

The Reptile Collection of the Museu de Zoologia, Universidade Federal da Bahia, Brazil

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ABSTRACT: Brazilian scientific collections represent an important sample of the country's biodiversity and are a testament to its history. The Reptile Collection of the Museu de Zoologia from Universidade Federal da Bahia (CRMZUFBA) has 5,206 specimens and 185 species (13 endemic to Brazil and 9 threatened) with one quarter of the known reptile species listed in Brazil, from over 175 municipalities. Although the CRMZUFBA houses species from all Brazilian biomes there is a strong regional presence. Knowledge of the species housed in smaller collections could avoid unrepresentative species descriptions and provide information concerning intraspecific variation, ecological features and geographic coverage.

INTRODUCTION

Brazil has outstanding vertebrate diversity, especially in mammal, amphibian and fish richness (Agostinho *et al* 2005; Costa *et al* 2005; Silvano and Segalla 2005), and has notable numbers for birds and reptiles (Marini and Garcia 2005; Rodrigues 2005).

Brazilian scientific collections are a very important sample of this great diversity and represent a cultural inheritance, providing information on the human impact over time (Martins 1988; Taub 2003; Zaher and Young 2003). They are also a useful (and in many cases unique) tool for biogeographic, ecologic, taxonomic and evolutionary research (e.g. Graham *et al.* 2004; Silva Jr. 2007; Franco and Ferreira 2002; Rodrigues 1987).

The Zoology Collection at the Museu de Zoologia of the Universidade Federal da Bahia (MZUFBA) located in the municipality of Salvador, northeastern Brazil, began in 1940 with the incorporation of the collection of butterflies belonging to Dr. Pedro de Araujo, and today houses nearly 120,000 specimens. The first reptiles at the MZUFBA were the snakes collected by Dra. Tania Brazil in 1982 during the wildlife rescue operation at the Pedra do Cavalo hydroelectric power plant. The Reptile Collection of the Museu de Zoologia (CRMZUFBA) was properly founded in 1987 and grew substantially in 1988 due to the many specimens collected during a second great fauna rescue for the construction of Itaparica Dam in the São Francisco River.

Herein we summarize the Reptile Collection of the Museu de Zoologia, Universidade Federal da Bahia (CRMZUFBA), and discuss its representativeness and relevance in relation to the List of Brazilian Reptiles (Bérnils and Costa 2011).

MATERIALS AND METHODS

The CRMZUFBA includes snakes, lizards and amphisbaenids. The specimens analyzed in this study are

those catalogued from 1987, when cataloguing began, to 2012. The zoological nomenclature follows Bérnils and Costa (2011).

The analysis of the CRMZUFBA representativeness was carried out by comparing the number of species in each family in the CRMZUFBA with the numbers from the whole of Brazil according to Bérnils and Costa (2011). This will show which families are well-represented in the CRMZUFBA and also whether they constitute a significant sample size of the richness of Brazilian reptiles. A few poorly preserved specimens or those of unclear taxonomy could only be identified to the genus level and are identified by a number (e.g., *Leptophis* sp. 1). These taxa are not included in the analysis of representativeness. The checklist of species can be found in Table 1. Because it would be impractical to include all of the CRMZUFBA catalogue numbers for each species here, we included only one representative catalogue number for each species. Interested researchers should contact the CRMZUFBA for a more detailed list. Table 1 also includes the total number of records of each species. Families are arranged in the order used by Bérnils and Costa (2011); genera and species are arranged alphabetically within families. Species that are known to be endemic to Brazil as well as species evaluated as threatened according CITES, IUCN or IBAMA are also listed in it.

RESULTS AND DISCUSSION

The CRMZUFBA has 5,206 specimens and 185 species from over 175 different municipalities in Brazil. Thirteen of these are known to be endemic to Brazil and nine threatened according CITES, IUCN or IBAMA. There are 2,203 snake specimens, 2,964 lizards and 39 amphisbaenids. The unidentified specimens totaled 135 (Table 1). Approximately 90% of specimens are from Bahia, although specimens from all Brazilian biomes and their main phytophysiognomies: ombrophylous forest, caatinga, savannas, seasonal

forests, “campo rupestre” and “restingas” are present. The collection data have been computerized, although the data have not been included in national or international online databases.

Snakes

Of the 371 species reported from Brazil (Bérnils and Costa 2011) the CRMZUFBA houses 110 (about 30%). The best represented families in the collection are Boidae and Colubridae, followed by Viperidae, Typhlopidae, Dipsadidae, Elapidae, Anomalepididae and Leptotyphlopidae. The Aniliidae and Tropidophiidae are not represented in the collection.

Lizards

Of the 240 species in the country, (Bérnils and Costa 2011) the CRMZUFBA houses 67 (28%). The best represented families in the collection are Iguanidae and Anguidae followed by Gekkonidae, Scincidae, Phyllodactylidae, Liolaemidae, Polychrotidae, Tropiduridae, Teiidae, Gymnophthalmidae, Leiosauridae and Sphaerodactylidae.

Amphisbaenids

All of the 66 species listed for the country (Bérnils and Costa 2011) belong to the family Amphisbaenidae (Mott and Vieites 2009). The collection houses eight species (12%).

Although the CRMZUFBA contains a limited number of specimens, it is larger than some important Brazilian

collections considered by Prudente *et al.* (2005) as “midsized” and provides a valuable historic and biodiversity database. For instance, the Reptile Collection of Instituto Nacional de Pesquisas da Amazônia houses about 3,500 specimens (INPA 2012), the Museu de Zoologia João Moojen 2,220 specimens (UFV 2012), the Museu de Zoologia Professor Mello Leitão 3,000 (MBML 2012) and the Museu de Zoologia from Universidade de Campinas 3,184 (UNICAMP 2012).

There are a few specimens in CRMZUFBA that do not appear to belong to any currently known species. These are in the genera *Apostolepis*, *Leptophis*, *Sibynomorphus*, *Thamnodynastes*, *Micrurus*, *Anolis* and *Cnemidophorus*. Detailed taxonomic studies of these specimens are needed.

The use of CRMZUFBA data as a tool in biogeographic, ecological and taxonomic studies could avoid unrepresentative species descriptions and promote discussions about diversity, especially regionally, in a space-time perspective. They can also provide insight on the priority gaps for collection development, which in turn enables a more representative sample of the reptile fauna.

We encourage the publication of the holdings of other less well-known collections, computerization and online hosting of collection data, and the exchange of specimens and data among museums, as proposed by Marinoni *et al.* (2006). Sharing of information will promote accurate identification of specimens and greater understanding of biodiversity.

TABLE 1. Checklist of species housed in the Reptile Collection of Museu de Zoologia, Universidade Federal da Bahia (CRMZUFBA). Endemic species known to occur in some Brazilian State are marked with ** and threatened species listed under CITES, IUCN or IBAMA are marked with *.

TAXON	REPRESENTATIVE CATALOG NUMBER	TOTAL RECORDS
Sauria		
Gekkonidae		
<i>Hemidactylus brasiliensis</i> Amaral, 1935	2269	51
<i>Hemidactylus mabouia</i> Moreau de Jonnés, 1818	1040	23
<i>Lygodactylus klugei</i> Smith, Martin and Swain, 1977	2237	41
Phyllodactylidae		
<i>Bogertia lutzae</i> Loveridge, 1941	1323	31
<i>Gymnodactylus darwinii</i> Gray, 1845	1160	233
<i>Gymnodactylus geckoides</i> Spix, 1825	896	28
<i>Phyllopezus pollicaris</i> Spix, 1825	1140	142
<i>Thecadactylus rapicauda</i> Houttuyn, 1782	1132	1
Sphaerodactylidae		
<i>Coleodactylus meridionalis</i> Boulenger, 1888	1312	123
<i>Gonatodes humeralis</i> Guichenot, 1855	1131	1
Scincidae		
<i>Mabuya agilis</i> Raddi, 1823	816	5
<i>Mabuya agmosticha</i> ** Rodrigues, 2000	530	45
<i>Mabuya bistrata</i> Spix, 1825	30	8
<i>Mabuya heathi</i> Schmidt and Inger, 1951	1454	25
<i>Mabuya macrorhyncha</i> Hoge, 1947	1036	10
<i>Mabuya nigropunctata</i> (Spix, 1825)	1137	4
Hoplocercidae		
<i>Hoplocercus spinosus</i> Fitzinger, 1843	2712	1
Iguanidae		
<i>Iguana iguana</i> Linnaeus, 1758	1967	10
Leiosauridae		
<i>Enyalius catenatus</i> Wied, 1821	1090	61
<i>Urostrophus vautieri</i> Duméril and Bibron, 1837	819	1

TABLE 1. CONTINUED.

TAXON	REPRESENTATIVE CATALOG NUMBER	TOTAL RECORDS
Liolaemidae		
<i>Liolaemus lutzae</i> *** Mertens, 1938	821	2
Polychrotidae		
<i>Anolis fuscoauratus</i> D'Orbigny, 1837	1125	34
<i>Anolis punctatus</i> Daudin, 1802	1126	10
<i>Anolis ortonii</i> Cope, 1868	2428	1
<i>Polychrus acutirostris</i> Spix, 1825	1301	43
<i>Polychrus marmoratus</i> Linnaeus, 1758	1129	6
Tropiduridae		
<i>Eurolophosaurus amathites</i> ** Rodrigues, 1984	1968	76
<i>Eurolophosaurus divaricatus</i> ** Rodrigues, 1984	1699	81
<i>Strobilurus torquatus</i> Wiegmann, 1834	1030	8
<i>Tropidurus cocorobensis</i> Rodrigues, 1987	2813	1
<i>Tropidurus hispidus</i> Spix, 1825	2309	151
<i>Tropidurus hygomi</i> Reinhardt and Luetken, 1861	1619	266
<i>Tropidurus oreadicus</i> Rodrigues, 1987	1127	2
<i>Tropidurus psammonastes</i> ** Rodrigues, Kasahara and Yonenaga-Yasuda, 1988	2155	152
<i>Tropidurus semitaeniatus</i> Spix, 1825	1122	42
<i>Tropidurus torquatus</i> Wied, 1820	831	9
<i>Uranoscodon superciliosus</i> Linnaeus, 1758	1130	1
Anguidae		
<i>Diploglossus fasciatus</i> Gray, 1831	694	1
<i>Diploglossus lessonae</i> Peracca, 1890	551	4
<i>Ophiodes striatus</i> Spix, 1825	1324	4
Gymnophthalmidae		
<i>Acratosaura mentalis</i> Amaral, 1933	661	2
<i>Alexandresaurus camacan</i> Rodrigues, Pellegrino, Dixo, Verdade, Pavan, Argôlo and Sites Jr., 2007	2994	2
<i>Calyptommatus leiolepis</i> ** Rodrigues, 1991	1750	282
<i>Calyptommatus sinebrachiatus</i> ** Rodrigues, 1991	1995	95
<i>Cercosaura ocellata</i> Wagler, 1830	958	5
<i>Colobosaura modesta</i> Reinhardt and Luetken, 1862	149	10
<i>Dryadosaura nordestina</i> Rodrigues, Freire, Pellegrino and Sites Jr., 2005	957	51
<i>Ecleopopus gaudichaudii</i> Duméril and Bibron, 1839	1328	3
<i>Leposoma annectans</i> ** Ruibal, 1952	1097	19
<i>Leposoma percarinatum</i> Müller, 1923	1133	1
<i>Leposoma puk</i> Rodrigues, 2002	661	1
<i>Leposoma scincoides</i> Spix, 1825	1374	109
<i>Placosoma cordylinum</i> Tschudi, 1847	824	1
<i>Placosoma glabellum</i> (Peters, 1870)	2983	1
<i>Procellosaurinus erythrocerus</i> ** Rodrigues, 1991	1479	39
<i>Psilophthalmus paeminus</i> Rodrigues, 1991	2671	12
<i>Micrablepharus maximiliani</i> (Reinhardt and Luetken, 1862)	2844	5
<i>Vanzosaura rubricauda</i> Boulenger, 1902	2622	68
Teiidae		
<i>Ameiva ameiva</i> Linnaeus, 1758	2315	36
<i>Cnemidophorus abaetensis</i> * Dias, Rocha and Vrcibradic, 2002	1326	62
<i>Cnemidophorus cryptus</i> Cole and Dessauer, 1993	1134	1
<i>Cnemidophorus ocellifer</i> Spix, 1825	2310	234
<i>Cnemidophorus</i> sp.1	2244	132
<i>Kentropyx calcarata</i> Spix, 1825	1135	42
<i>Tupinambis merianae</i> Duméril and Bibron, 1839	1123	11
<i>Tupinambis quadrilineatus</i> Manzani and Abe, 1997	2837	1
<i>Tupinambis teguixin</i> Linnaeus, 1758	718	1
Amphisbaenia		
Amphisbaenidae		
<i>Amphisbaena alba</i> Linnaeus, 1758	7	6
<i>Amphisbaena arda</i> ** Rodrigues, 2003	37	3
<i>Amphisbaena fuliginosa</i> Linnaeus, 1758	9	1
<i>Amphisbaena hastata</i> ** Vanzolini, 1991	20	16

TABLE 1. CONTINUED.

TAXON	REPRESENTATIVE CATALOG NUMBER	TOTAL RECORDS
<i>Amphisbaena cf. octostega</i> ** Duméril, 1851	42	1
<i>Amphisbaena cf. polystega</i> Duméril, 1851	16	4
<i>Amphisbaena pretrei</i> Duméril and Bibron, 1839	1	7
<i>Amphisbaena vermicularis</i> Wagler, 1824	45	1
Serpentes		
Anomalepididae		
<i>Liotyphlops beui</i> Amaral, 1924	1841	1
Typhlopidae		
<i>Typhlops brongersmianus</i> Vanzolini, 1976	1644	17
<i>Typhlops yonenagae</i> ** Rodrigues, 1991	1705	8
Leptotyphlopidae		
<i>Epictia borapeliotes</i> Vanzolini, 1996	1713	8
Boidae		
<i>Boa constrictor</i> * Linnaeus, 1758	156	31
<i>Corallus hortulanus</i> * Linnaeus, 1758	644	6
<i>Epicrates assisi</i> * Machado, 1945	226	17
<i>Epicrates cenchria</i> * Linnaeus, 1758	675	4
<i>Epicrates crassus</i> * Cope, 1862	1539	4
<i>Eunectes murinus</i> * Linnaeus, 1758	275	5
Colubridae		
<i>Chironius bicarinatus</i> Wied, 1820	1858	1
<i>Chironius carinatus</i> Linnaeus, 1758	1959	4
<i>Chironius exoletus</i> Linnaeus, 1758	402	20
<i>Chironius flavolineatus</i> Boettger, 1885	592	20
<i>Chironius foveatus</i> Bailey, 1955	507	1
<i>Chironius fuscus</i> Linnaeus, 1758	1652	2
<i>Chironius laevicollis</i> Wied, 1824	1599	1
<i>Chironius quadricarinatus</i> Boie, 1827	1671	3
<i>Drymarchon corais</i> Boie, 1827	231	6
<i>Drymoluber dichrous</i> Peters, 1863	293	5
<i>Leptophis ahaetulla</i> Linnaeus, 1758	1536	18
<i>Mastigodryas bifossatus</i> Raddi, 1820	1258	15
<i>Oxybelis aeneus</i> Wagler, 1824	1564	40
<i>Spilotes pullatus</i> Linnaeus, 1758	276	14
<i>Tantilla marcovani</i> Lema, 2004	1769	1
<i>Tantilla melanocephala</i> Linnaeus, 1758	625	25
Dipsadidae		
<i>Apostolepis ammodites</i> Ferrarezzi, Barbo and Albuquerque, 2005	728	3
<i>Apostolepis assimilis</i> Reinhardt, 1861	1838	2
<i>Apostolepis cearensis</i> Gomes, 1915	1796	11
<i>Apostolepis gaboi</i> Rodrigues, 1992	1673	32
<i>Apostolepis gr. longicaudata</i> Amaral, 1921	1808	4
<i>Atractus pantostictus</i> Fernandes and Puerto, 1993	1852	1
<i>Atractus potschi</i> Fernandes, 1995	2047	63
<i>Atractus guentheri</i> (Wucherer, 1861)	2382	1
<i>Boiruna sertaneja</i> Zaher, 1996	1374	14
<i>Dipsas catesbyi</i> Sentzen, 1796	655	4
<i>Dipsas indica</i> Laurenti, 1768	568	3
<i>Dipsas variegata</i> Duméril, Bibron and Duméril, 1854	1520	3
<i>Echiananthera undulata</i> Wied, 1824	1843	1
<i>Erythrolamprus aesculapii</i> Linnaeus, 1766	336	4
<i>Helicops angulatus</i> Linnaeus, 1758	1296	20
<i>Helicops carinicaudus</i> (Wied, 1825)	2318	1
<i>Helicops leopardinus</i> Schlegel, 1837	1741	43
<i>Helicops modestus</i> Günther, 1861	1834	2
<i>Hydrodynastes gigas</i> Duméril, Bibron and Duméril, 1854	1839	1
<i>Hydrops triangularis</i> (Wagler, 1824)	2391	1
<i>Imantodes cenchoa</i> Linnaeus, 1758	390	5
<i>Leptodeira annulata</i> Linnaeus, 1758	1148	40

TABLE 1. CONTINUED.

TAXON	REPRESENTATIVE CATALOG NUMBER	TOTAL RECORDS
<i>Liophis almadensis</i> Wagler, 1824	2041	28
<i>Liophis dilepis</i> Cope, 1862	14	32
<i>Liophis maryellenae</i> Dixon, 1985	1797	1
<i>Liophis miliaris</i> Linnaeus, 1758	344	29
<i>Liophis mossoroensis</i> Hoge and Lima-Verde, 1972	60	17
<i>Liophis poecilogyrus</i> Wied, 1825	1812	63
<i>Liophis reginae</i> Linnaeus, 1758	487	6
<i>Liophis taeniogaster</i> Jan, 1863	664	25
<i>Liophis typhlus</i> Linnaeus, 1758	798	5
<i>Liophis viridis</i> Günther, 1862	342	29
<i>Oxyrhopus clathratus</i> Duméril, Bibron and Duméril, 1854	1860	1
<i>Oxyrhopus guibei</i> Hoge and Romano, 1978	650	22
<i>Oxyrhopus petola</i> Linnaeus, 1758	645	15
<i>Oxyrhopus rhombifer</i> Duméril, Bibron and Duméril, 1854	216	9
<i>Oxyrhopus trigeminus</i> Duméril, Bibron and Duméril, 1854	416	125
<i>Philodryas agassizii</i> Jan, 1863	2043	1
<i>Philodryas mattogrossensis</i> Koslowsky, 1898	1995	1
<i>Philodryas nattereri</i> Steindachner, 1870	854	70
<i>Philodryas olfersii</i> Lichtenstein, 1823	1818	76
<i>Philodryas patagoniensis</i> Girard, 1858	1294	29
<i>Phimophis chui</i> Rodrigues, 1993	1729	2
<i>Phimophis guerini</i> Duméril, Bibron and Duméril, 1854	1960	1
<i>Phimophis scriptorcibatus</i> Rodrigues, 1993	1752	24
<i>Pseudoboa nigra</i> Duméril, Bibron and Duméril, 1854	245	48
<i>Psomophis genimaculatus</i> Boettger, 1885	2005	1
<i>Psomophis joberti</i> Sauvage, 1884	2135	2
<i>Sibynomorphus mikanii</i> Schlegel, 1837	1643	10
<i>Sibynomorphus neuwiedi</i> Ihering, 1911	545	22
<i>Sibynomorphus</i> sp. 1	800	3
<i>Siphlophis compressus</i> Daudin, 1803	1857	2
<i>Siphlophis leucocephalus</i> Günther, 1863	1461	1
<i>Taeniophallus affinis</i> Günther, 1858	1728	1
<i>Taeniophallus occipitalis</i> Jan, 1863	1656	9
<i>Thamnodynastes almae</i> Franco and Ferreira, 2003	138	26
<i>Thamnodynastes nattereri</i> Mikan, 1828	1798	3
<i>Thamnodynastes pallidus</i> Linnaeus, 1758	1292	8
<i>Thamnodynastes sertanejo</i> Bailey, Thomas and Silva-Jr, 2005	103	28
<i>Thamnodynastes</i> sp.2 Franco and Ferreira, 2002	840	50
<i>Thamnodynastes strigatus</i> Günther, 1858	1834	1
<i>Tomodon dorsatus</i> Duméril, Bibron and Duméril, 1854	1833	1
<i>Tropidodryas striaticeps</i> Cope, 1869	1380	3
<i>Xenodon merremii</i> Wagler, 1824	1924	55
<i>Xenodon neuwiedii</i> Günther, 1863	1835	1
<i>Xenodon rhabdocephalus</i> Wied, 1824	1651	9
<i>Xenopholis scalaris</i> Wucherer, 1861	1992	1
Elapidae		
<i>Micrurus corallinus</i> Merrem, 1820	865	9
<i>Micrurus frontalis</i> Duméril, Bibron and Duméril, 1854	1832	1
<i>Micrurus ibiboboca</i> Merrem, 1820	99	44
<i>Micrurus lemniscatus</i> Linnaeus, 1758	1439	120
Viperidae		
<i>Bothriopsis bilineata</i> Wied, 1825	2007	3
<i>Bothropoides erythromelas</i> Amaral, 1923	1372	55
<i>Bothropoides jararaca</i> Wied, 1824	1238	12
<i>Bothropoides lutzi</i> Miranda-Ribeiro, 1915	985	3
<i>Bothropoides marmoratus</i> Silva and Rodrigues, 2008	1548	1
<i>Bothropoides mattogrossensis</i> Amaral, 1925	2003	1
<i>Bothropoides neuwiedi</i> Wagler, 1824	1252	18
<i>Bothrops atrox</i> Linnaeus, 1758	347	4

TABLE 1. CONTINUED.

TAXON	REPRESENTATIVE CATALOG NUMBER	TOTAL RECORDS
<i>Bothrops jararacussu</i> Lacerda, 1884	1896	3
<i>Bothrops leucurus</i> Wagler, 1824	605	440
<i>Bothrops moojeni</i> Hoge, 1966	1326	3
<i>Crotalus durissus</i> * Linnaeus, 1758	1636	50
<i>Lachesis muta</i> Linnaeus, 1766	659	4
Total		5206

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LITERATURE CITED

- Agostinho, A.A., S.M. Thomaz and L.C. Gomes. 2005. Conservação da biodiversidade em águas continentais do Brasil. *Megadiversidade* 1(1): 70-78.
- Bérnils, R.S. and H.C. Costa. 2011. Brazilian reptiles – List of species. *Sociedade Brasileira de Herpetologia*. Accessible at <http://www.sbherpetologia.org.br/>. Captured on 10 October 2012.
- Costa, L.P., Y.L.R. Leite, S.L. Mendes and A.D. Ditchfield. 2005. Conservação de Mamíferos no Brasil. Belo Horizonte. *Megadiversidade* 1(1): 103-112.
- Franco, F.L. and T.G. Ferreira. 2002. Descrição de uma nova espécie de *Thamnodynastes* Wagler, 1830 (Serpentes, Colubridae) do nordeste brasileiro, com comentários sobre o gênero. *Phyllomedusa* 1(2): 57-74.
- Graham, C.H., S. Ferrier, F. Huettman, C. Moritz and A. T. Peterson. 2004. New developments in museum-based informatics and applications in biodiversity analysis. *Trends in ecology and evolution*, 19(9): 497-503.
- INPA. 2012. *Coleção de Répteis*, Instituto Nacional de Pesquisas da Amazônia. Electronic database accessible at <http://www.inpa.gov.br/colecoes/colecoes2.php>. Captured on 20 June 2012.
- Marini, M.A. and F.I. Garcia. 2005. Conservação de Aves no Brasil. Belo Horizonte. *Megadiversidade* 1(1): 79-86.
- Marinoni, L., C. Magalhães and A.C. Marques. 2006. Propostas de estratégias e ações para a consolidação das coleções zoológicas brasileiras; p. 183-211 In V. Canhos, A.L. Peixoto, L. Marinoni, L.R. Vazoller and D.A. Canhos (ed.). *Diretrizes e estratégias para a modernização de coleções biológicas brasileiras e a consolidação de sistemas integrados de informação sobre biodiversidade*. Brasília: Centro de Gestão e Estudos Estratégicos / Ministério da Ciência e Tecnologia.
- Martins, U.R. 1988. Museus Universitários. *Revista Brasileira de Zoologia* 5(4): 623-627.
- MBML. 2012. *Coleção de Répteis*, Museu de Zoologia Museu de Biologia Professor Mello Leitão, Santa Teresa, Espírito Santo. Electronic database accessible at <http://splink.cria.org.br/manager/detail?resource=MBML-Repteis&setlang=pt>. Captured on 6 March 2012.
- Mott, T. and D.R. Vieites. 2009. Molecular phylogenetics reveals extreme morphological homoplasy in Brazilian worm lizards challenging current taxonomy. *Molecular Phylogenetics and Evolution* 51(2): 190-200.
- Prudente, A.L.C. and H. Zaher. 2005. Coleções Herpetológicas (Répteis); p. 21-24 In A.L.C. Prudente, W. Wosiacki, R.E. Reis, H. Zaher, A. Percequillo, A. Aleixo and F.C. Straube (ed.). *Coleções Brasileiras de Vertebrados: estado da arte e perspectivas para os próximos dez anos*. Brasília: Centro de Gestão e Estudos Estratégicos / Ministério da Ciência e Tecnologia.
- Rodrigues, M.T. 1987. Sistemática, ecologia e zoogeografia dos *Tropidurus* do grupo *torquatus* ao sul do rio Amazonas (Sauria, Iguanidae). *Arquivos de Zoologia* 31(3): 105-230.
- Rodrigues, M.T. 2005. Conservação de Répteis Brasileiros: Os desafios para um país megadiverso. Belo Horizonte. *Megadiversidade* 1(1): 87-94.
- Silva Jr., N.J. 2007. Novas ocorrências de *Micrurus brasiliensis* Roze, 1967 (Serpentes: Elapidae) em áreas de tensão ambiental no centro-oeste brasileiro. *Estudos (Goiânia)* 34(11/12): 121-145.
- Silvano, D.L. and M.V. Segalla. 2005. Conservação de Anfíbios no Brasil. Belo Horizonte. *Megadiversidade* 1(1): 79-86.
- Taub, L. 2003. The history of science through academic collections. Paris: International Council of Museums. *ICOM Study Series* 11(1): 14-16.
- UFV. 2012. *Coleção de Répteis do Museu de Zoologia João Moojen*, Universidade Federal de Viçosa, Minas Gerais. Electronic database accessible at <http://www.museudezoologia.ufv.br/colecoes.htm>. Captured on 6 March 2012.
- UNICAMP. 2012. *Coleção de Répteis do Museu de Zoologia, Universidade Estadual de Campinas, São Paulo*. Electronic database accessible at <http://splink.cria.org.br/manager/detail?resource=ZUEC-REP&setlang=pt>. Captured on 14 April 2012.
- Zaher, H. and P.S. Young. 2003. As coleções zoológicas brasileiras: panorama e desafios. *Ciência e Cultura* 55(3): 24-26.

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