Check List **5**(3): 518–525, 2009.
ISSN: 1809-127X

LISTS OF SPECIES

Herpetofauna, Ponte de Pedra Hydroelectric Power Plant, states of Mato Grosso and Mato Grosso do Sul, Brazil

Nelson Jorge da Silva Jr. [1, 3]
Carlos Eduardo Domingos Cintra [1]
Hélder Lúcio Rodrigues Silva [1, 2]
Marcio Candido Costa [1]
Claudiano do Amaral Souza [1]
Antônio Alves Pachêco Jr. [1]
Fernanda Anziliero Gonçalves [1]

[1] *Systema Naturae Consultoria Ambiental Ltda.*
Rua 58 nº217, Jardim Goiás. CEP 74810-250. Goiânia, Goiás. Brazil. E-mail: herp@terra.com.br

[2] *Centro de Estudos e Pesquisas Biológicas. Departamento de Biologia. Universidade Católica de Goiás.*
Avenida Universitária, 1440 – Setor Universitário. CEP 74605-010. Goiânia, Goiás. Brazil.

[3] *Universidade Católica de Goiás. Mestrado em Ciências Ambientais e Saúde.*
Rua 232, nº 128, 3º andar, Área V . CEP 74605-140. Goiânia, Goiás. Brazil.

Abstract

This paper presents a check list of amphibians and reptiles of the area under influence of *Ponte de Pedra* hydroelectric power plant on Correntes River (municipality of Sonora), between the Brazilian states of Mato Grosso do Sul and Mato Grosso. The list was the result of collecting efforts of a Faunal Program (inventory, rescue, and monitoring) carried out between November 2003 and April 2005. The list comprises 2 orders (Gymnophiona and Anura), 7 families (Caeciliidae, Bufonidae, Cycloramphidae, Hylidae, Leiuperidae, and Leptodactylidae) 14 genera, and 33 species of amphibians and 3 orders (Testudines, Crocodylia, and Squamata), 20 families (Chelidae, Testudinidae, Alligatoridae, Amphisbaenidae, Anguidae, Gekkonidae, Phyllodactylidae, Gymnophtalmidae, Hoplocercidae, Polychrotidae, Scincidae, Teiidae, Tropiduridae, Anomalepididae, Leptotyphlopidae, Typhlopidae, Boidae, Colubridae, Elapidae, and Viperidae), 51 genera, and 72 species of reptiles.

Introduction

The knowledge of vertebrate species composition of a given area is an important factor in conservation projects. Accordingly, the identification of amphibians and reptiles and the study of their ecological characteristics are decisive for the success of actions directed to biodiversity conservation (Heyer et al. 1994). A considerable amount of data related to richness and composition of communities may be assembled through appropriate bibliography and field inventories. Herpetological inventories can offer a wider vision of distributional patterns of a large number of species which optimizes the comprehension efforts of species distribution related to different environmental variables.

A total of 825 species of amphibians (797 Anura, 27 Gymnophiona, and 1 Urodela) and 684 species of reptiles (6 Crocodylia, 36 Chelonia, 61 Amphisbaenia, 228 Sauria, and 353 Serpentes) are described for Brazil (SBH 2008 a,b). The frequent description of new species suggests a much richer diversity. A significant part of this biodiversity is represented in regions under the influence of *Cerrado*, corresponding to 141 species of amphibians (42 endemic), 5 crocodilians, 10 chelonians, 16 amphisbaenians (8 endemic), 47 saurians (12 endemic), and 107 ophidians (11 endemic) (Colli et al. 2002, Souza 2005). The communities complexity and heterogeneity found in it various phytophysiognomies (Coutinho 1978, Eiten 1972), as well as the influence of adjacent biomes suggest the existence of species geographical distribution patterns linked to these formations (Brandão and Araújo 2001; Colli 2005).

Check List **5**(3): 518–525, 2009.
ISSN: 1809-127X

Nowadays the vegetation physiognomies originally found in the Brazilian states of Mato Grosso and Mato Grosso do Sul have suffered intense transformation due to anthropic actions, especially agriculture and pasture (cattle ranching). These environmental modifications implicated in a process of landscape degradation and fragmentation that resulted in the reduction of population sizes, with possible local extinctions (Primack 2002). The states of Mato Grosso and Mato Grosso do Sul possess areas with typical phytophysiognomies of *Pantanal, Cerrado*, and *Chaco* (Prado and Gibbs 1993; Spichiger et al. 2004; Morrone et al. 2004), forming environmental mosaics and ecotones extremely important to understand faunal relationships. Both state are located in a central area of a diagonal strip of open formations, extending from the *Caatinga* (on northeastern Brazil) until the *Chaco* (Argentina) with several contacts among *Pantanal, Chaco,* and *Cerrado*. This diagonal strip of open areas houses an enormous diversity of amphibians and reptiles, including endemic species (Bucher 1980; Vanzolini 1988; Cabrera 1995; Duellman 1999; Colli et al. 2002; Souza 2005). Despite the biological and biogeographical relevance this diagonal area has received little attention in studies of regional scope.

This study presents herpetological information of the *Cerrado-Pantanal* ecotones in the limits of the South American open areas between Mato Grosso do Sul and Mato Grosso states. The species list is based on specimens collected during the Program of Faunal Monitoring and Rescue of the *Ponte de Pedra* hydroelectric power plant located in the municipality of Itiquira, state of Mato Grosso.

Materials and Methods

The *Ponte de Pedra* hydroelectric power plant (*UHE Ponte de Pedra*) is located on Correntes River, municipality of Itiquira, between Mato Grosso and Mato Grosso do Sul states (17°36'31" S and 54°49'40" W), with an estimated reservoir of 14.5 km^2 (Figure 1). The study area is in a shallow valley of granitic rocks with a vegetational mosaic of gallery forests, dense *Cerrado*, open *Cerrado*, with an important presence of *veredas* (swampy areas with unique vascular vegetation). On most of the surrounding areas the environment is fragmented with agriculture practices (mostly sugar cane and soy bean), with the best preserved areas located adjacent to the power plant dam (downriver).

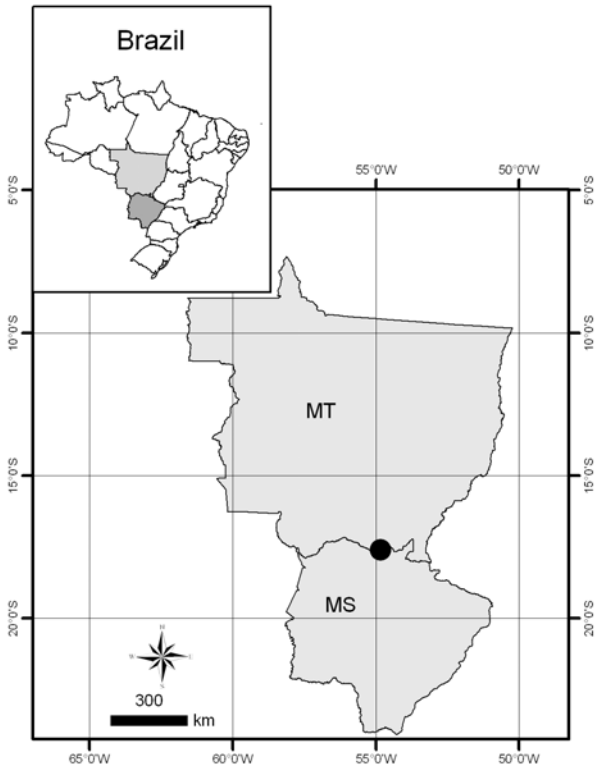

Figure 1. Location of *UHE Ponte de Pedra* on the border of Mato Grosso do Sul (MS) and Mato Grosso (MT) states

Field activities during the faunal inventory were carried out between 11 November 2003 and 10 January 2004, and the post filling faunal monitoring between 18 September 2004 and 10 April 2005. For monitoring we used pit-falls with 18L and 100L plastic buckets distributed in 20 collecting stations in 9 straight lines to a total of 180 traps per collecting station. Distance between buckets was 3 meters, and 4 meters between lines. Each collecting station was composed of 25 buckets of 100L and 155 buckets of 18L in an sampling area of 1,824m^2. We used 4 collecting stations (totaling 720 numbered pit-falls) in different phytophysiognomies (open *cerrado*, dense *cerrado*, gallery forest). Traps were visited 4 times (at 8:00, 11:00, 14:00, and 17:00 hours) daily. Animals were transferred to plastic bags or vials with all pertinent collecting data (date, time, and number of pitfall trap).

During the filling of the reservoir (1 April to 18 September 2004) we used three 6 meter aluminum boats equipped with 40 HP outboard engines with a crew of 1 biologist, 1 assistant, and 1 pilot each. All vegetated areas and land were searched every day, at least 4 times a day, including the reservoir margins. Animals were collected using herpetological hooks, nets, laces, and forceps, and then transferred to plastic vials (several sizes), plastic bags, and cloth bags until their final destination in the biological laboratory at the rescue base. The animals were then separated, identified and registered as to margin and location of collecting in the reservoir.

All collecting activities were legally permitted accordingly to IBAMA 02001.005547/99-49 process and permits IBAMA 0150/2003 and 065/2004-CGFAU/LIC. All collected specimens were deposited at the herpetological collection of the *Museu de Zoologia* of the *Universidade de São Paulo* (MZUSP).

Results and Discussion

We registered 33 species of amphibians from 14 genera, 7 families, and 2 orders. The most representative families were Hylidae and Leptodactylidae with 45.5 % (N=15) and 24.3 % (N=8) of the total number of species, a normal pattern for the Neotropical region (Duellman & Trueb 1994), followed by Leiuperidae, with 18.2 % (N=6). The families Bufonidae, Cycloramphidae, Microhylidae, and Caeciliidae contributed to only one species (3.0 %) each (Table 1).

The reptiles were represented by 72 species from 51 genera, and 20 families of the orders Chelonia, Crocodylia, and Squamata. The order Squamata was the most representative, with 95.8 % (N=69) of the reptiles, followed by Chelonia with 2.8 % (N=2), and Crocodylia with 1.4 % (N=1). Amphisbaenians, lizards, and snakes (Squamata) are the categories with higher taxonomic diversity among reptiles. These forms occupy a great variety of habitats and during the filling of the reservoir they are represented with a very expressive number of individuals. Among Squamata the suborders were represented as follows: Amphisbaenia – 1 family, 3 genera and 8 species; Sauria – 9 families, 17 genera and 23 species; and Serpentes – 7 families, 28 genera and 39 species (Appendix 1).

Most of amphibian species is associated to open habitats (especially wetlands) and are generalists. The only species found exclusively in forested habitats was *Osteocephalus taurinus* (Figure 2). *Dendropsophus tritaeniatus* is listed as endemic to Cerrado (Strüssmann 2000) with a suggested restricted distribution to SE Mato Grosso (Frost 2008). The species *Leptodactylus gracilis* and *Physalaemus bilingonigerus* are typical of Pantanal (Figure 2). These data are suggestive of the ecotone *Cerrado-Pantanal*.

The *Cerrado* reptile species are in most cases poorly represented in herpetological collections making it difficult to produce reliable distributional ranges. Several collected species (*Anolis meridionalis*, *Bachia bresslaui*, *Coleodactylus brachystoma*, and *Hoplocercus spinosus* – Figure 2) are related to this ecosystem (Colli et al. 2002). The remaining species present different distributional patterns: *Mabuya bistriata* and *Tupinambis quadrilineatus* in the Amazon realm (Ávila-Pires 1995); *Tropidurus guarani*, *Mabuya guaporicola*, *Liophis frenatus*, *Lygophis meridionalis*, and *Philodryas mattogrossensis* are common in Cerrado and Chaco (Cei 1993, Ávila-Pires 1995, Strüssmann 2000); *Cercosaura schreibersii* and *Mabuya dorsivittata* in *Cerrado*, *Chaco* and *Pampas* (Ávila-Pires 1995); *Mabuya frenata*, *Tropidurus torquatus* and *Sibynomorphus mikanii* (Figure 2) in *Cerrado* and Atlantic Forest; *Amphisbaena pretrei* e *Micrablepharus maximiliani* in Cerrado and Caatinga (Rodrigues 1996; Gans 1965); *Tupinambis merianae* and *Crotalus durissus* (Figure 2) in all formations south of the Amazon (Ávila-Pires 1995); *Ameiva ameiva* in all of South America (Vitt and Colli 1994); and the cosmopolitan *Hemidactylus mabouia*. However, the majority of species occur in the South American open areas diagonal (Caatinga-Cerrado-Chaco). Despite the results presented here there are several taxa that might represent range extensions or new forms yet to be described owing to complex taxonomic group.

LISTS OF SPECIES

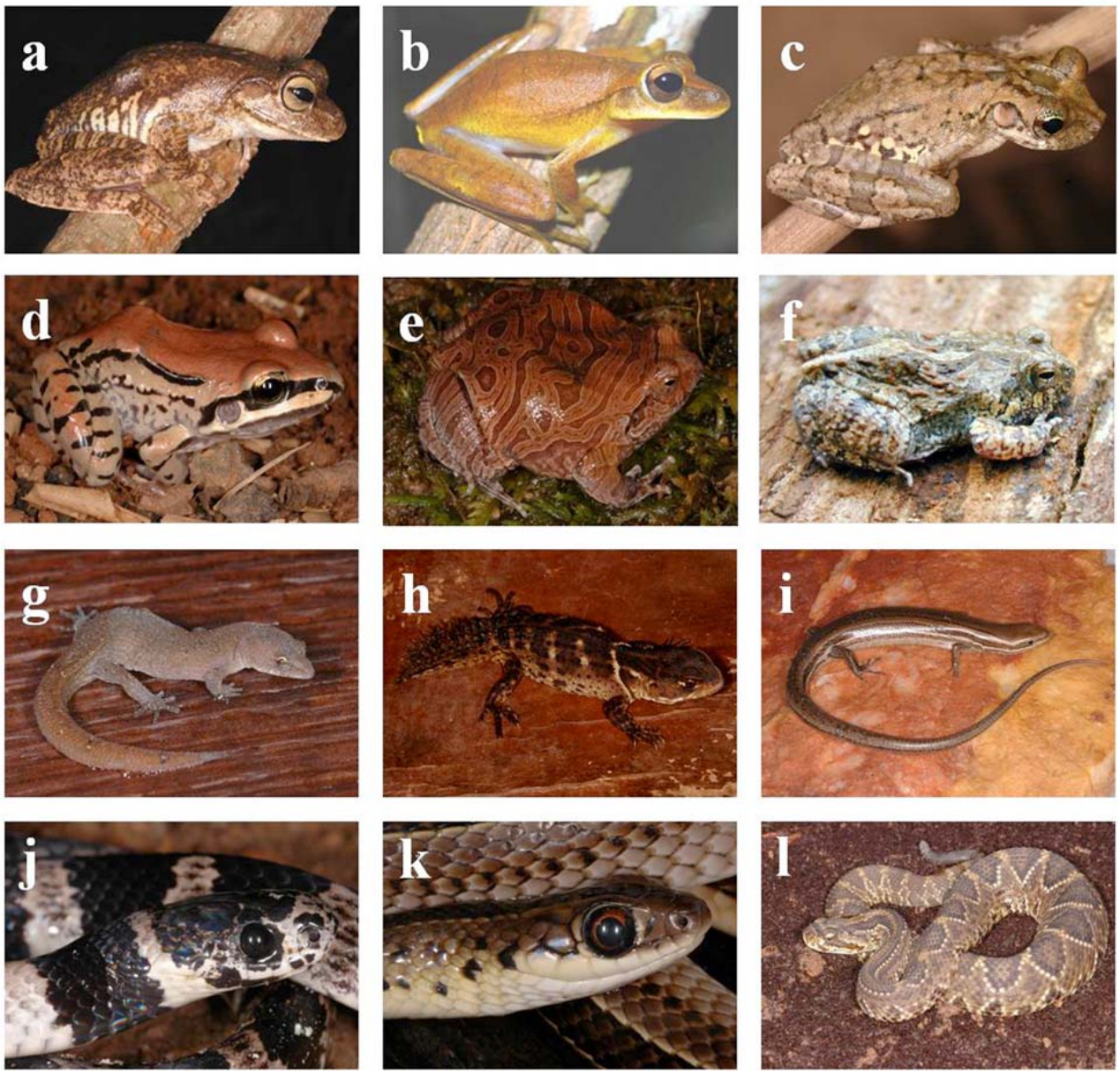

Figure 2. Representative species of amphibians and reptiles from the *UHE Ponte de Pedra*. a. *Hypsiboas lundii*; b. *Hypsiboas multifasciatus*; c. *Osteocephalus taurinus*; d. *Leptodactylus mystacinus*; e*, Eupemphix nattereri*; f*, Physalaemus biligonigerus*; g, *Coleodactylus brachystoma*; h, *Hoplocercus spinosus*; i, *Mabuya guaporicola*; j, *Sibynomorphus mikanii*; k, *Liophis meridionalis*; l, *Crotalus durissus*.

Acknowledgements
We are grateful to the UHE Ponte de Pedra staff especially Ivan Flausino da Cunha, Veríssimo Alves Neto, and Diego Nicolas Seminara. We are deeply indebted to the field collecting crew of the faunal inventory and monitoring programs, and the faunal rescue operation (*Operação Tuiuiú*).

LISTS OF SPECIES

Literature cited

Ávila-Pires, T. C. S. 1995. Lizards of Brazilian Amazonia (Reptilia: Squamata). Zoologische Verhandelingen 1995:3-706.

Brandão, R. A. and A. F. B. Araújo. 2001. A herpetofauna associada às matas de galeria no Distrito Federal; p. 561-604 *In*: J. F. Ribeiro, C. E. L. Fonseca, and J. C. Sousa-Silva (ed.), Caracterização e Recuperação de Matas de Galeria. Planaltina. Embrapa.

Bucher, H. 1980. Ecología de la fauna Chaqueña. Una revisón. Ecosur 7(4):111-159.

Cabrera, M. A. 1995. Comparative composition of turtle species in four natural regions of the Chacoan domain, South America. An. Mus. Hist. Nat. Valparaíso 23(1):41-52.

Cei, J. M. 1993. Reptiles del Noroeste, Nordeste y Este de la Argentina. Museo Regionale di Scienze Naturali. Torino. 949 p.

Colli, G. R., R. P. Bastos, and A. F. B. Araújo. 2002. The character and dynamics of the Cerrado herpetofauna; p. 223-241 *In*: P. S. Oliveira and R. J. Marquis (ed.), The Cerrados of Brazil: Ecology and Natural History of a Neotropical Savanna. Columbia New York. University Press.

Colli, G. R. 2005. As origens e a diversificação da herpetofauna do Cerrado; p. 247-264 *In*: A. Scariot, J. C. Souza-Silva and J. M. Felfili (ed.), Cerrado - Ecologia, Biodiversidade e Conservação. Brasília. Ministério do Meio Ambiente.

Coutinho, L. M. 1978. O conceito de cerrado. Revista Brasileira de Botânica 1(1):17-23

Duellman, W. E. and L. Trueb. 1994. Biology of Amphibians. Baltimore. The Johns Hopkins University Press. 670 p.

Duellman, W. E. 1999. Distribution patterns of amphibians in South America; p. 255-327 *In*: W. E. Duellman (ed.), Patterns of Distribution of Amphibians. Baltimore. The Johns Hopkins University Press. 633 p.

Eiten, G. 1972. The cerrado vegetation of Brazil. Bot. Review 38(2):201-341

Frost, W. D. 2008. Amphibians species of the world. Database accessible at http://research.amnh.org/herpetology/amphibia/. American Museum of Natural History, New York, USA. Captured on 20 April 2008.

Gans, C., 1965. Redescription of *Amphisbaena pretrei* Duméril and Bibron and of *A. leucocephala* Peters, with a discussion of their relation and synonymy. Amer. Midl. Nat. 84(2):387-407.

Heyer, W. R., M. A. Donnelly, R. W. McDiarmid, L. C. Hayek and M. S. Foster. 1994. Measuring and Monitoring Biological Diversity. Standard Methods for Amphibians. Washington. Smithsonian Institution Press. 364 p.

Morrone, J. J., S. A. Mazzucconi and A. O. Bachmann. 2004. Distributional patterns of Chacoan water bugs (Heteroptera: Belostomatidae, Corixidae, Micronectidae and Gerridae). Hydrobiologia 523:159-173.

Prado, D. E. and P. E. Gibbs. 1993. Patterns of species distributions in the dry seasonal forests of South América. Ann. Mo. Bot. Gard. 80:902-927.

Primack, R. B. 2002. Essentials of Conservation Biology. Sunderland. Sinauer. 660 p.

Rodrigues, M. T. 1996. Lizards, snakes, and amphisbaenians from the quaternary sand dunes of the middle Rio São Francisco, Bahia, Brazil. Journal of Herpetology 30: 513-523.

SBH – Sociedade Brasileira de Herpetologia. 2008a. Lista de espécies de anfíbios do Brasil. Database accessible at http://www.sbherpetologia.org.br/checklist/anfibios.htm. Captured on 20 April 2008.

SBH – Sociedade Brasileira de Herpetologia. 2008b. Lista de espécies de répteis do Brasil. Database accessible at http://www2.sbherpetologia.org.br/checklist/repteis.htm. Captured on 20 April 2008.

Souza, F. L. 2005. Geographical distribution patterns of South American side-necked turtles (Chelidae), with emphasis on Brazilian species. Rev. Esp. Herp. 19:33-46.

Spichiger, R., C. Calenge and B. Bise. 2004. Geographical zonation in the Neotropics of tree species characteristic of the Paraguay-Parana Basin. Journal of Biogeography 31:1489-150.

Strüssmann, C. 2000. Herpetofauna; p. 153-189 *In*: C. J. R. Alho (ed.). Fauna Silvestre da Região do Rio Manso, MT. Brasília. Ministério do Meio Ambiente/ Eletronorte/Ibama.

Vanzolini, P.E. 1988. Distributional patterns of South American Lizards; p.317-342 *In* Proceedings of a Workshop on Neotropical Distribution Patterns (P. E. Vanzolini & W. R. Heyer (ed.). Rio de Janeiro. Academia Brasileira de Ciências.

Vitt, L. J. and G. R. Colli. 1994. Geographical ecology of a Neotropical lizard: *Ameiva ameiva* (Teiidae) in Brazil. Canadian Journal of Zoology 72(11): 1986-2008.

Received August 2008
Accepted June 2009
Published online September 2009

Check List **5**(3): 518–525, 2009.
ISSN: 1809-127X

LISTS OF SPECIES

Appendix 1. Amphibians and reptiles recorded in the region affected by Ponte de Pedra hydroelectric power plant (municipality of Sonora, state of Mato Grosso do Sul, Brazil). Habits according to Strüssmann (2000): AB = arboreal species (species rarely seen on the ground); SAB = sub arboreal species (species inhabiting all vegetational levels and very often seen on the ground; CR = cryptozoic species (species that use habitats under rocks, fallen logs, or soil debris); TE = terrestrial (species that use habitats on the ground and occasionally on lower vegetational strata); FO = fossorial (species inhabiting higher soil strata); SFO = semi fossorial (species inhabiting higher soil strata but feed on the surface); SAQ = semi aquatic (species that feed primarily on the water but also use terrestrial habitats); PA = paludicola (species associated to lagoons and swampy areas = wetlands).

TAXON	SPECIES	MICROHABITAT
AMPHIBIA		
GYMNOPHIONA		
Caeciliidae	*Siphonops paulensis* Boettger, 1892	FO
ANURA		
Bufonidae	*Rhinella schneideri* (Werner, 1894)	TE
Cycloramphidae	*Proceratophrys* sp.	CR
Hylidae	*Dendropsophus minutus* (Peters, 1872)	SAB
	Dendropsophus nanus (Boulenger, 1889)	SAB
	Dendropsophus rubicundulus (Reinhardt & Lütken, 1862)	SAB
	Dendropsophus tritaeniatus (Bokermann, 1965)	SAB
	Hypsiboas albopunctatus (Spix, 1824)	SAB
	Hypsiboas lundii (Burmeister, 1856)	AB
	Hypsiboas multifasciatus (Günther, 1859 "1858")	SAB
	Hypsiboas punctatus (Schneider, 1799)	AB
	Hypsiboas raniceps Cope, 1862	AB
	Hypsiboas sp.	AB
	Osteocephalus taurinus Steindachner, 1862	AB
	Pseudis limellum (Cope, 1862)	SAQ
	Scinax fuscomarginatus (A. Lutz, 1925)	SAB
	Scinax fuscovarius (A. Lutz, 1925)	SAB
	Trachycephalus venulosus (Laurenti, 1768)	AB
Leiuperidae	*Eupemphix nattereri* Steindachner, 1863	CR
	Physalaemus biligonigerus (Cope, 1861 "1860")	CR
	Physalaemus cuvieri Fitzinger, 1826	TE
	Pseudopaludicola falcipes (Hensel, 1867)	PA
	Pseudopaludicola mystacalis (Cope, 1887)	PA
	Pseudopaludicola saltica (Cope, 1887)	PA
Leptodactylidae	*Leptodactylus furnarius* Sazima & Bokermann, 1978	TE
	Leptodactylus fuscus (Schneider, 1799)	TE
	Leptodactylus gracilis (Duméril & Bibron, 1841)	TE
	Leptodactylus labyrinthicus (Spix, 1824)	TE
	Leptodactylus martinezi (Bokermann, 1956)	TE
	Leptodactylus mystacinus (Burmeister, 1861)	TE
	Leptodactylus ocellatus (Linnaeus, 1758)	TE
	Leptodactylus podicipinus (Cope, 1862)	TE
Microhylidae	*Elachistocleis ovalis* (Schneider, 1799)	CR
REPTILIA		
TESTUDINES		
Chelidae	*Phrynops geoffroanus* (Schweigger, 1812)	SAQ
Testudinidae	*Chelonoidis carbonaria* (Spix, 1824)	TE

LISTS OF SPECIES

TAXON	SPECIES	MICROHABITAT
CROCODYLIA		
Alligatoridae	*Paleosuchus palpebrosus* (Cuvier, 1807)	SAQ
SQUAMATA		
Amphisbaenidae	*Amphisbaena alba* Linnaeus, 1758	FO
	Amphisbaena anaemariae Vanzolini, 1997	FO
	Amphisbaena leeseri Gans, 1964	FO
	Amphisbaena mertensii Strauch, 1881	FO
	Amphisbaena pretrei Duméril & Bibron, 1839	FO
	Amphisbaena vermicularis Wagler, 1824	FO
	Cercolophia roberti (Gans, 1964)	FO
	Leposternon infraorbitale (Bertold, 1859)	FO
Anguidae	*Ophiodes* sp.	TE
	Ophiodes striatus (Spix, 1824)	TE
Phyllodactylidae	*Phyllopezus pollicaris* (Spix, 1825)	AB
Sphaerodactylidae	*Coleodactylus brachystoma* (Amaral, 1935)	SAB
Gymnophtalmidae	*Bachia bresslaui* (Amaral, 1935)	CR
	Cercosaura ocellata Wagler, 1830	TE
	Cercosaura schreibersii Wiegmann, 1834	TE
	Colobosaura modesta (Reinhardt & Lütken, 1862)	CR
	Micrablepharus maximiliani (Reinhardt & Lütken, 1862)	TE
	Vanzosaura rubricauda (Boulenger, 1902)	TE
Hoplocercidae	*Hoplocercus spinosus* Fitzinger, 1843	TE
Polychrotidae	*Anolis meridionalis* Boettger, 1885	SAB
	Polychrus acutirostris Spix, 1825	AB
Scincidae	*Mabuya bistriata* (Spix, 1825)	SAB/TE
	Mabuya dorsivittata Cope, 1862	SAB/TE
	Mabuya frenata (Cope, 1862)	SAB/TE
Teiidae	*Ameiva ameiva* (Linnaeus, 1758)	TE
	Cnemidophorus ocellifer (Spix, 1825)	TE
	Tupinambis merianae (Duméril & Bibron, 1839)	TE
	Tupinambis quadrilineatus Manzani & Abe, 1997	TE
Tropiduridae	*Stenocercus caducus* (Cope, 1862)	SAB
	Tropidurus guarani (Cope, 1862)	AB
	Tropidurus torquatus (Wied, 1820)	SAB/TE
Anomalepididae	*Liotyphlops beui* (Amaral, 1924)	SFO
Leptotyphlopidae	*Leptotyphlops koppesi* Amaral, 1955	SFO
	Leptotyphlops septemstriatus (Schneider, 1801)	SFO
Typhlopidae	*Typhlops brongersmianus* Vanzolini, 1976	SFO
Boidae	*Boa constrictor* Linnaeus, 1758	TE
	Epicrates cenchria (Linnaeus, 1758)	TE
	Eunectes murinus (Linnaeus, 1758)	SAQ
Colubridae	*Apostolepis assimilis* (Reinhardt, 1861)	SFO
	Atractus albuquerquei Cunha & Nascimento, 1983	SFO
	Chironius exoletus (Linnaeus, 1758)	SAB
	Chironius flavolineatus (Boettger, 1885)	SAB
	Clelia clelia (Daudin, 1803)	TE
	Echinanthera occipitalis (Jan, 1863)	TE
	Erythrolamprus aesculapii (Linnaeus, 1766)	TE
	Gomesophis brasiliensis (Gomes, 1918)	SAQ

LISTS OF SPECIES

TAXON	SPECIES	MICROHABITAT
	Helicops angulatus (Linnaeus, 1758)	SAQ
	Helicops modestus Günther, 1861	SAQ
	Leptophis ahaetulla (Linnaeus, 1758)	AB
	Liophis frenatus (Werner, 1909)	TE
	Liophis poecilogyrus (Wied, 1825)	TE
	Liophis reginae (Linnaeus, 1758)	TE
	Lygophis meridionalis (Schenkel, 1901)	TE
	Mastigodryas bifossatus (Raddi, 1820)	TE
	Oxyrhopus trigeminus Duméril, Bibron & Duméril, 1854	TE
	Phalotris nasutus (Gomes, 1915)	TE
	Philodryas mattogrossensis Koslowsky, 1898	TE
	Philodryas nattereri Steindachner, 1870	TE
	Philodryas olfersii (Lichtenstein, 1823)	TE
	Philodryas patagoniensis (Girard, 1858)	TE
	Pseudoboa nigra (Duméril, Bibron & Duméril, 1854)	TE
	Sibynomorphus mikanii (Schlegel, 1837)	TE
	Spilotes pullatus (Linnaeus, 1758)	SAB
	Thamnodynastes pallidus (Linnaeus, 1758)	TE
	Thamnodynastes rutilus (Prado, 1942)	TE
	Thamnodynastes strigatus (Günther, 1858)	TE
	Xenodon merremii (Wagler, 1824)	TE
Elapidae	*Micrurus lemniscatus* (Linnaeus, 1758)	SFO
Viperidae	*Bothrops moojeni* Hoge, 1966	TE
	Bothrops neuwiedi Wagler, 1824	TE
	Crotalus durissus Linnaeus, 1758	TE

Appendix 2: Voucher specimens.
Amphibia: *Dendropsophus nanus* (MZUSP 140442–51); *D. rubicundulus* (MZUSP 140433); *D. tritaeniatus* (MZUSP 140434); *Eupemphix nattereri* (MZUSP 140487); *Hypsiboas albopunctatus* (MZUSP 140475–86); *H. punctatus* (MZUSP 140452–6); *H. raniceps* (MZUSP 140525–37); *Hypsiboas* sp. (MZUSP 140467); *Leptodactylus furnarius* (MZUSP 140488–89, 140436–7); *L. martinezi* (MZUSP 140438–39, 140465–66, 140440–41); *L. podicipinus* (MZUSP 140493–10); *Pseudis limellum* (MZUSP 140512–24); *Osteocephalus taurinus* (MZUSP 140490–92); *Physalaemus cuvieri* (MZUSP 140435); *Pseudopaludicola falcipes* (MZUSP 140511); *Rhinella schneideri* (MZUSP 140457–82); *Scinax fuscovarius* (MZUSP 140468–74); *Trachycephalus venulosus* (MZUSP 140538–52). Reptilia*: Ameiva ameiva (*MZUSP 98636, 98746–51); *Anolis meridionalis* (MZUSP 98633 –35); *Atractus albuquerquei* (MZUSP 17569–71); *Bachia bresslaui* (MZUSP 98769); *Bothrops moojeni* (MZUSP 17530–31, 17540–43, 17563–68, 17588–95); *B. neuwiedi* (MZUSP 17544–45); *Cercosaura ocellata* (MZUSP 98638–78); *Clelia clelia* (MZUSP 17533); *Erythrolamprus aesculapii* (MZUSP 17534–35); *Eunectes murinus* (MZUSP 17547); *Hoplocercus spinosus* (MZUSP 98761–65); *Liophis reginae* (MZUSP 17572–73); *Mabuya bistriata* (MZUSP 98681–84); *M. dorsivittata* (MZUSP 98752–59); *M. frenata* (MZUSP 98685–95); *Oxyrhopus trigeminus* (MZUSP 17536–38); *Philodryas nattereri* (MZUSP 17553); *P. olfersii* (MZUSP 17548–52); *Polychrus acutirostris* (MZUSP 98703–45); *Thamnodynastes rutilus* (MZUSP 17514–29, 17532, 17554–62, 17574–80, 17596–17613); *Tropidurus guarani* (MZUSP 98696–98702); *Tupinambis merianae* (MZUSP 98680); *Vanzosaura rubricauda* (MZUSP 98637); *Waglerophis merremii* (MZUSP 17539, 17546).