 1896: LIV-LV.
- BOGART, J.P., 1974.- A karyosystematic study of frogs in the genus *Leptodactylus* (Anura: Leptodactylidae). *Copeia* 3, 1974: 728-737.
- BOGART, J.P. & NELSON, C.E., 1976.- Evolutionary implications from karyotypic analysis of frogs of the families Microhylidae and Rhinophrynidae. *Herpetologica* 32: 199-208.
- BOGART, J.P., PYBURN, W.F. & NELSON, C.E., 1976.- The karyotype of *Otophryne robusta* (Anura: Microhylidae). *Herpetologica* 32: 208-210.
- BOKERMANN, W., 1964.- Notes on tree frogs of the *Hyla marmorata* group with description of a new species (Amphibia, Hylidae). *Senck. Biol.*, 45 (3/5): 243-254.
- BONNACORSO, E., GUAYASAMÍN, J. M., MÉNDEZ, D., SPEARE, R., 2003.- Chytridiomycosis as a possible cause of population declines in *Atelopus cruciger* (Anura: Bufonidae). *Herp. Rev.* 34 (4): 331-334.
- BOULENGER, G. A., 1882.- *Catalogue of the Batrachia Salientia, s. Ecaudata in the collection of the British Museum. 2nd. ed.* LONDON XVI: 503 p.
- BOULENGER, G. A., 1890.- Second report on additions to the Batrachian Collection in the Natural History Museum. *Proc. Zool. Soc.:* 323-328.
- BOULENGER, G. A., 1895a.- Description of a new batrachian (*Oreophryne Quelchii*) discovered by Messrs. J. J. QUELCH and F. McCONNELL on the summit of Mount Roraima. *Ann. Mag. Nat. Hist. Ser. 6, 15 (90):* 521-522.
- BOULENGER, G. A., 1895b.- Correction to p. 521 ("Annals", June 1895). *Ann. Mag. Nat. Hist., Ser. 6, 16 (91):* 125.
- BOULENGER, G. A., 1900.- Batrachians. En: E. Roy Lankester. Report on a collection made by Messrs. F. V. McCONNELL and J. J. QUELCH at Mount Roraima in British Guiana. *Linn. Soc., LONDON, Trans., Ser. 2, Zool., 8 (2):* 55.
- BOULENGER, G. A., 1903.- On some Batrachians and Reptiles from Venezuela. *Ann. Mag. Nat. Hist., 7 (2):* 481-484.
- BOULENGER, G. A., 1905.- Descriptions of new Batrachians in the Collection of the British Museum. *Ann. Mag. Nat. Hist., 16 (7):* 180-184.
- BOULENGER, G. A., 1912.- Descriptions of new Batrachians from the Andes of South America, preserved in the British Museum. *Ann. Mag. Nat. Hist., 10 (8):* 185-191.
- BRAME, A. H. & WAKE, D. B., 1962.- A new Plethodontid Salamander (genus *Bolitoglossa*) from Venezuela with redescription of the Ecuadorian *Bolitoglossa palmata* (WERNER). *Copeia*, 1962 (1): 171-177.
- BRAME, A. H. & WAKE, D. B., 1963.- The Salamanders of South America. *Contrib. Sci. Nat. Hist. Mus. Los Angeles. Co., 69:* 72 p.
- CALDWELL, J. P., LIMA A. P. and KELLER. C. (2002).- Redescription of *Colostethus marchesianus* (Melin, 1941) from its type locality. *Copeia*, Lawrence, 2002: 157-165.
- CAMPBELL, J.A. & CLARKE, B.T., 1998. A review of frogs of the genus *Otophryne* with the description of a new species. *Herpetologica* 54 (3): 301-317.
- CANNATELLA, D., 1980.- A review of the *Phyllomedusa buckleyi* group (Anura: Hylidae). *Occ. Pap. Mus. Nat. Hist. Univ. Kansas*, 87: 1-40.
- CANNATELLA, D. & DUELLMAN, W. E., 1984.- Leptodactylid frogs of the *Physalaemus pustulosus* group. *Copeia*, 1984 (4): 902-921.
- CANNATELLA, D. & LAMAR, W., 1986.- Synonymy and distribution of *Centrolenella orientalis* with notes on its life history (Anura: Centrolenidae). *J. Herpetology*, 20 (3): 307-317.
- CARVALHO, A.L., 1954.- A preliminary synopsis of the genera of American Microhylid frogs. *Occ. Pap. Mus. Zool. Univ. Michigan* 555: 1-21.
- CHACÓN, A. 2001. Estrategia reproductiva y desarrollo larval de *Hyla pugnax* "Schmidt, 1857" en una localidad del piedemonte andino de Venezuela. Tesis de Licenciatura. Universidad de los Andes, Mérida, Venezuela.
- CHACÓN, A., DÍAZ DE PASCUAL, A. y BARRIO, C.L. 2000. Presencia de *Bufo glaberrimus* (Anura: Bufonidae) en Venezuela. *Acta Biol. Venez.* 20 (4): 65-69.

- CHACÓN, A., DÍAZ DE PASCUAL, A. and GODOY, F. 2001. Geographic Distribution (Anura): *Bufo glaberrimus*. *Herp Rev.* 32 (4): 269.
- COCHRAN, D. & GOIN, c., 1970.- *Frogs of Colombia*. Smiths. Inst. U.S.N.M. Bull. 288: 655 pp.
- COCROFT, R.B., McDIARMID, R.W., JASLOW, A.P. & RUÍZ-CARRANZA, P.M., 1990.- Vocalizations of eight species of *Atelopus* (Anura:Bufonidae) with comments on communications in the genus. *Copeia* 1990(3):631-643.
- CRAWFORD, A.J. & E.N. SMITH. 2005. Cenozoic biogeography and evolution in direct-developing frogs of Central America (Leptodactylidae: *Eleutherodactylus*) as inferred from a phylogenetic analysis of nuclear and mitochondrial genes. *Molecular Phylogenetics and evolution*. www.sciencedirect.com
- CROMBIE, R. I. & HEYER, W. R., 1983.- *Leptodactylus longirostris* (Anura: Leptodactylidae): advertisement call, tadpole, ecological and distributional notes. *Rev. Brasil. Biol.*, 43 (3). 291-296.
- DARST, C., & CANNATELLA, D., 2004.- Novel relationships among hylid frogs inferred from 12S and 16S mitochondrial DNA sequences. *Mol. Phyl. Evol.* 31: 462-475.
- DAUDIN, F. M., 1803.- *Histoire naturelle des Rainettes, des Granouilles et des Crapauds*. Paris, An. XI: 71 pp.
- DIEGO-ARANSAY, A. y GORZULA, S., 1987.- Una nueva especie de *Oreophrynella* (Anura: Bufonidae) de la Guayana Venezolana. *Mem. Soc. Cien. Nat. La Salle.* 47 (127-128): 233-238.
- DIXON, J. R. & RIVERO-BLANCO, C., 1985.- A new dendrobatid frog (*Colostethus*) from Venezuela with notes on its natural history and that of related species. *J. Herpetology*, 19 (2): 177-184.
- DIXON, J. R. & STATON, M. A., 1976.- Some aspects of the biology of *Leptodactylus macrosternum* MIRANDA-RIBEIRO (Anura: Leptodactylidae) of the Venezuelan Llanos. *Herpetologica* 32 (2): 227-232.
- DOLE, J. & DURANT, P., 1972.- A new species of *Colostethus* (Amphibia: Salientia) from the Mérida Andes, Venezuela. *Carib. J. Sci.* 12 (3-4): 191-193.
- DOLE, J. & DURANT, P., 1974a.- Movements and seasonal activity of *Atelopus oxyrhynchus* (Anura: Atelopodidae) in a Venezuelan cloud forest. *Copeia* 1974 (1): 230-235.
- DOLE, J. & DURANT, P., 1974b.- Courtship behavior in *Colostethus collaris* (Dendrobatidae). *Copeia* 1974 (4): 988-990.
- DONNELLY, M. A. & MYERS, C. W., 1991.- Herpetological Results of the 1990 Expedition to the summit of Cerro Guaquinima, with new tepui Reptiles. *Am. Mus. Novitates* 3017: 1-54.
- DONOSO-BARROS, R., 1964.- A new species of dendrobatid frog, *Prostherapis riveroi* from Venezuela. *Carib. J. Sci.*, 4 (4): 485- 489.
- DONOSO-BARROS, R., 1965.- Nuevos reptiles y anfibios de Venezuela. *Bol. Mus. Nac. Hist. Nat. Chile*, 9 (102): 1-8.
- DONOSO-BARROS, R., 1966.- *Hyla robersimoni*, nuevo hylidae de Venezuela. *Bol. Mus. Nac. Hist. Nat. Chile*, 29 (2): 37-43.
- DONOSO-BARROS, R., 1968. Un nuevo anuro de los Andes de Venezuela. *Carib. J. Sci.* 8 (1-2): 31-34.
- DONOSO-BARROS, R., y LEÓN-OCHOA, J., 1972.- Desarrollo y evolución larval de *Hyla crepitans* (Amphibia: Salientia). *Bol. Soc. Biol. de Concepción*, 44: 117-127.
- DUBOIS, A. & HEYER, R., 1992.- *Leptodactylus labialis*, the valid name for the American white-lipped frog (Amphibia: Leptodactylidae). *Copeia* 1992(2): 584-585.
- DUELLMAN, W. E., 1956.- The frogs of the hylid genus *Phrynohyas* FITZINGER, 1843. *Misc. Publ. Zool. Univ. Michigan* 96: 1-47.
- DUELLMAN, W. E., 1968.- The genera of Phyllomedusine frogs (Anura: Hylidae). *Univ. Kansas Publ. Mus. Nat. Hist.*, 18: 1-10.
- DUELLMAN, W.E., 1969.- *Phyllomedusa buckleyi* BOULENGER: Variation, distribution and synonymy. *Herpetologica* 25 (2): 134-140.
- DUELLMAN, W.E., 1970.- Identity of the South American Hylid frog *Garbeana garbei*. *Copeia*, 1970 (3): 534-538.
- DUELLMAN, W. E., 1971a.- The nomenclatural status of the names *Hyla boans* (LINNAEUS) and *Hyla maxima* (LAURENTI) (Anura: Hylidae). *Herpetologica* 27 (4): 397-405.
- DUELLMAN, W. E., 1971b.- A taxonomy review of South American Hylid frogs, genus *Phrynohyas*. *Occ. Pap. Mus. Nat. Hist. Univ. Kansas*, 4: 1-21.
- DUELLMAN, W. E., 1972a.- A review of the Neotropical frogs of the *Hyla bogotensis* Group. *Occ. Pap. Mus. Nat. Hist. Univ. Kansas*, 11: 1-31.
- DUELLMAN, W. E., 1972b.- South American frogs of the *Hyla rostrata* group (Amphibia, Anura, Hylidae). *Zool. Meded.*, 47: 177-192.
- DUELLMAN, W. E., 1973.- Frogs of the *Hyla geographica* group. *Copeia*, 1973 (3): 515-533.
- DUELLMAN, W. E., 1974a.- A reassessment of the taxonomic status of some neotropical Hylid frogs. *Occ. Pap. Mus. Nat. Hist. Univ. Kansas*, 27: 1-27.
- DUELLMAN, W.E., 1974b.- Taxonomic notes on *Phyllomedusa* (Anura:Hylidae) from the Upper Amazon basin. *Herpetologica* 30 (2): 105-112.
- DUELLMAN, W. E., 1979a.- The South American Herpetofauna: a panoramic view: 1-28. En: DUELLMAN (ed.). *The South American Herpetofauna: its origin, evolution and dispersal*. *Mus. Nat. Hist. Univ. Kansas Monogr.* 7: 485 pp.
- DUELLMAN, W. E., 1979b.- The Herpetofauna of the Andes: patterns of distribution, origin, differentiation, and present communities: 371-459. En: DUELLMAN (ed.). *The South American Herpetofauna: its origin, evolution and dispersal*. *Mus. Nat. Hist. Univ. Kansas Monogr.* 7: 485 pp.
- DUELLMAN, W. E., 1980.- A new species of marsupial frog (Hylidae: *Gastrotheca*) from Venezuela. *Occ. Pap. Mus. Zool. Univ. Michigan*. 690: 1-7.
- DUELLMAN, W. E., 1986.- Two new species of *Oloolygon* (Anura: Hylidae) from the Venezuelan Guayana. *Copeia*, 1986 (4): 864-870.
- DUELLMAN, W. E., 1989a.- New species of Hylid frogs from the Andes of Columbia and Venezuela. *Occ. Pap. Mus. Nat. Hist. Univ. Kansas* 131: 1-12.
- DUELLMAN, W. E., 1989b.- Lista anotada y clave de los sapos marsupiales (Anura: Hylidae: *Gastrotheca*) de Colombia. *Caldasia*, 16 (76): 105-111.
- DUELLMAN, W. E., 1993.- Amphibian Species of the World. Additions and corrections. *Univ. Kansas Mus. Nat. Hist. Spec. Publ.*, 21: 372 pp.

- DUELLMAN, W.E., 1997.- Amphibians of La Escalera Region, Southeastern Venezuela: Taxonomy, Ecology and Biogeography. *Scient. Pap. Nat. Hist. Mus. Univ. Kansas* 2: 1-52.
- DUELLMAN, W.E. 2001.- The Hylid Frogs of Middle America, Vol. 3. SSAR, Ithaca: 695-1159.
- DUELLMAN, W. E. & CRUMP, M., 1974.- Speciation in frogs of the *Hyla parviceps* group in the Upper Amazon Basin. *Occ. Pap. Mus. Nat. Hist. Kansas* 23: 1-40.
- DUELLMAN, W. E. & FOUQUETTE, M. J., Jr., 1968.- Middle American frogs of the *Hyla microcephala* group. *Univ. Kansas Publ. Muis. Nat. Hist* 17 (12): 517-557.
- DUELLMAN, W. E. & GRAY, P., 1983.- Developmental biology and systematics of the egg-brooding hylid frogs, genera *Flectonotus* and *Fritziana*. *Herpetologica* 39 (4): 333-359.
- DUELLMAN, W. E. & HOOGMOED, M. S., 1984.- The taxonomy and phylogenetic relationships of the hylid frog genus *Stefania*. *Univ. Kansas Mus. Nat. Hist. Misc. Publ.*, 75: 1-39.
- DUELLMAN, W.E. & LYNCH, J.D., 1981.- Nomenclatural resolution of the identity of *Hyla aurantiaca* and *Hyla lactea*. *J. Herp.*, 15 (2):237-239.
- DUELLMAN W.E. and MANESS, S., 1980.- The reproductive behavior of some hylid marsupial frogs. *J. Herp.* 14 (3): 213-222.
- DUELLMAN, W.E. & MENDELSON III, J.R., 1995.-Amphibians and Reptiles from Northern Departamento Loreto, Perú: Taxonomy and Biogeography. *Univ Kansas Sci Bull.* 55 (10): 329-376.
- DUELLMAN, W.E. & RUÍZ-CARRANZA, P.M., 1986.- Ontogenetic polychromatism in marsupial frogs (Anura: Hylidae). *Caldasia* 15 (71-75): 617-627.
- DUELLMAN, W.E. & SEÑARIS, C., 2003.- A new species of glass frog (Anura: Centrolenidae) from the Venezuelan Guayana. *Herpetologica* 59(2): 247-252.
- DUELLMAN, W.E. & VELOSO, A., 1977.- Phylogeny of *Pleurodema* (Anura: Leptodactylidae): a biogeographic model. *Occ. Pap. Mus. Nat. Hist. Univ. Kansas*, 64:1-46.
- DUELLMAN, W. E. & WIENS, J. J., 1992.- The Status of the Hylid Frog Genus *Oloolygon* and the recognition of *Scinax* WAGLER, 1830. *Occ. Pap. Mus. Nat. Hist. Univ. Kansas* 151: 1-23.
- DUELLMAN, W. E. & YOSHPA, M., 1996.- A new species of *Tepuihyla* (Anura: Hylidae) from Guyana. *Herpetologica* 52 (2): 275-281.
- DUELLMAN, W. E., MAXSON, L. R. & JESIOŁOWSKI, C. A., 1988.- Evolution of Marsupial frogs (Hylidae: Hemiphraetinae): Immunological Evidence. *Copeia* 1988 (3): 527-543.
- DUNN, E. R., 1942.- The American Caecilians. *Bull. Mus. Comp. Zool. Harvard Coll.*, 91: 439-540.
- DUNN, E. R., 1948.- American frogs of the family Pipidae. *Amer. Mus. Novitates*, 1384: 1-13.
- DURANT, P., 1993.- Estatus poblacional en algunos representantes de la Anfibiafauna Andino-Venezolana.: 247. Libro de Resúmenes III Congreso Latino-Americano de Herpetología. Campinas, Brasil.
- DURANT, P., y DÍAZ, A., 1996.- Herpetofauna de cinco cuencas hidrográficas andino-venezolanas. Pp: 351-375. En PÉFAUR (Ed.) *Herpetologia Neotropical. Actas II Congreso Latinoamericano de Herpetología, II vol., publ. U.L.A., C.S.H., Mérida*: 451 pp.
- DURANT, P. y DOLE, J., 1974a.- Informaciones sobre la ecología de *Atelopus oxyrhynchus* (Salientia: Atelopodidae) en el bosque nublado de San Eusebio, Estado Mérida. *Rev. For. Venez.*, 24: 83-91.
- DURANT, P. & DOLE, J., 1974b.- Food of *Atelopus oxyrhynchus* (Anura: Atelopodidae) in a Venezuelan cloud forest. *Herpetologica*, 30: 183-187.
- DURANT, P. & DOLE, J., 1975.- Agressive behavior in *Colostethus collaris* (Anura: Dendrobatidae). *Herpetologica*, 31 (1): 23-26.
- EDWARDS, S. R., 1974.- Taxonomic notes on South American Dendrobatid frogs of the genus *Colostethus*. *Occ. Pap. Mus. Nat. Hist. Univ. Kansas* 30: 1-14.
- EVANS, M. & LAMPO, M., 1996.- Diet of *Bufo marinus* in Venezuela. *J.Herp.*, 30 (1):73-76.
- FABREZI, M. & LANGONE, J., 2000.- Los caracteres morfológicos del controvertido Neobatrachia *Allophryne ruthveni* Gaige, 1926. *Cuad. Herp.* 14 (1): 47-59.
- FOUQUETTE, M. J., 1961.- Status of the frog *Hyla albomarginata* in Central America. *Fieldiana* 39 (55): 595-601.
- FOUQUETTE, M. J., 1968.- Some frogs from the Venezuelan Llanos, and the status of *Hyla misera* WERNER. *Herpetologica*, 24 (4): 321-325.
- FOUQUETTE, M. J. & DELAHOUSAYE, A. J., 1977.- Sperm morphology in the *Hyla rubra* Group (Amphibia, Anura, Hylidae) and its bearing on generic status. *J. Herpetology*, 11 (4): 387-396.
- FROST, D. R. (ed.), 1985.- *Amphibian Species of the World*. Allen Press Inc. & Association of Systematic Collections, Lawrence, Kansas, USA. 732 pp.
- FROST, D. R. 2004. Amphibian Species of the World: an Online Reference. Version 3.0 (22 August, 2004). Electronic Database <http://research.amnh.org/herpetology/amphibia/index.php> American Museum of Natural History, New York, USA.
- FUENTES, O. and BARRIO-AMORÓS, C. L., 2003. A new *Eleutherodactylus* (Anura, Leptodactylidae) from Marahuaka tepui, Amazonas, Venezuela. *Rev. Acad. Colomb. Cienc.*, 28 (107): 285-290.
- FUENTES, O. & RODRÍGUEZ-ACOSTA, A., 1997.-The venomous "sapito minero" (*Dendrobates leucomelas* STEINDACHNER, 1864), its medical importance and the phenotypic variation in specimens from two regions of the Amazonas state, Venezuela. *Acta Biol. Venez.*, 17 (2): 53-57.
- FUNKHOUSER, A., 1957.- Review of the Neotropical Tree-Frogs of the Genus *Phyllomedusa*. *Occ. Papers Mus. Nat. Hist. Stanford Univ.*, 5: 1-89.
- FUNKHOUSER, A., 1962.- A new *Phyllomedusa* from Venezuela. *Copeia*, 1962 (3): 588-590.
- GAIGE, H. T., 1922.- A new *Gastrotheca* from Venezuela. *Occ. Pap. Mus. Zool. Univ. Michigan*, 107: 1-3.
- GALLARDO, J. M., 1965.- The species *Bufo granulosus* SPIX (Salientia: Bufonidae) and its geographic variation. *Bull. Mus. Comp. Zool. Harvard*, 134 (4): 107-138.

- GINÉS, H., 1958.- Representantes de la familia Pipidae (Amphibia, Salientia) en Venezuela. *Mem. Soc. Cien. Nat. La Salle*, 18 (49): 5-18.
- GINÉS, H., 1959.- Familias y géneros de anfibios *Amphibia* de Venezuela. *Mem. Soc. Cien. Nat. La Salle*, 19 (53): 85-146.
- GOIN, C., 1963.- A new Centrolenid frog from Venezuela. *Acta Biol. Venez.*, 3 (18): 283-286.
- GOIN, C., 1964.- Distribution and synonymy of *Centrolenella fleishmanni* in northern South America. *Herpetologica* 20 (1): 1-8.
- GOIN, C., 1966.- Description of a new frog of the genus *Hyla* from Suriname. *Zool. Meded.* 41 (15): 229-232.
- GOIN, C., 1968.- A new centrolenid frog from Guyana. *Quart. J. Florida Acad. Sci.*, 30 (2): 115-118.
- GORZULA, S., 1985a.- Notes on the Natural History of *Oloolygon rubra* (LAURENTI). *British Herp. Soc. Bull.*, 14.
- GORZULA, S., 1985b.- Field notes on *Otophryne robusta steyermarki*. *Herp. Review*, 16 (4): 102.
- GORZULA, S., 1988.- Una nueva especie de *Dendrobates* (Amphibia: Dendrobatidae) del Macizo del Chimantá, Estado Bolívar, Venezuela. *Mem. Soc. Cien. Nat. La Salle*, 48 (130): 143-149.
- GORZULA, S., 1989.- *Eleutherodactylus johnstoni*. *Herp. Review.*, 20 (2): 56.
- GORZULA, S., 1991.- *Epipedobates trivittatus*. *Herp. Review.*, 22 (3): 102.
- GORZULA, S., 1992.- La herpetofauna del macizo del Chimantá: 267-280. En: *El Macizo del Chimantá, Escudo de Guayana. Venezuela. Un ensayo ecológico tepuyano*. HUBER (ed. científico). TODTMANN, O. Edit. Caracas: 343 pp.
- GORZULA, S. y SEÑARIS, J. C. 1996.- Una nueva especie del género *Osteocephalus* (Anura: Hylidae) de la Gran Sabana, Venezuela. *Acta Biol. Venez.* 16 (4): 19-22.
- GORZULA, S. and SEÑARIS, J. C. 1998.- Contribution to the herpetofauna of the Venezuelan Guayana. I. A data base. *Scientia Guianae* 8: 267 pp.
- GORZULA, S., MORALES, J. y HERNÁNDEZ, L., 1983.- Cuidado materno en la rana *Stefania scalae*. *Mem. Soc. Cien. Nat. La Salle* 43 (119): 127-128.
- GRANT, T., E. C. HUMPHREY & C. W. MYERS, 1997.- The median lingual process of frogs: a bizarre character of old world ranoids discovered in South American dendrobatids. *Am. Mus. Novitates* 3212: 1-40.
- GREMONE, C., CERVIGÓN, F., GORZULA, S., MEDINA, G. y NOVOA, D., 1986.- *Fauna de Venezuela, Vertebrados*. Edit. Biosfera. Caracas: 269p.
- GÜNTHER, A. 1858.- *Catalogue of the Batrachia Salientia of the British Museum*. London: 160 pp.
- HANKEN, J. & WAKE, D.B., 1982.- Genetic differentiation among plethodontid salamanders (genus *Bolitoglossa*) in Central and South America: Implications for the South American invasion. *Herpetologica* 38 (2): 272-287.
- HARDY, J. D., 1984.- Systematic status of the South American frog *Phyllobates mandelorum* (Amphibia, Dendrobatidae). *Bull. Maryland Herp. Soc.*, 20 (3): 109-111.
- HARDY, J. D. & HARRIS, H. S., 1979.- Occurrence of the West Indian frog, *Eleutherodactylus johnstonei*, in South America and on the island of Curaçao. *Bull. Maryland Herp. Soc.*, 15 (4): 124-133.
- HAAS, A. 2003.- Phylogeny of frogs as inferred from primarily larval characters (Amphibia: Anura). *Cladistics*, 19: 23-89.
- HASS, C.A., DUNSKI, J.F., MAXSON, L.R. & HOOGMOED, M.S., 1995.- Divergent lineages within the *Bufo margaritifera* Complex (Amphibia: Anura; Bufonidae) revealed by albumin immunology. *Biotropica* 27 (2): 238-249.
- HANSELMANN, R., RODRÍGUEZ, A., LAMPO, M., FAJARDO-RAMOS, L., AGUIRRE, A. A., KILPATRICK, A.M., RODRÍGUEZ, J. P., & DASZAK, P., 2004.- Presence of an emerging pathogen of amphibians in introduced bullfrogs *Rana catesbeiana* in Venezuela. *Biol. Con.* 120: 115-119.
- HEATWOLE, H., 1962.- Contribution to the natural history of *Eleutherodactylus cornutus maussi*. *Stahlia. Misc. Pap.*, 2: 1-11.
- HEATWOLE, H., 1963a.- Contribución a la historia natural de *Eleutherodactylus terraebolivaris* (Anura). *Acta Biol. Venez.*, 3 (20): 301-313.
- HEATWOLE, H., SOLANO, H. & HEATWOLE, A., 1965.- Notes on Amphibians from the Venezuelan Guayanas with description of two new forms. *Acta Biol. Venez.*, 4 (12): 349-364.
- HERO, J.M. & GALATTI, U., 1990.- Characteristics distinguishing *Leptodactylus pentadactylus* and *Leptodactylus knudseni* in the Central Amazon rainforest. *J. Herp.*, 24 (2): 226-228.
- HERO, J.M. & MIJARES-URRÚTIA, A., 1995.- The tadpole of *Scinax rostrata* (Amphibia: Hylidae). *J. Herp.*, 29 (2): 307-311.
- HEYER, W. R., "1968" 1970.- Studies on the genus *Leptodactylus* (Amphibia: Leptodactylidae). 2. Diagnosis and distribution of the *Leptodactylus* of Costa Rica. *Rev. Biol. Trop.* 16 (2): 171-205.
- HEYER, W. R., 1972.- The status of *Leptodactylus pumilio BOULENGER* (Amphibia, Leptodactylidae) and the description of a new species of *Leptodactylus* from Ecuador. *Los Angeles Co. Mus. Contrib. Sci.*, 231: 1-8.
- HEYER, W. R., 1973.- Systematics of the *marmoratus* species group (Amphibia: Leptodactylidae) within the subfamily Leptodactylinae. *Contrib. Sci. Nat. Hist. Mus. Los Angeles Co.*, 253: 1-46.
- HEYER, W. R., 1977.- A discriminant function analysis of the frogs of the genus *Adenomera* (Amphibia: Leptodactylidae). *Proc. Biol. Soc. Wash.*, 89 (51): 581-592.
- HEYER, W. R., 1978.- Systematics of the *fuscus* group of the frog genus *Leptodactylus* (Amphibia: Leptodactylidae). *Nat. Hist. Mus. Los Angeles Co. Sci. Bull.*, 29: 1-85
- HEYER, W.R., 1979.- Systematics of the *pentadactylus* species group of the frog genus *Leptodactylus* (Amphibia: Leptodactylidae). *Smiths. Contr. Zool.*, 301: 1-43.
- HEYER, W.R., 1983.- Clarification of the names *Rana mystacea* SPIX, 1824, *Leptodactylus amazonicus* HEYER, 1978 and a description of a new species, *Leptodactylus spixi* (Amphibia: Leptodactylidae). *Proc. Biol. Wash.*, 96(2): 270
- HEYER, W.R., 1994a.- Variation within the *Leptodactylus podicipinus-wagneri* complex of frogs (Amphibia: Leptodactylidae). *Smiths. Contr. Zool.*, 546: 1-124.

- HEYER, W.R., 1994b.- *Hyla benitezi* (Amphibia: Anura: Hylidae): First record for Brazil and its biogeographical significance. *J. Herpetol.* 28 (4): 497-499.
- HEYER, W. R., 1995.- South American rocky habitat Leptodactylid (Amphibia: Anura: Leptodactylidae) with description of two new species. *Proc. Biol. Soc. Washington* 108 (4):695-716.
- HEYER, W. R., 1998.-The relationships of *Leptodactylus diedrus* (Anura, Leptodactylidae). *Alytes* 16 (1-2): 1.24.
- HEYER, W. R., 2002.- *Leptodactylus fragilis*, the valid name for the middle American and northern South American white-lipped frog (Amphibia: Leptodactylidae). *Proc. Biol. Soc. Washington.*, 115 (2): 321-322.
- HEYER, W. R. & HEYER, M.M. 2001.- *Leptodactylus lithonaetes*. *Cat. Am. Amph. Rept.* 723: 1-3.
- HEYER, W. R. & PYBURN, W. F., 1983.- *Leptodactylus riveroi*, a new frog species from Amazonia, South America (Anura: Leptodactylidae). *Proc. Biol. Soc. Wash.*, 96 (3): 560-566.
- HEYER, W. R. & THOMPSON, A.S. 2000.- *Leptodactylus rugosus*. *Cat. Am. Amph. Rept.* 708: 1-5.
- HILIS, D. M. & DE SA, R., 1988.- Phylogeny and taxonomy of the *Rana palmipes* group (Salientia: Ranidae). *Herpetol. Monogr.*, 2: 1-26.
- HOOGMOED, M.S., 1969.- Notes on the herpetofauna of Surinam II.- On the occurrence of *Allophryne ruthveni* Gaige (Amphibia, Salientia, Hylidae) in Surinam *Zool. Med. Leiden* 44 (5): 75-81.
- HOOGMOED, M.S., 1972.- *Hyla punctata* (SCHNEIDER), een ZuidAmerikaanse boomkikker. *Het. Aquar.*, 43: 127-130.
- HOOGMOED, M. S., 1977.- On the presence of *Bufo nasicus* WERNER in Guiana, with a redescription of the species on the basis of recently collected material. *Zool. Med. Leiden* 51 (16): 265-275.
- HOOGMOED, M. S., 1979a.- Resurrection of *Hyla ornatissima* NOBLE (Amphibia, Hylidae) and remarks on related species of Green tree frogs from the Guiana Area. Notes on the Herpetofauna of Surinam VI. *Zool. Verh., Leiden*, 172: 1-46
- HOOGMOED, M. S., 1979b.- The Herpetofauna of the Guianan Region: 241-279. En: DUELLMAN (ed.). *The South American Herpetofauna: its origin, evolution and dispersal.* Mus. Nat. Hist. Univ. Kansas Monogr. 7: 485 pp.
- HOOGMOED, M. S., 1986.- Biosystematic studies of the *Bufo typhonius* group. A preliminary progress report. En: ROZEK, Z.(ed.). *Studies in herpetology.* Prague: 147-150.
- HOOGMOED, M. S., 1989.- South American Bufonids (Amphibia: Anura: Bufonidae), an enigma for taxonomists. En: X. FONTANET y N. HORTA (eds.): *Treb. Soc. Cat. Ictio. Herp.*, 2: 167-180.
- HOOGMOED, M. S., 1990a.- Biosystematics of South American *Bufonidae*, with special reference to the *Bufo "typhonius"* group: 113-123. En: PETERS & HUTTERER (ed.). *Vertebrates in the tropics.* Mus. A. KOENING, Bonn, Germany.
- HOOGMOED, M. S., 1990b.- Resurrection of *Hyla wavrini* PARKER (Amphibia: Anura: Hylidae), a gladiator frog from northern South America. *Zool. Med. Leiden* 64 (6): 71-93.
- HOOGMOED, M. S., & GORZULA, S., 1979.- Checklist of the Savanna inhabiting frogs of the El Manteco Region with notes on their ecology and the description of a new species of tree frog (Hylidae, Anura). *Zool. Med. Leiden* 54 (13): 183-216.
- HOOGMOED, M. S., & GRUBER, U., 1983.- SPIX and WAGLER type specimens of reptiles and amphibians in the Natural History Museum in Munich (Germany) and Leiden (The Netherlands). *Spixiana* 9: 319-415.
- JUNGFER, K.H. & HÖDL, W., 2002.- A new species of *Osteocephalus* from Ecuador and a redescription of *O. lepreurii* (Duméril & Bibron, 1841) (Anura: Hylidae). *Amphibia-Reptilia* 23: 21-46.
- KAISER, H., HARDY, J. D. and GREEN, D. M., 1994.- Taxonomic status of Caribbean and South American frogs currently ascribed to *Eleutherodactylus urichi* (Anura: Leptodactylidae). *Copeia* 1994 (3): 780-796.
- KAISER, H., BARRIO-AMORÓS, C.L., TRUJILLO, J.D. and LYNCH, J.D. 2002.- Expansion of *Eleutherodactylus johnstonei* in northern South America: Rapid dispersal through human interactions. *Herp. Rev.* 33(4):290-294.
- KAISER, H., STEINLEIN, C., FEICHTINGER, W., & SCHMID, M., 2003.- Chromosome banding of six dendrobatid frogs (*Colostethus*, *Mannophryne*). *Herpetologica* 59(2): 203-218.
- KENNY, J.S., 1966.- Nest building in *Phyllomedusa trinitatis* MERTENS. *Carib. J. Sci.* 6 (1-2): 15-22.
- KENNY, J.S., 1969.-The Amphibia of Trinidad. *Stud. Fauna Curaçao other Carib. Islands* 108: 78 + XV láminas.
- KOHLER, K. & BÖHME, W., 1996.- Anuran Amphibians from the Region of Pre-Cambrian rock outcrops (inselbergs) in northeastern Bolivia, with a note on the gender of *Scinax* WAGLER, 1830 (Hylidae). *Rev. fr. Aquariol.*, 23 (3-4): 133-140.
- KWET, A. 2001.- Südbrasilianische Laubfrösche der Gattung *Scinax* mit Bemerkungen zum Geschlecht des Gattungsnamens und zum taxonomischen Status von *Hyla granulata* Peters, 1871. *Salamandra* 37 (4): 211-238.
- LA MARCA, E., 1983.- A new frog of the genus *Atelopus* (Anura: Bufonidae) from Venezuelan cloud forest. *Contrib. Biol. Geol. Milwaukee Publ. Mus.*, 54: 1-12.
- LA MARCA, E., 1984a.- Longevity in the Venezuelan Yellow Frog *Atelopus oxyrhinchus carbonerensis* (Anura: Bufonidae). *Trans. Kansas Acad. Sci.*, 87 (1-2): 66-67.
- LA MARCA, E., 1984b.- *Eleutherodactylus vanadise* sp. nov. (Anura: Leptodactylidae): First cloud forest *Eleutherodactylus* from the Venezuelan Andes. *Herpetologica*, 40 (1): 31-37.
- LA MARCA, E., 1985a.- Systematics and Ecological Observation on the Neotropical frogs *Hyla jahni* and *Hyla platydactyla*. *J. Herpetol.*, 19 (2): 227-237.
- LA MARCA, E., 1985b.- A new species of *Colostethus* (Anura: Dendrobatidae) from the Cordillera de Mérida, Northern Andes, South America. *Occ. Papers Mus. Zool. Univ. Michigan*, 710: 1-10.
- LA MARCA, E., 1986.- Description of the tadpole of *Ceratophrys calcarata*. *J. Herpetol.*, 2 (3): 459-461.
- LA MARCA, E., 1989.- A new species of collared frog (Anura: Dendrobatidae: *Colostethus*) from Serranía de Portuguesa, Andes of Estado Lara, Venezuela. *Amphibia-Reptilia* 10: 175-183.
- LA MARCA, E., 1991a "1994".- Descripción de un género nuevo de ranas (Amphibia: Dendrobatidae) de la cordillera de Mérida, Venezuela. *Anuario de Investigación 1991, Inst. Geogr. U.L.A.:* 39-41.

- LA MARCA, E., 1991b "1994".- Ecología de Anfibios en dos ambientes contrastantes (selva nublada y páramo) de la cordillera de Mérida, Venezuela". *Anuario de Investigación 1991, Inst. Geogr. U.L.A.*: 31-37.
- LA MARCA, E., 1991c "1994".- Biogeografía de las ranas del género *Mannophryne* (Anura: Dendrobatidae) en la América del Sur. *Anuario de Investigación 1991, Inst. Geogr. U.L.A.*:39-41.
- LA MARCA, E., 1992.- *Catálogo taxonómico, biogeográfico y bibliográfico de las ranas de Venezuela*. Cuadernos Geográficos U.L.A., Mérida (9): 197pp.
- LA MARCA, E., 1993.- Phylogenetic relationships and taxonomy of *Colostethus mandelorum* (Anura: Dendrobatidae) with notes on coloration, natural history and description of the tadpole. *Bull. Maryland Herp. Soc.*, 29 (1): 4-19.
- LA MARCA, E., 1994a.- Taxonomy of the frogs of the genus *Mannophryne* (Amphibia: Anura: Dendrobatidae). *Publ. Asoc. Amigos Doñana*, 4: 1-75.
- LA MARCA, E., 1994c.- Geographic Distribution (Anura): *Hyla platidactyla*. *Herp. Review* 25(4):160
- LA MARCA, E., 1994d.- Descripción de una nueva especie de *Atelopus* (Amphibia: Anura: Bufonidae) de la selva nublada andina de Venezuela. *Mem. Soc. Cien. Nat. La Salle* 54 (142): 101-108.
- LA MARCA, E., 1995a.- Crisis de Biodiversidad en Anfibios de Venezuela: Estudio de casos. En: ALONSO, M.(ed.) Cuad.-Quim. Ecol. 4 "La Biodiversidad Neotropical y la Amenaza de las extinciones" Fac. Cienc. ULA, Mérida, Venezuela: 47.
- LA MARCA, E., 1995b.- Biological and Systematic synopsis of a genus of frogs from Northern mountains of South America (Anura: Dendrobatidae: *Mannophryne*). *Bull. Maryland Herp. Soc.* 31 (2): 40-77.
- LA MARCA, E., 1995c.- Harlequin Frogs, in the face of extinction? *Reptilian magazine* 3(8): 22-24.
- LA MARCA, E., 1996a.- First record of *Hyla pugnax* (Amphibia: Anura: Hylidae) in Venezuela. *Bull. Maryland Herp. Soc.*, 32(2): 35-42.
- LA MARCA, E., 1996b.- Geographic Distribution (Anura): *Phyllomedusa tarsius*. *Herp. Rev.*, 27 (3): 149.
- LA MARCA, E., 1996c.- Geographic Distribution (Anura): *Centrolene buckleyi*. *Herp. Rev.*, 27 (3): 148-149.
- LA MARCA, E., 1996d.- Análisis de la biodiversidad de anfibios en la Cordillera de Mérida, Venezuela. Abstract. *IV Congreso Latinoamericano de Herpetología, Santiago de Chile*, octubre 1996, p. 285.
- LA MARCA, E., 1996e.- Ranas del género *Colostethus* (Amphibia: Anura: Dendrobatidae) de la Guayana Venezolana, con la descripción de siete nuevas especies. *Publ. Asoc. Amigos Doñana* 9: 1-64.
- LA MARCA, E., 1997.- Lista actualizada de los anfibios de Venezuela. Pp: 103-120. En: LA MARCA (ed.). *Vertebrados Actuales y Fósiles de Venezuela*. Museo de Ciencia y Tecnología de Mérida, Venezuela: 300 pp.
- LA MARCA, E. 2004.- Descripción de dos nuevos anfibios del piedemonte andino de Venezuela. *Herpetotrópicos* 1 (1): 1-9.
- LA MARCA, E. & LÖTTERS, S., 1997.- Monitoring of declines in Venezuelan *Atelopus* (Amphibia: Anura: Bufonidae). *Herpetologia Bonnensis*: 207-213.
- LA MARCA, E. & MANZANILLA, J. 1997.- Geographic Distribution (Anura): *Bufo sternosignatus*. *Herp. Rev.*, 28 (4): 207.
- LA MARCA, E. & MIJARES-URRÚTIA, A. 1988.- Description of the tadpole of *Colostethus mayorgai* (Anura: Dendrobatidae) with preliminary data on the reproductive biology of the species. *Bull. Maryland Herpetol. Soc.* 24 (3): 47-57.
- LA MARCA, E. & MIJARES-URRÚTIA, A. 1996.- Taxonomy and geographic distribution of a Northwestern Venezuelan toad (Anura, Bufonidae, *Bufo sternosignatus*). *Alytes* 14(3): 101-114.
- LA MARCA, E. & MIJARES-URRÚTIA, A. 1997.-The tadpole of *Colostethus bromelicola* (TEST, 1956)(Amphibia: Anura: Dendrobatidae) from Northern Venezuela. *Comun. Mus. Cien.Tecnol.-PUCRS, sér. Zool., Porto Alegre* 10: 3-11.
- LA MARCA, E. & SMITH, H. M., 1982a.- *Eleutherodactylus colostichos*, a new frog species from the Páramo de los Conejos, in the Venezuelan Andes (Anura: Leptodactylidae). *Occ. Papers Mus. Zool. Univ. Michigan*, 710: 1-8.
- LA MARCA, E. & SMITH, H. M., 1982b. The anuran named *Hyla loveridgei* RIVERO. *Carib. J. Sci.* 18 (1-4): 21.
- LA MARCA, E., PÉREZ, E. y RENFIJO, J. M., 1989.- Una nueva especie de *Atelopus* (Amphibia: Anura: Bufonidae) del Páramo de Tamá, Estado Apure, Venezuela. *Caldasia* 16 (76): 97-104.
- LA MARCA, E., VENCES, M. & LÖTTERS, S., 2002.- Rediscovery and mitochondrial relationships of the Dendrobatid frog *Colostethus humilis* suggest parallel colonization of the Venezuelan Andes by Poison frogs. *Stud. Neotr. Fauna Environ.* 37 (3): 233-240.
- LAMPO, M, CHACÓN, A., & DÍAZ DE PASCUAL, A. 2004.- Muge y no es Vaca. La rana toro, un invasor letal. *ESCIENCIA* 10: 14-15.
- LAVILLA, E., VAIRA, M., and FERRARI, L., 2003.- A new species of *Elachistocleis* (Anura: Microhylidae) from the Andean Yungas of Argentina , with notes on the *Elachistocleis ovalis-E. bicolor* controversy. *Amphibia-Reptilia* 24: 269-284.
- LEÓN-OCHOA, J. R., 1975.- Desarrollo temprano y notas sobre la historia natural de la larva de *Hyla x-signata* (Amphibia: Hylidae). *Carib. J. Sci.*, 15 (1-2): 57-65.
- LEÓN-OCHOA, J. R. y DONOSO-BARROS, R., 1970.- Desarrollo embrionario y metamorfosis de *Pleurodema brachyops* (COPE) (Salientia, Leptodactylidae). *Bol. Soc. Biol. Concepción*, 42: 355-379.
- LESCURE, J., 1975a.- Contribution a l'étude des Amphibiens de Guyana Française. V. Les Centrolenides. *Bull. Soc. Zool. France* 100 (3): 385-394.
- LICHTENSTEIN, M., et MARTENS, E., 1856.- *Nomenclator Reptilium et Amphibiorum Musei Zoologici Berolinensis*. Gedruckt Akad. Wissensch. Berlin: 48 pp.
- LIMA, A., 1992.- The tadpole of *Leptodactylus riveroi* HEYER & PYBURN, 1983 (Anura: Leptodactylidae). *J. Herp.*, 26(1): 91-93.
- LÖTTERS, S., 1996.- The Neotropical Toad Genus *Atelopus*. Checklist, Biology, Distribution. VENCES & GLAW Verlags GbR, Kolonia, 143 pp.
- LÖTTERS, S. and LA MARCA, E., 2001.- Case 3173. *Phrynidium crucigerum* Lichtenstein & Martens, 1856 (currently *Atelopus cruciger*; Amphibia, Anura): proposed conservation of the specific name by the designation of a neotype. *Bull. Zool. Nomencl.* 58 (2): 119-121.

- LÖTTERS, S. BÖHME, W., and GÜNTHER, R., 1998.- Notes on the type material of the Neotropical Harlequin frogs *Atelopus varius* (Lichtenstein & Martens, 1856) and *Atelopus cruciger* (Lichtenstein & Martens, 1856) deposited in the Museum für Naturkunde of Berlin (Anura, Bufonidae). *Mitt. Mus. Nat. kd. Berl. Zool. Reihe* 74 (2): 173-184.
- LÖTTERS, S., LA MARCA, E. and VENCES, M., 2004. Redescriptions of two toad species of the Genus *Atelopus* from Coastal Venezuela. *Copeia* 2004 (2): 222-234.
- LUTZ, A., 1927.- Notas sobre batrachios da Venezuela e da Ilha de trinidad. *Mem. Inst. Osw. Cruz.*, 20 (I): 35-65.
- LYNCH, J. D., 1970.- Systematic status of the American leptodactylid frog genera *Engystomops*, *Eupemphix* and *Physalaemus*. *Copeia*, 1970 (3): 488-496.
- LYNCH, J. D., 1975b.- A review of the broad-headed *Eleutherodactylinae* frogs of South America (Leptodactylidae). *Occ. Pap. Mus. Nat. Hist. Univ. Kansas*, 37: 1-46.
- LYNCH, J. D., 1976.- The species groups of the South American frogs of the genus *Eleutherodactylus* (Leptodactylidae). *Occ. Papers Mus. Nat. Hist. Univ. Kansas*, (61): 1-24.
- LYNCH, J. D., 1978.- A new *Eleutherodactylinae* frog from the Andes of northern Colombia (Leptodactylidae). *Copeia*, 1978 (1): 17-21.
- LYNCH, J. D., 1979a.- A new genus for *Elosia duidensis* RIVERO (Amphibia, Leptodactylidae) from Southern Venezuela. *Amer. Mus. Novitates* (2680): 1-8.
- LYNCH, J. D., 1979b.- The amphibians of the lowland tropical forests: 189-215. En: DUELLMAN (ed.). *The South American Herpetofauna: its origin, evolution and dispersal*. *Mus. Nat. Hist. Univ. Kansas Monogr.* 7: 485 pp.
- LYNCH, J. D., 1980.- A taxonomic and distributional synopsis of the Amazonian frogs of the genus *Eleutherodactylus*. *Amer. Mus. Novitates*, (2696): 1-24.
- LYNCH, J. D., 1981.- Leptodactylid frogs of the genus *Eleutherodactylus* in the Andes of northern Ecuador and adjacent Colombia. *Univ. Kansas Mus. Nat. Hist. Misc. Publ.*, 72: 1-46.
- LYNCH, J. D., 1982.- Relationships of the frogs of the genus *Ceratophrys* (Leptodactylidae) and their bearing on hypothesis of Pleistocene forest refugia in South America and punctuated equilibria. *Syst. Zool.*, 31 (2): 166-179.
- LYNCH, J.D., 1983.- A new leptodactylid frog from the Cordillera Oriental de Colombia. *Adv. Herp. Evol. Biol., Mus. Comp. Zool.* Cambridge, Massachusetts: 52-57.
- LYNCH, J. D., 1989.- A review of the Leptodactylid frogs of the genus *Pseudopaludicola* in Northern South America. *Copeia* 1989 (3): 577-588.
- LYNCH, J. D., 2004.- Two new frogs (*Eleutherodactylus*) from the Serranía de Perijá, Colombia. *Rev. Acad. Colomb. Cienc.*, 27 (105): 613-617.
- LYNCH, J. D. & FREEMAN, H. L., 1966.- Systematic status of a South American frog, *Allophryne ruthveni* GAIGE. *Univ. Kansas Publ. Mus. Nat. Hist.*, 17: 493-502.
- LYNCH, J. D. & HOOGMOED, M. S., 1977.- Two new species of *Eleutherodactylus* (Amphibia, Leptodactylidae) from northeastern South America. *Proc. Biol. Soc. Washington*, 90 (2): 424-439.
- LYNCH, J. D. & LA MARCA, E., 1993.- Synonymy and variation in *Eleutherodactylus bicumulus* (PETERS) from Northern Venezuela, with a description of a new species (Amphibia: Leptodactylidae). *Carib. J. Sci.*, 29(3-4): 133-146.
- LYNCH, J. D. & SUÁREZ-MAYORGA, A., 2001.- The distribution of the gladiator frogs (*Hyla boans* group) in Colombia, with comments on size variation and sympatry. *Caldasia* 23 (2): 491-507.
- LYNCH, J.D. y VARGAS RAMÍREZ, M.A., 2000.- Lista preliminar de especies de anuros del Departamento del Guanía, Colombia. *Rev. Acad. Cienc.* 24(93): 579-589.
- LUTZ, A., 1927.- Notas sobre batrachios da Venezuela e da Ilha de trinidad. *Mem. Inst. Osw. Cruz.*, 20 (I): 35-65.
- MÄGDEFRAU, H., MÄGDEFRAU, K., & SCHLÜTER, A., 1991.- Herpetologische Daten vom Guaiquinima-Tepui, Venezuela. *Herpetofauna* 13 (70): 13-26.
- MANZANILLA, J., & LA MARCA, E., 2004 "2002".- Museum records and field samplings as sources of data indicating population crashes for *Atelopus cruciger*, a proposed critically endangered species from the Venezuelan Coastal range. *Mem. Soc. Cien. Nat. La Salle*, 157: 5-30.
- MANZANILLA, J. & SANCHEZ, D., 2003.- Geographic Distribution. (Anura). *Gastrotheca ovifera*. *Herp. Rev.* 34 (4): 381.
- MANZANILLA, J., RIVERA, R & SCHMID, M., 1996.- Geographic Distribution. (Anura). *Eleutherodactylus mausii*. *Herp. Rev.* 27(1):29.
- MANZANILLA, J., FERNÁNDEZ-BADILLO, A., LA MARCA, E. y VISBAL, R., 1995.- Fauna del parque Nacional Henri Pittier, Venezuela: Composición y distribución de los anfibios. *Acta Cienc. Venez.*, 46(4): 294-302.
- MARTINS, M. 1998. The frogs of Ilha de Maraca. In: *Maraca. The biodiversity and environment of and Amazonian rainforest*. (Milliken, W. & Ratter, J. A. eds.), pp: 285-306. John Wiley & sons.
- McDIARMID, R., 1971.- Comparative morphology and evolution on frogs of the Neotropical Genera *Atelopus*, *Dendrophryniscus*, *Melanophryniscus* and *Oreophrynella*. *Bull. Los Angeles Co. Mus. Nat. Hist. Sc.*, 12: 1-66.
- McDIARMID, R., 1973.- A new species of *Atelopus* (Anura, Bufonidae) from Northeastern South America. *Los Angeles Co. Mus. Contrib. Sci.*, 240: 1-12.
- McDIARMID, R. & GORZULA, S., 1989.- Aspects of the reproductive ecology of the Tepui Toads, genus *Oreophrynella* (Anura, Bufonidae). *Copeia* 1989 (2): 445-451.
- McDIARMID, R. W. & PAOLILLO, A, 1988.- Herpetological collections: Cerro de la Neblina. En: BREWER-CARIAS (ed.) *Cerro de la Neblina. Resultados de la expedición 1983-1987*. FUDECI. Caracas: 922 pp.
- MEINHARDT, D.J. & PARMALEE, J.R., 1996.- A new species of *Colostethus* (Anura: Dendrobatidae) from Venezuela. *Herpetologica* 52 (1):70-77.
- MELIN, D., 1941.- Contributions to the knowledge of the Amphibia of South America. *Göteborgs Kungl. Vetensk. Vitter. Samh. Handl. Ser. B*, 1 (4): 1-71.
- MERTENS, R., 1926.- Herpetologische Mitteilungen VIII-XV. *Senckenbergiana*, 8 (3/4): 137-155.

- MERTENS, R., 1950.- Ein neuer Laubfrosch aus Venezuela. *Senckenbergiana* 31 (1-2): 1-2.
- MERTENS, R., 1957a.- Zur Naturgeschichte des venezolanischen Riesen-Beutelfrosches, *Gastrotheca ovifera*. *Der. Zool. Garten*, 23 (1-3): 110-133.
- MERTENS, R., 1957b.- Zoologische Beobachtungen in Nebelwäldern von Rancho Grande, Venezuela. *Natur v. Volk.*, 87 (10): 337-344.
- MERTENS, R., 1967.- Die herpetologische Sektion des Natur-Museums und Forschungs-Institutes Senckenberg in Frankfurt a. M. nebst einem Verzeichnis ihrer Typen. *Senckenbergiana Biol.*, 48: 1-106.
- MIJARES-URRÚTIA, A. E., 1990a.- The tadpole of *Centrolenella andina* (Anura: Centrolenidae). *J. Herpetology* 24 (4): 410-412.
- MIJARES-URRÚTIA, A. E., 1990b.- El renacuajo de *Hyla meridensis* (Anura: Hylidae) de los Andes de Venezuela. *Rev. Biol. Tropical* 38 (2): 1-4.
- MIJARES-URRÚTIA, A. E., 1991.- Descripción del renacuajo de *Colostethus leopardalis* RIVERO con algunos comentarios sobre su historia natural. *Amphibia-Reptilia* 12 (2): 145-152.
- MIJARES-URRÚTIA, A. E., 1992.- Sobre el renacuajo de *Hyla alemani* RIVERO (Anura: Hylidae). *Acta Biol. Venez.*, 13 (3-4): 35-39.
- MIJARES-URRÚTIA, A. E., 1997.- Un nuevo *Leptodactylus* (Anura, Leptodactylidae) de un bosque nublado del Oeste de Venezuela. *Alytes* 15 (3): 113-120.
- MIJARES-URRÚTIA, A. E., 1998.- Una nueva especie de rana arborícola (Amphibia: Hylidae: *Hyla*) de un bosque nublado del Oeste de Venezuela. *Rev. Brasil. Biol.* 58 (4): 489-493.
- MIJARES-URRÚTIA, A. E. & ARENDS, A., 1993.- New distributional records of Amphibians and Reptiles for the State of Falcon, Venezuela. *Herp. Rev.* 24 (4): 157-158.
- MIJARES-URRÚTIA, A. E. & ARENDS, A., 1999a.- A new *Mannophryne* (Anura: Dendrobatidae) from Western Venezuela, with comments on the generic allocation of *Colostethus larandinus*. *Herpetologica* 55 (1): 106-114.
- MIJARES-URRÚTIA, A. E. y ARENDS, A., 1999b.- Un nuevo *Mannophryne* (Anura: Dendrobatidae) del estado Falcón, con comentarios sobre la conservación del género en el Noroeste de Venezuela. *Carib. J. Sci.* 35 (3-4): 231-237.
- MIJARES-URRÚTIA, A. E. & ARENDS, A., 2001.- A new toad of the *Bufo margaritifera* complex (Amphibia, Bufonidae) from Northwestern Venezuela. *Herpetologica* 57 (4): 523-531.
- MIJARES-URRÚTIA, A. E. & HERO, J., 1997.- Los renacuajos de *Hyla luteoocellata* e *H. vigilans* (Anura: Hylidae) de Venezuela. *Rev. Biol. Trop.* 44 (3)/45 (1): 585-592.
- MIJARES-URRÚTIA, A. E. & LA MARCA, E., 1997.- Tadpoles of the genus *Nephelobates* (Amphibia: Anura: Dendrobatidae) from Venezuela. *Trop Zool.*, 10: 133-142.
- MIJARES-URRÚTIA, A. E. & RIVERO, R., 2000.- A new Treefrog from the Sierra de Aroa, Northern Venezuela. *J. Herpetol.* 34 (1): 80-84.
- MIJARES-URRÚTIA, A. E., ARENDS, A. & RIVERO, R., 1998.- Geographic Distribution: Anura: *Hyla vigilans*. *Herp. Rev.* 29(2): 107.
- MIJARES-URRÚTIA, A. E., MANZANILLA-PUPPO, J. y LA MARCA, E., 1999.- Una nueva especie de *Tepuihyla* (Anura: Hylidae) del Noroeste de Venezuela, con comentarios sobre su biogeografía. *Rev. Biol. Trop.* 47 (4): 1099-1110.
- MOLINA, C. R., 2004 "2002".-Reproducción de *Pleurodema brachyops* (Anura: Leptodactylidae) en los llanos del Estado Apure, Venezuela. *Mem. Soc. Cien. Nat. La Salle*, 158: 117-125.
- MORALES, V.R., 1994.- Taxonomía de algunos *Colostethus* (Anura: Dendrobatidae) de Sudamérica, con descripción de dos especies nuevas. *Rev. Esp. Herp.* 8:95-103.
- MORALES, V.R., 2000.- Sistemática y biogeografía del grupo *trilineatus* (Amphibia, Anura, Dendrobatidae, *Colostethus*) con descripción de once nuevas especies. *Publ. Asoc. Amigos Doñana*, 13: 1-59.
- MUEDEKING, M. H. & HEYER, R.W., 1976.-Description of eggs and reproductive patterns of *Leptodactylus pentadactylus* (Amphibia: Leptodactylidae). *Herpetologica* 32: 137-139.
- MULLER, L., 1935.- Sobre una nueva raza de *Atelopus cruciger* LICHT. & MART. en Venezuela. *Bol. Acad. Cien. Fis. y Nat.*, 2: 1-10.
- MURPHY, J.C., 1997.- *Amphibians and reptiles of Trinidad and Tobago*. Krieger Publ. Co. Malabar, Florida: 245 pp.
- MYERS, C. M. 1997. Preliminary remarks on the summit herpetofauna of Auyantepui, eastern Venezuela. *Acta Terramaris* 10, 1-8.
- MYERS, C.W & DONNELLY, M.A., 1996.- A new Herpetofauna from Cerro Yaví, Venezuela: First Results of the Robert G.Goelet American Museum-TERRAMAR Expedition to the Northwestern tepuis. *Am. Mus. Novitates* 3172: 1-56.
- MYERS, C.W & DONNELLY, M.A., 1997.- A tepui Herpetofauna on a Granitic Mountain (Tamacuari) in the borderland between Venezuela and Brazil. Report of the Phipps-Tapirapecó Expedition. *Am. Mus. Novitates* 3213: 1-71.
- MYERS, C.W & DONNELLY, M.A., 2001.- Herpetofauna of the Yutajé-Corocoro Massif, Venezuela: Second report from the Robert G. Goelet American Museum. Terramar Expedition to the Northwestern tepuis. *Bull. Am. Mus. Nat. Hist.* 261: 1-85.
- MYERS, C. W., PAOLILLO, A. & DALY, J. W., 1991.- Discovery of a defensively malodorous and nocturnal frog in the family Dendrobatidae: phylogenetic significances of a new genus and species from the Venezuelan Andes. *Amer. Mus. Novitates*, 3002: 1-33.
- NARVAES, P. 2003. Revisão taxonômica das espécies de *Bufo* do complexo *granulosus* (Amphibia, Anura, Bufonidae). PhD Thesis. Instituto de Biociências da Universidade de São Paulo. Brazil: 305 pp.
- NELSON, C. E., 1971.- A Brazilian record from the microhylid *Otophyryne robusta*. *Herpetologica* 27 (3): 324-325.
- NELSON, C. & LESCURE, J., 1975.- The taxonomy and distribution of *Myersiella* and *Synapturanus* (Anura: Microhylidae). *Herpetologica* 31: 389-397.
- NIETO-CASTRO, M. J. 1999. Estudio preliminar de las especies del género *Scinax* (Amphibia: Anura: Hylidae) en Colombia. *Rev. Acad. Colomb. Ciencias*, 23 (suplemento especial): 339-346.
- NOONAN, B. P. and R. M. BONETT. 2003. A new species of *Hyalinobatrachium* (Anura: Centrolenidae) from the highlands of Guyana. *J. Herpetol.* 37, 92-97.
- NUSSBAUM, R. A., 1977.- Rhinatrematidae: A new family of caecilians (Amphibia: Gymnophiona). *Occ. Pap. Mus. Zool. Univ. Michigan*, 682: 1-30.

- NUSSBAUM, R. A., & WILKINSON, M., 1989.- On the classification and phylogeny of Caecilians (Amphibia: Gymnophiona), a critical review. *Herpetol. Monogr.* 3: 1-42.
- PAOLILLO, A., 1977.- El sapito minero y su veneno (*Dendrobates leucomelas*). *Natura* 62: 36-39.
- PAOLILLO, A., 1986.- Geographic distribution. (Anura). *Hamptophryne boliviana*. *Herp. Review* 17 (1): 25-26.
- PAOLILLO, A. y CERDA, J., 1981.- Nuevos hallazgos de *Aparasphenodon venezolanus* (MERTENS) (Salientia, Hylidae) en el Territorio Federal Amazonas, Venezuela, con anotaciones sobre su biología. *Mem. Soc. Cien. Nat. La Salle*, 41 (116): 57-75.
- PARKER, H. W., 1927.- A revision of the frogs of the genera *Pseudopaludicola*, *Physalaemus* and *Pleurodema*. *Ann. Mag. Nat. Hist., Ser. 9*, 20: 450-478.
- PARKER, H. W., 1936.- A collection of reptiles and amphibians from the Upper Orinoco. *Mus. Roy. Hist. Nat. Belgique*, 12 (26): 1-4.
- PARRA-OLEA, G., GARCÍA-PARÍS, M., WAKE, D. B., 2004.- Molecular diversification of salamanders of the tropical American genus *Bolitoglossa* (Caudata: Plethodontidae) and its evolutionary and biogeographical implications. *Biol. J. Linnean Soc.* 81: 325-346.
- PÉFAUR, J. E., 1985.- New species of Venezuelan *Colostethus* (Dendrobatidae). *J. Herpetology* 19 (3): 321-327.
- PÉFAUR, J.E., 1993.-Description of a new *Colostethus* (Dendrobatidae) with some natural history on the genus in Venezuela. *Alytes* 11 (3):88-96.
- PÉFAUR, J.E. y DIAZ DE PASCUAL, A., 1982.- Aspectos biogeográficos de las comunidades de anfibios y saurios de los Andes venezolanos. In: SALINAS, P.J. *Zoología Neotropical*. Actas VIII Congreso Latinoamericano de Zoología; octubre 1980, Mérida, Venezuela.
- PÉFAUR, J.E. y DIAZ DE PASCUAL, A., 1987.- Distribución ecológica y variación temporal de los anfibios del estado Barinas, Venezuela. *Rev. Ecol. Lationamer.* 1 (3-4): 9-19.
- PÉFAUR, J.E. y PÉREZ, R., 1995.- Zoogeografía y variación espacial y temporal de algunos vertebrados epigeos de la zona xerófila de la cuenca media del río Chama, Mérida, Venezuela. *Ecotropicos* 8 (1-2): 15-38.
- PÉFAUR, J. E. & J. A. RIVERO. 2000.- Distribution, species-richness, endemism, and conservation of Venezuelan amphibians and reptiles. *Amph. & Rept. Conserv.* 2 (2): 42-70.
- PÉFAUR, J. E. & SIERRA, N., 1995.- Status of *Leptodactylus labyrinthicus* (Calf frog, Rana Ternero) in Venezuela. *Herp. Rev.* 26(3): 124-127.
- PÉFAUR, J. E., PÉREZ, R., SIERRA, N. y GODOY, F., 1987.- Density reappraisal of Caecilians in the Andes of Venezuela. *J. Herp.* 21 (4):335-337.
- PÉFAUR, J. E., SIERRA, N., PÉREZ, R. y GODOY, F., 1992.- Aspectos biológicos de una población de cecilidos de los Andes Venezolanos. *Acta zool. Lilloana*, 41: 67-74.
- PIÑERO, J. y DURANT, P., 1993.- Dieta y hábitat de una comunidad de anuros de la selva nublada en los Andes Merideños.:253. *Libro de Resúmenes III Congreso Latino-Americano de Herpetología. Campinas, Brasil.*
- PIÑERO, J., y LA MARCA, E., 1996.- Hábitos alimentarios de *Nephelobates alboguttatus* (Anura: Dendrobatidae) en una selva nublada andina de Venezuela. *Rev. Biol. Trop.*, 44 (2): 827-833.
- PRADERÍO, M.J. & ROBINSON, M., 1990.- Reproduction in the toad *Colostethus trinitatis* (Anura: Dendrobatidae) in a northern Venezuelan seasonal environment. *Journ. Trop. Ecol.* 6: 333-341.
- PYBURN, W.F., 1973.- A new Hylid frog from the Llanos of Colombia. *J. Herp.* 7 (3): 297-301.
- PYBURN, W.F., 1975.- A new species of Microhylid frog of the genus *Synapturanus* from Southeastern Colombia. *Herpetologica* 31 (4): 439-443.
- PYBURN, W. F., 1978.- The voice and relationship of the treefrog *Hyla hobbsi* (Anura: Hylidae). *Proc. Biol. Soc. Wash.*, 91 (1): 123-131.
- PYBURN, W. F. AND FOUQUETTE, M. J., 1971.- A new striped treefrog from Central Colombia. *J. Herpetol.* 5 (3-4): 97-101.
- PYBURN, W.F. & GLIDEWELL, J.R., 1971.- Nests and breeding behavior of *Phyllomedusa hypochondrialis* in Colombia. *J. Herp.*, 5 (1-2): 49-52.
- RADA, D., 1976.- Cariotipo de *Colostethus trinitatis* (Amphibia: Dendrobatidae). *Acta Biol. Venez.*, 9 (2): 213- 220.
- RADA, D., 1981a.- Renacuajos de algunos anfibios de Clarines (Edo. Anzoátegui, Venezuela). *Mem. Soc. Cien. Nat. La Salle*, 41 (116): 57-75.
- RADA, D., 1981b.- La ranita de Caracas, *Eleutherodactylus johnstonei*. *Natura* 70-71:36-37.
- RAMÍREZ PINILLA, M. P., 2004.- Rana cabeza de Inger. *Eleutherodactylus ingeri*. Pp. 330-333. In: RUEDA-ALMONACID, J. V., J. D. LYNCH & A. AMÉZQUITA (Eds.). Libro Rojo de los anfibios de Colombia. Serie Libros Rojos de especies amenazadas de Colombia. Conservación Internacional Colombia, Instituto Ciencias Naturales-Universidad Nacional Colombia, Ministerio del Medio Ambiente, Bogotá, Colombia.
- RAMO, C. y BUSTO, B., 1989-1990.-Inventario herpetológico (Anfibios y Reptiles) de las sabanas inundables del Módulo Fernando Corrales (Mantecal), Estado Apure. *Mem. Soc. Cien. Nat. La Salle*, 49 (131-132), 50 (133-134):287-308.
- RIVAS F., G., 1998.- Geographic Distribution. Anura: *Atelopus cruciger*. *Herp. Rev.* 29(3): 172.
- RIVAS, G. and MANZANILLA, J. 1999.- Geographic distribution (Anura): *Phyllomedusa hypocondrialis*. *Herp. Rev.* 30 (4):231.
- RIVERO, J. A., 1961.- Salientia of Venezuela. *Bull. Mus. Comp. Zool.*, 126 (1): 1-267.
- RIVERO, J. A., 1963a.- The distribution of venezuelan frogs I. The Maracaibo basin. *Carib. J. Sci.*, 3 (1): 7-13.
- RIVERO, J. A., 1963b.- The distribution of Venezuelan frogs II. The Venezuelan Andes. *Carib. J. Sci.*, 3 (2-3): 87-102.
- RIVERO, J. A., 1963c.- The distribution of Venezuelan frogs III. The Sierra de Perijá and the Falcon Region. *Carib. J. Sci.*, 3 (4): 197-199.
- RIVERO, J. A., 1963d.- *Hyla ginesi*, a new name for *Hyla loveridgei* RIVERO. *Carib. J. Sci.*, 3 (1): 28.
- RIVERO, J. A., 1964a.- The distribution of Venezuelan frogs IV. The Coastal Range. *Carib. J. Sci.*, 4 (1): 307-317.
- RIVERO, J. A., 1964b.- The distribution of Venezuelan frogs V. The Venezuelan Guayana. *Carib. J. Sci.*, 4 (2-3): 411-420.
- RIVERO, J. A., 1964c.- The distribution of Venezuelan frogs VI. The Llanos and The Delta Region. *Carib. J. Sci.*, 4 (4): 491-495.

- RIVERO, J. A., 1964d.- Salientios (*Amphibia*) en la colección de la Sociedad de Ciencias Naturales La Salle. *Carib. J. Sci.*, 4(1): 297-305.
- RIVERO, J. A., 1966.- Notes on the genus *Cryptobatrachus* (Amphibia: Salientia) with the description of a new race and four new species of a new genus of Hylid frogs. *Carib. J. Sci.*, 6 (3-4): 137-149.
- RIVERO, J. A., 1967a.- Anfibios coleccionados por la expedición Franco-Venezolana al Alto Orinoco. *Carib. J. Sci.*, 7 (3-4): 145-154.
- RIVERO, J. A., 1967b.- A new race of *Otophryne robusta* BOUL. (Amphibia: Salientia) from the Chimanta-Tepui of Venezuela. *Carib. J. Sci.*, 7 (3-4): 155-158.
- RIVERO, J. A., 1967c.- Adiciones recientes a la fauna anfibia de Venezuela. *Mem. Soc. Cien. Nat. La Salle*, 27 (76): 5-10.
- RIVERO, J. A., 1968a.- A new species of *Elosia* (Amphibia: Salientia) from Mt. Duida, Venezuela. *Amer. Mus. Novitates*. 2334: 155-158.
- RIVERO, J. A., 1968b.- Los Centrolénidos de Venezuela (Amphibia: Salientia). *Mem. Soc. Cien. Nat. La Salle*, 28 (81): 301-334.
- RIVERO, J. A., 1968c.- A new species of *Eleutherodactylus* (Amphibia: Salientia) from the Guayana Region, Edo. Bolívar, Venezuela. *Breviora* 306: 1-2.
- RIVERO, J. A., 1968d.- A new species of *Hyla* (Amphibia: Salientia) from the Venezuelan Guayana. *Breviora*, 307: 1-5.
- RIVERO, J. A., 1968e.- El problema de *Leptodactylus rhodomystax* BOULENGER (Amphibia: Salientia). *Mem. Soc. Cien. Nat. La Salle* 28 (80): 145-150.
- RIVERO, J. A., 1968g.- Sobre la identidad de *Hyla rostrata* PETERS (Amphibia, Salientia). *Acta Biol. Venez.*, 6 (3-4): 133-138.
- RIVERO, J. A., 1969a.- Sobre la *Hyla rubra* LAURENTI y la *Hyla x-signata* SPIX (Amphibia: Salientia). *Mem. Soc. Cien. Nat. La Salle*, 29 (83): 109-118.
- RIVERO, J. A., 1969b.- A new name for *Sphaenorhynchus aurantiacus* (DAUDIN) (Amphibia: Salientia). *Copeia*, 1969 (4): 700-703.
- RIVERO, J. A., 1969c.- On the identity and relationships of *Hyla luteocellata* ROUX (Amphibia: Salientia). *Herpetologica*, 25 (2): 126-134.
- RIVERO, J. A., 1969d.- A new species of *Hyla* (Amphibia : Salientia) from the Region of Páramo de Tamá, Venezuela. *Carib. J. Sci.*, 9 (3-4): 145-150.
- RIVERO, J. A., 1970.- On the origin, endemism and distribution of the genus *Stefania* RIVERO (Amphibia: Salientia) with a description of a new species from southeastern Venezuela. *Bol. Soc. Venez. Cien. Nat.*, 28 (117-118): 456-481.
- RIVERO, J. A., 1971a.- Tres nuevos records y una nueva especie de anfibios de Venezuela. *Carib. J. Sci.*, 2 (1-2): 1-9.
- RIVERO, J. A., 1971b.- Notas sobre los anfibios de Venezuela I. Sobre los hylidos de la Guayana Venezolana. *Carib. J. Sci.*, 2 (3-4): 181-193.
- RIVERO, J. A., 1971c.- Un nuevo e interesante *Dendrobates* (Amphibia: Salientia) del Cerro Yapacana de Venezuela. *Kasmera*, 3 (4): 389-396.
- RIVERO, J. A., 1972b.- On *Atelopus oxyrhynchus* BOULENGER (Amphibia, Salientia), with the description of a new race and a related new species from the Venezuelan paramos. *Bol. Soc. Venez. Cienc. Nat.*, 29 (122-123): 600-612.
- RIVERO, J. A., 1976.- Notas sobre los anfibios de Venezuela II. Sobre los *Colostethus* de los Andes Venezolanos. *Mem. Soc. Cien. Nat. La Salle*, 35 (105): 327-344.
- RIVERO, J. A., 1978.- Notas sobre los anfibios de Venezuela III. Nuevos *Colostethus* de los Andes Venezolanos. *Mem. Soc. Cien. Nat. La Salle*, 38 (109): 95-111.
- RIVERO, J. A., 1980.- Notas sobre los anfibios de Venezuela IV. Una nueva especie de *Atelopus* (Amphibia, Bufonidae) de los Andes, con anotaciones sobre el posible origen del género en Venezuela. *Mem. Soc. Cien. Nat. La Salle* 40: 129-139.
- RIVERO, J. A., 1982a.- Sobre el *Colostethus mandelorum* (SCHMIDT) y el *Colostethus inflexus* RIVERO (Amphibia, Dendrobatidae). *Mem. Soc. Cien. Nat. La Salle*, 42 (118): 9-16.
- RIVERO, J. A., 1982b.- Los *Eleutherodactylus* (Amphibia, Leptodactylidae) de los Andes Venezolanos I. Especies del Páramo. *Mem. Soc. Cien. Nat. La Salle*, 42 (118): 17-56.
- RIVERO, J. A., 1982c.- Los *Eleutherodactylus* (Amphibia, Leptodactylidae) de los Andes Venezolanos II. Especies subparameras. *Mem. Soc. Cien. Nat. La Salle*, 42 (118): 57-132.
- RIVERO, J. A., 1983.- Sobre las Relaciones y el Origen de los *Eleutherodactylus* (Amphibia, Leptodactylidae) Andinos de Venezuela. *Informe Final IX CLAZ PERU*: 199-204.
- RIVERO, J. A., 1984a.- Una nueva especie de *Colostethus* (Amphibia, Dendrobatidae) de la Cordillera de la Costa, con anotaciones sobre otros *Colostethus* de Venezuela. *Brenesia* 22: 51-56.
- RIVERO, J. A., 1985.- Nuevos Centrolenidos de Colombia y Venezuela. *Brenesia* 23: 335- 373.
- RIVERO, J. A., 1988.- Sobre las relaciones de las especies del género *Colostethus* (Amphibia, Dendrobatidae). *Mem. Soc. Cien. Nat. La Salle*, 48 (129):3-32.
- RIVERO, J. A. & ESTEVES, A. E., 1969.- Observations on the agonistic and breeding behavior of *Leptodactylus pentadactylus* and other amphibian species in Venezuela. *Breviora* 321: 1-14.
- RIVERO, J. A., LANGONE, J. A. y PRIGIONI, C. M., 1986.- Anfibios Anuros colectados por la Expedición del Museo Nacional de Historia Natural de Montevideo al Río Caura, Estado Bolívar, Venezuela; con la descripción de una nueva especie de *Colostethus* (Dendrobatidae). *Com. Zool. Mus. Hist. Nat. Montevideo*, 11 (157): 1-15.
- RIVERO, J. A. y MAYORGA, H., 1973.- Un nuevo *Eleutherodactylus* (Amphibia: Salientia) del Páramo de Guaramacal, Edo. Trujillo, Venezuela. *Carib. J. Sci.*, 13 (1-2): 75-79.
- RIVERO, R. & MIJARES, A., 2004.- Geographic Distribution: Anura: *Eleutherodactylus biporcatus*. *Herp. Rev.* 35 (1): 77.
- RIVERO-BLANCO, C. & DIXON, J. R., 1979.- Origin and distribution of the herpetofauna of Northern South America: 281-298. En: DUELLMAN (ed.). *The South American Herpetofauna: its origin, evolution and dispersal*. *Mus. Nat. Hist. Univ. Kansas Monogr.* 7: 485 pp.
- RODRÍGUEZ, J.P. y ROJAS-SUÁREZ, F., 1995-1999.- *El Libro Rojo de la fauna Venezolana*. PROVITA, Fundación Polar, Wildlife Cons. Soc., PROFAUNA-MARNR, UICN: 444 pp.
- ROHL, E., 1959.- *Fauna descriptiva de Venezuela* (Vertebrados). 4ta ed., corregida y aumentada. Nuevas Gráficas, Madrid: 516 pp.
- ROUX, J., 1927.- Contribution a l'erpétologie de Venezuela. *Verh. Naturforsch. Ges. Basel.* 38: 259-260.

- ROYERO, R. y HERNÁNDEZ, O., 1995.- Presencia de *Pipa parva* RUTHVEN y GAIGE (Anura: Pipidae) en la cuenca del lago de Valencia: un problema de introducción de especies. *Biollania* 11: 57-62.
- ROZE, J. A., 1964.- La herpetología de la Isla Margarita, Venezuela. *Mem. Soc. Cien. Nat. La Salle*, 69: 209-241.
- ROZE, J. A. y SOLANO, H., 1963.- Resumen de la familia *Caecilidae* (Amphibia: Gymnophiona) de Venezuela. *Acta Biol. Venez.*, 3 (19): 287-300.
- RUIZ-CARRANZA, P.M. y LYNCH, J.D., 1995.- Ranas Centrolenidae de Colombia VII. Redescripción de *Centrolene andinum* (RIVERO, 1985). *Lozania* 64: 1-12.
- RUIZ-CARRANZA, P. M. y LYNCH, J., 1998.- Ranas *Centrolenidae* de Colombia XI. Nuevas especies de ranas de cristal del género *Hyalinobatrachium*. *Rev. Acad. Colomb. Cienc.* 22 (85): 571-586.
- RUTHVEN, A. G. & GAIGE, H. T., 1923.- Description of a new species of *Pipa* from Venezuela. *Occ. Pap. Mus. Zool. Univ. Michigan*, 136: 1-2.
- SAVAGE, J. M., 1986.- Nomenclatural notes on the Anura (Amphibia). *Proc. Biol. Soc. Washington* 99 (1): 42-45.
- SAVAGE, J. M., 2002.- *The Amphians and Reptiles of Costa Rica; a herpetofauna between two continents, between two seas*. The University of Chicago Press: 934 pp.
- SAVAGE, J. M. and CH. W. MYERS. 2002. Frogs of the *Eleutherodactylus biporcatus* group (Leptodactylidae) of Central America and Northern South America, including rediscovered, resurrected and new taxa. *American Museum Novitates* 3357: 1-48.
- SCHARGEL, W. & RIVAS, G., 2003.- Two new country records of salamanders of the genus *Bolitoglossa* from Colombia and Venezuela. *Herpetozoa* 16 (1/2): 94-96.
- SCHARGEL, W., GARCÍA J. E., & SMITH, E., 2002.- A new species of *Bolitoglossa* (Caudata: Plethodontidae) from the Cordillera de Mérida, Venezuela. *Proc. Biol. Soc. Washington* 115 (3): 534-542.
- SCHLÜTER, A., and MÄGDEFRAU, K., 1991.- First record of *Hyla parviceps* on the lower slope of a central Venezuelan table mountain. *Amphibia-Reptilia* 12 (2): 217-219.
- SCHMIDT, K. P. 1932.- Reptiles and Amphibians of the Mandel Venezuelan expedition. *Field Mus. Nat. Hist., Zool ser.*, 18 (7): 157-163.
- SCHNEIDER, J. G., 1799.- *Historiae Amphibiorum Naturalis et literarie*. Jena, 1: 264 pp.
- SCHULTE, R. 1999.- *Pfeilgiftfrösche, "Arten teil Peru"*. Waiblingen INIBICO.
- SEÑARIS, J. C., 1993.- Una nueva especie de *Oreophrynella* (Anura; Bufonidae) de la cima del Auyan-tepui, Estado Bolívar, Venezuela. *Mem. Soc. Cien. Nat. La Salle*, 53 (140): 177-183.
- SEÑARIS, J. C., 1997.- Geographic distribution (Anura): *Cochranella oyampiensis*. *Herp. Rev.*, 28(4): 207.
- SEÑARIS, J. C., 1999.- Una nueva especie de *Hyalinobatrachium* (Anura: Centrolenidae) de la Cordillera de la Costa, Venezuela. *Mem. Soc. Cien. Nat. La Salle*, 59 (152): 133-145.
- SEÑARIS, J. y AYARZAGÜENA, J., 1993.- Una nueva especie de *Centrolenella* (Anura: Centrolenidae) del Auyan -Tepui, Edo. Bolívar, Venezuela. *Mem. Soc. Cien. Nat. La Salle*, 53 (139): 121-126.
- SEÑARIS, J. y AYARZAGÜENA, J., 2001.- Una nueva especie de rana de cristal del género *Hyalinobatrachium* (Anura: Centrolenidae) del delta del Orinoco, Venezuela. *Rev. Biol. Trop.* 49(3-4): 1083-1093.
- SEÑARIS, J. y AYARZAGÜENA, J., 2002.- A new species of *Hyla* (Anura: Hylidae) from the highlands of Venezuelan Guayana. *J. Herp.* 36 (4): 634-640.
- SEÑARIS, J. y AYARZAGÜENA, J., 2004 "2002".- Contribución al conocimiento de la anurofauna del delta del Orinoco, Venezuela: diversidad, ecología y biogeografía. *Mem. Soc. Cien. Nat. La Salle*, 157: 129-152.
- SEÑARIS, J. C. & C. L. BARRIO A. 2002. Geographic Distribution. *Hyla calcarata*. *Herp. Rev.*, 33 (1):61.
- SEÑARIS, J.C. & VERNET, O. 1997.- Geographic distribution (Anura): *Hyla ornatissima*. *Herp. Rev.*, 28(4): 207.
- SEÑARIS, J.C., AYARZAGÜENA, J. y GORZULA, S., 1994.- Los sapos de la familia Bufonidae (Amphibia: Anura) de las tierras altas de la Guayana venezolana: Descripción de un nuevo género y tres especies. *Publ. Asoc. Amigos Doñana*, 3: 1-37.
- SEÑARIS, J.C., AYARZAGÜENA, J. y GORZULA, S., 1996.- Revisión taxonómica del género *Stefania* (Anura; Hylidae) en Venezuela, con la descripción de cinco nuevas especies. *Publ. Asoc. Amigos Doñana* 7: 1-55.
- SEÑARIS, J.C., MOLINA, C. & VILLARREAL, O., 2003.- Geographic distribution (Anura): *Synapturanus salseri*. *Herp. Rev.*, 34 (3): 260.
- SEXTON, O.J., 1958.- Observations on the life history of a Venezuelan frog *Atelopus cruciger*. *Acta Biol. Venez.*, 2 (21): 235-242.
- SEXTON, O.J., 1960.- Some aspects of the behavior and of the territory of a dendrobatid frog *Prostherapis trinitatis*. *Ecology* 41: 107-115.
- SEXTON, O., 1962.- Apparent territorialism in *Leptodactylus insularum* BARBOUR. *Herpetologica*, 18 (3): 212-214
- SILVERSTONE, P., 1975.- A revision of the poison-arrow frogs of the genus *Dendrobates* WAGLER. *Nat. Hist. Mus. Los Angeles Co. Sci. Bull.*, 21: 1-55.
- SILVERSTONE, P., 1976.- A Revision of the Poison Arrow Frogs of the Genus *Phyllobates* BIBRON in SAGRA (Family Dendrobatidae). *Nat. Hist. Mus. Los Angeles Co. Sci. Bull.*, 27: 1-53.
- SOLANO, H., 1971.- Una nueva especie del género *Hyla* (Amphibia: Anura) de Venezuela. *Acta Biol. Venez.*, 7 (2): 211-218.
- SOLANO, H., 1987a.- Algunos aspectos de la biología reproductiva del sapito silbador *Leptodactylus fuscus* (SCHNEIDER) (Amphibia: Leptodactylidae). *Amphibia-Reptilia*, 8: 111-128.
- SOLANO, H., 1987b.- Variations saisonnières du régime alimentaire de *Leptodactylus fuscus* (Anoures Leptodactylidae) dans les "Llanos" du Venezuela. *Bull. Soc. Zool. France* 111(1-2): 75-87.
- SOLANO, H., 1989.- Aspectos de la Biología de *Oreophrynella quelchii* (BOULENGER) en los tepuyes venezolanos. *Acta Biol. Venez.*, 12 (3-4): 55-63.

- SPIX, J. B., 1824.- *Animalia Nova sive Species novae Testudinum et ranarum quas in itinere per Brasilian Annis 1817-20...collegit et descripsit...* (Monachii): 55 pp.
- SUÁREZ-MAYORGA, A. & LYNCH, J., 2001. Redescription of the tadpole of *Hyla vigilans* (Anura: Hylidae) and notes about possible taxonomic relationships. *Carib. J. Sci.* 37 (1-2): 116-119.
- STATON, M. A. & DIXON, J. R., 1977.- The herpetofauna of the central Llanos of Venezuela: noteworthy records, a tentative checklist and ecological notes. *J. Herpetology*, 11: 17-24.
- STEINDACHNER, F., 1864.- Batrachologische Mitteilungen. *Verh. Zool.-Bot. Ges. Wien*: 239-288.
- STEJNEGER, L., 1901.- An annotated list of Batrachians and Reptiles collected in vicinity of La Guaira, Venezuela, with description of two new species of snakes. *Proc. U. S. Nat. Mus.*, 24: 172-192.
- TAYLOR, E. H., 1968.- The Caecilians of the World: A Taxonomic Review. *Univ. Kansas Press, Lawrence, Kansas*: 848 pp.
- TELLO, J., 1968.- Clase Amphibia. En: *Historia Natural de Caracas*. Ed. del Concejo Municipal del Distrito Federal. Caracas, 246-247.
- TEST, F. H., 1956.- Two new Dendrobatid frogs from Northern Venezuela. *Occ. Pap. Mus. Zool. Univ. Michigan*, 577: 1-9.
- TEST, F. H., 1962.- The highly developed courtship of the frog *Prostherapis trinitatis*. *Amer. Univ. Michigan*, 577: 1-9.
- TEST, F. H., 1963.- A protective behavior pattern in Venezuelan frogs of mountain streams. *Carib. J. Sci.* 3 (2-3): 125-128.
- TORRES, D. & BARRIO, C.L., 2001. Conservation: Anura: *Atelopus carbonerensis* *Herpetological Review*. 32 (3): 179.
- TRAPIDO, H., 1942.- A new salamander from Venezuela. *Bol. Soc. Ven. Cien. Nat.*, 8 (51): 297-301.
- TRUEB, L., 1984.- Description of a new species of *Pipa* (Anura: Pipidae) from Panamá. *Herpetologica* 40(3): 225-234.
- TRUEB, L. & CANNATELLA, D. C., 1986. Systematics, morphology and phylogeny of genus *Pipa* (Anura: Pipidae). *Herpetologica* 42 (4): 412-449.
- TRUEB, L. & DUELLMAN, W. E., 1971.- A synopsis of Neotropical Hylid frogs, genus *Osteocephalus*. *Occ. Pap. Mus. Nat. Hist. Univ. Kansas*, 1: 1-47.
- VÉLEZ, C., 1995.- Estudio taxonómico del grupo *Bufo typhonius* (Amphibia, Anura, Bufonidae) en Colombia. Tesis. Universidad Nacional de Colombia: 174 p.
- VÉLEZ, C., 1999.- Presencia de *Bufo sternosignatus* Günther 1859 (Amphibia: Anura: Bufonidae) en Colombia. *Rev. Acad. Colomb. Cienc.*, 23 (suplemento especial): 411-416.
- VENCES, M., KOSUCH, J., LÖTTERS, S., WIDMER, A., JUNGFER, K.-H., KÖLER, J., VEITH, M., 2000.- Phylogeny and classification of Poison frogs (Amphibia: Dendrobatidae), based on mitochondrial 16S and 12S ribosomal RNA gene sequences. *Molecular Phylogenetics and Evolution* 15 (1): 34-40.
- VENCES, M., KOSUCH, J. BOISTEL, R., HADDAD, C., LA MARCA, E., LOTTERS, S. & VEITH, M., 2003.- Convergent evolution of aposematic coloration in Neotropical poison frogs: a molecular phylogenetic perspective. *Org. Divers. Evol.* 3: 215-226.
- WALKER, C. F. & TEST, F. H., 1955.- New Venezuelan frogs of the genus *Eleutherodactylus*. *Occ. Pap. Mus. Zool. Univ. Michigan*, 561: 1-10
- WALLS, J.G., 1994.- *Jewels of the rainforest. Poison frogs of the family Dendrobatidae*. T.F.H. Neptune City: 288 pp.
- WARREN, A., 1971.- *Roraima. Report of the 1971 British Expedition to Mount Roraima in Guyana, South America*: 152 pp.
- WASSERSUG, R.J. & PYBURN, W.F., 1987.- The biology of the Pe-ret' toad, *Otophryne robusta* (Microhylidae), with special considerations of its fossorial larva and systematic relationships. *Zool. J. linnean Soc.*, 91: 137-169.
- WEINLAND, D. F., 1854.- Über den Beutelfrosch. *Archiv. Anat. Physiol.* 1854: 449-477.
- WELLS, K.D., 1980.- Social behavior and communication of a dendrobatid frog (*Colostethus trinitatis*): *Herpetologica* 36 (2): 189-199.
- WILD, E., 1994.- New genus and species of Amazonian microhylid frog with a phylogenetic análisis of New World genera. *Copeia* 1994 (4): 837-849.
- WILKINSON, M., 1996a.- On the status of *Nectocaecilia fasciata* TAYLOR, with a discussion of the Typhlonectidae (Amphibia: Gymnophiona). *Herpetologica* 45 (1): 23-36.
- WILKINSON, M., 1996b.- Resolution of the taxonomic status of *Nectocaecilia haydeae* (ROZE) and a revised key to the genera of Typhlonectidae (Amphibia: Gymnophiona). *J. Herpetol.* 30 (3): 413-415.
- YÚSTIZ, E., 1976a.- Anfibios y Ofidios del parque Nacional Yacambú. Comunicación Preliminar. *Rev. Univ. Centrooc. Lisandro Alvarado, Tarea Común* 2: 75-80.
- YÚSTIZ, E., 1976b.- *Gastrotheca yacambuensis* (Salientia-Hylidae). Nueva especie en el Parque Nacional Yacambú, Sierra de Portuguesa, Estado Lara, Venezuela. *Rev. Univ. Centroccid. Lisandro Alvarado, Tarea Común*, 3: 87-97.
- YÚSTIZ, E., 1991.- Un nuevo *Colostethus* (Amphibia: Dendrobatidae) en la Sierra de Barbacoas, Estado Lara, Venezuela. *Bioagro* 3 (4): 145-151.
- YÚSTIZ, E., 1996.- Aspectos biogeográficos de la herpetofauna de la cuenca hidrográfica del río Turbio (Estado Lara, Venezuela): 317-349. En PEFAUR J.E. (Ed.), 1996. *Herpetología Neotropical. Actas del II Congreso Latinoamericano de Herpetología. II vol. Publ. U.L.A., C.S.H., Mérida*: 451 pp.
- ZIMMERMANN, H. & ZIMMERMANN, E., 1988.- Etho-taxonomie und zoogeographische Artengruppenbildung bei Pfeilgiftfröschen (Anura: Dendrobatidae). *Salamandra* 24 (2-3): 125-160.
- ZUG, G. R. & ZUG, P. B., 1979.- The marine toad, *Bufo marinus*: a natural history resumé of native populations. *Smiths. Contr. Zool.*, 284: 1-58.
- ZWEIFEL, R. G., 1986.- A new genus and species of microhylid frog from the Cerro de la Neblina region of Venezuela and a discussion of relationships among New World microhylid genera. *Amer. Mus. Novitates* 2847: 1-24.
- ZWEIFEL, R. G. & MYERS, C. W., 1989.- A new frog of the genus *Ctenophryne* (Microhylidae) for the Pacific lowlands of Northwestern South America. *Amer. Mus. Novitates* 2947: 1-16.

