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An updated country checklist to the amphibians and
reptiles of Nicaragua

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Foto de Portada: *Scaphiodontophis annulatus* from Cerro Mogotón, Nueva Segovia (Foto: José G. Martínez-Fonseca).

An updated country checklist to the amphibians and reptiles of Nicaragua

Javier Sunyer¹ and José Gabriel Martínez-Fonseca^{2,3}

RESUMEN

Nicaragua es un país biodiverso y estudios en la última década han incrementado notablemente la riqueza de especies conocida en el país para casi todas las taxas. En este trabajo, proveemos una actualización a la lista patrón de los 264 anfibios y reptiles del país con comentarios y referencias sobre los últimos cambios taxonómicos y de nomenclatura.

Palabras clave: biogeografía, biodiversidad, herpetología, América Central, herpetofauna, Viperidae

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ABSTRACT

Nicaragua is a biodiverse country and research in the last decade has increased the known species richness of the country in almost all taxa. In this work, we provide an updated checklist of the 264 amphibians and reptiles of the country with comments and references on recent taxonomical and nomenclature changes.

Keywords: biogeography, biodiversity, herpetology, Central America, herpetofauna, Viperidae

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Introduction

Central America, and thus, Nicaragua are a globally important biodiversity hotspot (Gutiérrez-García and Vázquez-Domínguez 2013). The country lies in the center of the continent, where northern and southern flora and fauna meet, resulting in a unique species profile (Sunyer and Köhler 2010, Sunyer 2014). In the last two decades, a large number of new species have been recorded for the first time in the country (e.g., Fernández *et al.* 2017, Loza *et al.* 2017, Salazar-Saavedra *et al.* 2018, Martínez-Fonseca *et al.* 2019).

Herpetological work in Nicaragua has followed trends that are also shared with other taxa including mammals (Medina-Fitoria and Martínez-Fonseca 2019). In addition to the new taxa recorded in Nicaragua, the last decade has also seen a large number of scientific publications that improve the knowledge on the distribution of herpetofauna species within Nicaragua (e.g., Sunyer *et al.* 2014, 2016, Diaz-Gómez *et al.* 2017). Importantly, in 2017 for the first time an evaluation of the conservation status of the herpetofauna in Nicaragua allowed to prioritize species of concern (Robleto-Hernández *et al.* 2017). We expect that research as well as its translation into conservation policy in the upcoming years will continue to increase despite the tumultuous political and global climate. In this work, we present an update that is long overdue from the herpetofauna checklist by Sunyer (2014) the field guide to the amphibians and reptiles of Nicaragua published in 2015 (HerpetoNica 2015).

Methods

Work was conducted under research permits by the national authority Ministerio de Ambiente y Recursos Naturales (MARENA) No. DGPNB-IC-025-2018; DGPNB-090622-P2491-0; DGPNB-050723-P3347-0. This checklist uses Sunyer (2014) and HerpetoNica (2015) as a baseline along to an extensive literature search referenced on each of the species' entries. We organize our species taxonomically by order, and within orders alphabetically by subfamily and family.

Checklist of the herpetofauna of Nicaragua

2 classes, 6 orders, 51 families, 143 genera, 264 species, 13 endemic species, 6 exotic species

* Indicates endemic species

** Indicates non-native species

CLASS AMPHIBIA Blainville, 1816 (3 orders, 14 families, 37 genera, 77 species, 7 endemic species, 1 exotic species)

ORDER ANURA Duméril, 1805 (12 families, 32 genera, 66 species, 2 endemic species, 1 exotic species)

FAMILY AROMOBATIDAE Grant, Frost, Caldwell, Gagliardo, Haddad, Kok, Means, Noonan, Schargel, and Wheeler, 2006 (1 genus, 1 species)

Allobates Zimmermann and Zimmermann, 1988 (1)

Allobates talamancae (Cope, 1875)

FAMILY BUFONIDAE Gray, 1825 (3 genera, 7 species)

Incilius Cope, 1863 (5)

Incilius coccifer (Cope, 1866)

Incilius coniferus (Cope, 1862)

Incilius luetkenii (Boulenger, 1891)

Incilius melanochlorus (Cope, 1877)

Incilius valliceps (Wiegmann, 1833)

Rhaebo Cope, 1862 (1)

Rhaebo haematinicus (Cope, 1862)

Rhinella Fitzinger, 1826 (1)

Rhinella horribilis (Wiegmann, 1833). Nicaraguan populations of this species were addressed as *R. marina* in Sunyer (2014). Acevedo *et al.* (2016) assigned them to *R. horribilis*, although we believe they should be referred as *R. angustipes* (McCranie *et al.*, 2019).

FAMILY CENTROLENIDAE Taylor, 1951 (5 genera, 7 species)

Cochranella Taylor, 1951 (1)

Cochranella granulosa (Taylor, 1949)

Espadarana Guayasamin, Castroviejo-Fisher, Trueb, Ayarzagüena, Rada, and Vilà, 2009 (1)

Esparadana prosoblepon (Boettger, 1892)

Hyalinobatrachium Ruiz-Carranza and Lynch, 1991 (1)

Hyalinobatrachium fleischmanni (Boettger, 1893)

Sachatamia Guayasamin, Castroviejo-Fisher, Trueb, Ayarzagüena, Rada, and Vilà, 2009 (2)

Sachatamia albomaculata (Taylor, 1949)

Sachatamia ilex (Savage, 1967)

Teratohyla Taylor, 1951 (2)

Teratohyla pulverata (Peters, 1873)

Teratohyla spinosa (Taylor, 1949)

FAMILY CRAUGASTORIDAE Hedges, Duellman, and Heinicke, 2008 (2 genera, 12 species)

Craugastor Cope, 1862 (10)

Craugastor bransfordii (Cope, 1886). We believe *C. polyptychus*, a species described from southeastern Nicaragua, to be junior synonym of *C. bransfordii* (Savage 1973, Sunyer and Köhler 2010).

*Craugastor chingopetaca** Köhler and Sunyer, 2006

Craugastor fitzingeri (Schmidt, 1857)

Craugastor laevissimus (Werner, 1896)

Craugastor lauraster (Savage, McCranie, and Espinal, 1996)

Craugastor megacephalus (Cope, 1875)

Craugastor mimus (Taylor, 1955)

Craugastor noblei (Barbour and Dunn, 1921)

Craugastor ranoides (Cope, 1886)

Craugastor talamancae (Dunn, 1931)

Pristimantis Jiménez de la Espada, 1870 (2)

Pristimantis cerasinus (Cope, 1875)

Pristimantis ridens (Cope, 1866)

FAMILY DENDROBATIDAE Cope, 1865 (3 genera, 3 species)

Dendrobates Wagler, 1830 (1)

Dendrobates auratus (Girard, 1855)

Oophaga Bauer, 1994 (1)

Oophaga pumilio (Schmidt, 1857)

Phyllobates Bibron, 1840, *In De la Sagra* 1840 (1)

Phyllobates lugubris (Schmidt, 1857)

FAMILY ELEUTHERODACTYLIDAE Lutz, 1954 (2 genera, 2 species)

Diasporus Hedges, Duellman, and Heinicke, 2008 (1)

Diasporus diastema (Cope, 1875). We believe this taxon corresponds to a species complex (Batista *et al.*, 2016). If so, the nominal name *D. chica* would be available for, at least, the Atlantic lowland populations of Nicaragua (Noble 1918). Whether the highland populations of this species complex in central Nicaragua also corresponds to *D. chica* or to an undescribed species needs further study (Sunyer, 2009).

Eleutherodactylus Duméril and Bibron 1841 (1)

*Eleutherodactylus planirostris*** (Cope 1862). This exotic species was recently recorded in Cayo Mayor in the “Reserva Biológica Marina Cayos Miskitos y Franja Costera Inmediata”, Caribbean Nicaragua, based on observations made in 1992 (Villa 2015).

FAMILY HYLIDAE Rafinesque, 1815 (9 genera, 17 species)

Boana Gray, 1825 (1)

Boana rufitela (Fouquette, 1961). This species was addressed as *Hypsiboas rufitelus* in Sunyer (2014). Recently, this species was included within the genus *Boana* (Dubois 2017).

Dendropsophus Fitzinger, 1843 (3)

Dendropsophus ebraccatus (Cope, 1874)

Dendropsophus microcephalus (Cope, 1886)

Dendropsophus phlebodes (Stejneger, 1906)

Ecnomiohyla Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005 (1)

Ecnomiohyla miliaria (Cope, 1886)

Plectrohyla Brocchi 1877

Plectrohyla sp. Köhler (2001) recorded tadpoles, metamorphs, and juveniles of this genus from Northern Nicaragua but did not allocate it to a specific species.

Ptychohyla Taylor, 1944 (1)

Ptychohyla hypomykter McCranie and Wilson, 1993

Scinax Wagler, 1830 (3)

Scinax boulengeri (Cope, 1887)

Scinax elaeochroa (Cope, 1875)

Scinax staufferi (Cope, 1865)

Smilisca Cope, 1865 (5)

Smilisca baudinii (Duméril and Bibron, 1841). *Smilisca baudinii* was considered to occur throughout the country of Nicaragua. Recently, McCranie (2017) resurrected the Atlantic populations of this species as *S. manisorum* (see below).

Smilisca manisorum (Taylor, 1954). McCranie (2017) resurrected *S. manisorum* for the Atlantic populations of Nicaragua, which were previously referred to as *S. baudinii*.

Smilisca phaeota (Cope, 1862)

Smilisca puma (Cope, 1885)

Smilisca sordida (Peters, 1863)

Tlalocohyla Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005 (1)

Tlalocohyla loquax (Gaige and Stuart, 1934)

Trachycephalus Tschudi, 1838 (1)

Trachycephalus vermiculatus (A place-holder "taxon" for all names

available for former *Trachycephalus typhonius* from Chocoan South America to southern and eastern Mexico; Frost, 2023). Ron *et al.*

(2016) suggest that Central American populations of this species are not conspecific with *T. typhonius*, which is the name previously associated with this species.

FAMILY LEPTODACTYLIDAE Werner, 1896 (2 genera, 4 species)

Engystomops Jiménez de la Espada, 1872 (1)

Engystomops pustulosus (Cope, 1864)

Leptodactylus Fitzinger, 1826 (3)

Leptodactylus fragilis (Brocchi, 1877)

Leptodactylus melanonotus (Hallowell, 1861)

Leptodactylus savagei Heyer, 2005

FAMILY MICROHYLIDAE Günther, 1858 (1 genus, 2 species)

Hypopachus Keferstein, 1867 (2)

Hypopachus pictiventris (Cope, 1886)

Hypopachus variolosus (Cope, 1866)

FAMILY PHYLLOMEDUSIDAE Günther, 1858 (2 genera, 3 species).

This family was included within Hylidae in Sunyer (2014). We follow Duellman *et al.* (2016) and consider it as a distinct family.

Agalychnis Cope, 1864 (2)

Agalychnis callidryas (Cope, 1862). We believe this to be a species complex in Central America and all Nicaraguan populations should be addressed as *A. heleneae* (Solano-Flórez 2012, McCranie *et al.* 2019).

Agalychnis saltator Taylor, 1955

Cruziohyla Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005 (1)

Cruziohyla sylviae Gray, 2018. Nicaraguan populations of this species were addressed as *C. calcarifer* in Sunyer (2014). Gray (2018) recently described the distinctiveness of *C. sylviae* for all Central American populations of this species complex.

FAMILY RANIDAE Batsch, 1796 (1 genus, 7 species)

Lithobates Fitzinger, 1843 (7)

Lithobates brownorum (Sanders, 1973)

Lithobates forreri (Boulenger, 1883). Luque-Montes *et al.* (2018) referred to all Nicaraguan populations of this species complex as *Lithobates* cf. *forreri* to demonstrate its distinctiveness from its nominal form.

Lithobates maculatus (Brocchi, 1877)

*Lithobates miadis** (Barbour and Loveridge, 1929).

Lithobates taylori (Smith, 1959)

Lithobates vaillanti (Brocchi, 1877)

Lithobates warszewitschii (Schmidt, 1857)

FAMILY RHINOPHRYNIDAE Günther, 1859 (1 genus, 1 species)

Rhinophryalus Duméril and Bibron, 1841 (1)

Rhinophryalus dorsalis Duméril and Bibron, 1841

ORDER CAUDATA Fischer von Waldheim, 1813 (1 family, 3 genera, 9 species, 5 endemic species)

FAMILY PLETHODONTIDAE Gray, 1850 (3 genera, 9 species)

Bolitoglossa Duméril, Bibron, and Duméril, 1854 (4)

Bolitoglossa indio Sunyer, Lotzkat, Hertz, Wake, Alemán, Robleto, and Köhler, 2008

*Bolitoglossa insularis** Sunyer, Lotzkat, Hertz, Wake, Alemán, Robleto, and Köhler, 2008

*Bolitoglossa mombachoensis** Köhler and McCranie, 1999

Bolitoglossa striatula (Noble, 1918)

Nototriton Wake and Elias, 1983 (1)

*Nototriton saslaya** Köhler, 2002

Oedipina Keferstein, 1868 (4)

Oedipina collaris (Stejneger, 1907)

Oedipina cyclocauda Taylor, 1952

*Oedipina koehleri** Sunyer, Townsend, Wake, Travers, Gonzalez, Obando, and Quintana, 2011

*Oedipina nica** Sunyer, Wake, Townsend, Travers, Rovito, Papenfuss, Obando, and Köhler, 2010

ORDER GYMNOPHIONA Müller, 1832 (1 family, 2 genera, 2 species)

FAMILY DERMOPHIIDAE Taylor, 1969 (2 genera, 2 species)

Dermophis Peters, 1880 (1)

Dermophis mexicanus (Duméril and Bibron, 1841)

Gymnopus Peters, 1874 (1)

Gymnopus multiplicata Peters, 1874

CLASS REPTILIA Laurenti, 1768 (3 orders, 37 families, 104 genera, 187 species, 6 endemic species, 5 exotic species)

ORDER CROCODYLIA Owen, 1842 (2 families, 2 genera, 2 species)

FAMILY ALLIGATORIDAE Cuvier, 1807 (1 genus, 1 species)

Caiman Spix, 1825 (1)

Caiman crocodilus (Linnaeus, 1758)

FAMILY CROCODYLIDAE Cuvier, 1807 (1 genus, 1 species)

Crocodylus Laurenti, 1768 (1)

Crocodylus acutus (Cuvier, 1807)

ORDER SQUAMATA Oppel, 1811 (28 families, 94 genera, 170 species, 6 endemic species, 4 exotic species)

SQUAMATA--LIZARDS (17 families, 28 genera, 59 species, 3 endemic species, 3 exotic species)

FAMILY ANGUIDAE Gray, 1825 (1 genus, 1 species)

Abronia Gray 1838 (1)

Abronia moreletii (Bocourt, 1871). This species was addressed as *Mesaspis moreletii* in Sunyer (2014). Gutiérrez-Rodríguez *et al.* (2021) recently placed it under the genus *Abronia*.

FAMILY CORYTOPHANIDAE Fitzinger, 1843 (3 genera, 5 species)

Basiliscus Laurenti, 1768 (3)

Basiliscus (Linnaeus, 1758)

Basiliscus plumifrons Cope, 1875

Basiliscus vittatus Wiegmann, 1828

Corytophanes Boie, 1827 (1)

Corytophanes cristatus (Merrem, 1820)

Laemancus Wiegmann, 1834 (1)

Laemancus longipes Wiegmann, 1834. The systematics of Nicaraguan populations of this species needs further studies (McCranie 2018).

FAMILY ANOLIDAE Cocteau, 1836 (1 genus, 18 species).

The family Anolidae has priority over Dactyloidae Fitzinger, 1843 (de Queiroz 2022).

***Norops* Wagler, 1830 (18)**

- Norops beckeri* (Boulenger, 1881)
Norops biporcatus (Wiegmann, 1834)
Norops capito (Peters, 1863)
Norops carpenteri (Echelle, Echelle, and Fitch, 1971)
Norops cupreus (Hallowell, 1861)
Norops dariense (Fitch and Seigel, 1984)
Norops humilis (Peters, 1863). This species was recently recorded from southern Nicaragua (Phillips *et al.* 2015).
Norops laeviventris (Wiegmann, 1834). We believe Nicaraguan populations of this species to correspond to *N. intermedius*.
Norops lemurinus (Cope, 1861)
Norops limifroms (Cope, 1862)
Norops mccraniei (Peters, 1863). Köhler *et al.* (2016) described *N. mccraniei*, a valid species for all Nicaraguan populations that were referred to as *N. tropidonotus* in Sunyer (2014).
Norops oxylophus (Cope, 1875)
Norops pentaprion (Cope, 1862)
Norops quaggulus (Cope, 1885)
Norops unilobatus (Köhler and Veselý, 2010)
*Norops villai** (Fitch and Henderson, 1976)
Norops wellbornae (Ahl, 1940)
Norops wermuthi Köhler and Obermeier, 1998

FAMILY DIPLOGLOSSIDAE Cope, 1865 (3 genera, 3 species).

This family was considered a subfamily within Anguidae in Sunyer (2014). We here follow McCranie (2018) and consider this a distinct family.

***Diploglossus* Wiegmann, 1834 (1)**

- Diploglossus monotropis* (Kuhl, 1820)

***Mesoamericanus* Schools and Hedges, 2021 (1)**

- Mesoamericanus bilobatus* (O'Shaughnessy, 1874). This species was included in the genus *Diploglossus* in Sunyer (2014). Schools and Hedges (2021) assigned this species under the newly described genus *Mesoamericanus*.

***Siderolamprus* Cope, 1861 (1)**

- Siderolamprus bivittatus* (Boulenger, 1895). This species was included in the genus *Celestus* in Sunyer (2014). Schools & Hedges (2021) placed this species under the genus *Siderolamprus*.

FAMILY EUBLEPHARIDAE Boulenger, 1883 (1 genus, 1 species)

Coleonyx Gray, 1845 (1)

Coleonyx mitratus (Peters, 1863)

FAMILY GEKKONIDAE Gray, 1825 (2 genera, 2 species)

Hemidactylus Cuvier, 1820 (1)

*Hemidactylus frenatus*** Duméril and Bibron, 1836

Lepidodactylus Fitzinger, 1843 (1)

*Lepidodactylus lugubris*** (Duméril and Bibron, 1836)

FAMILY GYMNOPHTHALMIDAE Merrem, 1820 (1 genus, 1 species)

Gymnophthalmus Merrem, 1820 (1)

Gymnophthalmus speciosus (Hallowell, 1861)

FAMILY IGUANIDAE Gray, 1827 (2 genera, 3 species)

Ctenosaura Wiegmann, 1828 (2)

Ctenosaura quinquecarinata (Gray, 1842)

Ctenosaura similis (Gray, 1831)

Iguana Laurenti, 1768 (1)

Iguana rhinolopha (Wiegemann, 1834). This species was included as *I. iguana* in Sunyer (2014). Breuil *et al.* (2022) consider Central American populations to belong to *I. rhinolopha*.

FAMILY MABUYIDAE Mittleman, 1952 (1 genus, 4 species)

Marisora Hedges and Conn, 2012 (3)

Marisora alliacea (Cope, 1875)

Marisora brachypoda (Taylor, 1956)

*Marisora magnacornae** Hedges and Conn, 2012

Marisora roatanae Hedges and Conn, 2012. McCranie *et al.* (2020) included the distribution of this species in northeastern Nicaragua.

FAMILY PHRYNOSOMATIDAE Fitzinger, 1843 (1 genus, 3 species)

Sceloporus Wiegmann, 1828 (3)

Sceloporus malachiticus Cope, 1864. This taxon corresponds to a species complex (McCranie 2018). We believe Nicaraguan populations of this species likely correspond to *S. hondurensis* or to an undescribed species.

Sceloporus squamosus Bocourt, 1874

Sceloporus variabilis Wiegmann, 1834. Some authors refer to Nicaraguan populations of *S. variabilis* species complex as *S. olloporus*. A thorough review using both molecular and morphological data of this species complex is needed (McCrane 2018).

**FAMILY PHYLLODACTYLIDAE Gamble, Bauer, Greenbaum, and Jackman, 2008
(2 genera, 2 species)**

Phyllodactylus Gray, 1828 (1)

Phyllodactylus tuberculosus Wiegmann, 1834

Thecadactylus Cuvier, 1820 (1)

Thecadactylus rapicauda (Houttuyn, 1782)

FAMILY POLYCHROTIDAE Fitzinger, 1843 (1 genus, 1 species)

Polychrus Cuvier, 1816 (1)

Polychrus gutturosus Berthold, 1846

FAMILY SCINCIDAE Gray, 1825 (1 genus, 1 species)

Mesoscincus Griffith, Ngo, and Murphy, 2000 (1)

Mesoscincus managuae (Dunn, 1933)

FAMILY SPHAERODACTYLIDAE Underwood, 1954 (3 genera, 5 species)

Gonatodes Fitzinger, 1843 (1)

Gonatodes albogularis (Duméril and Bibron, 1836)

Lepidoblepharis Peracca, 1897 (1)

Lepidoblepharis xanthostigma (Noble, 1916)

Sphaerodactylus Wagler, 1830 (3)

*Sphaerodactylus argus*** Gosse, 1850

Sphaerodactylus homolepis Cope, 1886

Sphaerodactylus millepunctatus Hallowell, 1861

FAMILY SPHENOMORPHIDAE Welch, 1982 (1 genus, 1 species)

Scincella Mittleman, 1950 (1)

Scincella cherriei (Cope, 1893)

FAMILY TEIIDAE Gray, 1827 (3 genera, 7 species)

Aspidoscelis Fitzinger, 1843 (2)

Aspidoscelis deppii (Weigmann, 1834)

Aspidoscelis motaguae (Sackett, 1941)

Cnemidophorus Wagler, 1830 (1)

Cnemidophorus ruatanus Barbour, 1928

Holcosus Cope, 1862 (4)

Holcosus festivus (Lichtenstein and von Martens, 1856)

*Holcosus miadis** (Barbour and Loveridge, 1929). This endemic species from the Corn Islands, Caribbean Nicaragua, was recently resurrected (Meza-Lázaro and Nieto-Montes de Oca 2015).

Holcosus quadrilineatus (Hallowell, 1861)

Holcosus undulatus (Wiegmann, 1834)

FAMILY XANTUSIIDAE Baird, 1859 (1 genus, 1 species)

Lepidophyma Duméril, 1851 (1)

Lepidophyma flavimaculatum Duméril, 1851

SQUAMATA--SNAKES (11 families, 66 genera, 111 species, 3 endemic species, 1 exotic species)

FAMILY ANOMALEPIDIDAE Taylor, 1939 (1 genus, 1 species)

Anomalepis Jan, 1860 (1)

Anomalepis mexicanus Jan, 1860

FAMILY BOIDAE Gray, 1825 (3 genera, 4 species)

Boa Linnaeus, 1758 (1)

Boa imperator Daudin, 1803

Corallus Daudin, 1803 (1)

Corallus annulatus (Cope, 1875)

Ungaliophis Müller, 1880 (2). This genus was included within the family

Charinidae in Sunyer (2014). Quintero A. and Shear (2016) considered Charinidae a synonym of Ungaliophinae, within the family Boidae.

Ungaliophis continentalis Müller, 1880

Ungaliophis panamensis Schmidt, 1933

FAMILY COLUBRIDAE Oppel, 1811 (20 genera, 39 species)

Chironius Fitzinger, 1826 (1)

Chironius grandisquamis (Peters, 1868)

Coluber Linnaeus, 1758 (1)

Coluber mentovarius (Duméril, Bibron, and Duméril, 1854). This species was included in the genus *Masticophis* in Sunyer (2014). We follow Myers *et al.* (2017) and place under the genus *Coluber*.

Dendrophidion Fitzinger, 1843 (3)

Dendrophidion aphanocybe Cadle, 2012

Dendrophidion percarinatum (Cope, 1893)

- Dendrophidion rufiterminorum* Cadle and Savage, 2012
- Drymarchon* Fitzinger, 1843 (1)
- Drymarchon melanurus* (Duméril, Bibron, and Duméril, 1854)
- Drymobius* Fitzinger, 1843 (4)
- Drymobius chloroticus* (Cope, 1886)
- Drymobius margaritiferus* (Schlegel, 1837)
- Drymobius melanotropis* (Cope, 1875)
- Drymobius rhombifer* (Günther, 1860)
- Lampropeltis* Fitzinger, 1843 (1)
- Lampropeltis abnorma* (Bocourt, 1886). Previously considered a subspecies of *L. triangulum* (Ruane *et al.* 2014).
- Leptodrymus* Amaral, 1927 (1)
- Leptodrymus pulcherrimus* (Cope, 1874)
- Leptophis* Bell, 1825 (4)
- Leptophis ahaetulla* (Linnaeus, 1758)
- Leptophis depressirostris* (Cope, 1861)
- Leptophis mexicanus* (Duméril, Bibron, and Duméril, 1854).
- Leptophis nebulosus* Oliver, 1942
- Mastigodryas* Amaral, 1935 (2)
- Mastigodryas alternatus* (Bocourt, 1884)
- Mastigodryas dorsalis* (Bocourt, 1890)
- Oxybelis* Wagler, 1830 (3)
- Oxybelis brevirostris* (Cope, 1861)
- Oxybelis fulgidus* (Daudin, 1803)
- Oxybelis koehleri* Jadin, Blair, Orlofske, Jowers, Rivas, Vitt, Ray, Smith, and Murphy, 2020. This species was referred to as *O. aeneus* in Sunyer (2014). Jadin *et al.* (2020) recently described *O. koehleri* and allocated all Nicaraguan populations of this species to this new taxon.
- Phrynonax* Cope, 1862 (1)
- Phrynonax poecilonotus* (Günther, 1858)
- Pseudelaphe* Mertens and Rosenberg, 1943 (1)
- Pseudelaphe flavirufa* (Cope, 1867)
- Rhinobothryum* Wagler, 1830 (1)
- Rhinobothryum bovallii* (Andersson, 1916). This species was first recorded for Nicaragua by Martínez-Fonseca *et al.* (2019).
- Scolecophis* Fitzinger, 1843 (1)
- Scolecophis atrocinctus* (Schlegel, 1837)
- Senticolis* Dowling and Fries, 1987 (1)
- Senticolis triaspis* (Cope, 1866)
- Spilotes* Wagler, 1830 (1)
- Spilotes pullatus* (Linnaeus, 1758)
- Stenorhina* Duméril, 1853 (2)
- Stenorhina degenhardtii* (Berthold, 1846)
- Stenorhina freminvillii* (Duméril, Bibron, and Duméril, 1854)

Tantilla Baird and Girard, 1853 (8)

- Tantilla alticola* (Boulenger, 1903)
Tantilla armillata Cope, 1875
Tantilla reticulata Cope, 1860
Tantilla ruficeps (Cope, 1894)
Tantilla schistosa (Bocourt, 1883)
Tantilla supracincta (Peters, 1863)
Tantilla taeniata Bocourt, 1883. McCranie (2011) considered this nominal form as a species complex.
Tantilla vermiformis (Hallowell, 1861)

Tantillita Smith, 1941 (1)

- Tantillita lintoni* (Smith, 1940)

Trimorphodon Cope, 1862 (1)

- Trimorphodon quadruplex* Smith, 1941

FAMILY DIPSADIDAE Bonaparte, 1838 (26 genera, 44 species)

Adelphicos Jan, 1862 (1)

- Adelphicos quadrivirgatum* Jan, 1862

Amastridium Cope, 1861 (1)

- Amastridium veliferum* Cope, 1861

Clelia Fitzinger, 1826 (1)

- Clelia* (Daudin, 1803)

Coniophanes Hallowell, 1861 (3)

- Coniophanes bipunctatus* (Günther, 1858)

- Coniophanes fissidens* (Günther, 1858)

- Coniophanes piceivittis* Cope, 1870

Conophis Peters, 1860 (1)

- Conophis lineatus* (Duméril, Bibron, and Duméril, 1854)

Crisantophis Villa, 1971 (1)

- Crisantophis nevermanni* (Dunn, 1937)

Dipsas Laurenti, 1768 (2)

- Dipsas articulata* (Cope, 1868)

- Dipsas bicolor* (Günther, 1895)

Enuliophis McCranie and Villa, 1993 (1)

- Enuliophis sclateri* (Boulenger, 1894)

Enulius Cope, 1871 (1)

- Enulius flavitorques* (Cope, 1869)

Erythrolamprus Boie, 1826 (1)

- Erythrolamprus mimus* (Cope, 1869)

Geophis Wagler, 1830 (2)

- Geophis dunnii** Schmidt, 1932

- Geophis hoffmanni* (Peters, 1859)

Hydromorphus Peters, 1859 (1)

- Hydromorphus concolor* Peters, 1859

- Imantodes* Duméril, 1853 (3)
 Imantodes cenchoa (Linnaeus, 1758)
 Imantodes gemmistratus (Cope, 1862)
 Imantodes inornatus (Boulenger, 1896)
- Leptodeira* Fitzinger, 1843 (4)
 Leptodeira nigrofasciata (Günther, 1868)
 Leptodeira ornata (Bocourt, 1884). This species was addressed as *L. septentrionalis* in Sunyer (2014). Recently, Barrio-Amorós (2019) resurrected *L. ornata* from *L. septentrionalis*.
 Leptodeira polysticta (Günther, 1895). This species was addressed as *L. septentrionalis* in Sunyer (2014). Recently, Barrio-Amorós (2019) resurrected *L. polysticta* from *L. septentrionalis*.
 Leptodeira rhombifera (Günther, 1872)
- Ninia* Baird and Girard, 1853 (2)
 Ninia maculata (Peters, 1861)
 Ninia sebae (Duméril, Bibron, and Duméril, 1854)
- Nothopsis* Cope, 1871 (1)
 Nothopsis rugosus Cope, 1871
- Oxyrhopus* Wagler, 1830 (1)
 Oxyrhopus petolarius (Linnaeus, 1758)
- Pliocercus* Cope, 1860 (1)
 Pliocercus euryzonus Cope, 1862
- Rhadinaea* Cope, 1863 (1)
 Rhadinaea decorata (Günther, 1858)
- Rhadinella* Smith, 1941 (3)
 Rhadinella godmani (Günther 1865). This species was first recorded for Nicaragua by (Loza *et al.* 2017)
 Rhadinella kinkelini (Boettger, 1898)
 *Rhadinella rogerromani** (Köhler and McCranie, 1999)
- Sibon* Fitzinger, 1826 (5)
 Sibon annulatus (Günther, 1872)
 Sibon anthracops (Cope, 1868)
 Sibon dimidiatus (Günther, 1872)
 Sibon longifrenis (Stejneger, 1909)
 Sibon nebulatus (Linnaeus, 1758)
- Tretanorhinus* Duméril, Bibron, and Duméril, 1854 (1)
 Tretanorhinus nigroluteus Cope, 1862
- Trimetopon* Cope, 1885
 Trimetopon pliolepis Cope, 1894. This species was first recorded for Nicaragua by Gutiérrez-Rodríguez and Sunyer (2016)
- Tropidodipsas* Günther, 1858 (1)
 Tropidodipsas sartorii Cope, 1863
- Urotheca* Bibron, 1843 (3)
 Urotheca decipiens (Günther, 1893)
 Urotheca guentheri (Dunn, 1938)
 Urotheca pachyura (Cope, 1875)

Xenodon Boie, 1826 (1)

Xenodon angustirostris (Peters, 1864)

FAMILY ELAPIDAE Boie, 1827 (2 genera, 4 species)

Hydrophis Latreille, 1801 (1)

Hydrophis platurus (Linnaeus, 1766)

Micrurus Wagler, 1824 (3)

Micrurus allenii Schmidt, 1936

Micrurus multifasciatus (Jan, 1858)

Micrurus nigrocinctus (Girard, 1854). We believe *M. mosquitensis* to be a junior synonym of *M. nigrocinctus* (Sunyer and Köhler 2010).

FAMILY LEPTOTYPHLOPIDAE Stejneger, 1892 (1 genus, 2 species)

Epictia Gray, 1845 (2)

Epictia ater (Taylor, 1940)

*Epictia rioignis** Koch, Martins, and Schweiger, 2019. This species was recently described for Nicaragua and constitutes the first endemic reptile species for the Pacific versant of the country (Koch *et al.* 2019).

FAMILY LOXOCEMIDAE Cope, 1861 (1 genus, 1 species)

Loxocemus Cope, 1861 (1)

Loxocemus bicolor Cope, 1861

FAMILY NATRICIDAE Bonaparte, 1838 (1 genus, 2 species)

Thamnophis Fitzinger, 1843 (2)

Thamnophis marcianus (Baird and Girard, 1853)

Thamnophis proximus (Say, 1823)

FAMILY SIBYNOPHIIDAE Dunn, 1928 (1 genus, 2 species)

Scaphiodontophis Taylor and Smith, 1943 (2)

Scaphiodontophis annulatus (Duméril, Bibron, and Duméril, 1854). This species was first recorded for Nicaragua by Salazar-Saavedra *et al.* (2018).

Scaphiodontophis venustissimus (Günther, 1894)

FAMILY TYPHLOPIDAE Fitzinger, 1826 (2 genera, 2 species)

Amerotyphlops Hedges, Marion, Lipp, Marin, and Vidal, 2014 (1)

Amerotyphlops costaricensis (Jiménez and Savage, 1962)

***Virgatyphlops* Wallach, 2020 (1)**

*Virgatyphlops braminus*** (Daudin, 1803). This exotic and parthenogenetic species was first recorded for Nicaragua by Leets-Rodriguez *et al.* (2019). This species has been recently included in the genera *Indotyphlops* and *Ramphotyphlops* (Wallach 2020).

FAMILY VIPERIDAE Oppel, 1811 (8 genera, 10 species)

Akistrodon Palisot de Beauvois, 1799 (1)

Akistrodon howardgloydii (Conant, 1984)

Bothriechis Peters, 1859 (1)

Bothriechis schlegelii (Berthold, 1846)

Bothrops Wagler, 1824 (1)

Bothrops asper (Garman, 1884)

Cerrophidion Campbell and Lamar, 1992 (1)

Cerrophidion wilsoni Jadin, Townsend, Castoe, and Campbell, 2012. This species was first recorded for Nicaragua by Fernández *et al.* (2017).

Crotalus Linnaeus, 1758 (1)

Crotalus simus Latreille, 1801

Metlapilcoatlus Campbell, Frost, and Castoe, 2019 (2). This genus was addressed as *Atropoides* in Sunyer (2014). Campbell *et al.* (2019) recently described the genus *Metlapilcoatlus*.

Metlapilcoatlus indomitus (Smith and Ferrari-Castro, 2008). First record of this species in Nicaragua (Martínez-Fonseca *et al.* *In Review*).

Metlapilcoatlus mexicanus (Duméril, Bibron, and Duméril, 1854).

Lachesis Daudin, 1803 (1)

Lachesis stenophrys Cope, 1875

Porthidium Cope, 1871 (2)

Porthidium nasutum (Bocourt, 1868)

Porthidium ophryomegas (Bocourt, 1868)

ORDER TESTUDINES Batsch, 1788 (7 families, 10 genera, 15 species, 1 exotic species)

FAMILY CHELONIIDAE Oppel, 1811 (4 genera, 4 species)

Caretta Rafinesque, 1814 (1)

Caretta caretta (Linnaeus, 1758)

Chelonia Brongniart, 1800 (1)

Chelonia mydas (Linnaeus, 1758)

Eretmochelys Fitzinger, 1843 (1)

Eretmochelys imbricata (Linnaeus, 1766)

Lepidochelys Fitzinger, 1843 (1)

Lepidochelys olivacea (Eschscholz, 1829)

FAMILY CHELYDRIDAE Swainson, 1839 (1 genus, 1 species)

Chelydra Schweigger, 1812 (1)

Chelydra acutirostris Peters, 1862

FAMILY DERMOCHELYIDAE Blainville, 1816 (1 genus, 1 species)

Dermochelys Blainville, 1816 (1)

Dermochelys coriacea (Vandelli, 1761)

FAMILY EMYDIDAE Rafinesque, 1815 (1 genus, 2 species)

Trachemys Agassiz, 1857 (2)

Trachemys emolli (Legler, 1990)

Trachemys venusta (Gray, 1855)

FAMILY GEOEMYDIDAE Theobald, 1868 (1 genus, 3 species)

Rhinoclemmys Fitzinger, 1835 (3)

Rhinoclemmys annulata (Gray, 1860)

Rhinoclemmys funerea (Cope, 1875)

Rhinoclemmys pulcherrima (Gray, 1856)

FAMILY KINOSTERNIDAE Agassiz, 1857 (1 genus, 3 species)

Kinosternon Spix, 1824 (3)

Kinosternon albogulare (Bocourt, 1870). Nicaraguan populations of this species were addressed as *K. scorpioides* in Sunyer (2014). McCranie (2018) assigned them to *K. albogulare*.

Kinosternon angustipons Legler, 1965

Kinosternon leucostomum (Duméril and Bibron, 1851)

FAMILY TESTUDINIDAE Batsch, 1788 (1 genus, 1 species)

Chelonoidis Fitzinger, 1835 (1)

*Chelonoidis carbonarius*** (Spix, 1824). Wild specimens of this exotic pet species were first recorded in Nicaragua by Salazar-Saavedra *et al.* (2015).

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Literature Cited

- Acevedo A.A., Lampo M. & Cipriani R. (2016) The cane or marine toad, *Rhinella marina* (Anura, Bufonidae): Two genetically and morphologically distinct species. Zootaxa 4103: 574-586. <https://doi.org/10.11646/zootaxa.4103.6.7>
- Barrio-Amorós C.L. (2019) On the Taxonomy of snakes in the genus *Leptodeira*, with an emphasis on Costa Rican species. IRCP Reptiles & Amphibians 26: 1-15.
- Breuil M., Schikorski D., Vuillaume B., Krauss U., Daltry J.C., Gaymes G., Gaymes J., Lepais O., Bech N., Jelić M., Becking T. & Grandjean F. (2022) *Iguana insularis* (Iguanidae) from the southern Lesser Antilles: An endemic lineage endangered by hybridization. ZooKeys 2022: 137-161. <https://doi.org/10.3897/zookeys.1086.76079>
- Campbell J.A., Frost D.R. & Castoe T.A. (2019) New generic name for jumping pitvipers (Serpentes: Viperidae). Revista Latinoamericana de Herpetología 2: 52-53. <https://doi.org/10.22201/fc.25942158e.2019.2.73>
- Díaz-Gómez Y., Sunyer J., Loza J., Fernández M., Salazar-Saavedra M. & Martínez-Fonseca J.G. (2017) Distribution notes: *Ecnomiohyla miliaria* (Cope, 1886). Mesoamerican Herpetology 4: 658-659. https://doi.org/10.1163/9789004208001_012
- Dubois A. (2017) The nomenclatural status of *Hysaplesia*, *Hylaplesia*, *Dendrobates* and related nomina (Amphibia, Anura), with general comments on zoological nomenclature and its governance, as well as on taxonomic databases and websites. Bionomina 11: 1-48. <https://doi.org/10.11646/bionomina.11.1.1>
- Duellman W.E., Marion A.B. & Hedges S.B. (2016) 4104 Zootaxa Phylogenetics, classification, and biogeography of the treefrogs (Amphibia: Anura: Arboranae). 1-109 pp. <https://doi.org/10.11646/zootaxa.4104.1.1>
- Fernández M., Martínez-Fonseca J.G., Salazar-Saavedra M., Gutiérrez L., Loza J. & Sunyer J. (2017) First verified record of *Cerrophidion wilsoni* (Reptilia: Squamata: Viperidae) from Nicaragua. Mesoamerican Herpetology 4: 481-484.
- Frost D. (2023) Amphibian species of the world. Version 6.2. The American Museum of Natural History.
- Gray A.R. (2018) Review of the genus *Cruziohyla* (Anura: Phyllomedusidae), with description of a new species. Zootaxa 4450: 401-426. <https://doi.org/10.11646/zootaxa.4450.4.1>
- Gutiérrez-García T.A. & Vázquez-Domínguez E. (2013) Consensus between genes and stones in the biogeographic and evolutionary history of Central America. Quaternary Research 79: 311-324. <https://doi.org/10.1016/j.yqres.2012.12.007>

Gutiérrez-Rodríguez A.A. & Sunyer J. (2016) First record of *Trimetopon pliolepis* Cope, 1894 (Reptilia: Squamata: Dipsadidae) from Nicaragua. Mesoamerican Herpetology 3: 517-518.

Gutiérrez-Rodríguez J., Zaldívar-Riverón A., Solano-Zavaleta I., Campbell J.A., Meza-Lázaro R.N., Flores-Villela O. & Nieto-Montes de Oca A. (2021) Phylogenomics of the Mesoamerican alligator-lizard genera *Abronia* and *Mesaspis* (Anguidae: Gerrhonotinae) reveals multiple independent clades of arboreal and terrestrial species. Molecular phylogenetics and evolution 154: 106963. <https://doi.org/10.1016/j.ympev.2020.106963>

HerpetoNica (2015) Guia Ilustrada de los Anfibios y Reptiles de Nicaragua (Herpetonicas). MARENA, Managua, Nicaragua, 521 pp. Available from: <https://www.researchgate.net/publication/326930729>.

Jadin R.C., Blair C., Orlofske S.A., Jowers M.J., Rivas G.A., Vitt L.J., Ray J.M., Smith E.N. & Murphy J.C. (2020) Not withering on the evolutionary vine: systematic revision of the Brown Vine Snake (Reptilia: Squamata: *Oxybelis*) from its northern distribution. Organisms Diversity & Evolution 20: 723-746. <https://doi.org/10.1007/s13127-020-00461-0>

Koch C., Martins A. & Schweiger S. (2019) A century of waiting: Description of a new *Epictia* Gray, 1845 (Serpentes: Leptotyphlopidae) based on specimens housed for more than 100 years in the collection of the Natural History Museum Vienna (NMW). PeerJ7: e7411. <https://doi.org/10.7717/peerj.7411>

Köhler G. (2001) Anfibios y reptiles de Nicaragua. Herpeton, Offenbach, Germany, 208 pp.

Köhler G., Townsend J.H. & Petersen C.B.P. (2016) A taxonomic revision of the *Norops tropidonotus* complex (Squamata, Dactyloidae), with the resurrection of *N. spilorhipis* (Álvarez del Toro and Smith, 1956) and the description of two new species. Mesoamerican Herpetology 3: 8-41.

Leets-Rodriguez L., Lopez-Guevara H.J. & Sunyer J. (2019) First country records of the invasive Brahminy Blindsnake *Indotyphlops braminus* (Daudin, 1803) (Squamata: Typhlopidae) from Nicaragua. Revista Nicaraguense de Biodiversidad 45: 1-53.

Loza J.C., Gutiérrez L., Salazar-Saavedra M., Martínez-Fonseca J.G., Fernández M. & Sunyer J. (2017) First record of *Rhadinella godmani* (Reptilia: Squamata: Dipsadidae) from Nicaragua. Mesoamerican Herpetology 4: 476-478.

Luque-Montes I., Austin J.D., Weinfurther K.D., Wilson L.D., Hofmann E.P. & Townsend J.H. (2018) An integrative assessment of the taxonomic status of putative hybrid leopard frogs (Anura: Ranidae) from the Chortís Highlands of Central America, with description of a new species. Systematics and Biodiversity 16: 340-356. <https://doi.org/10.1080/14772000.2017.1415232>

- Martínez-Fonseca J.G., Loza J., Fernández M., Salazar-Saavedra M. & Sunyer J.** (2019) First country record of *Rhinobothryum bovallii* (Andersson, 1916) (squamata, colubridae) from nicaragua. Check List 15: 555-563. <https://doi.org/10.15560/15.4.555>
- McCrannie J.R.** (2017) Morphological and systematic comments on the Caribbean lowland population of *Smilisca baudinii* (Anura: Hylidae: Hylinae) in northeastern Honduras, with the resurrection of *Hyla manisorum* Taylor. 4: 15.
- McCrannie J.R.** (2018) The Lizards, Crocodiles, and Turtles of Honduras. Systematics, Distribution, and Conservation. Bulletin of the Museum of Comparative Zoology 15: 1-129. <https://doi.org/10.3099/0027-4100-15.1.1>
- McCrannie J.R., Sunyer J. & Martínez-Fonseca J.G.** (2019) Comments and updates to “Guía Ilustrada de Anfibios y Reptiles de Nicaragua” along with taxonomic and related suggestions associated with the herpetofauna of Nicaragua. Revista Nicaragüense de Biodiversidad 52: 1-44.
- McCrannie J.R., Matthews A.J. & Hedges B.** (2020) A morphological and molecular revision of lizards of the genus *Marisoraa* Hedges & Conn (Squamata: Mabuyidae) from Central America and Mexico, with descriptions of four new species. Zootaxa 4763: 301-353. <https://doi.org/https://doi.org/10.11646/zootaxa.4763.3.1>
- Medina-Fitoria A. & Martínez-Fonseca J.G.** (2019) Cronología histórica de la quiropterología en Nicaragua. Revista Mexicana de Mastozoología, nueva época 2: 1-28. <https://doi.org/10.22201/ie.20074484e.2019.9.2.286>
- Meza-Lázaro R.N. & Nieto-Montes de Oca A.** (2015) Long forsaken species diversity in the Middle American lizard *Holcosus undulatus* (Teiidae). Zoological Journal of the Linnean Society 175: 189-210. <https://doi.org/10.1111/zoj.12264>
- Myers E.A., Burgoon J.L., Ray J.M., Martínez-Gómez J.E., Matías-Ferrer N., Mulcahy D.G. & Burbrink F.T.** (2017) Coalescent Species Tree Inference of *Coluber* and *Masticophis*. Copeia 105: 642-650. <https://doi.org/10.1643/CH-16-552>
- Noble G.K.** (1918) The amphibians collected by the American Museum Expedition to Nicaragua in 1916. Bulletin of the American Museum of Natural History 38: 311-347.
- Phillips J.G., Sunyer J. & Nicholson K.E.** (2015) First record of *Norops humilis* from Nicaragua. Mesoamerican Herpetology 2: 361-363.
- de Queiroz K.** (2022) The correct name for the taxon ranked as a Family containing the genus *Anolis* under rank-based nomenclature and the author of the name *Anolis loysiana*. Herpetology Review 53: 418-420.

- Quintero A.D. & Shear W.A. (2016)** Case 3688 charinidae Gray 1849 (Reptilia, Squamata, Serpentes): proposed suppression. *The Bulletin of Zoological Nomenclature* 73: 25-29. <https://doi.org/10.21805/bzn.v73i1.a21>
- Robleto-Hernández S., Gutiérrez-Rodríguez A.A., Otero Ortúño C., González E.Y., Leets Rodríguez L., López Guevara H. & Sunyer J. (2017)** Libro rojo de los anfibios y reptiles de Nicaragua. MARENA, Managua, Nicaragua, 225 pp.
- Ron S.R., Venegas P.J., Ortega-Andrade H.M., Gagliardi-Urrutia G. & Salerno P.E. (2016)** Systematics of *Ecnomiohyla tuberculosa* with the description of a new species and comments on the taxonomy of *Trachycephalus typhonius* (Anura, Hylidae). *ZooKeys* 2016: 115-154. <https://doi.org/10.3897/zookeys.630.9298>
- Ruane S., Bryson R.W., Pyron R.A. & Burbrink F.T. (2014)** Coalescent Species Delimitation in Milksnakes (Genus *Lampropeltis*) and Impacts on Phylogenetic Comparative Analyses. *Systematic Biology* 63: 231-250. <https://doi.org/10.1093/sysbio/syt099>
- Salazar-Saavedra M., Loza J., Dávila P., Ruíz Pérez G.A. & Sunyer J. (2018)** First country records of the Guatemala Neckband Snake *Scaphiodontophis annulatus* (Duméril, Bibron and Duméril, 1854) (Squamata, Sibynophiidae) from Nicaragua. *Revista Ni*: 4-15.
- Salazar-Saavedra M., Loza J.C., Fernandez M., Martínez-Fonseca J.G., Dwyer Q. & Sunyer J. (2015)** *Chelonoidis carbonarius* (Spix , 1824): a member of the Nicaraguan herpetofauna. *Mesoamerican Herpetology* 2: 571-573.
- Savage J.M. (1973)** Herpetological collections made by Dr. John F. Bransford, Assistant Surgeon, U.S.N. during the Nicaragua and Panama Canal Surveys (1872-1885). *Journal of Herpetology* 7: 35-38.
- Schools M. & Hedges S.B. (2021)** Phylogenetics, classification, and biogeography of the Neotropical forest lizards (Squamata, Diploglossidae). *Zootaxa* 4974: 201-257. <https://doi.org/10.11646/zootaxa.4974.2.1>
- Solano-Flórez L. (2012)** Diversity, Phylogeography and Conservation of two groups of anurans of the family Hylidae in Mesoamerica. Doctoral Thesis. University of Manchester, Manchester, United Kingdom
- Sunyer J. (2014)** An updated checklist of the amphibians and reptiles of Nicaragua. *Mesoamerican Herpetology* 1: 186-202. Available from: http://mesoamericanherpetology.com/uploads/3/5/0/0/3500871/sunyer_paper.pdf
- Sunyer J. & Köhler G. (2010)** Conservation status of the herpetofauna of Nicaragua. In: Wilson LD, Townsend JH, Johnson JD (Eds), *Conservation of Mesoamerican amphibians and reptiles*. Eagle Mountain Publishing, Utah, 488-509.

- Sunyer J., Martínez-Fonseca J.G. & Salazar-Saavedra M.** (2016) New departmental records for lizards in Nicaragua. *Mesoamerican Herpetology* 3: 1049-1054. <https://doi.org/10.1016/j.ympev.2016.09.001.R>
- Sunyer J., Martinez-Fonseca J.G., Fernández M.A., Olivas M.F.U. & Obando L.A.** (2014) Noteworthy snake records from Nicaragua (Reptilia: Serpentes). *Check List* 10: 1134-1147. <https://doi.org/10.15560/10.5.1134>
- Villa J.** (2015) Las Ranitas de Cayos Miskitos. *Revista de temas Nicaraguenses* 89: 6-22.
- Wallach V.** (2020) How to easily identify the flowerpot blindsnake, *Indotyphlops braminus* (Daudin , 1803), with proposal of a new genus (Serpentes : Typhlopidae). *Pod@rcis* 11: 4-12.

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