

# Herpetofauna from the Estação Ecológica Rio Acre, Amazon Rainforest, Brazil

Marco Antonio de Freitas<sup>1,\*</sup>, Nathocley Mendes Venâncio<sup>2</sup>, Arthur Diesel Abegg<sup>3,4</sup>, Weverton dos Santos Azevedo<sup>3,4</sup>, Valquiria de Oliveira Pereira<sup>4</sup>, Alexandre Pinheiro Zanotti<sup>5</sup>, Arley Veloso<sup>6</sup>, Lincoln Schwarzbach<sup>7</sup>, Alanna Grazieli Oliveira e Sousa<sup>8</sup>, Raiany Cristine Cruz-da-Silva<sup>9</sup>, Vânia Regina Gonçalves de Amorim<sup>10</sup>, and Geraldo Jorge Barbosa de Moura<sup>11</sup>

**Abstract.** This study presents the results of a herpetofauna inventory carried out at the Estação Ecológica Rio Acre (ESEC Rio Acre), in the city of Assis Brasil, Acre State, Brazil. Two methods were synchronously applied for herpetofauna sampling during 30 consecutive days, namely time limited searches and pitfall traps. The sampling was distributed in three campaigns between 2015 and 2017. A total of 132 species (63 amphibians and 69 reptiles) were found. The richness of amphibians and reptiles at the ESEC Rio Acre is high when compared to other Amazon Forest localities in Brazil. This study provides the second most robust inventory for the state so far and delivers new information that may support future studies in the region, such as contributing to the review of the management plan of the Estação Ecológica Rio Acre.

**Keywords.** Checklist, Inventory, Reptiles, Amphibians, Snakes

## Introduction

Brazil is noteworthy for its significant territorial extension and notable phytophysionomic heterogeneity, presenting 1,093 amphibian and 795 reptile species (Costa and Bérnils, 2018; Segalla et al., 2019). The Brazilian Amazon comprises high species diversity, this

is particularly true to herpetofauna, because it has one of the greatest species diversities in the world (Avila-Pires et al., 2007; Morato et al., 2018; Fonseca et al., 2019).

In Amazon, the fauna inventories have contributed to the knowledge of the herpetofauna diversity (Masseli et al., 2019) and, consequently, to reduce shortfalls (for

---

<sup>1</sup> Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio), ESEC Murici, Rua Marino Vieira de Araújo 32, Cidade Alta, Murici, 57820-000, Alagoas, Brazil.

<sup>2</sup> Faculdade Meta - FAMETA, Estrada Alberto Torres, 947, Rio Branco, 69919-230, Acre, Brazil.

<sup>3</sup> Instituto Butantan, Laboratório de Coleções Zoológicas, Avenida Vital Brasil, 1500, Butantã, São Paulo, 05503-900, São Paulo, Brazil.

<sup>4</sup> Universidade de São Paulo (USP), Instituto de Biociências (IB-USP), Rua do Matão, 14, São Paulo, 05508-090, São Paulo, Brazil.

<sup>5</sup> Serpenteiro Mata Sul, Rua 6, Casa 25, Pedrinhas, Rio Formoso, 55000-000, Pernambuco, Brazil.

<sup>6</sup> Escola da Floresta Roberval Cardoso – Instituto Dom Moacyr, 105, Rio Branco, 69906-400, Acre, Brazil.

<sup>7</sup> Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio), ESEC Rio Acre, ICMBio sede s/n, Assis Brasil,

69000-000, Acre, Brazil.

<sup>8</sup> Universidade de Ensino Superior do Sul do Maranhão (UNISULMA), Departamento de Ciências Biológicas, Rua São Pedro, 11, Jd. Cristo Rei, Imperatriz, 65907-070, Maranhão, Brazil.

<sup>9</sup> Instituto Natureza do Tocantins – NATURATINS 302 Norte, Alameda 01, Lote 03 – Plano Diretor Norte, Palmas, 77006-336, Tocantins, Brazil.

<sup>10</sup> Universidade de Cuiabá UNIC, Rua Manoel José de Arruda, 3100, Jardim Europa, Cuiabá, 78065-900, Mato Grosso, Brazil.

<sup>11</sup> Programa de Pós-Graduação em Ecologia, Laboratório de Estudos Herpetológicos e Paleoherpetológicos, Universidade Federal Rural de Pernambuco, Recife, 52171-900, Pernambuco, Brazil.

\* Corresponding author. E-mail: philodryas@hotmail.com

example, Wallacean and Linnean shortfalls). These inventories are of great importance, because they allow the description, mapping, understanding of species richness and endemism (Dirzo and Raven, 2003; Margules and Pressey, 2000). However, despite the notable increase in these inventories in the last decades, large sampling gaps are still observed in the Amazon (Avila-Pires *et al.*, 2007; Bernarde *et al.*, 2011; Ferreira *et al.*, 2017; Moraes *et al.*, 2017).

The state of Acre comprises high biodiversity, and herpetofauna surveys to date have corroborated this statement (e.g. Bernarde *et al.* 2011; França *et al.* 2017; Fonseca *et al.* 2019). Despite this, most surveys were carried out in the northwestern region of the state, at the Cruzeiro do Sul Imediata Region, evidencing the need for inventories in other regions, which may result in the expansion of geographic distributions and even in the discovery of new species (Souza *et al.*, 2003; Avila-Pires *et al.* 2009; Souza 2009; Silva *et al.* 2010; Bernarde *et al.* 2011; Bernarde *et al.* 2013; Miranda *et al.* 2014; Venâncio *et al.* 2014; Miranda *et al.* 2015; Venâncio and Souza 2016; França *et al.* 2017; IBGE, 2017; Fonseca *et al.* 2019). In order to promote the improvement of distribution and richness records of Amazonian herpetofauna, as well as increment the importance of knowledge on biodiversity, both for conservation and sustainable use, the results of the herpetofaunal survey carried out at the Estação Ecológica Rio Acre, in the Brasília Imediata Region, is presented herein.

## Material and methods

**Study area.**—The present study was carried out at the Estação Ecológica Rio Acre (ESEC Rio Acre) (-10.9428°S, -70.2821°W), a protected area that comprises 79.395,22 ha (ICMBio, 2018) and is located on the left bank of the Acre River (Figure 1).

The sampling area was conducted in the municipality of Assis Brasil. The vegetation is classified as open rainforest (Velooso *et al.*, 1991), because it is characterized by the presence of Open Forests, where the canopy presents a lower density of large tree and has a subequatorial that presents a great abundance of palms, bamboos and lianas (ICMBio, 2010). The climate of the region is classified as tropical, hot and humid with average temperature of 26 °C and rainfall density of 1,700 mm (ICMBio, 2010).

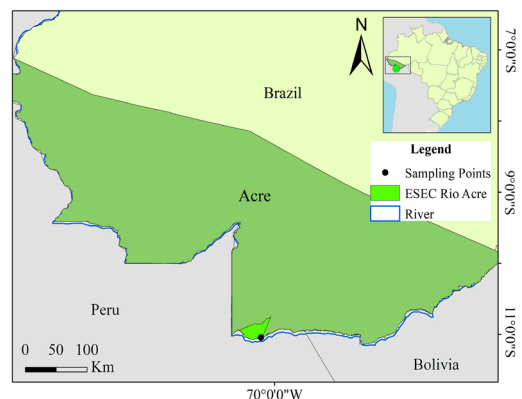
**Data sampling.**—During 10 consecutive days in the months of April 2015, February 2016 and December 2017, in which we conducted research in the forest for amphibians, lizards, snakes and chelonians.

Our sampling effort comprises about 900 hours of observation, of which 600 h during the night (18:00 - 23:00) and 300 h during the day (morning). Two methods were synchronously applied for herpetofauna sampling: time limited search and pitfall traps. Four pitfall lines were used, each containing ten 60-liter buckets, eight feet apart, interconnected by a one-meter-high black canvas. Two lines were installed in a floodplain area (-11.0436S, -70.1843W) and two in a *terra firme* area (-11.0409S, -70.1886W). The distance between these points is approximately 0.560 Km. No campaigns were carried out in the dry season, due to the impossibility of reaching the Estação Ecológica Rio Acres base during this period, as the river water level does not allow for motorized boat navigation. Records of occasional team meetings, outside the active search periods, were also maintained. The search effort spanned all visually accessible microenvironments, with five people carrying out the active search per campaign.

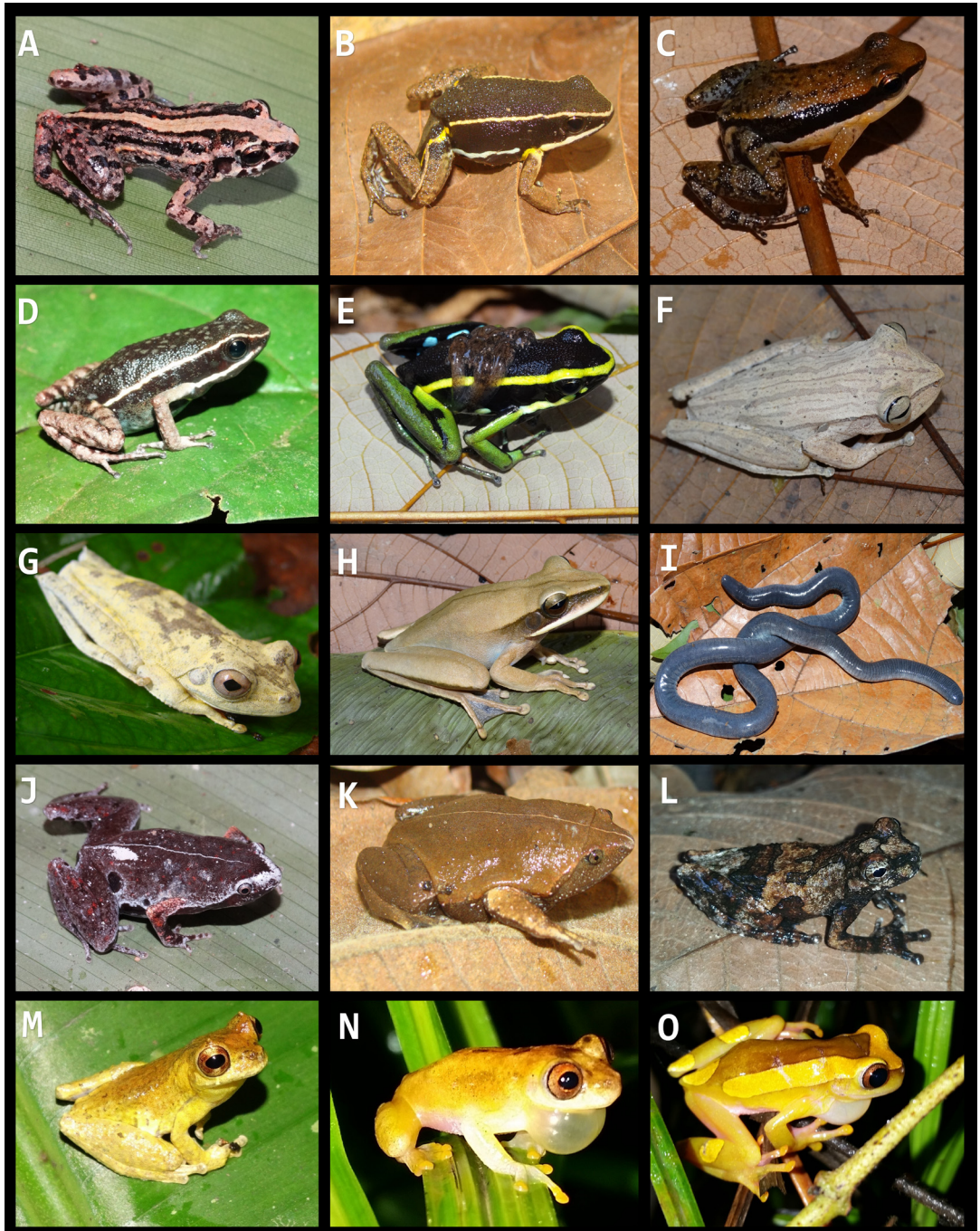
The collected specimens (ICMBio/SISBIO license # 48448-1) were deposited in two biological collections, the Herpetological Collection of the Acre Federal University - CHUFAC and the Herpetological and Paleoherpetological Collection of the Pernambuco Federal Rural University - CHPUFRPE. The zoological nomenclature adopted herein follows Segalla *et al.* (2019), for amphibians, and Costa and Bérnils (2018), for reptiles.

## Results

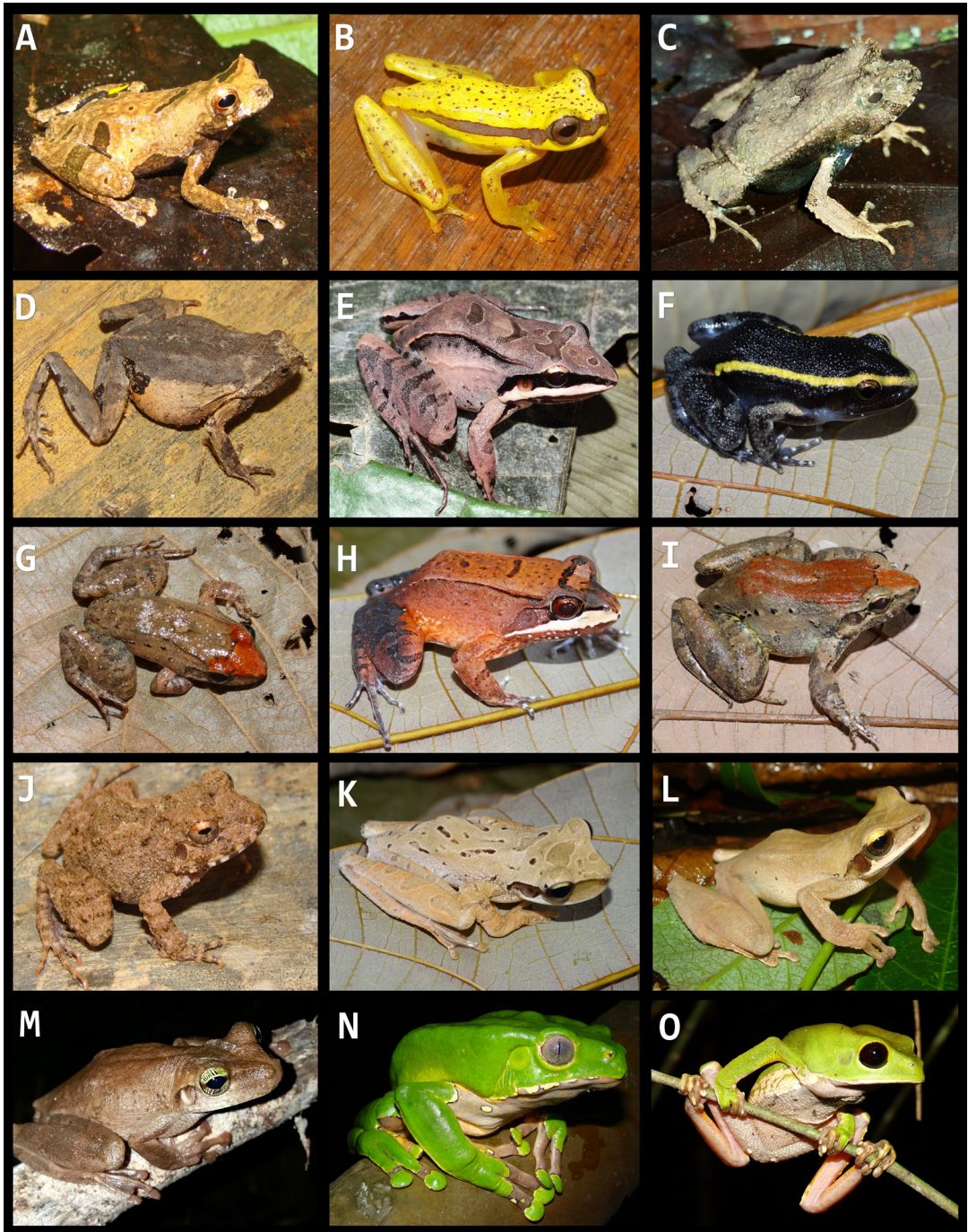
A total of 132 species were recorded, 63 amphibians and 69 reptiles (Figure 10). Amphibians were represented by



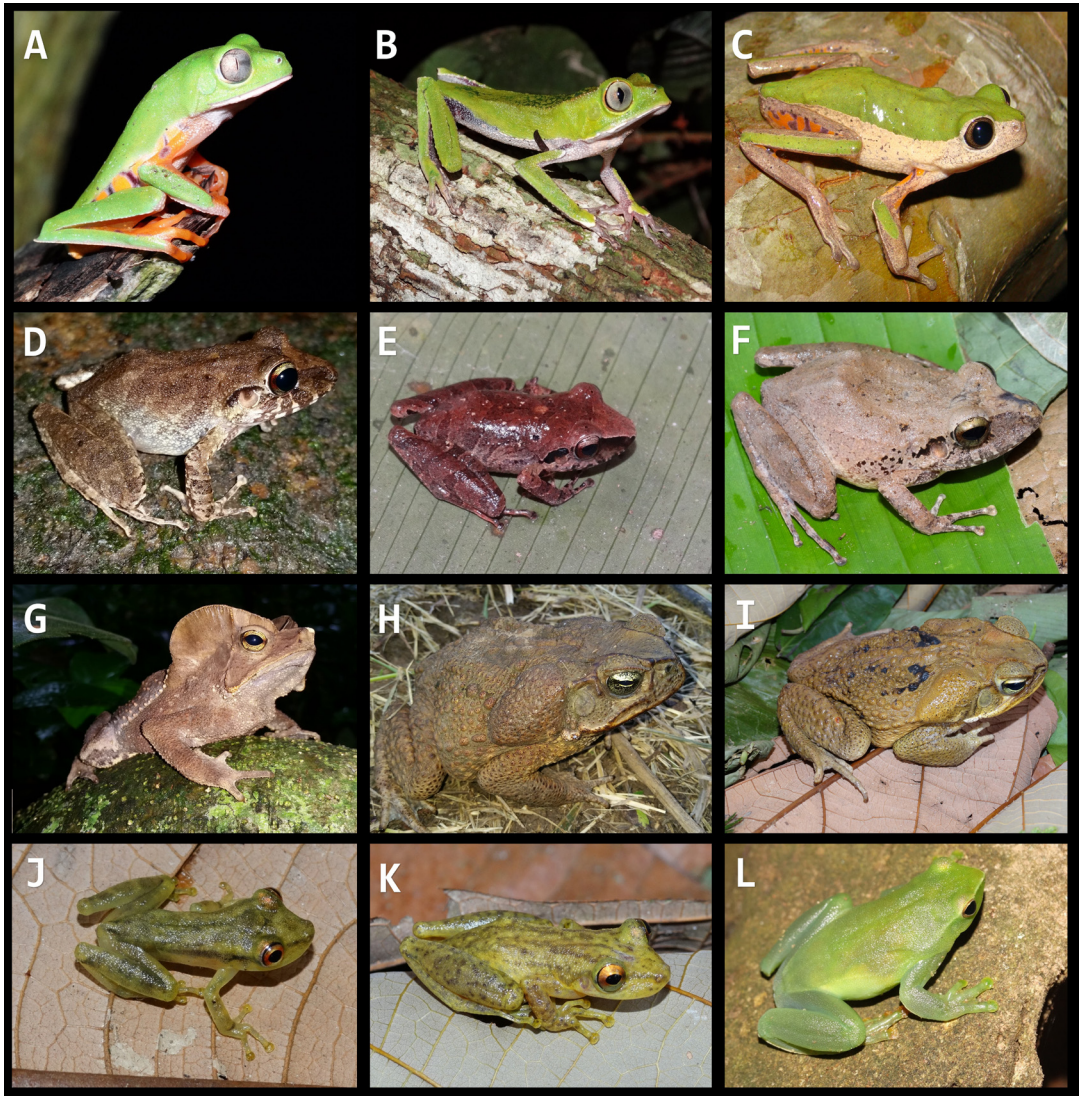
**Figure 1.** Map of the Estação Ecológica Rio Acre, in the municipality of Assis Brasil, state of Acre, Brazil.



**Figure 2.** Amphibian species recorded at the ESEC Rio Acre, Brazil. (A) *Adenomera hylaedactyla*; (B) *Allobates femoralis*; (C) *Allobates* sp.; (D) *Ameerega hahnelti*; (E) *Ameerega trivittata*; (F) *Boana fasciata*; (G) *Boana geographica*; (H) *Boana lanciformis*; (I) *Caecilia* sp.; (J) *Chiasmocleis bassleri*; (K) *Ctenophryne geayi*; (L) *Dendropsophus acreanus*; (M) *Dendropsophus brevifrons*; (N) *Dendropsophus joannae*; (O) *Dendropsophus leucophyllatus*. Photographs by Marco Antonio de Freitas.



**Figure 3.** Amphibian species recorded at the ESEC Rio Acre, Brazil. (A) *Dendropsophus parviceps*; (B) *Dendropsophus rhodopeplus*; (C) *Edalorhina perezi*; (D) *Engystomops freibergeri*; (E) *Leptodactylus didymus*; (F) *Lithodytes lineatus*; (G) *Leptodactylus petersii*; (H) *Leptodactylus rhodomystax*; (I) *Leptodactylus wagneri*; (J) *Oreobates quixensis*; (K) *Osteocephalus lepieurii*; (L) *Osteocephalus planiceps*; (M) *Osteocephalus taurinus*; (N) *Phyllomedusa bicolor*; (O) *Phyllomedusa camba*. Photographs by Marco Antonio de Freitas.



**Figure 4.** Amphibian species recorded at the ESEC Rio Acre, Brazil. (A) *Callimedusa tomopterna*; (B) *Phyllomedusa vaillantii*; (C) *Pithecopus palliatus*; (D) *Pristimantis fenestratus*; (E) *Pristimantis peruvianus*; (F) *Pristimantis reichlei*; (G) *Rhinella margaritifera*; (H) *Rhinella marina*; (I) *Rhinella poeppigii*; (J) *Scarthyla goinorum*; (K) *Scinax ruber*; (L) *Sphaenorhynchus lacteus*. Photographs by Marco Antonio de Freitas.

Anura and Gymnophiona orders. Anura was represented by 62 species belonging to the following families: Aromobatidae (4 species), Bufonidae (4), Craugastoridae (6), Dendrobatidae (3), Hylidae (23), Leptodactylidae (12), Microhylidae (4), Phyllomedusidae (6). The order Gymnophiona was represented only by one species (family Caeciliidae) (Table 1, Figures 2–4). Crocodylia were represented by three species from the

Alligatoridae family, as were Testudines, belonging to the Testudinidae (1), Podocnemididae (1) and Chelidae (1) families. Squamata were represented by 63 species, comprising the following families: Alopoglossidae (2), Amphisbaenidae (1) Boidae (4), Colubridae (7), Dactyloidae (3), Dipsadidae (20), Elapidae (3), Hoplocercidae (2), Mabuyidae (1), Sphaerodactylidae (3), Gymnophthalmidae (3), Iguanidae (1),

**Table 1.** Amphibian species recorded at the ESEC Rio Acre, state of Acre, Brazil.

ORDER/Family/Species (Author, year)	Vouchers
<b>ANURA</b>	
<b>Aromobatidae</b>	
<i>Allobates cf. trilineatus</i>	CHUFAC 6413, 6444, 6445, 6449, 6452, 6548, 8677, 8678
<i>Allobates femoralis</i> (Boulenger, 1884)	CHUFAC 6426, 6438; CHPUFRPE 4404
<i>Allobates gasconi</i> (Morales, 2002)	CHUFAC 8687
<i>Allobates</i> sp.	CHPUFRPE 4355
<b>Bufonidae</b>	
<i>Rhinella castaneotica</i> (Caldwell, 1991)	CHPUFRPE 4374
<i>Rhinella margaritifera</i> (Laurenti, 1768)	CHPUFRPE 4365; CHUFAC 6369, 6380
<i>Rhinella marina</i> (Linnaeus, 1758)	-
<i>Rhinella poeppigii</i> (Tschudi, 1845)	CHPUFRPE 4353; CHUFAC 6361, 6366
<b>Craugastoridae</b>	
<i>Oreobates quixensis</i> Jiménez De la Espada, 1872	CHPUFRPE 4395; CHUFAC 6384, 6414, 6417, 6424
<i>Pristimantis altamazonicus</i> (Barbour and Dunn, 1921)	CHUFAC 6437
<i>Pristimantis fenestratus</i> (Steindachner, 1864)	CHPUFRPE 4350, 4944; CHUFAC 6378, 6386, 6397, 6439
<i>Pristimantis peruvianus</i> (Melin, 1941)	-
<i>Pristimantis reichlei</i> Padial and De la Riva, 2009	CHPUFRPE 4406, 4945; CHUFAC 6394, 6429
<i>Pristimantis zimmermanae</i> (Heyer and Hardy, 1991)	-
<b>Dendrobatidae</b>	
<i>Ameerega hahneli</i> (Boulenger, 1884)	CHPUFRPE 4348; CHUFAC 6408, 6421, 6422, 6431, 6441
<i>Ameerega trivittata</i> (Spix, 1824)	CHUFAC 6409, 6442, 6443, 6446, 6448, 6450, 6451; CHPUFRPE 4427, 4933
<i>Ranitomeya sirensis</i> (Aichinger, 1991)	-
<b>Hylidae</b>	
<i>Boana boans</i> (Linnaeus, 1758)	CHPUFRPE 4366; CHUFAC 6368
<i>Boana fasciata</i> (Günther, 1858)	CHPUFRPE 4393, 6544; CHUFAC 8673
<i>Boana geographica</i> (Spix, 1824)	-
<i>Boana lanciformis</i> (Cope, 1871)	CHPUFRPE 4356
<i>Dendropsophus acreanus</i> (Bokermann, 1964)	CHUFAC 6543, 8672; CHPUFRPE 4932
<i>Dendropsophus brevifrons</i> (Duellman and Crump, 1974)	CHPUFRPE 4400; CHUFAC 6432
<i>Dendropsophus joanae</i> (Köhler and Lötters, 2001)	CHUFAC 6547, 8676
<i>Dendropsophus kamagarini</i> Rivadeneira, Venegas and Ron, 2018	-
<i>Dendropsophus leucophyllatus</i> (Beireis, 1783)	CHUFAC 6545, 8674
<i>Dendropsophus marmoratus</i> (Laurenti, 1768)	CHUFAC 8681
<i>Dendropsophus parviceps</i> (Boulenger, 1882)	CHUFAC 6393, 6412, 6419, 6425, 6434
<i>Dendropsophus rhodopeplus</i> (Günther, 1858)	CHPUFRPE 4428, 4934; CHUFAC 6535, 6543, 8664, 8671
<i>Osteocephalus castaneicola</i> Moravec, Aparicio, Guerrero-Reinhard, Calderón, Jungfer and Gvoždik, 2009	CHUFAC 6372, 6389, 6404
<i>Osteocephalus leprieurii</i> (Duméril and Bibron, 1841)	CHPUFRPE 4387
<i>Osteocephalus planiceps</i> Cope, 1874	CHPUFRPE 4384
<i>Osteocephalus taurinus</i> Steindachner, 1862	CHUFAC 6370, 6371, 6374, 6376, 6379; CHPUFRPE 4373
<i>Scarthyla goinorum</i> (Bokermann, 1962)	-
<i>Scinax funereus</i> (Cope, 1874)	CHPUFRPE 4380; CHUFAC 6395, 6401, 6420
<i>Scinax ruber</i> (Laurenti, 1768)	CHPUFRPE 4397
<i>Scinax</i> sp.	CHUFAC 6399, 6402, 6405, 6407, 6410
<i>Sphaenorhynchus lacteus</i> (Daudin, 1800)	CHUFAC 6396, 6398
<i>Trachycephalus resinifictrix</i> (Goeldi, 1907)	-
<i>Trachycephalus typhonius</i> (Linnaeus, 1758)	-

Table 1. Continued.

ORDER/Family/Species (Author, year)	Vouchers
<b>Leptodactylidae</b>	
<i>Adenomera hylaedactyla</i> (Cope, 1868)	CHPUFRPE 4409, 4410; CHUFAC 6428, 6430, 6435
<i>Edalorhina perezi</i> Jiménez de la Espada, 1870	CHUFAC 6440, 6546, 8675; CHPUFRPE 4405, 4430
<i>Engystomops freibergeri</i> (Donoso-Barros, 1969)	CHPUFRPE 4398, 4942; CHUFAC 8679, 8680
<i>Leptodactylus didymus</i> Heyer, García-Lopez and Cardoso, 1996	CHUFAC 8663; CHPUFRPE 4392, 6534
<i>Leptodactylus knudseni</i> Heyer, 1972	-
<i>Leptodactylus leptodactyloides</i> (Andersson, 1945)	CHPUFRPE 4369; CHUFAC 6367, 6375, 6382, 6383, 6385, 6391, 6392, 6533, 8662
<i>Leptodactylus pentadactylus</i> (Laurenti, 1768)	CHPUFRPE 4954
<i>Leptodactylus petersii</i> (Steindachner, 1864)	CHPUFRPE 4386
<i>Leptodactylus rhodomystax</i> Boulenger, 1884	CHUFAC 6387, 6400, 8686; CHPUFRPE 4389, 4396
<i>Leptodactylus rhodonotus</i> (Günther, 1869 “1868”)	CHUFAC 6530; 8659
<i>Leptodactylus wagneri</i> (Peters, 1862)	-
<i>Lithodytes lineatus</i> (Schneider, 1799)	CHPUFRPE 4383, 6403; CHUFAC 6411, 6418, 6423, 6427, 6436, 6532, 8661
<b>Microhylidae</b>	
<i>Chiasmocleis bassleri</i> Dunn, 1949	CHUFAC 6453, 6462
<i>Ctenophryne geayi</i> Mocquard, 1904	CHUFAC 8682, 8683; CHPUFRPE 4940, 4941
<i>Elachistocleis mairaquitana</i> Nunes-de-Almeida and Toledo, 2012	CHUFAC 8685
<i>Hamptophryne boliviana</i> (Parker, 1927)	CHUFAC 8684
<b>Phyllomedusidae</b>	
<i>Callimedusa tomopterna</i> (Cope, 1868)	CHPUFRPE 4388
<i>Phyllomedusa bicolor</i> (Boddaert, 1772)	CHPUFRPE 4955
<i>Phyllomedusa camba</i> De la Riva, 1999	CHPUFRPE 4358; CHUFAC 6531, 8660
<i>Phyllomedusa tarsius</i> (Cope, 1868)	-
<i>Phyllomedusa vaillantii</i> Boulenger, 1882	CHPUFRPE 4357, 6381
<i>Pithecopus palliatus</i> (Peters, 1873)	-
<b>GYMNOPHIONA</b>	
<b>Caeciliidae</b>	
<i>Caecilia</i> sp.	CHPUFRPE 4381

Phyllodactylidae (1), Teiidae (6), Tropiduridae (2) and Viperidae (4) (Table 2, Figures 5–9).

## Discussion

The richness of amphibians and reptiles at the ESEC Rio Acre is high when compared to other Amazon Forest localities in Brazil (Figure 10). Compared to the closest inventories performed, Miranda et al. (2014) registered 66 species of amphibians and reptiles for the municipality of Sena Madureira, França et al. (2017) recorded 85 species of amphibians and reptiles for the municipality of Brasília and May et al. (2009), 114 species of amphibians in the Madre de Dios region, Peru.

Herein, we reported some noteworthy records for Acre. Of these, the first specimen *Rhinella poeppigii* (Figure 4I) recorded in Brazil (Venâncio et al., 2017). *Ninia hudsoni* (Figure 9A) is the first confirmed record for the state (São-Pedro et al., 2016). Similarly, the second specimen of *Drymobius rhombifer* (Figure 7I) (Bernarde et al., 2011) is also noted, besides the third *Micrurus annellatus* specimen (Figure 8G) (Bernarde et al., 2012) and also for the *Pseudogonatodes gasconi* lizard (Figure 6I) since its description by Avila-Pires and Hoogmoed (2000). *P. gasconi* is so far, categorized as endemic to Acre, and our records increase its distribution by about 120 kilometres, from the Chico Mendes RESEX (França et al., 2017; Costa and Bérnils, 2018). In addition, we also indicate the lizard *Kentropyx*



**Figure 5.** Reptile species recorded at the ESEC Rio Acre, Brazil. (A) *Alopoglossus angulatus*; (B) *Caiman crocodilus*; (C) *Cercosaura argulus*; (D) *Cercosaura eigenmanni*; (E) *Chelonoidis denticulatus*; (F) *Copeoglossum nigropunctatum*; (G) *Gonatodes humeralis*; (H) *Enyalioides laticeps*; (I) *Iguana iguana*; (J) *Enyalioides palpebralis*; (K) *Dactyloa punctata*; (L) *Kentropyx altamazonica*. Photographs by Marco Antonio de Freitas.

sp., possibly representing a not yet described taxon, since it is not compatible with the known morphological variation for other species belonging to the genus (Harvey *et al.*, 2012). *Pristimantis reichlei* is classified as Data Deficient (DD) and *Podocnemis unifilis*, as Near Threatened (NT) (ICMBio, 2018).

These records deserve attention, since the Rio Acre ESEC constitutes an area of extreme relevance due to its significant representativeness, and of paramount importance for strategic conservation plans. Compared

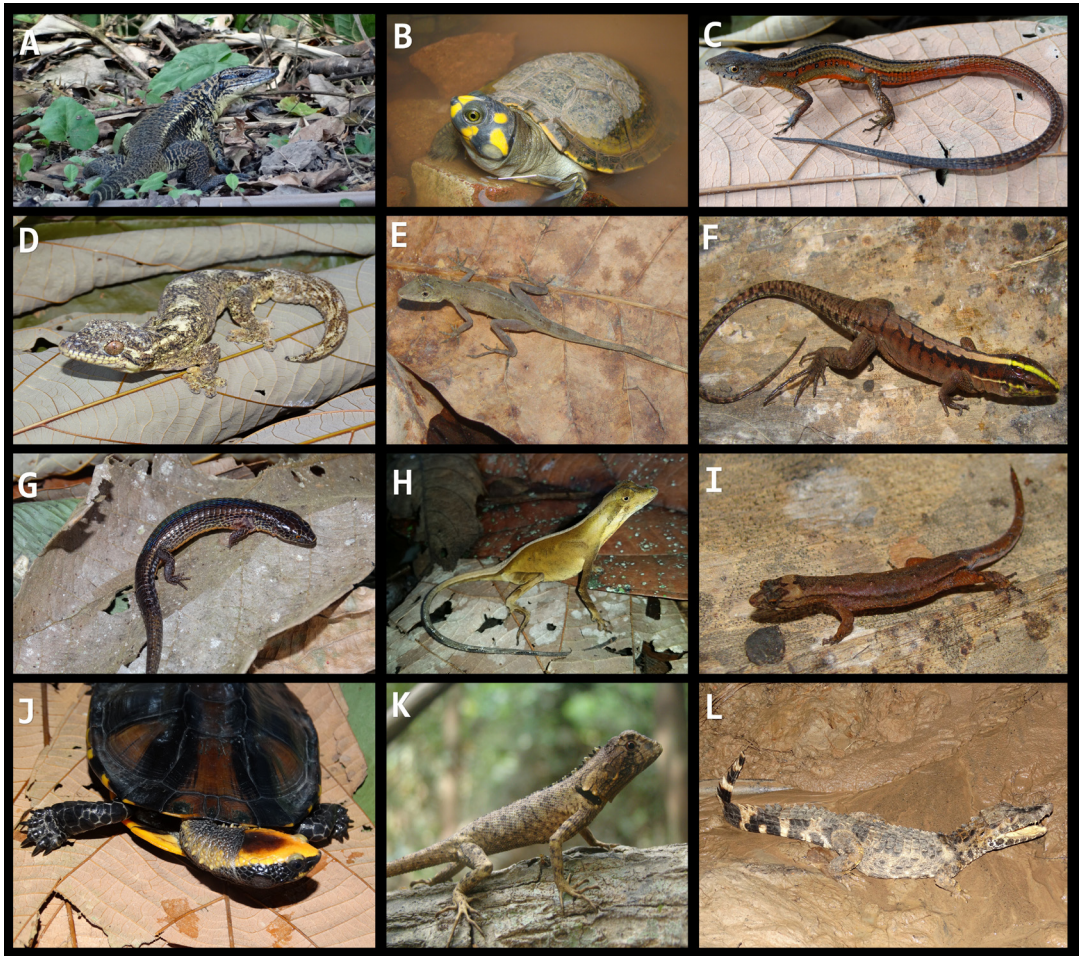
to other herpetofaunistic studies in Acre (Figure 10), this assessment presents the second most robust inventory for the state so far. We emphasize the need for other surveys to be carried out in regions that have not yet been sampled. Finally, our results provide new information that may be of value in supporting future studies in the region and contribute to the review of the Estação Ecológica Rio Acre management plan, since the amphibian and reptile sampling in the current management plan is notoriously undersampled.

Table 2. Reptiles species recorded at the ESEC Rio Acre, state of Acre, Brazil.

ORDER/Family/Species (Author, year)	Vouchers
<b>CROCODYLIA</b>	
<b>Alligatoridae</b>	
<i>Caiman crocodilus</i> (Linnaeus, 1758)	CHUFAC 0074
<i>Paleosuchus palpebrosus</i> (Cuvier, 1807)	-
<i>Paleosuchus trigonatus</i> (Schneider, 1801)	CHUFAC 0073
<b>TESTUDINES</b>	
<b>Testudinidae</b>	
<i>Chelonoidis denticulatus</i> (Linnaeus, 1766)	-
<b>Podocnemididae</b>	
<i>Podocnemis unifilis</i> Troschel, 1848	-
<b>Chelidae</b>	
<i>Platemys platycephala</i> (Schneider, 1792)	CHPUFRPE 4371
<b>SQUAMATA</b>	
<b>Phyllodactylidae</b>	
<i>Thecadactylus solimoensis</i> Bergmann and Russell, 2007	CHPUFRPE 4346
<b>Sphaerodactylidae</b>	
<i>Gonatodes hasemani</i> Griffin, 1917	CHPUFRPE 4432, 4939, 4953
<i>Gonatodes humeralis</i> (Guichenot, 1855)	CHPUFRPE 4429, 4922
<i>Pseudogonatodes gasconi</i> Avila-Pires and Hoogmoed, 2000	CHPUFRPE 4431, 4927
<b>Mabuyidae</b>	
<i>Copeoglossum nigropunctatum</i> (Spix, 1825)	-
<b>Dactyloidae</b>	
<i>Dactyloa punctata</i> (Daudin, 1802)	CHPUFRPE 4938
<i>Norops fuscoauratus</i> (D'Orbigny, 1837 in Duméril and Bibron, 1837)	CHPUFRPE 4391, 4403
<i>Norops tandai</i> (Avila-Pires, 1995)	CHPUFRPE 4426
<b>Hoploceridae</b>	
<i>Enyalioides laticeps</i> (Guichenot, 1855)	CHPUFRPE 4360
<i>Enyalioides palpebralis</i> (Boulenger, 1883)	CHPUFRPE 4937
<b>Iguanidae</b>	
<i>Iguana iguana</i> (Linnaeus, 1758)	-
<b>Tropiduridae</b>	
<i>Plica plica</i> (Linnaeus, 1758)	CHPUFRPE 4420, 4917
<i>Plica umbra</i> (Linnaeus, 1758)	CHPUFRPE 4421, 4918
<b>Alopoglossidae</b>	
<i>Alopoglossus angulatus</i> (Linnaeus, 1758)	CHPUFRPE 4946
<i>Ptychoglossus brevifrontalis</i> Boulenger, 1912	CHPUFRPE 4399
<b>Gymnophthalmidae</b>	
<i>Cercosaura argulus</i> Peters, 1862	-
<i>Cercosaura eigenmanni</i> (Griffin, 1917)	CHPUFRPE 4407
<i>Cercosaura ocellata</i> Wagler, 1830	CHPUFRPE 4390
<b>Teiidae</b>	
<i>Ameiva ameiva</i> (Linnaeus, 1758)	CHPUFRPE 4351
<i>Cnemidophorus lemniscatus</i> (Linnaeus, 1758)	-
<i>Kentropyx altamazonica</i> (Cope, 1875)	CHPUFRPE 4345, 4385, 4418, 4919, 4920, 4935, 4936
<i>Kentropyx pelviceps</i> Cope, 1868	CHPUFRPE 4419
<i>Kentropyx</i> sp.	-
<i>Tupinambis cuzcoensis</i> Murphy, Jowers, Lehtinen, Charles, Colli, Peres, Hendry and Pyron, 2016	-

Table 2. Continued.

ORDER/Family/Species (Author, year)	Vouchers
<b>Amphisbaenidae</b>	
<i>Amphisbaena fuliginosa</i> Vanzolini, 1951	CHUFAC 0071
<b>Boidae</b>	
<i>Boa constrictor constrictor</i> Linnaeus, 1758	-
<i>Corallus batesii</i> (Gray, 1860)	-
<i>Corallus hortulanus</i> (Linnaeus, 1758)	CHPUFRPE 4951
<i>Epicrates cenchria</i> (Linnaeus, 1758)	-
<b>Colubridae</b>	
<i>Chironius fuscus</i> (Linnaeus, 1758)	CHPUFRPE 4363, 4417, 4925; CHUFAC 0469
<i>Chironius exoletus</i> (Linnaeus, 1758)	CHUFAC 0469
<i>Drymobius rhombifer</i> (Günther, 1860)	CHPUFRPE 4353
<i>Drymoluber dichrous</i> (Peters, 1863)	CHPUFRPE 4352
<i>Oxybelis fulgidus</i> (Daudin, 1803)	CHUFAC 0468
<i>Rhinobothryum lentiginosum</i> (Scopoli, 1785)	CHPUFRPE 4950
<i>Spilotes pullatus</i> (Linnaeus, 1758)	-
<b>Dipsadidae</b>	
<i>Atractus albuquerquei</i> Cunha and Nascimento, 1983	CHUFAC 0475
<i>Atractus schach</i> (Boie, 1827)	CHPUFRPE 4382, 4424, 4931
<i>Clelia clelia</i> (Daudin, 1803)	-
<i>Dipsas catesbyi</i> (Sentzen, 1796)	CHPUFRPE 4349, 4952
<i>Drepanoides anomalus</i> (Jan, 1863)	CHPUFRPE 4376
<i>Erythrolamprus dorsocorallinus</i> (Esqueda, Natera, La Marca and Ilija-Fistar, 2007)	CHPUFRPE 4378
<i>Erythrolamprus reginae</i> (Linnaeus, 1758)	CHPUFRPE 4394, 4423, 4929
<i>Erythrolamprus oligolepis</i> (Boulenger, 1905)	-
<i>Helicops angulatus</i> (Linnaeus, 1758)	CHPUFRPE 4368
<i>Hydrops triangularis</i> (Wagler in Spix, 1824)	-
<i>Imantodes cenchoa</i> (Linnaeus, 1758)	CHPUFRPE 4377
<i>Leptodeira annulata annulata</i> (Linnaeus, 1758)	CHPUFRPE 4347, 4359, 4364, 4370, 4947
<i>Ninia hudsoni</i> Parker, 1940	CHPUFRPE 4425
<i>Oxyrhopus melanogenys</i> (Tschudi, 1845)	CHPUFRPE 4372, 4379
<i>Oxyrhopus occipitalis</i> Wagler in Spix, 1824	CHPUFRPE 4926, 4416
<i>Oxyrhopus petolarius</i> (Linnaeus, 1758)	-
<i>Siphlophis cervinus</i> (Laurenti, 1768)	CHPUFRPE 4949
<i>Siphlophis compressus</i> (Daudin, 1803)	CHPUFRPE 4375, 4415, 4948, 4924
<i>Xenodon severus</i> (Linnaeus, 1758)	CHUFAC 0487
<i>Xenopholis scalaris</i> (Wucherer, 1861)	CHPUFRPE 4402
<b>Elapidae</b>	
<i>Micrurus annellatus</i> Roze, 1967	CHPUFRPE 4361
<i>Micrurus lemniscatus helleri</i> Roze, 1967	CHUFAC 0465
<i>Micrurus obscurus</i> Harvey, Aparicio and González, 2003	CHPUFRPE 4930
<b>Viperidae</b>	
<i>Bothrops atrox</i> (Linnaeus, 1758)	CHPUFRPE 4422, 4928
<i>Bothrops bilineatus smaragdinus</i> Hoge, 1966	CHPUFRPE 4362
<i>Bothrops taeniatus</i> Wagler in Spix, 1824	-
<i>Lachesis muta</i> (Linnaeus, 1766)	-



**Figure 6.** Reptile species recorded at the ESEC Rio Acre, Brazil. (A) *Tupinambis cuzcoensis*; (B) *Podocnemis unifilis*; (C) *Cercosaura ocellata*; (D) *Thecadactylus solimoensis*; (E) *Norops fuscoauratus*; (F) *Kentropyx pelviceps*; (G) *Ptychoglossus brevifrontalis*; (H) *Norops tandai*; (I) *Pseudogonatodes gasconi*; (J) *Platemys platycephala*; (K) *Plica umbra*; (L) *Paleosuchus trigonatus*. Photographs by Marco Antonio de Freitas.

**Acknowledgments.** To the Estação Ecológica Rio Acre managers, based in Assis Brasil, for field research financing, especially Adalucia Carvalho and Anselmo Silva.

## References

- Araújo, A.S., Costa-Campos, C.E. (2014): Anurans of the Reserva Biológica do Parazinho, Municipality of Macapá, state of Amapá, eastern Amazon. *Check List* 10(6): 1414–1419.
- Ávila, R.W., Kawashita-Ribeiro, R.A. (2011): Herpetofauna of São João da Barra Hydroelectric Plant, state of Mato Grosso, Brazil. *Check List* 7(6):750–755.
- Avila-Pires, T.C.S., Hoogmoed, M.S. (2000): On two new species of *Pseudogonatodes* Ruthven, 1915 (Reptilia: Squamata: Gekkonidae), with remarks on the distribution of some other sphaerodactyl lizards. *Zoologische Mededelingen* 73: 209–223.
- Avila-Pires, T.C.S., Hoogmoed, M.S., Vitt, L.J. (2007): Herpetofauna da Amazônia. In: Nascimento, L.B., Oliveira, M.E. (Ed.). *Herpetologia no Brasil II*. Belém: Sociedade Brasileira de Herpetologia: 13–43.
- Avila-Pires, T.C.S., Vitt, L.J., Sartorius, S.S. (2009): Squamata (Reptilia) from four sites in southern Amazonia, with a biogeographic analysis of amazonian lizards. *Boletim do Museu Paraense Emílio Goeldi, Ciências Naturais* 4(2):99–118.
- Barros, F.B., Vicente, L., Pereira, H.M. (2010): Amphibians of the Riozinho do Anfrízio Extractive Reserve, Pará. Web version.
- Benício, R. A., Lima, J.D. (2017): Anurans of Amapá National Forest, Eastern Amazonia, Brazil. *Herpetology Notes*, 10: 627–633.



**Figure 7.** Snake species recorded at the ESEC Rio Acre, Brazil. (A) *Atractus schach*; (B) *Boa constrictor*; (C) *Bothrops atrox*; (D) *Bothrops bilineatus smaragdinus*; (E) *Chironius fuscus*; (F) *Clelia clelia*; (G) *Dipsas catesbyi*; (H) *Drepanoides anomalus*; (I) *Drymobius rhombifer*. Photographs by Marco Antonio de Freitas.

Bernarde, P.S. (2007): Ambientes e temporada de vocalização da anurofauna no município de Espigão do Oeste, Rondônia, Sudoeste da Amazônia – Brasil (Amphibia: Anura). *Biota Neotropica*, Campinas **7**(2): 87–92.

Bernarde, P.S., Albuquerque, S., Miranda, D.B., Turci, L.C.B. (2013): Herpetofauna da floresta do baixo rio Moa em Cruzeiro do Sul, Acre–Brasil. *Biota Neotropica* **13**(1): 220–244.

Bernarde, P.S., Machado, R.A., Turci, L.C. (2011): Herpetofauna da área do Igarapé Esperança na Reserva Extrativista Riozinho da Liberdade, Acre–Brasil. *Biota Neotropica* **11**(3): 117–144.

Bernarde, P.S. (2012): Serpentes de Rondônia. *Biota Neotropica* **12**(3): 1–30.

Bernarde, P.S., Abe, A.S. (2006): A snake community at Espigão do Oeste, Rondônia, Southwestern Amazon, Brazil. *South American Journal of Herpetology* **1**(2): 102–113.

Bernarde, P.S., Kokubum, M.N.C., Machado, R.A., Anjos, L. (1999): Uso de habitats naturais e antrópicos pelos anuros em uma localidade no estado de Rondônia, Brasil (Amphibia: Anura). *Acta Amazônica* **29**(4): 555–562.

Bernarde, P.S., Souza, M.B., França, D.P.F., Freitas, M. A. (2012):

*Micrurus annellatus annellatus* (Peters, 1871) (Serpentes: Elapidae): Distribution extension in the state of Acre, northern Brazil. *CheckList* **8**(3): 516–517.

Bernardo, P.H., Guerra-Fuentes, R.A., Matiazzi, W., Zaher, H. (2012): Checklist of Amphibians and Reptiles of Reserva Biológica do Tapirapé, Pará, Brazil. *Check List* **8**(5): 839–846.

Costa, H.C., Bérnils, R.S. (2018): Répteis do Brasil e suas Unidades Federativas: Lista de espécies. *Herpetologia Brasileira* **7**(1): 11–57.

Cunha, O.R., Nascimento, F.P. (1993): Ofídios da Amazônia. As cobras da região Leste do Pará. *Boletim Museu Paraense Emílio Goeldi. Zoologia* **9**: 1–191.

Dirzo, R., Raven, P.H. (2003): Global state of biodiversity and loss. *Annual Review of Environment and Resources* **28**: 137–167.

Ferrão, M., Filho, J.A.S.R., Silva, M.O. (2012): Checklist of reptiles (Testudines, Squamata) from Alto Alegre dos Parecis, southwestern Amazonia, Brazil. *Herpetology Notes* **5**: 473–480.

Ferreira, G.C., Sturaro, M.J., Peloso, P.L.V. (2017): Amphibians and reptiles from Floresta Nacional de Pau-Rosa, Amazonas,



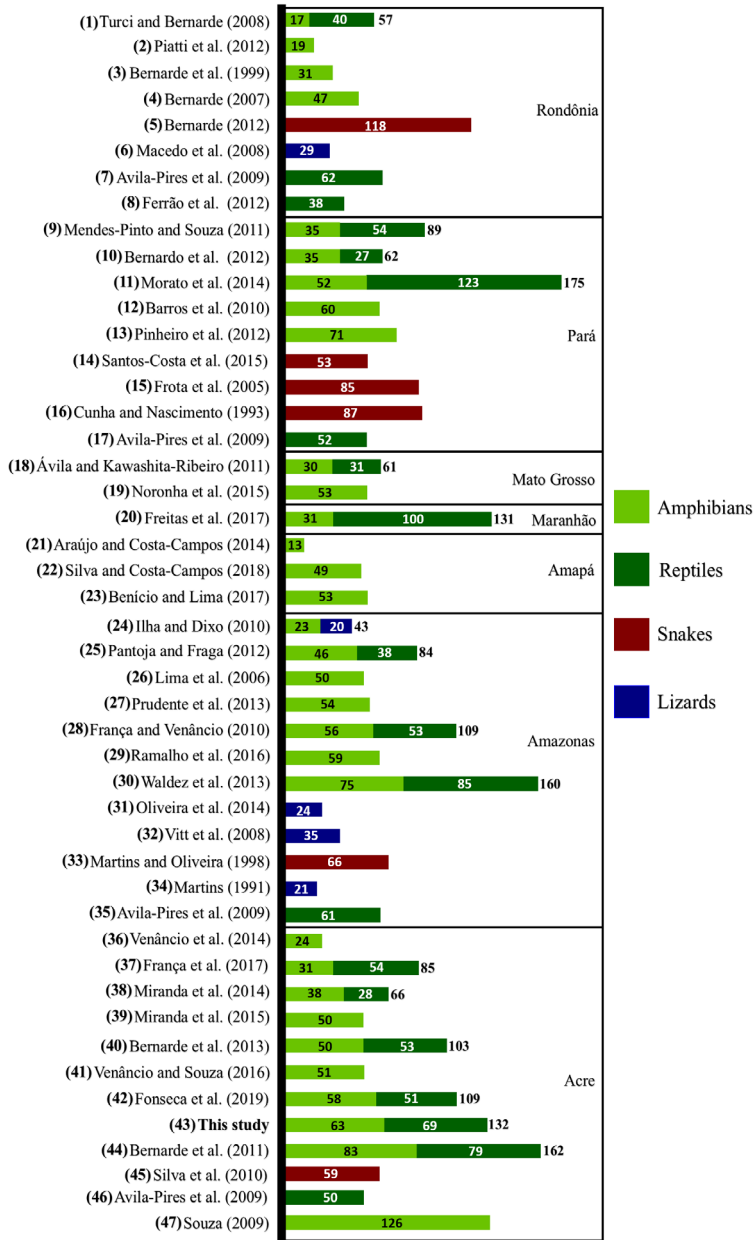
**Figure 8.** Snake species recorded at the ESEC Rio Acre, Brazil. (A) *Drymoluber dichrous*; (B) *Erythrolamprus reginae*; (C) *Helicops angulatus*; (D) *Hydrops triangularis*; (E) *Imantodes cenchoa*; (F) *Leptodeira annulata*; (G) *Micrurus annellatus* (H) *Micrurus lemniscatus*; (I) *Micrurus obscurus*. Photographs by Marco Antonio de Freitas.

- Brazil: an important protected area at the heart of Amazonia. *Acta Amazonica* **47**: 259–267.
- Fonseca, W.L., Silva, J.D., Abegg, A.D., Rosa, C.M., Bernarde, P.S. (2019): Herpetofauna of Porto Walter and surrounding areas, Southwest Amazonia, Brazil. *Herpetology Notes* **12**: 91–107.
- França, D.P.F., Freitas, M.A., Ramalho, W.P., Bernarde, P.S. (2017): Diversidade local e influência da sazonalidade sobre taxocenoses de anfíbios e répteis na Reserva Extrativista Chico Mendes, Acre, Brasil. *Iheringia, Série Zoologia* **107**: 2017023.
- França, F. G. R., Venâncio, N. M. (2010): Reptiles and amphibians of a poorly known region in southwest Amazonia. *Biotemas* **23**(3):71–84.
- Freitas, M.A., Vieira, R.S., Entiauspe-Neto, O.M., Sousa, S.O., Farias, T., Sousa, A.G., Moura, G.J.B. (2017): Herpetofauna of the Northwest Amazon forest in the state of Maranhão, Brazil, with remarks on the Gurupi Biological Reserve. *ZooKeys* **643**: 141–155.
- Frota, J.G., Santos-Jr, A.P., Chalkids, H.M., Guedes, A.G. (2005): The snakes of the lower Amazon, west of the state of Pará, Brazil (Squamatas). *Biociências* **13**(2): 211–220.
- Harvey, M.B., Ugueto, G.N., Gutberlet Jr, R.L. (2012): Review of teiid morphology with a revised taxonomy and phylogeny of the Teiidae (Lepidosauria: Squamata). *Zootaxa* **3459**(1): 1–156.
- IBGE (Instituto Brasileiro de Geografia e Estatística) (2017): Divisão Regional do Brasil. Available at [https://ww2.ibge.gov.br/home/geociencias/geografia/default\\_div\\_int.shtm](https://ww2.ibge.gov.br/home/geociencias/geografia/default_div_int.shtm) Accessed on 18 May 2019.
- ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), (2010): Plano de Manejo Estação Ecológica Rio Acre. Brasília: Ministério do Meio Ambiente. 360p.
- ICMBio (Instituto Chico Mendes de Conservação da Biodiversidade), (2018): Livro Vermelho da Fauna Brasileira Ameaçada de Extinção. Brasília: ICMBio. 4162 p.
- Ilha, P., Dixo, M. (2010): Anurans and Lizards, Rio Preto da Eva, Amazonas, Brazil. *Check List* **6**: 017–021.
- Lima, A.P., Magnusson, W.E., Menin, M., Erdtmann, L.K., Rodrigues, D.J., Keller, C., Hodi, W. (2006): Guia de sapos da Reserva Adolpho Ducke, Amazônia Central = Guide to the frogs of Reserva Adolpho Ducke, Central Amazonia. Áttema Design Editoria 1168 p.
- Macedo, L.C., Bernarde, P.S., Abe, A.S. (2008): Lagartos (Squamata: Lacertilia) em áreas de floresta e de pastagem em



**Figure 9.** Snake species recorded at the ESEC Rio Acre, Brazil. (A) *Ninia hudsoni*; (B) *Oxyrhopus melanogenys*; (C) *Oxyrhopus occipitalis*; (D) *Oxyrhopus petolaris*; (E) *Rhinobothryum lentiginosum*; (F) *Siphlophis cervinus*; (G) *Siphlophis compressus*; (H) *Xenodon severus*; (I) *Xenopholis scalaris*. Photographs by Marco Antonio de Freitas.

- Espigão do Oeste, Rondônia, sudoeste da Amazônia, Brasil. *Biota Neotropica* **8**(1):133–139.
- Margules, C.R., Pressey, R.L. (2000): Systematic conservation planning. *Nature* **405**(6783): 243–253.
- Martins, M. (1991): The lizards of Balbina, Central Amazonia, Brazil: A Qualitative Analysis of resource Utilization. *Studies on Neotropical Fauna and Environment* **26**(3):179–190.
- Martins, M., Oliveira, M.E. (1998): Natural history of snakes in forests of the Manaus region, Central Amazonia, Brazil. *Herpetological Natural History* **6**:78–150.
- Masseli, G.S., Bruce, A.D., Santos, J.G., Vincen, T., Kaefer, I.L. (2019): Composition and ecology of a snake assemblage in an upland forest from Central Amazonia. *Anais da Academia Brasileira de Ciências*: **91**.
- May, R.V., Siu-Ting, K., Jacobs, J.M., Medina-Müller, M., Gagliardi, G., Rodríguez, L. O., Donnelly, M.A. (2009): Species diversity and conservation status of amphibians in Madre de Dios, southern Peru. *Herpetological Conservation and Biology* **4**(1), 14–29.
- Mendes-Pinto, T.J., Souza, S.M. (2011): Preliminary assessment of amphibians and reptiles from Floresta Nacional do Trairão, with a new snake record for the Pará state, Brazilian Amazon. *Salamandra* **47**(4):199–206.
- Miranda, D.B., Albuquerque, S., Turci, L.C.B., Bernarde, P.S. (2015): Richness, breeding environments and calling activity of the anurofauna of the lower moa river forest, state of Acre, Brazil. *Zoologia* **32**(2): 93–108.
- Miranda, D.B., Venâncio, N.M., Albuquerque, S. (2014): Rapid survey of the herpetofauna in an area of forest management in eastern Acre, Brazil. *Check List* **10**(4): 893–899.
- Moraes, L.J., Almeida, A.P., Fraga, R., Rojas, R.R., Pirani, R.M., et al. (2017): Integrative overview of the herpetofauna from Serra da Mocidade, a granitic mountain range in northern Brazil. *ZooKeys* **715**: 103–159.
- Morato, S.A.A., Calixto, P.O., Mendes, L.R., Gomes, R., Galatti, U., Trein, F.L., Oliveira, F.S., Ferreiras, G.N. (2014): Guia fotográfico de identificação da herpetofauna da Floresta Nacional de Saracá-Taquera, Estado do Pará. Curitiba: STCP Engenharia



**Figure 10.** Amphibian and reptile richness found in some Brazilian Amazon Forest. Total species next to the bar. Municipalities and locations corresponding to each study: (1) Cacoal; (2) Jarú; (3) Espigão D’oeste; (4) Espigão do Oeste; (5) “Rondônia”; (6) Espigão do Oeste; (7) Guajará-Mirim; (8) Alto Alegre dos Parecis; (9) Trairão; (10) Marabá and São Félix do Xingú; (11) Terra Santa, Oriximiná and Faro ; (12) Altamira; (13) Marabá, Parauapebas, Canaã dos Carajás, Água Azuldo Norte, São Félix do Xingú and Curionópolis; (14) Melgaço and Portel; (15) “Western Pará”; (16) “Eastern Pará”; (17) Curuá-Una; (18) Juara, Nova Monte Verde and Nova Bandeirantes; (19) Cotriguaçu; (20) Bom Jardim, Centro Novo do Maranhão and São João do Caru; (21) Macapá; (22) Serra do Navio; (23) Ferreira Gomes; (24) Rio Preto da Eva; (25) Eirunepé and Ipixuna; (26) Manaus; (27) Juruti; (28) Boca do Acre; (29) Boca do Acre and Pauni; (30) Amazônia Central; (31) São Sebastião do Uatumã; (32) Manaus; (33) Manaus; (34) Presidente Figueiredo; (35) Ituxi; (36) Rio Branco; (37) Brasiléia; (38) Sena Madureira; (39) Cruzeiro do Sul; (40) Cruzeiro do Sul; (41) Rio Branco; (42) Porto Walter; (43) Assis Brasil; (44) Cruzeiro do Sul, Marechal Thaumaturgo, Porto Walter, Tarauacá and Ipixuna; (45) Acre; (46) Juruá; (47) Cruzeiro do Sul.

- de Projetos Ltda, Porto Trombetas: MRN – Mineração Rio do Norte S.A., 215p.
- Morato, S.A.A., Ferreira, G.N., Trein, F.L., Oliveira, F.S., Prudente, A.L.C., Maschio, G.F., Galatti, U., Sarmento, J.F.M., Calixto, P.O., Mendes, L.R.L.P (2018): Levantamento, Distribuição e Hábitos dos Répteis da FLONA de Saracá-Taquera, Amazônia Central, Estado do Pará, Brasil. In Herpetofauna da Amazônia Central: Estudos FLONA de Saracá-Taquera. Curitiba/Pará: STCP Engenharia de Projetos Ltda; MRN – Mineração Rio do Norte S.A., 210p.
- Noronha, J.C., Lima, M.M., Velasquez, C.L., Almeida, E.J., Barros, A.B., Rodrigues, D.J. (2015): Update das Espécies de Anuros da Fazenda São Nicolau, Mato Grosso, Brasil Update of Anurans Species of São Nicolau Farm, Mato Grosso, Brazil. Scientific Electronic Archives **8**(1): 15–25.
- Oliveira, D.P., Souza, S.M., Frazão, L., Almeida, A.P., Herbek, T. (2014): Lizards from central Jatapú River, Amazonas, Brazil. Check List **10**(1): 46–53.
- Pantoja, D.L., Fraga, R. (2012): Herpetofauna of the Reserva Extrativista do Rio Gregório. Check List **8**(3): 360–374.
- Piatti, L., Amaro, P.M.O., Araújo, J.F.J., Sanches, V.Q.A., Bernarde, P.S. (2012): Anurans of a disturbed area in Jarú, Rondônia, Brazil. Check List **8**(1): 83–87.
- Pinheiro, L.C., Youszef, O.C.B., Galatti, U., Neckel, Oliveira, S., Santos-Costa, M.C. (2012): Amphibians from southeastern state of Pará: Carajás Region, northern Brazil. Check List **8**(4): 693–702.
- Prudente, A.L., Magalhães, F., Menks, A., Sarmento, J.F.M. (2013): Checklist of Lizards of the Juruti, state of Pará, Brazil. Check List **9**(1): 42–50.
- Prudente, A.L.C., Sturaro, M.J., Travasso, A.E.M., Maschio, G.F., Santos-Costa, M.C. (2013): Anurans of the Urucu Petrol Basin, municipality of Coari, State of Amazonas, northern Brazil. Check List **9**(3): 601–606.
- Ramalho, W. P., Andrade, M. S., Matos, L. R. A., Vieira, L. J. S. (2016): Amphibians of varzea environments and floating meadows of the oxbow lakes. Biota Neotropica **16**(1).
- Santos-Costa, M.C., Maschio, G.F., Prudente, A.L.C. (2015): Natural history of snakes from Floresta Nacional de Caxiuanã, eastern Amazonia, Brazil. Herpetology Notes, volume **8**: 69–98.
- São-Pedro, V.A., Freitas, M.A., Oliveira, E.F., Venâncio, N.M., Pinheiro, A.P. Zanotti (2017): Geographical Distribution of *Ninia hudsoni* (Serpentes: Dipsadidae) With New Occurrence Records. Oecologia Australis **20**(4): 1–6.
- Segalla, M.V., Caramaschi, U., Cruz, C.A.G., Garcia, P.C.A., Grant, T., Haddad, C.F.B., Santana, D.J., Toledo, L.F., Langone, J.A. (2019): Lista de espécies brasileiras-Brazilian Amphibians: List of Species. Herpetologia Brasileira **8**(1): 65–96.
- Silva, M.V., Souza, M.B., Bernarde, P.S. (2010): Riqueza e dieta de serpentes do estado do Acre, Brasil. Revista Brasileira de Zoociências **12**(2): 165–176.
- Souza, M.B. (2009): Anfíbios – Reserva Extrativista do Alto Juruá e Parque Nacional da Serra do Divisor, Acre. Série Pesquisa e Monitoramento Participativo em Áreas de Conservação Gerenciadas por Populações Tradicionais. Volume 2. Campinas: Instituto de Filosofia e Ciências Humanas (IFCH) Unicamp, 77p.
- Souza, M.B., Silveira, M., Lopes, M.R.M., Vieira, L.J.S., Guilherme, E., Calouro, A. M., Morato, E.F. (2003): Biodiversidade no estado do Acre: conhecimento atual, conservação e perspectiva. T&C Amazônia **1**(3): 45–56.
- Turci, L.C., Bernarde, P.S. (2008): Levantamento herpetofaunístico em uma localidade no município de Cacoal, Rondônia, Brasil. Bioikos **22**(2): 101–108.
- Veloso, H.P., Rangel-Filho, A.L.R., Lina, J.C.A. (1991): Classificação da vegetação brasileira, adaptada a um sistema universal, 1<sup>nd</sup> Edition. Rio de Janeiro, BR, Instituto Brasileiro de Geografia e Estatística, IBGE.
- Venâncio, N. M., Lima, A. P., Souza, M. B., Magnusson, W. P. (2014): Between-year consistency of anuran assemblages in temporary ponds in a deforested area in Western Amazonia. Herpetological Journal **24**: 155–160.
- Venâncio, N.M., Freitas, M.A., Abegg, A.D., Kokubum, M. (2017): First record of *Rhinella poeppigii* (Tschudi, 1845) in Brazil (Anura; Bufonidae). Check List **13**(6): 747–750.
- Venâncio, N.M., Souza, M.B. (2016): Anfíbios do Parque Ambiental Chico Mendes, Rio Branco Acre, Brasil. Biotemas **29**: 85–95.
- Vitt, L. J., Magnusson, W. E., Avila-Pires, T. C. S., Lima, A. P. (2008): Guia de Lagartos da Reserva Adolpho Ducke, Amazônia Central. Manaus, Attema. 176 p.
- Waldez, F., Menin, M., Vogt, R.C. (2013): Diversidade de anfíbios e répteis Squamata na região do baixo rio Purus, Amazônia Central, Brasil. Biota Neotropica **13**(1): 300–316.