

AMPHIBIANS AND REPTILES OF THE LOWER CRISTALINO RIVER REGION OF THE SOTHERN AMAZON

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INTRODUCTION

The herpetological surveys in the Cristalino Region were based on a collaborative effort between the [University of Oklahoma](#) and the [Universidade de Brasília](#). The project was initiated by [Dr. Guarino Colli](#) and his students as part of ongoing surveys of the Cerrado in general and the Cerrado-Amazon contact zones. Americans included [Laurie J. Vitt](#), [Janalee P. Caldwell](#), and Donald B. Shepard. Brazilians included Guarino R. Colli and Frederico G. R. França.

Located in the northern part of the state of Mato Grosso and extending north into Pará, the lower Cristalino River region represents the southern-most portion of the Amazon rainforest. Situated below and south of the Serra do Cachimbo, the lower Cristalino River area is bordered to the north (partially) and south by open habitats. The landscape is hilly, with rocky outcrops interrupting rainforest on sides and tops of hills. Just north of Alta Floresta and south of our study sites, the Cristalino River drains into the Teles-Pires River, which in turn merges with the Juruena River to form one of the most beautiful rivers of the Amazon, the Tapajós River. To the northeast, the Tapajós River finally becomes part of the spectacular Amazon River, entering just east of Santarém.

METHODS

Pitfall arrays were used to capture most reptiles and many amphibians. Drift fences with funnel traps were used to capture many snakes and lizards. Hoop net traps were used for turtles. We also searched habitats, visited aquatic habitats at night, and searched the forest at night to capture reptiles and amphibians. For all specimens collected, we recorded exact locality data, microenvironmental data, and a series of ecological and

morphological data. Our intent was not only to put together species lists, but also to learn as much about the ecology and behavior of individual species as possible. All specimens were properly preserved and tagged and are housed in the herpetology collections of the University of Brasília (Coleção Herpetológica da Universidade de Brasília—CHUNB). Funding was provided by the National Science Foundation of the United States, the Sam Noble Oklahoma Museum of Natural History, the Conselho Nacional de Desenvolvimento Científico e Tecnológico, the Universidade de Brasília (FUNPE), and personal funds of L. J. Vitt and J. P. Caldwell. Logistic support and some funding was provided by the Cristalino Jungle Lodge and the Fundação Ecológica Cristalino. We particularly thank Vitoria da Riva Carvalho, Zuleica Melo, Renato Aparecido de Farias and Maria Luisa de Castro (Malu). We also thank Romilda Pires Andrade, who once again left her home in Rondônia to prepare our food and manage our camp during our fieldwork. Adrian Garda and Gabriel Costa provided the Portuguese translation of the web page.

Scientific permits for the collaborative project were issued by the [Conselho Nacional de Desenvolvimento Científico e Tecnológico](#) (Portarias MCT-889/03 and MCT-649/04) and collecting permits were issued by the [Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis](#) (CGFAU/LIC-145/2003 and 217/2004). Permission to conduct research on private property was granted by Vitoria da Riva Carvalho.

Most species are difficult to find and as a result, their presence can only be determined by intensive field research. The list of species that we provide below is based on what we know at this point in time. We have excluded several species which have not yet been described (they are new species), but will add them as the species descriptions appear in the scientific literature. As additional species are discovered in the area, we will add them as well. Recently, Rich Hoyer sent us photographs of several species that we had not collected (*Tropidurus insulanus*, *Anolis fuscoauratus*, *Dipsas indica*, *Ameerendus flavopictus*, *A. pictus*, and an unidentified species of *Eleutherodactylus*). We have added these to the web page and lists.

THE HERPETOFAUNA

The herpetofauna of the lower Cristalino consists of frogs, crocodylians, turtles, lizards, and snakes. Most of the herpetofauna is of Amazon rainforest origin, but a number of species have their origins in the Cerrado herpetofauna. These include the strange lizard [Hoplocercus spinosus](#) and the treefrog [Hyla albopunctata](#). Compared with relatively well studied Amazon rainforest sites to the north (e.g., south of Santarém), the the lower Cristalino area contains fewer species. Nevertheless, the herpetofauna is a rich and

interesting one. Most of the more spectacular reptiles are present, including anacondas ([Eunectes murinus](#)), boa constrictors ([Boa constrictor](#)), emerald tree boas ([Corallus caninus](#)), bushmasters ([Lachesis muta](#)), caimans (three genera, [Caiman](#), [Paleosuchus](#), and [Melanosuchus](#)), and forest tortoises ([Geochelone carbonaria](#) and [G. denticulata](#)). Likewise, most of the more interesting Amazon amphibians are present, including horned frogs ([Ceratophrys cornuta](#)), the Brazil-nut poison frog ([Dendrobates castaneoticus](#)), the gladiator frog ([Hypsiboas boans](#)), the Turkeit Hill treefrog (*Allophryne ruthveni*), the semi-transparent glass frogs (*Cochranella* sp.), the white-lined leaf frog (*Phyllomedusa vaillanti*), and the cane toad ([Bufo marinus](#)). Actually observing reptiles and amphibians in rainforest is a challenge requiring time and patience. During the day, the most commonly observed reptiles include Spix's kentropyx ([Kentropyx calcarata](#)), the Amazon skink ([Mabuya nigropunctata](#)), and the spotted anole ([Anolis punctatus](#)). During excursions by boat along the river, large iguanas (*Iguana iguana*) can often be observed in the canopy of trees overhanging the water and large tegu lizards ([Tupinambis teguixin](#)) can be seen basking on logs or along the shoreline. Following several days of rain. The first sunny day will often bring anacondas ([Eunectes murinus](#)) to the surface where they will bask on logs or in brush along the river's edge.

A large number of frog species can be observed by walking trails at night with strong headlights. Most frog eyes reflect light, so it is often easy to scan the forest and trees in search of glowing eyes and then move in for a closer look. Some reptile eyes reflect light as well, including tree boas (*Corallus*) and all three species of caimans. On buildings at night, both in Alta Floresta and other places in the region, you will see geckos on the walls that are nearly white in coloration. These are not native to Brazil although they occur nearly everywhere that people have settled. These are Mediterranean geckos ([Hemidactylus mabouia](#)) and are usually not found in the forest, except on man-made structures.

Cautionary Note—Amazon rainforest contains some highly venomous snakes as well as potentially dangerous spiders and scorpions. Observing amphibians and reptiles in rainforest can be an exciting and educational experience and most problems can easily be avoided by simply taking care to always be aware of where you put your feet while walking. Most venomous snakes will not bite unless they are stepped on or bothered at close range. So, if your primary interest is in bird watching, be sure to pay attention to the ground as you search the trees for birds. If your primary interest is in amphibians and reptiles, you may be able to observe bushmasters, fer-de-lances, or coral snakes at night using your headlamp. It is important to not disturb these snakes. Venomous snakes usually will not bother you if you don't bother them.

PART I - FROGS OF THE LOWER CRISTALINO RIVER AREA

List prepared by

Janalee P. Caldwell and Donald B. Shepard

Frogs

Family Allophrynidae

Allophryne ruthveni

Family Bufonidae

Bufo castaneoticus

Bufo guttatus

Bufo margaritifer

Bufo marinus

Family Centrolenidae

Cochranella sp.

Hyalinobatrachium nouraguensis

Family Dendrobatidae

Colostethus sp.

Dendrobates castaneoticus

Dendrobates sp.

Family Hylidae

Dendropsophus granosus

Dendropsophus marmoratus

Dendropsophus sp.

Hypsiboas albopunctatus

Hypsiboas boans

Hypsiboas fasciatus

Osteocephalus buckleyi

Osteocephalus leprieurii

Phyllomedusa hypocondrialis

Phyllomedusa vaillanti

Scinax garbei

Scinax ruber

Trachycephalus coriaceus

Family Leptodactylidae

Adenomera andreae

Ceratophrys cornuta

Eleutherodactylus sp.

Leptodactylus mystaceus

Leptodactylus stenodema

Leptodactylus rhodomystax

Leptodactylus gr. wagneri

Lithodytes lineatus

Microhylidae

Chiasmocleis sp. 1

Chiasmocleis sp. 2

Ctenophryne geayi

Ranidae

Rana palmipes

PART II - REPTILES OF THE LOWER CRISTALINO RIVER AREA

(* indicates species not collected but confirmed either from the immediate area or very close to it)

List prepared by

Laurie J. Vitt, Frederico G. R. Frana, and Guarino R. Colli

Crocodylians

Family Alligatoridae

Caiman crocodilus

Melanosuchus niger*

Paleosuchus palpebrosus

Turtles

Family Chelidae

Phrynops geoffroanus

Family Podocnemidae

Podocnemis expansa*

Podocnemis unifilus

Family Kinosternidae

Kinosternon scorpiodes

Family Testudinidae

Geochelone carbonaria

Geochelone denticulata

Lizards

Family Iguanidae

Iguana iguana

Family Hoplocercidae

Hoplocercus spinosus

Family Polychrotidae

Anolis punctatus

Polychrus marmoratus

Family Tropiduridae

Uranoscodon superciliosus

Family Gekkonidae

Gonatodes humeralis

Gonatodes eladioi

Hemidactylus mabouia

Family Gymnophthalmidae

Bachia flavescens

Cercosaura ocellata

Leposoma percarinatum

Undesc. microteiid

Family Teiidae

Ameiva ameiva

Kentropyx calcarata

Tupinambis teguixin

Family Scincidae

Mabuya nigropunctata

Snakes

Family Aniliidae

Anilius scytale

Family Typhlopidae

Typhlops reticulatus*

Family Boidae

Boa constrictor*

Corallus caninus

Corallus hortulanus

Epicrates cenchria

Eunectes murinus*

Family Colubridae

Atractus elaps

Chironius multiventris

Dendrophidion dendrophis

Dipsas variegata

Drepanoides anomalous

Erythrolamprus aesculapii

Helicops angulatus

Hydrodynastes gigas

Imantodes cenchoa

Leptodeira annulata

Leptophis ahaetulla

Liophis reginae

Liophis typhlus

Oxybelis fulgidus*

Oxyrhopus melanogenys

Oxyrhopus petola

Philodryas viridissimus

Pseudoboa coronata

Pseustes poecilonotus

Pseustes sulphureus

Rhinobothryum lentiginosum
Tantilla melanocephala
Undesc. coluzbrid
Xenopholis scalaris
Xenoxybelis argenteus

Family Viperidae

Bothrops atrox
Bothriopsis taeniata
Lachesis muta

Family Elapidae

Micrurus hemprichi
Micrurus lemniscatus*
Micrurus spixi*
Micrurus surinamensis

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This page on the web. www.omnh.ou.edu/personnel/herpetology/vitt/Cerrado/Cristalino/index.htm