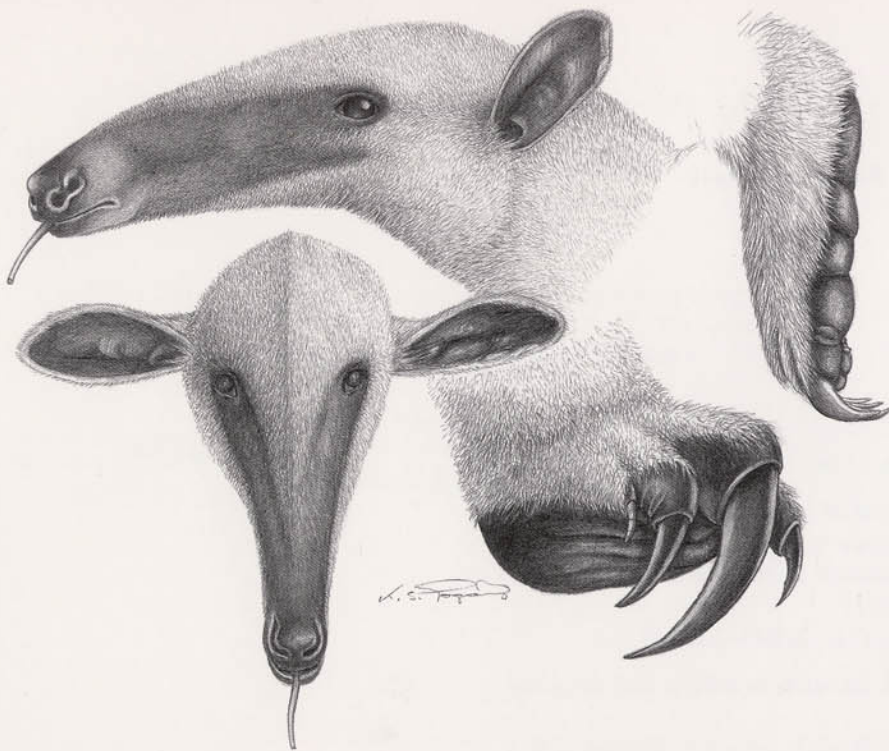


ISSN 0006-324X

BULLETIN OF THE  
BIOLOGICAL SOCIETY  
OF WASHINGTON



CHECKLIST OF THE TERRESTRIAL VERTEBRATES OF THE GUIANA SHIELD

21 DECEMBER 2005  
NUMBER 13

TOM HOLLOWELL AND ROBERT P. REYNOLDS, EDITORS

# **CHECKLIST OF THE TERRESTRIAL VERTEBRATES OF THE GUIANA SHIELD**

Tom Hollowell and Robert P. Reynolds, editors

(TH) Biological Diversity of the Guiana Shield Program  
National Museum of Natural History MRC 166, P.O. Box 37012  
Washington, D.C., 20013-7012, U.S.A.

(RPR) USGS Patuxent Wildlife Research Center  
National Museum of Natural History, MRC 111, P.O. Box 37012  
Washington, D.C. 20013-7012, U.S.A.

Front cover illustration: *Tamandua tetradactyla* (Linnaeus, 1758), Myrmecophagidae, the Southern Tamandua, illustration by Karl S. Pogany, 1961, © 2005 the Royal Ontario Museum.

Illustrations facing each section: for the Foreword, *Chelus fimbriatus* (Schneider, 1783), Chelidae, the Mata-Mata turtle, illustration by Morag Williams, courtesy of the Guyana Marine Turtle Conservation Society; for the Preface, *Artibeus obscurus* Schinz, 1821, the Dark Fruit-Eating Bat, Phyllostomidae and *Phyllostomus discolor* Wagner, 1843, Phyllostomidae, the Pale Spear-nosed Bat, illustrations by Karl S. Pogany, 1961, © 2005 the Royal Ontario Museum; for the Introduction, *Bubo virginianus* (J. F. Gmelin, 1788), Strigidae, illustration by Robert Savannah, courtesy of the U.S. Fish and Wildlife Service; for Amphibians, *Oreophrynella quelchii* (Boulenger 1895), Bufonidae, the Roraima Bush Toad, illustration by Penelope Kay Hollingworth, courtesy of Roy McDiarmid; for Reptiles, *Arthrosaura guianensis* MacCulloch & Lathrop, 2001, Gymnophthalmidae, illustration of head by Amy Lathrop, courtesy of the Royal Ontario Museum; for Birds, *Carduelis cucullata* Swainson, 1820, Fringillidae, the Red Siskin, with its food plant *Curatella americana* L., Dilleniaceae, illustration by John C. Anderton, courtesy of the Smithsonian Institution's Biological Diversity of the Guiana Shield Program; for Mammals, *Pithecia pithecia* (Linnaeus, 1766), Pitheciinae, the Guianan Saki, illustration of a female by Karl S. Pogany, 1961, © 2005 the Royal Ontario Museum.

All photographs are reproduced courtesy of the Smithsonian Institution's Biological Diversity of the Guiana Shield Program, except as noted.

Preferred citations:

Hollowell, T., and R. P. Reynolds, eds. 2005. Checklist of the Terrestrial Vertebrates of the Guiana Shield. Bulletin of the Biological Society of Washington, no. 13.

or, e.g.,

Ávila Pires, T. C. S. 2005. Reptiles, in Checklist of the Terrestrial Vertebrates of the Guiana Shield, Hollowell, T., and R. P. Reynolds, eds. Bulletin of the Biological Society of Washington, no. 13.

## CONTENTS

CONTRIBUTORS .....	iv
ABSTRACT .....	v
FOREWORD..... <i>Cristián Samper</i>	vii
PREFACE .....	ix
<i>V. A. Funk and Carol L. Kelloff</i>	
INTRODUCTION.....	1
<i>Tom Hollowell and Robert P. Reynolds</i>	
AMPHIBIANS .....	9
<i>J. Celsa Señaris and Ross MacCulloch</i>	
REPTILES .....	25
<i>Teresa C. S. de Ávila Pires</i>	
BIRDS .....	43
<i>Chris Milensky, Wiltshire Hinds, Alexandre Aleixo, and Maria de Fátima C. Lima</i>	
MAMMALS .....	77
<i>Burton K. Lim, Mark D. Engstrom, and José Ochoa G.</i>	
PLATES .....	93

## CONTRIBUTORS

**Alexandre Aleixo**, Department of Zoology, Museo Paraense Emílio Goeldi, Caixa Postal 399 CEP 66040-170, Belém, Pará, Brazil

**Teresa C. S. de Ávila Pires**, Department of Zoology, Museo Paraense Emílio Goeldi, Caixa Postal 399 CEP 66040-170, Belém, Pará, Brazil

**Mark D. Engstrom**, Department of Mammalogy, Royal Ontario Museum, Toronto, Ontario M5S 2C6, Canada

**Maria de Fátima C. Lima**, Department of Zoology, Museo Paraense Emílio Goeldi, Caixa Postal 399 CEP 66040-170, Belém, Pará, Brazil

**Vicki A. Funk**, Department of Botany, National Museum of Natural History MRC 166, Smithsonian Institution, Washington, D.C. 20013-7012, U.S.A.

**Wiltshire Hinds**, University of Guyana; current address 294 Stanhope Street, Apt # 2L Brooklyn, NY 11237, U.S.A.

**Tom Hollowell**, Biological Diversity of the Guiana Shield Program, National Museum of Natural History MRC 166, Smithsonian Institution, Washington, D.C. 20013-7012, U.S.A.

**Carol L. Kelloff**, Biological Diversity of the Guiana Shield Program, National Museum of Natural History MRC 166, Smithsonian Institution, Washington, D.C. 20013-7012, U.S.A.

**Burton K. Lim**, Department of Mammalogy, Royal Ontario Museum, Toronto, Ontario M5S 2C6, Canada

**Ross MacCulloch**, Department of Ichthyology and Herpetology, Royal Ontario Museum, Toronto, Ontario M5S 2C6, Canada

**Chris Milensky**, Division of Birds, National Museum of Natural History MRC 116, Smithsonian Institution, Washington, D.C. 20013-7012, U.S.A.

**José Ochoa G.**, Wildlife Conservation Society/ACOANA, Apartado 51532, Caracas 1050-A, Venezuela

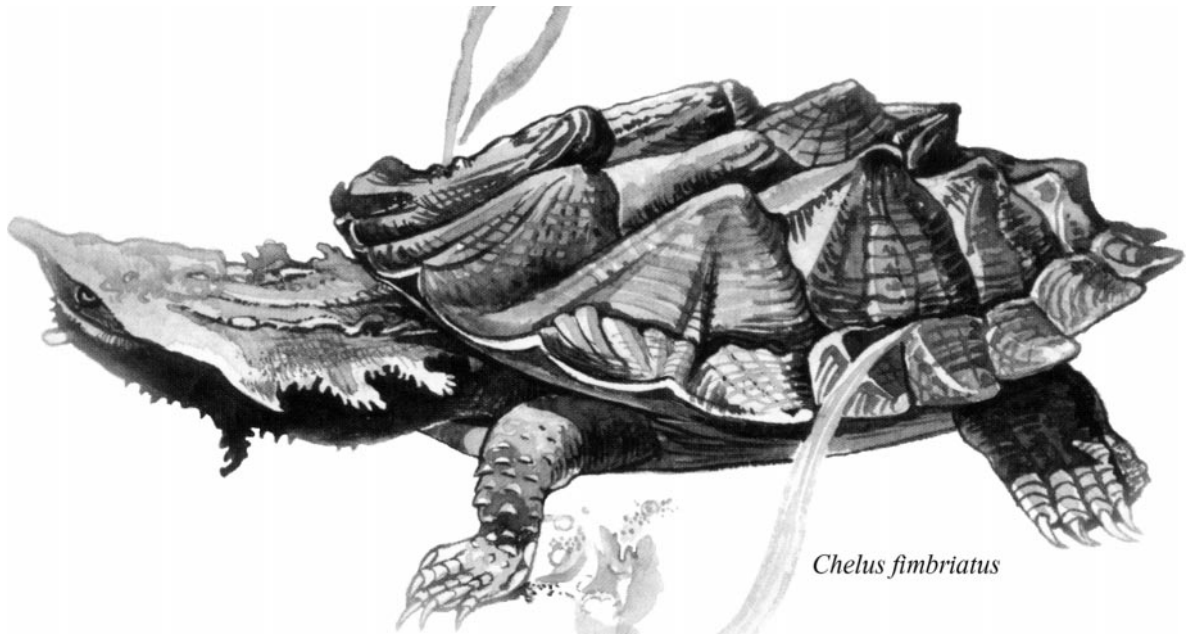
**Robert P. Reynolds**, USGS Patuxent Wildlife Research Center, National Museum of Natural History, MRC 111, PO Box 37012, Washington, D.C. 20013-7012, U.S.A.

**Cristián Samper**, Director, National Museum of Natural History MRC 106, Smithsonian Institution, Washington, D.C. 20013-7012, U.S.A.

**J. Celsa Señaris**, Museo de Historia Natural La Salle, Apartado 1930, Caracas 1010-A, Venezuela

*Abstract.*—Distributions are given for 1850 species of terrestrial vertebrates in the Guiana Shield region of northeastern South America, with introductory text by the authors of each section. Distributions cover the three Guianas (Guyana, Surinam, and French Guiana), and the states of the Venezuelan Guayana (Amazonas, Bolívar, and Delta Amacuro), and in some cases the states of the Brazilian portion of the Guiana Shield (Amazonas, Roraima, Pará, and Amapá), and the Colombian portion of the Guiana Shield. The first section is a checklist of amphibians of the Guiana Shield, by J. Celsa Señaris and Ross MacCulloch, detailing the distribution of 269 species. The second section is a checklist of the reptiles of the Guiana Shield by Teresa C. S. de Ávila Pires, detailing the distribution of 295 species. The third section is a checklist of the birds of the Guiana Shield, by Chris Milensky, Wiltshire Hinds, Alexandre Aleixo, and Maria de Fátima C. Lima, detailing the distribution of 1004 species. The fourth section is a checklist of the mammals of the Guiana Shield, by Burton K. Lim, Mark D. Engstrom, and José Ochoa G., detailing the distribution of 282 species.

*Key Words.*—Guiana Shield, Guyana, Surinam, French Guiana, Venezuela, Brazil, Colombia, Zoological Nomenclature, Biodiversity, Biogeography, Vertebrates, Amphibians, Reptiles, Birds, Mammals



*Chelus fimbriatus*

## FOREWORD

---

Natural History Museums have never been more important than they are today. The expeditions they sponsor, the collections they house, and the research they foster are critical to understanding the biological diversity of our world.

It is a pleasure to introduce the Checklist of the Terrestrial Vertebrates of the Guiana Shield, a new research and conservation resource, which highlights three critical facets of our Museum's work: research, collections, and expeditions. This checklist was produced using information gathered from both historical and recent collections housed at Museums around the world and many recent expeditions to northeastern South America. The expertise of scientists from many organizations has been drawn together and made available to the scientific and conservation communities in both hard copy and on the web ([www.mnh.si.edu/biodiversity/bdg](http://www.mnh.si.edu/biodiversity/bdg)).

This new resource should be of particular use to students, taxonomists, ecologists, and conservation biologists as well as to interested amateurs. It is a significant contribution toward a better understanding of the biodiversity of northeastern South America, and we are proud to have played a part in its production.

The Guiana Shield region has long held a fascination for tropical biologists because of its unique geography that includes table-top mountains known as tepuis, tropical savannas, and broad expanses of rainforest. These areas are home to many endemic taxa, as well as to unique ecosystems such as the Greenheart forests of Guyana and the montane savannas of the tepuis of Brazil, Venezuela, and Guyana.

Checklists of any type are put to many uses. They are aids in the identification of organisms, resources for biodiversity estimates and biogeographic studies, and essential starting points for more detailed studies of an area's biota. The Guiana Shield is a geologic

formation, and as such it defines a section of northeastern South America that is ideally a natural unit rather than a political one. This gives the checklist an environmental focus that is a first step toward thinking in terms of ecosystems, evolution, and systematics rather than simple lists of organisms. Along these lines, data in this checklist are already being used to examine endemism levels, species turnover rates, and the location of areas most in need of additional study. The checklist is particularly useful for these types of investigations because it includes several groups of organisms, (amphibians, reptiles, birds, and mammals), facilitating comparisons among the different groups. It also presents distributions in a matrix that allows for an initial visual discrimination of patterns across a large portion of northeastern South America.

In addition, checklists are useful in conservation efforts in northeastern South America, as they provide standardized species nomenclature that will be used in both governmental and academic undertakings, including impact studies, reserve planning, ecological research, production of faunal studies, and biogeographical analyses, allowing various data sets to be compared with greater accuracy and confidence.

Finally, this publication exemplifies the collaborative nature of studies in biological diversity science, reflecting as it does the efforts of so many specialists essential to its production. It is a truly international effort, for while this volume was organized and edited by biologists working at the National Museum of Natural History in Washington, D.C., the authors of the various chapters are citizens of Brazil, Canada, Guyana, the United States, and Venezuela. This affirms the common interests of all the people, institutions, and nations involved in studying, understanding, and conserving the irreplaceable natural heritage of this part of the world.

Cristián Samper  
Director, National Museum of Natural History





*Artibeus obscurus*



*Phyllostomus discolor*

## PREFACE

V. A. FUNK AND CAROL L. KELLOFF

---

The Checklist of the Terrestrial Vertebrates of the Guiana Shield project was undertaken following the initial success of the ongoing compilation of the *Preliminary Checklist of the Plants of the Guiana Shield* (Hollowell et al. 2001, Biological Diversity of the Guiana Shield Program, Smithsonian Institution; and subsequent online updates <[www.mnh.si.edu/biodiversity/bdg](http://www.mnh.si.edu/biodiversity/bdg)>). With the first half of that plant checklist, it has been possible to estimate that the total number of vascular plant species from the Guiana Shield is in the range of 13,500 to 15,000 species, which is about 5% of the estimated world total of 300,000. Berry et al. (1995, *Flora of the Venezuelan Guayana. Volume 1: Introduction*. Missouri Botanical Garden) calculated that 40% of the plant species occurring in the Guiana Shield do not occur outside of this area. A closer analysis of the flora of Kaieteur Falls, Guyana (Kelloff and Funk 2004, *Journal of Biogeography* 31:501–513) has shown that 43% of the plant species found there are endemic to the Guiana Shield. Consequently, it can be estimated that about 6000 species of vascular plants are restricted to the region. The positive feedback resulting from that plant publication encouraged initiation of a similarly ambitious checklist for the animals of the Guiana Shield. A checklist of fishes has been deferred for later publication when more complete data are available; thus this volume includes only the terrestrial vertebrates. This *Checklist of the Terrestrial Vertebrates of the Guiana Shield* will allow investigations of animal distributions and predictions on levels of endemism and other questions of interest to governments and conservation organizations. The terrestrial vertebrate data have not yet been fully analyzed, but we know from these checklists that, in the Guiana Shield region, there are 1004 bird species of the approximately 10,000 in the world, or about 10% of all known birds. There are also 282 of approximately 4600 mammals worldwide (6%), 269 of 5000 amphibians (5.5%), and 295 of 8100 reptiles (3.6%). It has been demonstrated that the Guiana Shield is clearly a distinct biogeographic area, with a diverse array of terrestrial vertebrates that represent a substantial portion of their biodiversity worldwide.

Checklists have many uses. Beyond providing an account of all of the terrestrial vertebrates of the Guiana Shield region, these lists can be valuable as an encouragement to new research. They can provide a starting point in the process of identification of specimens. In addition, checklists allow preliminary es-

timates of species richness for a given region. With appropriate annotations, checklists can serve as indicators of endemism within areas and provide information on the number of introduced species. They can be used in comparisons between and among areas. If they cover a natural area (one that has some biotic or geologic significance rather than a simple administrative unit) they can be used to formulate questions about centers of origin and evolutionary histories of particular taxa. In addition, checklists facilitate the standardization of spelling, which promotes accurate labeling and citation of specimens and is essential for computerized comparisons of data sets. However, checklists can only reflect knowledge and taxonomic opinion at a particular point in time. Their usefulness is tempered by the potential for the information that they contain to become outdated as new research expands our knowledge of taxonomy and distributions. For instance, it is likely that this checklist contains some names that will change or species that will be reclassified due to advances in systematics, changes in synonymies, and changes in specimen identifications. It is certain that these lists will change due to the addition of taxa that have yet to be described or even collected, extensions of known ranges, and addition of detailed synonymies. Checklists can also be valuable as documentation of long-term changes in distributions, especially in light of increasing habitat modification by humans. Although these lists are only “snapshots” of our present knowledge, they will remain valuable by stimulating research on distribution and taxonomy and by providing a baseline against which progress in research can be measured.

The goals of the Biological Diversity of the Guiana Shield (BDG) Program are, first, to document, study, and preserve the biodiversity of the Guiana Shield region, providing opportunities for excellent scientific research through that process, and second, to find ways to make the information generated by these studies useful for conservation and education. The production of checklists organizes data and publications that have been generated by scientists and puts them into a form that can be used by researchers, educators, the general public, governments, and conservation officials. Building upon fieldwork and descriptions of species, they are an important step toward documenting and understanding the biodiversity of an area. The BDG and the Smithsonian Institution are pleased to play a role in making this publication possible.



*Bubo virginianus*

# INTRODUCTION

TOM HOLLOWELL AND ROBERT P. REYNOLDS

---

The *Checklist of the Terrestrial Vertebrates of the Guiana Shield* is a collaborative project in every sense. Many of the contributors previously participated by producing checklists of vertebrate species of Guyana that are maintained on the Smithsonian Institution's Biological Diversity of the Guiana Shield (BDG) Program website, ([www.mnh.si.edu/biodiversity/bdg](http://www.mnh.si.edu/biodiversity/bdg)). The checklists in this volume certainly benefited from those earlier efforts.

Each chapter is itself the result of a collaborative effort, particularly those on reptiles and amphibians. The amphibian checklist was contributed by J. Celsa Señaris of the Museo de Historia Natural La Salle in Caracas, Venezuela, and Ross MacCulloch of the Royal Ontario Museum in Toronto, Canada. An earlier version was drafted by Dr. Señaris and revised at the Global Amphibian Assessment Project (GAA) Amazonian Region Review Workshop held in Belo Horizonte, Brazil, 31 March–4 April 2004. That workshop, coordinated by Conservation International and the International Union for the Conservation of Nature (IUCN), brought together 60 herpetologists from around the world to evaluate more than 1000 amphibian species assessments from the Amazon and Guianas regions.

The checklist of reptiles was contributed by Teresa C. S. de Ávila Pires of the Museo Paraense Emílio Goeldi in Belém, Brazil. This list was greatly advanced by Conservation International's Guayana Shield Conservation Priority Setting Workshop (5–9 April, 2002) in Paramaribo, Surinam, attended by a large group of biodiversity and conservation specialists. Both the amphibian and reptile lists benefited from an existing online checklist for Guyana (Reynolds et al. 2001 to present).

The checklist of birds was produced by ornithologists from the Smithsonian's National Museum of Natural History and the University of Guyana. It builds upon *A Field Checklist of the Birds of Guyana* published by the Smithsonian (Braun et al. 2000). Ongoing field work in Guyana has added substantially to that initial checklist, and it is likely that additional fieldwork will further expand ornithological knowledge of the entire Guiana Shield region.

The chapter on mammals was assembled by scientists at the Royal Ontario Museum (ROM), in Toronto, Canada, and builds upon their work for the online *Checklist of the Mammals of Guyana* (Engstrom & Lim 2001–present). That institution's field work is also an important part of the process of understanding mammal distributions in the region.

As with any endeavor of this type, insights that specialists have gained through their experience are irreplaceable in correcting errors and updating classifications. In order to make future editions of this checklist as current and accurate as possible, specialists are encouraged to contact the Smithsonian's Biological Diversity of the Guiana Shield Program with additions or corrections.

The extensive bibliographies provide a unique compendium of early and current literature pertinent to the distributions within the four classes of terrestrial vertebrates included in this volume. This resource will enable users to become familiar quickly with the primary literature and will serve to facilitate future work on the terrestrial vertebrates of the Guiana Shield region.

## The Guiana Shield

The Guiana Shield region is a biologically rich area that includes much of northeastern South America (Figure 1). It is strictly defined by the underlying geological formation known as the Guiana Shield, and in the context of this volume the term Guiana Shield also refers to the corresponding geographic region. That region includes the Venezuelan states of Bolívar and Amazonas, and a portion of Delta Amacuro; all of Guyana, Surinam, and French Guiana; and parts of northern Brazil. Several geological outliers of the Guiana Shield occur west of the Orinoco River in Colombia. In Spanish and Portuguese speaking countries, the region is often referred to as the "Guayana"; thus the terms Colombian Guayana, Brazilian Guayana and Venezuelan Guayana are often used. The total area of the Guiana Shield is approximately 1,520,000 km<sup>2</sup>. Table 1 lists the areas of political divisions that occur within the region. See Berry et al. (1995) for a review of definitions of and terminology related to the Guiana Shield region.

## Geology

The Guiana Shield is a distinct ancient geological formation that is roughly bounded by the Atlantic Ocean to the east, the Orinoco River to the north and west, the Río Negro (a major tributary of the Amazon River) to the southwest, and the Amazon River to the south (Gibbs & Barron 1993). The Shield includes the mountain systems that form the watershed boundary between the Amazon and Orinoco rivers. On the Shield's western side, the Orinoco River and Río Negro are connected by the Río Casiquiare, making

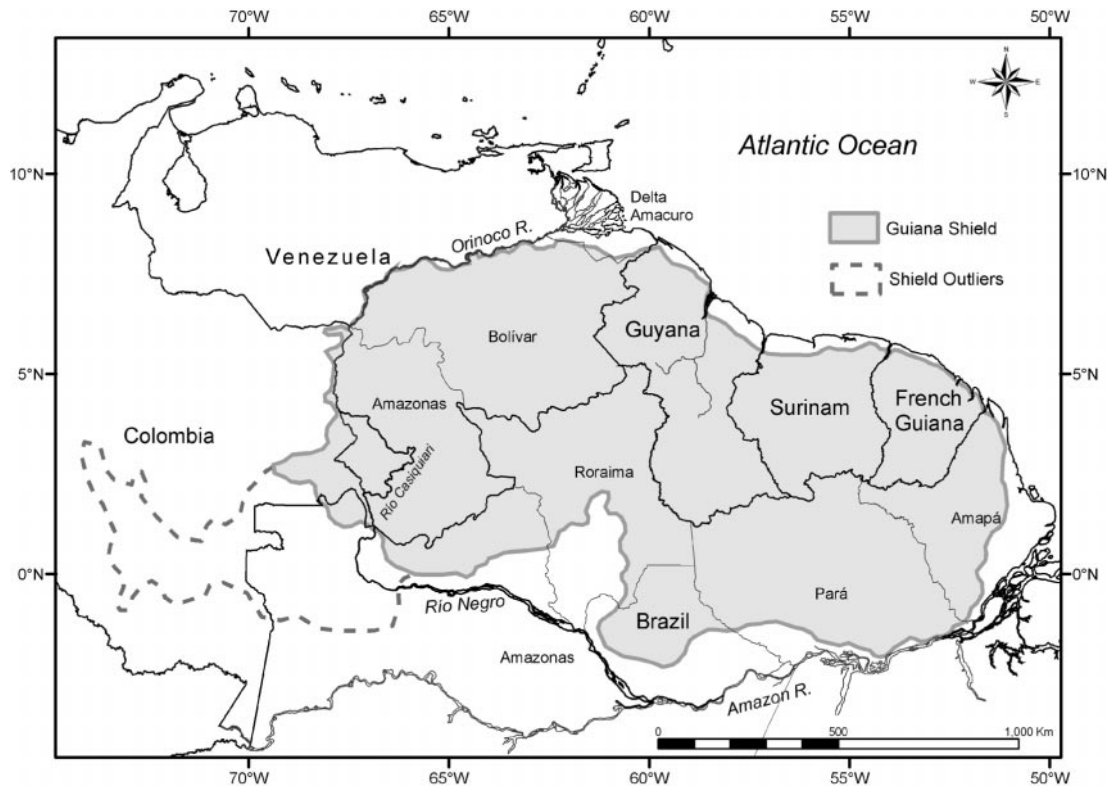


Figure 1. The Guiana Shield; adapted from Gibbs & Barron (1993), with the region of western outliers indicated.

most of the region an island. The base of the Guiana Shield is composed of crystalline rocks of Proterozoic origin; these are mainly granites and gneisses formed between 3.6 and 0.8 billion years ago (Mendoza 1977, Schubert & Huber 1990). Large areas of the Shield were overlain with sediments from 1.6 to 1 billion years ago (Huber 1995a), and remnants of these sandstones comprise the Roraima group of formations that are scattered across the central portion of the Shield. Erosion decreased the size of these formations, and the remaining sediments extend west from the Kaieteur escarpment of the Pakaraima Mountains in central Guyana through parts of Venezuela and Colombia (Arbeláez & Callejas 1999) and

south into northern Brazil (Leechman 1913, Gibbs & Barron 1993). Within this area, erosion has resulted in numerous vertical-walled, frequently flat-topped mountains called “tepui,” among them Chimantá-tepui (2550 m), Cerro Duida (2358 m) and Auyán-tepui (2450 m). Pico de Neblina (3014 m) is the Shield’s western-most tepui and highest point, located on the southern-most segment of the border between Venezuela and Brazil. Mount Roraima (2810 m) is located at the juncture of Guyana, Venezuela, and Brazil and includes the highest point within Guyana. The eastern-most peaks in Guyana reach approximately 2000 m elevation, including Mt. Ayan-ganna (2080 m) and Mt. Wokomung (1700 m). However, the highest point of most Venezuelan tepuis is between 2000 and 2400 m. Several of these mesa-like formations are virtually inaccessible by foot and are so unusual that a fictional scientific expedition account referred to one as “The Lost World” (Doyle 1912), a term sometimes applied to all tepuis. Notable waterfalls of the region include Angel Falls (979 m) on Auyán-tepui in Venezuela and Kaieteur Falls (226 m) on the Potaro River in Guyana’s Pakaraima Mountains.

Granitic dome mountains occur in the southern part of the three Guianas (Guyana, Surinam, French Guiana), where they are known as “inselbergs,” as well as in the western extreme of the Shield in the Puerto Ayacucho, Venezuela, region where they are

Table 1.—Divisions of the Guiana Shield, with abbreviations used and estimated areas.

Division	Abbr.	Area (km <sup>2</sup> )
Colombian Guayana	CG	120,325
Amazonas, Ven.	VA	175,750
Bolívar, Ven.	BO	238,000
Delta Amacuro, Ven.	DA	40,200
Amazonas, Brazil	BA	125,550
Roraima, Brazil	RO	173,750
Pará, Brazil	PA	243,280
Amapá, Brazil	AP	98,750
Guyana	GU	214,970
Surinam	SU	163,270
French Guiana	FG	91,000
Total (km <sup>2</sup> )		1,896,845

called “lajas.” Deposits of low-nutrient white sands occur inland of the coastal plain, in belts across the region and in isolated pockets. Large areas of savanna are found in the region, particularly the complex of savannas that includes the Rupununi Savanna in southwestern Guyana, the Gran Sabana in eastern Bolívar, Venezuela, and the savannas of northern Roraima, Brazil. In some of these areas, sands overlay a clay hardpan that is resistant to penetration by tree roots and that floods during the heavy rainy season, resulting in limited forest growth. Tertiary and Quaternary sediments separate the southern edge of the Guiana Shield from the Amazon River and the eastern edge of the Shield from the Atlantic Ocean.

The southern boundary of the Guiana Shield is difficult to define precisely, as a broad band of outwash materials resulting from erosion occurs between mountains on the southern boundary of the Shield and the Amazon and Negro rivers. Much of the Venezuelan state of Delta Amacuro occurs over thick sediments deposited primarily by the Orinoco River; however, some mountains of the Guiana Shield occur in this state’s southern section, and a large proportion of the sediments of the delta are derived from outwash from the highlands of the Shield. For more detailed discussions of the geology of the area, readers should refer to Gibbs & Barron (1993) and Huber (1995a).

### Climate

As a whole, the Guiana Shield region has a tropical climate characterized by a relatively high mean annual temperature exceeding 25° C at sea level, an annual monthly maximum temperature range of less than 5° C, and an average daily temperature range of approximately 6° C. Because of the Guiana Shield’s location just north of the equator, its climate varies primarily according to elevation and effects of the trade winds that combine to affect rainfall patterns. The trade winds blow consistently from the east and northeast, off of the Atlantic Ocean onto northeastern South America, with wind speeds averaging from 3–4 m per second. Due to orographic effects, the eastern-most escarpments of the mountains of the Guiana Shield are generally localities of increased precipitation where these moisture-laden winds meet the slopes (Clarke et al. 2001). Seasonal oscillations of the Intertropical Convergence Zone (ITCZ) also bring variations in rainfall as the locations of low pressure zones near the equator change (Snow 1976). Varying primarily by latitude, one or two rainy seasons result from shifts in the ITCZ. The heaviest rains usually occur between May and August, whereas the rainy season running from December to January is shorter and less intense, with rains that do not penetrate as far inland. Even during most dry

seasons, frequent storms provide adequate moisture to allow evergreen tropical moist forests to persist in most low elevation parts of the region.

### Diversity

The variety of landscapes of the Guiana Shield includes sandstone tepuis, granite inselbergs, white sands, seasonally flooded tropical savannas, lowlands with numerous rivers, isolated mountain ranges, and coastal swamps, each supporting a characteristic vegetation (Huber et al. 1995, Huber 1995b). This variety accounts for a great deal of the high diversity and endemism of the Shield’s biota. The highlands of the Shield have a flora and fauna with numerous endemic species. Some tepui endemic species occur as low as 300 m in elevation, with increasing numbers by 1500 to 1800 m, and fully developed communities occurring by 2000 m (Funk & Berry, in press). Few if any plant or animal specimens have been collected from most medium to high elevation areas of the Guiana Shield. Most parts of Brazil north of the Amazon river and much of eastern Colombia are poorly explored, and their inclusion in some chapters of this volume (e.g., amphibians and reptiles) calls attention to the need for additional biological surveys.

### Conservation

With the exceptions of the few populated localities such as Puerto Ayacucho, Ciudad Guayana, Ciudad Bolívar, and the agricultural coastal areas, the environment of the Guiana Shield has benefited from limited access and low population densities, although this same isolation has hindered biodiversity research. Estimates vary, but much of the vegetation is still relatively undisturbed by human activities. Recently, however, the pace of disturbance has greatly increased. Current threats to the environment include large-scale logging by Asian and local companies, large- and small-scale gold and diamond mining, oil prospecting, bauxite mining, hydroelectric dams, wildlife trade, and population-related pressures such as burning, grazing, agriculture, and the expansion of Amerindian villages. Taken together, these impacts have begun to take their toll, with vast areas vulnerable to increasing disturbance.

The status of conservation efforts varies by country. Throughout the Guiana Shield, many areas that are designated as protected or otherwise restricted are often only “paper” parks because of a lack of infrastructure and funds to actually protect the areas.

Over the last four decades, Venezuela has established seven national parks, 29 natural monuments, and two biosphere reserves covering about 142,280 km<sup>2</sup>, more than 30% of its share of the Guiana Shield (Funk & Berry, in press). In Guyana, the progress of conservation efforts has been slower, with the only

Table 2—Number of vertebrate taxa at different ranks.

	Orders	Families	Genera	Species
Amphibians	2	13	59	269
Reptiles	3	22	119	295
Birds	22	70	493	1004
Mammals	11	35	143	282
Total	38	140	814	1850

substantial protected area being Kaieteur National Park, its 627 km<sup>2</sup> comprising about 3% of the country's area (Kelloff 2003), with additional reserves under consideration. Guyana's 3710 km<sup>2</sup> Iwokrama Forest (Clarke et al. 2001) is dedicated to sustainable use. Surinam's protected areas system includes one national park and a network of 11 reserves, totaling almost 20,000 km<sup>2</sup>, over 12% of its total area. This includes the recently created 16,000 km<sup>2</sup> Central Suriname Nature Reserve, an UNESCO World Heritage Site that joined and expanded three existing reserves (see <http://www.stinasu.com>). French Guiana has no officially designated protected areas, but 18 proposed sites total 6710 km<sup>2</sup>, about 7.5% of its area (Lindeman & Mori 1989). The natural areas of Venezuela and Guyana are currently under the most anthropogenic pressure, while those of French Guiana are probably less threatened.

The Guiana Shield encompasses part or all of five countries with five different governments, five official languages and many more indigenous languages. Cooperation is sometimes hampered by border disputes and illegal cross-border transportation of gold and wildlife. The implementation of conservation practices is further complicated by many issues concerning the indigenous peoples of the region. All of these challenges will have to be overcome on the way to designing and maintaining a viable reserve system for the Guiana Shield.

#### About the Checklist

This checklist incorporates all terrestrial vertebrates known from the three Guianas (Guyana, Surinam, and French Guiana) and the three states of southern Venezuela (Amazonas, Bolívar, and Delta Amacuro). These political units include the greatest part of the geological formation of the Guiana Shield. In most chapters the listings include distributions for portions of the Guiana Shield in northern Brazil (most of the state of Roraima and parts of the states of Amapá, Pará and Amazonas), and southeastern Colombia (Guainia and parts of Guaviare, Méta, Vaupes and Vichada). The introduction of each chapter details the geographic areas covered for that group.

For the Colombian Guayana, this volume lacks distribution data for birds and mammals, reflecting the need for additional field and museum research on

Table 3—Number of species listed by country. Abbreviations follow Table 1, with the Brazilian Guayana (BG) including areas of BA, RO, PA and AP, and the Venezuelan Guayana (VG) including VA, BO, and DA. (na = not available.)

	CG	VG	BG	GU	SU	FG
Amphibians	87	176	124	120	102	103
Reptiles	115	218	198	168	175	169
Birds	na	859	868	798	694	668
Mammals	na	257	na	222	192	183
Total	202	1510	1190	1308	1163	1123

these groups. The total species numbers for amphibians and reptiles of that region are significantly lower than for other distributional units, and it is uncertain whether these results are due to actual lower levels of diversity or insufficient sampling.

Four of the five traditional groups of vertebrates, Amphibia, Reptilia, Aves and Mammalia, are included in this treatment, while the fishes are excluded at the present time. These traditional classifications are broadly recognized by the general public and conservation community. The checklist includes a total of 140 vertebrate families in 38 orders (Table 2), though additional families may well be documented in the region in the future. These families include 814 genera and 1850 species. For all terrestrial vertebrate groups, 1510 species are listed for the Venezuelan Guayana, 1190 for the Brazilian Guayana, 1308 for Guyana, 1163 for Surinam, and 1123 for French Guiana (Table 3). As stated above, the total of 202 species for the Colombian Guayana highlights the need for additional research and collaboration in that region. Summaries of the number of taxa in each family are included in the introductions for each chapter. In Table 4 these totals are expanded for the states of Brazil and Venezuela for which distributions are provided in some groups.

In the wider scope of biological understanding, the goal of checklists of this type is to understand diversity in terms of the spatial, evolutionary, and ecological settings of physical environments, rather than simply by political boundaries. The assembly of these lists is a step toward considering the fauna in terms of the geological entity of the Guiana Shield. Future studies will include the analyses of animal community composition on finer landscape scales, using developing abilities to produce customized checklists for research and conservation with Geographic Information System (GIS) technologies drawing upon comprehensive databases that include georeferenced museum specimen records.

#### Using the Checklist

For each family, names of species (with authorities) are accompanied by the statements of known distribution. Distribution codes are explained at the

Table 4—Number of species expanded by variations in resolutions of species distributions for Venezuela and Brazil. Abbreviations follow Table 1. (na = not available.)

	CG	VA	BO	DA	BA	RO	PA	AP	GU	SU	FG
Amphibians	87	105	116	46	84	63	61	69	120	102	103
Reptiles	115	156	169	101	159	137	152	146	168	175	169
	CG	VA	BO	DA	BA-RO		PA-AP		GU	SU	FG
Birds	na	725	786	na	786		686		798	694	668
Mammals	na	208	243	145	na		na		222	192	183

beginning of each section's list. English vernacular names are provided for bird species, as these are broadly used and standardized by both the scientific and amateur communities. Commonly used vernacular names are also given throughout the checklist for higher levels of classification, where possible.

Comments are frequently presented in the line below the taxon name. These may include distribution and endemism information, indications of exotic species, notes on published names that have been included by the contributors as equivalent to or part of a species, and other details.

#### Acknowledgements

Special thanks go to Vicki Funk and Carol Kelloff of the Smithsonian Institution's Biological Diversity of the Guiana Shield Program for encouraging the production of this checklist, for promoting zoological research in the Guiana Shield region, and for providing logistical support for all phases of field work, including the follow-up necessary for processing of specimens and management of data.

Many members of the University of Guyana faculty assisted with logistical, administrative, and scientific aspects of field work over the years, including Mike Tamessar, Indarjit Ramdass, and Phillip da Silva, as well as past and present staff members of the Centre for the Study of Biological Diversity, in particular the late Dyantie Naraine. Many Guyanese researchers, students, and naturalists have helped with zoological expeditions that are essential for documenting biodiversity, including Jackie Arjoon, Calvin Bernard, Chris Chin, Keith David, Romeo DeFreitas, Duane DeFreitas, Sandy DeFreitas, Kristine Erskine, Deidre Jafferally, Michelle Kalamandeen, Wiltshire Hinds, Claudius Perry, Tsitsi McPherson, Waldyke Prince, Indraneel Roopsind, Graham Watkins, Cynthia Watson, Romeo Williams, and many Iwokrama International Programme rangers and research assistants.

Other researchers, from many countries, have contributed to the knowledge of the Guianan fauna including Leo Brongersma, Jean-Pierre Gasc, Stefan Gorzula, Marinus Hoogmoed, Philippe Kok, Shawn Lehman, Jean Lescure, Henri Ouellet, Juan Rivero, Janis Roze, Fausto Starace, and Barbara Zimmerman.

Among researchers from the United States who have contributed to terrestrial vertebrate research and expeditions in the Guiana Shield over the years are Rob Anderson, Brian Barber, Kim Bostwick, Godfrey Bourne, Robb Brumfield, Jay Cole, Maureen Donnelly, Ron Heyer, Roy McDiarmid, Davis Finch, Charles Myers, Brice Noonan, Brian O'Shea, Peter Pritchard, Nathan Rice, Robert P. Reynolds, Mark Robbins, Brian Schmidt, Robert Timm, Carol Townsend, David Watson, Don Wilson, Barth Wright, Kristin Wright, and Kristof Zyskowski.

Credit also goes to the participants in the Guiana Shield Conservation Priority Setting Workshop, organized by Conservation International and held in Paramaribo, Surinam. Thanks go to those who contributed to the vertebrate disciplines, including Godfrey Bourne (University of Missouri, St. Louis), Jay Cole (American Museum of Natural History), Jean-Pierre Gasc (Muséum national d'Histoire naturelle, Paris); John Lynch (Universidad Nacional de Colombia), Christian Marty (Cayenne, French Guiana), Brice Noonan (Brigham Young University), Miguel Rodrigues (Universidade de São Paulo), Shamita Sahdew (Universiteit van Suriname); François Katzeflis (Université de Montpellier), Jan Schipper (World Wildlife Fund, USA), Marc van Roosmalen (Netherlands); Mario Cohn-Haft (Instituto Nacional de Pesquisas da Amazônia, Brazil), Jose Maria DaSilva (Conservation International, Brazil), Miguel Lentino (Museo Phelps, Caracas), Otte Ottema (STINASU—Foundation for Nature Conservation in Suriname), Arie Spaans (Netherlands), Gary Stiles (Universidad Nacional de Colombia, Bogota), and Olivier Tostain (ECOBIO, Cayenne).

The participants in the Global Amphibian Assessment Project (GAA), Amazonian Region Review Workshop held in Belo Horizonte, Brazil (Stuart et al. 2004, Young et al. 2004), organized by Conservation International and IUCN, were similarly instrumental in the preparation of the Amphibians checklist. At that workshop valuable support came from Claudia Azevedo-Ramos, IPAM, Brasilia; Philippe Gaucher, Mission Parc de Guyane, Cayenne; W. Ron Heyer, USNM, Smithsonian Institution; Marinus Hoogmoed, NNM, Leiden; Jesús Manzanilla, MNCN, Madrid; Enrique La Marca, Universidad de



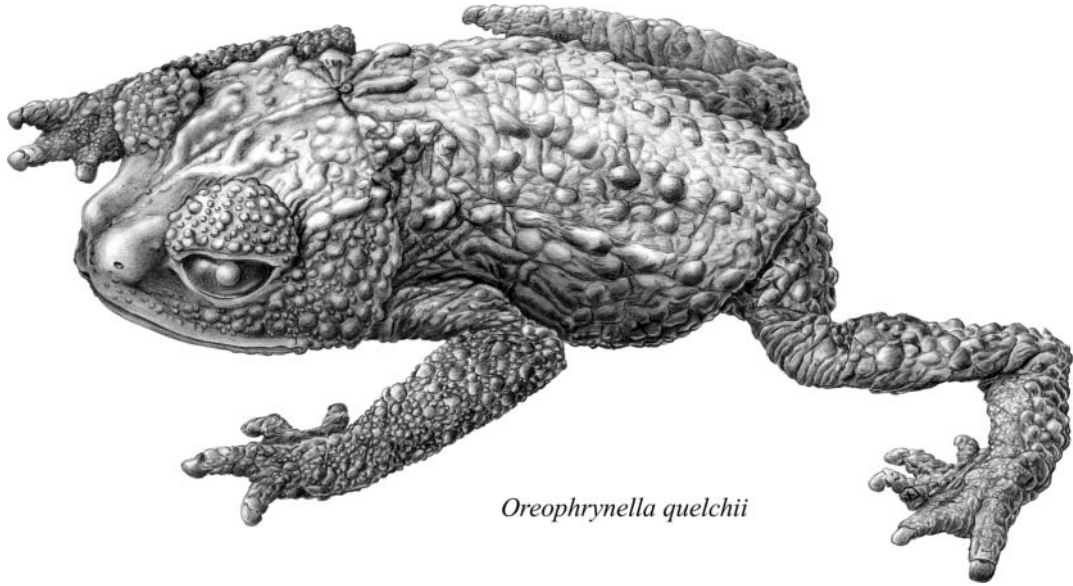
Los Andes, Mérida; and Abraham Mijares-Urrutia, Universidad Francisco de Miranda, Coro. The Guianas assessment for the Belo Horizonte workshop was coordinated by Robert P. Reynolds.

Several reviewers provided valuable and welcome comments of various sections of the manuscript, including Maureen Donnelly, Alfred Gardner, Ross MacCulloch, Roy McDiarmid, Brian O'Shea, Mark Robbins, Don Wilson, and George Zug.

Many government and non-government agencies have assisted with the funding of biodiversity research in the region in the past, including the National Science Foundation, U.S. Agency for International Development, the World Bank, and the National Geographic Society. This is number 101 in the Smithsonian's Biological Diversity of the Guiana Shield Program publication series.

### References

- Arbeláez, M. V., & R. Callejas. 1999. Flórua de la Meseta de Arensica de la comunidad de Monochoa (Región de Arauca, Medio Caquetá. Tropenbos, Colombia, Bogota.
- Berry, P. E., B. K. Holst, & K. Yatskievych, eds. 1995. Flora of the Venezuelan Guayana. Vol. 1: Introduction. J. A. Steyermark, P. E. Berry, and B. K. Holst, general eds. Missouri Botanical Garden, St. Louis.
- Braun, M. J., D. W. Finch, M. B. Robbins, & B. K. Schmidt. 2000. A field checklist of the birds of Guyana. Biological Diversity of the Guianas Program, Smithsonian Institution, Washington D.C. ([www.mnh.si.edu/biodiversity/bdg/guybirds.html](http://www.mnh.si.edu/biodiversity/bdg/guybirds.html)).
- Clarke, H. D., V. Funk, & T. Hollowell. 2001. Using checklists and collections data to investigate plant diversity. I: A comparative checklist of the plant diversity of the Iwokrama Forest, Guyana.—*Sida Botanical Miscellany* 21:1–86.
- Doyle, A. C. 1912. *The Lost World*. Puffin Books, London.
- Engstrom, M. D., & B. K. Lim. 2001–present. Checklist of the mammals of Guyana. Biological Diversity of the Guiana Shield Program, Smithsonian Institution. ([www.mnh.si.edu/biodiversity/bdg/guymammals.html](http://www.mnh.si.edu/biodiversity/bdg/guymammals.html)).
- Engstrom, M. D., & B. K. Lim. 2002. Mamíferos de Guyana. In G. Ceballos and J.A. Simonetti, eds., *Diversidad y Conservación de los Mamíferos Neotropicales*. CONABIO-UNAM. México, D.F.
- Funk, V. A., & P. E. Berry. In press. Guiana Shield. Chapter 10.4 in *Plant conservation: a natural history approach*. Smithsonian Institution Press.
- Gibbs, A. K., & C. N. Barron. 1993. *The geology of the Guiana Shield*. Oxford University Press, New York.
- Gill, R. E., Jr., P. Canevari, & E. H. Iverson. 1998. Eskimo curlew (*Numenius borealis*). In A. Poole and F. Gill, eds., *The birds of North America*, no. 347.
- Hollowell, T., P. Berry, V. Funk, & C. Kelloff. 2001. Preliminary checklist of the plants of the Guiana Shield (Venezuela: Amazonas, Bolívar, Delta Amacuro; Guyana; Surinam; French Guiana). Vol. 1: Acanthaceae–Lythraceae. Biological Diversity of the Guianas Program, Smithsonian Institution, Washington D.C.
- Huber, O. 1995a. Geography and physical features. Pp. 1–61 in P. E. Berry, B. K. Holst, and K. Yatskievych, eds., *Flora of the Venezuelan Guayana*. Vol. 1: Introduction. J. A. Steyermark, Paul E. Berry, and B. K. Holst, general eds. Missouri Botanical Garden, St. Louis.
- Huber, O. 1995b. Vegetation. Pp. 97–160 in P. E. Berry, B. K. Holst, and K. Yatskievych, eds., *Flora of the Venezuelan Guayana*. Vol. 1: Introduction. J. A. Steyermark, P. E. Berry, and B. K. Holst, general eds. Missouri Botanical Garden, St. Louis.
- Huber, O., G. Gharbarran, & V. A. Funk. 1995. Preliminary vegetation map of Guyana. Biological diversity of the Guianas program, Smithsonian Institution, Washington, D.C.
- Kelloff, C. L. 2003. The use of biodiversity data in developing Kaieteur National Park, Guyana for ecotourism and conservation.—*Contributions to the Study of Biological Diversity* 1:1–44. University of Guyana, Georgetown.
- Kelloff, C. L., & V. A. Funk. 2004. Phytogeography of the Kaieteur Falls, Potaro Plateau, Guyana: floral distributions and affinities.—*Journal of Biogeography* 31:501–513.
- Leechman, A. 1913. *The British Guiana handbook*. “The Argosy” Co., Ltd., Georgetown, British Guiana and Dulau & Co., London.
- Lindeman, J. C., & S. A. Mori. 1989. The Guianas. Pp. 375–391 in D. G. Campbell and H. D. Hammond, eds., *Floristic inventory of tropical countries*. New York Botanical Garden, New York.
- Reynolds, R., R. MacCulloch, M. Tamessar, C. Watson, C. J. Cole, & C. Townsend. 2001–present. Preliminary checklist of the herpetofauna of Guyana. Biological Diversity of the Guiana Shield Program, Smithsonian Institution. ([www.mnh.si.edu/biodiversity/bdg/guyherps.html](http://www.mnh.si.edu/biodiversity/bdg/guyherps.html)).
- Robbins, M. B., M. J. Braun, & D. W. Finch. 2003. A discovery of a population of the endangered Red Siskin (*Carduelis cucullata*) in Guyana.—*The Auk* 120(2):291–298.
- Snow, J.W. 1976. *Climates of northern South America*. Pp. 295–403 in W. Schwerdtfeger, ed., *Climates of Central and South America*. Elsevier Scientific Publishing Company, Amsterdam.
- Stuart, S. N., J. S. Chanson, N. A. Cox, B. E. Young, A. S. L. Rodrigues, D. L. Fischman, & R. W. Waller. 2004. Status and trends of amphibian declines and extinctions worldwide.—*Science* 306:1783–1786
- Steyermark, J. A., P. E. Berry, & B. K. Holst, eds. 1995. *Flora of the Venezuelan Guayana*. Missouri Botanical Garden, St. Louis.
- Young, B. E., S. N. Stuart, J. S. Chanson, N. A. Cox, & T. M. Boucher. 2004. Disappearing jewels: the status of New World amphibians. NatureServe, Arlington, Virginia. (<http://www.natureserve.org/publications/disappearing-jewels.pdf>).



*Oreophrynella quelchii*

# AMPHIBIANS

J. CELSA SEÑARIS AND ROSS MACCULLOCH

## Introduction

The Guiana Shield is a distinct geological and biological unit that supports a particularly diverse amphibian fauna. The area of coverage for this checklist of amphibians of the Guiana Shield includes French Guiana, Surinam, and Guyana (“the Guianas”); the Brazilian Guayana, which roughly includes the state of Amazonas north of the Amazon River up to and north and east of the Río Negro, the state of Pará north of the Amazon River, and the states of Roraima and Amapá; the Venezuelan Guayana, which includes all of the states of Amazonas, Bolívar and part of the state of Delta Amacuro; and the Colombian Guayana, being the areas of the Guiana Shield found in sections of the departments of Guaviare, Meta, Vaupés, and Vichada, and much of Guainia (Gibbs & Barron 1993, Giraldo-Cañas 2001).

This checklist has its origin in the Reynolds et al. *Preliminary Checklist of the Herpetofauna of Guyana* (2001). This voucher-based checklist has been expanded using available published information, including general studies such as Barrio-Amorós (1999), Hoogmoed (1979), Frost (2004), Duellman (1999), Gorzula & Señaris (1999), and Lescure & Marty (2000), and recent publications on regions or particular taxa including: Azevedo-Ramos & Galatti (2001), Barrio-Amorós & Fuentes (2003), Barrio-Amorós et al. (2004), Born & Gaucher (2001a, 2001b), Clough & Summers (2000), Duellman & Yoshpa (1996), Duellman & Señaris (2003), Fuentes & Barrio-Amorós (2004), Heyer & Thompson (2000), Heyer & Muedeling (2001), Kok (2000), Jungfer & Böhme (2004), La Marca et al. (2002), Lynch (1999), Lynch & Suarez-Mayorga (2001), Lynch & Vargas (2000), MacCulloch & Lathrop (2002), Morales (2000), Myers & Donnelly (2001), Neckel-Oliveira et al. (2000), Noonan & Harvey (2000), Noonan & Bonett (2003), Parker et al. (1993), Señaris (2000), Señaris & Ayarzagüena (2001, 2002, 2004), Señaris et al. (2005), Smith & Noonan (2001), and Trueb & Massenin (2000). Additional data from museums were incorporated into the checklist, although not all of those specimens were examined by the authors. Also, some information was obtained from online data sources at Sam Noble Oklahoma Museum of Natural History ([www.snomnh.ou.edu/](http://www.snomnh.ou.edu/)), the Iwokrama International Centre for Rain Forest Conservation and Development ([www.iwokrama.org/](http://www.iwokrama.org/)), and the Global Amphibian Assessment ([www.globalamphibians.org/](http://www.globalamphibians.org/)). Detailed taxonomic and zoogeographical information

relevant to the amphibians of the Guiana Shield can be found in the literature section below.

## Taxonomic Composition

269 amphibian species are on this list, in 13 families and two orders. Of these 253 (94%) are Anurans, while 16 (6%) are Gymnophionans; salamanders (Caudata) do not occur in the region. The Hylidae is the most diverse family, with 105 species, followed by Leptodactylidae (58) and Dendrobatidae (33). The more speciose genera are *Hyla* (44 species), *Leptodactylus* (21), *Colostethus* (20), *Eleutherodactylus* (18), *Stefania* (18), and *Scinax* (15). The Guiana Shield region contains many endemic taxa. Most of the endemic genera and species are found in the Guiana highlands, generally closely associated with the tepui formations. Only 124 of the amphibian species listed here also occur outside the region, whereas 145 (54%) are endemic to the Guiana Shield; 136, or 94%, of those endemic amphibians are Anurans. Counts of species in all families, along with the numbers and percentages of endemic species, are given in Table 5.

Some of these numbers will certainly change as the knowledge of the Guiana Shield fauna increases. Also, errors in identifications and in distributional data may have occurred, and users of this checklist are invited to point out any such errors to the authors. Researchers are also encouraged to provide specimens to the collections of appropriate institutions and to send copies of published research to the authors and editors.

## Geographic Distribution

Numbers of species by country are given in Table 3 of this volume’s introduction. These numbers are a

Table 5—Counts of amphibian species by family, with number and percentage of endemic taxa.

	Taxa	Endemics
Hylidae	105	58 (55%)
Leptodactylidae	58	21 (36%)
Dendrobatidae	33	23 (70%)
Bufo	19	10 (53%)
Centrolenidae	15	14 (93%)
Microhylidae	14	9 (64%)
Caeciliidae	12	7 (58%)
Pipidae	4	1 (25%)
Pseudidae	3	
Rhinatrematidae	2	2 (100%)
Typhlonectidae	2	
Allophrynidae	1	1 (100%)
Ranidae	1	

Table 6—Distribution codes for amphibians.

CG	Colombian Guayana
VA	Venezuela—Amazonas
BO	Venezuela—Bolívar
DA	Venezuela—Delta Amacuro
BA	Brazil—Amazonas
RO	Brazil—Roraima
PA	Brazil—Pará
AP	Brazil—Amapá
GU	Guyana
SU	Surinam
FG	French Guiana

useful indicator of species diversity, but they also demonstrate that species distributions do not respect administrative boundaries. We are still a long way from fully understanding the zoogeography of the Guiana Shield.

Although details of habitat are outside the scope of this checklist, the majority of endemic species of the region are highland species. Because Venezuela has the greatest diversity of highland habitat in the region, it also has the greatest number of endemic species. Examples of studies of highland habitat can be found in Donnelly & Myers (1990), Gorzula (1992), McDiarmid & Paolillo (1988), and Myers & Donnelly (1996, 1997, 2001). A broad overview of the herpetofauna of the Venezuelan Guayana is presented in Gorzula & Señaris (1999), and for the Guayana highlands in McDiarmid & Donnelly (2005).

Some endemic species occur at relatively low elevations, and these tend to have wider distributions than do highland endemics. Some lowland species are restricted to specific habitats such as savannas or riverine forests. Lowland species are also more likely to be disturbed by human activities than highland species, although the extremely restricted distributions of some of the latter make them vulnerable to changes in habitat.

#### Using the Checklist

Species are organized by order, family and genus, alphabetically within each rank. Nomenclature follows current literature, especially *Amphibian Species of the World* (Frost 2004). Notes indicate known distribution: species that occur outside of the Guiana Shield region are termed “widespread”; those that have relatively wide distributions within the region are “Guiana Shield Endemic”; detailed localities are provided for those species that have restricted known distributions.

The distributional abbreviations used are given in Table 6, and illustrated in Figure 2. Abbreviations are followed by a “?” if the distribution is uncertain.

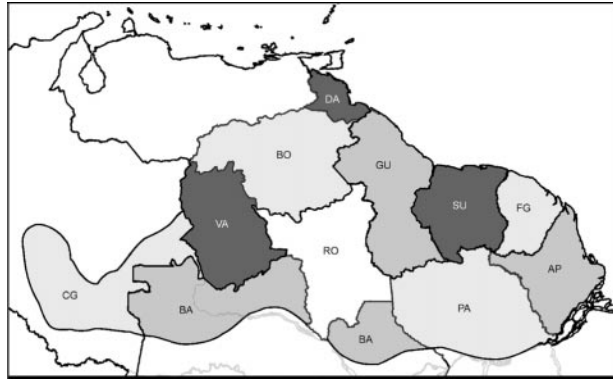


Figure 2. Map of the distributional units used in the amphibian checklist, using the abbreviations given in Table 6.

#### Acknowledgments

Significant contributions to the development of this checklist were made by Marinus Hoogmoed of the Nationaal Natuurhistorisch Museum in Leiden, the Netherlands, John Lynch of the Universidad Nacional de Colombia, Bogotá, Christian Marty of Montjoly, French Guiana, and Brice Noonan of Brigham Young University.

Thanks go to the participants and organizers of the IUCN Global Amphibian Assessment Project (GAA), Amazonian Region Workshop, held in Belo Horizonte, Brazil, 2003 (Stuart et al. 2004, Young et al. 2004), and the Guiana Shield Priority Setting Workshop, held in Paramaribo, Surinam, 2002. These two gatherings allowed many researchers working in the region to pool their knowledge and refine the data that produced this list.

#### Literature on the Amphibians of the Guiana Shield

- Acosta-Galvis, A.R. 2000. Ranas, salamandras y caecilias (Tetrapoda: Amphibia) de Colombia.—*Biota Colombiana* 1:289–319.
- Ayarzagüena, J. 1985 [“1983”]. Una nueva especie de *Dischidodactylus* Lynch (Amphibia, Leptodactylidae) en la cumbre del tepui Marahuaca, Territorio Federal Amazonas, Venezuela.—*Memorias de la Sociedad de Ciencias Naturales La Salle* 43:215–220.
- Ayarzagüena, J. 1992. Los Centrolenidos de la Guayana Venezolana.—*Publicaciones de la Asociación de los Amigos de Doñana* 1:1–48.
- Ayarzagüena, J., & A. Diego-Aransas. 1985. Primer reporte para Venezuela de *Adelophryne gutturosa* (Leptodactylidae) y datos sobre su biología.—*Memorias de la Sociedad de Ciencias Naturales La Salle* 45:159–160.
- Ayarzagüena, J., & J. C. Señaris. 1994 [“1993”]. Dos nuevas especies de *Hyla* (Anura: Hylidae) para las cumbres tepuyanas del estado Amazonas, Venezuela.—*Memorias de la Sociedad de Ciencias Naturales La Salle* 53:127–146.
- Ayarzagüena, J., & J. C. Señaris. 1997 [“1996”]. Dos nuevas especies de *Cochranella* (Anura: Centrolenidae) para Venezuela.—*Publicaciones de la Asociación de los Amigos de Doñana* 8:1–16.
- Ayarzagüena, J., J. Señaris, & S. Gorzula. 1992a. El grupo *Osteocephalus rodriguezi* de las tierras altas de la Guayana Ve-

- nezolana: descripción de cinco nuevas especies.—Memoria de la Sociedad de Ciencias Naturales La Salle 52(137):113–142.
- Ayarzagüena, J., J. Señaris, & S. Gorzula. 1992b. Nuevo género para las especies del grupo “*Osteocephalus rodriguezi*” (Hylidae).—Memoria de la Sociedad de Ciencias Naturales La Salle 52 (138):213–221.
- Azevedo-Ramos, C., & U. Galatti. 2001. Relatório Técnico sobre a diversidade de anfíbios na Amazonia Brasileira. Pp. 79–88 in J. P. Ribeiro, ed., Biodiversidade na Amazonia Brasileira. Estação Liberdade/Instituto Socioambiental, Sao Paulo, Brazil.
- Barrio, C. L. 1998. Sistemática y biogeografía de los anfíbios (Amphibia) de Venezuela.—Acta Biologica Venezuelica 18(2): 1–93.
- Barrio, C. L. 1999. Geographic distribution: *Otophryne pyburni*.—Herpetological Review 30:173.
- Barrio, C. L. 1999. Geographic distribution: *Otophryne steyermarki*.—Herpetological Review 30:173.
- Barrio, C. L., & C. Brewer-Carias. 1999. Geographic distribution: *Synapturanus mirandoribeiroi*.—Herpetological Review 30: 51.
- Barrio A., C. L., & O. Fuentes R. 1998. Distribucion de *Dendrobates leucomelas* (Amphibia: Anura: Dendrobatidae) en Venezuela.—Acta Biologica Venezuelica 18:35–41.
- Barrio A., C. L., & O. Fuentes R. 1999. Sinopsis de la familia Dendrobatidae (Amphibia: Anura) de Venezuela.—Acta Biologica Venezuelica 19:1–10.
- Barrio-Amorós, C. L., & O. Fuentes. 2003. A new species of *Stefania* (Anura: Hylidae: Hemiphractinae) from the summit of Cerro Autana, Estado Amazonas, Venezuela.—Herpetologica 59(4):506–514.
- Barrio-Amorós, C., O. Fuentes, & G. Rivas. 2004. Two new species of *Colostethus* (Anura: Dendrobatidae) from the Venezuelan Guayana.—Salamandra 40(3/4):1–18.
- Bauer, A. M. 2001. Atlas des amphibiens de Guyane (review).—Herpetological Review 32:204–205.
- Boistel, R., J.-C. de Massary, & A. Angulo. In press. Description of a new species of the genus *Adenomera* (Amphibia: Anura: Leptodactylidae) from French Guiana.—Amphibia-Reptilia.
- Born, M. 1996. Reptiles and amphibians of Nouragues, French Guiana. A species inventory of a tropical rainforest. M. Born, The Netherlands.
- Born, M., & P. Gaucher. 2001a. Distribution and life histories of amphibians and reptiles. Pp. 167–184 in F. Bongers, P. Charles-Dominique, P. M. Forget, and M. Thery, eds., Nouragues: dynamics and plant-animal interactions in a neotropical rainforest. Monographies Biologicae, vol. 80. Kluwer Academic, Dordrecht.
- Born, M., & P. Gaucher. 2001b. Appendix 5. Amphibian and reptile species at the Nouragues Nature Reserve. Pp. 371–379 in F. Bongers, P. Charles-Dominique, P. M. Forget, and M. Thery, eds., Nouragues: dynamics and plant-animal interactions in a neotropical rainforest. Monographies Biologicae, vol. 80. Kluwer Academic, Dordrecht.
- Boulenger, G. A. 1895. Description of a new batrachian (*Oreophryne quelchii*) discovered by Messrs. J. J. Quelch and F. McConnell on the summit of Mt. Roraima.—Annals and Magazine of Natural History series 6, 15:521–522.
- Boulenger, G. A. 1900. Batrachians. In E. R. Lankester, Report on a collection made by Messrs. F. V. McConnell and J. J. Quelch at Mount Roraima in British Guiana.—Transactions of the Linnaean Society of London series 2, 8(2):55–56.
- Boulenger, G. A. 1903. On some batrachians and reptiles from Venezuela.—Annals and Magazine of Natural History series 7, 11(65):481–484.
- Boulenger, G. A. 1904. Description of a new tree-frog of the genus *Hyla*, from British Guiana, carrying eggs on its back.—Proceedings of the Zoological Society of London 1904(2): 106.
- Bourne, G. R. 2001. Color pattern, predator avoidance, and foraging behavior in the golden frog *Colostethus beebei* (Anura: Dendrobatidae).—Herpetological Review 32:225–228.
- Buchacher, C. O. 1993. Field studies on the small Surinam toad, *Pipa arrabali*, near Manaus, Brazil.—Amphibia-Reptilia 14:59–69.
- Caldwell, J. P., & M. S. Hoogmoed. 1998. Allophrynidae, *Allophryne*, *A. ruthveni*.—Catalogue of American Amphibians and Reptiles 666:1–3.
- Campbell, J. A., & B. T. Clarke. 1998. A review of frogs of the genus *Otophryne* (Microhylidae) with the description of a new species.—Herpetologica 54:301–317.
- Caramaschi, U., & C. A. G. Cruz. 2002. *Phyllomedusa*: posição taxonômica, hábitos e biologia (Amphibia, Anura, Hylidae).—Phyllomedusa 1:5–10.
- Clough, M., & K. Summers. 2000. Phylogenetic systematics and biogeography of the poison frogs: evidence from mitochondrial DNA sequences.—Biological Journal of the Linnean Society 70(3):515–540.
- Cochran, D. M. 1956. A new species of frog from Kartabo, British Guiana.—Zoologica 41:11–12.
- Crombie, R. I., & W. R. Heyer. 1983. *Leptodactylus longirostris* (Anura: Leptodactylidae): advertisement call, tadpole, ecological and distributional notes.—Revista Brasileira de Biologia 43:292–196.
- de Carvalho, A. L. 1954. A preliminary synopsis of the genera of American microhylid frogs.—Occasional Papers, Museum of Zoology, University of Michigan 555:1–19.
- de Massary, J.-C., & J. Lescure. 1998. Presence de *Ctenophryne geayi* (Amphibia: Microhylidae) en Guyane française.—Revue Française d’Aquariologie 25:53–57.
- de Sá, R. O. 1996. *Hyla multifasciata*. Catalogue of American Amphibians and Reptiles 624:1–4.
- Diego-Aransay, A., & S. Gorzula. 1990 [“1987”]. Una nueva especie de *Oreophrynella* (Anura: Bufonidae) de la Guayana Venezolana.—Memoria de la Sociedad de Ciencias Naturales La Salle 47:233–238.
- Donnelly, M. A., & C. W. Myers. 1991. Herpetological results of the 1990 Venezuelan expedition to the summit of Cerro Guaiquinima, with new tepui reptiles.—American Museum Novitates 3017, 54 pp.
- Donnelly, M. A., M. Chen, C. Watson, & G. Watkins. 1999. Herpetofauna of the Iwokrama forest. (www.iwokrama.org/library).
- Duellman, W. E. 1971. A taxonomic review of South American hyliid frogs, genus *Phrynohyas*.—Occasional Papers, Natural History Museum, University of Kansas, no. 4:1–21.
- Duellman, W. E. 1973. Frogs of the *Hyla geographica* group.—Copeia 1973:515–533.
- Duellman, W. E. 1986. Two new species of *Oloolygon* (Anura: Hylidae) from the Venezuelan Guayana.—Copeia 1986:864–870.
- Duellman, W. E. 1993. Amphibian species of the world: additions and corrections.—University of Kansas Museum of Natural History, Special Publication, no. 21:1–372.
- Duellman, W. E. 1997. Amphibians of La Escalera region, southeastern Venezuela: taxonomy, ecology, and biogeography.—Scientific Papers, Natural History Museum, The University of Kansas, no. 2:1–52.
- Duellman, W. E. 1999. Distribution patterns of amphibians in South America. Pp. 255–328 in W. E. Duellman, ed., Patterns of distribution of amphibians. a global perspective. The Johns Hopkins University Press, Baltimore.
- Duellman, W. E., & M. S. Hoogmoed. 1984. The taxonomy and phylogenetic relationships of the hyliid frog genus *Stefan-*

- ia.—University of Kansas Museum of Natural History Miscellaneous Publications, no. 75:1–39.
- Duellman, W. E., & M. S. Hoogmoed. 1992. Some hylid frogs from the Guiana highlands, northeastern South America: new species, distributional records, and a generic reallocation.—Occasional Papers of the Museum of Natural History, University of Kansas, no. 147:1–21.
- Duellman, W. E., & J. Lescure. 1973. Life history and ecology of the hylid frog *Osteocephalus taurinus*, with observations on larval behaviour.—Occasional Papers of the Museum of Natural History, University of Kansas, no. 13:1–12.
- Duellman W., & J. C. Señaris. 2003. A new species of glass frog from the Venezuelan Guayana.—Herpetologica 59(2):247–252.
- Duellman, W. E., & J. J. Wiens. 1992. The status of the hylid frog genus *Oloolygon* and the recognition of *Scinax* Wagler, 1830.—Occasional Papers of the Museum of Natural History, University of Kansas, no. 151:1–23.
- Duellman, W. E., & M. Yosha. 1996. A new species of *Te-puichhyla* (Anura: Hylidae) from Guyana.—Herpetologica 52(2):275–282.
- Edwards, S. R. 1974. Taxonomic notes on South American dendrobatid frogs of the genus *Colostethus*.—Occasional Papers of the Museum of Natural History, University of Kansas, no. 30:1–14.
- Faivovich, J. 2002. A cladistic analysis of *Scinax* (Anura: Hylidae).—Cladistics 18:367–393.
- Ford, L. S. 1993. The phylogenetic position of the dart-poison frogs (Dendrobatidae) among anurans: an examination of the competing hypotheses and their characters.—Ethology, Ecology and Evolution 5:219–231.
- Frost, D. R. 2004. Amphibian species of the world: an online reference. Version 3.0 (22 August, 2004). Electronic database accessible at: <http://research.amnh.org/herpetology/amphibia/index.html>. American Museum of Natural History, New York.
- Fuentes, O., & C. L. Barrio-Amorós. 2004. A new *Eleutherodactylus* (Anura, Leptodactylidae) from Marahuaka tepui, Amazonas, Venezuela.—Revista de la Academia Colombiana de Ciencias 28(107):285–290.
- Gibbs, A. K., & C. N. Barron. 1993. The geology of the Guiana Shield. Oxford University Press, New York.
- Gines, H. 1959. Familia y géneros de anfibios—Amphibia—de Venezuela.—Memorias de la Sociedad de Ciencias Naturales La Salle 19:85–146.
- Giraldo-Cañas, D. 2001. Relaciones fitogeográficas de las sierras y afloramientos rocosos de la Guayana colombiana: un estudio preliminar.—Revista Chilena de Historia Natural 74(2):353–364.
- Goin, C. J. 1966a. Description of a new frog of the genus *Hyla* from Suriname.—Zoologische Mededelingen 41:229–232.
- Goin, C. J. 1966b. A new frog of the genus *Hyla* from British Guiana.—Quarterly Journal of the Florida Academy of Sciences 29:39–42.
- Goin, C. J. 1968. A new centrolenid frog from Guyana.—Quarterly Journal of the Florida Academy of Sciences 30:115–118.
- Goin, C. J., & O. B. Goin. 1968. A new green tree frog from Suriname.—Copeia 1968:581–583.
- Goin, C.J., & J. D. Woodley. 1969. A new tree-frog from Guyana.—Zoological Journal of the Linnaean Society 48:135–140.
- Gorzula, S. 1985. Field notes on *Otophryne robusta steyermarki*.—Herpetological Review 16:102–103.
- Gorzula, S. 1990 [“1988”]. Una nueva especie de Dendrobates (Amphibia, Dendrobatidae) del Macizo del Chimantá, Estado Bolívar, Venezuela.—Memorias de la Sociedad de Ciencias Naturales La Salle 48:143–149.
- Gorzula, S. 1992. La herpetofauna del Macizo del Chimantá. Pp. 267–280 in O. Huber, ed., El Macizo del Chimantá, Escudo de Guayana, Venezuela. Un ensayo ecológico tepuiano. Todtmann, Caracas.
- Gorzula, S. J., & J. Cerda. 1979. La herpetofauna del Territorio Federal Amazonas. Pp. 1–20 in Distribucion Preliminar de la Fauna Silvestre del Territorio Federal Amazonas. MARNR Ser. Inf. Cient. DODESUR-División de Fauna. DGIIA/IC/03/79.
- Gorzula, S., & J. C. Señaris. 1996. Una nueva especie de *Osteocephalus* (Anura: Hylidae) de la Gran Sabana, Venezuela.—Acta Biologica Venezuelica 16(4):19–22.
- Gorzula, S., & J. C. Señaris. 1999 [“1998”]. Contribution to the herpetofauna of the Venezuelan Guayana. I. A data base.—Scientia Guaianae 8:XVIII + 269 pp.
- Heatwole, H., H. Solano, & A. Heatwole. 1965. Notes on amphibians from the Venezuelan Guayanas with description of two new forms.—Acta Biologica Venezuelica 4:349–364.
- Hero, J.-M. 1990. An illustrated key to tadpoles occurring in the central Amazonian rainforest, Manaus, Amazonas, Brazil.—Amazoniana 11:201–262.
- Heyer, W.R. 1973. Systematics of the *marmoratus* group of the frog genus *Leptodactylus* (Amphibia, Leptodactylidae).—Natural History Museum of Los Angeles County Contributions in Science 251:1–50.
- Heyer, W. R. 1975. *Adenomera lutzi* (Amphibia: Leptodactylidae), a new species of frog from Guyana.—Proceedings of the Biological Society of Washington 88:315–318.
- Heyer, W. R. 1977. A discriminant function analysis of the frogs of the genus *Adenomera* (Amphibia: Leptodactylidae).—Proceedings of the Biological Society of Washington 89:581–592.
- Heyer, W. R. 1978. Systematics of the fuscus group of the frog genus *Leptodactylus* (Amphibia, Leptodactylidae).—Natural History Museum of Los Angeles County Science Bulletin 29:1–85.
- Heyer, W. R. 1979. Systematics of the pentadactylus species group of the frog genus *Leptodactylus* (Amphibia: Leptodactylidae).—Smithsonian Contributions to Zoology 301:1–43.
- Heyer, W. R. 1994. *Hyla benitezi* (Amphibia: Anura: Hylidae): first record for Brazil and its biogeographical significance.—Journal of Herpetology 28(4):497–499.
- Heyer, W. R. 1994. Variation within the *Leptodactylus podicipinus-wagneri* complex of frogs (Amphibia: Leptodactylidae).—Smithsonian Contributions to Zoology 546:1–124.
- Heyer, W. R. 1995. South American rocky habitat *Leptodactylus* (Amphibia: Anura: Leptodactylidae) with description of two new species.—Proceedings of the Biological Society of Washington 108:695–716.
- Heyer, W. R. 2002. *Leptodactylus fragilis*, the valid name for the middle American and northern South American white-lipped frog (Amphibia: Leptodactylidae).—Proceedings of the Biological Society of Washington 115:321–322.
- Heyer, W. R., M. A. Donnelly, R. W. McDiarmid, L. C. Hayek, & M. S. Foster, eds. 1994. Measuring and monitoring biological diversity: standard methods for amphibians. Smithsonian Institution Press, Washington, D.C.
- Heyer, W. R., & M. Muedeking Heyer. 2001. *Leptodactylus lithonaetes*.—Catalogue of American Amphibians and Reptiles 723:1–3.
- Heyer, W. R., & A. S. Thompson. 2000. *Leptodactylus rugosus*.—Catalogue of American Amphibians and Reptiles 708:1–5.
- Hillis, D. M., & R. de Sa. 1988. Phylogeny and taxonomy of the *Rana palmipes* group (Salientia: Ranidae).—Herpetological Monographs 2:1–26.
- Hoogmoed, M. S. 1969. Notes on the herpetofauna of Surinam. II. On the occurrence of *Allophryne ruthveni* Gaige (Amphibia, Salientia, Hylidae) in Surinam.—Zoologische Mededelingen 44:75–81.

- Hoogmoed, M. S. 1969. Notes on the herpetofauna of Surinam. III. A new species of *Dendrobates* (Amphibia, Salientia, Dendrobatidae) from Surinam.—*Zoologische Mededelingen* 44:133–141.
- Hoogmoed, M. S. 1977. On the presence of *Bufo nasicus* Werner in Guiana, with a redescription of the species on the basis of recently collected material.—*Zoologische Mededelingen* 51(16):265–275.
- Hoogmoed, M. S. 1979. Resurrection of *Hyla ornatissima* Noble (Amphibia, Hylidae) and remarks on related species of green tree frogs from the Guiana area: notes on the herpetofauna of Surinam VI. E. J. Brill, Leiden.
- Hoogmoed, M. S. 1979b. The herpetofauna of the Guianian region. In W. E. Duellman, ed., *The South American herpetofauna: its origin, evolution and dispersal*.—Monograph of the Museum of Natural History, University of Kansas, no. 7:241–279.
- Hoogmoed, M. S. 1990. Biosystematics of South American Bufonidae, with special reference to the Bufo “*typhonius*” group. Pp. 113–123 in G. Peters and R. Hutterer, eds., *Vertebrates in the tropics*. Museum A. Koenig, Bonn.
- Hoogmoed, M. S. 1990. Resurrection of *Hyla wavrini* Parker (Amphibia: Anura: Hylidae), a gladiator frog from northern South America.—*Zoologische Mededelingen* 64:71–93.
- Hoogmoed, M. S., & T. C. S. Avila-Pires. 1991. Annotated checklist of the herpetofauna of Petit Saut, Sinnamary River, French Guiana.—*Zoologische Mededelingen* 65(5):53–88.
- Hoogmoed, M. S., D. M. Borges, & P. Cascon. 1994. Three new species of the genus *Adelophryne* (Amphibia: Anura: Leptodactylidae) from northeastern Brazil, with remarks on the other species of the genus.—*Zoologische Mededelingen* 68:271–300.
- Hoogmoed, M. S., & S. Gorzula. 1979. Checklist of the savanna inhabiting frogs of the El Manteco region with notes on their ecology and the description of a new species of tree-frog (Hylidae, Anura).—*Zoologische Mededelingen* 54:183–216.
- Hoogmoed, M. S., & J. Lescure. 1984. A new genus and two new species of minute Leptodactylid frogs from northern South America, with comments upon *Phyzelaphryne* (Amphibia: Anura: Leptodactylidae).—*Zoologische Mededelingen* 58:85–115.
- Hoogmoed, M. S., J. D. Lynch, & J. Lescure. 1977. A new species of *Eleutherodactylus* from Guiana (Leptodactylidae, Anura).—*Zoologische Mededelingen* 51(3):33–41.
- Jungfer, K.-H., & W. Böhme. 1991. The backpack strategy of parental care in frogs, with notes on froglet-carrying in *Stefania evansi* (Boulenger, 1904) (Anura: Hylidae: Hemiphraactinae).—*Revue Française d’Aquariologie* 18:91–96.
- Jungfer, K.-H., & W. Böhme. 2004. A new poison-dart frog (*Dendrobates*) from northern central Guyana (Amphibia: Anura: Dendrobatidae).—*Salamandra* 40(2):99–104.
- Jungfer, K.-H., & W. Hödl. 2002. A new species of *Osteocephalus* from Ecuador and a redescription of *O. leprieurii* (Dumeril & Bibron, 1841) (Anura: Hylidae).—*Amphibia-Reptilia* 23:21–46.
- Jungfer, K. H., & L. C. Schiesari. 1995. Description of a central Amazonian and Guianan tree-frog, genus *Osteocephalus* (Anura, Hylidae), with oophagous tadpoles.—*Alytes* 13:1–13.
- Kaiser, H., C. L. Barrio-Amorós, J. D. Trujillo, & J. D. Lynch. 2002. Expansion of *Eleutherodactylus johnstonei* in northern South America: rapid dispersal through human interactions.—*Herpetological Review* 33:290–294.
- Kok, P. J. R. 2000. A survey of the anuran fauna of Montagne Belvédère, county of Saül, French Guiana: field list with comments on taxonomy and ecology.—*The British Herpetological Society Bulletin* 71:6–26.
- Kok, P. J. R. 2000. Addenda to ‘A survey of the anuran fauna of Montagne Belvédère, County of Saül, French Guiana’.—*Herpetological Bulletin* 73:1.
- La Marca, E. 1992. Catalogo taxonomico, biogeografico y bibliografico de las ranas de Venezuela.—*Cuadernos Geograficos, Universidad de los Andes* 1:1–97.
- La Marca, E. 1997 [“1996”]. Ranas del genero *Colostethus* (Amphibia: Anura: Dendrobatidae) de la Guayana venezolana con la descripcion de siete especies nuevas.—*Publicaciones de la Asociación de los Amigos de Doñana* 9:1–64.
- La Marca, E. 1997. Lista actualizada de los anfibios de Venezuela. Pp. 103–120 in E. La Marca, ed., *Vertebrados actuales y fósiles de Venezuela*, vol. I. Museo de Ciencia y Tecnología. Mérida, Venezuela.
- La Marca, E., J. C. Señaris, & C. Molina. 2002. Geographic distribution: *Colostethus tepuyensis*.—*Herpetological Review* 33(3):219.
- La Marca, E., & H. M. Smith. 1982. The anuran named *Hyla loveridgei* Rivero.—*Caribbean Journal of Science* 18:21.
- Lescure, J. 1973 [“1972”]. Contribution a l’étude des amphibiens de Guyane française. I. Notes sur *Atelopus flavescens* Dumeril et Bibron et description d’une nouvelle espece.—*Vie Melieu* 23:125–141.
- Lescure, J. 1973 [“1972”]. Contribution a l’étude des amphibiens de Guyane française. II. *Leptodactylus fuscus* (Schneider).—*Annales du Muséum d’Histoire Naturelle de Nice* 1:91–100.
- Lescure, J. 1975a. Contribution à l’étude des amphibiens de Guyane française III. Une nouvelle espèce de *Colostethus* (Dendrobatidae): *Colostethus degranvillei* nov. sp.—*Bulletin du Muséum National d’Histoire Naturelle* 3(293), *Zoologie* 203:413–420.
- Lescure, J. 1975b. Contribution a l’étude des amphibiens de Guyane française V. Les Centrolenidae.—*Bulletin de la Société Zoologique de France* 100:385–394.
- Lescure, J. 1975c. Biogéographie et écologie des amphibiens de Guyane française.—*Compte rendu Sommaire des Séances de la Societe Biogeographie* 440:68–82.
- Lescure, J. 1976. Contribution à l’étude des amphibiens de Guyane française VI. Liste préliminaire des anoures.—*Bulletin du Muséum National d’Histoire Naturelle* 3(377), *Zoologie* 265:475–525.
- Lescure, J. 1981a. Contribution à l’étude des amphibiens de Guyane française VII. Les Eleutherodactylus (Anura, Leptodactylidae).—*Revue Française d’Aquariologie* 8:25–32.
- Lescure, J. 1981b. Contribution a l’étude des amphibiens de Guyane française VIII. Validation d’*Atelopus spumarius* Cope 1871.—*Bulletin du Muséum National d’Histoire Naturelle* 4:893–910.
- Lescure, J. 1981c. Contribution à l’étude des amphibiens de Guyane française IX. Le têtard gastromyzophore d’*Atelopus flavescens* Duméril et Bibron (Anura, Bufonidae).—*Amphibia-Reptilia* 2:209–215.
- Lescure, J. 1982. Les amphibiens anoures de la foret Guyanaise (region de Trois Sauts, Guyane française).—*Memoires du Muséum National d’Histoire Naturelle Paris Serie A, Zoologie* 132:43–51.
- Lescure, J., P. Cerdan, J. C. de Massary, & C. Marty. 1998. Découverte d’un amphibien tres rare, *Pipa aspera* Mueller (Anura: Pipidae), en Guyane française.—*Revue Française d’Aquariologie* 25:45–46.
- Lescure J., & C. Marty. 2000.—*Atlas des amphibiens de Guyane. Patrimoines Naturels* 45. Muséum National d’Histoire Naturelle, Paris.
- Lescure, J., V. Marty, C. Marty, M. Auber-Thomas, T. Letellier, & F. Starace. 1995. Contribution à l’étude des Amphibiens de Guyane française. X, Les *Phyllomedusa* (Anura, Hyli-

- dae).—*Revue Française d'Aquariologie et Herpétologie* 22: 35–50.
- Lescure, J., V. Marty, C. Marty, & M. Auber-Thomas. 1996. Contribution à l'étude des Amphibiens de Guyane française. XI. Les Phrynohyas (Anura, Hylidae).—*Revue Française d'Aquariologie et Herpétologie* 23:69–76.
- Lima, A. P. 1992. The tadpole of *Leptodactylus riveroi* Heyer and Pyburn, 1983 (Anura: Leptodactylidae).—*Journal of Herpetology* 26:91–93.
- Lötters, S. 1996. The Neotropical toad genus *Atelopus*: Checklist—Biology—Distribution. Vences & Glaw Verlags GbR. Köln, 143 pp.
- Lynch, J. D. 1976. The species groups of the South American frogs of the genus *Eleutherodactylus* (Leptodactylidae).—*Occasional Papers of the Museum of Natural History, University of Kansas*, no. 61:1–24.
- Lynch, J. D. 1977. Two new species of *Eleutherodactylus* (Amphibia: Leptodactylidae) from northeastern South America.—*Proceedings of the Biological Society of Washington* 90:424–439.
- Lynch, J. D. 1979. A new genus for *Elosia duidensis* Rivero (Amphibia, Leptodactylidae) from southern Venezuela.—*American Museum Novitates* 2680:1–8.
- Lynch, J. D. 1989. A review of the Leptodactylid frogs of the genus *Pseudopaludicola* in Northern South America.—*Copeia* 1989:577–588.
- Lynch, J. 1999. Una aproximación a las culebras ciegas de Colombia (Amphibia: Gymnophiona).—*Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales* 23(Suplemento Especial):317–337.
- Lynch, J., P. M. Ruiz-Carranza, & M. C. Ardila-Robayo. 1997. Biogeographic patterns of Colombian frogs and toads.—*Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales* 21(80):237–248.
- Lynch, J., & A. M. Suárez-Mayorga. 2001. The distributions of the gladiator frogs (*Hyla boans* group) in Colombia, with comments on size variation and sympatry.—*Caldasia* 23(2): 491–507.
- Lynch, J., & M. A. Vargas Ramirez. 2000 [“1999”]. Lista preliminar de especies de anuros del Departamento del Guainia, Colombia.—*Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales* 24:579–589.
- MacCulloch, R. D., & A. Lathrop. 2002. Exceptional diversity of the genus *Stefania* (Anura: Hylidae) on Mount Ayanganna, Guyana; three new species and new distributional records.—*Herpetologica* 58:327–346.
- Magdefrau, H. 1991. Rufe, paarung und eiablage bei einer froschart der gattung *Stefania* (Rivero, 1966).—*Herpetofauna* 13: 7–13.
- Magdefrau, H., K. Magdefrau, & A. Schluter. 1991. Herpetologische daten von Guaiquinima-Tepui, Venezuela.—*Herpetofauna* 13:13–26.
- Martins, M., & G. Moreira. 1991. The nest and the tadpole of *Hyla wavrini* Parker (Amphibia, Anura).—*Memorias do Instituto Butantan* 53:197–204.
- Marty, C., & P. Gaucher. 1999. Sound guide to the tailless amphibians of French Guiana. Centre Bioacoustique Alpin. Complementary CD in J. Lescure and C. Marty. 2000. Atlas des amphibiens de Guyane. Patrimoines Naturels 45. Muséum National d'Histoire Naturelle, Paris.
- McDiarmid, R. W. 1973. A new species of *Atelopus* (Anura, Bufonidae) from northeastern South America.—*Natural History Museum of Los Angeles County Contributions in Science* 240:1–12.
- McDiarmid, R. W., & M. A. Donnelly. 2005. The herpetofauna of the Guayana highlands: amphibians and reptiles of the Lost World. Chapter 18, pp. 461–560 in M. A. Donnelly, B. I. Crother, C. Guyer, M. H. Wake, and M. E. White, eds., Ecology and evolution in the tropics: a herpetological perspective. University of Chicago Press, Chicago, IL.
- McDiarmid, R. W., & S. Gorzula. 1989. Aspects of the reproductive ecology and behavior of the tepui toads, genus *Oreophrynella* (Anura, Bufonidae).—*Copeia* 1989(2):445–451.
- McDiarmid, R. W., & A. Paolillo O. 1988. Herpetological collections—Cerro de la Neblina, updated January 1988. Pp. 667–670 in C. Brewer-Carías, ed., Cerro de la Neblina. Resultados de la Expedición 1983–1987. Fundación para el Desarrollo de las Ciencias Físicas, Matemáticas y Naturales, Caracas.
- McDiarmid, R. W., & J. M. Savage. 1984. Taxonomic status of the genus *Centrolenella* Noble (Anura: Centrolenidae).—*Journal of Herpetology* 18:213–215.
- Meinhardt, D. J., & J. R. Parmelee. 1996. A new species of *Colostethus* (Anura: Dendrobatidae) from Venezuela.—*Herpetologica* 52:70–77.
- Mijares-Urrutia, A. 1993. The tadpole of *Hyla granosa* (Anura: Hylidae) from southeastern Venezuela.—*Revista Chilena de Historia Natural* 66:143–147.
- Morales, V. R. 2002. [“2000”]. Sistemática y biogeografía del grupo *trilineatus* (Amphibia, Anura, Dendrobatidae, *Colostethus*), con descripción de once nuevas especies.—*Publicaciones de la Asociación de Amigos de Doñana* 13:1–59.
- Myers, C. W. 1997. Preliminary remarks on the summit herpetofauna of Auyantepui, eastern Venezuela.—*Acta Terramaris* 10:1–8.
- Myers, C. W., & M. A. Donnelly. 1996. A new herpetofauna from Cerro Yaví, Venezuela: first results of the Robert G. Goelet American Museum–Terramar Expedition to the northwestern tepuis.—*American Museum Novitates* 3172:1–56.
- Myers, C. W., & M. A. Donnelly. 1997. A tepui herpetofauna on a granitic mountain (Tamacuari) in the borderland between Venezuela and Brazil: report from the Phipps Tapirapécó expedition.—*American Museum Novitates* 3213:1–71.
- Myers, C. W., & M. A. Donnelly. 2001. Herpetofauna of the Yutajé-Corocoro Massif, Venezuela: second report from the Robert G. Goelet American Museum–Terramar Expedition to the northwestern tepuis.—*Bulletin of the American Museum of Natural History* 261:1–85.
- Neckel-Oliveira, S., W. E. Magnusson, A. P. Lima, & L. K. A. Albernaz. 2000. Diversity and distribution of frogs in an Amazonian savanna in Brazil.—*Amphibia-Reptilia* 21:317–326.
- Noble, G. K. 1923. New batrachians from the tropical research station, British Guiana.—*Zoologica NY* 3(14):289–299.
- Noonan, B., & R. Bonett. 2003. A new species of *Hyalinobatrachium* from the highlands of Guyana.—*Journal of Herpetology* 37(1):91–97.
- Noonan, B., & M. B. Harvey. 2000. A new species of glass frog (Anura: Centrolenidae) from the highlands of Guyana.—*Herpetologica* 56:294–302.
- Nussbaum, R. A., & M. S. Hoogmoed. 1979. Surinam caecilians, with notes on *Rhinatrema bivittatum* and the description of a new species of *Microcaecilia* (Amphibia: Gymnophiona).—*Zoologische Mededelingen* 54:217–235.
- Parker, T. A., III, R. B. Foster, L. H. Emmons, P. Freed, A. B. Forsyth, B. Hoffman, & B. D. Gill. 1993. A biological assessment of the Kanuku Mountain region of Southwestern Guyana. RAP Working Papers 5. Conservation International, Washington, D.C.
- Péfaur, J. E., & J. A. Rivero. 2000. Distribution, species-richness, endemism and conservation of Venezuelan amphibians and reptiles.—*Amphibian and Reptile Conservation* 2:42–70.
- Reynolds, R., R. MacCulloch, M. Tamessaar, C. Watson, C. J. Cole, & C. Townsend. 2001. Preliminary checklist of the herpetofauna of Guyana. Biological Diversity of the Guiana



- Shield Program, Smithsonian Institution. ([www.mnh.si.edu/biodiversity/bdg/guyherps.html](http://www.mnh.si.edu/biodiversity/bdg/guyherps.html)).
- Rivero, J. A. 1961. Salientia of Venezuela.—Bulletin of the Museum of Comparative Zoology, Harvard 126(1):1–267.
- Rivero, J. A. 1965 [“1964”]. The distribution of Venezuelan frogs V, the Venezuelan Guayana.—Caribbean Journal of Science 4:411–420.
- Rivero, J. 1968 [“1966”]. Notes on the genus *Cryptobatrachus* (Amphibia, Salientia) with the description of a new race and four new species of a new genus of hylid frogs.—Caribbean Journal of Science 6:137–149.
- Rivero, J. A. 1968a [“1967”]. A new race of *Otophryne robusta* from the Chimantá-tepui of Venezuela.—Caribbean Journal of Science 7:155–158.
- Rivero, J. A. 1968b. A new species of *Eleutherodactylus* from the Guayana region, Bolivar, Venezuela.—Breviora 306:1–11.
- Rivero, J. A. 1968c. A new species of *Elosia* (Amphibia, Salientia) from Mt. Duida, Venezuela.—American Museum Novitates 2334:1–9.
- Rivero, J. A. 1968d. A new species of *Hyla* (Amphibia, Salientia) from the Venezuelan Guayana.—Breviora 307:1–5.
- Rivero, J. A. 1968e. El problema de *Leptodactylus rhodomystax* Boulenger (Amphibia, Salientia).—Memorias de la Sociedad de Ciencias Naturales La Salle 28:145–149.
- Rivero, J. A. 1968f. Los centrolenidos de Venezuela (Amphibia, Salientia).—Memorias de la Sociedad de Ciencias Naturales La Salle 28(81):301–334.
- Rivero, J. A. 1969. Sobre la *Hyla rubra* Laurenti y la *Hyla x-signata* Spix (Amphibia, Salientia).—Memorias de la Sociedad de Ciencias Naturales La Salle 29:108–118.
- Rivero, J. 1970. On the origin, endemism, and distribution of the genus *Stefania* Rivero (Amphibia, Salientia) with the description of a new species from southeastern Venezuela.—Boletín de la Sociedad Venezolana de Ciencias Naturales 28:456–481.
- Rivero, J. 1972 [“1971”]. Notas sobre los anfibios de Venezuela I. Sobre los hílidos de la guayana venezolana.—Caribbean Journal of Science 11:181–193.
- Rivero, J. A. 1985. Nuevos centrolenidos de Colombia y Venezuela.—Brenesia 23:335–373.
- Rivero, J. 1990 [“1988”]. Sobre las relaciones de las especies del género *Colostethus* (Amphibia, Dendrobatidae).—Memoria de la Sociedad de Ciencias Naturales La Salle 48:3–32.
- Rivero, J. A., J. A. Langone, & C. M. Prigioni. 1986. Anfibios anuros colectados por la expedición del Museo Nacional de Historia Natural de Montevideo al Río Caura, Estado Bolívar, Venezuela; con la descripción de una nueva especie de *Colostethus* (Dendrobatidae).—Comunicaciones Zoológicas del Museo de Historia Natural de Montevideo 11:1–15.
- Robinson, M. 1989. Comentarios sobre una colección de anfibios y reptiles hecha en los alrededores del río Cunucunuma al norte del Cerro Duida y en la cima del Cerro Marahuaca, Territorio Federal Amazonas.—Acta Terramaris 1:59–64.
- Roze, J. A., & H. Solano. 1963. Resumen de la familia Caeciliidae (Amphibia: Gymnophiona) de Venezuela.—Acta Biologica Venezuelica 3:287–300.
- Ruiz-Carranza, P. M., & J. D. Lynch. 1991. Ranas Centrolenidae de Colombia I: propuesta de una nueva clasificación generica.—Lozania 57:1–30.
- Ruiz-Carranza, P. M., M. C. Ardila-Robayo, & J. D. Lynch. 1996. Lista actualizada de la fauna de anfibios de Colombia.—Revista de la Academia Colombiana de Ciencias 20:365–415.
- Schiesari, L. S., & G. Moreira. 1996. The tadpole of *Phrynohyas coriacea* (Hylidae) with comments on the species’ reproduction.—Journal of Herpetology 30:404–407.
- Schluter, A., & K. Magdefrau. 1981. First record of *Hyla parviceps* on the lower step of a central Venezuelan table mountain.—Amphibia-Reptilia 12:217–219.
- Señaris, J. C. 1995 [“1993”]. Una nueva especie de *Oreophrynella* (Anura: Bufonidae) de la cima del Auyán-tepui, Edo. Bolívar, Venezuela.—Memoria de la Sociedad de Ciencias Naturales La Salle 53:177–183.
- Señaris, J. C. 1998. Geographic distribution (Anura): *Cochranella oyampiensis*.—Herpetological Review 28(4):207.
- Señaris, J. C. 2000. Herpetofauna de la Gran Sabana. In O. Huber and G. Febres, eds., Guía Ecológica de la Gran Sabana. The Nature Conservancy, Caracas.
- Señaris, J. C., & J. Ayarzagüena. 1995 [“1993”]. Una nueva especie de *Centrolenella* (Anura: Centrolenidae) del Auyán-tepui, Edo. Bolívar, Venezuela.—Memoria de la Sociedad de Ciencias Naturales La Salle 53:121–126.
- Señaris, J. C., & J. Ayarzagüena. 2001. Una nueva especie de rana de cristal del género *Hyalinobatrachium* (Anura: Centrolenidae) del Delta del río Orinoco, Venezuela.—Revista de Biología Tropical 49(3):1007–1017.
- Señaris, J. C., & J. Ayarzagüena. 2002. A new species of *Hyla* (Anura: Hylidae) from the highlands of Venezuelan Guayana.—Journal of Herpetology 36:634–640.
- Señaris J. C., & J. Ayarzagüena. 2004. Contribución al conocimiento de la Anurofauna del Delta del Orinoco, Venezuela: Diversidad, Ecología y Biogeografía.—Memoria de la Fundación la Salle de Ciencias Naturales 157:129–152.
- Señaris, J. C., J. Ayarzagüena, & S. Gorzula. 1994. Los sapos de la familia Bufonidae (Amphibia: Anura) de las tierras altas de la Guayana Venezolana: descripción de un nuevo género y tres especies.—Publicaciones de la Asociación de los Amigos de Doñana 3:1–37.
- Señaris, J. C., J. Ayarzagüena, & S. Gorzula. 1997 [“1996”]. Revisión taxonómica del género *Stefania* (Anura: Hylidae) en Venezuela con la descripción de cinco nuevas especies.—Publicaciones de la Asociación de los Amigos de Doñana 7:1–57.
- Señaris J. C., C. DoNascimento, & O. Villareal. 2005. A new species of the genus *Oreophrynella* (Anura: Bufonidae) from the Guyana Highlands.—Papeis Avulsos de Zoologia, Museu de Sao Paulo 45(4):41–47.
- Señaris, J. C., E. La Marca, & C. Molina. 2002. Geographic distribution: *Lithodytes lineatus*.—Herpetological Review 33:145–146.
- Señaris, J. C., C. Molina, & E. La Marca. 2002. Geographic distribution: *Stefania scalae*.—Herpetological Review 35:80.
- Señaris, J. C., & O. Vernet. 1997. Geographic distribution: *Hyla ornaticissima*.—Herpetological Review 28:207.
- Silverstone, P. A. 1975. A revision of the poison-arrow frogs of the genus *Dendrobates* Wagler.—Natural History Museum of Los Angeles County Science Bulletin 21:1–55.
- Silverstone, P. A. 1976. A revision of the poison-arrow frogs of the genus *Phyllobates* Bibron in Sagra (family Dendrobatidae).—Natural History Museum of Los Angeles County Science Bulletin 27:1–53.
- Smith, E. N., & B. P. Noonan. 2001. A new species of *Osteocephalus* (Anura: Hylidae) from Guyana.—Revista de Biología Tropical 49(1):347–357.
- Stuart, S. N., J. S. Chanson, N. A. Cox, B. E. Young, A. S. L. Rodrigues, D. L. Fischman, & R. W. Waller. 2004. Status and trends of amphibian declines and extinctions worldwide.—Science 306:1783–1786.
- Tamessar, M., G. Watkins, D. Arjoon, M. Donnelly, R. Reynolds, C. J. Cole, G. Bourne, R. MacCulloch, & B. Noonan. 2001. Status of amphibians in Guyana, South America.—Report for Declining Amphibian Population Task Force, 8 pp.
- Taylor, E. M. 1968.—The caecilians of the world: a taxonomic review. University of Kansas Press. 848 pp.
- Trueb, L. 1970. The evolutionary relationships of casque-headed

- treefrogs with co-ossified skulls (family Hylidae).—University of Kansas Publications, Museum of Natural History no. 18:547–716.
- Trueb, L., & D. C. Cannatella. 1986. Systematics, morphology and phylogeny of the genus *Pipa* (Anura: Pipidae).—Herpetologica 42:412–449.
- Trueb, L., & D. Massemin. 2000. The osteology and relationships of *Pipa aspera* (Amphibia: Anura: Pipidae), with notes on its natural history in French Guiana.—Amphibia-Reptilia 22:33–54.
- Wassersug, R. J., & W. P. Pyburn. 1987. The biology of the Peret toad, *Otophryne robusta* (Microhylidae), with special consideration of its fossorial larva and systematic relationships.—Zoological Journal of the Linnean Society 22:137–169.
- Wild, E. R. 1995. New genus and species of Amazonian microhylid frog with a phylogenetic analysis of New World genera.—Copeia 1995:837–845.
- Young, B. E., S. N. Stuart, J. S. Chanson, N. A. Cox, & T. M. Boucher. 2004. Disappearing jewels: the status of New World amphibians. NatureServe, Arlington, Virginia. (<http://www.natureserve.org/publications/disappearing-jewels.pdf>).
- Zimmerman, H., & E. Zimmerman. 1988. Ethotaxonomie und zoogeographische Artengruppenbildung bei Pfeilgiftfroschen.—Salamandra 24(2/3):125–160.
- Zweifel, R. G. 1986. A new genus and species of microhylid frog from the Cerro de la Neblina region of Venezuela and a discussion of relationships among New World microhylid genera.—American Museum Novitates 2863:1–24.

### Order: Anura—Frogs & Toads

#### Family: Allopnyridae

*Allopnyne ruthveni* Gaige, 1926  
Endemic to Guiana Shield

VA BO DA BA RO PA AP GU SU FG

#### Family: Bufonidae

*Atelopus flavescens* Duméril & Bibron, 1841  
Endemic to French Guiana and Amapá, Brazil, 10–100 m

AP FG

*Atelopus franciscus* Lescure, 1974  
Endemic to French Guiana, 50–200 m

FG

*Atelopus spumarius* Cope, 1871  
Widespread; may include more than one species

AP GU SU FG

*Bufo andersoni* Melin, 1941

CG

*Bufo ceratophrys* Boulenger, 1882  
Widespread

CG VA

*Bufo dapsilis* Myers & Carvalho, 1945

CG BA

*Bufo granulatus* Spix, 1824  
Widespread

CG BO DA BA RO GU SU FG

*Bufo guttatus* Schneider, 1799  
Widespread

CG VA BO DA BA RO PA GU SU FG

*Bufo margaritifera* complex (Laurenti, 1768)  
Widespread

CG VA BO DA BA RO PA AP GU SU FG

*Bufo marinus* (Linnaeus, 1758)  
Widespread

CG VA BO DA BA RO PA AP GU SU FG

*Bufo nasicus* Werner, 1903  
Endemic to eastern Venezuela and western Guyana, 500–1350 m

BO GU

*Dendrophryniscus minutus* (Melin, 1941)

CG PA AP GU SU FG

*Metaphryniscus sosae* Señaris *et al.* 1994  
Endemic to Cerro Marahuaca, Amazonas-Venezuela, 2600 m

VA

*Oreophrynella cryptica* Señaris, 1995  
Endemic to summit of Auyán-tepui, Bolívar-Venezuela, 1750–2330 m

BO

*Oreophrynella huberi* Diego-Aransay & Gorzula, 1988  
Endemic to summit of Cerro El Sol, Bolívar-Venezuela, 1700 m

BO

*Oreophrynella macconnelli* Boulenger, 1900  
Endemic to Mt. Roraima slopes, Guyana and Venezuela

BO GU

*Oreophrynella nigra* Señaris *et al.* 1994  
Endemic to summits of Kukenán and Yuruaní-tepui, Bolívar-Venezuela, 2300–2700 m

BO

*Oreophrynella quelchii* (Boulenger, 1895)  
Endemic to summit of Roraima, Venezuela, Brazil, and Guyana, and Wei-Assipu-tepui on Guyana-Brazil border

BO RO GU

*Oreophrynella vasquezii* Señaris *et al.* 1994  
Endemic to summit of Ilú-tepui, Bolívar-Venezuela, 2450–2650 m

BO

#### Family: Centrolenidae

*Centrolene gorzulai* (Ayarzagüena, 1992)  
Endemic to summit of Auyán-tepui, Bolívar-Venezuela, 1850 m

BO

*Centrolene lema* Duellman & Señaris, 2003  
Endemic to La Escalera, Gran Sabana, Bolívar-Venezuela, 1250 m

BO

*Centrolene papillahallicum* Noonan & Harvey, 2000  
Endemic to Peters Mountain, 3.6 km N of Imbaimadai, Pakaraima Mountains, Guyana, 900 m

GU

<i>Cochranella duidaeana</i> (Ayarzagüena, 1992) Endemic to south summit of Cerro Duida, Amazonas-Venezuela, 2140 m	VA										
<i>Cochranella geijskesi</i> (Goin, 1966) Endemic to slopes of Wilhelmina Mountains, District Nickerie, Surinam, 200 m									SU		
<i>Cochranella helenae</i> (Ayarzagüena, 1992) Endemic to Quebrada de Jaspe, Gran Sabana, Venezuela, 1000 m	BO										
<i>Cochranella oyampiensis</i> (Lescure, 1975) Endemic to French Guiana, Surinam, Venezuela Guayana and northern Brazil, 90–900 m	BO		RO	PA	AP				SU	FG	
<i>Cochranella riveroi</i> (Ayarzagüena, 1992) Endemic to summit of Cerro Aracamuni, Amazonas-Venezuela, 1600 m	VA										
<i>Hyalinobatrachium crurifasciatum</i> Myers & Donnelly, 1997 Known from numerous locations in Venezuela	VA	BO									
<i>Hyalinobatrachium eccentricum</i> Myers & Donnelly, 2001 Endemic to Cerro Yutajé, Amazonas-Venezuela, 1700 m	VA										
<i>Hyalinobatrachium iaspidiensis</i> (Ayarzagüena, 1992) Endemic to Gran Sabana, Bolívar-Venezuela, 1000 m	BO										
<i>Hyalinobatrachium ignioculus</i> Noonan & Bonett, 2003 Endemic to Peters Mountain, 3.6 km N of Imbaimadai, Pakaraima Mountains, Guyana									GU		
<i>Hyalinobatrachium mondolfi</i> Señaris & Ayarzagüena, 2001 Endemic to the Orinoco Delta, Venezuela, 0–25 m			DA								
<i>Hyalinobatrachium nouraguensis</i> Lescure & Marty, 2000 Endemic to Montagne de Kaw, Monts Trinité, Courcibo and Saut Arataye, French Guiana, 50–150 m										FG	
<i>Hyalinobatrachium taylori</i> (Goin, 1968) Endemic to the Guianas and Venezuelan Guayana, 30–1850 m	VA	BO							GU	SU	FG
<b>Family: Dendrobatidae</b>											
<i>Allobates femoralis</i> (Boulenger, 1884) Widespread	CG	BO	BA	RO	PA	AP	GU	SU	FG		
<i>Colostethus ayarzaguenai</i> La Marca, 1997 Endemic to Cerro Jaua, Bolívar-Venezuela, 1600 m		BO									
<i>Colostethus baeobatrachus</i> Boistel & de Massary, 1999 Endemic to French Guiana and adjacent Surinam and Brazil, 50–500 m			BA			AP		SU	FG		
<i>Colostethus beebei</i> (Noble, 1923) Endemic to French Guiana, Guyana, Surinam, and adjacent Brazil, 50–500 m								GU	SU	FG	
<i>Colostethus brunneus</i> (Cope, 1887) Limits and distributions of this species are in need of further study	VA		BA						SU		
<i>Colostethus degranvillei</i> Lescure, 1975 Endemic to French Guiana and Surinam, 50–500 m									SU	FG	
<i>Colostethus fuliginosus</i> (Jimenez de la Espada, 1871)	VA										
<i>Colostethus guanayensis</i> La Marca, 1997 Endemic to Alto Río Parguaza, Serranía de Guanay, Amazonas-Venezuela, 1650–1800 m	VA										
<i>Colostethus marchesianus</i> (Melin, 1941)	CG	VA	BA		PA						
<i>Colostethus murisipanensis</i> La Marca, 1997 Endemic to summit of Murisipán-tepui, Bolívar-Venezuela, 2350 m		BO									
<i>Colostethus parimae</i> La Marca, 1997 Endemic to Cerro Delgado Chalbaud, Sierra Parima, Amazonas-Venezuela, 670 m	VA										
<i>Colostethus parkerae</i> Meinhardt & Parmelee, 1996 Endemic to La Escalera, Bolívar-Venezuela, 860–1300 m		BO									
<i>Colostethus praderioi</i> La Marca, 1997 Endemic to Cerro Roraima slopes, Bolívar-Venezuela, 1800–1950 m		BO									
<i>Colostethus roraima</i> La Marca, 1997 Endemic to Cerro Roraima, just below summit, Bolívar-Venezuela, 2700 m		BO									
<i>Colostethus sanmartini</i> Rivero <i>et al.</i> 1986 Endemic to Las Majadas, Río Orinoco, Bolívar-Venezuela, 100 m		BO									
<i>Colostethus shrevei</i> Rivero, 1961 Endemic to Cerro Marahuaca, Amazonas-Venezuela, 350–1829 m	VA										
<i>Colostethus stepheni</i> Martins, 1989			BA								
<i>Colostethus sumtuosus</i> Morales, 2002								PA			
<i>Colostethus tamacuarensis</i> Myers & Donnelly, 1997 Endemic to Pico Tamacuari, Sierra Tapirapecó, Amazonas-Venezuela, 1160–1200 m	VA										
<i>Colostethus tepuyensis</i> La Marca, 1997 Endemic to Auyán-tepui slopes, Bolívar-Venezuela, 400–1650 m		BO									
<i>Colostethus undulatus</i> Myers & Donnelly, 2001 Endemic to Cerro Yutajé, Amazonas-Venezuela, 1750 m	VA										
<i>Dendrobates azureus</i> Hoogmoed, 1969 Endemic to slopes of Vier Gebroeders Mountain, Surinam, 315–430 m									SU		
<i>Dendrobates leucomelas</i> Fitzinger, 1864 Endemic to the Venezuela Guayana, Guyana, northern Brazil and southeastern Colombia, 50–800 m	CG	VA	BO	DA	BA	RO			GU		





<i>Scinax boesemani</i> (Goin, 1966) Endemic to Guyana, Surinam, Venezuelan Guayana and northern Brazil, 0–650 m	VA	BO	DA	BA	RO	PA	GU	SU	FG		
<i>Scinax cruentommus</i> (Duellman, 1972)				BA					FG		
<i>Scinax danae</i> (Duellman, 1986) Endemic to La Escalera, Bolívar-Venezuela, 1250 m		BO									
<i>Scinax exiguus</i> (Duellman, 1986) Endemic to Gran Sabana, Bolívar-Venezuela, 1100–1250 m		BO			RO						
<i>Scinax garbei</i> (Miranda-Ribeiro, 1926)	CG	VA		BA		PA					
<i>Scinax jolyi</i> Lescure & Marty, 2000 Endemic to Crique Gabrielle, French Guiana, 10 m									FG		
<i>Scinax lindsayi</i> Pyburn, 1992 Endemic to Amazonas-Brazil and Vaupés-Colombia, 50 m	CG			BA							
<i>Scinax nebulosus</i> (Spix, 1824)		BO		BA	RO	PA	AP	GU	SU	FG	
<i>Scinax proboscideus</i> (Brongersma, 1933) Endemic to the Guianas, 200–600 m								GU	SU	FG	
<i>Scinax rostratus</i> (Peters, 1863)	CG	VA	BO	DA				GU			
<i>Scinax ruber</i> (Laurenti, 1768)	CG	VA	BO	DA	BA	RO	PA	AP	GU	SU	FG
<i>Scinax trilineatus</i> (Hoogmoed & Gorzula, 1979) Endemic from Venezuela to Belém, Brazil, 0–200 m			BO					GU	SU		
<i>Scinax wandae</i> (Pyburn & Fouquette, 1971)	CG	VA									
<i>Scinax x-signatus</i> group (Spix, 1824)			BO	DA			PA	AP	GU	SU	FG?
<i>Sphaenorhynchus carneus</i> (Cope, 1868)	CG			BA							
<i>Sphaenorhynchus dorisae</i> (Goin, 1957)	CG			BA							
<i>Sphaenorhynchus lacteus</i> Daudin, 1802	CG	VA	BO	DA	BA	RO		AP	GU	SU	FG
<i>Stefania ackawaio</i> MacCulloch & Lathrop 2002 Endemic to Mt. Ayanganna, Guyana, 1490–1550 m								GU			
<i>Stefania ayanganna</i> MacCulloch & Lathrop, 2002 Endemic to Mt. Ayanganna, Guyana, 1490–1550 m								GU			
<i>Stefania breweri</i> Barrio-Amorós & Fuentes, 2003 Endemic to summit of Cerro Autana, Amazonas-Venezuela		VA									
<i>Stefania coxi</i> MacCulloch & Lathrop, 2002 Endemic to Mt. Ayanganna, Guyana, 1490–1550 m								GU			
<i>Stefania evansi</i> (Boulenger, 1904) Endemic to Guyana, 20–890 m								GU			
<i>Stefania ginesi</i> Rivero, 1968 Endemic to summits of Macizo de Chimantá, Bolívar-Venezuela, 1850–2600 m				BO							
<i>Stefania goini</i> Rivero, 1968 Endemic to Cerro Duida and Cerro Huachamacari, Amazonas-Venezuela, 1400–1700 m		VA									
<i>Stefania marahuaquensis</i> (Rivero, 1961) Endemic to Cerro Marahuaca, Cerro Duida and Cerro Culebra, Amazonas-Venezuela, 340–1200 m		VA									
<i>Stefania oculosa</i> Señaris <i>et al.</i> 1997 Endemic to Cerro Jaua, Bolívar-Venezuela, 1600 m				BO							
<i>Stefania percristata</i> Señaris <i>et al.</i> 1997 Endemic to Cerro Jaua, Bolívar-Venezuela, 1600 m				BO							
<i>Stefania riae</i> Duellman & Hoogmoed, 1984 Endemic to Cerro Sarisariñama, Amazonas-Venezuela, 1200 m		VA									
<i>Stefania riveroi</i> Señaris <i>et al.</i> 1997 Endemic to summit of Yuruani-tepui, Bolívar-Venezuela, 2300 m				BO							
<i>Stefania roraimae</i> Duellman & Hoogmoed, 1984 Endemic to Mt. Roraima and Mt. Ayanganna, Guyana, 1400–1500 m								GU			
<i>Stefania satelles</i> Señaris <i>et al.</i> 1997 Endemic to summits of Aprada, Angasima, Upuigma, and Murisipán, Bolívar-Venezuela, 2000–2100 m				BO							
<i>Stefania scalae</i> Rivero, 1970 Endemic to La Escalera, Bolívar-Venezuela, 860–1500 m				BO				GU			
<i>Stefania schuberti</i> Señaris <i>et al.</i> 1997 Endemic to summit of Auyán-tepui, Bolívar-Venezuela, 1750–2400 m				BO							
<i>Stefania tamacuarina</i> Myers & Donnelly, 1997 Endemic to Pico Tamacuari, Sierra Tapirapécó, Amazonas-Venezuela, 1270 m		VA									
<i>Stefania woodleyi</i> Rivero, 1968 Endemic to southern Pakaraima region, Guyana, 100–850 m								GU			
<i>Tepuihyla aecii</i> (Ayarzagüena <i>et al.</i> 1992) Endemic to summit of Cerro Duida, Amazonas-Venezuela, 2150 m		VA									

<i>Tepuihyla edelcae</i> (Ayarzagüena <i>et al.</i> 1992)	BO																					
Endemic to summits of Auyán-tepui and Macizo de Chimantá, Bolívar-Venezuela, 1630–2600 m																						
<i>Tepuihyla galani</i> (Ayarzagüena <i>et al.</i> 1992)	BO																					
Endemic to Guadacapiapuy-tepui slopes, Bolívar-Venezuela, 1250 m																						
<i>Tepuihyla luteolabris</i> (Ayarzagüena <i>et al.</i> 1992)	VA																					
Endemic to northern summit of Cerro Marahuaca, Amazonas-Venezuela, 2550 m																						
<i>Tepuihyla rimarum</i> (Ayarzagüena <i>et al.</i> 1992)	BO																					
Endemic to summit of Ptari-tepui, Bolívar-Venezuela, 2400 m																						
<i>Tepuihyla rodriguezi</i> (Rivero, 1968)	BO																					
Endemic to Sierra de Lema and Gran Sabana, Bolívar-Venezuela, 1100–1210 m																						
<i>Tepuihyla talbergae</i> Duellman & Yoshpa, 1996																			GU			
Endemic to Kaieteur Falls area, Potaro River, Guyana, 366 m																						
<b>Family: Leptodactylidae</b>																						
<i>Adelophryne adiastrata</i> Hoogmoed & Lescure, 1984	CG																					
<i>Adelophryne gutturosa</i> Hoogmoed & Lescure, 1984	BO																	AP	GU			
Endemic to northeastern Venezuelan Guayana, the Guianas and Amapá, Brazil, 10–1200 m																						
<i>Adenomasp.</i> nov. [Boistel, de Massary and Angulo in press]																			FG			
Endemic to French Guiana (fide P. Gaucher), 100–500 m																						
<i>Adenomera andreae</i> (Müller, 1923)	CG	VA	BO		BA	RO	PA	AP	GU	SU	FG											
<i>Adenomera hylaedactyla</i> (Cope, 1868)	CG	VA	BO	DA	BA	RO	PA	AP	GU	SU	FG											
<i>Adenomera lutzii</i> Heyer, 1975																			GU			
Endemic to upper Potaro River and Mt. Ayanganna, Guyana, 800–1500 m																						
<i>Ceratophrys cornuta</i> (Linnaeus, 1758)	CG	VA			BA		PA		GU	SU	FG											
<i>Dischidodactylus colonnelloi</i> Ayarzagüena, 1985	VA																					
Endemic to summit of Cerro Marahuaca, Amazonas-Venezuela, 2550 m																						
<i>Dischidodactylus duidensis</i> (Rivero, 1968)	VA																					
Endemic to Cerro Duida slopes, Amazonas-Venezuela, 1402 m																						
<i>Edalorhina perezii</i> Jiménez de la Espada, 1870	CG																					
<i>Eleutherodactylus avius</i> Myers & Donnelly, 1997	VA																					
Endemic to Pico Tamacuari, Sierra Tapirapécó, Amazonas-Venezuela, 1160–1200 m																						
<i>Eleutherodactylus cantitans</i> Myers & Donnelly, 1996	VA																					
Endemic to Cerro Yaví and Cerro Yutajé, Amazonas-Venezuela, 1700–2150 m																						
<i>Eleutherodactylus cavernibardus</i> Myers & Donnelly, 1997	VA																					
Endemic to Pico Tamacuari, Sierra Tapirapécó, Amazonas-Venezuela, 1160–1200 m																						
<i>Eleutherodactylus chiastonotus</i> Lynch & Hoogmoed, 1977																		AP	SU	FG		
Endemic to northeastern Brazil, French Guiana, Surinam, and Amapá, Brazil, 0–700 m																						
<i>Eleutherodactylus fenestratus</i> (Steindachner, 1864)																		BA	PA	AP	GU	
<i>Eleutherodactylus gutturalis</i> Hoogmoed <i>et al.</i> 1977																			AP	SU	FG	
Endemic to northern Brazil, French Guiana and Surinam, 30–310 m																						
<i>Eleutherodactylus inguinalis</i> Parker, 1940																				GU	SU	FG
Endemic to the Guianas, 180–1200 m																						
<i>Eleutherodactylus johnstonei</i> Barbour, 1914																				BO	GU	FG
Introduced species																						
<i>Eleutherodactylus marahuaca</i> Fuentes & Barrio-Amoros, 2004	VA																					
Endemic to Marahuaca tepui, Amazonas-Venezuela																						
<i>Eleutherodactylus marmoratus</i> (Boulenger, 1900)	VA	BO			BA				AP	GU	SU	FG										
Endemic to eastern Venezuela and Guianas, 30–1463 m																						
<i>Eleutherodactylus memorans</i> Myers & Donnelly, 1997	VA																					
Endemic to Pico Tamacuari and Sierra Tapirapécó, Amazonas-Venezuela, 1160–1270 m																						
<i>Eleutherodactylus ockendeni</i> (Boulenger, 1912)	CG																					
<i>Eleutherodactylus pruinatus</i> Myers & Donnelly, 1996	VA																					
Endemic to Cerro Yaví, Amazonas-Venezuela, 2150 m																						
<i>Eleutherodactylus pulvinatus</i> Rivero, 1968																				BO	GU	
Endemic to Gran Sabana, Bolívar-Venezuela and adjacent Guyana, 1000–1500 m																						
<i>Eleutherodactylus vilarsi</i> Melin, 1941	CG	VA	BO		BA	RO																
<i>Eleutherodactylus yaviensis</i> Myers & Donnelly, 1996																				VA		
Endemic to Cerro Yaví and Cerro Yutajé, Amazonas-Venezuela, 1700–2150 m																						
<i>Eleutherodactylus zeuctotylus</i> Lynch & Hoogmoed, 1977	CG	VA																	AP	GU	SU	FG
<i>Eleutherodactylus zimmermanae</i> Heyer & Hardy, 1991																				BA		
<i>Hydrolaetare schmidti</i> (Cochran & Goin, 1959)	CG																			BA	PA	FG

<i>Leptodactylus bolivianus</i> Boulenger, 1898	CG VA BO DA RO PA AP GU SU FG
<i>Leptodactylus diedrus</i> Heyer, 1995	CG VA RO
<i>Leptodactylus fuscus</i> (Schneider, 1799)	CG VA BO DA BA RO PA AP GU SU FG
<i>Leptodactylus knudseni</i> Heyer, 1972	CG VA BO DA BA RO PA AP GU SU FG
<i>Leptodactylus labialis</i> (Cope, 1878)	BO
<i>Leptodactylus labyrinthicus</i> (Spix, 1824) Widespread	RO PA
<i>Leptodactylus leptodactyloides</i> (Andersson, 1945)	CG BO BA PA AP GU SU FG
<i>Leptodactylus lithonaetes</i> Heyer, 1996 Endemic to Amazonas, Guainia and Vaupes in Colombia; Venezuelan Guayana, 100–600 m	CG VA BO
<i>Leptodactylus longirostris</i> Boulenger, 1882	VA BO RO AP GU SU FG
<i>Leptodactylus macrosternum</i> Miranda-Ribeiro, 1926	BO DA BA RO PA AP GU SU
<i>Leptodactylus myersi</i> Heyer, 1995 Endemic to Amazonas and Roraima in Brazil, French Guiana, and Surinam, 100–600 m	BA RO SU FG
<i>Leptodactylus mystaceus</i> (Spix, 1824)	CG VA BO DA BA RO PA AP GU SU FG
<i>Leptodactylus pallidirostris</i> Lutz, 1930	VA BO DA RO GU SU FG
<i>Leptodactylus pentadactylus</i> (Laurenti, 1768)	CG VA BO DA BA RO PA AP GU SU FG
<i>Leptodactylus petersii</i> (Steindachner, 1864) Distinct from <i>L. podicipinus</i> , which does not occur in the Guiana Shield	CG VA BO DA RO PA AP GU SU FG
<i>Leptodactylus rhodomystax</i> Boulenger, 1883	CG VA BA RO PA AP GU SU FG
<i>Leptodactylus riveroi</i> Heyer & Pyburn, 1983	CG VA BA
<i>Leptodactylus rugosus</i> Noble, 1923 Endemic to Bolívar-Venezuela and Guyana, 230–2100 m	BO GU
<i>Leptodactylus sabanensis</i> Heyer, 1994 Endemic to Gran Sabana, Bolívar-Venezuela, 1000–1200 m	BO
<i>Leptodactylus stenodema</i> Jiménez de la Espada, 1875	CG BA GU? SU FG
<i>Leptodactylus wagneri</i> (Peters, 1862)	BA RO PA AP
<i>Lithodytes lineatus</i> (Schneider, 1799)	CG VA BO BA RO AP GU SU FG
<i>Physalaemus ephippifer</i> (Steindachner, 1864)	BO RO GU SU
<i>Physalaemus petersi</i> (Jiménez de la Espada, 1872)	CG AP SU FG
<i>Physalaemus pustulosus</i> (Cope, 1864)	BO DA GU
<i>Pleurodema brachyops</i> (Cope, 1869)	BO RO GU
<i>Pseudopaludicola boliviana</i> Parker, 1927	CG VA BA RO PA GU SU
<i>Pseudopaludicola llanera</i> Lynch, 1989	CG VA BO DA
<i>Vanzolinius discodactylus</i> (Boulenger, 1883)	BA
<b>Family: Microhylidae</b>	
<i>Adelastes hylonomus</i> Zweifel, 1986 Endemic to Cerro de la Neblina, southern Amazonas-Venezuela, 140 m	VA
<i>Chiasmocleis hudsoni</i> Parker, 1940 Endemic to Guyana and Surinam, 200–500 m	VA BA RO PA AP GU SU FG
<i>Chiasmocleis shudikarensis</i> Dunn, 1949 Endemic to the Guianas and Amazonas-Brazil, 0–300 m	BA PA GU SU FG
<i>Ctenophryne geayi</i> Mocquard, 1904	CG VA BO DA BA RO PA GU SU FG
<i>Elachistocleis bicolor</i> (Valenciennes, 1838)	BO DA AP
<i>Elachistocleis ovalis</i> (Schneider, 1799)	CG VA BO DA RO GU SU FG
<i>Elachistocleis surinamensis</i> (Daudin, 1802)	BO DA GU SU
<i>Hamptophryne boliviana</i> (Parker, 1927)	CG BO BA RO PA AP GU SU FG



<i>Otophryne pyburni</i> Campbell & Clarke, 1998 Endemic to Vaupés and Amazonas in Colombia, Venezuelan Guayana to Amapá, Brazil, 200–1100 m	CG VA BO	AP GU SU FG
<i>Otophryne robusta</i> Boulenger, 1900 Endemic to Bolívar-Venezuela and adjacent Guyana, 1100–1216 m	BO	GU
<i>Otophryne steyermarki</i> (Rivero, 1968) Endemic to Mt. Roraima and Macizo de Chimantá slopes, Bolívar-Venezuela and Mt. Ayanganna, Guyana, 1300–2151 m	BO	GU
<i>Synapturanus mirandaribeiroi</i> Nelson & Lescure, 1975 Endemic to the Guianas, northern Brazil, southeastern Colombia and Bolívar-Venezuela, 120–300 m	CG BO BA PA AP	GU SU FG
<i>Synapturanus rabus</i> Pyburn, 1976 Endemic to southeastern Vaupés-Colombia, 100? m	CG	
<i>Synapturanus salseri</i> Pyburn, 1975 Endemic to Vaupés-Colombia and Amazonas-Venezuela, 100–120 m	CG VA BA	
<b>Family: Pipidae</b>		
<i>Pipa arrabali</i> Izecksohn, 1976	BO BA	GU SU
<i>Pipa aspera</i> Müller, 1924 Endemic to northern Surinam and French Guiana, 150–430 m		SU FG
<i>Pipa pipa</i> (Linnaeus, 1758)	CG VA BO DA BA RO PA AP	GU SU FG
<i>Pipa snethlageae</i> Müller, 1914	CG	
<b>Family: Pseudidae</b>		
<i>Lysapsus laevis</i> Parker, 1935	BA	GU
<i>Lysapsus limellus</i> Cope, 1862 Widespread	BA	
<i>Pseudis paradoxa</i> (Linnaeus, 1758)	BO DA BA	GU SU FG
<b>Family: Ranidae</b>		
<i>Rana palmipes</i> Spix, 1824	CG VA BO BA RO PA AP	GU SU FG

### Order: Gymnophiona—Caecilians

#### Family: Caecilidae

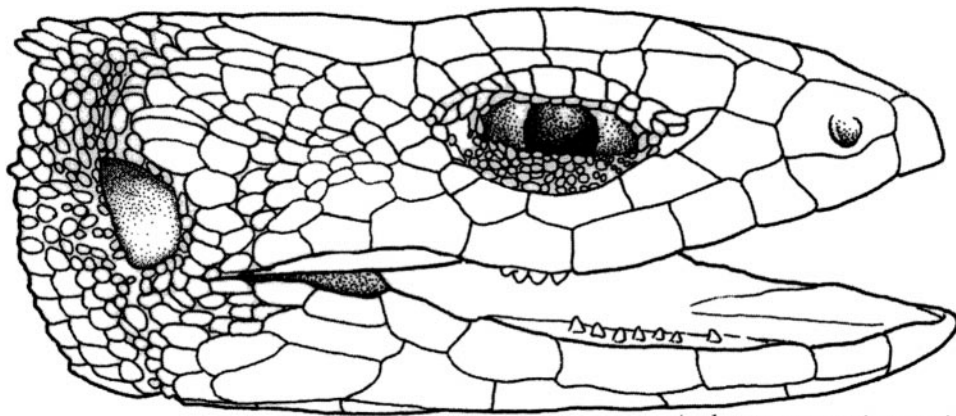
<i>Brasilotyphlus braziliensis</i> (Dunn, 1945) Endemic to Amazonas and Amapá, Brazil, 40 m	BA	AP
<i>Caecilia albiventris</i> Daudin, 1803 Endemic to Surinam		SU
<i>Caecilia gracilis</i> Shaw, 1802		GU SU FG
<i>Caecilia pressula</i> Taylor, 1968 Endemic to Marudi Mountains, Guyana, 250 m		GU
<i>Caecilia tentaculata</i> Linnaeus, 1758 Widespread	VA	GU SU FG
<i>Microcaecilia rabei</i> (Roze & Solano, 1963) Endemic to Bolívar-Venezuela and Surinam, 100–400 m	BO	SU
<i>Microcaecilia taylori</i> Nussbaum & Hoogmoed, 1979 Endemic to Sipaliwini, Surinam, 250 m		SU
<i>Microcaecilia unicolor</i> (Duméril, 1864) Endemic to the Guianas, 0–690 m		GU SU FG
<i>Nectocaecilia petersi</i> (Boulenger, 1882) Uncertain in Brazil	VA BA	
<i>Oscaecilia bassleri</i> (Dunn, 1942) Possibly not a Guiana Shield species. Presence in Colombia unconfirmed	CG?	
<i>Oscaecilia zweifeli</i> Taylor, 1968		GU FG
<i>Siphonops annulatus</i> (Mikan, 1820) Widespread	CG	SU? FG

#### Family: Rhinatrematidae

<i>Epicrionops niger</i> (Dunn, 1942) Endemic to eastern Venezuela and western Guyana, 300–1500 m	BO	GU
<i>Rhinatrema bivittatum</i> (Guérin-Méneville, 1829) Endemic to the Guianas and Brazil, 20–300 m		AP GU SU FG

#### Family: Typhlonectidae

<i>Potomotyphlus kaupii</i> (Berthold, 1859)	CG VA BO DA	
<i>Typhlonectes compressicauda</i> (Duméril & Bibron, 1841) May include <i>T. cumhai</i> Cascon, Lima-Verde & Marques, 1991, which is endemic to Manaus, Amazonas-Brazil	VA BO DA	GU SU FG



*Arthrosaura guianensis*

# REPTILES

TERESA C. S. DE ÁVILA PIRES

## Introduction

The area considered for this checklist of reptiles of the Guiana Shield includes French Guiana, Surinam and Guyana; the northern part of Brazilian Amazonia (the state of Pará north of the Amazon River, the state of Amazonas north of the Amazon River and east of the Río Negro, and the states of Amapá and Roraima); the states of Delta Amacuro, Bolívar and Amazonas of Venezuela; and the Orinoquía region of Colombia (as defined by Rangel Ch. 1995, including the departments Arauca, Casanare, Vichada and Meta). Species known only from the western part of Meta, however, were excluded, as they are clearly not members of the Guianan fauna. This area corresponds to the Guiana Shield with some peripheral lowland areas. It also corresponds approximately, though not entirely, with the Guiana Shield Region concept that resulted from Conservation International's Guayana Shield Conservation Priority Setting Workshop in Paramaribo, Surinam. The limits adopted within Colombia are particularly different here, with additional territory included to the north of the boundaries typically set for the Shield. This is due to the nature of the data that are available, which are based on political boundaries, and the lack of detailed information on the distribution of species in this region.

Señaris & MacCulloch (this volume) present a variation on the concept of the Guiana Shield region based on the Amphibian fauna. There are two major factors contributing to the differences between these definitions. One is inadequacy of data; our knowledge about the distribution of the herpetofauna in the region is still very fragmentary. The other factor reflects the fact that the region is not isolated, and its southern border merges with the Amazonian region. Delimiting such areas is always somewhat arbitrary.

The present checklist is based on the available literature, which includes Ávila-Pires (1995), Campbell & Lamar (1989), Gorzula & Señaris (1999), Hoogmoed (1973, 1979, 1983), Medem (1981–1983), Sánchez (1995), several papers by Myers and collaborators on the herpetofauna of the tepuis, and many papers dealing with specific faunas or taxa. A list of all publications used is presented at the end. *The Preliminary Checklist of the Herpetofauna of Guyana*, by Reynolds, MacCulloch, Tamessar, Watson, Cole, and Townsend (on the website [www.mnh.si.edu/biodiversity/bdg/guyherps](http://www.mnh.si.edu/biodiversity/bdg/guyherps)), was also utilized. In addition, data from the following collections were incorporated: American Museum of Natural History, Museo de Historia Natural La Salle, Museu Paraense

Emílio Goeldi, Nationaal Natuurhistorisch Museum and Royal Ontario Museum. Specimens from these collections have not been examined, but doubtful records were excluded. Finally, M. Hoogmoed provided his unpublished data on the distribution of snakes in Surinam, and there was a significant collaboration with the members of the amphibian group attending the Paramaribo workshop; they also contributed data.

## Taxonomic Composition

There are 295 species of reptiles currently known from the Guianan region, of which 108 are lizards, 10 amphisbaenians, 149 snakes, 5 crocodylians, and 23 turtles. Snakes, therefore, comprise more than 50% of the total number of these reptile species. However, when only reptiles endemic to the Guianan region are considered, the proportion of lizards and amphisbaenians increases, while the proportion of snakes decreases (Figure 3). It is difficult to be certain whether this difference is real or a sampling artifact. Amphisbaenians are usually poorly sampled, and their geographical range could turn out to be wider than presently known, decreasing the number of species considered Guianan endemics. The pattern of widely distributed snake species is well known and probably real, unless most of the presently recognized snake species turn out to be species complexes. At the family level, Colubridae has by far the largest number of species (104), followed by Gymnophthalmidae (45), Iguanidae (32), Gekkonidae (16), Elapidae (13), Teiidae (12), and Amphisbaenidae (10). In all, 88 species are listed as endemic. Considering the 34 Guiana Shield-wide endemics, the two most abundant families are Gymnophthalmidae (25 species, 28% of the total number of Guianan endemic rep-

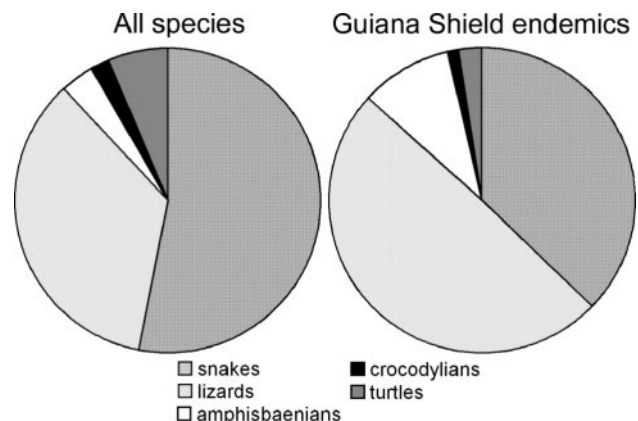


Figure 3. Proportions of species falling into the five major groups of reptiles, for all species occurring in the Guiana Shield, and for Guiana Shield endemic species only.

Table 7—Number of reptile species by family. Totals are also given for species with broadly endemic distributions within the Guiana Shield and species with site-specific endemic distributions.

Family	Species	Shield-wide endemics	Site-specific endemics
Colubridae	104	6	15
Gymnophthalmidae	45	7	18
Iguanidae	32	2	9
Gekkonidae	16	4	1
Elapidae	13	4	1
Teiidae	12	1	1
Amphisbaenidae	10	3	5
Leptotyphlopidae	8	2	1
Boidae	8	1	
Viperidae	8		1
Chelidae	8	1	
Podocnemididae	6	1	
Crocodylidae	5	1	
Anomalepididae	4		1
Cheloniidae	4		
Scincidae	3	1	
Typhlopidae	3		
Testudinidae	2		
Dermochelyidae	1		
Kinosternidae	1		
Bataguridae	1		
Aniliidae	1		

tiles) and Colubridae (21 species, 25%). Most of the 54 site-specific endemics are also in these two families, respectively with 17 (31%) and 15 (28%) species. Table 7 presents a full listing of species and endemic totals by family.

It is clear as well that new species are still to be discovered, especially in the highlands but also at lower elevations. A species-accumulation graph based on dates of species publication clearly shows an ascendant curve (Figure 4).

#### Geographic Distribution

Distribution of Guiana Shield species by country yields: Colombia 96 species (116 including presumed occurrences); Venezuela 203 (217); Brazil 184 (197); Guyana 162 (168); Surinam 168 (175); and French Guiana 159 (169). These differences are derived in part from unequal sampling, but regional differences certainly exist. Most species endemic to the Guiana Shield region, even those with relatively broad ranges, have been found to occur only rarely.

Many Guiana Shield endemics are confined to the highlands. The concept of a Pantepui biogeographic province, although originally based primarily on plants, is likely valid for animals as well. However, additional studies are necessary to confirm this hypothesis. Roze's studies (1958a, 1958b) were the first to examine tepui reptiles. A hiatus of 30 years occurred before studies on other highland areas appeared in the 1990's. All of these studies invariably described new species, even when the surveys were

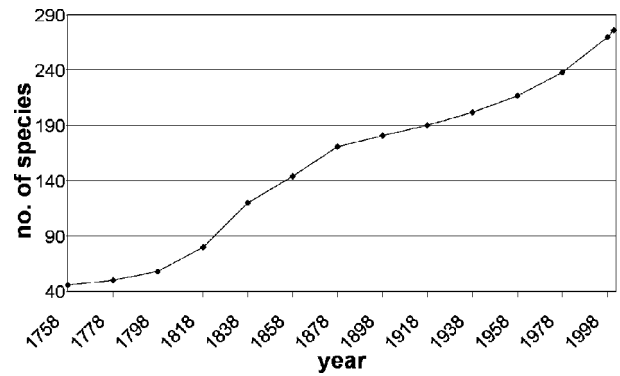


Figure 4. Accumulation over time in the number of descriptions of reptile species that occur in the Guiana Shield.

brief (e.g., Donnelly & Myers 1991, Myers & Donnelly 1996). Myers & Donnelly (1997, 2001) briefly discussed the relationships of tepui faunas to other highland faunas, as well as between lowland and highland species. Gorzula & Señaris (1999) examined the herpetofauna of the Venezuelan Guayana as a whole.

Some lowland endemics are known, but several of these taxa are poorly represented in collections (e.g., *Bachia* and *Amphisbaena* species, *Amapasaurus tetradactylus*); they may actually be more widespread than presently known. Some others are special cases restricted to unusual habitats, such as the two *Gymnophthalmus* species from the "lavrados" (a special type of open vegetation) of Roraima, Brazil, or *Cnemidophorus pseudolemniscatus*, a triploid hybrid that is restricted to coastal areas. Moreover, some species seem to occur only in the easternmost areas; others are apparently restricted to more western areas. A general picture of distribution patterns within the area is still lacking.

Although marine turtles (families Cheloniidae and Dermochelyidae) occur in the Guiana Shield region only while nesting on its beaches, they occur broadly in the American tropics. These species are included in this list because they are of great conservation interest. The countries of the Guiana Shield have several programs aimed at protecting, monitoring, and providing education about these turtles. Occurrences listed here are likely influenced by greater conservation and monitoring efforts in some areas and minimal effort in others.

#### Using the Checklist

Species are organized within Orders and Families, in alphabetical order at each level. Taxonomic nomenclature follows the current literature and, in cases of controversy, a choice was made without necessarily resolving the core of the controversy. Species have been classified as "widespread" when distribution extends well beyond the Guiana Shield Re-

Table 8—Distribution codes for reptiles.

CG	Colombian Guayana
VA	Venezuela—Amazonas
BO	Venezuela—Bolívar
DA	Venezuela—Delta Amacuro
BA	Brazil—Amazonas
RO	Brazil—Roraima
PA	Brazil—Pará
AP	Brazil—Amapá
GU	Guyana
SU	Surinam
FG	French Guiana

gion; “Guiana Shield” when endemic to, but relatively widespread within the region; and “Guiana Shield+” when the distribution extends slightly beyond the region; or “endemic” when distribution is restricted to relatively small areas within the region. We emphasize that these are preliminary data, gathered with the aim of having a general assessment of the herpetofauna of this region for conservation purposes. Any analyses based on these data should be made cautiously, considering their preliminary nature.

Distributional abbreviations used in the checklist are given in Table 8 and shown on the map in Figure 5. Abbreviations are followed by a “?” if a listing is uncertain.

#### Acknowledgments

Early work on this list was reviewed by Roy McDiarmid and Robert P. Reynolds of the National Museum of Natural History (USNM); Reynolds also assisted with compilation of data from collections at USNM. Significant contributions to the development of this checklist were made by Godfrey Bourne of the University of Missouri in St. Louis, Jay Cole of the American Museum of Natural History in New York, Jean-Pierre Gasc of the Muséum National d’Histoire Naturelle (MNHN) in Paris, Miguel Rodrigues of the Museu de Zoologia in São Paulo, Brazil, and Shamita Sahdew of the University of Suriname and National Zoological Collection of Suriname in Paramaribo. Thanks also go to the many participants and organizers of the Guiana Shield Priority Setting Workshop, held in Paramaribo, Surinam, in 2002.

#### Literature on the Reptiles of the Guiana Shield

- Ávila-Pires, T. C. S. 1995. Lizards of Brazilian Amazonia (Reptilia: Squamata).—*Zoologisches Verhandelingen*, Leiden 299:1–706.
- Ayala, S. C. 1986. Saurios de Colombia: lista actualizada, y distribución de ejemplares colombianos en los museos.—*Caldasia* 15(71–75):555–575.
- Barrio, C., C. Brewer-Carias, & O. Fuentes. 1999. Geographic dis-

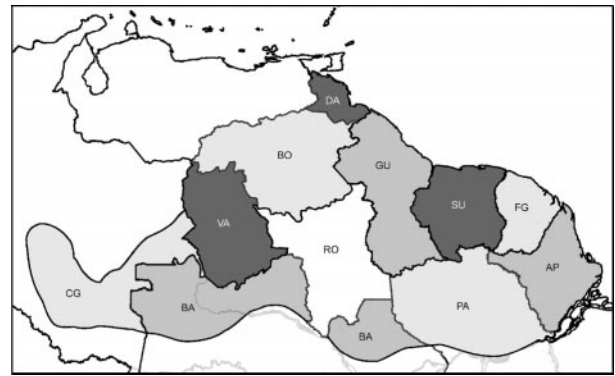


Figure 5. Map of the distributional units used in the reptile checklist, using the abbreviations given in Table 8.

- tribution: *Atractus torquatus*.—*Herpetological Review* 30: 53.
- Barrio, C., L. F. Navarrete, O. Fuentes, & R. Mattei. 1998. *Siphlophis cervinus* (Serpentes, Colubridae) en Venezuela.—*Acta Biologica Venezuelica* 18(1):49–53.
- Beebe, W. 1944a. Field notes on the lizards of Kartabo, British Guiana, and Caripito, Venezuela. Part 1. Gekkonidae.—*Zoologica* 29(3):145–160.
- Beebe, W. 1944b. Field notes on the lizards of Kartabo, British Guiana, and Caripito, Venezuela. Part 2. Iguanidae.—*Zoologica* 29(4):195–216.
- Beebe, W. 1945. Field notes on the lizards of Kartabo, British Guiana, and Caripito, Venezuela. Part 3. Teiidae, Amphisbenidae and Scincidae.—*Zoologica* 30(1):7–32.
- Born, M. 1996.—Reptiles and amphibians of Nouragues, French Guiana. A species inventory of a tropical rainforest. M. Born, The Netherlands.
- Born, M., & P. Gaucher. 2001. Amphibian and reptile species at the Nouragues Nature Reserve. Pp. 371–379 in F. Bongers, P. Charles-Dominique, P. M. Forget, and M. Thery, eds., *Nouragues: dynamics and plant-animal interactions in a Neotropical rainforest*. Kluwer Academic, Dordrecht.
- Born, M., & P. Gaucher. 2001. Distribution and life histories of amphibians and reptiles. Pp. 167–184 in F. Bongers, P. Charles-Dominique, P. M. Forget, and M. Thery, eds., *Nouragues: dynamics and plant-animal interactions in a Neotropical rainforest*. Kluwer Academic, Dordrecht.
- Boulenger, G. A. 1900. Reptiles and batrachians. In E. R. Lankester, Report on a collection made by Messrs. F. V. McConnell and J. J. Quelch at Mount Roraima in British Guiana. Reptiles.—*Transactions of the Linnean Society of London*, Zool. ser. 2, 8(2):53–56, pl. 5.
- Bour, R., & I. Pauler. 1987. Identité de *Phrynops vanderhaegei* Bour, 1973, et des espèces affines (Reptilia-Chelonii-Chelidae).—*Mesogee* 47:3–23.
- Brongersma, L. D. 1966. Poisonous snakes of Surinam.—*Memorias do Instituto Butantan* 33:73–79.
- Campbell, J. A., & W. W. Lamar. 1989. The venomous reptiles of Latin America. Comstock Publishing Associates, Ithaca and London.
- Campbell, J. A., & W. W. Lamar. 2004. The venomous reptiles of the Western Hemisphere, vols. 1 and 2. Cornell University Press.
- Carvalho, C. M. 1997. Uma nova espécie de microteiídeo do gênero *Gymnophthalmus* do Estado de Roraima, Brasil (Sauria, Gymnophthalmidae).—*Papéis Avulsos de Zoologia* 40(10):161–174.
- Carvalho, C. M. 2002. Descrição de uma nova espécie de *Micrurus* do estado de Roraima, Brasil (Serpentes, Elapidae).—*Papéis Avulsos de Zoologia* 42(8):183–192.

- Chippaux, J.-P. 1986. Les serpents de la Guyane Française. Faune Tropicale XXVII. ORSTOM, Paris.
- Cole, C. J., & H. C. Dessauer. 1993. Unisexual and bisexual whiptail lizards of the *Cnemidophorus lemniscatus* complex (Squamata: Teiidae) of the Guiana region, South America, with descriptions of new species.—American Museum Novitates 3081:1–30.
- Cole, C. J., H. C. Dessauer, & A. L. Markezich. 1993. South American unisexual lizard of hybrid origin.—American Museum Novitates 3055:1–13.
- Cole, C. J., H. C. Dessauer, C. R. Townsend, & M. G. Arnold. 1990. Unisexual lizards of the genus *Gymnophthalmus* (Reptilia: Teiidae) in the Neotropics: genetics, origin, and systematics.—American Museum Novitates 2994:1–29.
- Cunha, O. R. 1970. Lacertílios da Amazônia. IV—Um novo gênero e espécie de lagarto do Território Federal do Amapá (Lacertília—Teiidae).—Boletim do Museu Paraense Emílio Goeldi, Zool. 74:1–8.
- Cunha, O. R. 1981. Lacertílios da Amazônia. VII—Lagartos da região norte do Território Federal de Roraima, Brasil. (Lacertília; Gekkonidae, Iguanidae, Scincidae e Teiidae).—Boletim do Museu Paraense Emílio Goeldi, Zool. 107:1–25.
- Cunha, O. R., & F. P. Nascimento. 1970. Ofídios da Amazônia. II—*Liophis miliaris* (Linneu, 1758) na Amazônia norte oriental (Território Federal do Amapá) (Ophidia, Colubridae).—Boletim do Museu Paraense Emílio Goeldi, Zool. 70:1–6.
- Cunha, O. R., & F. P. Nascimento. 1980. Ofídios da Amazônia. XI—Ofídios de Roraima e notas sobre *Erythrolamprus baupertuisii* Duméril, Bibron & Duméril, 1854, sinônimo de *Erythrolamprus aesculapii aesculapii* (Linnaeus, 1758).—Boletim do Museu Paraense Emílio Goeldi, Série Zoologia 102:1–21.
- Cunha, O. R., & F. P. Nascimento. 1982a. Ofídios da Amazônia. XV—As espécies de *Chironius* da Amazônia oriental (Pará, Amapá e Maranhão) (Ophidia: Colubridae).—Memórias do Instituto Butantan 46:139–172.
- Cunha, O. R., & F. P. Nascimento. 1982b. Ofídios da Amazônia. XVIII—O gênero *Chironius* Fitzinger, na Amazônia oriental (Ophidia: Colubridae) (Nota prévia).—Boletim do Museu Paraense Emílio Goeldi, Série Zoologia 119:1–17.
- Cunha, O. R., & F. P. Nascimento. 1983. Ofídios da Amazônia. XIX—As espécies de *Oxyrhopus* Wagler, com uma subespécie nova, e *Pseudoboa* Schneider, na Amazônia oriental e Maranhão (Ophidia: Colubridae).—Boletim do Museu Paraense Emílio Goeldi, Série Zoologia 122:1–42.
- Cunha, O. R., & F. P. Nascimento. 1993. Ofídios da Amazônia. As cobras da região leste do Pará.—Boletim do Museu Paraense Emílio Goeldi, Série Zoologia 9(1):1–191.
- Devender, R. W. van. 1969. Resurrection of *Neusticurus racenisi* (Sauria, Teiidae).—Journal of Herpetology 3(1–2):105–107.
- Dixon, J. R. 1973. A systematic review of the teiid lizards, genus *Bachia*, with remarks on *Heterodactylus* and *Anotosaura*. Miscellaneous Publications of the University of Kansas Museum of Natural History 57:1–47.
- Dixon, J. R. 1983. The *Liophis cobella* group of the Neotropical colubrid snake genus *Liophis*. Journal of Herpetology 17(2): 149–165.
- Dixon, J. R. 1983b. Taxonomic status of the South American snakes *Liophis miliaris*, *L. amazonicus*, *L. chrysostomus*, *L. mossoroensis* and *L. purpurans* (Colubridae: Serpentes).—Copeia 1983(3):791–802.
- Dixon, J. R. 1987. Taxonomy and geographic variation of *Liophis typhlus* and related “green” species of South America (Serpentes: Colubridae).—Annals of Carnegie Museum 56(8): 173–191.
- Dixon, J. R. 1989. A key and checklist to the Neotropical snake genus *Liophis* with country lists and maps.—Smithsonian Herpetological Information Service 79:1–28 + maps.
- Dixon, J. R., & F. S. Hendricks. 1979. The wormsnakes (Family Typhlopidae) of the Neotropics, exclusive of the Antilles.—Zoologische Verhandlungen Leiden 173:1–39.
- Dixon, J. R., & C. P. Kofron. 1983. The Central and South American anomalepid snakes of the genus *Liotyphlops*. Amphibia-Reptilia 4:241–264.
- Dixon, J. R., J. A. Wiest, Jr., & J. M. Cei. 1993. Revision of the Neotropical snake genus *Chironius* Fitzinger (Serpentes, Colubridae).—Museo Regionale di Scienze Naturali Monografia (Turin) 13:1–280.
- Donnelly, M. A., M. H. Chen, & G. Watkins. 2005. The Iwokrama herpetofauna: an exploration of diversity in a Guyanan rainforest. Chapter 17, pp. 428–460 in M. A. Donnelly, B. I. Crother, C. Guyer, M. H. Wake, and M. E. White, eds., Ecology and evolution in the tropics: a herpetological perspective. University of Chicago Press, Chicago, IL.
- Donnelly, M. A., M. Chen, C. Watson, & G. Watkins. 1999.—Herpetofauna of the Iwokrama forest. (www.iwokrama.org/library).
- Donnelly, M. A., R. W. McDiarmid, & C. W. Myers. 1992. A new lizard of the genus *Arthrosaura* (Teiidae) from southern Venezuela.—Proceedings of the Biological Society of Washington 105(4):821–833.
- Donnelly, M. A., & C. W. Myers. 1991. Herpetological results of the 1990 Venezuelan expedition to the summit of Cerro Guaiquinima, with new tepui reptiles.—American Museum Novitates 3017:1–54.
- Donoso-Barros, R. 1968. The lizards of Venezuela (check list and key).—Caribbean Journal of Science 8:105–122.
- Esqueda, L. F., E. La Marca, & M. H. Praderio. 2004. Una nueva especie de lagarto altotepuyano del género *Riolama* (Squamata: Gymnophthalmidae) del Cerro Marahuaca, Estado Amazonas, Venezuela.—Herpetotrópicos 1(2):11–17.
- Franco, F. L., & T. G. Ferreira. 2003. Ocorrência de *Thamnodynastes strigatus* (Serpentes, Colubridae) no Escudo das Guianas, estados do Pará e Roraima, Brasil.—Phyllomedusa 2:117–119.
- Frétey, J. 1987. Les tortues de Guyane française: données récentes sur leur systématique, leur biogéographie, leur éthologie et leur protection. Nature Guyanaise, Paris.
- Fuentes, O., & A. Rodríguez-Acosta. 1997. Sobre los generos *Bothriechis*, *Bothriopsis*, *Bothrops* y *Porthidium* (Serpentes: Crotalidae) existentes en Venezuela. Claves para su identificación en interes biomédico.—Acta Biologica Venezuelica 17:31–38.
- Gans, C. 1962. Notes on amphisbaenids (Amphisbaenia, Reptilia). 5. A redefinition and a bibliography of *Amphisbaena alba* Linné.—American Museum Novitates 2105:1–31.
- Gans, C. 1971. Redescription of three monotypic genera of Amphisbaenians from South America: *Aulura* Barbour, *Bronia* Gray, and *Mesobaena* Mertens.—American Museum Novitates 2475:1–32.
- Gasc, J. P. 1976. Contribution à la connaissance des Squamates (Reptilia) de la Guyane française. Nouvelles localités pour les Sauriens.—Compte Rendu de la Société de Biogéographie 454:17–36.
- Gasc, J. P. 1981. Quelques nouvelles données sur la repartition et l'écologie des sauriens en Guyane française.—Revue d'Ecologie (Terre et Vie) 35:273–325.
- Gasc, J. P. 1986. Le peuplement herpétologique d'*Astrocaryum paramaca* (Arécacées), un palmier important dans la structure de la forêt en Guyane française.—Mémoires du Muséum National d'Histoire Naturelle, sér. A 132:97–107.
- Gasc, J. P. 1990. Les lézards de Guyane. Chabaud, Paris.
- Gasc, J. P., & J. Lescure. 1977. Données sur l'herpétoceenose en milieu ouvert dans la forêt amazonienne.—Bulletin du Mu-

- séum national d'Histoire naturelle, Paris, (3)440, Écol. gen. 35:35–44.
- Gasc, J. P., & Lescure, J. 1981. Effets de l'homme sur la répartition géographique des amphibiens et des lézards dans l'ensemble guyano-amazonien.—Compte Rendu de la Société de Biogéographie 57(2):33–49.
- Gasc, J. P., & M. T. Rodrigues. 1979. Une nouvelle espèce du genre *Atractus* (Colubridae, Serpentes) de la Guyane française.—Bulletin du Muséum national d'Histoire naturelle (4) 1A (2):547–557.
- Gasc, J. P., & M. T. Rodrigues. 1980. Liste préliminaire des Serpents de la Guyane française.—Bulletin du Muséum national d'Histoire naturelle de Paris (4)2A(2):559–598.
- Gasc, J. P., J. Lescure, & D. Peccinini-Seale. 1994. Unisexualité et vaste répartition: le cas de *Cnemidophorus lemniscatus* (Reptilia, Teiidae) dans le complexe guyano-amazonien.—Biogeographica 70(1):33–39.
- Gorzula, S. 1992. La herpetofauna del macizo del Chimantá. Pp. 267–280, 304–310 (+ photographs 152–171) in O. Huber, ed., El macizo del Chimantá. Oscar Todtmann Editores, Caracas. [apud Myers and Donnelly, 1996]
- Gorzula, S., & J. Ayarzagüena. 1996 [“1995”]. Dos nuevas especies del género *Thamnodynastes* (Serpentes; Colubridae) de los tepuyes de la Guayana venezolana.—Publicaciones de la Asociación Amigos de Doñana, 6:1–17.
- Gorzula, S., & J. C. Señaris. 1998 [“1999”]. Contribution to the herpetofauna of the Venezuelan Guayana. I. A data base.—Scientia Guaianae 8:XVIII + 269 pp.
- Hahn, D. E. The identity of the blind snake *Stenostoma signatum* Jan, 1861.—Herpetologica 35(1):57–60.
- Harris, D. 1982. The *Sphaerodactylus* (Sauria: Gekkonidae) of South America.—Occasional Papers, Museum of Zoology, University of Michigan 704:1–31.
- Henderson, R. W. 1997. A taxonomic review of the *Corallus hortulanus* complex of Neotropical tree boas.—Caribbean Journal of Science 33(3–4):198–221.
- Henderson, R. W., T. W. P. Muccucci, G. Puerto, & R. W. Bourgeois. 1995. Ecological correlates and patterns in the distribution of Neotropical boines (Serpentes: Boidae): a preliminary assessment.—Herpetological Natural History 3(1):15–27.
- Hoge, A. R. 1962. Serpentes da Fundação “Surinaam Museum.”—Memórias do Instituto Butantan 30(1960–62):51–64.
- Hoge, A. R., & A. C. M. Nina. 1962. Serpentes coletadas pelo Instituto Nacional de Pesquisas da Amazônia.—Memórias do Instituto Butantan 30(1960–62):71–96.
- Hoogmoed, M. S. 1973. Notes on the herpetofauna of Surinam IV. The lizards and amphisbaenians of Surinam. Biogeographica 4. W. Junk Publisher, The Hague.
- Hoogmoed, M. S. 1977. On a new species of *Leptotyphlops* from Surinam, with notes on the other Surinam species of the genus (Leptotyphlopidae, Serpentes).—Notes on the Herpetofauna of Surinam V.—Zoologische Mededelingen Leiden 51(7):99–123.
- Hoogmoed, M. S. 1979. The herpetofauna of the Guianan region. Pp. 241–279 in W. E. Duellman, ed., The South American herpetofauna: its origin, evolution, and dispersal. University of Kansas Museum of Natural History Monograph 7.
- Hoogmoed, M. S. 1980. Revision of the genus *Atractus* in Surinam, with the resurrection of two species (Colubridae, Reptilia). Notes on the herpetofauna of Surinam VII.—Zoologische Verhandlungen Leiden, 175:1–47.
- Hoogmoed, M. S., 1982 (1983). Snakes of the Guianan region.—Memórias do Instituto Butantan, 46:219–254.
- Hoogmoed, M. S. 1985a. *Xenodon werneri* Eiselt, a poorly known snake from Guiana, with notes on *Waglerophis merremii* (Wagler) (Reptilia: Serpentes: Colubridae). Notes on the herpetofauna of Surinam IX.—Zoologische Mededelingen Leiden 59(8):79–88.
- Hoogmoed, M. S. 1985b. *Coleodactylus septentrionalis* Vanzolini, a lizard new for the Surinamese fauna (Sauria: Gekkonidae). Notes on the herpetofauna of Suriname X.—Zoologische Mededelingen Leiden 59(20):229–138.
- Hoogmoed, M. S. 1992. Het Nederlandse aandeel in het zoologisch onderzoek van Zuid-Amerika. Pp. 159–174 in J. Lechner and H. Ph. Vogel, eds., De Nieuwe Wereld en de Lage Landen. Ombekende Aspecten van Vijfhonderd Jaar Ontmoetingen Tussen Latijns-Amerika en Nederland. Meulenhoff, Amsterdam.
- Hoogmoed, M. S. 1993. The herpetofauna of floating meadows. Pp. 199–213 in P. E. Ouboter, ed., The freshwater ecosystems of Suriname. Monographiae Biologicae, 70. Kluwer Academic Publishers, Dordrecht.
- Hoogmoed, M. S., & T. C. S. Ávila-Pires. 1990. New distribution data for *Podocnemis erythrocephala* (Spix) with remarks on some other turtle taxa (Reptilia: Chelonia: Pelomedusidae).—Zoologische Mededelingen Leiden 64(2):21–24.
- Hoogmoed, M. S., & T. C. S. Ávila-Pires. 1991a. Annotated checklist of the herpetofauna of Petit Saut, Sinnamary River, French Guiana.—Zoologische Mededelingen Leiden 65(5):53–88.
- Hoogmoed, M. S., & T. C. S. Ávila-Pires. 1991b. A new species of small *Amphisbaena* (Reptilia: Amphisbaenia: Amphisbaenidae) from western Amazonian Brazil.—Boletim do Museu Paraense Emilio Goeldi, Zool. 7(1):77–94.
- Hoogmoed, M. S., & T. C. S. Ávila-Pires. 1992. Studies on the species of the South American lizard genus *Arthrosaura* Boulenger (Reptilia: Sauria: Teiidae), with resurrection of two species.—Zoologische Mededelingen Leiden 66(35):453–484.
- Hoogmoed, M. S., C. J. Cole, & J. Ayarzagüena. 1992. A new cryptic species of lizard (Sauria: Teiidae: *Gymnophthalmus*) from Venezuela.—Zoologische Mededelingen Leiden 66(1):1–18.
- Hoogmoed, M. S., & J. Lescure. 1975. An annotated checklist of the lizards of French Guiana, mainly based on two recent collections.—Zoologische Mededelingen Leiden 49(13):141–171.
- Iverson, J. B., & E. College. 1992.—A revised checklist with distribution maps of the turtles of the world. Privately printed, Richmond.
- Kok, P. J. R., J. A. Roze, G. L. Lenglet, H. Sambhu, & D. Arjoon. 2003. *Micrurus isozonus* (Cope, 1860) (Serpentes, Elapidae): an addition to the herpetofauna of Guyana, with comments on other species of coral snakes from Guyana.—Bulletin de l'Institut Royal des Sciences Naturelles de Belgique 73:73–79.
- Kornacker, P. M. 1999.—Checklist and key to the snakes of Venezuela. Pako-Verlag. Reinbach, Germany.
- La Marca, E. 1997. Lista actualizada de los reptiles de Venezuela. Pp. 123–142 in E. La Marca, ed., Vertebrados actuales y fósiles de Venezuela, vol. 1. Museo de Ciencia y Tecnología de Mérida, Mérida.
- Lancini V., A. R., & P. M. Kornacker. 1989. Die Schlangen von Venezuela. Verlag Armitano Edit. C.A., Caracas.
- Lema, T., & M. F. Renner. 1998. O status de *Apostolepis quinque-lineata* Boulenger, 1896, *A. pygmaea* Boulenger, 1903, e *A. ron-doni* Amaral, 1925 (Serpentes, Colubridae, Elapomorphi-ni).—Biociências 6(1):99–121.
- Lescure, J., & M. S. Hoogmoed. 1975. An annotated checklist of the lizards of French Guiana, mainly based on two recent collections.—Zoologische Mededelingen 49:141–169.
- MacCulloch, R. D., & A. Lathrop. 2001. A new species of *Arthrosaura* (Sauria: Teiidae) from the highlands of Guyana.—Caribbean Journal of Science 37(3–4):174–181.

- MacCulloch, R. D., & A. Lathrop. 2004a. *Micrurus ibiboboca* (Squamata: Elapidae) is not a Guiana Shield species.—*Phyllomedusa* 3(2):141–144.
- MacCulloch, R. D., & A. Lathrop. 2004b. A new species of *Dipsas* (Squamata: Colubridae) from Guyana.—*Revista de Biología Tropical* 52(1):329–347.
- Mägdefrau, H. 1991. *Plica nigra*, ein neuer Leguan von Guaiquinima Tepui (Venezuela) (Sauria, Iguanidae).—*Spixiana* 14:229–234.
- Mägdefrau, H., K. Mägdefrau, & A. Schlüter. 1991. Herpetologische Daten vom Guaiquinima-Tepui, Venezuela.—*Herpetofauna* 13(70):13–26.
- Markezich, A. L., & J. R. Dixon. 1979. A new South American species of snake and comments on the genus *Umbrivaga*.—*Copeia* 1979(4):698–701.
- 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., & M. E. Oliveira. 1993. The snakes of the genus *Atractus* Wagler (Reptilia: Squamata: Colubridae) from the Manaus region, central Amazonia, Brazil.—*Zoologische Mededelingen Leiden* 67(2):21–40.
- Martins, M., & M. E. Oliveira. 1998. Natural history of snakes in forests of the Manaus region, central Amazonia, Brazil.—*Herpetological Natural History* 6(2):78–150.
- Massary, J.-C., J.-P. Gasc, & M. Blanc. 2000. The occurrence of *Mabuya bistriata* (Spix, 1825) (Sauria: Scincidae) in French Guiana.—*Herpetological Bulletin* 74:19–25.
- Massary, J.-C., M. S. Hoogmoed, & M. Blanc. 2000. Comments on the type specimen of *Dracaena guianensis* Daudin, 1801 (Reptilia: Sauria: Teiidae), and rediscovery of the species in French Guiana.—*Zoologische Mededelingen Leiden* 74(9):167–180.
- Mattei, R., & C. Barrio. 1999. Geographic distribution: *Oxyrhopus formosus*.—*Herpetological Review* 30:55.
- McCord, W. P., M. Joseph-Ouni, & W. W. Lamar. 2001. A taxonomic reevaluation of *Phrynops* (Testudines: Chelidae) with the description of two new genera and a new species of *Batrachemys*.—*Revista de Biología Tropical* 49(2):715–764.
- McDiarmid, R. W., J. A. Campbell, & T'S. A. Toure. 1999. Snake species of the world. A taxonomic and geographic reference, vol. 1. The Herpetologists League, Washington, D.C.
- McDiarmid, R. W., & M. A. Donnelly. 2005. The herpetofauna of the Guayana highlands: Amphibians and reptiles of the Lost World. Chapter 18, pp. 461–560 in M. A. Donnelly, B. I. Crother, C. Guyer, M. H. Wake, and M. E. White, eds., *Ecology and evolution in the tropics: a herpetological perspective*. University of Chicago Press, Chicago, IL.
- McDiarmid, R. W., & A. Paolillo O. 1988. Herpetological collections—Cerro de la Neblina, updated January 1988. Pp. 667–670 in C. Brewer-Carías, ed., *Cerro de la Neblina. Resultados de la Expedición 1983–1987*. Fundación para el Desarrollo de las Ciencias Físicas, Matemáticas y Naturales, Caracas.
- Medem, F., 1981–1983. Los Crocodylia de Sur America, vols. 1 and 2. Ministério de Educación Nacional/Colciencias, Bogotá.
- Métrailler, S., & G. Le Gratiet. 1996. Tortues continentales de Guyane française. S. Métrailler, Bramois, Switzerland.
- Mittermeier, R. A., A. G. J. Rhodin, F. Medem, P. Soini, M. S. Hoogmoed, & N. C. Espinoza. 1978. Distribution of the South American Chelid turtle *Phrynops gibbus*, with observations on habitat and reproduction.—*Herpetologica* 34(1):94–100.
- Molina, C. 1998. *Mabuya carvalhoi* (Squamata: Scincidae): nuevo registro para Venezuela.—*Memorias de la Sociedad de Ciencias Naturales La Salle* 58(149):149–150.
- Molina, C. 2001a. Geographic distribution: *Pseudogonatodes guianensis*.—*Herpetological Review* 32(3):193.
- Molina, C. 2001b. Geographic distribution: *Cercosaura ocellata ocellata*.—*Herpetological Review* 32:275.
- Molina, C., & J. C. Señaris. 2003 [“2001”]. Una nueva especie del genero *Riolama* (Reptilia: Gymnophthalmidae) de las tierras altas del Estado Amazonas, Venezuela.—*Memorias de la Fundacion La Salle de Ciencias Naturales* 155:5–19.
- Moonen, J., W. Eriks, & K. van Deursen. 1979. Surinaamse Slangen in Kleur. C. Kersten & Co., Paramaribo, 119 pp.
- Myers, C. W. 1997. Preliminary remarks on the summit herpetofauna of Auyantepui, eastern Venezuela.—*Acta Terramaris* 10:1–8.
- Myers, C. W., & J. E. Cadle. 1994. A new genus for South American snakes related to *Rhadinaea obtusa* Cope (Colubridae) and resurrection of *Taeniophallus* Cope for the “*Rhadinaea*” *brevirostris* group.—*American Museum Novitates* 3102:1–33.
- Myers, C. W., & M. A. Donnelly. 1996. A new herpetofauna from Cerro Yaví, Venezuela: first results of the Robert G. Goelet American Museum–Terramar Expedition to the northwestern tepuis.—*American Museum Novitates* 3172:1–56.
- Myers, C. W., & M. A. Donnelly. 1997. A tepui herpetofauna on a granitic mountain (Tamacuari) in the borderland between Venezuela and Brazil: report from the Phipps Tapirapecó Expedition.—*American Museum Novitates* 3213:1–71.
- Myers, C. W., & M. A. Donnelly. 2001. Herpetofauna of the Yutajé-Corocoro Massif, Venezuela: second report from the Robert G. Goelet American Museum–Terramar Expedition to the northwestern tepuis.—*Bulletin of the American Museum of Natural History* 261:1–85.
- Myers, C. W., E. E. Williams, & R. W. McDiarmid. 1993. A new anoline lizard (*Phenacosaurus*) from the highland of Cerro de la Neblina, southern Venezuela.—*American Museum Novitates* 3070:1–15.
- Natera, M., & J. Manzanilla. 2000. Nuevos registros geográficos y notas bioecológicas de *Philodryas olfersii* (Lichtenstein, 1823) (Serpentes: Colubridae) en Venezuela.—*Memorias de la Sociedad de Ciencias Naturales La Salle* 153:51–59.
- O’Shea, M. T. 1998. The reptilian herpetofauna of the Ilha de Maracá. Pp. 231–262 in W. Milliken and J. A. Ratter, eds., *Macará: the biodiversity and environment of an Amazonian rainforest*. John Wiley and Sons, London.
- Paolillo, A. 1986. Geographic distribution: *Helicops hagmanni*.—*Herpetological Review* 17:49.
- Pérez-Bravo, G. 1978 [“1976–1977”]. Segundo hallazgo de *Helicops hoguei* Lancini, 1964 (Serpentes: Colubridae).—*Memórias do Instituto Butantan* 40–41:313–315.
- Pritchard, P. C. H. 1969. Sea turtles of the Guianas.—*Bulletin of the Florida State Museum* 13:85–140.
- Pritchard, P. C. H., & P. Trebbau. 1984. The turtles of Venezuela. *Contributions to Herpetology* 2. Society for the Study of Amphibians and Reptiles, Oxford, Ohio.
- Rangel Ch., J. O. (ed.). 1995.—Colombia. *Diversidad Biotica I*. Inderena/Universidad Nacional de Colombia, Bogotá, 442 pp.
- Rebouças-Spieker, R., & P. E. Vanzolini. 1990. *Mabuya carvalhoi*, especie nova do Estado de Roraima, Brasil (Sauria, Scincidae).—*Revista Brasileira de Biologia* 50:377–386.
- Rivas, G. 2001. Sobre la presencia de *Taeniophallus brevirostris* (Serpentes: Colubridae) en Venezuela.—*Cuadernos de Herpetología* 15(1):83–84.
- Rivas, G. 2001b. Geographic distribution: *Typhlops reticulatus*.—*Herpetological Review* 32(2):126–127.
- Rivas, G. In press. Geographic distribution: *Hemidactylus palaichthus*.—*Herpetological Review*.
- Rivas, G., O. Fuentes, & C. Barrio. In press. Geographic distribution: *Liophis peocilogyrus*.—*Herpetological Review*.



- Rivas, G., & C. Molina. In press. New reptile records for Orinoco Delta, Delta Amacuro state, Venezuela.—Herpetological Review.
- Rivero-Blanco, C., 1979.—The Neotropical lizard genus *Gonatodes* Fitzinger (Sauria: Sphaerodactylinae). Unpublished doctoral dissertation, Texas A&M University.
- Robinson, M. 1989. Comentarios sobre una colección de Anfibios y Reptiles hecha en los alrededores del río Cunucunuma al norte del Cerro Duida y en la cima del Cerro Marahuaca, Territorio Federal Amazonas.—Acta Terramaris 1:59–64.
- Roze, J. A. 1955. Ofidios coleccionados por la expedición franco-venezolana al Alto Orinoco 1951 a 1952.—Boletín de lo Museo de Ciencias Naturales, Caracas 1(3–4):179–194.
- Roze, J. A. 1958a. Los reptiles del Auyantepui, Venezuela, basándose en las colecciones de las expediciones de Phelps-Tate, del American Museum of Natural History, 1937–1938, y de la Universidad Central de Venezuela, 1956.—Acta Biológica Venezolana 2:243–270.
- Roze, J. A. 1958b. Los reptiles del Chimantá Tepui (Estado Bolívar, Venezuela) colectados por la expedición botánica del Chicago Natural History Museum.—Acta Biológica Venezolana 2:299–314.
- Roze, J., 1966. La taxonomía y zoogeografía de los Ofidios en Venezuela. Universidad Central de Venezuela, Ediciones de la Biblioteca. Caracas, 362 pp.
- Roze, J. A. 1996. Coral snakes of the Americas: biology, identification, and venoms. Krieger Publishing Company, Malabar, Florida.
- Sánchez-C., H., O. Castaño-M., & G. Cardenas-A. 1995. Diversidad de los reptiles em Colombia. Pp. 277–325 in J. O. Rangel Ch., ed., Colombia. Diversidad Biotica I. Inderena/ Universidad Nacional de Colombia, Bogotá.
- Schulz, J. P. 1975. Sea turtles nesting in Surinam. Stichting Natuurbehoud Suriname, number 3. Rijksmuseum van Natuurlijke Historie, Leiden.
- Señaris, J. C. 1998. A new species of *Typhlophis* (Serpentes: Anomalepididae) from Bolívar State, Venezuela.—Amphibia-Reptilia 19(3):303–310.
- Stafford, P. J., & R. W. Henderson. 1996. Kaleidoscopic tree boas. The genus *Corallus* of tropical America. Krieger Publishing Company, Malabar, Florida.
- Starace, F. 1998. Guide des serpents et amphisbènes de Guyane. Ibis Rouge Editions, Guyane.
- Vanzolini, P. E. 1951. *Amphisbaena fuliginosa*. Contributions to the knowledge of the Brazilian lizards of the family Amphisbaenidae Gray, 1825. 6. On the geographical distribution and differentiation of *Amphisbaena fuliginosa* Linné.—Bulletin of the Museum of Comparative Zoology 106(1): 67.
- Vanzolini, P. E., & C. M. Carvalho. 1991. Two sibling and sympatric species of *Gymnophthalmus* in Roraima, Brasil (Sauria, Teiidae).—Papéis Avulsos de Zoologia 37(12):173–226.
- Vidal, N., J.-C. Massary, & C. Marty. 1999. Nouvelles espèces de serpents pour la Guyane française.—Revue Française d’Aquariologie 25:131–134.
- Walls, J. G. 1998. The living boas of the world. A complete guide to the boas of the world. TFH publications. Neptune City.
- Williams, E. E. 1974a. A case history in retrograde evolution: the *onca* lineage in anoline lizards. I. *Anolis annectens* new species, intermediate between the genera *Anolis* and *Tropidodactylus*.—Breviora 421:1–21.
- Williams, E. E. 1974b. South American *Anolis*: three new species related to *Anolis nigrolineatus* and *A. dissimilis*.—Breviora 422:1–15.
- Williams, E. E. 1992. New or problematic *Anolis* from Colombia. 7. *Anolis lamari*, a new anole from the Cordillera Oriental of Colombia, with a discussion of *tigrinus* and *punctatus* species group boundaries.—Breviora 495:1–24.
- Williams, E. E., M. J. Praderio, & S. Gorzula. 1996. A phenacosaur from Chimantá Tepui, Venezuela.—Breviora 506:1–15.
- Wilson, L. D. 1999. Checklist and key to the species of the genus *Tantilla* (Serpentes: Colubridae) with some commentary on distribution.—Smithsonian Herpetological Information Service 122.
- Zaher, H., & U. Caramaschi. 1992. Sur le statut taxinomique d’*Oxyrhopus trigeminus* et *O. guibei* (Serpentes, Xenodontinae).—Bulletin du Muséum national d’Histoire naturelle, Paris (4) 14a(3–4):805–827.
- Zimmerman, B. L., & M. T. Rodríguez. 1990. Frogs, snakes, and lizards of the INPA-WWF reserves near Manaus, Brazil. Pp. 426–454 in A. H. Gentry, ed., Four Neotropical rainforests. Yale University Press, London.

**Order: Squamata—Lizards**

**Family: Gekkonidae**

<i>Coleodactylus amazonicus</i> (Andersson, 1918) Widespread	VA	BA	RO?	PA	AP	GU	SU	FG
<i>Coleodactylus septentrionalis</i> Vanzolini, 1980 Guiana Shield		BO	DA	RO		GU	SU	
<i>Gonatodes albogularis</i> Dumeril & Bibron, 1836 Guiana Shield			DA					
<i>Gonatodes annularis</i> Boulenger, 1887 Guiana Shield	VA?	BO	DA	BA	RO	PA	AP	GU
<i>Gonatodes concinnatus</i> (O’Shaughnessy, 1881) Widespread	CG							
<i>Gonatodes humeralis</i> (Guichenot, 1855) Widespread	CG?	VA	BO	DA	BA	RO	PA	AP
<i>Gonatodes vittatus</i> (Lichtenstein, 1856) Introduced	CG	BO						
<i>Hemidactylus mabouia</i> (Moreau de Jonnés, 1818) Introduced	CG		DA?	BA		PA	AP	GU
<i>Hemidactylus palaichthus</i> Kluge, 1969 Guiana Shield +	CG	VA	BO	DA	BA	RO		GU
<i>Lepidoblepharis heyerorum</i> Vanzolini, 1978 Widespread							PA	AP
<i>Lepidoblepharis sanctaemartae</i> (Ruthven, 1928) Widespread	CG							FG
<i>Phyllodactylus dixonii</i> Rivero & Lancini, 1968 Endemic		BO						



<i>Prionodactylus argulus</i> (Peters, 1862) Widespread	CG					PA?			GU	SU	FG
<i>Prionodactylus goeleti</i> (Myers & Donnelly, 1996) Endemic		VA									
<i>Prionodactylus nigroventris</i> Gorzula & Señaris 1999 Endemic			BO								
<i>Prionodactylus phelpsorum</i> Lancini, 1968 Endemic			BO								
<i>Proctoporus striatus</i> (Peters, 1862) Widespread	CG										
<i>Ptychoglossus brevifrontalis</i> Boulenger, 1912 Widespread						PA?				SU	
<i>Ptychoglossus nicefori</i> (Loveridge, 1929) Widespread	CG										
<i>Riolama leucosticta</i> (Boulenger, 1900) Endemic			BO							GU	
<i>Riolama luridiventris</i> Esqueda, La Marca & Praderio, 2004 Endemic		VA									
<i>Riolama uzzelli</i> Molina and Señaris, 2003 ["2001"] Endemic		VA									
<i>Tretioscincus agilis</i> (Ruthven, 1916) Widespread	CG?			BA		PA?	AP		GU	SU	FG
<i>Tretioscincus oriximinensis</i> Avila-Pires, 1995 Guiana Shield		VA		BA		PA					
<b>Family: Iguanidae</b>											
<i>Anolis aeneus</i> Gray, 1840 Introduced											GU
<i>Anolis annectens</i> Williams, 1974 Widespread			BO								
<i>Anolis auratus</i> Daudin, 1802 Widespread	CG	VA	BO	DA?	BA	RO	PA	AP	GU	SU	FG
<i>Anolis chlorocyanus</i> Duméril & Bibron, 1837 Introduced											SU
<i>Anolis cybotes</i> Cope, 1862 Introduced											SU
<i>Anolis deltae</i> Williams, 1974 Endemic						DA					
<i>Anolis eewi</i> Roze, 1958 Endemic			BO								
<i>Anolis extremus</i> Garman, 1840 Introduced											GU
<i>Anolis fuscoauratus</i> Duméril & Bibron, 1837 Widespread	CG	VA?	BO	DA	BA	RO?	PA	AP	GU	SU	FG
<i>Anolis lineatus</i> Daudin, 1804 Introduced											SU
<i>Anolis marmoratus</i> Duméril & Bibron, 1837 Introduced											FG
<i>Anolis nitens</i> (Wagler, 1830) Widespread	CG	VA	BO	DA	BA	RO	PA	AP	GU	SU	FG
<i>Anolis onca</i> (O'Shaughnessy, 1875) Widespread	CG										
<i>Anolis ortonii</i> Cope, 1868 Widespread	CG				BA	RO	PA	AP	GU	SU	FG
<i>Anolis philopunctatus</i> Rodrigues, 1988 Endemic					BA						
<i>Anolis punctatus</i> Daudin, 1802 Widespread		VA	BO		BA	RO?	PA	AP	GU	SU	FG
<i>Basiliscus basiliscus</i> (Linnaeus, 1758) Introduced											GU
<i>Iguana iguana</i> (Linnaeus, 1758) Widespread	CG	VA	BO	DA	BA	RO	PA	AP	GU	SU	FG
<i>Ophryoesoides erythrogaster</i> Hallowell, 1856 Widespread	CG										
<i>Phenacosaurus bellipeniculus</i> Myers & Donnelly, 1996 Endemic		VA									
<i>Phenacosaurus carlostoddi</i> Williams, Praderio & Gorzula, 1996 Endemic			BO								
<i>Phenacosaurus neblininus</i> Myers, Williams & McDiarmid, 1993 Endemic		VA									
<i>Plica lumaria</i> Donnelly & Myers, 1991 Endemic			BO								
<i>Plica panstictus</i> (Myers & Donnelly, 2001) Endemic		VA									
<i>Plica plica</i> (Linnaeus, 1758) Widespread	VA	BO	DA	BA	RO	PA	AP	GU	SU	FG	

<i>Plica umbra</i> (Linnaeus, 1758) Widespread	CG VA BO DA BA RO? PA AP GU SU FG
<i>Polychrus guttuerosus</i> Berthold, 1846 Widespread	CG
<i>Polychrus marmoratus</i> (Linnaeus, 1758) Widespread	CG? VA? BO DA? BA RO PA AP GU SU FG
<i>Tropidurus bogerti</i> Roze, 1958 Endemic	BO
<i>Tropidurus hispidus</i> Spix, 1825 Widespread	CG VA BO DA RO PA? AP? GU SU FG
<i>Uracentron azureum</i> (Linnaeus, 1758) Widespread	CG VA BA RO? PA AP GU SU FG
<i>Uranoscodon superciliosus</i> (Linnaeus, 1758) Widespread	CG VA BO DA BA RO PA AP GU SU FG
<b>Family: Scincidae</b>	
<i>Mabuya bistrata</i> (Spix, 1825) Widespread	BA PA? AP GU? FG
<i>Mabuya carvalhoi</i> Rebouças-Spieker & Vanzolini, 1990 Guiana Shield	VA RO
<i>Mabuya nigropunctata</i> (Spix, 1825) Widespread	CG? VA? BO? DA? BA RO PA AP GU SU FG
<b>Family: Teiidae</b>	
<i>Ameiva ameiva</i> (Linnaeus, 1758) Widespread	CG VA BO DA BA RO PA AP GU SU FG
<i>Ameiva bifrontata</i> Cope, 1862 Introduced	BO
<i>Cnemidophorus cryptus</i> Cole & Dessauer, 1993 Widespread	BO BA PA AP SU?
<i>Cnemidophorus lemniscatus</i> (Linnaeus, 1758) Guiana Shield +	CG? VA BO BA? RO PA AP? GU SU FG
<i>Cnemidophorus pseudolemniscatus</i> Cole & Dessauer, 1993 Endemic	SU FG?
<i>Crocodylurus amazonicus</i> Spix, 1825 Widespread	CG VA BA RO? PA AP FG
<i>Dracaena guianensis</i> Daudin, 1802 Widespread	CG BA PA? AP FG
<i>Kentropyx altamazonica</i> Cope, 1876 Widespread	CG VA BA RO? PA
<i>Kentropyx borckiana</i> Peters, 1869 Widespread	BO DA? GU SU FG
<i>Kentropyx calcarata</i> Spix, 1825 Widespread	VA BO DA BA RO PA AP GU SU FG
<i>Kentropyx striata</i> (Daudin, 1802) Widespread	CG VA BO DA? BA? RO PA AP GU SU FG?
<i>Tupinambis teguixin</i> (Linnaeus, 1758) Widespread	CG VA BO DA BA RO PA AP GU SU FG

**Order: Squamata—Worm Lizards****Family: Amphisbaenidae**

<i>Amphisbaena alba</i> Linnaeus, 1758 Widespread	BO DA BA RO PA AP GU SU FG
<i>Amphisbaena fuliginosa</i> Linnaeus, 1758 Widespread	VA BO DA BA RO PA? AP? GU SU FG
<i>Amphisbaena gracilis</i> Strauch, 1881 Endemic	BO DA
<i>Amphisbaena myersi</i> Hoogmoed, 1989 Endemic	SU
<i>Amphisbaena rozei</i> Lancini, 1963 Endemic	BO
<i>Amphisbaena slevini</i> Schmidt, 1936 Guiana Shield	BA FG
<i>Amphisbaena stejneri</i> Ruthven, 1922 Endemic	GU
<i>Amphisbaena tragorhectes</i> Vanzolini, 1971 Endemic	PA
<i>Amphisbaena vanzolinii</i> Gans, 1963 Guiana Shield	BA RO? PA? GU SU
<i>Mesobaena huebneri</i> Mertens, 1925 Guiana Shield +	CG VA

## Order: Squamata—Snakes

**Family: Aniliidae**

*Anilius scytale* (Linnaeus, 1758) CG BO BA RO? PA AP GU SU FG  
Widespread

**Family: Anomalepididae**

*Liotyphlops ternetzi* (Boulenger, 1896) SU FG  
Widespread

*Liotyphlops albirostris* (Peters, 1857) CG  
Widespread

*Typhlops ayarzaguenai* Señaris, 1998 BO  
Endemic

*Typhlops squamosus* Schlegel, 1839 BA AP? GU SU FG  
Widespread

**Family: Boidae**

*Boa constrictor* Linnaeus, 1758 CG VA BO DA BA RO PA AP GU SU FG  
Widespread

*Corallus caninus* (Linnaeus, 1758) CG VA BO DA BA RO PA AP GU SU FG  
Widespread

*Corallus hortulanus* (Linnaeus, 1758) CG VA BO DA BA RO PA AP GU SU FG  
Widespread

*Corallus ruschenbergerii* (Cope, 1876) CG VA BO DA  
Widespread

*Epicrates cenchria* (Linnaeus, 1758) CG VA BO DA BA RO PA AP GU SU FG  
Widespread

*Epicrates maurus* Gray, 1849 BO DA GU SU FG  
Widespread

*Eunectes deschauenseei* Dunn & Conant, 1936 AP SU? FG  
Guiana Shield +

*Eunectes murinus* (Linnaeus, 1758) CG VA BO DA BA RO PA AP GU SU FG  
Widespread

**Family: Colubridae**

*Apostolepis quinquelineata* Boulenger, 1896 BA RO PA? AP GU SU FG  
Widespread

*Atractus alphonsehoegi* Cunha & Nascimento, 1983 BA RO PA?  
Widespread

*Atractus badius* (Boie, 1827) VA BO? AP GU SU FG  
Widespread

*Atractus duidensis* Roze, 1961 VA  
Endemic

*Atractus elaps* (Günther, 1858) CG VA GU? SU  
Widespread

*Atractus favae* (Filippi, 1840) GU SU  
Endemic

*Atractus flammigerus* (Boie, 1827) PA? SU FG  
Widespread

*Atractus insipidus* Roze, 1961 BO RO?  
Endemic

*Atractus latifrons* (Günther, 1868) BA PA? AP GU? SU FG  
Widespread

*Atractus major* Boulenger, 1894 VA BA  
Widespread

*Atractus poeppigi* (Jan, 1862) BA  
Widespread

*Atractus riveroi* Roze, 1961 VA  
Endemic

*Atractus schach* (Boie, 1827) BA PA? SU FG  
Widespread

*Atractus snethlageae* Cunha & Nascimento, 1983 BA PA?  
Widespread

*Atractus steyermarki* Roze, 1958 BO  
Endemic

*Atractus torquatus* Duméril, Bibron & Duméril, 1854 VA BO BA RO PA? GU SU FG  
Widespread

*Atractus trilineatus* Wagler, 1828 BO DA BA RO GU SU?  
Guiana Shield +

*Atractus zidoki* Gasc & Rodrigues, 1979 PA? AP SU FG  
Guiana Shield +

*Cercophis auratus* (Schlegel, 1837) PA? AP? SU FG?  
Widespread

*Chironius carinatus* (Linnaeus, 1758) CG VA BO DA BA RO PA AP GU SU FG  
Widespread

<i>Chironius exoletus</i> (Linnaeus, 1758) Widespread	CG? VA BO DA? BA RO PA? AP GU SU FG
<i>Chironius fuscus</i> (Linnaeus, 1758) Widespread	CG VA BO DA BA RO? PA AP GU SU FG
<i>Chironius multiventris</i> Schmidt & Walker, 1943 Widespread	CG VA BO? DA BA RO? PA AP GU SU FG
<i>Chironius scurrulus</i> (Wagler, 1824) Widespread	CG VA BO DA? BA RO? PA? AP GU SU FG
<i>Clelia clelia</i> (Daudin, 1803) Widespread	CG VA BO DA? BA RO PA? AP GU SU FG
<i>Dendrophidion dendrophis</i> (Schlegel, 1837) Widespread	CG? VA BO DA? BA RO? PA? AP GU SU FG
<i>Dipsas catesbyi</i> (Santzen, 1796) Widespread	CG VA BO BA RO PA? AP? GU SU FG
<i>Dipsas copei</i> (Günther, 1872) Guiana Shield	VA GU SU? FG
<i>Dipsas indica</i> Laurenti, 1768 Widespread	VA? BO BA RO? PA? AP? GU SU FG
<i>Dipsas latifrontalis</i> (Boulenger, 1905) Widespread	CG
<i>Dipsas pakaraima</i> MacCulloch & Lathrop, 2004 Endemic	GU
<i>Dipsas pavonina</i> Schlegel, 1837 Widespread	CG VA BO BA RO? PA? AP? GU SU FG
<i>Dipsas variegata</i> (Duméril, Bibron & Duméril, 1854) Widespread	VA BO BA? RO? PA? AP? GU SU FG
<i>Drepanoides anomalus</i> (Jan, 1863) Widespread	VA? BA RO? PA? AP? GU? SU FG
<i>Drymarchon corais</i> (Boie, 1827) Widespread	CG VA BO DA? BA RO PA AP GU SU FG
<i>Drymobius rhombifer</i> (Günther, 1860) Widespread	VA BO RO GU SU FG
<i>Drymoluber dichrous</i> (Peters, 1863) Widespread	VA BO BA RO PA AP GU SU FG
<i>Erythrolamprus aesculapii</i> (Linnaeus, 1758) Widespread	CG? VA BO DA BA RO PA? AP GU SU FG
<i>Helicops angulatus</i> (Linnaeus, 1758) Widespread	CG? VA BO DA BA RO PA AP GU SU FG
<i>Helicops hagmanni</i> Roux, 1910 Widespread	VA BA PA?
<i>Helicops hogeï</i> Lancini, 1964 Guiana Shield	VA BO DA
<i>Helicops leopardinus</i> (Schlegel, 1837) Widespread	BO? PA AP GU SU FG
<i>Hydrodynastes bicinctus</i> (Herrmann, 1804) Widespread	CG VA BA RO? PA? AP? GU SU FG
<i>Hydrodynastes gigas</i> (Duméril, Bibron & Duméril, 1854) Widespread	PA AP? FG
<i>Hydrops martii</i> (Wagler, 1824) Widespread	BA RO
<i>Hydrops triangularis</i> (Wagler, 1824) Widespread	BO DA BA RO? PA? AP? GU SU FG
<i>Imantodes cenchoa</i> (Linnaeus, 1758) Widespread	CG? VA BO DA? BA RO? PA AP GU SU FG
<i>Imantodes lentiferus</i> (Cope, 1894) Widespread	BO SU FG
<i>Leptodeira annulata</i> (Linnaeus, 1758) Widespread	CG VA BO DA BA RO PA AP GU SU FG
<i>Leptophis ahaetulla</i> (Linnaeus, 1758) Widespread	CG VA BO DA BA RO PA AP GU SU FG
<i>Liophis breviceps</i> Cope, 1860 Widespread	VA BO DA BA RO PA AP GU SU FG
<i>Liophis cobellus</i> (Linnaeus, 1758) Widespread	VA BO DA BA RO? PA AP GU SU FG
<i>Liophis ingeri</i> Roze, 1958 Endemic	BO
<i>Liophis lineatus</i> (Linnaeus, 1758) Widespread	VA BO DA? RO PA AP GU SU FG
<i>Liophis melanotus</i> (Shaw, 1802) Widespread	CG BO DA
<i>Liophis miliaris</i> (Linnaeus, 1758) Widespread	VA BO BA RO? PA AP GU SU FG
<i>Liophis poecilogyrus</i> (Wied, 1825) Widespread	VA BO BA RO PA AP GU SU FG?
<i>Liophis reginae</i> (Linnaeus, 1758) Widespread	CG? VA BO DA BA RO? PA AP GU SU FG

<i>Liophis torrenicola</i> Donnelly & Myers, 1991 Endemic	BO
<i>Liophis trebbaii</i> Roze, 1958 Endemic	BO
<i>Liophis typhlus</i> (Linnaeus, 1758) Widespread	CG VA BO DA? BA RO PA AP GU SU FG
<i>Masticophis mentovarius</i> (Peters, 1868) Widespread	BO
<i>Mastigodryas bifossatus</i> (Raddi, 1820) Widespread	VA BO PA AP? GU SU FG
<i>Mastigodryas boddaerti</i> (Sentzen, 1796) Widespread	CG VA BO DA? BA RO PA AP GU SU FG
<i>Mastigodryas pleei</i> Duméril, Bibron & Duméril, 1854 Widespread	VA BO SU
<i>Ninia hudsoni</i> Parker, 1940 Widespread	GU SU?
<i>Oxybelis aeneus</i> (Wagler, 1824) Widespread	CG? VA BO DA? BA RO PA? AP? GU SU FG
<i>Oxybelis fulgidus</i> (Daudin, 1803) Widespread	CG VA BO DA? BA RO? PA AP? GU SU FG
<i>Oxyrhopus</i> aff. <i>melanogenys</i> (Zaher & Caramaschi, 1992) Widespread	VA BA RO PA FG
<i>Oxyrhopus formosus</i> (Wied, 1820) Widespread	VA BO BA AP? SU FG
<i>Oxyrhopus petola</i> (Linnaeus, 1758) Widespread	CG VA BO BA RO PA AP GU SU FG
<i>Oxyrhopus trigeminus</i> (Duméril & Bibron, 1854) Widespread	BO AP GU SU? FG?
<i>Philodryas cordata</i> Donnelly & Myers, 1991 Endemic	BO
<i>Philodryas olfersii</i> (Lichtenstein, 1823) Widespread	VA BO RO AP GU SU FG
<i>Philodryas viridissimus</i> (Linnaeus, 1758) Widespread	CG BO DA? BA RO PA? AP GU SU FG
<i>Phimophis guianensis</i> (Troschel, 1848) Widespread	VA BO GU SU FG
<i>Pseudoboa coronata</i> Schneider, 1801 Widespread	CG VA BO? DA? BA RO PA? AP GU SU FG
<i>Pseudoboa newwiedii</i> Duméril, Bibron & Duméril, 1854 Widespread	BO BA RO PA? AP GU SU FG
<i>Pseudoeryx plicatilis</i> (Linnaeus, 1758) Widespread	VA? BO? BA RO? PA AP GU SU FG
<i>Pseustes poecilonotus</i> (Peters, 1867) Widespread	CG VA BO DA? BA RO? PA? AP? GU SU FG
<i>Pseustes sulphureus</i> (Wagler, 1824) Widespread	VA? BO BA RO? PA? AP GU SU FG
<i>Rhinobothryum lentiginosum</i> (Scopoli, 1785) Widespread	CG BO BA RO? PA? AP SU FG
<i>Sibon nebulata</i> (Linnaeus, 1758) Widespread	CG? BO DA? RO PA? AP? GU SU FG
<i>Siphlophis cervinus</i> (Laurenti, 1768) Widespread	VA BO BA GU SU FG
<i>Siphlophis compressus</i> (Daudin, 1803) Widespread	CG VA BO DA BA RO PA AP? GU SU FG
<i>Spilotes pullatus</i> (Linnaeus, 1758) Widespread	CG? VA BO DA BA RO PA? AP GU SU FG
<i>Taeniophallus brevirostris</i> (Peters, 1863) Widespread	BA PA? AP SU FG
<i>Taeniophallus nicagus</i> (Cope, 1868) Guiana Shield	BA AP SU FG?
<i>Tantilla melanocephala</i> (Linnaeus, 1758) Widespread	CG VA BO DA? BA RO PA? AP? GU SU FG
<i>Thamnodynastes chimanta</i> Roze, 1958 Endemic	BO
<i>Thamnodynastes corocoroensis</i> Gorzula & Ayarzagüenna, 1995 [1996] Endemic	VA
<i>Thamnodynastes duida</i> Myers & Donnelly, 1996 Endemic	VA
<i>Thamnodynastes marahuaquensis</i> Gorzula & Ayarzagüenna, 1995 [1996] Endemic	VA
<i>Thamnodynastes pallidus</i> (Linnaeus, 1758) Widespread	VA BO BA PA? GU SU FG
<i>Thamnodynastes strigilis</i> (Thunberg, 1787) Widespread	VA BO DA RO GU SU FG
<i>Thamnodynastes yavi</i> Myers & Donnelly, 1996 Endemic	VA





<i>Bothriopsis taeniata</i> (Wagler, 1824) Widespread	VA BO BA? RO? PA? AP GU SU FG
<i>Bothrops atrox</i> (Linnaeus, 1758) Widespread	CG VA BO DA BA RO PA AP GU SU FG
<i>Bothrops brazili</i> Hoge, 1954 Widespread	VA BO? BA? RO? PA? AP GU SU FG
<i>Bothrops venezuelensis</i> Sandner Montilla, 1952 Widespread	BO
<i>Crotalus durissus</i> Linnaeus, 1758 Widespread	CG BO RO PA AP GU SU FG
<i>Lachesis muta</i> (Linnaeus, 1758) Widespread	CG? VA BO DA BA RO? PA? AP GU SU FG

### Order: Crocodylia—Crocodylians

#### Family: Crocodylidae

<i>Caiman crocodilus</i> (Linnaeus, 1758) Widespread	CG VA BO DA BA RO PA AP GU SU FG
<i>Crocodylus intermedius</i> Graves, 1819 Guiana Shield +	CG VA BO DA
<i>Melanosuchus niger</i> (Spix, 1825) Widespread	BA RO PA AP GU FG
<i>Paleosuchus palpebrosus</i> (Cuvier, 1807) Widespread	CG VA BO DA BA RO? PA? AP? GU SU FG
<i>Paleosuchus trigonatus</i> (Schneider, 1801) Widespread	CG VA BO BA RO? PA? AP? GU SU FG

### Order: Testudines—Turtles

#### Family: Bataguridae

<i>Rhinoclemmys punctularia</i> (Daudin, 1802) Widespread	VA BO DA BA RO PA? AP GU SU FG
--	--------------------------------

#### Family: Chelidae

<i>Batrachemys heliostema</i> McCord et al., 2001 Widespread	VA BA
<i>Batrachemys nasuta</i> (Schweigger, 1812) Guiana Shield	PA? AP? GU SU FG
<i>Batrachemys raniceps</i> (Gray, 1855) Widespread	CG? VA? BO? BA RO PA AP
<i>Chelus fimbriatus</i> (Schneider, 1783) Widespread	CG VA BO DA BA RO PA? AP GU SU? FG
<i>Mesoclemmys gibba</i> (Schweigger, 1812) Widespread	CG VA BO DA BA? RO PA? AP? GU SU FG
<i>Phrynops tuberosus</i> (Peters, 1870) Widespread	CG VA BO DA? BA RO PA AP? GU SU FG
<i>Platemys platycephala</i> (Schneider, 1792) Widespread	VA BO DA BA RO PA? AP? GU SU FG
<i>Rhinemys rufipes</i> (Spix, 1824) Widespread	VA? BA

#### Family: Cheloniidae

<i>Caretta caretta</i> (Linnaeus, 1758) Widespread, marine, rare on Guiana Shield coasts	GU SU FG
<i>Chelonia mydas</i> (Linnaeus, 1758) Widespread, marine	DA AP GU SU FG
<i>Eretmochelys imbricata</i> (Linnaeus, 1766) Widespread, marine	DA? GU SU FG
<i>Lepidochelys olivacea</i> (Eschscholtz, 1829) Widespread, marine	DA? AP? GU SU FG

#### Family: Dermochelyidae

<i>Dermochelys coriacea</i> (Vandelli, 1761) Widespread, marine	DA AP? GU SU FG
--	-----------------

#### Family: Kinosternidae

<i>Kinosternon scorpioides</i> (Linnaeus, 1766) Widespread	CG VA BO DA BA RO PA? AP GU SU FG
---	-----------------------------------

#### Family: Podocnemididae

<i>Peltocephalus dumerilianus</i> (Schweigger, 1812) Widespread	CG VA BO? BA RO PA AP? GU? FG
<i>Podocnemis erythrocephala</i> (Spix, 1824) Guiana Shield	CG VA BA PA

*Podocnemis expansa* (Schweigger, 1812)

Widespread

CG VA BO BA RO PA GU

*Podocnemis sextuberculata* Cornalia, 1849

Widespread

BA PA

*Podocnemis unifilis* Troschel, 1848

Widespread

CG VA BO DA? BA RO PA AP GU SU FG

*Podocnemis vogli* Müller, 1935

Widespread

CG VA BO DA?

**Family: Testudinidae**

*Geochelone carbonaria* (Spix, 1824)

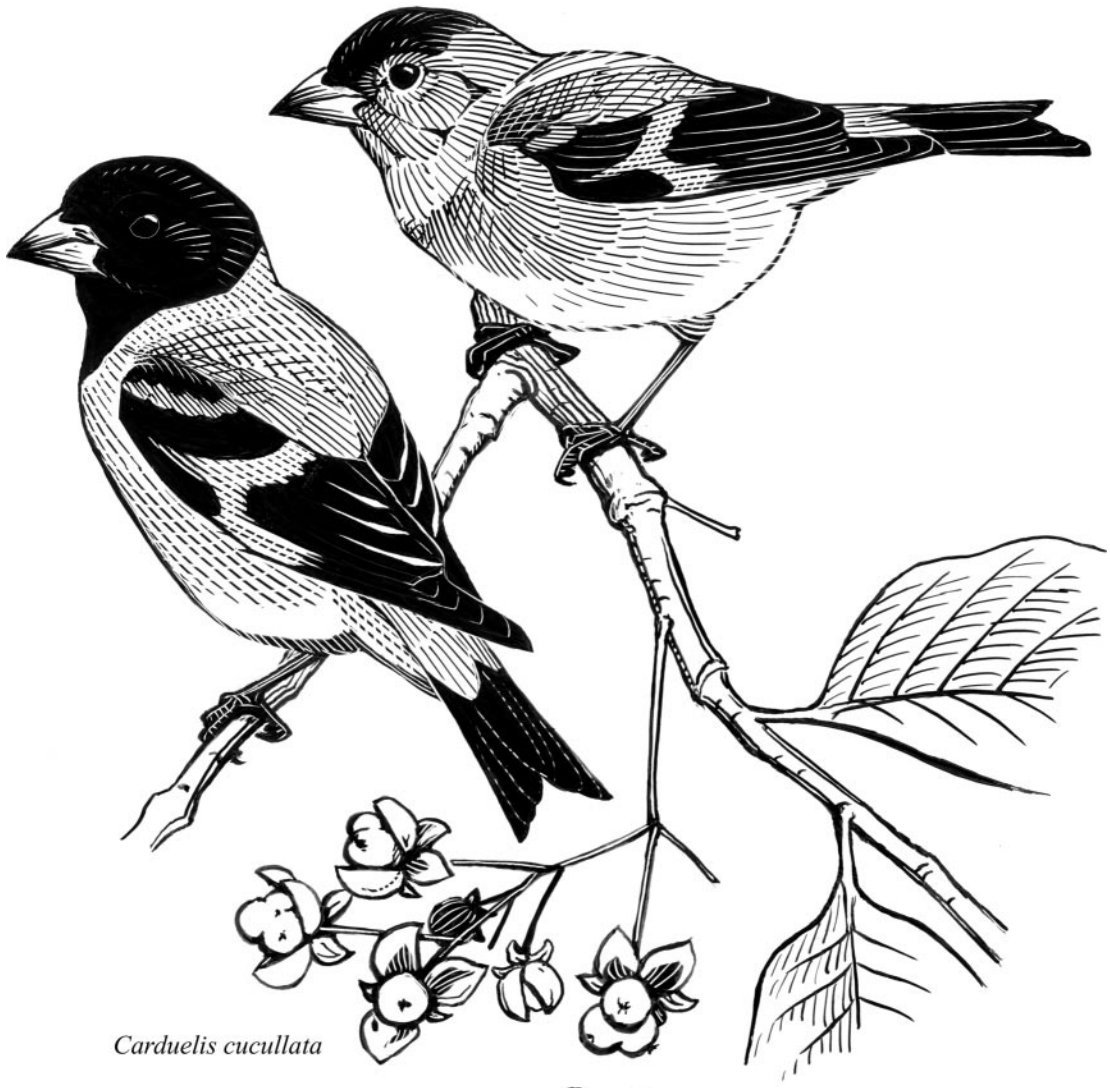
Widespread

CG BO DA BA RO PA? AP? GU SU FG

*Geochelone denticulata* (Linnaeus, 1766)

Widespread

CG VA BO DA BA RO PA AP GU SU FG



*Carduelis cucullata*

©JCA 2000

# BIRDS

CHRISTOPHER M. MILENSKY, WILTSHIRE HINDS, ALEXANDRE ALEIXO, AND MARIA DE FÁTIMA C. LIMA

## Introduction

Geologically, the Guiana Shield roughly underlies the area north of the Amazon River and east of the Orinoco River in northeastern South America. This includes approximately the southern half of Venezuela and the northern extremities of Brazil, as well as some parts of southeastern Colombia (Gibbs & Barron 1993). For the purpose of this avian checklist, we include the countries of Guyana, Surinam, and French Guiana in their entirety, the Venezuelan states of Amazonas and Bolívar, and the Brazilian states of Amapá, Pará, Roraima, and Amazonas. The Amazon River is used as the southern shield boundary for most of Brazil, with the Río Negro as the boundary in western Amazonas. The Venezuelan state of Delta Amacuro, which is predominantly a coastal lowland, is not included in this list. The Guiana Shield's boundaries by strict definition do not include coastal areas (Gibbs & Barron 1993), and therefore pelagic bird species are not included in this list.

Among the terrestrial vertebrate groups included in this checklist, it is fair to say that birds are the best-studied. Major published works exist for all countries involved (Snyder 1966, Meyer de Schauensee & Phelps 1978, Tostain et al. 1992, Haverschmidt & Mees 1994, Braun et al. 2000, Hilty 2003, Sick 1993). This list is considered an update of the list in the Guianan appendix compiled in Stotz et al. (1996), with recent information incorporated from the works mentioned above, relevant literature, and ongoing field work, including some reliable sight records.

## Taxonomic Composition

South America has the highest bird species richness of any continent, with more than 3000 species that account for nearly one third of the world's living avian species. Analyses of species richness patterns have show the highlands of the Guiana Shield to be one of the more diverse areas of the continent (Rahbek & Graves 2001). Here, 1004 species of birds are listed from the region, representing 70 families in 22 orders. This comprises approximately 10% of the known bird species of the world and some 39% of the currently recognized families. The most diverse order within the area of the Guiana Shield is the Passeriformes, with 549 species. The most diverse family is Tyrannidae, with 132 species. A full listing of the number of species in each family, with the number considered to be endemic to the Guiana Shield, is given in Table 9.

Cracraft (1985) considered 71 species as endemics to the region. Here, that number has been increased

to 77, with the humid montane forests of the tepuis showing the highest endemism.

Among vertebrates recorded from the Guiana Shield region, at least one bird species, the Eskimo curlew (*Numenius borealis*), a Nearctic migrant, is believed to be extinct (Gill et al. 1998). Also, a population of the Red Siskin (*Carduelis cucullata*), previously believed to be on the verge of extinction in the wild, has been found recently in Guyana (Robbins et al. 2003).

More museum-oriented fieldwork certainly will increase the number of avian taxa known from the Guiana Shield. As the taxa in this list are studied in more detail, there will also undoubtedly be taxonomic adjustments elevating current subspecies to full species status. Future studies in genetics, distributions, and vocal characters will improve the taxonomic arrange-

Table 9—Number of bird species by family.

Family	Species	Endemics	Family	Species	Endemics
Tyrannidae	132	7	Charadriidae	7	
Thamnophilidae	71	11	Galbulidae	7	1
Furnariidae	57	3	Trogonidae	7	
Trochilidae	51	5	Alcedinidae	6	
Thraupidae	47	3	Cathartidae	5	
Accipitridae	39		Nyctibiidae	5	
Psittacidae	38	5	Sylviidae	4	1
Emberizidae	33	3	Ciconiidae	3	
Picidae	27	3	Corvidae	3	
Parulidae	24	3	Capitonidae	2	
Scolopacidae	22		Mimidae	2	
Ardeidae	21		Odontophoridae	2	
Icteridae	21	1	Podicipedidae	2	
Pipridae	20	7	Anhimidae	1	
Caprimulgidae	19	1	Anhingidae	1	
Columbidae	18		Aramidae	1	
Cotingidae	17	5	Burhinidae	1	
Rallidae	17		Conopophagidae	1	
Cuculidae	16	1	Eurypygidae	1	
Falconidae	16		Haematopodidae	1	
Hirundinidae	16		Heliornithidae	1	
Strigidae	15		Jacaniidae	1	
Anatidae	14		Momotidae	1	
Apodidae	14	1	Motacillidae	1	
Bucconidae	14	2	Opisthocomidae	1	
Fringillidae	14	2	Oxyruncidae	1	
Troglodytidae	14	2	Pandionidae	1	
Tinamidae	13	1	Phalacrocoracidae	1	
Turdidae	13		Phoenicopteridae	1	
Vireonidae	13	1	Psophiidae	1	
Laridae	11		Recurvirostridae	1	
Ramphastidae	10	2	Rynchopidae	1	
Formicariidae	9	1	Steatornithidae	1	
Cardinalidae	8		Tytonidae	1	
Cracidae	8	5	<i>Incertae sedis</i>	28	2
Threskiornithidae	8				

Table 10—Distribution codes for birds.

VA	Venezuela-Amazonas
BO	Venezuela-Bolívar
RO-BA	Brazil-Roraima and Amazonas
PA-AP	Brazil-Pará and Amapá
GU	Guyana
SU	Surinam
FG	French Guiana

ment and better define the total number of species in this geographic region.

#### Using the Checklist

This checklist taxonomy is based on a checklist of South American birds (Remsen et al. 2005). However, species arrangement within families generally follows Hilty (2003). There are several groups of species for which the family placement is currently uncertain; these are placed in the list in an approximate position under the heading “Incertae sedis.” As with the other vertebrate groups in this publication, taxonomic arrangements of birds are currently subject to great discussion and debate and are in a constant state of flux. The taxonomic relationships of many species in this list have yet to be determined.

Latin binomial names of species are given first, followed by the standard English name. To maintain consistency in this publication, the authors of the bird names are also included. Authors’ names were obtained in large part from the ITIS taxonomic database (ITIS 2004). In order to see species distributions across the shield, we have divided it into seven regions. The distributional abbreviations used are given in Table 10 and illustrated in Figure 6. Abbreviations are followed by a “?” if the distribution is uncertain. The Brazilian state distributions include only the parts of those states within the defined extent of the shield.

Although there is widespread scientific and amateur interest in South American birds, there is still much to be learned about habitats, behaviors, breeding, migration patterns and ecology of many Neotropical bird species. It is hoped that this list will promote the organized documentation and communication of new information on these topics, in addition to encouraging collection of new information on the species present in the Guiana Shield.

#### Acknowledgments

Special thanks go to our field colleagues over the years, especially Mark Robbins, Brian O’Shea, Nathan Rice, Brian Schmidt, and Michael Braun. Thanks also go to Brian Barber, Kim Bostwick, Robb Brumfield, H. David Clarke, James Dean, Kristine Erskine, Davis Finch, Rob Faucet, Gary Graves,

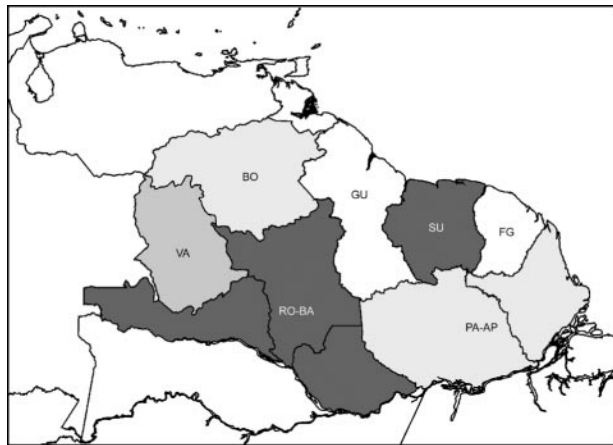


Figure 6. Map of the the distributional units used in the bird checklist, using the abbreviations given in Table 10.

Robert Timm, David Watson, Romeo Williams, and Kristof Zyskowski. Mark Robbins of the University of Kansas Natural History Museum reviewed and made helpful comments on an early version of this manuscript. We are also grateful to Brian O’Shea of the Louisiana State University Museum of Natural Science and Carla Dove for reviews that greatly improved this manuscript.

#### Selected Literature on the Birds of the Guiana Shield

- American Ornithologists’ Union. 1998. Check-list of North American birds, 7th edition. American Ornithologists’ Union, Washington, D.C.
- Barnett, A., R. Shapley, P. Benjamin, E. Henry, & M. McGarrill. 2002. Birds of the Potaro Plateau, with eight new species for Guyana.—*Cotinga* 18:19–36.
- Barrowclough, G. F., P. Escalante-Pliengo, R. Avelado-Hostos, & L. A. Perez-Chinchilla. 1995. An annotated list of the birds of the Cerro Tamacuarí region, Serranía de Tapirapecó, Federal Territory of Amazonas, Venezuela.—*Bulletin of the British Ornithologists’ Club* 115(4):211–219.
- Beebe, W., G. I. Hartley, & P. G. Howes. 1917. Tropical wildlife in British Guyana. New York Zoological Society, New York.
- Borges, S. H. 1994. Listagem e novos registros de aves para região de Boa Vista, Roraima, Brasil.—*Boletim Museu Paraense Emílio Goeldi, sér. Zoologia* 10(2):191–202.
- Braun, M. J., D. W. Finch, M. B. Robbins, & B. K. Schmidt. 2000. A field checklist of the birds of Guyana. Biological Diversity of the Guianas Program, Smithsonian Institution, Washington, D.C. ([www.mnh.si.edu/biodiversity/bdg/guybirds.html](http://www.mnh.si.edu/biodiversity/bdg/guybirds.html)).
- Braun, M. J., M. B. Robbins, C. M. Milensky, B. J. O’Shea, B. R. Barber, W. Hinds, & W. S. Prince. 2003. New birds for Guyana from Mts. Roraima and Ayanganna.—*Bulletin of the British Ornithologists’ Club* 123(1):24–32.
- Cabanis, J. 1848. Voegel. Pp. 662–765 in R. Schomburgk, ed., *Reisen en Britisch-Guiana in den Jahren 1840–1844*, vol. 3. J. J. Weber, Leipzig, Germany.
- Cohn-Haft, M., A. Whittaker, & P. C. Stouffer. 1997. A new look at the “species-poor” central Amazon: the avifauna north of Manaus, Brazil.—*Ornithological Monographs* 48:205–235.

- Cracraft, J. 1985. Historical biogeography and patterns of differentiation within the South American avifauna: areas of endemism.—*Ornithological Monographs* 36:49–84.
- Davis, T. H. 1980. Additions to the birds of Suriname.—*Continental Birdlife* 1:136–146.
- Del Hoyo, J., A. Elliott, & J. Sargatal, eds. 1999. *Handbook of the birds of the world*. Vol. 5: Barn-owls to hummingbirds. Lynx Edicions, Barcelona, Spain.
- Diaz, M., F. G. Stiles, & J. L. Telleria. 1995. La comunidad de aves en un gran claro permanente de la selva Amazonica: la Sierra de Chiribiquete (Colombia).—*Ardeola* 42(2):191–200.
- Dickerman, R. W., & W. H. Phelps, Jr. 1982. An annotated list of the birds of Cerro Urutaní on the border of Estado Bolívar, Venezuela, and Territorio Roraima, Brazil.—*American Museum Novitates* 2732:1–20.
- Donahue, P. K. 1985. Notes on some little known or previously unrecorded birds of Suriname.—*American Birds* 39:229–230.
- Friedmann, H. 1948. Birds collected by the National Geographic Society's expeditions to northern Brazil and southern Venezuela.—*Proceedings of the U.S. National Museum* 97:373–570.
- Gibbs, A. K., & C. N. Barron. 1993. *The geology of the Guiana Shield*. Oxford University Press, New York.
- Griscom, L., & J. C. Greenway, Jr. 1941. Birds of lower Amazonia.—*Bulletin of the Museum of Comparative Zoology at Harvard University*. 88:83–344.
- Haffer, J. 1974. Avian speciation in tropical South America.—*Publications of the Nuttall Ornithological Club* 14:1–390.
- Haverschmidt, F., & G. F. Mees. 1994. *Birds of Suriname*. VACO, Paramaribo.
- Hilty, S., J. A. Gwynne, & G. Tudor. 2003. *Birds of Venezuela*, 2nd edition. Princeton University Press, Princeton.
- Hu, D. S., L. Joseph, & D. Agro. 2000. Distribution, variation, and taxonomy of *Topaza* hummingbirds (Aves: Trochilidae).—*Ornitologia Neotropical* 11:123–142.
- ITIS. 2004. Data retrieved October 2004. Integrated Taxonomic Information System on-line database, (<http://www.itis.usda.gov>).
- Mees, G. F. 2000. *Birds of the Rupununi south savannah, Guyana*. Published by the author.
- Mees, G. F., & V. J. Mees-Balchin. 1990. *Basileuterus flaveolus* (Baird) in Guyana.—*Bulletin of the British Ornithologists' Club* 110:179–181.
- Meyer de Schauensee, R., & W. H. Phelps, Jr. 1978. *A guide to the birds of Venezuela*. Princeton University Press, Princeton.
- Monroe, B. L., & C. G. Sibley. 1993. *A world checklist of birds*. Yale University Press, New Haven.
- Moskovits, D. K., J. W. Fitzpatrick, & D. E. Willard. 1985. Lista preliminar das aves da estação ecológica de Maracá, território de Roraima, Brasil, e áreas adjacentes.—*Papéis Avulsos de Zoologia (Sao Paulo)* 36:51–68.
- Niles, J. J. 1981. The status of psittacine birds in Guyana. Pp. 431–438 in R. F. Pasquier, ed., *Conservation of New world parrots*. Smithsonian Institution, Washington, D.C.
- Novaes, F. C. 1974. *Ornitologia do território do Amapá*. I.—*Publicações Avulsas do Museu Paraense Emílio Goeldi, Zoologia* 25:1–121.
- Novaes, F. C. 1978. *Ornitologia do território do Amapá*. II.—*Publicações Avulsas do Museu Paraense Emílio Goeldi, Zoologia* 29:1–75.
- Parker, T. A., III, R. B. Foster, L. H. Emmons, P. Freed, A. B. Forsyth, B. Hoffman, & B. D. Gill. 1993. A biological assessment of the Kanuku Mountain region of Southwestern Guyana. RAP Working Papers 5. Conservation International, Washington, D.C.
- Pérez-Emán, J., C. J. Sharpe, M. Lentino, R. O. Prum, & I. J. Carreño. 2003. New records of birds from the summit of Cerro Guaiquinima, Estado Bolívar, Venezuela.—*Bulletin of the British Ornithologists' Club* 123:78–90.
- Phelps, W. H., Sr. 1938. La procedencia geográfica de las aves coleccionadas en el Cerro Roraima.—*Boletín de la Sociedad Venezolana de Ciencias Naturales* 36:83–95.
- Pinto, O. M. O. 1966. Estudo crítico e catálogo remissivo das aves do território federal de Roraima.—*Caderno da Amazônia* 8:1–176.
- Rahbek, C., & G. R. Graves. 2001. Multiscale assessment of patterns of avian species richness.—*Proceedings of the National Academy of Sciences of the United States of America* 98(8):4534–4539.
- Remsen, J. V., Jr., A. Jaramillo, M. Nores, J. F. Pacheco, M. B. Robbins, T. S. Schulenberg, F. G. Stiles, J. M. C. da Silva, D. F. Stotz, & K. J. Zimmer. Version February 2005. A classification of the bird species of South America. American Ornithologists' Union. (<http://www.museum.lsu.edu/~Remsen/SACCBaseline.html>).
- Ribot, J. H. July 2003. Checklist of birds of Suriname. (<http://webserv.nhl.nl/~ribot/english/>).
- Ridgely, R. S., D. Agro, & L. Joseph. 2004. Birds of Iwokrama Forest.—*Proceedings of the Academy of Natural Sciences of Philadelphia* 154(1):109–121.
- Ridgely, R. S., & G. Tudor. 1989. *The birds of South America*. Vol. I: The oscine passerines. University of Texas Press, Austin.
- Ridgely, R. S., & G. Tudor. 1994. *The birds of South America*, Vol. II: The subsocine passerines. University of Texas Press, Austin.
- Robbins, M. B., M. J. Braun, & D. W. Finch. 2003. Discovery of a population of the endangered Red Siskin (*Carduelis cucullata*) in Guyana.—*The Auk* 120(2):291–298.
- Robbins, M. B., M. J. Braun, & D. W. Finch. 2004. Avifauna of the Guyana southern Rupununi, with comparisons to other savannas of northern South America.—*Ornitologia Neotropical* 15:173–200.
- Rodner, C., M. Lentino, & R. Restall. 2000. Checklist of the birds of northern South America. An annotated checklist of the species and subspecies of Ecuador, Colombia, Venezuela, Aruba, Curaçao, Bonaire, Trinidad & Tobago, Guyana, Suriname and French Guiana. Pica Press, Sussex.
- Santos, M. P. D. 2004. New records of birds from the Brazilian state of Roraima.—*Bulletin of the British Ornithologists' Club* 124(4):223–225.
- Sharpe, C. J., D. Ascanio-Echeverría, & G. A. Rodríguez. 2001. Further range extensions and noteworthy records for Venezuelan birds.—*Bulletin of the British Ornithologists' Club* 121:50–61.
- Sick, H. 1993. *Birds in Brazil*. Princeton University Press, Princeton, New Jersey.
- Silva, J. M. C. 1998. Birds of the Ilha de Maracá. Pp. 211–229 in W. Milliken and J. A. Ratter, eds., *Maracá: the biodiversity and environment of an Amazonian rainforest*. John Wiley & Sons, London.
- Silva, J. M. C., D. C. Oren, J. C. Roma, & L. M. P. Henriques. 1997. Composition and distribution patterns of the avifauna of an Amazonian upland savanna, Amapá.—*Ornithological Monographs* 48:743–762.
- Snyder, D. E. 1966. *The birds of Guyana*. Peabody Museum, Salem, Massachusetts.
- Stephens, L., & M. A. Traylor. 1985. *Ornithological gazetteer of the Guianas*. Museum Comparative Zoology, Harvard Univ., Cambridge, Massachusetts.
- Stiles, F. G. 1995. Dos nuevas subespecies de aves de la Serranía del Chiribiquete, Departamento del Caquetá, Colombia.—*Lozania* 66:1–16.

- Stiles, F. G. 1996. A new species of emerald hummingbird (Trochilidae, Chlorostilbon) from the Sierra de Chiribiquete, southeastern Colombia, with a review of the *C. mellisugus* complex.—Wilson Bulletin 108:1–27.
- Stiles, F. G., J. L. Telleria, & M. Diaz. 1995. Observaciones sobre la composición, ecología, y zoogeografía de la avifauna de la Sierra de Chiribiquete, Caqueta, Colombia.—Caldasia 17:481–500.
- Stotz, D. F., J. W. Fitzpatrick, T. A. Parker, III, & D. K. Moskovits. 1996. Neotropical birds: ecology and conservation. University of Chicago Press, Chicago.
- Teixeira, D. M., & R. C. Best. 1981. Adendas à ornitologia do Território Federal do Amapá.—Boletim Museu Paraense Emílio Goeldi, série Zoologia 104:4–25.
- Tostain, O., J.-L. Dujardin, Ch. Énard, & J.-M. Thiollay. 1992. Oiseaux de Guyane. Société d'Études Ornithologiques, Bruy, France.
- Traylor, M. A., Jr., ed. 1979. Check-list of the birds of the world, vol. VIII. Museum of Comparative Zoology, Cambridge, MA.
- Willard, D. E., M. S. Foster, G. F. Barrowclough, R. W. Dickerman, P. F. Cannell, S. L. Coates, J. L. Cracraft, & J. P. O'Neill. 1991. The birds of Cerro de la Neblina, Territorio Federal Amazonas, Venezuela.—Fieldiana Zoology (New Series): 65:1–80.

### Order: Tinamiformes

#### Family: Tinamidae—Tinamous

<i>Tinamus tao</i> Temminck, 1815 Gray Tinamou			RO-BA		GU?			
<i>Tinamus major</i> (J. F. Gmelin, 1789) Great Tinamou	VA	BO	RO-BA	PA-AP	GU	SU	FG	
<i>Tinamus guttatus</i> Pelzeln, 1863 White-throated Tinamou	VA		RO-BA					
<i>Crypturellus cinereus</i> (J. F. Gmelin, 1789) Cinereous Tinamou	VA	BO	RO-BA	PA-AP	GU	SU	FG	
<i>Crypturellus soui</i> (Hermann, 1783) Little Tinamou	VA	BO	RO-BA	PA-AP	GU	SU	FG	
<i>Crypturellus ptaritepui</i> Zimmer & Phelps, 1945 Tepui Tinamou Shield endemic			BO					
<i>Crypturellus undulatus</i> (Temminck, 1815) Undulated Tinamou	VA		RO-BA	PA-AP	GU		FG	
<i>Crypturellus variegatus</i> (J. F. Gmelin, 1789) Variegated Tinamou	VA	BO	RO-BA	PA-AP	GU	SU	FG	
<i>Crypturellus erythropus</i> (Pelzeln, 1863) Red-legged Tinamou			BO	RO-BA	PA-AP	GU	SU	FG
<i>Crypturellus duidae</i> Zimmer, 1938 Gray-legged Tinamou	VA	BO	RO-BA					
<i>Crypturellus casiquiare</i> (Chapman, 1929) Barred Tinamou	VA							
<i>Crypturellus brevirostris</i> (Pelzeln, 1863) Rusty Tinamou			RO-BA	PA-AP	GU	SU?	FG	
<i>Crypturellus parvirostris</i> (Wagler, 1827) Small-billed Tinamou				PA-AP				

### Order: Anseriformes

#### Family: Anhimidae—Screamers

*Anhima cornuta* (Linnaeus, 1766) Horned Screamer BO RO-BA PA-AP GU SU FG

#### Family: Anatidae—Ducks, Geese

*Dendrocygna viduata* (Linnaeus, 1766) White-faced Whistling-Duck VA BO RO-BA PA-AP GU SU FG

*Dendrocygna bicolor* (Vieillot, 1816) Fulvous Whistling-Duck GU SU FG

*Dendrocygna autumnalis* (Linnaeus, 1758) Black-bellied Whistling-Duck VA BO RO-BA PA-AP GU SU FG

*Neochen jubata* (Spix, 1825) Orinoco Goose VA BO PA-AP GU FG

*Cairina moschata* (Linnaeus, 1758) Muscovy Duck VA BO RO-BA PA-AP GU SU FG

*Sarkidiornis melanotos* (Pennant, 1769) Comb Duck GU

*Anas americana* J. F. Gmelin, 1789 American Wigeon SU

*Anas bahamensis* Linnaeus, 1758 White-cheeked Pintail PA-AP GU SU FG

*Anas acuta* Linnaeus, 1758 Northern Pintail GU SU

*Anas discors* Linnaeus, 1766 Blue-winged Teal VA BO PA-AP GU SU FG

*Netta erythrophthalma* (Wied-Neuwied, 1833) Southern Pochard SU

<i>Aythya affinis</i> (Eyton, 1838) Lesser scaup					SU
<i>Amazonetta brasiliensis</i> (J. F. Gmelin, 1789) Brazilian Teal	BO	RO-BA	PA-AP	GU	
<i>Nomonyx dominica</i> (Linnaeus, 1766) Masked Duck	BO	RO-BA	PA-AP	GU	SU FG

### Order: Galliformes

#### Family: Cracidae Curassows, Guans

<i>Ortalis ruficauda</i> Jardine, 1847 Rufous-vented Chachalaca	BO	RO-BA			
<i>Ortalis motmot</i> (Linnaeus, 1766) Variable Chachalaca	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Penelope marail</i> (Muller, 1776) Marail Guan Shield endemic	BO	RO-BA	PA-AP	GU	SU FG
<i>Penelope jacquacu</i> Spix, 1825 Spix's Guan	VA	BO	RO-BA		GU SU
<i>Pipile cumanensis</i> (Jacquin, 1784) Blue-throated Piping-Guan	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Nothocrax urumutum</i> (Spix, 1825) Nocturnal Curassow	VA				
<i>Mitu tomentosum</i> (Spix, 1825) Crestless Curassow Shield endemic	VA	BO	RO-BA		GU
<i>Crax alector</i> Linnaeus, 1766 Black Curassow Shield endemic	VA	BO	RO-BA	PA-AP	GU SU FG

#### Family: Odontophoridae—Quails

<i>Colinus cristatus</i> (Linnaeus, 1766) Crested Bobwhite	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Odontophorus gujanensis</i> (J. F. Gmelin, 1789) Marbled Wood-Quail	VA	BO	RO-BA	PA-AP	GU SU FG

### Order: Podicipediformes

#### Family: Podicipedidae—Grebes

<i>Tachybaptus dominicus</i> (Linnaeus, 1766) Least Grebe	BO	RO-BA	PA-AP	GU	SU FG
<i>Podilymbus podiceps</i> (Linnaeus, 1758) Pied-billed Grebe	VA			GU	SU FG?

### Order: Pelecaniformes

#### Family: Phalacrocoracidae—Cormorants

<i>Phalacrocorax brasilianus</i> (J. F. Gmelin, 1789) Neotropic Cormorant	VA	BO	RO-BA	PA-AP	GU SU FG
---	----	----	-------	-------	----------

#### Family: Anhingidae—Anhingas

<i>Anhinga anhinga</i> (Linnaeus, 1766) Anhinga	VA	BO	RO-BA	PA-AP	GU SU FG
---	----	----	-------	-------	----------

### Order: Ciconiiformes

#### Family: Ardeidae—Hérons

<i>Botaurus pinnatus</i> (Wagler, 1829) Pinnated Bittern	BO	RO-BA	PA-AP	GU	SU FG
<i>Ixobrychus exilis</i> (J. F. Gmelin, 1789) Least Bittern	BO	RO-BA	PA-AP	GU	SU FG
<i>Ixobrychus involucris</i> (Vieillot, 1823) Stripe-backed Bittern	BO	RO-BA		GU	SU FG
<i>Zebrielus undulatus</i> (J. F. Gmelin, 1789) Zigzag Heron	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Tigrisoma lineatum</i> (Boddaert, 1783) Rufescent Tiger-Heron	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Tigrisoma fasciatum</i> (Such, 1825) Fasciated Tiger-Heron					GU SU
<i>Ardea cocoi</i> Linnaeus, 1766 Cocoi Heron	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Ardea alba</i> Linnaeus, 1758 Great Egret	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Egretta garzetta</i> (Linnaeus, 1766) Little egret					GU SU
<i>Egretta thula</i> (Molina, 1782) Snowy Egret	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Egretta caerulea</i> (Linnaeus, 1758) Little Blue Heron	VA	BO	RO-BA	PA-AP	GU SU FG



<i>Egretta tricolor</i> (Muller, 1776) Tricolored Heron	VA	PA-AP	GU	SU	FG
<i>Bubulcus ibis</i> (Linnaeus, 1758) Cattle Egret	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Butorides striata</i> (Linnaeus, 1758) Striated Heron	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Butorides virescens</i> (Linnaeus, 1758) Green heron	VA	BO			SU FG
<i>Agamia agami</i> (J. F. Gmelin, 1789) Agami Heron	VA	BO	PA-AP	GU	SU FG
<i>Syrigma sibilatrix</i> (Temminck, 1824) Whistling Heron		BO			
<i>Pilherodius pileatus</i> (Boddaert, 1783) Capped Heron	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Nycticorax nycticorax</i> (Linnaeus, 1758) Black-crowned Night-Heron	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Nyctanassa violacea</i> (Linnaeus, 1758) Yellow-crowned Night-Heron	VA	BO			GU SU FG
<i>Cochlearius cochlearia</i> (Linnaeus, 1766) Boat-billed Heron	VA	BO	RO-BA	PA-AP	GU SU FG
<b>Family: Threskiornithidae</b> —Ibises					
<i>Theristicus caudatus</i> (Boddaert, 1783) Buff-necked Ibis		BO	RO-BA	PA-AP	GU SU FG
<i>Cercibis oxycerca</i> (Spix, 1825) Sharp-tailed Ibis		BO	RO-BA		GU SU
<i>Phimosus infuscatus</i> (Lichtenstein, 1823) Bare-faced Ibis	VA	BO	RO-BA		GU
<i>Mesembrinibis cayennensis</i> (J. F. Gmelin, 1789) Green Ibis	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Eudocimus albus</i> (Linnaeus, 1758) White Ibis	VA				FG?
<i>Eudocimus ruber</i> (Linnaeus, 1758) Scarlet Ibis	VA	BO	PA-AP	GU	SU FG?
<i>Plegadis falcinellus</i> (Linnaeus, 1766) Glossy Ibis					GU
<i>Ajaia ajaja</i> (Linnaeus, 1758) Roseate Spoonbill	VA	BO	RO-BA	PA-AP	GU SU FG
<b>Family: Ciconiidae</b> —Storks					
<i>Mycteria americana</i> Linnaeus, 1758 Wood Stork	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Ciconia maguari</i> (J. F. Gmelin, 1789) Maguari Stork		BO	RO-BA	PA-AP	GU SU FG
<i>Jabiru mycteria</i> (Lichtenstein, 1819) Jabiru	VA	BO	RO-BA	PA-AP	GU SU FG
<b>Family: Cathartidae</b> —Vultures					
<i>Sarcoramphus papa</i> (Linnaeus, 1758) King Vulture	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Coragyps atratus</i> (Bechstein, 1793) Black Vulture	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Cathartes aura</i> (Linnaeus, 1758) Turkey Vulture	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Cathartes burrovianus</i> Cassin, 1845 Lesser Yellow-headed Vulture	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Cathartes melambrotus</i> Wetmore, 1964 Greater Yellow-headed Vulture	VA	BO	RO-BA	PA-AP	GU SU FG

### Order: Phoenicopteriformes

#### Family: Phoenicopteridae—Flamingos

<i>Phoenicopterus ruber</i> Linnaeus, 1758 Greater Flamingo			PA-AP	GU	SU FG
---	--	--	-------	----	-------

### Order: Falconiformes

#### Family: Pandionidae—Ospreys

<i>Pandion haliaetus</i> (Linnaeus, 1758) Osprey		RO-BA	PA-AP	GU	SU FG
--	--	-------	-------	----	-------

#### Family: Accipitridae—Hawks, Eagles

<i>Leptodon cayanensis</i> (Latham, 1790) Gray-headed Kite	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Chondrohierax uncinatus</i> (Temminck, 1822) Hook-billed Kite	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Elanoides forficatus</i> (Linnaeus, 1758) Swallow-tailed Kite	VA	BO	RO-BA	PA-AP	GU SU FG
<i>Gampsonyx swainsonii</i> Vigors, 1825 Pearl Kite	VA	BO	RO-BA	PA-AP	GU SU

<i>Elanus leucurus</i> (Vieillot, 1818) White-tailed Kite	VA BO RO-BA PA-AP GU SU
<i>Rostrhamus sociabilis</i> (Vieillot, 1817) Snail Kite	BO RO-BA PA-AP GU SU FG
<i>Rostrhamus hamatus</i> (Temminck, 1821) Slender-billed Kite	BO RO-BA PA-AP GU SU FG
<i>Harpagus bidentatus</i> (Latham, 1790) Double-toothed Kite	VA BO RO-BA PA-AP GU SU FG
<i>Harpagus diodon</i> (Temminck, 1823) Rufous-thighed Kite	VA PA-AP GU SU FG
<i>Ictinia plumbea</i> (J. F. Gmelin, 1788) Plumbeous Kite	VA BO RO-BA PA-AP GU SU FG
<i>Circus buffoni</i> (J. F. Gmelin, 1788) Long-winged Harrier	BO PA-AP GU SU FG
<i>Geranospiza caerulescens</i> (Vieillot, 1817) Crane Hawk	VA BO RO-BA PA-AP GU SU
<i>Accipiter striatus</i> Vieillot, 1808 Sharp-shinned Hawk	VA BO PA-AP GU FG
<i>Accipiter superciliosus</i> (Linnaeus, 1766) Tiny Hawk	VA BO RO-BA PA-AP GU SU
<i>Accipiter bicolor</i> (Vieillot, 1817) Bicolored Hawk	VA BO RO-BA PA-AP GU SU FG
<i>Accipiter poliogaster</i> (Temminck, 1824) Gray-bellied Hawk	VA BO RO-BA PA-AP GU SU FG
<i>Leucopternis schistaceus</i> (Sundevall, 1851) Slate-colored Hawk	VA RO-BA PA-AP FG
<i>Leucopternis albigollis</i> (Latham, 1790) White Hawk	VA BO RO-BA PA-AP GU SU
<i>Leucopternis melanops</i> (Latham, 1790) Black-faced Hawk	VA BO RO-BA PA-AP GU SU FG
<i>Buteogallus meridionalis</i> (Latham, 1790) Savanna Hawk	VA BO RO-BA PA-AP GU SU FG
<i>Buteogallus aequinoctialis</i> (J. F. Gmelin, 1788) Rufous Crab-Hawk	PA-AP GU SU FG
<i>Buteogallus anthracinus</i> (Deppe, 1830) Common Black Hawk	GU SU FG
<i>Buteogallus urubitinga</i> (J. F. Gmelin, 1788) Great Black Hawk	VA BO RO-BA PA-AP GU SU FG
<i>Parabuteo unicinctus</i> (Temminck, 1824) Harris' Hawk	BO
<i>Busarellus nigricollis</i> (Latham, 1790) Black-collared Hawk	BO RO-BA PA-AP GU SU FG
<i>Harpohaliaetus solitarius</i> (Tschudi, 1844) Solitary Eagle	VA BO GU FG
<i>Geranoaetus melanoleucus</i> (Vieillot, 1819) Black-chested Buzzard-Eagle	VA
<i>Asturina nitida</i> (Latham, 1790) Gray Hawk	VA BO RO-BA PA-AP GU SU FG
<i>Buteo magnirostris</i> (J. F. Gmelin, 1788) Roadside Hawk	VA BO RO-BA PA-AP GU SU FG
<i>Buteo platypterus</i> (Vieillot, 1823) Broad-winged Hawk	VA BO RO-BA GU SU FG
<i>Buteo brachyurus</i> Vieillot, 1816 Short-tailed Hawk	VA BO RO-BA PA-AP GU SU FG
<i>Buteo albigula</i> Philippi, 1899 White-throated Hawk	BO
<i>Buteo albonotatus</i> Kaup, 1847 Zone-tailed Hawk	BO RO-BA GU SU FG
<i>Buteo albicaudatus</i> Vieillot, 1816 White-tailed Hawk	RO-BA PA-AP GU SU FG
<i>Morphnus guianensis</i> (Daudin, 1800) Crested Eagle	VA BO RO-BA GU SU FG
<i>Harpia harpyja</i> (Linnaeus, 1758) Harpy Eagle	VA BO RO-BA PA-AP GU SU FG
<i>Spizastur melanoleucus</i> (Vieillot, 1816) Black-and-white Hawk-Eagle	VA BO RO-BA GU SU FG
<i>Spizaetus tyrannus</i> (Wied-Neuwied, 1820) Black Hawk-Eagle	RO-BA PA-AP GU SU FG
<i>Spizaetus ornatus</i> (Daudin, 1800) Ornate Hawk-Eagle	VA BO RO-BA PA-AP GU SU
<b>Family: Falconidae</b> —Falcons, Caracaras	
<i>Daptrius ater</i> Vieillot, 1816 Black Caracara	VA BO RO-BA PA-AP GU SU FG
<i>Ibycter americanus</i> (Boddaert, 1783) Red-throated Caracara	VA BO RO-BA PA-AP GU SU FG

<i>Caracara cheriway</i> (Jacquin, 1784) Crested Caracara	VA BO RO-BA PA-AP GU SU FG
<i>Milvago chimachima</i> (Vieillot, 1816) Yellow-headed Caracara	VA BO RO-BA PA-AP GU SU FG
<i>Micrastur ruficollis</i> (Vieillot, 1817) Barred Forest-Falcon	VA BO RO-BA PA-AP GU SU FG
<i>Micrastur gilvicolis</i> (Vieillot, 1817) Lined Forest-Falcon	VA BO RO-BA PA-AP GU SU FG
<i>Micrastur mirandollei</i> (Schlegel, 1862) Slaty-backed Forest-Falcon	VA BO RO-BA GU SU FG
<i>Micrastur semitorquatus</i> (Vieillot, 1817) Collared Forest-Falcon	VA BO RO-BA PA-AP GU SU FG
<i>Micrastur buckleyi</i> Swann, 1919 Buckley's Forest-Falcon	BO
<i>Herpetotheres cachinnans</i> (Linnaeus, 1758) Laughing Falcon	VA BO RO-BA PA-AP GU SU FG
<i>Falco sparverius</i> Linnaeus, 1758 American Kestrel	VA BO RO-BA GU SU FG
<i>Falco columbarius</i> Linnaeus, 1758 Merlin	BO GU FG
<i>Falco femoralis</i> Temminck, 1822 Aplomado Falcon	BO RO-BA PA-AP GU SU
<i>Falco ruficularis</i> Daudin, 1800 Bat Falcon	VA BO RO-BA PA-AP GU SU FG
<i>Falco deiroleucus</i> Temminck, 1825 Orange-breasted Falcon	BO PA-AP GU SU FG
<i>Falco peregrinus</i> Tunstall, 1771 Peregrine Falcon	BO PA-AP GU SU FG

### Order: Gruiformes

#### Family: Rallidae—Rails

<i>Laterallus exilis</i> (Temminck, 1831) Gray-breasted Crake	RO-BA PA-AP GU SU FG
<i>Laterallus melanophaius</i> (Vieillot, 1819) Rufous-sided Crake	RO-BA GU SU
<i>Anurolimnas viridis</i> (Muller, 1776) Russet-crowned Crake	VA BO RO-BA PA-AP GU SU FG
<i>Amaurolimnas concolor</i> (Gosse, 1847) Uniform Crake	RO-BA GU SU? FG
<i>Porzana carolina</i> (Linnaeus, 1758) Sora	VA BO GU
<i>Porzana albicollis</i> (Vieillot, 1819) Ash-throated Crake	BO RO-BA GU SU FG
<i>Porzana flaviventer</i> (Boddaert, 1783) Yellow-breasted Crake	BO RO-BA PA-AP GU SU FG
<i>Neocrex erythrops</i> (Sclater, 1867) Paint-billed Crake	BO PA-AP GU SU FG
<i>Coturnicops notatus</i> (Gould, 1841) Speckled Rail	GU
<i>Micropygia schomburgkii</i> (Schomburgk, 1848) Ocellated Crake	VA BO GU SU FG
<i>Rallus longirostris</i> Boddaert, 1783 Clapper Rail	GU SU FG
<i>Pardirallus maculatus</i> (Boddaert, 1783) Spotted Rail	PA-AP SU FG
<i>Aramides axillaris</i> Lawrence, 1863 Rufous-necked Wood-Rail	GU SU FG
<i>Aramides cajanea</i> (Muller, 1776) Gray-necked Wood-Rail	VA BO RO-BA PA-AP GU SU FG
<i>Porphyrio martinica</i> (Linnaeus, 1766) Purple Gallinule	VA BO RO-BA PA-AP GU SU FG
<i>Porphyrio flavirostris</i> (Gmelin, 1789) Azure Gallinule	VA BO RO-BA PA-AP GU SU FG
<i>Gallinula chloropus</i> (Linnaeus, 1758) Common Moorhen	BO GU SU FG
<b>Family: Heliornithidae—Sungrebes</b>	
<i>Heliornis fulica</i> (Boddaert, 1783) Sungrebe	VA BO RO-BA PA-AP GU SU FG
<b>Family: Eurypygidae—Sunbitterns</b>	
<i>Eurypyga helias</i> (Pallas, 1781) Sunbittern	VA BO RO-BA PA-AP GU SU FG
<b>Family: Aramidae—Limpkins</b>	
<i>Aramus guaranauna</i> (Linnaeus, 1766) Limpkin	VA BO RO-BA PA-AP GU SU FG

**Family: Psophiidae**—Trumpeters

*Psophia crepitans* Linnaeus, 1758 Gray-winged Trumpeter VA BO RO-BA PA-AP GU SU FG

**Order: Charadriiformes****Family: Burhinidae**—Thick-knees

*Burhinus bistriatus* (Wagler, 1829) Double-striped Thick-knee VA BO RO-BA PA-AP GU

**Family: Charadriidae**—Plovers

*Vanellus chilensis* (Molina, 1782) Southern Lapwing VA BO RO-BA PA-AP GU SU FG

*Vanellus cayanus* (Latham, 1790) Pied Lapwing VA BO RO-BA PA-AP GU SU FG

*Pluvialis squatarola* (Linnaeus, 1758) Black-bellied Plover GU SU FG

*Pluvialis dominica* (Muller, 1776) American Golden-Plover BO RO-BA PA-AP GU SU FG

*Charadrius semipalmatus* Bonaparte, 1825 Semipalmated Plover PA-AP GU SU FG

*Charadrius wilsonia* Ord, 1814 Wilson's Plover PA-AP GU SU FG

*Charadrius collaris* Vieillot, 1818 Collared Plover VA BO RO-BA PA-AP GU SU FG

**Family: Jacanidae**—Jacanas

*Jacana jacana* (Linnaeus, 1766) Wattled Jacana VA BO RO-BA PA-AP GU SU FG

**Family: Recurvirostridae**—Stilts

*Himantopus mexicanus* (Muller, 1776) Black-necked Stilt VA BO PA-AP GU SU FG

**Family: Haematopodidae**—Oystercatchers

*Haematopus palliatus* Temminck, 1820 American Oystercatcher FG

**Family: Scolopacidae**—Sandpipers

*Tringa melanoleuca* (J. F. Gmelin, 1789) Greater Yellowlegs VA BO RO-BA PA-AP GU SU FG

*Tringa flavipes* (J. F. Gmelin, 1789) Lesser Yellowlegs VA BO RO-BA PA-AP GU SU FG

*Tringa solitaria* Wilson, 1813 Solitary Sandpiper VA BO RO-BA PA-AP GU SU FG

*Catoptrophorus semipalmatus* (J. F. Gmelin, 1789) Willet GU SU FG

*Actitis macularia* (Linnaeus, 1766) Spotted Sandpiper VA BO RO-BA PA-AP GU SU FG

*Bartramia longicauda* (Bechstein, 1812) Upland Sandpiper VA BO RO-BA GU SU FG

*Numenius phaeopus* (Linnaeus, 1758) Whimbrel BO PA-AP GU SU FG

*Numenius americanus* Bechstein, 1812 Long-billed Curlew FG

*Limosa haemastica* (Linnaeus, 1758) Hudsonian Godwit GU SU FG

*Arenaria interpres* (Linnaeus, 1758) Ruddy Turnstone GU SU FG

*Calidris alba* (Pallas, 1764) Sanderling PA-AP GU SU FG

*Calidris pusilla* (Linnaeus, 1766) Semipalmated Sandpiper VA BO PA-AP GU SU FG

*Calidris mauri* (Cabanis, 1857) Western Sandpiper GU SU FG

*Calidris minutilla* (Vieillot, 1819) Least Sandpiper VA BO RO-BA PA-AP GU SU FG

*Calidris fuscicollis* (Vieillot, 1819) White-rumped Sandpiper VA BO RO-BA PA-AP GU SU FG

*Calidris melanotos* (Vieillot, 1819) Pectoral Sandpiper VA BO RO-BA GU SU FG

*Calidris alpina* (Linnaeus, 1758) Dunlin FG?

*Calidris himantopus* (Bonaparte, 1826) Stilt Sandpiper VA RO-BA GU SU FG?

*Tryngites subruficollis* (Vieillot, 1819) Buff-breasted Sandpiper VA BO RO-BA GU SU FG

*Limnodromus griseus* (J. F. Gmelin, 1789) Short-billed Dowitcher GU SU FG

*Gallinago paraguaiae* (Vieillot, 1816) South American Snipe VA BO RO-BA PA-AP GU SU FG

<i>Gallinago undulata</i> (Boddaert, 1783) Giant Snipe	VA BO RO-BA	GU SU FG
<b>Family: Laridae</b> —Gulls, Terns, Skimmers		
<i>Sterna nilotica</i> J. F. Gmelin, 1789 Gull-billed Tern	RO-BA PA-AP	GU SU FG
<i>Sterna sandvicensis</i> Latham, 1787 Sandwich Tern	PA-AP	GU SU FG
<i>Sterna maxima</i> Boddaert, 1783 Royal Tern	PA-AP	
<i>Sterna hirundo</i> Linnaeus, 1758 Common Tern	PA-AP	GU SU FG
<i>Sterna dougallii</i> Montagu, 1813 Roseate Tern		GU SU FG
<i>Sterna superciliaris</i> Vieillot, 1819 Yellow-billed Tern	VA BO RO-BA PA-AP	GU SU FG
<i>Sterna antillarum</i> (Lesson, 1847) Least Tern	PA-AP	GU SU FG
<i>Sterna anaethetus</i> Scopoli, 1786 Bridled Tern		GU
<i>Sterna fuscata</i> Linnaeus, 1766 Sooty Tern	PA-AP	GU SU FG
<i>Anous stolidus</i> (Linnaeus, 1758) Brown Noddy	PA-AP	GU SU FG
<i>Phaetusa simplex</i> (J. F. Gmelin, 1789) Large-billed Tern	VA BO RO-BA PA-AP	GU SU FG
<b>Family: Rynchopidae</b> —Skimmers		
<i>Rynchops niger</i> Linnaeus, 1758 Black Skimmer	VA BO RO-BA PA-AP	GU SU FG

### Order: Columbiformes

<b>Family: Columbidae</b> —Pigeons, Doves		
<i>Columba livia</i> J. F. Gmelin, 1789 Rock Pigeon	RO-BA PA-AP	GU SU FG
<i>Patagioenas fasciata</i> Say, 1823 Band-tailed Pigeon	VA BO RO-BA	
<i>Patagioenas speciosa</i> J. F. Gmelin, 1789 Scaled Pigeon	VA BO RO-BA PA-AP	GU SU FG
<i>Patagioenas cayennensis</i> Bonnaterre, 1792 Pale-vented Pigeon	VA BO RO-BA PA-AP	GU SU FG
<i>Patagioenas subvinacea</i> (Lawrence, 1868) Ruddy Pigeon	VA BO RO-BA PA-AP	GU SU FG
<i>Patagioenas plumbea</i> Vieillot, 1818 Plumbeous Pigeon	VA BO RO-BA PA-AP	GU SU FG
<i>Zenaida macroura</i> (Linnaeus, 1758) Mourning Dove		SU
<i>Zenaida auriculata</i> (DesMurs, 1847) Eared Dove	BO RO-BA PA-AP	GU SU FG
<i>Columbina squammata</i> (Lesson, 1831) Scaled Dove	VA BO PA-AP	FG
<i>Columbina passerina</i> (Linnaeus, 1758) Common Ground-Dove	VA BO RO-BA PA-AP	GU SU FG
<i>Columbina minuta</i> (Linnaeus, 1766) Plain-breasted Ground-Dove	VA BO RO-BA PA-AP	GU SU FG
<i>Columbina talpacoti</i> (Temminck, 1810) Ruddy Ground-Dove	VA BO RO-BA PA-AP	GU SU FG
<i>Claravis pretiosa</i> (Ferrari-Perez, 1886) Blue Ground-Dove	VA BO RO-BA PA-AP	GU SU FG
<i>Uropelia campestris</i> (Spix, 1825) Long-tailed Ground Dove	PA-AP	
<i>Leptotila verreauxi</i> (Bonaparte, 1855) White-tipped Dove	VA BO RO-BA PA-AP	GU SU FG
<i>Leptotila rufaxilla</i> (Richard & Bernard, 1792) Gray-fronted Dove	VA BO RO-BA PA-AP	GU SU FG
<i>Geotrygon violacea</i> (Temminck, 1809) Violaceous Quail-Dove	BO	GU SU
<i>Geotrygon montana</i> (Linnaeus, 1758) Ruddy Quail-Dove	VA BO RO-BA PA-AP	GU SU FG

### Order: Psittaciformes

<b>Family: Psittacidae</b> —Parrots		
<i>Ara ararauna</i> (Linnaeus, 1758) Blue-and-yellow Macaw	VA RO-BA PA-AP	GU SU FG
<i>Ara macao</i> (Linnaeus, 1758) Scarlet Macaw	VA BO RO-BA PA-AP	GU SU FG

<i>Ara chloropterus</i> Gray, 1859 Red-and-green Macaw	VA BO RO-BA PA-AP GU SU FG
<i>Ara severus</i> (Linnaeus, 1758) Chestnut-fronted Macaw	VA BO RO-BA PA-AP GU SU FG
<i>Orthopsittaca manilata</i> (Boddaert, 1783) Red-bellied Macaw	VA BO RO-BA PA-AP GU SU FG
<i>Diopsittaca nobilis</i> (Linnaeus, 1758) Red-shouldered Macaw	BO RO-BA PA-AP GU SU FG
<i>Aratinga acuticaudata</i> (Vieillot, 1818) Blue-crowned Parakeet	BO
<i>Aratinga leucophthalmus</i> (Muller, 1776) White-eyed Parakeet	BO RO-BA PA-AP GU SU FG
<i>Aratinga solstitialis</i> (Linnaeus, 1758) Sun Parakeet Shield endemic	BO? RO-BA GU? SU FG
<i>Aratinga pintoii</i> Silveira, Lima & Höfling, 2005 Sulfur-breasted Parakeet	PA-AP
<i>Aratinga pertinax</i> (Linnaeus, 1758) Brown-throated Parakeet	VA BO RO-BA GU SU FG
<i>Aratinga aurea</i> (J. F. Gmelin, 1788) Peach-fronted Parakeet	PA-AP SU
<i>Pyrrhura picta</i> (Muller, 1776) Painted Parakeet	VA BO RO-BA PA-AP GU SU FG
<i>Pyrrhura egregia</i> (Sclater, 1881) Fiery-shouldered Parakeet Shield endemic	BO RO-BA GU
<i>Pyrrhura melanura</i> (Spix, 1824) Maroon-tailed Parakeet	VA BO RO-BA
<i>Forpus passerinus</i> (Linnaeus, 1758) Green-rumped Parrotlet	BO RO-BA PA-AP GU SU FG
<i>Forpus sclateri</i> (Gray, 1859) Dusky-billed Parrotlet	VA BO GU SU FG
<i>Brotogeris versicolurus</i> (Muller, 1776) Canary-winged Parakeet	PA-AP FG
<i>Brotogeris cyanoptera</i> (Salvadori, 1891) Cobalt-winged Parakeet	VA RO-BA
<i>Brotogeris chrysoptera</i> (Linnaeus, 1766) Golden-winged Parakeet	BO RO-BA PA-AP GU SU FG
<i>Brotogeris sanctithomae</i> (Muller, 1776) Tui Parakeet	PA-AP
<i>Nannopsittaca panychlora</i> (Salvin & Godman, 1883) Tepui Parrotlet Shield endemic	VA BO GU
<i>Touit batavicus</i> (Boddaert, 1783) Lilac-tailed Parrotlet	BO GU SU FG
<i>Touit huetii</i> (Temminck, 1830) Scarlet-shouldered Parrotlet	VA BO GU
<i>Touit purpuratus</i> (J. F. Gmelin, 1788) Sapphire-rumped Parrotlet	VA BO RO-BA PA-AP GU SU FG
<i>Pionites melanocephalus</i> (Linnaeus, 1758) Black-headed Parrot Shield endemic	VA BO RO-BA PA-AP GU SU FG
<i>Pionopsitta caica</i> (Latham, 1790) Caica Parrot Shield endemic	BO RO-BA PA-AP GU SU FG
<i>Pionopsitta barrabandi</i> (Kuhl, 1820) Orange-cheeked Parrot	VA BO RO-BA
<i>Pionus menstruus</i> (Linnaeus, 1766) Blue-headed Parrot	VA BO RO-BA PA-AP GU SU FG
<i>Pionus fuscus</i> (Muller, 1776) Dusky Parrot	BO RO-BA PA-AP GU SU FG
<i>Amazona autumnalis</i> (Linnaeus, 1758) Red-lore Parrot	RO-BA
<i>Amazona dufresniana</i> (Shaw, 1812) Blue-cheeked Parrot	BO GU SU FG
<i>Amazona festiva</i> (Linnaeus, 1758) Festive Parrot	BO RO-BA PA-AP GU
<i>Amazona ochrocephala</i> (J. F. Gmelin, 1788) Yellow-crowned Parrot	VA BO RO-BA PA-AP GU SU FG
<i>Amazona amazonica</i> (Linnaeus, 1766) Orange-winged Parrot	VA BO RO-BA PA-AP GU SU FG
<i>Amazona farinosa</i> (Boddaert, 1783) Mealy Parrot	VA BO RO-BA PA-AP GU SU FG
<i>Deroytyus accipitrinus</i> (Linnaeus, 1758) Red-fan Parrot	VA BO RO-BA PA-AP GU SU FG
<i>Graydidascalus brachyurus</i> (Kuhl, 1820) Short-tailed Parrot	PA-AP FG

### Order: Opisthocomiformes

#### Family: Opisthocomidae—Hoatzins

<i>Opisthocomus hoazin</i> (Muller, 1776) Hoatzin	VA BO RO-BA PA-AP GU SU FG
---	----------------------------

**Order: Cuculiformes****Family: Cuculidae**—Cuckoos

<i>Coccyzus pumilus</i> Strickland, 1852 Dwarf Cuckoo	VA BO RO-BA
<i>Coccyzus americanus</i> (Linnaeus, 1758) Yellow-billed Cuckoo	VA BO RO-BA PA-AP GU SU FG
<i>Coccyzus euleri</i> Cabanis, 1873 Pearly-breasted Cuckoo	VA BO RO-BA GU SU FG
<i>Coccyzus minor</i> (J. F. Gmelin, 1788) Mangrove Cuckoo	RO-BA PA-AP GU SU FG
<i>Coccyzus melacoryphus</i> Vieillot, 1817 Dark-billed Cuckoo	VA BO RO-BA PA-AP GU SU FG
<i>Piaya cayana</i> (Linnaeus, 1766) Squirrel Cuckoo	VA BO RO-BA PA-AP GU SU FG
<i>Piaya melanogaster</i> (Vieillot, 1817) Black-bellied Cuckoo	VA BO RO-BA PA-AP GU SU FG
<i>Piaya minuta</i> (Vieillot, 1817) Little Cuckoo	VA BO RO-BA PA-AP GU SU FG
<i>Crotophaga major</i> J. F. Gmelin, 1788 Greater Ani	VA BO RO-BA PA-AP GU SU FG
<i>Crotophaga ani</i> Linnaeus, 1758 Smooth-billed Ani	VA BO RO-BA PA-AP GU SU FG
<i>Crotophaga sulcirostris</i> Swainson, 1827 Groove-billed Ani	VA BO
<i>Guira guira</i> (J. F. Gmelin, 1788) Guira Cuckoo	PA-AP
<i>Tapera naevia</i> (Linnaeus, 1766) Striped Cuckoo	VA BO RO-BA PA-AP GU SU FG
<i>Dromococcyx phasianellus</i> (Spix, 1824) Pheasant Cuckoo	BO
<i>Dromococcyx pavoninus</i> Pelzeln, 1870 Pavonine Cuckoo	VA BO RO-BA GU
<i>Neomorphus rufipennis</i> (Gray, 1849) Rufous-winged Ground-Cuckoo Shield endemic	VA BO RO-BA PA-AP GU

**Order: Strigiformes****Family: Tytonidae**—Barn Owls

<i>Tyto alba</i> (Scopoli, 1769) Barn Owl	BO RO-BA PA-AP GU SU FG
---	-------------------------

**Family: Strigidae**—Typical Owls

<i>Megascops choliba</i> (Vieillot, 1817) Tropical Screech-Owl	VA BO RO-BA PA-AP GU SU FG
<i>Megascops watsonii</i> (Cassin, 1849) Tawny-bellied Screech-Owl	VA BO RO-BA PA-AP GU SU FG
<i>Megascops guatemalae</i> (Sharpe, 1875) Vermiculated Screech-Owl	VA BO RO-BA GU
<i>Bubo virginianus</i> (J. F. Gmelin, 1788) Great Horned Owl	VA BO RO-BA PA-AP GU SU FG
<i>Glaucidium brasilianum</i> (J. F. Gmelin, 1788) Ferruginous Pygmy-Owl	VA BO RO-BA PA-AP GU SU FG
<i>Glaucidium hardyi</i> Vieillard, 1990 Amazonian Pygmy-Owl	BO RO-BA PA-AP GU FG
<i>Athene cunicularia</i> (Molina, 1782) Burrowing Owl	VA BO RO-BA PA-AP GU SU
<i>Lophotrix cristata</i> (Daudin, 1800) Crested Owl	VA BO RO-BA PA-AP GU SU FG
<i>Pulsatrix perspicillata</i> (Latham, 1790) Spectacled Owl	VA BO RO-BA PA-AP GU SU FG
<i>Ciccaba huhula</i> Daudin, 1800 Black-banded Owl	VA BO RO-BA PA-AP GU SU FG
<i>Ciccaba virgata</i> (Cassin, 1849) Mottled Owl	VA BO RO-BA PA-AP GU SU FG
<i>Pseudoscops clamator</i> (Vieillot, 1808) Striped Owl	BO RO-BA GU SU FG
<i>Asio stygius</i> (Wagler, 1832) Stygian Owl	VA RO-BA GU
<i>Asio flammeus</i> (Pontoppidan, 1763) Short-eared Owl	GU FG
<i>Aegolius harrisi</i> (Cassin, 1849) Buff-fronted Owl	VA BO GU
<b>Family: Nyctibiidae</b> —Potoos	
<i>Nyctibius grandis</i> (J. F. Gmelin, 1789) Great Potoo	VA BO RO-BA PA-AP GU SU FG

<i>Nyctibius aethereus</i> (Wied-Neuwied, 1820) Long-tailed Potoo	BO	RO-BA		GU		
<i>Nyctibius griseus</i> (J. F. Gmelin, 1789) Common Potoo	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Nyctibius leucopterus</i> (Wied-Neuwied, 1821) White-winged Potoo			RO-BA		GU	FG
<i>Nyctibius bracteatus</i> Gould, 1846 Rufous Potoo			RO-BA		GU	FG
<b>Family: Steatornithidae</b> —Oilbirds						
<i>Steatornis caripensis</i> Humboldt, 1817 Oilbird	VA	BO	RO-BA		GU	

### Order: Caprimulgiformes

<b>Family: Caprimulgidae</b> —Nighthawks, Nightjars						
<i>Lurocalis semitorquatus</i> (J. F. Gmelin, 1789) Short-tailed Nighthawk	VA	BO	RO-BA		GU	SU FG
<i>Chordeiles pusillus</i> Gould, 1861 Least Nighthawk	VA	BO	RO-BA	PA-AP	GU	SU
<i>Chordeiles acutipennis</i> (Hermann, 1783) Lesser Nighthawk	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Chordeiles minor</i> (Forster, 1771) Common Nighthawk			RO-BA			
<i>Chordeiles rupestris</i> (Spix, 1825) Sand-coloured Nighthawk	VA		RO-BA			
<i>Nyctiprogne leucopyga</i> (Spix, 1825) Band-tailed Nighthawk	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Podager nacunda</i> (Vieillot, 1817) Nacunda Nighthawk	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Nyctidromus albicollis</i> (J. F. Gmelin, 1789) Common Pauraque	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Caprimulgus carolinensis</i> J. F. Gmelin, 1789 Chuck-wills-widow						SU FG
<i>Caprimulgus rufus</i> Boddaert, 1783 Rufous Nightjar	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Caprimulgus nigrescens</i> Cabanis, 1848 Blackish Nightjar	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Caprimulgus longirostris</i> Bonaparte, 1825 Band-winged Nightjar	VA	BO				
<i>Caprimulgus whitelyi</i> (Salvin, 1885) Roraiman Nightjar Shield endemic	VA	BO	RO-BA		GU	
<i>Caprimulgus cayennensis</i> J. F. Gmelin, 1789 White-tailed Nightjar	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Caprimulgus maculicaudus</i> (Lawrence, 1862) Spot-tailed Nightjar	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Caprimulgus maculosus</i> (Todd, 1920) Cayenne Nightjar						FG
<i>Caprimulgus parvulus</i> Gould, 1837 Little Nightjar		BO				
<i>Hydropsalis torquata</i> (J. F. Gmelin, 1789) Scissor-tailed Nightjar				PA-AP		SU
<i>Hydropsalis climacocerca</i> (Tschudi, 1844) Ladder-tailed Nightjar	VA	BO	RO-BA	PA-AP	GU	SU FG

### Order: Apodiformes

<b>Family: Apodidae</b> —Swifts						
<i>Streptoprocne zonaris</i> (Shaw, 1796) White-collared Swift	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Streptoprocne rutila</i> (Vieillot, 1817) Chestnut-collared Swift						SU FG
<i>Streptoprocne phelpsi</i> Collins, 1972 Tepui Swift Shield endemic	VA	BO	RO-BA		GU	
<i>Cypseloides niger</i> (J. F. Gmelin, 1789) Black Swift					GU	
<i>Cypseloides cryptus</i> Zimmer, 1945 White-chinned Swift		BO			GU	SU
<i>Chaetura chapmani</i> Hellmayr, 1907 Chapman's Swift	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Chaetura meridionalis</i> Hellmayr, 1907 Sick's Swift			RO-BA			SU
<i>Chaetura brachyura</i> (Jardine, 1846) Short-tailed Swift	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Chaetura vauxi</i> (Townsend, 1839) Vaux's Swift		BO				SU



<i>Chaetura spinicaudus</i> (Temminck, 1839) Band-rumped Swift	VA BO RO-BA PA-AP GU SU FG
<i>Chaetura cinereiventris</i> Sclater, 1862 Gray-rumped Swift	VA BO RO-BA GU
<i>Aeronautes montivagus</i> (d'Orbigny & Lafresnaye, 1837) White-tipped Swift	VA BO RO-BA GU SU
<i>Panyptila cayennensis</i> (J. F. Gmelin, 1789) Lesser Swallow-tailed Swift	VA BO RO-BA PA-AP GU SU FG
<i>Tachornis squamata</i> (Cassin, 1853) Fork-tailed Palm-Swift	VA BO RO-BA PA-AP GU SU FG
<b>Family: Trochilidae</b> —Hummingbirds	
<i>Glaucis hirsutus</i> (J. F. Gmelin, 1788) Rufous-breasted Hermit	VA BO RO-BA PA-AP GU SU FG
<i>Threnetes niger</i> (Linnaeus, 1758) Sooty Barbthroat	VA BO RO-BA PA-AP GU SU FG
<i>Phaethornis hispidus</i> (Gould, 1846) White-bearded Hermit	VA BO RO-BA
<i>Phaethornis superciliosus</i> (Linnaeus, 1766) Eastern Long-tailed Hermit	VA BO RO-BA PA-AP GU SU FG
<i>Phaethornis malaris</i> (Nordmann, 1835) Great-billed Hermit	VA RO-BA PA-AP SU FG
<i>Phaethornis bourcieri</i> (Lesson, 1832) Straight-billed Hermit	VA BO RO-BA PA-AP GU SU FG
<i>Phaethornis augusti</i> (Bourcier, 1847) Sooty-capped Hermit	VA BO RO-BA GU SU
<i>Phaethornis rufurumii</i> Boucard 1892 Streak-throated Hermit	VA BO RO-BA PA-AP GU
<i>Phaethornis ruber</i> (Linnaeus, 1758) Reddish Hermit	VA BO RO-BA PA-AP GU SU FG
<i>Phaethornis griseogularis</i> Gould, 1851 Gray-chinned Hermit	VA BO RO-BA
<i>Phaethornis longuemareus</i> (Lesson, 1832) Little Hermit	BO RO-BA GU SU FG
<i>Eupetomena macroura</i> (J. F. Gmelin, 1788) Swallow-tailed Hummingbird	PA-AP SU FG
<i>Doryfera johanna</i> (Bourcier, 1847) Blue-fronted Lancebill	VA BO RO-BA GU
<i>Campylopterus largipennis</i> (Boddaert, 1783) Gray-breasted Sabrewing	VA BO RO-BA PA-AP GU SU FG
<i>Campylopterus hyperythrus</i> Cabanis, 1848 Rufous-breasted Sabrewing Shield endemic	BO RO-BA GU
<i>Campylopterus duidae</i> Chapman, 1929 Buff-breasted Sabrewing Shield endemic	VA BO RO-BA
<i>Florisuga mellivora</i> (Linnaeus, 1758) White-necked Jacobin	VA BO RO-BA PA-AP GU SU FG
<i>Colibri delphinae</i> (Lesson, 1839) Brown Violet-ear	VA BO RO-BA GU SU
<i>Colibri coruscans</i> (Gould, 1846) Sparkling Violetear	VA BO RO-BA GU
<i>Anthracothorax viridigula</i> (Boddaert, 1783) Green-throated Mango	PA-AP GU SU FG
<i>Anthracothorax nigricollis</i> (Vieillot, 1817) Black-throated Mango	VA BO RO-BA PA-AP GU SU FG
<i>Avocettula recurvirostris</i> (Swainson, 1822) Fiery-tailed Awlbill	BO RO-BA GU SU FG
<i>Chrysolampis mosquitos</i> (Linnaeus, 1758) Ruby-topaz Hummingbird	VA BO RO-BA PA-AP GU SU FG
<i>Topaza pella</i> (Linnaeus, 1758) Crimson Topaz	BO RO-BA PA-AP GU SU FG
<i>Topaza pyra</i> (Gould, 1846) Fiery Topaz	VA RO-BA
<i>Lophornis ornatus</i> (Boddaert, 1783) Tufted Coquette	BO RO-BA PA-AP GU SU FG
<i>Lophornis chalybeus</i> (Vieillot, 1823) Festive Coquette	VA BO RO-BA
<i>Lophornis pavoninus</i> Salvin & Godman, 1882 Peacock Coquette Shield endemic	VA BO RO-BA GU
<i>Discosura langsdorffi</i> (Temminck, 1821) Black-bellied Thorntail	VA RO-BA
<i>Discosura longicaudus</i> (J. F. Gmelin, 1788) Racket-tailed Coquette	VA BO RO-BA PA-AP GU SU FG
<i>Chlorestes notata</i> (Reich, 1793) Blue-chinned Sapphire	VA BO RO-BA PA-AP GU SU FG
<i>Chlorostilbon mellisugus</i> (Linnaeus, 1758) Blue-tailed Emerald	VA BO RO-BA PA-AP GU SU FG

<i>Thalurania furcata</i> (J. F. Gmelin, 1788) Fork-tailed Woodnymph	VA BO RO-BA PA-AP GU SU FG
<i>Hylocharis sapphirina</i> (J. F. Gmelin, 1788) Rufous-throated Sapphire	VA BO RO-BA PA-AP GU SU FG
<i>Hylocharis cyanus</i> (Vieillot, 1818) White-chinned Sapphire	VA BO RO-BA PA-AP GU SU FG
<i>Polytmus guainumbi</i> (Pallas, 1764) White-tailed Goldenthrout	VA BO RO-BA PA-AP GU SU
<i>Polytmus milleri</i> (Chapman, 1929) Tepui Goldenthrout Shield endemic	VA BO RO-BA GU
<i>Polytmus theresiae</i> (Da Silva Maia, 1843) Green-tailed Goldenthrout	VA RO-BA PA-AP GU SU FG
<i>Amazilia brevirostris</i> (Gould, 1859) White-chested Emerald	VA BO RO-BA GU SU FG
<i>Amazilia leucogaster</i> (J. F. Gmelin, 1788) Plain-bellied Emerald	BO GU SU FG
<i>Amazilia versicolor</i> (Vieillot, 1818) Versicolored Emerald	VA BO RO-BA PA-AP GU
<i>Amazilia fimbriata</i> (J. F. Gmelin, 1788) Glittering-throated Emerald	VA BO RO-BA PA-AP GU SU FG
<i>Amazilia lactea</i> (Lesson, 1829) Sapphire-spangled Emerald	BO
<i>Amazilia tobaci</i> (J. F. Gmelin, 1788) Copper-rumped Hummingbird	VA BO
<i>Amazilia viridigaster</i> (Bourcier, 1843) Green-bellied Hummingbird	VA BO RO-BA GU SU
<i>Heliodoxa aurescens</i> (Gould, 1846) Gould's Jewelfront	VA BO RO-BA
<i>Heliodoxa xanthogonys</i> Salvin & Godman, 1882 Velvet-browed Brilliant Shield endemic	VA BO RO-BA GU
<i>Heliothryx auritus</i> (J. F. Gmelin, 1788) Black-eared Fairy	VA BO RO-BA PA-AP GU SU FG
<i>Heliomaster longirostris</i> (Audebert & Vieillot, 1801) Long-billed Starthroat	VA BO RO-BA PA-AP GU SU FG
<i>Calliphlox amethystina</i> (Boddaert, 1783) Amethyst Woodstar	VA BO RO-BA PA-AP GU SU FG
<i>Heliactin bilophus</i> (Wied-Neuwied, 1821) Horned Sungem	PA-AP SU

### Order: Trogoniformes

#### Family: Trogonidae—Trogons

<i>Pharomachrus pavoninus</i> (Spix, 1824) Pavonine Quetzal	VA BO RO-BA
<i>Trogon melanurus</i> Swainson, 1838 Black-tailed Trogon	VA BO RO-BA PA-AP GU SU FG
<i>Trogon viridis</i> Linnaeus, 1766 White-tailed Trogon	VA BO RO-BA PA-AP GU SU FG
<i>Trogon collaris</i> Vieillot, 1817 Collared Trogon	VA BO RO-BA PA-AP GU SU FG
<i>Trogon personatus</i> Gould, 1842 Masked Trogon	VA BO RO-BA PA-AP GU
<i>Trogon rufus</i> J. F. Gmelin, 1788 Black-throated Trogon	VA BO RO-BA PA-AP GU SU FG
<i>Trogon violaceus</i> J. F. Gmelin, 1788 Violaceous Trogon	VA BO RO-BA PA-AP GU SU FG

### Order: Coraciiformes

#### Family: Alcedinidae—Kingfishers

<i>Megaceryle torquata</i> (Linnaeus, 1766) Ringed Kingfisher	VA BO RO-BA PA-AP GU SU FG
<i>Megaceryle alcyon</i> (Linnaeus, 1758) Belted Kingfisher	GU
<i>Chloroceryle amazona</i> (Latham, 1790) Amazon Kingfisher	VA BO RO-BA PA-AP GU SU FG
<i>Chloroceryle americana</i> (J. F. Gmelin, 1788) Green Kingfisher	VA BO RO-BA PA-AP GU SU FG
<i>Chloroceryle inda</i> (Linnaeus, 1766) Green-and-rufous Kingfisher	VA BO RO-BA PA-AP GU SU FG
<i>Chloroceryle aenea</i> (Pallas, 1764) American Pygmy Kingfisher	VA BO RO-BA PA-AP GU SU FG

#### Family: Momotidae—Motmots

<i>Momotus momota</i> (Linnaeus, 1766) Blue-crowned Motmot	VA BO RO-BA PA-AP GU SU
--	-------------------------

## Order: Galbuliformes

**Family: Galbulidae**—Jacamars

<i>Brachygalba lugubris</i> (Swainson, 1838) Brown Jacamar	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Galbula albirostris</i> Latham, 1790 Yellow-billed Jacamar <small>Shield endemic</small>	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Galbula ruficauda</i> Cuvier, 1816 Rufous-tailed Jacamar		BO		PA-AP	GU	SU	FG
<i>Galbula galbula</i> (Linnaeus, 1766) Green-tailed Jacamar	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Galbula leucogastra</i> Vieillot, 1817 Bronzy Jacamar	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Galbula dea</i> (Linnaeus, 1758) Paradise Jacamar	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Jacamerops aureus</i> (Muller, 1776) Great Jacamar	VA	BO	RO-BA	PA-AP	GU	SU	FG

**Family: Bucconidae**—Puffbirds

<i>Notharchus hyperrhynchus</i> (Sclater, 1856) White-Necked Puffbird	VA	BO					
<i>Notharchus macrorhynchus</i> (J. F. Gmelin, 1788) Guianan Puffbird <small>Shield endemic</small>	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Notharchus ordii</i> (Cassin, 1851) Brown-banded Puffbird	VA		RO-BA	PA-AP			
<i>Notharchus tectus</i> (Boddaert, 1783) Pied Puffbird	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Bucco macrodactylus</i> (Spix, 1824) Chestnut-capped Puffbird	VA	BO	RO-BA				
<i>Bucco tamatia</i> J. F. Gmelin, 1788 Spotted Puffbird	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Bucco capensis</i> Linnaeus, 1766 Collared Puffbird	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Hypnelus ruficollis</i> (Wagler, 1829) Russet-throated Puffbird	VA	BO					
<i>Malacoptila fusca</i> (J. F. Gmelin, 1788) White-chested Puffbird	VA		RO-BA	PA-AP	GU	SU	FG
<i>Nonnula rubecula</i> (Spix, 1824) Rusty-breasted Nunlet	VA		RO-BA	PA-AP	GU	SU	FG
<i>Monasa atra</i> (Boddaert, 1783) Black Nunbird <small>Shield endemic</small>	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Monasa nigrifrons</i> (Spix, 1824) Black-fronted Nunnbird				PA-AP			
<i>Monasa morphoeus</i> (Hahn & Kuster, 1823) White-fronted Nunbird	VA		RO-BA	PA-AP			
<i>Chelidoptera tenebrosa</i> (Pallas, 1782) Swallow-wing Puffbird	VA	BO	RO-BA	PA-AP	GU	SU	FG

## Order: Piciformes

**Family: Capitonidae**—New World Barbets

<i>Capito niger</i> (Muller, 1776) Black-spotted Barbet	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Capito auratus</i> (Dumont, 1816) Gilded Barbet	VA	BO	RO-BA				

**Family: Ramphastidae**—Barbets, Toucans

<i>Aulacorhynchus derbianus</i> Gould, 1835 Chestnut-tipped Toucanet	VA	BO	RO-BA			GU	SU
<i>Selenidera culik</i> (Wagler, 1827) Guianan Toucanet <small>Shield endemic</small>		BO	RO-BA	PA-AP	GU	SU	FG
<i>Selenidera nattereri</i> (Gould, 1836) Tawny-tufted Toucanet	VA	BO	RO-BA			GU	
<i>Pteroglossus aracari</i> (Linnaeus, 1758) Black-necked Aracari		BO	RO-BA	PA-AP	GU	SU	FG
<i>Pteroglossus azara</i> (Vieillot, 1819) Ivory-billed Aracari	VA	BO	RO-BA				
<i>Pteroglossus pluricinctus</i> Gould, 1836 Many-banded Aracari	VA	BO	RO-BA				
<i>Pteroglossus viridis</i> (Linnaeus, 1766) Green Aracari <small>Shield endemic</small>	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Ramphastos vitellinus</i> Lichtenstein, 1823 Channel-billed Toucan	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Ramphastos tucanus</i> Linnaeus, 1758 White-throated Toucan	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Ramphastos toco</i> Muller, 1776 Toco Toucan			RO-BA	PA-AP	GU	SU	FG

**Family: Picidae**—Woodpeckers

<i>Picumnus pumilus</i> Cabanis & Heine, 1863 Orinoco Piculet	VA	RO-BA				
<i>Picumnus exilis</i> (Lichtenstein, 1823) Golden-spangled Piculet	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Picumnus minutissimus</i> (Pallas, 1782) Guianan Piculet Shield endemic (coastal plain)						SU FG
<i>Picumnus spilogaster</i> Sundevall, 1866 White-bellied Piculet		BO	RO-BA		GU	SU FG
<i>Picumnus cirratus</i> Temminck, 1825 White-barred Piculet			RO-BA	PA-AP	GU	FG
<i>Colaptes campestris</i> (Vieillot, 1818) Campo Flicker				PA-AP		SU
<i>Colaptes punctigula</i> (Boddaert, 1783) Spot-breasted Woodpecker	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Piculus rubiginosus</i> (Swainson, 1820) Golden-olive Woodpecker	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Piculus flavigula</i> (Boddaert, 1783) Yellow-throated Woodpecker	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Piculus chrysochloros</i> (Vieillot, 1818) Golden-green Woodpecker	VA		RO-BA	PA-AP	GU	SU FG
<i>Celeus elegans</i> (Muller, 1776) Chestnut Woodpecker	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Celeus grammicus</i> (Natterer & Malherbe, 1845) Scale-breasted Woodpecker	VA	BO	RO-BA	PA-AP		FG?
<i>Celeus undatus</i> (Linnaeus, 1766) Waved Woodpecker		BO	RO-BA	PA-AP	GU	SU FG
<i>Celeus flavescens</i> (J. F. Gmelin, 1788) Blond-crested Woodpecker				PA-AP		
<i>Celeus flavus</i> (Muller, 1776) Cream-colored Woodpecker	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Celeus torquatus</i> (Boddaert, 1783) Ringed Woodpecker	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Dryocopus lineatus</i> (Linnaeus, 1766) Lineated Woodpecker	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Melanerpes candidus</i> (Otto, 1796) White Woodpecker				PA-AP	GU	SU FG
<i>Melanerpes cruentatus</i> (Boddaert, 1783) Yellow-tufted Woodpecker	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Melanerpes rubricapillus</i> (Cabanis, 1862) Red-crowned Woodpecker	VA	BO			GU	SU
<i>Veniliornis passerinus</i> (Linnaeus, 1766) Little Woodpecker	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Veniliornis sanguineus</i> (Lichtenstein, 1793) Blood-colored Woodpecker Shield endemic					GU	SU FG
<i>Veniliornis cassini</i> (Malherbe, 1862) Golden-collared Woodpecker Shield endemic	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Veniliornis affinis</i> (Swainson, 1821) Red-stained Woodpecker	VA		RO-BA			
<i>Veniliornis kirkii</i> (Malherbe, 1845) Red-rumped Woodpecker	VA	BO			GU	
<i>Campephilus melanoleucos</i> (J. F. Gmelin, 1788) Crimson-crested Woodpecker	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Campephilus rubricollis</i> (Boddaert, 1783) Red-necked Woodpecker	VA	BO	RO-BA	PA-AP	GU	SU FG

**Order: Passeriformes****Family: Furnariidae**—Ovenbirds

<i>Furnarius leucopus</i> Swainson, 1838 Pale-legged Hornero			RO-BA		GU	
<i>Synallaxis propinqua</i> Pelzeln, 1859 White-bellied Spinetail				PA-AP		FG
<i>Synallaxis albescens</i> Temminck, 1823 Pale-breasted Spinetail	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Synallaxis macconnelli</i> Chubb, 1919 McConnell's Spinetail	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Synallaxis gujanensis</i> (J. F. Gmelin, 1789) Plain-crowned Spinetail	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Synallaxis rutilans</i> Temminck, 1823 Ruddy Spinetail	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Synallaxis kollari</i> (Pelzeln, 1856) Hoary-throated Spinetail			RO-BA		GU	
<i>Certhiaxis cinnamomeus</i> (J. F. Gmelin, 1788) Yellow-chinned Spinetail	VA	BO	RO-BA	PA-AP	GU	SU FG

<i>Cranioleuca demissa</i> (Salvin & Godman, 1884) Tepui Spinetail Shield endemic	VA BO RO-BA	GU
<i>Cranioleuca vulpina</i> (Pelzeln, 1856) Rusty-backed Spinetail	VA BO RO-BA PA-AP	GU
<i>Cranioleuca gutturata</i> (d'Orbigny & Lafresnaye, 1838) Speckled Spinetail	VA BO RO-BA PA-AP	SU FG
<i>Cranioleuca muelleri</i> Hellmayr, 1911 Scaled Spinetail		PA-AP
<i>Thripophaga cherriei</i> Berlepsch & Hartert, 1902 Orinoco Softtail Shield endemic	VA	
<i>Berlepschia rikeri</i> (Ridgway, 1887) Point-tailed Palmcreeper	VA RO-BA PA-AP	GU SU FG
<i>Roraimia adusta</i> (Salvin & Godman, 1884) Roraiman Barbtail Shield endemic	VA BO RO-BA	GU
<i>Hyloctistis subulatus</i> (Spix, 1824) Striped Woodhaunter	VA BO RO-BA	
<i>Philydor erythropterum</i> (Sclater, 1856) Chestnut-winged Foliage-gleaner	VA BO RO-BA	
<i>Philydor pyrrhodes</i> (Cabanis, 1848) Cinnamon-rumped Foliage-gleaner	VA BO RO-BA PA-AP	GU SU FG
<i>Philydor ruficaudatum</i> (d'Orbigny & Lafresnaye, 1838) Rufous-tailed Foliage-gleaner	VA BO RO-BA PA-AP	GU SU FG
<i>Philydor erythrocerum</i> (Pelzeln, 1859) Rufous-rumped Foliage-gleaner	RO-BA PA-AP	GU SU FG
<i>Philydor rufum</i> (Vieillot, 1818) Buff-fronted Foliage-gleaner	VA BO	
<i>Automolus roraimae</i> Hellmayr, 1917 White-throated Foliage-gleaner	VA BO RO-BA	GU
<i>Automolus infuscatus</i> (Sclater, 1856) Olive-backed Foliage-gleaner	VA BO RO-BA PA-AP	GU SU FG
<i>Automolus ochrolaemus</i> (Tschudi, 1844) Buff-throated Foliage-gleaner	VA BO RO-BA PA-AP	GU SU FG
<i>Automolus rufipileatus</i> (Pelzeln, 1859) Chestnut-crowned Foliage-gleaner	VA BO RO-BA PA-AP	GU SU FG
<i>Automolus rubiginosus</i> (Sclater, 1857) Ruddy Foliage-gleaner	VA BO RO-BA PA-AP	GU SU FG
<i>Xenops tenuirostris</i> Pelzeln, 1859 Slender-billed Xenops	VA BO RO-BA PA-AP	GU SU FG
<i>Xenops minutus</i> (Sparrman, 1788) Plain Xenops	VA BO RO-BA PA-AP	GU SU FG
<i>Xenops milleri</i> (Chapman, 1914) Rufous-tailed Xenops	VA BO RO-BA PA-AP	GU SU FG
<i>Sclerurus mexicanus</i> Sclater, 1857 Tawny-throated Leaf-tosser	VA BO RO-BA PA-AP	GU SU FG
<i>Sclerurus rufigularis</i> Pelzeln, 1868 Short-billed Leaf-tosser	VA BO RO-BA PA-AP	GU SU FG
<i>Sclerurus caudacutus</i> (Vieillot, 1816) Black-tailed Leaf-tosser	VA BO RO-BA PA-AP	GU SU FG
<i>Lochmias nematura</i> (Lichtenstein, 1823) Sharp-tailed streamcreeper	VA BO RO-BA	GU
<i>Dendrocincla fuliginosa</i> (Vieillot, 1818) Plain-brown Woodcreeper	VA BO RO-BA PA-AP	GU SU FG
<i>Dendrocincla merula</i> (Lichtenstein, 1820) White-chinned Woodcreeper	VA BO RO-BA PA-AP	GU SU FG
<i>Deconychura longicauda</i> (Pelzeln, 1868) Long-tailed Woodcreeper	VA BO RO-BA PA-AP	GU SU FG
<i>Deconychura stictolaema</i> (Pelzeln, 1868) Spot-throated Woodcreeper	VA RO-BA PA-AP	GU SU FG
<i>Glyphorynchus spirurus</i> (Vieillot, 1819) Wedge-billed Woodcreeper	VA BO RO-BA PA-AP	GU SU FG
<i>Sittasomus griseicapillus</i> (Vieillot, 1818) Olivaceous Woodcreeper	VA BO RO-BA PA-AP	GU SU? FG
<i>Nasica longirostris</i> (Vieillot, 1818) Long-billed Woodcreeper	VA RO-BA PA-AP	FG
<i>Dendrexetastes rufigula</i> (Lesson, 1844) Cinnamon-throated Woodcreeper	BO RO-BA PA-AP	GU SU FG
<i>Hylexetastes stresemanni</i> Sneath, 1925 Bar-bellied Woodcreeper	RO-BA	
<i>Hylexetastes perrotii</i> (Lafresnaye, 1844) Red-billed Woodcreeper	BO RO-BA PA-AP	GU SU FG
<i>Xiphocolaptes promeropirhynchus</i> (Lesson, 1840) Strong-billed Woodcreeper	VA BO RO-BA PA-AP	GU SU? FG
<i>Dendrocolaptes certhia</i> (Boddaert, 1783) Amazonian Barred Woodcreeper	VA BO RO-BA PA-AP	GU SU FG

<i>Dendrocolaptes picumnus</i> Lichtenstein, 1820 Black-banded Woodcreeper	VA BO RO-BA PA-AP GU SU FG
<i>Xiphorhynchus picus</i> (J. F. Gmelin, 1788) Straight-billed Woodcreeper	VA BO RO-BA PA-AP GU SU FG
<i>Xiphorhynchus kienerii</i> (Des Murs, 1855) Zimmer's Woodcreeper	RO-BA PA-AP
<i>Xiphorhynchus obsoletus</i> (Lichtenstein, 1820) Striped Woodcreeper	VA BO RO-BA PA-AP GU SU FG
<i>Xiphorhynchus ocellatus</i> (Spix, 1824) Ocellated Woodcreeper	VA RO-BA
<i>Xiphorhynchus pardalotus</i> (Vieillot, 1818) Chestnut-rumped Woodcreeper	VA BO RO-BA PA-AP GU SU FG
<i>Xiphorhynchus guttatus</i> (Lichtenstein, 1820) Buff-throated Woodcreeper	VA BO RO-BA PA-AP GU SU FG
<i>Lepidocolaptes angustirostris</i> (Vieillot, 1818) Narrow-billed Woodcreeper	PA-AP SU
<i>Lepidocolaptes souleyetii</i> (DesMurs, 1849) Streak-headed Woodcreeper	BO RO-BA GU
<i>Lepidocolaptes albolineatus</i> (Lafresnaye, 1846) Lineated Woodcreeper	VA BO RO-BA PA-AP GU SU FG
<i>Campylorhamphus trochilirostris</i> (Lichtenstein, 1820) Red-billed Scythebill	BO RO-BA PA-AP
<i>Campylorhamphus procurvoides</i> (Lafresnaye, 1850) Curve-billed Scythebill	VA BO RO-BA PA-AP GU SU FG
<b>Family: Thamnophilidae</b> —Typical Antbirds	
<i>Cymbilaimus lineatus</i> (Leach, 1814) Fasciated Antshrike	VA BO RO-BA PA-AP GU SU FG
<i>Frederickena viridis</i> (Vieillot, 1816) Black-throated Antshrike <small>Shield endemic</small>	BO RO-BA PA-AP GU SU FG
<i>Taraba major</i> (Vieillot, 1816) Great Antshrike	VA BO RO-BA PA-AP GU SU FG
<i>Sakesphorus canadensis</i> (Linnaeus, 1766) Black-crested Antshrike	VA BO RO-BA PA-AP GU SU FG
<i>Sakesphorus melanothorax</i> (Sclater, 1857) Band-tailed Antshrike <small>Shield endemic</small>	PA-AP GU SU FG
<i>Sakesphorus luctuosus</i> (Lichtenstein, 1823) Glossy Antshrike	PA-AP
<i>Thamnophilus doliatus</i> (Linnaeus, 1764) Barred Antshrike	VA BO RO-BA PA-AP GU SU FG
<i>Thamnophilus nigrocinereus</i> Sclater, 1855 Blackish-grey Antshrike	VA BO RO-BA PA-AP FG
<i>Thamnophilus aethiops</i> Sclater, 1858 White-shouldered Antshrike	VA BO RO-BA
<i>Thamnophilus murinus</i> Sclater & Salvin, 1867 Mouse-colored Antshrike	VA BO RO-BA PA-AP GU SU FG
<i>Thamnophilus punctatus</i> (Shaw, 1809) Northern Slaty-Antshrike	VA BO RO-BA PA-AP GU SU FG
<i>Thamnophilus amazonicus</i> Sclater, 1858 Amazonian Antshrike	VA BO RO-BA PA-AP GU SU FG
<i>Thamnophilus insignis</i> Salvin & Godman, 1884 Streaked-backed Antshrike <small>Shield endemic</small>	VA BO RO-BA GU
<i>Megascictus margaritatus</i> (Sclater, 1855) Pearly Antshrike	VA BO RO-BA
<i>Pygiptila stelleris</i> (Spix, 1825) Spot-winged Antshrike	VA BO RO-BA PA-AP GU SU FG
<i>Dysithamnus mentalis</i> (Temminck, 1823) Plain Antwren	VA BO GU
<i>Thamnomanes ardesiacus</i> (Sclater & Salvin, 1868) Dusky-throated Antshrike	VA BO RO-BA PA-AP GU SU FG
<i>Thamnomanes caesius</i> (Temminck, 1820) Cinereous Antshrike	VA BO RO-BA PA-AP GU SU FG
<i>Myrmotherula brachyura</i> (Hermann, 1783) Pygmy Antwren	VA BO RO-BA PA-AP GU SU FG
<i>Myrmotherula ambigua</i> Zimmer, 1932 Yellow-throated Antwren	VA RO-BA
<i>Myrmotherula surinamensis</i> (J. F. Gmelin, 1788) Guianan Streaked-Antwren	VA BO RO-BA PA-AP GU SU FG
<i>Myrmotherula multostriata</i> Sclater, 1858 Amazonian Streaked-Antwren	VA RO-BA
<i>Myrmotherula cherriei</i> Berlepsch & Hartert, 1902 Cherrie's Antwren	VA RO-BA
<i>Myrmotherula klagesi</i> Todd, 1927 Klages's Antwren	RO-BA
<i>Myrmotherula hauxwelli</i> (Sclater, 1857) Plain-throated Antwren	RO-BA

<i>Myrmotherula guttata</i> (Vieillot, 1825) Rufous-bellied Antwren Shield endemic	VA BO RO-BA PA-AP GU SU FG
<i>Myrmotherula gutturalis</i> Sclater & Salvin, 1881 Brown-bellied Antwren Shield endemic	BO RO-BA PA-AP GU SU FG
<i>Myrmotherula haematonota</i> (Sclater, 1857) Stipple-throated Antwren	VA BO RO-BA
<i>Myrmotherula axillaris</i> (Vieillot, 1817) White-flanked Antwren	VA BO RO-BA PA-AP GU SU FG
<i>Myrmotherula longipennis</i> Pelzeln, 1868 Long-winged Antwren	VA BO RO-BA PA-AP GU SU FG
<i>Myrmotherula behni</i> Berlepsch & Leverkühn, 1890 Plain-winged Antwren	VA BO RO-BA PA-AP GU SU FG
<i>Myrmotherula menetriesii</i> (d'Orbigny, 1837) Gray Antwren	VA BO RO-BA PA-AP GU SU FG
<i>Myrmotherula assimilis</i> Pelzeln, 1868 Leaden Antwren	PA-AP
<i>Herpsilochmus sticturus</i> Salvin, 1885 Spot-tailed Antwren Shield endemic	BO PA-AP GU SU FG
<i>Herpsilochmus stictocephalus</i> Todd, 1927 Todd's Antwren Shield endemic	BO PA-AP GU SU FG
<i>Herpsilochmus dorsimaculatus</i> Pelzeln, 1868 Spot-backed Antwren	VA BO RO-BA
<i>Herpsilochmus roraimae</i> Hellmayr, 1903 Roraiman Antwren Shield endemic	VA BO RO-BA GU
<i>Herpsilochmus rufimarginatus</i> (Temminck, 1822) Rufous-winged Antwren	VA BO RO-BA PA-AP GU SU
<i>Microrhopias quixensis</i> (Cornalia, 1849) Dot-winged Antwren	RO-BA PA-AP GU SU FG
<i>Formicivora rufa</i> (Wied-Neuwied, 1831) Rusty-backed Antwren	PA-AP SU
<i>Formicivora grisea</i> (Boddaert, 1783) White-fringed Antwren	VA BO RO-BA PA-AP GU SU FG
<i>Terenura callinota</i> (Sclater, 1855) Rufous-rumped Antwren	GU SU
<i>Terenura spodioptila</i> Sclater & Salvin, 1881 Ash-winged Antwren	VA BO RO-BA PA-AP GU SU FG
<i>Cercomacra cinerascens</i> (Sclater, 1857) Gray Antbird	VA BO RO-BA PA-AP GU SU FG
<i>Cercomacra tyrannina</i> (Sclater, 1855) Dusky Antbird	VA BO RO-BA PA-AP GU SU FG
<i>Cercomacra laeta</i> Todd, 1927 Willis's Antbird	RO-BA GU
<i>Cercomacra nigrescens</i> (Cabanis & Heine, 1859) Blackish Antbird	RO-BA PA-AP GU SU FG
<i>Cercomacra carbonaria</i> Sclater & Salvin, 1873 Rio Branco Antbird Shield endemic	RO-BA GU
<i>Myrmoborus leucophrys</i> (Tschudi, 1844) White-browed Antbird	VA BO RO-BA PA-AP GU SU FG
<i>Myrmoborus lugubris</i> (Cabanis, 1847) Ash-breasted Antbird	RO-BA PA-AP
<i>Myrmoborus myotherinus</i> (Spix, 1825) Black-faced Antbird	VA BO RO-BA
<i>Hypocnemis cantator</i> (Boddaert, 1783) Warbling Antbird	VA BO RO-BA PA-AP GU SU FG
<i>Hypocnemis hypoxantha</i> Sclater, 1869 Yellow-browed Antbird	RO-BA
<i>Hypocnemoides melanopogon</i> (Sclater, 1857) Black-chinned Antbird	VA BO RO-BA PA-AP GU
<i>Hylophylax punctulatus</i> (DesMurs, 1856) Dot-backed Antbird	VA BO RO-BA FG?
<i>Hylophylax naevius</i> (J. F. Gmelin, 1789) Spot-backed Antbird	VA BO RO-BA PA-AP GU SU FG
<i>Hylophylax poecilonotus</i> (Cabanis, 1847) Scale-backed Antbird	VA BO RO-BA PA-AP GU SU FG
<i>Dichrozona cincta</i> (Pelzeln, 1868) Banded Antbird	VA RO-BA
<i>Schistocichla leucostigma</i> (Pelzeln, 1868) Spot-winged Antbird	VA BO RO-BA PA-AP GU SU FG
<i>Schistocichla caurensis</i> (Hellmayr, 1906) Caura Antbird	VA BO RO-BA
<i>Sclateria naevia</i> (J. F. Gmelin, 1788) Silvered Antbird	VA BO RO-BA PA-AP GU SU FG
<i>Percnostola rufifrons</i> (J. F. Gmelin, 1789) Black-headed Antbird Shield endemic	VA RO-BA PA-AP GU SU FG
<i>Myrmeciza disjuncta</i> Friedmann, 1945 Yapacana Antbird	VA

<i>Myrmeciza longipes</i> (Swainson, 1825) White-bellied Antbird	VA BO RO-BA PA-AP GU SU FG
<i>Myrmeciza ferruginea</i> (Muller, 1776) Ferruginous-backed Antbird	BO RO-BA PA-AP GU SU FG
<i>Myrmeciza atrothorax</i> (Boddaert, 1783) Black-throated Antbird	VA BO RO-BA PA-AP GU SU FG
<i>Myrmeciza pelzelni</i> Sclater, 1890 Gray-bellied Antbird	VA RO-BA
<i>Pithys albifrons</i> (Linnaeus, 1766) White-plumed Antbird	VA BO RO-BA PA-AP GU SU FG
<i>Gymnopathys rufigula</i> (Boddaert, 1783) Rufous-throated Antbird Shield endemic	VA BO RO-BA PA-AP GU SU FG
<i>Phlegopsis erythroptera</i> (Gould, 1855) Reddish-winged Bare-eye	VA RO-BA
<i>Myrmornis torquata</i> (Boddaert, 1783) Wing-banded Antbird	VA BO RO-BA PA-AP GU SU FG
<b>Family: Formicariidae</b> —Ground Antbirds	
<i>Formicarius colma</i> Boddaert, 1783 Rufous-capped Antthrush	VA BO RO-BA PA-AP GU SU FG
<i>Formicarius analis</i> (d'Orbigny & Lafresnaye, 1837) Black-faced Antthrush	BO RO-BA PA-AP GU SU FG
<i>Chamaeza campanisona</i> (Lichtenstein, 1823) Short-tailed Antthrush	VA BO GU
<i>Grallaria varia</i> (Boddaert, 1783) Variegated Antpitta	VA RO-BA PA-AP GU SU FG
<i>Grallaria guatemalensis</i> Prevost & DesMurs, 1846 Scaled Antpitta	VA BO GU
<i>Hylopezus macularius</i> (Temminck, 1823) Spotted Antpitta	VA BO RO-BA PA-AP GU SU FG
<i>Myrmothera campanisona</i> (Hermann, 1783) Thrush-like Antpitta	VA BO RO-BA PA-AP GU SU FG
<i>Myrmothera simplex</i> (Salvin & Godman, 1884) Tepui Antpitta Shield endemic	VA BO RO-BA GU
<i>Grallaricula nana</i> (Lafresnaye, 1842) Slate-crowned Antpitta	BO GU
<b>Family: Conopophagidae</b> —Gnateaters	
<i>Conopophaga aurita</i> (J. F. Gmelin, 1789) Chestnut-belted Gnateater	VA? BO? RO-BA PA-AP GU SU FG
<b>Family: Tyrannidae</b> —Tyrant Flycatchers	
<i>Phyllomyias burmeisteri</i> (Lawrence, 1868) Rough-legged Tyrannulet	BO
<i>Phyllomyias griseiceps</i> (Sclater & Salvin, 1871) Sooty-headed Tyrannulet	VA BO RO-BA PA-AP GU SU
<i>Zimmerius gracilipes</i> (Sclater & Salvin, 1867) Slender-footed Tyrannulet	VA BO RO-BA PA-AP GU SU FG
<i>Ornithion inerme</i> Hartlaub, 1853 White-lored Tyrannulet	VA BO RO-BA PA-AP GU SU FG
<i>Camptostoma obsoletum</i> (Temminck, 1824) Southern Beardless-Tyrannulet	VA BO RO-BA PA-AP GU SU FG
<i>Phaeomyias murina</i> (Spix, 1825) Mouse-colored Tyrannulet	VA BO RO-BA PA-AP GU SU FG
<i>Tyrannulus elatus</i> (Latham, 1790) Yellow-crowned Tyrannulet	VA BO RO-BA PA-AP GU SU FG
<i>Myiopagis caniceps</i> (Swainson, 1835) Gray Elaenia	VA BO RO-BA PA-AP GU FG
<i>Myiopagis gaimardii</i> (d'Orbigny, 1840) Forest Elaenia	VA BO RO-BA PA-AP GU SU FG
<i>Myiopagis flavivertex</i> (Sclater, 1887) Yellow-crowned Elaenia	VA RO-BA PA-AP GU SU FG
<i>Myiopagis viridicata</i> (Vieillot, 1817) Greenish Elaenia	VA BO PA-AP GU
<i>Elaenia dayi</i> Chapman, 1929 Great Elaenia Shield endemic	VA BO
<i>Elaenia flavogaster</i> (Thunberg, 1822) Yellow-bellied Elaenia	VA BO RO-BA PA-AP GU SU FG
<i>Elaenia spectabilis</i> Pelzeln, 1868 Large Elaenia	RO-BA
<i>Elaenia chiriquensis</i> Lawrence, 1865 Lesser Elaenia	VA BO RO-BA PA-AP GU SU FG
<i>Elaenia pallatangae</i> Sclater, 1861 Sierran Elaenia	VA BO GU
<i>Elaenia parvirostris</i> Pelzeln, 1868 Small-billed Elaenia	VA BO RO-BA PA-AP GU SU FG
<i>Elaenia cristata</i> Pelzeln, 1868 Plain-crested Elaenia	VA BO RO-BA PA-AP GU SU FG



<i>Elaenia ruficeps</i> Pelzeln, 1868 Rufous-crowned Elaenia	VA BO RO-BA PA-AP GU SU FG
<i>Elaenia strepera</i> Cabanis, 1883 Slaty Elaenia	VA BO
<i>Sublegatus arenarum</i> (Salvin, 1863) Northern Scrub-Flycatcher	BO PA-AP GU SU FG
<i>Sublegatus obscurior</i> Todd, 1920 Amazonian Scrub-Flycatcher	BO RO-BA PA-AP GU SU FG
<i>Sublegatus modestus</i> (Wied-Neuwied, 1831) Southern Scrub-Flycatcher	PA-AP
<i>Mecocerculus leucophrys</i> (d'Orbigny & Lafresnaye, 1837) White-throated Tyrannulet	VA BO RO-BA
<i>Serpophaga hypoleuca</i> Sclater & Salvin, 1866 River Tyrannulet	VA BO
<i>Inezia caudata</i> Salvin 1897 Pale-tipped Tyrannulet	BO RO-BA PA-AP GU SU FG
<i>Inezia subflava</i> (Sclater & Salvin, 1873) Amazonian Inezia	VA RO-BA PA-AP
<i>Suiriri suiriri</i> (Vieillot, 1818) Suiriri Flycatcher	PA-AP SU
<i>Suiriri islerorum</i> Zimmer, Whittaker & Oren, 2001 Chapada Flycatcher	PA-AP
<i>Capsiempis flaveola</i> (Lichtenstein, 1823) Yellow Tyrannulet	VA BO RO-BA PA-AP GU SU FG
<i>Polystictus pectoralis</i> (Vieillot, 1817) Bearded Tachuri	VA BO RO-BA PA-AP GU SU FG
<i>Pseudocolopteryx sclateri</i> (Oustalet, 1892) Crested Doradito	GU
<i>Euscarthmus rufomarginatus</i> (Pelzeln, 1868) Rufous-sided Pygmy-Tyrant	PA-AP SU
<i>Euscarthmus melorophus</i> Wied-Neuwied, 1831 Tawny-crowned Pygmy-Tyrant	BO
<i>Mionectes oleagineus</i> (Lichtenstein, 1823) Ochre-bellied Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Mionectes macconnelli</i> (Chubb, 1919) McConnell's Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Leptopogon superciliaris</i> Tschudi, 1844 Slaty-capped Flycatcher	VA
<i>Leptopogon amaurocephalus</i> Tschudi, 1846 Sepia-capped Flycatcher	VA BO PA-AP GU SU FG
<i>Phylloscartes nigrifrons</i> (Salvin & Godman, 1884) Black-fronted Tyrannulet Shield endemic	VA BO RO-BA GU
<i>Phylloscartes chapmani</i> Gilliard, 1940 Chapman's Bristle-Tyrant Shield endemic	VA BO RO-BA GU
<i>Phylloscartes virescens</i> Todd, 1925 Olive-green Tyrannulet Shield endemic	RO-BA GU SU FG
<i>Corythopsis torquatus</i> Tschudi, 1844 Ringed Antpipit	VA BO RO-BA PA-AP GU SU FG
<i>Myiornis ecaudatus</i> (d'Orbigny & Lafresnaye, 1837) Short-tailed Pygmy-Tyrant	VA BO RO-BA PA-AP GU SU FG
<i>Lophotriccus vitiosus</i> (Bangs & Penard, 1921) Double-banded Pygmy-Tyrant	RO-BA PA-AP GU SU FG
<i>Lophotriccus galeatus</i> (Boddaert, 1783) Helmeted Pygmy-Tyrant	VA BO RO-BA PA-AP GU SU FG
<i>Atalotriccus pilaris</i> (Cabanis, 1847) Pale-eyed Pygmy-Tyrant	VA BO RO-BA GU
<i>Hemitriccus margaritaceiventer</i> (d'Orbigny & Lafresnaye, 1837) Pearly-vented Tody-Tyrant	VA BO
<i>Hemitriccus inornatus</i> (Pelzeln, 1868) Pelzeln's Tody-Tyrant	RO-BA
<i>Hemitriccus josephinae</i> (Chubb, 1914) Boat-billed Tody-Tyrant Shield endemic	RO-BA PA-AP GU SU FG
<i>Hemitriccus zosterops</i> (Pelzeln, 1868) White-eyed Tody-Tyrant	VA RO-BA PA-AP GU SU FG
<i>Hemitriccus minor</i> (Snethlage, 1907) Snethlage's Tody-Tyrant	VA RO-BA
<i>Taeniotriccus andrei</i> Berlepsch & Hartert, 1902 Black-chested Tyrant	VA BO RO-BA SU
<i>Poecilotriccus fumifrons</i> Hartlaub, 1853 Smoky-fronted Tody-Flycatcher	PA-AP SU FG
<i>Poecilotriccus russatum</i> (Salvin & Godman, 1884) Ruddy Tody-Flycatcher Shield endemic	BO RO-BA GU
<i>Poecilotriccus sylvia</i> (Desmarest, 1806) Slate-headed Tody-Flycatcher	VA BO RO-BA PA-AP GU SU? FG

<i>Todirostrum maculatum</i> (Desmarest, 1806) Spotted Tody-Flycatcher		RO-BA	PA-AP	GU	SU	FG
<i>Todirostrum cinereum</i> (Linnaeus, 1766) Common Tody-Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Todirostrum pictum</i> Salvin, 1897 Painted Tody-Flycatcher Shield endemic	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Ramphotrigon megacephalum</i> (Swainson, 1835) Large-headed Flatbill	VA					
<i>Ramphotrigon ruficauda</i> (Spix, 1825) Rufous-tailed Flatbill	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Rhynchocyclus olivaceus</i> (Temminck, 1820) Olivaceous Flatbill	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Tolmomyias sulphurescens</i> (Spix, 1825) Yellow-olive Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Tolmomyias assimilis</i> (Pelzeln, 1868) Yellow-margined Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Tolmomyias poliocephalus</i> (Taczanowski, 1884) Gray-crowned Flycatcher			RO-BA	PA-AP	GU	SU FG
<i>Tolmomyias flaviventris</i> (Wied-Neuwied, 1831) Yellow-breasted Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Platyrinchus platyrhynchos</i> (J. F. Gmelin, 1788) White-crested Spadebill	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Platyrinchus saturatus</i> Salvin & Godman, 1882 Cinnamon-crested Spadebill	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Platyrinchus mystaceus</i> Vieillot, 1818 White-throated Spadebill	VA	BO	RO-BA		GU	SU? FG
<i>Platyrinchus coronatus</i> Sclater, 1858 Golden-crowned Spadebill	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Onychorhynchus coronatus</i> (Muller, 1776) Royal Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Terenotriccus erythrurus</i> (Cabanis, 1847) Ruddy-tailed Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Myiobius barbatus</i> (J. F. Gmelin, 1789) Sulphur-rumped Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Myiobius atricaudus</i> Lawrence, 1863 Black-tailed Flycatcher		BO	RO-BA	PA-AP		
<i>Neopipo cinnamomea</i> (Lawrence, 1869) Cinnamon Tyrant-Manakin	VA		RO-BA	PA-AP	GU	SU FG
<i>Myiophobus roraimae</i> (Salvin & Godman, 1883) Roraiman Flycatcher	VA	BO	RO-BA		GU	
<i>Myiophobus fasciatus</i> (Muller, 1776) Bran-colored Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Contopus virens</i> (Linnaeus, 1766) Eastern Wood Pewee	VA	BO	RO-BA			FG
<i>Contopus sordidulus</i> Sclater, 1859 Western Wood-Pewee	VA	BO				
<i>Contopus fumigatus</i> (d'Orbigny & Lafresnaye, 1837) Smoke-colored Pewee	VA	BO	RO-BA		GU	
<i>Contopus cooperi</i> (Nuttall, 1831) Olive-sided Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Contopus cinereus</i> (Spix, 1825) Tropical Pewee	VA	BO			GU	SU FG
<i>Contopus albogularis</i> (Berlioz, 1962) White-throated Pewee				PA-AP	SU	FG
<i>Contopus nigrescens</i> (Sclater & Salvin, 1880) Blackish Pewee					GU	
<i>Lathrotriccus euleri</i> (Cabanis, 1868) Euler's Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Cnemotriccus fuscatus</i> (Wied-Neuwied, 1831) Fuscous Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Pyrocephalus rubinus</i> (Boddaert, 1783) Vermilion Flycatcher		BO	RO-BA	PA-AP	GU	
<i>Ochthornis littoralis</i> (Pelzeln, 1868) Drab Water-Tyrant	VA	BO	RO-BA	PA-AP	GU	SU? FG
<i>Hirundinea ferruginea</i> (J. F. Gmelin, 1788) Cliff Flycatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Knipolegus poecilurus</i> (Sclater, 1862) Rufous-tailed Tyrant	VA	BO	RO-BA		GU	
<i>Knipolegus orenocensis</i> Berlepsch, 1884 Riverside Tyrant	VA	BO				
<i>Knipolegus poecilocercus</i> (Pelzeln, 1868) Amazonian Black-Tyrant	VA		RO-BA	PA-AP	GU	
<i>Satrapa icterophrys</i> (Vieillot, 1818) Yellow-browed Tyrant		BO		PA-AP		
<i>Colonia colonus</i> (Vieillot, 1818) Long-tailed Tyrant	VA	BO	RO-BA	PA-AP	GU	SU FG

<i>Machetornis rixosus</i> (Vieillot, 1819) Cattle Tyrant	BO
<i>Fluvicola pica</i> (Boddaert, 1783) Pied Water-Tyrant	VA BO RO-BA PA-AP GU SU FG
<i>Fluvicola albiventer</i> (Spix, 1825) Black-backed Water-Tyrant	PA-AP
<i>Arundinicola leucocephala</i> (Linnaeus, 1764) White-headed Marsh-Tyrant	VA BO RO-BA PA-AP GU SU FG
<i>Xolmis cinereus</i> (Vieillot, 1816) Grey monjita	PA-AP SU
<i>Xolmis velatus</i> (Lichtenstein, 1823) White-rumped Monjita	PA-AP
<i>Attila phoenicurus</i> (Pelzeln 1868) Rufous-tailed Attila	VA
<i>Attila spadiceus</i> (J. F. Gmelin, 1789) Bright-rumped Attila	VA BO RO-BA PA-AP GU SU FG
<i>Attila citriniventris</i> Sclater, 1859 Citron-bellied Attila	VA RO-BA
<i>Attila cinnamomeus</i> (J. F. Gmelin, 1789) Cinnamon Attila	VA BO RO-BA PA-AP GU SU FG
<i>Rhytipterna simplex</i> (Lichtenstein, 1823) Grayish Mourner	VA BO RO-BA PA-AP GU SU FG
<i>Rhytipterna immunda</i> (Sclater & Salvin, 1873) Pale-bellied Mourner	VA BO? RO-BA PA-AP GU SU FG
<i>Sirystes sibilator</i> (Vieillot, 1818) Sirystes	RO-BA PA-AP GU SU FG
<i>Myiarchus tuberculifer</i> (d'Orbigny & Lafresnaye, 1837) Dusky-capped Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Myiarchus swainsoni</i> Cabanis & Heine, 1859 Swainson's Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Myiarchus ferox</i> (J. F. Gmelin, 1789) Short-crested Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Myiarchus venezuelensis</i> Lawrence, 1865 Venezuelan Flycatcher	BO
<i>Myiarchus tyrannulus</i> (Muller, 1776) Brown-crested Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Myiarchus crinitus</i> (Linnaeus, 1758) Great-crested Flycatcher	VA
<i>Pitangus sulphuratus</i> (Linnaeus, 1766) Great Kiskadee	VA BO RO-BA PA-AP GU SU FG
<i>Pitangus lictor</i> (Lichtenstein, 1823) Lesser Kiskadee	VA BO RO-BA PA-AP GU SU FG
<i>Megarynchus pitangua</i> (Linnaeus, 1766) Boat-billed Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Phelpsia inornata</i> Lawrence, 1869 White-bearded Flycatcher	BO
<i>Myiozetetes similis</i> (Spix, 1825) Social Flycatcher	VA BO RO-BA PA-AP GU?
<i>Myiozetetes cayanensis</i> (Linnaeus, 1766) Rusty-margined Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Myiozetetes granadensis</i> Lawrence, 1862 Gray-capped Flycatcher	VA BO
<i>Myiozetetes luteiventris</i> (Sclater, 1858) Dusky-chested Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Conopias albobittatus</i> (Pelzeln, 1868) White-ringed Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Conopias trivirgatus</i> (Wied-Neuwied, 1831) Three-striped Flycatcher	VA BO RO-BA PA-AP
<i>Myiodynastes maculatus</i> (Muller, 1776) Streaked Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Legatus leucophaeus</i> (Vieillot, 1818) Piratic Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Empidonomus varius</i> (Vieillot, 1818) Variegated Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Empidonomus aurantioatrocristatus</i> (d'Orbigny & Lafresnaye, 1837) Crowned Slaty Flycatcher	VA RO-BA PA-AP GU
<i>Tyrannopsis sulphurea</i> (Spix, 1825) Sulphury Flycatcher	VA BO RO-BA PA-AP GU SU FG
<i>Tyrannus melancholicus</i> Vieillot, 1819 Tropical Kingbird	VA BO RO-BA PA-AP GU SU FG
<i>Tyrannus albogularis</i> Burmeister, 1856 White-throated Kingbird	VA BO RO-BA PA-AP GU SU FG
<i>Tyrannus dominicensis</i> (J. F. Gmelin, 1788) Gray Kingbird	VA BO RO-BA GU SU FG

<i>Tyrannus tyrannus</i> (Linnaeus, 1758) Eastern Kingbird	VA BO RO-BA PA-AP GU SU
<i>Tyrannus savana</i> Vieillot, 1808 Fork-tailed Flycatcher	VA BO RO-BA PA-AP GU SU FG
<b>Family: Oxyruncidae</b> —Sharpbills	
<i>Oxyruncus cristatus</i> (Swainson, 1821) Sharpbill	VA BO RO-BA PA-AP GU SU FG
<b>Family: Cotingidae</b> —Cotingas	
<i>Pipreola whitelyi</i> Salvin & Godman, 1884 Red-banded Fruiteater Shield endemic	BO GU
<i>Cotinga cotinga</i> (Linnaeus, 1766) Purple-breasted Cotinga	VA BO RO-BA PA-AP GU SU FG
<i>Cotinga cayana</i> (Linnaeus, 1766) Spangled Cotinga	VA BO RO-BA PA-AP GU SU FG
<i>Lipaugus vociferans</i> (Wied-Neuwied, 1820) Screaming Piha	VA BO RO-BA PA-AP GU SU FG
<i>Lipaugus streptophorus</i> (Salvin & Godman, 1884) Rose-collared Piha Shield endemic	BO RO-BA GU
<i>Xipholena punicea</i> (Pallas, 1764) Pompadour Cotinga	VA BO RO-BA PA-AP GU SU FG
<i>Procnias averano</i> (Hermann, 1783) Bearded Bellbird	VA BO RO-BA GU
<i>Procnias albus</i> (Hermann, 1783) White Bellbird Shield endemic	VA BO RO-BA PA-AP GU SU FG
<i>Gymnoderus foetidus</i> (Linnaeus, 1758) Bare-necked Fruitcrow	VA BO RO-BA PA-AP GU SU FG
<i>Querula purpurata</i> (Muller, 1776) Purple-throated Fruitcrow	VA BO RO-BA PA-AP GU SU FG
<i>Haematoderus militaris</i> (Shaw, 1792) Crimson Fruitcrow	VA RO-BA PA-AP GU SU FG
<i>Pyroderus scutatus</i> (Shaw, 1792) Red-ruffed Fruitcrow	BO GU
<i>Cephalopterus ornatus</i> Geoffroy Saint-Hilaire, 1809 Amazonian Umbrellabird	VA RO-BA GU
<i>Perissocephalus tricolor</i> (Muller, 1776) Capuchinbird Shield endemic	VA BO RO-BA PA-AP GU SU FG
<i>Phoenicircus carnifex</i> (Linnaeus, 1758) Guianan Red-Cotinga	BO RO-BA PA-AP GU SU FG
<i>Phoenicircus nigricollis</i> Swainson, 1832 Black-necked Red-Cotinga	VA RO-BA
<i>Rupicola rupicola</i> (Linnaeus, 1766) Guianan Cock-of-the-Rock Shield endemic	VA BO RO-BA PA-AP GU SU FG
<b>Family: Pipridae</b> —Manakins	
<i>Machaeropterus regulus</i> (Hahn, 1819) Striped Manakin	VA BO GU
<i>Machaeropterus pyrocephalus</i> (Sclater, 1852) Fiery-capped Manakin	VA BO RO-BA PA-AP
<i>Xenopipo atronitens</i> Cabanis, 1847 Black Manakin	VA BO RO-BA PA-AP GU SU FG
<i>Xenopipo uniformis</i> Salvin & Godman, 1884 Olive Manakin Shield endemic	VA BO RO-BA GU
<i>Manacus manacus</i> (Linnaeus, 1766) White-bearded Manakin	VA BO RO-BA PA-AP GU SU FG
<i>Corapipo gutturalis</i> (Linnaeus, 1766) White-throated Manakin Shield endemic	VA BO RO-BA PA-AP GU SU FG
<i>Chiroxiphia pareola</i> (Linnaeus, 1766) Blue-backed Manakin	BO RO-BA PA-AP GU SU FG
<i>Pipra filicauda</i> Spix, 1825 Wire-tailed Manakin	VA RO-BA
<i>Pipra aureola</i> (Linnaeus, 1758) Crimson-hooded Manakin	BO PA-AP GU SU FG
<i>Pipra cornuta</i> Spix, 1825 Scarlet-horned Manakin Shield endemic	VA BO RO-BA GU
<i>Pipra erythrocephala</i> (Linnaeus, 1758) Golden-headed Manakin	VA BO RO-BA PA-AP GU SU FG
<i>Pipra pipra</i> (Linnaeus, 1758) White-crowned Manakin	VA BO RO-BA PA-AP GU SU FG
<i>Lepidothrix coronata</i> Spix, 1825 Blue-crowned Manakin	VA BO RO-BA
<i>Lepidothrix suavissima</i> (Salvin & Godman 1882) Orange-bellied Manakin Shield endemic	VA BO RO-BA GU
<i>Lepidothrix serena</i> (Linnaeus 1766) White-fronted Manakin Shield endemic	RO-BA PA-AP GU SU FG
<i>Heterocercus flavivertex</i> Pelzeln, 1868 Yellow-crowned Mankin	VA RO-BA PA-AP

<i>Tyrannetes stolzmanni</i> (Hellmayr, 1906) Dwarf Tyrant-Manakin	VA	BO	RO-BA				
<i>Tyrannetes virescens</i> (Pelzeln, 1868) Tiny Tyrant-Manakin Shield endemic		BO	RO-BA	PA-AP	GU	SU	FG
<i>Neopelma chrysocephalum</i> (Pelzeln, 1868) Saffron-crested Tyrant-Manakin Shield endemic	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Neopelma pallescens</i> (Lafresnaye, 1853) Pale-bellied Tyrant-Manakin				PA-AP	GU		
<b>Family: Incertae Sedis</b> —Placement uncertain							
<i>Schiffornis turdina</i> (Wied-Neuwied, 1831) Thrush-like Schiffornis	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Schiffornis major</i> DesMurs, 1856 Varzea Schiffornis	VA		RO-BA	PA-AP			
<i>Piprites chloris</i> (Temminck, 1822) Wing-barred Piprites	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Laniocera hypopyrra</i> (Vieillot, 1817) Cinereous Mourner	VA	BO	RO-BA	PA-AP	GU		
<i>Xenopsaris albinucha</i> (Burmeister, 1869) White-naped Xenopsaris		BO	RO-BA		GU		
<i>Pachyramphus viridis</i> (Vieillot, 1816) Green-backed Becard		BO			GU		
<i>Pachyramphus surinamus</i> (Linnaeus, 1766) Glossy-backed Becard		BO	RO-BA	PA-AP	GU	SU	FG
<i>Pachyramphus polychopterus</i> (Vieillot, 1818) White-winged Becard	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Pachyramphus marginatus</i> (Lichtenstein, 1823) Black-capped Becard	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Pachyramphus rufus</i> (Boddaert, 1783) Cinereous Becard		BO	RO-BA	PA-AP	GU	SU	FG
<i>Pachyramphus castaneus</i> (Jardine & Selby, 1827) Chestnut-crowned Becard	VA	BO		PA-AP			
<i>Pachyramphus minor</i> (Lesson, 1830) Pink-throated Becard	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Tityra inquisitor</i> (Lichtenstein, 1823) Black-crowned Tityra	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Tityra cayana</i> (Linnaeus, 1766) Black-tailed Tityra	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Tityra semifasciata</i> (Spix, 1825) Masked Tityra			RO-BA	PA-AP			FG
<i>Iodopleura isabellae</i> Parzudaki, 1847 White-browed Purpleuft	VA		RO-BA	PA-AP			
<i>Iodopleura fusca</i> (Vieillot, 1817) Dusky Purpleuft Shield endemic		BO	RO-BA		GU	SU	FG
<b>Family: Vireonidae</b> —Vireos							
<i>Cyclarhis gujanensis</i> (J. F. Gmelin, 1789) Rufous-browed Peppershrike	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Vireolanius leucotis</i> (Swainson, 1838) Slaty-capped Shrike-Vireo	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Vireo olivaceus</i> (Linnaeus, 1766) Red-eyed Vireo	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Vireo altiloquus</i> (Vieillot, 1808) Black-whiskered Vireo	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Hylophilus flavipes</i> Lafresnaye, 1845 Scrub Greenlet	VA	BO					
<i>Hylophilus semicinereus</i> Sclater & Salvin, 1867 Gray-chested Greenlet	VA	BO	RO-BA	PA-AP			FG
<i>Hylophilus thoracicus</i> Temminck, 1822 Lemon-chested Greenlet		BO	RO-BA	PA-AP	GU	SU	FG
<i>Hylophilus pectoralis</i> Sclater, 1866 Ashy-headed Greenlet			RO-BA	PA-AP	GU	SU	FG
<i>Hylophilus brunneiceps</i> Sclater, 1866 Brown-headed Greenlet	VA		RO-BA				
<i>Hylophilus hypoxanthus</i> Pelzeln, 1868 Dusky-capped Greenlet	VA		RO-BA				
<i>Hylophilus sclateri</i> Salvin & Godman, 1883 Tepui Greenlet Shield endemic	VA	BO	RO-BA		GU		
<i>Hylophilus muscicapinus</i> Sclater & Salvin, 1873 Buff-cheeked Greenlet	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Hylophilus ochraceiceps</i> Sclater, 1859 Tawny-crowned Greenlet	VA		RO-BA	PA-AP	GU	SU	FG
<b>Family: Corvidae</b> —Jays							
<i>Cyanocorax violaceus</i> Du Bus de Gisignies, 1847 Violaceous Jay	VA	BO	RO-BA		GU		
<i>Cyanocorax heilprini</i> Gentry, 1885 Azure-naped Jay	VA		RO-BA				

<i>Cyanocorax cayanus</i> (Linnaeus, 1766) Cayenne Jay	BO	RO-BA	PA-AP	GU	SU	FG
<b>Family: Hirundinidae</b> —Swallows						
<i>Progne tapera</i> (Linnaeus, 1766) Brown-chested Martin	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Progne chalybea</i> (J. F. Gmelin, 1789) Gray-breasted Martin	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Progne subis</i> (Linnaeus, 1758) Purple Martin	VA	BO	RO-BA	PA-AP	GU	SU
<i>Progne dominicensis</i> (J. F. Gmelin, 1789) Caribbean Martin					GU	
<i>Progne elegans</i> Gould, 1838 Southern Martin						SU
<i>Tachycineta albiventer</i> (Boddaert, 1783) White-winged Swallow	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Tachycineta bicolor</i> (Vieillot, 1808) Tree Swallow					GU	FG?
<i>Pygochelidon cyanoleuca</i> (Vieillot, 1817) Blue-and-white Swallow	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Atticora fasciata</i> (J. F. Gmelin, 1789) White-banded Swallow	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Atticora melanoleuca</i> (Wied-Neuwied, 1820) Black-collared Swallow	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Neochelidon tibialis</i> (Cassin, 1853) White-thighed Swallow	VA	BO	RO-BA		GU	SU FG
<i>Alopochelidon fucata</i> (Temminck, 1822) Tawny-headed Swallow	VA	BO	RO-BA			
<i>Stelgidopteryx ruficollis</i> (Vieillot, 1817) Southern Rough-winged Swallow	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Riparia riparia</i> (Linnaeus, 1758) Bank Swallow	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Hirundo rustica</i> Linnaeus, 1758 Barn Swallow	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Petrochelidon pyrrhonota</i> (Vieillot, 1817) Cliff Swallow	VA	BO	RO-BA	PA-AP	GU	SU
<b>Family: Troglodytidae</b> —Wrens						
<i>Campylorhynchus griseus</i> (Swainson, 1838) Bicolored Wren	VA	BO	RO-BA	PA-AP	GU	
<i>Campylorhynchus nuchalis</i> Cabanis, 1847 Stripe-backed Wren		BO				
<i>Campylorhynchus turdinus</i> (Wied-Neuwied, 1821) Thrush-like Wren				PA-AP		
<i>Cistothorus platensis</i> (Latham, 1790) Sedge Wren		BO			GU	
<i>Thryothorus coraya</i> (J. F. Gmelin, 1789) Coraya Wren	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Thryothorus leucotis</i> Lafresnaye, 1845 Buff-breasted Wren	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Thryothorus genibarbis</i> Swainson, 1838 Moustached Wren			RO-BA	PA-AP		
<i>Troglodytes aedon</i> Naumann, 1823 House Wren	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Troglodytes rufulus</i> Cabanis, 1849 Tepui Wren Shield endemic	VA	BO	RO-BA		GU	
<i>Henicorhina leucosticta</i> (Cabanis, 1847) White-breasted Wood-Wren	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Cyphorhinus arada</i> (Hermann, 1783) Musician Wren		BO	RO-BA	PA-AP	GU	SU FG
<i>Microcerculus marginatus</i> (Sclater, 1855) Scaly-breasted Wren	VA					
<i>Microcerculus bambla</i> (Boddaert, 1783) Wing-banded Wren	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Microcerculus ustulatus</i> Salvin & Godman, 1883 Flutist Wren Shield endemic	VA	BO	RO-BA		GU	
<b>Family: Sylviidae</b> —Gnatwrens, Gnatcatchers						
<i>Microbates collaris</i> (Pelzeln, 1868) Collared Gnatwren Shield endemic	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Ramphocaenus melanurus</i> Vieillot, 1819 Long-billed Gnatwren	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Polioptila plumbea</i> (J. F. Gmelin, 1788) Tropical Gnatcatcher	VA	BO	RO-BA	PA-AP	GU	SU FG
<i>Polioptila guianensis</i> Todd, 1920 Guianan Gnatcatcher	VA		RO-BA	PA-AP	GU	SU FG
<b>Family: Incertae Sedis</b> —Placement uncertain						
<i>Donacobius atricapilla</i> (Linnaeus, 1766) Black-capped Donacobius	VA	BO	RO-BA	PA-AP	GU	SU FG

**Family: Turdidae**—Thrushes

<i>Cichlopsis leucogenys</i> Cabanis, 1850 Rufous-brown Solitaire	BO RO-BA	GU SU
<i>Catharus minimus</i> (Lafresnaye, 1848) Gray-cheeked Thrush	VA BO RO-BA	GU SU
<i>Catharus ustulatus</i> (Nuttall, 1840) Swainson's Thrush	VA BO RO-BA	GU?
<i>Catharus fuscescens</i> (Stephens, 1817) Veery	VA BO RO-BA	GU FG?
<i>Platycichla flavipes</i> (Vieillot, 1818) Yellow-legged Thrush	VA BO	GU
<i>Platycichla leucops</i> (Taczanowski, 1877) Pale-eyed Thrush	VA BO RO-BA	GU
<i>Turdus olivater</i> (Lafresnaye, 1848) Black-hooded Thrush	VA BO RO-BA	GU
<i>Turdus nudigenis</i> Lafresnaye, 1848 Bare-eyed Robin	VA BO RO-BA PA-AP	GU SU FG
<i>Turdus ignobilis</i> Sclater, 1857 Black-billed Thrush	VA BO RO-BA PA-AP	GU SU
<i>Turdus lawrencii</i> Coues, 1880 Lawrence's Thrush	VA BO RO-BA	
<i>Turdus leucomelas</i> Vieillot, 1818 Pale-breasted Thrush	VA BO RO-BA PA-AP	GU SU FG
<i>Turdus fumigatus</i> Lichtenstein, 1823 Cocoa Thrush	VA BO RO-BA PA-AP	GU SU FG
<i>Turdus albicollis</i> Vieillot, 1818 White-necked Robin	VA BO RO-BA PA-AP	GU SU FG

**Family: Mimidae**—Mockingbirds

<i>Mimus gilvus</i> (Vieillot, 1808) Tropical Mockingbird	VA BO RO-BA PA-AP	GU SU FG
<i>Mimus saturninus</i> (Lichtenstein, 1823) Chalk-browed Mockingbird	RO-BA PA-AP	SU FG

**Family: Motacillidae**—Pipits

<i>Anthus lutescens</i> Pucheran, 1855 Yellowish Pipit	VA BO RO-BA PA-AP	GU SU FG
--	-------------------	----------

**Family: Thraupidae**—Tanagers

<i>Cypsnagra hirundinacea</i> (Lesson, 1831) White-rumped Tanager	PA-AP	SU FG
<i>Conirostrum speciosum</i> (Temminck, 1824) Chestnut-vented Conebill	BO RO-BA PA-AP	GU SU FG
<i>Conirostrum bicolor</i> (Vieillot, 1809) Bicolored Conebill	PA-AP	GU SU FG
<i>Schistochlamys melanopsis</i> (Latham, 1790) Black-faced Tanager	VA BO RO-BA PA-AP	GU SU FG
<i>Lamprospiza melanoleuca</i> (Vieillot, 1817) Red-billed Pied Tanager	RO-BA PA-AP	GU SU FG
<i>Cissopis leverianus</i> (J. F. Gmelin, 1788) Magpie Tanager	VA BO RO-BA PA-AP	GU SU FG
<i>Thlypopsis sordida</i> (d'Orbigny & Lafresnaye, 1837) Orange-headed Tanager	BO	
<i>Hemithraupis guira</i> (Linnaeus, 1766) Guira Tanager	BO RO-BA PA-AP	GU SU FG
<i>Hemithraupis flavicollis</i> (Vieillot, 1818) Yellow-backed Tanager	VA BO RO-BA PA-AP	GU SU FG
<i>Neothraupis fasciata</i> (Lichtenstein, 1823) White-banded Tanager	PA-AP	
<i>Nemosia pileata</i> (Boddaert, 1783) Hooded Tanager	BO RO-BA PA-AP	GU SU FG
<i>Eucometis penicillata</i> (Spix, 1825) Gray-headed Tanager	VA RO-BA PA-AP	GU SU FG
<i>Lanio fulvus</i> (Boddaert, 1783) Fulvous Shrike-Tanager	VA BO RO-BA PA-AP	GU SU FG
<i>Tachyphonus rufus</i> (Boddaert, 1783) White-lined Tanager	VA BO RO-BA PA-AP	GU SU FG
<i>Tachyphonus cristatus</i> (Linnaeus, 1766) Flame-crested Tanager	VA BO RO-BA PA-AP	GU SU FG
<i>Tachyphonus surinamus</i> (Linnaeus, 1766) Fulvous-crested Tanager	VA BO RO-BA PA-AP	GU SU FG
<i>Tachyphonus phoenicius</i> Swainson, 1838 Red-shouldered Tanager	VA BO RO-BA PA-AP	GU SU FG
<i>Tachyphonus luctuosus</i> d'Orbigny & Lafresnaye, 1837 White-shouldered Tanager	VA BO RO-BA PA-AP	GU SU FG
<i>Ramphocelus nigrogularis</i> (Spix, 1825) Masked Crimson Tanager	PA-AP	
<i>Ramphocelus carbo</i> (Pallas, 1764) Silver-beaked Tanager	VA BO RO-BA PA-AP	GU SU FG

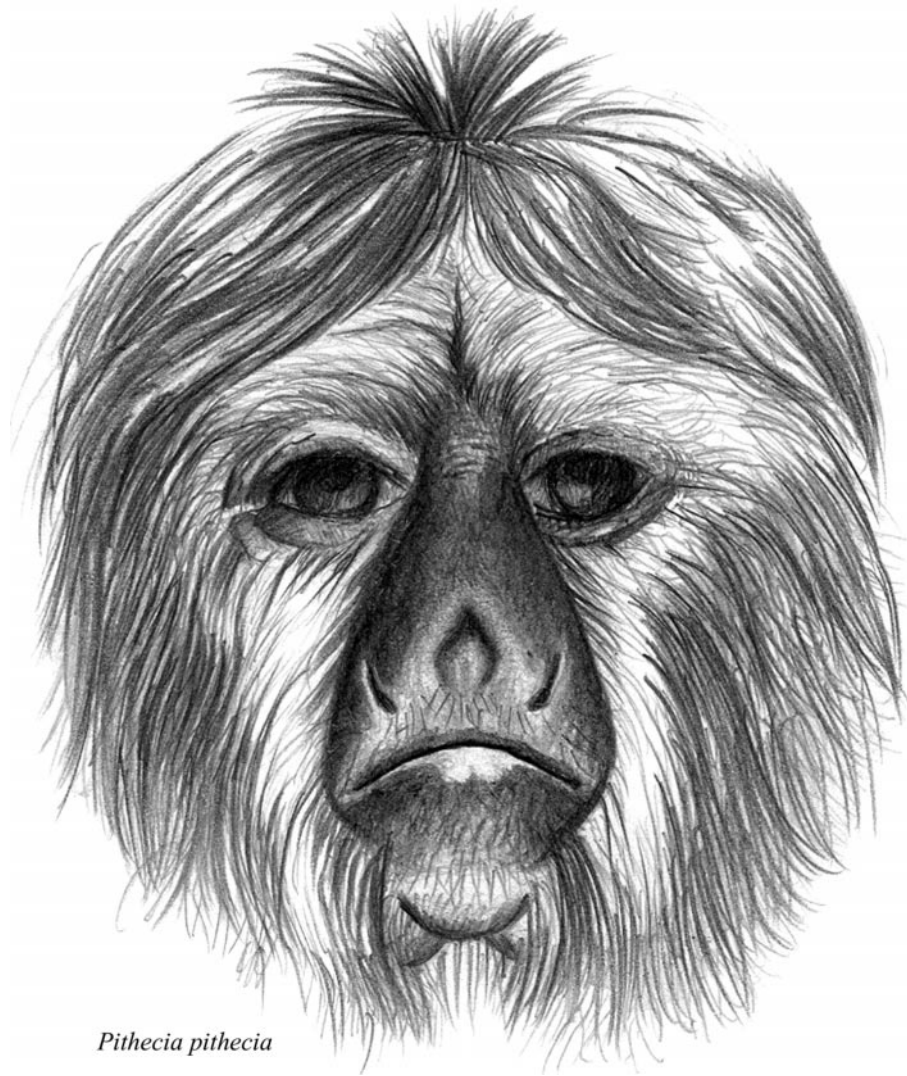
<i>Thraupis episcopus</i> (Linnaeus, 1766) Blue-gray Tanager	VA BO RO-BA PA-AP GU SU FG
<i>Thraupis palmarum</i> (Wied-Neuwied, 1821) Palm Tanager	VA BO RO-BA PA-AP GU SU FG
<i>Cyanicterus cyanicterus</i> (Vieillot, 1819) Blue-backed Tanager Shield endemic	BO RO-BA PA-AP GU SU FG
<i>Pipraeidea melanonota</i> (Vieillot, 1819) Fawn-breasted Tanager	VA BO
<i>Tangara cyanoptera</i> (Swainson, 1834) Black-headed Tanager	VA BO RO-BA GU
<i>Tangara cayana</i> (Linnaeus, 1766) Burnished-buff Tanager	VA BO RO-BA PA-AP GU SU FG
<i>Tangara nigrocincta</i> (Bonaparte, 1838) Masked Tanager	VA BO RO-BA GU
<i>Tangara mexicana</i> (Linnaeus, 1766) Turquoise Tanager	VA BO RO-BA PA-AP GU SU FG
<i>Tangara velia</i> (Linnaeus, 1758) Opal-rumped Tanager	VA BO RO-BA PA-AP GU SU FG
<i>Tangara chilensis</i> (Vigors, 1832) Paradise Tanager	VA BO RO-BA PA-AP GU SU FG
<i>Tangara schrankii</i> (Spix, 1825) Green-and-Gold Tanager	VA BO RO-BA
<i>Tangara punctata</i> (Linnaeus, 1766) Spotted Tanager	VA BO RO-BA PA-AP GU SU FG
<i>Tangara guttata</i> (Cabanis, 1850) Speckled Tanager	VA BO RO-BA GU SU? FG
<i>Tangara xanthogastra</i> (Sclater, 1851) Yellow-bellied Tanager	VA BO RO-BA GU
<i>Tangara varia</i> (Muller, 1776) Dotted Tanager	VA BO RO-BA PA-AP GU SU FG
<i>Tangara gyrola</i> (Linnaeus, 1758) Bay-headed Tanager	VA BO RO-BA PA-AP GU SU FG
<i>Dacnis cayana</i> (Linnaeus, 1766) Blue Dacnis	VA BO RO-BA PA-AP GU SU FG
<i>Dacnis lineata</i> (J. F. Gmelin, 1789) Black-faced Dacnis	VA BO RO-BA PA-AP GU SU FG
<i>Dacnis flaviventer</i> d'Orbigny & Lafresnaye, 1837 Yellow-bellied Dacnis	VA BO RO-BA
<i>Dacnis albiventris</i> (Sclater, 1852) White-bellied Dacnis	VA RO-BA
<i>Chlorophanes spiza</i> (Linnaeus, 1758) Green Honeycreeper	VA BO RO-BA PA-AP GU SU FG
<i>Cyanerpes nitidus</i> (Hartlaub, 1847) Short-billed Honeycreeper	VA BO RO-BA PA-AP GU SU
<i>Cyanerpes caeruleus</i> (Linnaeus, 1758) Purple Honeycreeper	VA BO RO-BA PA-AP GU SU FG
<i>Cyanerpes cyaneus</i> (Linnaeus, 1766) Red-legged Honeycreeper	VA BO RO-BA PA-AP GU SU FG
<i>Diglossa major</i> Cabanis, 1849 Greater Flowerpiercer Shield endemic	BO RO-BA GU
<i>Diglossa duidae</i> Chapman, 1929 Scaled Flowerpiercer Shield endemic	VA BO RO-BA
<i>Tersina viridis</i> (Illiger, 1811) Swallow-Tanager	VA BO RO-BA PA-AP GU SU FG
<b>Family: Incertae Sedis</b> —Placement uncertain	
<i>Coereba flaveola</i> (Linnaeus, 1758) Bananaquit	VA BO RO-BA PA-AP GU SU FG
<i>Mitrospingus oleagineus</i> (Salvin, 1886) Olive-backed Tanager Shield endemic	BO RO-BA GU
<i>Piranga leucoptera</i> Trudeau, 1839 White-winged Tanager	BO GU
<i>Piranga haemalea</i> (Salvin and Godman, 1883) Blood-red Tanager	GU
<i>Piranga flava</i> (Vieillot, 1822) Hepatic Tanager	VA BO RO-BA PA-AP GU SU FG
<i>Piranga rubra</i> (Linnaeus, 1758) Summer Tanager	VA RO-BA GU SU FG
<i>Piranga olivacea</i> (J. F. Gmelin, 1789) Scarlet Tanager	VA? BO? GU
<i>Habia rubica</i> (Vieillot, 1817) Red-crowned Ant-Tanager	BO
<i>Tiaris fuliginosa</i> (Wied-Neuwied, 1830) Sooty Grassquit	BO GU
<b>Family: Emberizidae</b> —Emberizine Finches	
<i>Volatinia jacarina</i> (Linnaeus, 1766) Blue-black Grassquit	VA BO RO-BA PA-AP GU SU FG



<i>Dolospingus fringilloides</i> (Pelzeln, 1870) White-naped Seedeater Shield endemic	VA	RO-BA	PA-AP	GU			
<i>Oryzoborus angolensis</i> (Linnaeus, 1766) Chestnut-bellied Seed-Finch	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Oryzoborus crassirostris</i> (J. F. Gmelin, 1789) Large-billed Seed-Finch	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Oryzoborus maximiliani</i> Cabanis, 1851 Great-billed Seed-Finch		BO	RO-BA	PA-AP	GU	SU	FG
<i>Sporophila intermedia</i> Cabanis, 1851 Gray Seedeater	VA	BO	RO-BA	PA-AP	GU		
<i>Sporophila schistacea</i> (Lawrence, 1862) Slate-colored Seedeater		BO	RO-BA	PA-AP	GU	SU	
<i>Sporophila plumbea</i> (Wied-Neuwied, 1830) Plumbeous Seedeater	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Sporophila americana</i> (J. F. Gmelin, 1789) Wing-barred Seedeater	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Sporophila bouvronides</i> (Lesson, 1831) Lesson's Seedeater	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Sporophila lineola</i> (Linnaeus, 1758) Lined Seedeater	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Sporophila leucoptera</i> (Vieillot, 1817) White-bellied Seedeater				PA-AP	SU		
<i>Sporophila bouvreuil</i> (Muller, 1776) Capped Seedeater				PA-AP	SU		
<i>Sporophila nigricollis</i> (Vieillot, 1823) Yellow-bellied Seedeater	VA	BO	RO-BA	PA-AP	GU	SU	
<i>Sporophila minuta</i> (Linnaeus, 1758) Ruddy-breasted Seedeater	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Sporophila castaneiventris</i> Cabanis, 1849 Chestnut-bellied Seedeater	VA	RO-BA	PA-AP	GU	SU	FG	
<i>Catamenia homochroa</i> Sclater, 1858 Paramo Seedeater	VA	BO	RO-BA				
<i>Sicalis flaveola</i> (Linnaeus, 1766) Saffron Finch	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Sicalis columbiana</i> Cabanis, 1851 Orange-fronted Yellow-Finch	VA	BO	RO-BA	PA-AP			
<i>Sicalis citrina</i> Pelzeln, 1870 Stripe-tailed Yellow-Finch	VA	BO	RO-BA	PA-AP	GU	SU	
<i>Sicalis luteola</i> (Sparrman, 1789) Grassland Yellow-Finch		BO	RO-BA	PA-AP	GU	SU	
<i>Haplospiza rustica</i> (Tschudi, 1844) Slaty Finch	VA	BO			GU		
<i>Atlapetes personatus</i> (Cabanis, 1848) Tepui Brush-Finch Shield endemic	VA	BO	RO-BA		GU		
<i>Arremon taciturnus</i> (Hermann, 1783) Pectoral Sparrow	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Arremonops conirostris</i> (Bonaparte, 1850) Black-striped Sparrow	VA	BO	RO-BA				
<i>Ammodramus humeralis</i> (Bosc, 1792) Grassland Sparrow	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Ammodramus aurifrons</i> (Spix, 1825) Yellow-browed Sparrow	VA	BO	RO-BA	PA-AP			
<i>Zonotrichia capensis</i> (Muller, 1776) Rufous-collared Sparrow	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Emberizoides herbicola</i> (Vieillot, 1817) Wedge-tailed Grass-Finch	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Emberizoides duidae</i> Chapman, 1929 Duida Grass-Finch Shield endemic	VA						
<i>Paroaria gularis</i> (Linnaeus, 1766) Red-capped Cardinal	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Coryphospingus cucullatus</i> (Muller, 1776) Red-crested Finch				PA-AP	GU		
<i>Coryphospingus pileatus</i> (Wied-Neuwied, 1821) Pileated Finch		BO					
<b>Family: Cardinalidae</b> —Grosbeaks, Saltators							
<i>Saltator coerulescens</i> Vieillot, 1817 Grayish Saltator	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Saltator maximus</i> (Muller, 1776) Buff-throated Saltator	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Saltator grossus</i> (Linnaeus, 1766) Slate-colored Grosbeak	VA	BO	RO-BA	PA-AP	GU	SU	FG
<i>Periporphyrus erythromelas</i> (J. F. Gmelin, 1789) Red-and-black Grosbeak		BO	RO-BA	PA-AP	GU	SU	FG
<i>Pheucticus ludovicianus</i> (Linnaeus, 1766) Rose-breasted Grosbeak	VA				GU?		FG?

<i>Cyanocompsa cyanooides</i> (Lafresnaye, 1847) Blue-black Grosbeak	VA BO RO-BA PA-AP GU SU FG
<i>Caryothraustes canadensis</i> (Linnaeus, 1766) Yellow-green Grosbeak	VA BO RO-BA PA-AP GU SU FG
<i>Spiza americana</i> (J. F. Gmelin, 1789) Dickcissel	VA BO RO-BA PA-AP GU SU
<b>Family: Parulidae</b> —Wood Warblers	
<i>Vermivora chrysoptera</i> (Linnaeus, 1766) Golden-winged Warbler	BO
<i>Vermivora peregrina</i> (Wilson, 1811) Tennessee Warbler	BO FG
<i>Parula pitiayumi</i> (Vieillot, 1817) Tropical Parula	VA BO RO-BA PA-AP GU SU FG
<i>Dendroica petechia</i> (Linnaeus, 1766) Yellow Warbler	VA BO RO-BA PA-AP GU SU FG
<i>Dendroica castanea</i> (Wilson, 1810) Bay-breasted Warbler	GU
<i>Dendroica striata</i> (Forster, 1772) Blackpoll Warbler	VA BO RO-BA PA-AP GU SU FG
<i>Dendroica fusca</i> (Muller, 1776) Blackburnian Warbler	VA BO RO-BA PA-AP GU SU FG
<i>Dendroica cerulea</i> (Wilson, 1810) Cerulean Warbler	BO
<i>Setophaga ruticilla</i> (Linnaeus, 1758) American Redstart	VA BO RO-BA PA-AP GU SU FG
<i>Protonotaria citrea</i> (Boddaert, 1783) Prothonotary Warbler	VA BO GU SU
<i>Seiurus noveboracensis</i> (J. F. Gmelin, 1789) Northern Waterthrush	VA BO RO-BA PA-AP GU SU FG
<i>Oporornis formosus</i> (Wilson, 1811) Kentucky Warbler	BO
<i>Oporornis agilis</i> (Wilson, 1812) Connecticut Warbler	VA BO FG
<i>Oporornis philadelphia</i> (Wilson, 1810) Mourning Warbler	VA
<i>Geothlypis aequinoctialis</i> (J. F. Gmelin, 1789) Masked Yellowthroat	VA BO RO-BA PA-AP GU SU FG
<i>Wilsonia canadensis</i> (Linnaeus, 1766) Canada Warbler	VA BO RO-BA
<i>Myioborus miniatus</i> (Swainson, 1827) Slate-throated Redstart	VA BO RO-BA GU
<i>Myioborus castaneocapillus</i> (Cabanis, 1849) Tepui Redstart	VA BO RO-BA GU
<small>Shield endemic</small>	
<i>Myioborus cardonai</i> Zimmer & Phelps, 1945 Saffron-breasted Redstart	BO
<small>Shield endemic</small>	
<i>Myioborus albifacies</i> Phelps & Phelps, 1946 White-faced Redstart	VA
<small>Shield endemic</small>	
<i>Basileuterus bivittatus</i> (Lafresnaye & d'Orbigny, 1837) Two-banded Warbler	VA BO RO-BA GU
<i>Basileuterus culicivorus</i> (Deppe, 1830) Golden-crowned Warbler	VA BO RO-BA GU
<i>Basileuterus flaveolus</i> (Baird, S. F., 1865) Flavescent Warbler	GU
<i>Phaeothlypis rivularis</i> (Wied-Neuwied, 1821) Riverbank Warbler	VA BO RO-BA PA-AP GU SU FG
<b>Family: Incertae Sedis</b> —Placement uncertain	
<i>Granatellus pelzelni</i> Sclater, 1865 Rose-breasted Chat	VA BO RO-BA PA-AP GU SU FG
<b>Family: Icteridae</b> —New World Blackbirds	
<i>Dolichonyx oryzivorus</i> (Linnaeus, 1758) Bobolink	VA BO RO-BA GU SU FG
<i>Chrysomus ruficapillus</i> Vieillot 1819 Chestnut-capped Blackbird	PA-AP FG
<i>Chrysomus icterocephalus</i> (Linnaeus, 1766) Yellow-hooded Blackbird	VA BO RO-BA PA-AP GU SU FG
<i>Chrysomus cyanopus</i> Vieillot, 1819 Unicolored Blackbird	PA-AP
<i>Sturnella magna</i> (Linnaeus, 1758) Eastern Meadowlark	VA BO RO-BA PA-AP GU SU FG
<i>Sturnella militaris</i> (Linnaeus, 1758) Red-breasted Blackbird	VA BO RO-BA PA-AP GU SU FG
<i>Lamprosar tanagrinus</i> (Spix, 1824) Velvet-fronted Grackle	VA BO RO-BA GU
<i>Macroagelaius imthurni</i> (Sclater, 1881) Golden-tufted Grackle	VA BO RO-BA GU
<small>Shield endemic</small>	

<i>Quiscalus lugubris</i> Swainson, 1838 Carib Grackle	BO	PA-AP	GU	SU	FG
<i>Molothrus bonariensis</i> (J. F. Gmelin, 1789) Shiny Cowbird	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Molothrus oryzivorus</i> (J. F. Gmelin, 1788) Giant Cowbird	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Icterus cayanensis</i> (Linnaeus, 1766) Epaulet Oriole	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Icterus icterus</i> (Linnaeus, 1766) Troupial	BO	RO-BA	PA-AP	GU	
<i>Icterus nigrogularis</i> (Hahn, 1819) Yellow Oriole	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Gymnomystax mexicanus</i> (Linnaeus, 1766) Oriole Blackbird	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Cacicus solitarius</i> (Vieillot, 1816) Solitary Black Caci que			PA-AP		
<i>Cacicus cela</i> (Linnaeus, 1758) Yellow-rumped Caci que	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Cacicus haemorrhous</i> (Linnaeus, 1766) Red-rumped Caci que	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Psarocolius decumanus</i> (Pallas, 1769) Crested Oropendola	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Psarocolius viridis</i> (Muller, 1776) Green Oropendola	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Psarocolius bifasciatus</i> (Lafresnaye & d'Orbigny, 1838) Olive Oropendola	VA	BO RO-BA	PA-AP		
<b>Family: Fringillidae</b> —Cardueline Finches					
<i>Carduelis magellanica</i> (Vieillot, 1805) Hooded Siskin	BO	RO-BA		GU	
<i>Carduelis cucullata</i> Swainson, 1820 Red Siskin				GU	
<i>Euphonia cyanocephala</i> (Vieillot, 1818) Golden-rumped Euphonia	BO			GU?	SU FG
<i>Euphonia violacea</i> (Linnaeus, 1758) Violaceous Euphonia	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Euphonia xanthogaster</i> Sundevall, 1834 Orange-bellied Euphonia	VA	BO RO-BA		GU	
<i>Euphonia minuta</i> Cabanis, 1849 White-vented Euphonia	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Euphonia trinitatis</i> Strickland, 1851 Trinidad Euphonia	VA	BO			
<i>Euphonia chlorotica</i> (Linnaeus, 1766) Purple-throated Euphonia	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Euphonia finschi</i> Sclater & Salvin, 1877 Finsch's Euphonia <small>Shield endemic</small>	BO	RO-BA		GU	SU FG
<i>Euphonia rufiventris</i> (Vieillot, 1819) Rufous-bellied Euphonia	VA	BO RO-BA			
<i>Euphonia cayennensis</i> (J. F. Gmelin, 1789) Golden-sided Euphonia <small>Shield endemic</small>	BO	RO-BA	PA-AP	GU	SU FG
<i>Euphonia plumbea</i> Du Bus de Gisignies, 1855 Plumbeous Euphonia	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Euphonia chrysopasta</i> Sclater & Salvin, 1869 Golden-bellied Euphonia	VA	BO RO-BA	PA-AP	GU	SU FG
<i>Chlorophonia cyanea</i> (Thunberg, 1822) Blue-naped Chlorophonia	VA	BO RO-BA		GU	



*Pithecia pithecia*

# MAMMALS

BURTON K. LIM, MARK D. ENGSTROM, AND JOSÉ OCHOA G.

## Introduction

The Guiana Shield as defined by Hollowell et al. (2001) includes the southern Venezuelan states of Amazonas, Bolívar, and Delta Amacuro and all of Guyana, Surinam, and French Guiana. This region, however, is defined more broadly in a geological context to include this core area and parts of Brazil north of the Amazon River (states of Amapá, Pará, Roraima, and Amazonas) and eastern Colombia (departments of Vichada, Guainía, and Vaupés), with the western limit reaching the Serranía Chiribiquete (Huber 1994; Gibbs & Barron 1993). In terms of mammalian biogeography, the Guiana Shield is considered by some authors as a subregion of Amazonia located east of the Río Negro, south of the Orinoco River, and north of the Amazon River (e.g., Wallace 1854, Voss and Emmons 1996). For the purpose of this study, we restrict our mammal inventory to the area of the Guiana Shield within the aforementioned three states in southern Venezuela, Guyana, Surinam, and French Guiana. The areas of northern Brazil and eastern Colombia are relatively poorly known in terms of its flora and fauna, but we hope this paper will stimulate future research on the mammal communities from this region so that a comprehensive revised checklist for the entire region can be compiled in the future.

Much has changed concerning species concepts and distributions since Eisenberg (1989) started his ambitious series on the mammals of the Neotropics, beginning with northern South America. The only other synthesis beyond political boundaries was the influential work by Tate (1939), who focused on the highlands of southern Venezuela, western Guyana, and northern Brazil. Our study is the first attempt to summarize and standardize the current taxonomy of the mammals of the Guiana Shield, and presents coarse-level distributions of the species recorded in the six political units of Figure 7. The checklist is based on the most recent systematic revisions, which may differ from the concepts of some other mammalogists. It will serve, however, as a starting point for our understanding of species diversity and boundaries in the Neotropics.

The impetus for this review paper was a request from the Biological Diversity of the Guiana Shield Program at the Smithsonian Institution to make available a checklist of mammals from the Guiana Shield on their internet site <<http://www.mnh.si.edu/biodiversity/bdg/>>. Further incentive was provided by our participation in the mammal working group of a priority setting workshop on conservation in the

Guiana Shield (Lim & Engstrom 2003). The region has been designated a tropical wilderness area by Conservation International because it incorporates large tracts of pristine rainforest crucial to global climate regulation, conservation of biodiversity, and preservation of indigenous lifestyles.

The checklist is derived in part from the summary of bats of the Guiana Shield by Lim and Engstrom (2001), in addition to the results of inventories conducted by J. Ochoa G. and other researchers in southern Venezuela. The bat list incorporates many of the recent taxonomic proposals of Simmons and Voss (1998). Nonvolant mammals are based on our work in Guyana (Lim and Engstrom submitted) and Venezuela (Ochoa et al. submitted), with the systematic updates of Voss et al. (2001). This in turn is complemented with the information provided by publications on the mammals of the Venezuelan Guayana Region (Handley 1976, Ochoa et al. 1993, Linares 1998, Linares & Rivas 2004, Ochoa et al. submitted) and Surinam (Husson 1978). Taxonomic and distributional information can also be found in the most recent literature (e.g., Voss & Emmons 1996), in addition to the ongoing studies by Lew (2001) in Venezuela, H. H. Genoways in Surinam, A. Brosset, P. Charles-Dominique and F. Catzeflis in French Guiana, and other colleagues.

## Historical Perspective

This checklist would not be possible without the critical mass of data compiled by past and present researchers. Taxonomic and distributional information related to the mammals of the Guiana Shield is built upon data accumulated over the years and presented in many publications. This region had an early and important role in the classification of Neotropical mammals. In the first half-century after the establishment of the binomial nomenclature system of Linnaeus, 39 of the 107 species of mammals with type localities in South America were described from Surinam and French Guiana (Baker 1991). However, it was not until the early 1840s that perhaps the first comprehensive collection of mammals from the Guiana Shield was deposited in the Berlin Natural History Museum by Robert and Richard Schomburgk after they surveyed the colonial boundary of British Guiana (now Guyana) in relation to Venezuela and Brazil (Hershkovitz 1987). Today, the Venezuelan Guayana has one of the more established resident research infrastructures in the region (Pine 1982).

The first compilation of the mammalian fauna for the Venezuelan Guayana region was provided in the

annotated species list that resulted from new collections made during the Smithsonian Venezuelan Project (Handley 1976). Later inventory work in Canaima National Park updated the species known from this region (Ochoa et al. 1993). A recent monographic work on the mammals of Venezuela also gives an account of the area south of the Orinoco River (Linares 1998); however, systematic interpretations especially for bats and rodents have changed since that publication, with relevant differences cited herein. As a member of the former Tropical Research Station at Kartabo established by the New York Zoological Society, Beebe (1919) recorded 119 species of mammals from Guyana. However, it was almost a century later that a revised list almost doubled the known species diversity in Guyana (Engstrom & Lim 2002). The only summary of the mammals from Surinam was the monographic work of Husson (1978), with bats largely based on a previous publication (Husson 1962). Knowledge of the Surinamese fauna was greatly enhanced by the research program established by the Carnegie Museum of Natural History, 1977–1981, resulting in 34 new species added to that inventory of mammals (Genoways & Williams 1979, 1980; Williams and Genoways 1980a, 1980b; Genoways et al. 1981; Williams et al. 1983). However, until recently (Lim et al. 2003) there had been no additional publications resulting from this project in Surinam, and a comprehensive review is needed in light of recent systematic changes and additions to the country's fauna (Lim et al. in press). Currently, the mammalian diversity and taxonomy in French Guiana is the best documented in the region with the recent publications of the companion volumes on a 1991–1994 study at Paracou (Simmons & Voss 1998, Voss et al. 2001). Other important references that reviewed the bats of French Guiana are Brosset and Charles-Dominique (1990) and Charles-Dominique et al. (2001).

There has not been a comparable summary for the mammals of Guianan Brazil east of the Negro and north of the Amazon Rivers. Three general sites have been surveyed, but an integrated study to verify and standardize the taxonomy from these areas and other miscellaneous localities has not been done. At the Biological Dynamics of Forest Fragments Project 80 km north of Manaus in Amazonas state, 125 species of mammals were documented, including 72 bats (Sampaio et al. 2003) and 53 non-volant mammals, as summarized in Voss and Emmons (1996). An ecological survey at Ilha de Maracá in northern Roraima state reported 93 species of mammals including 49 bats, 5 primates, 17 small non-volant mammals, and 22 large mammals (Barnett & da Cunha 1998, Nunes et al. 1998, Robinson 1998). A more recent medium to large-sized mammal survey was conducted at Xixuá Nature Reserve in Roraima state and docu-

Table 11—Number of mammal species by order.

Chiroptera	148
Rodentia	58
Didelphimorphia	22
Carnivora	17
Primates	13
Xenarthra	12
Artiodactyla	5
Sirenia	2
Lagomorpha	2
Cetacea	2
Perissodactyla	1

mented 42 species (Trolle 2003). Other collection sites not fully documented in Guianan Brazil include the vicinity of Faro in Amazonas, Cachoeira in Pará, and Serra do Navio in Amapá (Voss et al. 2001).

### Taxonomic Composition

There are currently 282 species of indigenous non-marine mammals recorded from the Guiana Shield study area. Just over half (148) of the diversity is represented by bats. Rodents are the next most speciose group, comprising 21% (58) of the species. Each of the remaining orders account for less than 8% of the mammalian diversity. The numbers of species in each order are summarized in Table 11 and the number of species in each family in Table 12.

From the previous list of bats published by Lim and Engstrom (2001), the following changes are noted: the name *Micronycteris homezi* is used as a junior synonym of *M. minuta* (Ochoa & Sánchez in press); separation of *Artibeus bogotensis* from *A. glaucus* (Lim et al. in press); *Pygoderma bilabiatum* is an erroneous record from Surinam (Voss & Emmons 1996); previous records of *Vampyressa melissa* and *Platyrrhinus lineatus* are considered misidentifications (Charles-Dominique et al. 2001, Voss et al. 2001, P. Velazco pers. comm.); *Vampyressa pusilla* has been removed and *Myotis albescens* has been added to the species list for French Guiana (Charles-Dominique et al. 2001); specimens previously named as *V. pusilla* in the study area are considered *V. thuyone* by Lim et al. (2003); the presence of *Artibeus jamaicensis* in the Venezuelan Guayana Region is recognized (Ochoa 2000, Ochoa et al. 1993); *Nyctinomops gracilis* is recorded as a valid taxon according to Handley (1976) and Molinari (pers. comm.).

Engstrom and Lim (2002) made several changes to the mammal species list for Guyana, including the removal of *Micronycteris homezi*, *Cynomops greenhalli*, *Oecomys paricola*, *O. concolor*, *Dasyprocta fuliginosa*, and *Proechimys warreni*. There are six more additions for Guyana from the recent checklist for Iwokrama, Guyana (Lim & Engstrom 2005), including *Monodelphis reigi*, *Euphractus sexcinctus* (Plate 6),

Table 12—Number of mammal species by family.

Family	Species	Endemics
Phyllostomidae	75	3
Muridae	32	10
Molossidae	27	1
Didelphidae	22	5
Vespertilionidae	18	1
Emballonuridae	16	
Cebidae	12	2
Echimyidae	11	2
Dasypodidae	6	
Felidae	6	
Dasyproctidae	5	1
Mormoopidae	5	
Mustelidae	5	
Sciuridae	5	1
Procyonidae	4	
Cervidae	3	
Myrmecophagidae	3	
Thyropteridae	3	
Bradypodidae	2	
Canidae	2	
Erethizontidae	2	1
Leporidae	2	
Noctilionidae	2	
Tayassuidae	2	
Trichechidae	2	
Callitrichidae	1	
Caviidae	1	
Cuniculidae	1	
Delphinidae	1	
Furipteridae	1	
Hydrochaeridae	1	
Megalonychidae	1	
Natalidae	1	
Platanistidae	1	
Tapiridae	1	

*Thyroptera* sp. nov., *Mustela frenata*, *Akodon urichi*, and *Rhipidomys wetzeli*. Other taxonomic considerations regarding previously published regional species lists are summarized in the account of species. For relatively remote and unexplored regions such as the Guiana Shield, biodiversity is usually underestimated, and species lists are in a constant state of change and will almost certainly expand as the understanding of systematics and distributions improves.

There are some species excluded from this checklist that occur just north of the Amazon River of Brazil in seasonally inundated forest near the margins of the greater Guiana Shield region, including the bushy-tailed opossum (*Glironia venusta*), Brazilian bare-faced tamarin (*Saguinus bicolor*), giant tree rat (*Makalata grandis*), and plain brush-tailed rat (*Isothrix pagurus*) (Emmons & Feer 1997).

#### Geographic Distribution

Among the 282 species of mammals known from the Guiana Shield, 257 (91%) have been recorded in Venezuela (Amazonas with 208, Bolívar with 243,

and Delta Amacuro with 145), 222 (79%) in Guyana, 192 (68%) in Surinam, and 183 (65%) in French Guiana (Table 4). Of the political units within Venezuela, Delta Amacuro has 79% of the number of mammal species recorded in French Guiana, which has the second lowest area and mammalian diversity. In addition to its relatively small size (less than half the area of French Guiana), Delta Amacuro is composed of predominately semi-inundated ecosystems (mangroves, marsh forests, palm swamps, and grasslands), which are marginal habitats for many mammal species. Delta Amacuro has been sampled less extensively than the other states of the Venezuelan Guayana region (Linares & Rivas, 2004; Ochoa et al., submitted).

Thirty-seven percent (104) of the species recorded in the region are considered widely distributed, because they are found in all six political units. These include 7 species of opossums, 7 xenarthrans, 56 bats, 3 primates, 12 carnivores, 1 tapir, 5 artiodactyls, and 13 rodents. Within the rodents, 39% (5) of the widely distributed species are medium to large sized mammals. Only 6 of the 31 species of small-sized murid rats and 2 of the 11 species of echimyid (spiny) rats are found in all 6 political units. In contrast, all of large-sized artiodactyls and the tapir are widely distributed. Two of the widely distributed species of mammals are also Guiana Shield endemics, the black-spined porcupine (*Sphiggurus melanura*) and the white-faced saki (*Pithecia pithecia*), although the latter has not been recorded in highland areas.

In terms of endemism, there are 31 species (11%) of mammals confined to this region. Of these, six have been collected only in highlands, located primarily in Venezuela with smaller sectors in adjacent Guyana and Brazil, in addition to an outlying peak, Tafelberg, in central Surinam: *Marmosa tyleriana*, *Monodelphis reigi*, *Platyrrhinus aurarius*, *Podoxymys roraimae*, *Rhipidomys macconnelli*, and *Rhipidomys wetzeli*. The distribution of the Roraima akodont (*Podoxymys roraimae*) is confined to the top of Mount Roraima (2,772 m), where the borders of Brazil, Guyana, and Venezuela converge (Pérez-Zapata et al. 1992). Reig's short-tailed opossum was recently described from a single specimen from Sierra de Lema in Venezuela (Lew & Pérez-Hernández 2004) and collected at Mount Ayanganna in Guyana (Lim & Engstrom unpublished data). The mouse opossum *Marmosa tyleriana* has been recorded only on three Venezuelan tepuis: Duida, Auyantepui and Jaua (Ochoa 1985). The climbing rat *Rhipidomys wetzeli* is known only from the tepuis in three Venezuelan national parks: Canaima, Duida-Marahuaca, and Neblina (Gardner 1990, Linares 1998). It also was recently found on the slopes of Mount Roraima in Guyana (Lim & Engstrom unpublished data). Although not abundant, the golden white-lined bat (*Pla-*

*tyrrhinus aurarius*) occurs across most of the Guiana highlands from Tafelberg to Neblina (Lim & Engstrom 2000). *Rhipidomys macconnelli* is presently known from Venezuelan Guayana (Linares 1998). We do not consider *Didelphis imperfecta* and *Proechimys hoplomyoides* highland endemics as reported by Tate (1939) and Gardner (1990), although their distributional patterns are restricted to the Guiana Shield. The former species has been found in lowland rainforests as a taxon sympatric with *D. marsupialis* (Ochoa 2000, Lim & Engstrom unpublished data), and specimens listed as *D. albiventris* from Surinam (Genoways et al. 1981) and French Guiana (Catzefflis et al. 1997) are referable to *D. imperfecta*. The spiny rat *P. hoplomyoides* has been found in lowlands of Amazonas and Bolívar state (Ochoa et al. 1988, unpublished data).

The lowland area of the Guiana Shield has 15 endemic species, of which five have restricted distributions. The opossum *Philander* sp. is known only in the Orinoco Delta; Fernandez's sword-nosed bat (*Lonchorhina fernandesi*) is known only in a small area from northern Amazonas State and western Bolívar State; Barnes' mastiff bat (*Molossus barnesi*) has been recorded only in French Guiana; the fiery squirrel (*Sciurus flammifer*) is restricted to northern Bolívar State; the small murids *Oecomys* sp.1, *Oecomys* sp.2 and *Oligoryzomys* sp., in addition to *Artibeus* sp., are represented by specimens confined to small areas in lowlands of the Caura watershed (Bolívar State); the Oyapock fish-eating rat (*Neusticomys oyapocki*) is known from French Guiana and neighboring Amapá State in Brazil (Nunes, 2002); and the Orinoco agouti (*Dasyprocta guamara*) is found only in Delta Amacuro state. In addition to these taxa, the short-tailed mouse opossum *Monodelphis* sp. (undescribed), although not restricted to the Guiana Shield, is considered endemic in a relatively small area of lowlands in Venezuela (Central Llanos to northern Bolívar state). The other lowland endemics of the Guiana Shield are more widely distributed and include *Lasiurus atratus*, *Ateles paniscus*, *Pithecia pithecia*, *Neacomys dubosti*, and *Isothrix sinnamariensis*. Nine species are endemic to, but found throughout, the Guiana Shield: *Didelphis imperfecta*, *Monodelphis brevicaudata*, *Lophostoma schulzi*, *Neacomys guianae*, *N. paracou*, *Oecomys auyantepui*, *O. rex*, *O. rutilus*, and *Sphiggurus melanura*. One endemic species (*Proechimys hoplomyoides*) is restricted to lowland and highland regions of the western Guiana Shield. Voss et al. (2001) defined a slightly different "Guianan center of mammalian endemism" with 17 species that had similar distributions in a more restricted area east of the Río Caroní and Rio Branco, although some also occurred just south of the Amazon River.

There are six species of bats endemic to the Guiana

Table 13—Distribution codes for mammals.

VA	Venezuela—Amazonas
BO	Venezuela—Bolívar
DA	Venezuela—Delta Amacuro
GU	Guyana
SU	Surinam
FG	French Guiana

Shield (*Artibeus* sp., *Lonchorhina fernandesi*, *Lophostoma schulzi*, *Lasiurus atratus*, *Molossus barnesi*, and *Platyrrhinus aurarius*), five endemic marsupials (*Didelphis imperfecta*, *Marmosa tyleriana*, *Monodelphis brevicaudata*, *Monodelphis reigi*, and *Philander* sp.) and two primates (*Ateles paniscus* and *Pithecia pithecia*). The majority of the other endemic species are rodents (18), which represent slightly more than one-quarter of the diversity within that order.

Except for the tucuxi (*Sotalia fluviatilis*) and the Amazon River dolphin (*Inia geoffrensis*), both recorded for inland aquatic ecosystems, we do not include cetaceans in the checklist due to their primary association with marine environments outside the region. However, there are reports of eight species of marine cetaceans close to the northeastern boundary of the Guiana Shield (*Eubalaena australis*, *Balaenoptera acutorostrata*, *B. borealis*, *B. physalus*, *Delphinus delphis*, *Globicephala macrorhynchus*, *Pseudorca crassidens*, and *Physeter catodon*). Aside from domesticated animals, there are four introduced feral species of mammals in the Guiana Shield, which are also excluded from our checklist but are discussed briefly here. The mongoose (*Herpestes javanicus*) was intentionally introduced by humans to control rat populations in agricultural fields (Husson 1978), and appears to be confined to coastal areas in Surinam and Guyana. Old World mice and rats (*Mus musculus*, *Rattus norvegicus*, and *R. rattus*) were unintentionally introduced in the region and thrive in association with human habitation along the coastal strip. Of these invasive species, only *R. rattus* seems to have penetrated inland, with records in southern Venezuela (Handley 1976) and interior French Guiana (F. Catzefflis pers. comm.).

#### Using the Checklist

English common names are given to the rank of family or subfamily. For most mammals, particularly the speciose and secretive bats and small rodents, there are no widely used standardized names as there are for birds (however see Wilson & Cole 2000). Distributional abbreviations used are given in Table 13 and illustrated in Figure 7. Caution should be exercised when interpreting biogeographic implications of this checklist. Although it is for the "Guiana Shield", the delineations are political and defined by country or



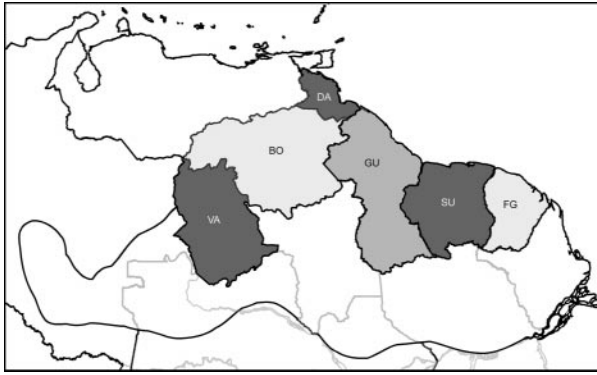


Figure 7. Map of the distributional units used in the mammal checklist, using the abbreviations given in Table 13.

state boundaries. Based on this preliminary checklist, researchers are encouraged to investigate the regional differences and local composition of the mammalian fauna. For instance, some species more typical of western Amazonia than the Guiana Shield are found only in Amazonas state of Venezuela (Voss et al. 2001). Additional distributional and taxonomic comments are listed under the species name.

#### Nomenclatural Considerations

The higher-level classification of the species checklist is organized following primarily Wilson and Reeder (1993), with some changes proposed in the recent taxonomic literature. We have not tried to verify all older literature references, but we hope that researchers will be stimulated to revise the list with currently accepted taxonomy. Some groups, such as the common free-tailed bats *Molossus* and the arboreal rodents *Oecomys* and *Rhipidomys*, are in need of systematic revision and their taxonomy is tentative.

Similarly, the subfamily ranks within phyllostomid bats are in flux because recent molecular data (Baker et al. 2000, 2003) has contradicted many morphological groupings (Wetterer et al. 2000). We retain the use of the more traditional taxonomy until a consensus is reached. The species-level classification also primarily follows Wilson and Reeder (1993), with the addition of some recent taxonomic changes including the distinction of *Didelphis imperfecta* from *D. albiventris* (Ventura et al. 2002); the elevation of *Marmosops neblina* to species status (Mustringi & Patton 1997); the systematic revisions of *Micronycteris* (Wetterer et al. 2000) and *Tonatia* (Lee et al. 2002); the consideration of *Micronycteris homezi* as a synonym of *M. minuta* (Ochoa & Sánchez in press); the distinction of *Artibeus bogotensis* from *A. glaucus* (Lim et al. in press); the recognition of *Artibeus planirostris* as a species distinct from *A. jamaicensis* (Lim 1997, Lim et al. 2004); the retention of *Mesophylla* at the generic level (Lim et al. 2003); the assignation of the name *Vampyressa thylene* to those specimens

of *V. pusilla* previously recorded in the study area (Lim et al., 2003); the separation of *Cynomops* from *Molossops* (Peters et al. 2002); the removal of *Alouatta macconnelli* from *A. seniculus* (Groves 2001); the distinction of *Odocoileus cariacou* from *O. virginianus* (Molina & Molinari 1999); the systematic revision of the *Oryzomys "capito"* group (Musser et al. 1998); the generic status for *Sphiggurus melanura* as opposed to *Coendou* (Bonvicino et al. 2002); and the use of *Mesomys hispidus* for the spiny tree rat (Orlando et al. 2002). The thorough taxonomic reviews based on work in French Guiana for bats (Simmons & Voss 1998) and non-volant mammals (Voss et al. 2001) were invaluable references, as was a recent summary of non-volant small mammals from Rio Juruá in Amazonas Brazil for delineating species boundaries (Patton et al. 2000).

#### Acknowledgments

We thank Don Wilson, Alfred Gardner, Robert Voss, Francois Catzeflis, Javier Sánchez, and the late Charles Handley for their generosity in sharing their knowledge of Guiana Shield mammals. Jesus Molinari and Daniel Lew provided us with unpublished data on the bats from Amazonas and Bolívar states. Mammal research of José Ochoa G. in Venezuela is supported by the Wildlife Conservation Society, the Venezuelan Ministry of Science and Technology, and Bat Conservation International. Since 1990, fieldwork in Guyana conducted by Mark Engstrom and Burton Lim has received generous financial support from the Royal Ontario Museum (ROM) Foundation, Smithsonian Institution's Biological Diversity of the Guiana Shield Program, the Iwokrama International Centre, Conservation International, and the National Geographic Society. This chapter is also contribution number 261 from the Centre for Biodiversity and Conservation Biology of the Royal Ontario Museum.

#### Literature on the Mammals of the Guiana Shield

- Baker, R. H. 1991. The classification of Neotropical mammals: a historical résumé. Pp. 7–32 in: M.A. Mares and D.J. Schmidly (eds.), *Latin American Mammalogy: History, Biodiversity, and Conservation*. University of Oklahoma Press, Norman, Oklahoma, 468 pp.
- Baker, R. J., S. R. Hooper, C. A. Porter, & R. A. Van Den Bussche. 2003. Diversification among New World leaf-nosed bats: an evolutionary hypothesis and classification inferred from digenomic congruence of DNA sequence. *Occasional Papers Museum of Texas Tech University* 230: 1–32.
- Baker, R. J., C. A. Porter, J. C. Patton, & R. A. Van Den Bussche. 2000. Systematics of bats of the family Phyllostomidae based on RAG2 DNA sequences. *Occasional Papers, The Museum, Texas Tech University* 202: 1–16.
- Barnett, A. A., & A. C. da Cunha. 1998. Small mammals of the Ilha de Maracá. Pp. 189–210 in: W. Milliken and J.A. Ratter (eds.), *Maracá: the Biodiversity and Environment of an Amazonian Rainforest*. John Wiley and Sons, Chichester, UK.
- Beebe, W. 1919. Higher vertebrates of British Guiana with special

- reference to the fauna of Bartica District: No. 7. List of amphibia, reptilia and mammalia. *Zoologica* 2: 205–227.
- Boher-Benti, S., & G. A. Cordero. 2000. Distribution of brown capuchin monkeys (*cebus apella*) in Venezuela: A piece of the puzzle. *Neotropical Primates* 8: 152–153.
- Bonvicino, C. R., V. Penna-Firme, & E. Braggio. 2002. Molecular and Karyologic evidence of the taxonomic status of *Coendou* and *Sphiggurus* (Rodentia: Hystricognathi). *Journal of Mammalogy* 83: 1071–1076.
- Brosset, A., & P. Charles-Dominique. 1990. The bats from French Guiana: a taxonomic, faunistic and ecological approach. *Mammalia* 54: 509–560.
- Catzefflis, F., C. Richard-Hansen, C. Fournier-Chambrillon, A. Lavergne, & J. Vié. 1997. Biométrie, reproduction et sympatrie chez *Didelphis marsupialis* et *D. albiventris* en Guyane française (Didelphidae: Marsupialia). *Mammalia* 61: 231–243.
- Charles-Dominique, P., A. Brosset, & S. Jouard. 2001. Les chauves-souris de Guyane. *Patrimoines Naturels* 49: 1–150.
- Eisenberg, J. F. 1989. *Mammals of the Neotropics: the Northern Neotropics. Vol. 1: Panama, Colombia, Venezuela, Guyana, Surinam, French Guiana*. The University of Chicago Press, Chicago. 449 pp.
- Emmons, L. H., & F. Feer. 1997. *Neotropical rainforest Mammals: a Field Guide, Second Edition*. The University of Chicago Press, Chicago, 307 pp.
- Engstrom, M. D., & B. K. Lim. 2002. Mamíferos de Guyana. Pp. 329–375 in: G. Ceballos and J.A. Simonetti (eds.), *Diversidad y Conservación de los Mamíferos Neotropicales*. CONABIO-UNAM, México, D.F., 582 pp.
- Gardner, A. L. 1990 [“1989”]. Two new mammals from southern Venezuela and comments on the affinities of the highland fauna of Cerro de la Neblina. Pp. 411–424 in: K.H. Redford and J.F. Eisenberg (eds.), *Advances in Neotropical Mammalogy*. Sandhill Crane Press, Gainesville, Florida.
- Genoways, H. H., & S. L. Williams. 1979. Records of bats (Mammalia: Chiroptera) from Suriname. *Annals of Carnegie Museum* 48: 323–335.
- Genoways, H. H., & S. L. Williams. 1980. Results of the Alcoa Foundation-Suriname expeditions. I. A new species of bat of the genus *Tonatia* (Mammalia: Phyllostomidae). *Annals of Carnegie Museum* 49: 203–211.
- Genoways, H. H., S. L. Williams, & J. A. Groen. 1981. Results of the Alcoa Foundation-Suriname expeditions. V. Noteworthy records of Surinamese mammals. *Annals of Carnegie Museum* 50: 319–332.
- Gibbs, A. K., & C. N. Barron. 1993. *The Geology of the Guiana Shield*. Oxford University Press, Oxford. 246 pp.
- Gregorin, R., E. Gonçalves, B. K. Lim, & M. D. Engstrom. (Submitted). A new species of disk-winged bat, genus *Thyroptera* (Chiroptera: Thyropteridae), and range extension for *T. discifera*. *Journal of Mammalogy*.
- Groves, C. 2001. *Primate Taxonomy*. Smithsonian Institution Press, Washington, DC, 350 pp.
- Handley, C. O., Jr. 1976. Mammals of the Smithsonian Venezuelan Project. *Brigham Young University Science Bulletin, Biological Series* 20: 1–91.
- Hershkovitz, P. 1987. A history of the recent Mammalogy of the Neotropical region from 1492 to 1850. Pp. 11–98 in: B.D. Patterson and R.M. Timm (eds.), *Studies in Neotropical Mammalogy: Essays in Honor of Philip Hershkovitz*. Fieldiana: Zoology, New Series, 39.
- Hollowell, T., P. Berry, V. Funk, & C. Kelloff. 2001. *Preliminary checklist of the plants of the Guiana Shield (Venezuela: Amazonas, Bolívar, Delta Amacuro; Guyana; Surinam; French Guiana)*. Volume 1: *Acanthaceae—Lythraceae*. Smithsonian Institution, Washington, DC. 129 pp.
- Huber, O. 1994. Recent advances in the phytogeography of the Guayana Region, South America. *Mémoires de la Société de Biogéographie* 4: 53–63.
- Husson, A. M. 1962. The bats of Suriname. *Zoologische Verhandlungen* 58: 1–282.
- Husson, A. M. 1978. The mammals of Surinam. *Zoologische Monographien van het Rijksmuseum van Natuurlijke Historie* 2: 1–569.
- Lee, T. E., Jr., S. R. Hooper, & R. A. Van Den Bussche. 2002. Molecular phylogenetics and taxonomic revision of the genus *Tonatia* (Chiroptera: Phyllostomidae). *Journal of Mammalogy* 83: 49–57.
- Lew, D. 2001. Componente Mastozoológica. Pp. 201–232 in *Caracterización de la Diversidad Biológica de la Cuenca del Río Cucurital, Afluente del Río Caroní, Estado Bolívar, Venezuela* (CONICIT Proyecto 98003384). Unpublished technical report. MHNLS-FIBV-USB-ULA. Caracas, Venezuela.
- Lew, D., & R. Pérez-Hernández. 2004 [“2003”]. Una nueva especie del género *Monodelphis* (Didelphimorpha: Didelphidae) de la sierra de Lema, Venezuela. *Memoria de la Fundación la Salle de Ciencias Naturales* 159–160: 6–25.
- Lim, B. K. 1997. Morphometric differentiation and species status of the allopatric fruit-eating bats *Artibeus jamaicensis* and *A. planirostris* in Venezuela. *Studies on Neotropical Fauna and Environments* 32: 65–71.
- Lim, B. K., & M. D. Engstrom. 2000. Preliminary survey of bats from the Upper Mazaruni of Guyana. *Chiroptera Neotropical* 6: 119–123.
- Lim, B. K., & M. D. Engstrom. 2001. Species diversity of bats (Mammalia: Chiroptera) in Iwokrama Forest, Guyana, and the Guianan subregion: implications for conservation. *Biodiversity and Conservation* 10: 613–657.
- Lim, B. K., & M. D. Engstrom. 2003. Mammals. Pp. 14–15 in: O. Huber and M. N. Foster (eds.), *Conservation Priorities for the Guayana Shield: 2002 Consensus*. Conservation International, Washington, DC., 99 pp.
- Lim, B. K., & M. D. Engstrom. 2005. Mammals of Iwokrama Forest. *Proceedings of the Academy of Natural Sciences of Philadelphia* 154: 71–108.
- Lim, B. K., & M. D. Engstrom. (Submitted). Biodiversity and conservation of mammals from Guyana. In: V.A. Funk, C.L. Kelloff, and P. Da Silva (eds.), *Proceeding of the Biodiversity of Guyana: a Global Perspective for the Future*. Smithsonian Institution Press, Washington, DC.
- Lim, B. K., M. D. Engstrom, H. H. Genoways, F. M. Catzefflis, K. A. Fitzgerald, S. L. Peters, M. Djoseretro, S. Brandon, & S. Mitro. (In press). Results of the Alcoa Foundation-Suriname expeditions. XIV. Mammals of Brownsberg Nature Park, Suriname. *Annals of Carnegie Museum*.
- Lim, B. K., M. D. Engstrom, T. E. Lee, Jr., J. C. Patton, & J. W. Bickham. 2004. Molecular differentiation of large species of fruit-eating bats (*Artibeus*) and phylogenetic relationships based on the cytochrome b gene. *Acta Chiropterologica* 6: 1–12.
- Lim, B. K., M. D. Engstrom, J. C. Patton, & J. W. Bickham. (In press). Systematic relationships of the Guianan brush-tailed rat (*Isothrix sinnamariensis*) and its first occurrence in Guyana. *Mammalia* 69.
- Lim, B. K., H. H. Genoways, & M. D. Engstrom. 2003. Results of the Alcoa Foundation-Suriname expeditions. XII. First record of the giant fruit-eating bat, *Artibeus amplus*, (Mammalia: Chiroptera) from Suriname with a review of the species. *Annals of Carnegie Museum* 72: 99–107.
- Lim, B. K., W. A. Pedro, & F. C. Passos. 2003. Differentiation and species status of the Neotropical yellow-eared bats *Vampyressa pusilla* and *V. thyone* (Phyllostomidae) with a molecular phylogeny and review of the genus. *Acta Chiropterologica* 5: 15–29.

- Linares, O. J., & B. Rivas A. 2004 [“2003”]. Mamíferos del sistema deltaico (delta del Orinoco-golfo de Paria), Venezuela. *Memoria de la Fundación la Salle de Ciencias Naturales* 159–160: 185–262.
- Linares, O. J. 1998. *Mamíferos de Venezuela*. Sociedad Conservacionista Audubon de Venezuela, Caracas, 691 pp.
- Molina, M., & J. Molinari. 1999. Taxonomy of Venezuelan white-tailed deer (*Odocoileus*, Cervidae, Mammalia), based on cranial and mandibular traits. *Canadian Journal of Zoology* 77: 632–645.
- Musser, G. G., M. D. Carleton, E. M. Brothers, & A. L. Gardner. 1998. Systematic studies of oryzomine rodents (Muridae, Sigmodontinae): diagnoses and distributions of species formerly assigned to *Oryzomys* “capito”. *Bulletin of the American Museum of Natural History* 266: 1–376.
- Mustrangi, M. A., & J. L. Patton. 1997. Phylogeography and systematics of the slender mouse opossum *Marmosops* (Marsupialia, Didelphidae). *University of California Publications, Zoology* 39: 1–86.
- Nunes, A. 2002. First record of *Neusticomys oyapocki* (Muridae: Sigmodontinae) from the Brazilian Amazon. *Mammalia* 66: 445–447.
- Nunes, A. P., J. M. Ayres, E. S. Martins, & J. de Sousa e Silva. 1998. Primates of the Ilha de Maracá. Pp. 143–150 in: W. Milliken and J.A. Ratter (eds.), *Maracá: the Biodiversity and Environment of an Amazonian Rainforest*. John Wiley and Sons, Chichester, UK.
- Ochoa G., J. 1985. Nueva localidad para *Marmosa tyleriana* (Marsupialia: Didelphidae) en Venezuela. *Doñana, Acta Vertebrata* 12: 183–185.
- Ochoa G., J. 2000. Efectos de la extracción de maderas sobre la diversidad de mamíferos pequeños en bosques de tierras bajas de la Guayana Venezolana. *Biotropica* 32: 146–164.
- Ochoa G., J. & J. Sánchez H. (In press). Taxonomic status of *Micronycteris homezi* (Chiroptera: Phyllostomidae). *Mammalia*.
- Ochoa G., J., M. Bevilacqua, F. García, & J. Ojasti. (Submitted). Evaluación ecológica rápida de las comunidades de mamíferos en cinco localidades del delta del Orinoco, Venezuela. *Interciencia*.
- Ochoa G., J., C. Molina, & S. Giner. 1993. Inventario y estudio comunitario de los mamíferos del Parque Nacional Canaima, con una lista de las especies registradas para la Guayana Venezolana. *Acta Científica Venezolana* 44: 244–261.
- Ochoa G., J., J. Sánchez H., M. Bevilacqua, & R. Ribero. 1988. Inventario de los mamíferos de la Reserva Forestal de Tipoporo y la Serranía de los Pijiguas, Venezuela. *Acta Científica Venezolana* 39: 269–280.
- Orlando, L., J.-F. Mauffrey, J. Cuisin, J. L. Patton, C. Hänni, & F. Catzefflis. 2002. Napoleon Bonaparte and the fate of an Amazonian rat: new data on the taxonomy of *Mesomys hispidus* (Rodentia: Echimyidae). *Molecular Phylogenetics and Evolution* 27: 113–120.
- Patton, J. L., M. N. F. da Silva, & J. R. Malcolm. 2000. Mammals of the Rio Juruá and the evolutionary and ecological diversification of Amazonia. *Bulletin of the American Museum of Natural History* 244: 1–306.
- Pérez-Zapata, A., D. Lew, M. Aguilera, & O. A. Reig. 1992. New data on the systematics and karyology of *Podoxymys roiraimae* (Rodentia, Cricetidae). *Zeitschrift für Säugetierkunde* 57: 216–224.
- Peters, S. L., B. K. Lim, & M. D. Engstrom. 2002. Systematics of dog-faced bats (*Cynomops*) based on molecular and morphometric data. *Journal of Mammalogy* 83: 1097–1110.
- Pine, R. H. 1982. Current status of South American Mammalogy. Pp. 27–37 in: M. A. Mares and H. H. Genoways (eds.), *Mammalian Biology in South America*. University of Pittsburgh, Pymatuning Laboratory of Ecology, Special Publication Series, Volume 6, Linesville, Pennsylvania, pp. 539 pp.
- Robinson, F. 1998. The bats of the Ilha de Maracá. Pp. 165–187 in: W. Milliken and J. A. Ratter (eds.), *Maracá: the Biodiversity and Environment of an Amazonian Rainforest* John Wiley and Sons, Chichester, UK.
- Sampaio, E. M., E. K. V. Kalko, E. Bernard, B. Rodríguez-Herrera, & C. O. Handley, Jr. 2003. A biodiversity assessment of bats (Chiroptera) in a tropical lowland rainforest of Central Amazonia, including methodological and conservation considerations. *Studies on Neotropical Fauna and Environment* 38: 17–31.
- Simmons, N. B., & R. S. Voss. 1998. The mammals of Paracou, French Guiana: a Neotropical lowland rainforest fauna, Part 1. Bats. *Bulletin of the American Museum of Natural History* 237: 1–219.
- Tate, G. G. 1939. Mammals of the Guiana region. *Bulletin of the American Museum of Natural History* 76: 151–229.
- Trolle, M. 2003. Mammal survey in the Rio Jauparé region, Rio Negro basin, the Amazon, Brazil. *Mammalia* 67: 75–83.
- Ventura, J., R. Pérez-H., & M. J. López-Fuster. 1998. Morphometric assessment of the *Monodelphis breviceaudata* group (Didelphimorphia: Didelphidae) in Venezuela. *Journal of Mammalogy* 79: 104–117.
- Ventura, J., M. Salazar, R. Pérez-Hernández, & M. J. López-Fuster. 2002. Morphometrics of the genus *Didelphis* (Didelphimorphia: Didelphidae) in Venezuela. *Journal of Mammalogy* 83: 1087–1096.
- Voss, R. S., & L. H. Emmons. 1996. Mammalian diversity in Neotropical lowland rainforest: a preliminary assessment. *Bulletin of the American Museum of Natural History* 230: 1–115.
- Voss, R. S., D. P. Lunde, & N. B. Simmons. 2001. The mammals of Paracou, French Guiana: a Neotropical lowland rainforest fauna, Part 2. Nonvolant species. *Bulletin of the American Museum of Natural History* 263: 1–236.
- Wallace, A. R. 1854. On the monkeys of the Amazon. *Proceedings of the Zoological Society of London* 1852: 107–110.
- Wetterer, A. L., M. V. Rockman, & N. B. Simmons. 2000. Phylogeny of phyllostomid bats (Mammalia: Chiroptera): data from diverse morphological systems, sex chromosomes, and restriction sites. *Bulletin of the American Museum of Natural History* 248: 1–200.
- Wetzel, R. M. 1985. Taxonomy and distribution of armadillos, Dasypodidae. Pp. 23–48 in: G.G. Montgomery (ed.), *The Evolution and Ecology of Armadillos, Sloths, and Vermilinguas*. Smithsonian Institution Press, Washington, DC. 451 pp.
- Williams, S. L., & H. H. Genoways. 1980a. Results of the Alcoa Foundation-Suriname expeditions. II. Additional records of bats (Mammalia: Chiroptera) from Suriname. *Annals of Carnegie Museum* 49: 213–236.
- Williams, S. L., & H. H. Genoways. 1980b. Results of the Alcoa Foundation-Suriname expeditions. IV. A new species of bat of the genus *Molossops* (Mammalia: Molossidae). *Annals of Carnegie Museum* 49: 487–498.
- Williams, S. L., H. H. Genoways, & J. A. Groen. 1983. Results of the Alcoa Foundation-Suriname expeditions. VII. Records of mammals from central and southern Suriname. *Annals of Carnegie Museum* 52: 329–336.
- Wilson, D. E., & Cole, F. R. 2000. *Common Names of Mammals of the World*. Smithsonian Institution Press. Washington, DC and London. 204 pp.
- Wilson, D. E., & D. M. Reeder (eds.). 1993. *Mammal Species of the World: a Taxonomic and Geographic Reference* (Second Edition). Smithsonian Institution Press, Washington, DC and London. 1206 pp. Data also searchable online at: <<http://nmmhgoph.si.edu/msw/>>.

**Order: Didelphimorphia**—American marsupials**Family: Didelphidae**—Opossums

Subfamily: Caluromyinae—Woolly opossums

<i>Caluromys lanatus</i> (Olfers, 1818)	VA BO GU
<i>Caluromys philander</i> (Linnaeus, 1758)	VA BO DA GU SU FG
Subfamily: Didelphinae—Opossums	
<i>Chironectes minimus</i> (Zimmermann, 1780)	VA BO DA GU SU FG
<i>Didelphis imperfecta</i> Mondolfi & Pérez-Hernández, 1984 Endemic to the Guiana Shield; = <i>D. azarae</i> of Linares (1998)	VA BO GU SU FG
<i>Didelphis marsupialis</i> Linnaeus, 1758	VA BO DA GU SU FG
<i>Gracilinanus emiliae</i> (Thomas, 1909)	BO GU SU FG
<i>Hyladelphys kalinowskii</i> (Hershkovitz, 1992)	GU FG
<i>Lutreolina crassicaudata</i> (Desmarest, 1804)	BO DA GU SU
<i>Marmosa lepida</i> (Thomas, 1888)	GU SU FG
<i>Marmosa murina</i> (Linnaeus, 1758)	VA BO DA GU SU FG
<i>Marmosa tyleriana</i> Tate, 1931 Endemic to highlands of the Venezuelan Guayana	VA BO
<i>Marmosops neblina</i> Gardner 1990 (1989) Includes <i>M. impavidus</i> of Ochoa <i>et al.</i> (1993) and Linares (1998)	VA
<i>Marmosops parvidens</i> (Tate, 1931) VA records (Handley, 1976; Linares, 1998) = <i>M. pinheiroi</i> ?	VA BO GU SU FG
<i>Marmosops pinheiroi</i> (Pine, 1981) Surinam record: Lim <i>et al.</i> (in press)	BO GU SU FG
<i>Metachirus nudicaudatus</i> (E. Geoffroy, 1803)	VA BO DA GU SU FG
<i>Micoureus demerarae</i> (Thomas, 1905)	VA BO DA GU SU FG
<i>Monodelphis breviceaudata</i> (Erxleben, 1777) Endemic to Guiana Shield; includes <i>M. touan</i> of Linares (1998)	VA BO GU SU FG
<i>Monodelphis reigi</i> Lew & Pérez-Hernández, 2004 Endemic to the highlands of the Guiana Shield	BO GU
<i>Monodelphis</i> sp. Population considered <i>M. orinoci</i> Thomas, 1899 by Ventura <i>et al.</i> (1998), but is apparently an unnamed species	BO
<i>Philander andersoni</i> (Osgood, 1913)	VA BO
<i>Philander opossum</i> (Linnaeus, 1758)	VA BO DA GU SU FG
<i>Philander</i> sp. Lew & Pérez-Hernández, ined. Endemic to Delta Amacuro	DA

**Order: Xenarthra**—Xenarthrans**Family: Bradypodidae**—Three-toed sloths

<i>Bradypus tridactylus</i> Linnaeus, 1758	BO DA GU SU FG
<i>Bradypus variegatus</i> Schinz, 1825	VA BO

**Family: Megalonychidae**—Two-toed sloths

<i>Choloepus didactylus</i> (Linnaeus, 1758)	VA BO DA GU SU FG
--	-------------------

**Family: Dasypodidae**—Armadillos

<i>Cabassous unicinctus</i> (Linnaeus, 1758)	BO DA GU SU FG
<i>Dasypus kappleri</i> Krauss, 1862	VA BO DA GU SU FG
<i>Dasypus novemcinctus</i> Linnaeus, 1758	VA BO DA GU SU FG
<i>Dasypus sabanicola</i> Mondolfi, 1968	BO
<i>Euphractus sexcinctus</i> (Linnaeus, 1758) Disjunct populations, savannas of southern Surinam (Wetzel, 1985). Photo-documented from savannas of NE Guyana (see Figure 41 in plates)	GU SU
<i>Priodontes maximus</i> (Kerr, 1792)	VA BO DA GU SU FG

**Family: Myrmecophagidae**—Anteaters*Cyclopes didactylus* (Linnaeus, 1758)

VA BO DA GU SU FG

*Myrmecophaga tridactyla* Linnaeus, 1758

VA BO DA GU SU FG

*Tamandua tetradactyla* (Linnaeus, 1758)

VA BO DA GU SU FG

**Order: Chiroptera**—Bats**Family: Emballonuridae**—Sheath-tailed bats*Centronycteris maximiliani* (Fischer, 1829)

VA BO GU SU FG

*Cormura brevirostris* (Wagner, 1843)

VA BO DA GU SU FG

*Cyttarops alecto* Thomas, 1913

GU FG

*Diclidurus albus* Wied-Neuwied, 1820

VA BO DA GU SU

*Diclidurus ingens* Hernandez-Camacho, 1955

VA BO DA GU

*Diclidurus isabellus* (Thomas, 1920)

VA BO DA GU

*Diclidurus scutatus* Peters, 1869

VA BO GU SU FG

*Peropteryx kappleri* Peters, 1867

BO DA GU SU FG

*Peropteryx leucoptera* Peters, 1867

VA GU SU FG

*Peropteryx macrotis* (Wagner, 1843)

VA BO DA GU SU FG

*Peropteryx trinitatis* Miller, 1899

VA BO DA FG

*Rhynchonycteris naso* (Wied-Neuwied, 1820)

VA BO DA GU SU FG

*Saccopteryx bilineata* (Temminck, 1838)

VA BO DA GU SU FG

*Saccopteryx canescens* Thomas, 1901

VA BO DA GU SU FG

*Saccopteryx gymnura* Thomas, 1901

GU FG

*Saccopteryx leptura* (Schreber, 1774)

VA BO DA GU SU FG

**Family: Noctilionidae**—Bulldog bats*Noctilio albiventris* Desmarest, 1818

VA BO DA GU SU FG

*Noctilio leporinus* (Linnaeus, 1758)

VA BO DA GU SU FG

**Family: Mormoopidae**—Leaf-chinned bats*Mormoops megalophylla* (Peters, 1864)

Disjunct population in northern Bolívar

BO DA

*Pteronotus davyi* Gray, 1838

VA BO DA

*Pteronotus gymnotus* Natterer, 1843Surinam record: Lim *et al.* (in press)

VA BO DA GU SU FG

*Pteronotus parnellii* (Gray, 1843)

VA BO DA GU SU FG

*Pteronotus personatus* (Wagner, 1843)

VA BO DA GU SU FG

**Family: Phyllostomidae**—New World leaf-nosed bats

Subfamily: Phyllostominae—New World leaf-nosed bats

*Chropterus auritus* (Peters, 1856)

VA BO DA GU SU FG

*Glyphonycteris daviesi* (Hill, 1964)

VA BO GU SU FG

*Glyphonycteris sylvestris* (Thomas, 1896)

VA BO GU SU FG

*Lampronnycteris brachyotis* (Dobson, 1879)

VA BO DA GU SU FG

*Lonchorhina aurita* Tomes, 1863

VA BO GU SU

*Lonchorhina fernandesi* Ochoa & Ibañez, 1982

Endemic to lowlands of northern VA and Bolívar

VA BO

*Lonchorhina inusitata* Handley & Ochoa, 1997

VA BO SU FG

<i>Lonchorhina orinocensis</i> Linares & Ojasti, 1971	VA BO
<i>Lophostoma brasiliense</i> Peters, 1866	VA BO DA GU SU FG
<i>Lophostoma carrikeri</i> (J.A. Allen, 1910)	VA BO GU SU FG
<i>Lophostoma schulzi</i> (Genoways & Williams, 1980) Endemic to the Guiana Shield	GU SU FG
<i>Lophostoma silvicolum</i> d'Orbigny, 1836	VA BO DA GU SU FG
<i>Macrophyllum macrophyllum</i> (Schinz, 1821)	VA BO DA GU SU FG
<i>Micronycteris brosetti</i> Simmons & Voss, 1998	GU FG
<i>Micronycteris hirsuta</i> (Peters, 1869)	VA BO DA GU SU FG
<i>Micronycteris megalotis</i> (Gray, 1842)	VA BO DA GU SU FG
<i>Micronycteris microtis</i> Miller, 1898	VA BO DA GU SU FG
<i>Micronycteris minuta</i> (Gervais, 1856) Includes <i>M. homezi</i> according to Ochoa and Sánchez (in press)	VA BO DA GU SU FG
<i>Micronycteris schmidtorum</i> Sanborn, 1935 Some records of Linares (1998) from Bolívar are <i>M. minuta</i>	VA BO FG
<i>Mimon bennettii</i> (Gray, 1838)	VA GU SU FG
<i>Mimon crenulatum</i> (E. Geoffroy, 1803)	VA BO DA GU SU FG
<i>Phylloderma stenops</i> Peters, 1865	VA BO GU SU FG
<i>Phyllostomus discolor</i> Wagner, 1843	VA BO DA GU SU FG
<i>Phyllostomus elongatus</i> (E. Geoffroy, 1810)	VA BO DA GU SU FG
<i>Phyllostomus hastatus</i> (Pallas, 1767)	VA BO DA GU SU FG
<i>Phyllostomus latifolius</i> (Thomas, 1901) Recorded in Bolívar by Lew (2001)	BO GU SU FG
<i>Tonatia saurophila</i> Koopman & Williams, 1951	VA BO DA GU SU FG
<i>Trachops cirrhosus</i> (Spix, 1823)	VA BO DA GU SU FG
<i>Trinycteris nicefori</i> (Sanborn, 1949)	VA BO DA GU SU FG
<i>Vampyrum spectrum</i> (Linnaeus, 1758)	VA BO DA GU SU FG
Subfamily: Glossophaginae—Nectar-feeding bats	
<i>Anoura caudifer</i> (E. Geoffroy, 1818)	VA BO GU SU FG
<i>Anoura geoffroyi</i> Gray, 1838	VA BO GU SU FG
<i>Anoura latidens</i> Handley, 1984	VA BO DA GU
<i>Choeroniscus godmani</i> (Thomas, 1903)	BO DA GU SU
<i>Choeroniscus minor</i> (Peters, 1868) Includes <i>C. intermedius</i> of Linares (1998)	VA BO DA GU SU FG
<i>Glossophaga longirostris</i> Miller, 1898	VA BO DA GU
<i>Glossophaga soricina</i> (Pallas, 1766)	VA BO DA GU SU FG
<i>Lichonycteris obscura</i> Thomas, 1895	BO GU SU FG
<i>Lionycteris spurrelli</i> Thomas, 1913	VA BO GU SU FG
<i>Lonchophylla thomasi</i> J.A. Allen, 1904	VA BO GU SU FG
<i>Scleronycteris ega</i> Thomas, 1912	VA BO
Subfamily: Carollinae—New World fruit bats	
<i>Carollia brevicauda</i> (Schinz, 1821)	VA BO DA GU SU FG
<i>Carollia castanea</i> H. Allen, 1890	VA
<i>Carollia perspicillata</i> (Linnaeus, 1758)	VA BO DA GU SU FG

<i>Rhinophylla fischeræ</i> Carter, 1966	VA
<i>Rhinophylla pumilio</i> Peters, 1865	VA BO DA GU SU FG
Subfamily: Stenodermatinae—New World fruit-eating bats	
<i>Ametrida centurio</i> Gray, 1847	VA BO DA GU SU FG
<i>Artibeus amplus</i> Handley, 1987	VA BO GU SU
<i>Artibeus bogotensis</i> Surinam records: Lim <i>et al.</i> (in press)	VA BO DA GU SU
<i>Artibeus cinereus</i> (Gervais, 1856)	VA BO DA GU SU FG
<i>Artibeus concolor</i> Peters, 1865	VA BO DA GU SU FG
<i>Artibeus gnomus</i> Handley, 1987 Includes some <i>A. cinereus</i> of Linares (1998). Surinam records: Lim <i>et al.</i> (in press)	VA BO DA GU SU FG
<i>Artibeus jamaicensis</i> Leach, 1821	VA BO DA
<i>Artibeus lituratus</i> (Olfers, 1818)	VA BO DA GU SU FG
<i>Artibeus obscurus</i> Schinz, 1821 Surinam records: Lim <i>et al.</i> (in press)	VA BO DA GU SU FG
<i>Artibeus planirostris</i> (Spix, 1823) Taxon previously not recognized by Ochoa <i>et al.</i> (1993); Surinam records: Lim <i>et al.</i> (in press)	VA BO GU SU FG
<i>Artibeus</i> sp. Ochoa <i>et al.</i> , ined. Caura, Bolívar	BO
<i>Chiroderma trinitatum</i> Goodwin, 1958	VA BO DA GU SU FG
<i>Chiroderma villosum</i> Peters, 1860	VA BO DA GU SU FG
<i>Enchisthenes hartii</i> (Thomas, 1892) Disjunct population in VA	VA
<i>Mesophylla macconnelli</i> Thomas, 1901	VA BO DA GU SU FG
<i>Platyrrhinus aurarius</i> (Handley & Ferris, 1972) Endemic to highlands of the Guiana Shield	VA BO GU SU
<i>Platyrrhinus brachycephalus</i> (Rouk & Carter, 1972)	BO DA GU SU FG
<i>Platyrrhinus helleri</i> (Peters, 1866)	VA BO DA GU SU FG
<i>Sphaeronycteris toxophyllum</i> Peters, 1882	VA BO
<i>Sturnira lilium</i> (E. Geoffroy, 1810)	VA BO DA GU SU FG
<i>Sturnira tildæ</i> de la Torre, 1959	VA BO DA GU SU FG
<i>Uroderma bilobatum</i> Peters, 1866	VA BO DA GU SU FG
<i>Uroderma magnirostrum</i> Davis, 1968	VA BO DA GU
<i>Vampyressa bidens</i> (Dobson, 1878)	VA BO DA GU SU FG
<i>Vampyressa brocki</i> Peterson, 1968	GU SU FG
<i>Vampyressa pusilla</i> (Wagner, 1843)	VA BO GU FG
<i>Vampyrodes thyone</i> Thomas, 1909	VA BO DA GU SU
Subfamily: Desmodontinae—Vampire bats	
<i>Desmodus rotundus</i> (E. Geoffroy, 1810)	VA BO DA GU SU FG
<i>Diaemus youngi</i> (Jentink, 1893)	VA BO DA GU FG
<b>Family: Natalidae</b> —Funnel-eared bats	
<i>Natalus tumidirostris</i> Miller, 1900 Includes <i>N. stramineus</i> of Linares (1998) for Bolívar	BO GU SU FG
<b>Family: Furipteridae</b> —Thumbless bats	
<i>Furipterus horrens</i> (F. Cuvier, 1828)	VA GU SU FG
<b>Family: Thyropteridae</b> —Disc-winged bats	
<i>Thyroptera discifera</i> (Lichtenstein & Peters, 1855)	SU FG

<i>Thyroptera</i> sp. nov. Gregorin <i>et al.</i> , submitted Previously identified as <i>T. discifera</i>	GU SU FG
<i>Thyroptera tricolor</i> Spix, 1823	VA BO DA GU SU FG
<b>Family: Vespertilionidae</b> —Vesper bats	
<i>Eptesicus andinus</i> J.A. Allen, 1914 Lim and Engstrom, unpublished data	GU
<i>Eptesicus brasiliensis</i> (Desmarest, 1819)	VA BO DA GU SU
<i>Eptesicus chiriquinus</i> Thomas, 1920 Includes <i>E. andinus</i> of Ochoa <i>et al.</i> (1993) and Linares (1998); Surinam record: Lim <i>et al.</i> (in press)	BO DA GU SU FG
<i>Eptesicus diminutus</i> Osgood, 1915	BO
<i>Eptesicus furinalis</i> (d'Orbigny, 1847)	VA BO DA GU SU FG
<i>Histiotus humboldti</i> Handley, 1996	VA BO
<i>Lasiurus atratus</i> Handley, 1996 Endemic to lowlands of the Guiana Shield	BO GU SU FG
<i>Lasiurus blossevillii</i> (Lesson & Garnot, 1826)	VA DA GU SU FG
<i>Lasiurus cinereus</i> (Beauvois, 1796)	VA DA
<i>Lasiurus ega</i> (Gervais, 1856)	VA BO DA GU SU
<i>Lasiurus egregius</i> (Peters, 1870)	FG
<i>Myotis albescens</i> (E. Geoffroy, 1806)	VA BO DA GU SU FG
<i>Myotis keaysi</i> (J. Allen, 1914)	BO
<i>Myotis nigricans</i> (Schinz, 1821)	VA BO DA GU SU FG
<i>Myotis oxyotus</i> (Peters, 1867)	VA BO
<i>Myotis riparius</i> Handley, 1960 Surinam records: Lim <i>et al.</i> (in press)	VA BO DA GU SU FG
<i>Rhogeessa hussoni</i> Genoways & Baker, 1996	SU
<i>Rhogeessa io</i> Thomas, 1903 Includes <i>R. tumida</i> of Ochoa <i>et al.</i> (1993) & Linares (1998)	VA BO DA GU
<b>Family: Molossidae</b> —Free-tailed bats	
<i>Cynomops abrasus</i> (Temminck, 1827)	BO GU SU FG
<i>Cynomops greenhalli</i> Goodwin, 1958	BO DA SU FG
<i>Cynomops parvus</i> (Thomas, 1901)	BO GU SU FG
<i>Cynomops planirostris</i> (Peters, 1865)	VA BO GU SU FG
<i>Eumops auripendulus</i> (Shaw, 1800)	VA BO DA GU SU FG
<i>Eumops bonariensis</i> (Peters, 1874)	GU
<i>Eumops dabbenei</i> Thomas, 1914	BO
<i>Eumops glaucinus</i> (Wagner, 1843)	VA BO GU SU
<i>Eumops hansae</i> Sanborn, 1932	VA BO GU FG
<i>Eumops maurus</i> (Thomas, 1901)	BO GU SU
<i>Eumops trumbulli</i> (Thomas, 1901) Includes <i>E. perotis</i> of Ochoa <i>et al.</i> (1993) & Linares (1998)	BO GU SU
<i>Molossops neglectus</i> Williams & Genoways, 1980	BO GU SU
<i>Molossops temminckii</i> (Burmeister, 1854)	BO GU
<i>Molossus aztecus</i> Saussure, 1860	BO DA
<i>Molossus barnesi</i> Thomas, 1905 Endemic to FG	FG
<i>Molossus coibensis</i> J.A. Allen, 1904 Includes forms from the Guiana Shield previously identified as <i>M. aztecus</i>	VA BO DA GU



<i>Molossus molossus</i> (Pallas, 1766)	VA BO DA GU SU FG
<i>Molossus pretiosus</i> Miller, 1902	BO DA GU
<i>Molossus rufus</i> E. Geoffroy, 1805 Includes <i>M. ater</i> of Ochoa <i>et al.</i> (1993) & Linares (1998)	VA BO DA GU SU FG
<i>Molossus sinaloae</i> J.A. Allen, 1906	BO DA GU SU FG
<i>Molossus</i> sp. See Lim and Engstrom (2001)	GU
<i>Neoplatymops mattogrossensis</i> (Vieira, 1942) Not included in <i>Molossops</i> (see Peters <i>et al.</i> , 2002)	VA BO GU
<i>Nyctinomops gracilis</i> (Wagner, 1843)	VA BO DA
<i>Nyctinomops laticaudatus</i> (E. Geoffroy, 1805)	VA BO GU SU FG
<i>Nyctinomops macrotis</i> (Gray, 1840)	VA BO GU SU
<i>Promops centralis</i> Thomas, 1915	VA BO GU SU FG
<i>Promops nasutus</i> (Spix, 1823)	VA BO GU SU

### Order: Primates—Primates

#### Family: Callitrichidae—Marmosets and tamarins

<i>Saguinus midas</i> (Linnaeus, 1758) Recorded by Linares (1998) in Bolívar without evidence	GU SU FG
--	----------

#### Family: Cebidae—New World monkeys

Subfamily: Alouattinae—Howler monkeys

<i>Alouatta macconnelli</i> Elliott, 1910	VA BO DA GU SU FG
---	-------------------

Subfamily: Aotinae—Night monkeys

<i>Aotus trivirgatus</i> (Humboldt, 1811)	VA BO
---	-------

Subfamily: Atelinae—Spider monkeys

<i>Ateles belzebuth</i> E. Geoffroy, 1806	VA BO
---	-------

<i>Ateles paniscus</i> (Linnaeus, 1758) Endemic to E. lowlands of the Guiana Shield; recorded by Linares (1998) in Bolívar without evidence	GU SU FG
--	----------

Subfamily: Callicebinae—Titis

<i>Callicebus torquatus</i> (Hoffmannsegg, 1807)	VA BO
--	-------

Subfamily: Cebinae—New World monkeys

<i>Cebus albifrons</i> (Humboldt, 1812)	VA BO
---	-------

<i>Cebus apella</i> (Linnaeus, 1758) DA record, Boher & Cordero (2000)	VA DA GU SU FG
---	----------------

<i>Cebus olivaceus</i> Schomburgk, 1848	VA BO DA GU SU FG
---	-------------------

<i>Saimiri sciureus</i> (Linnaeus, 1758)	VA BO GU SU FG
--	----------------

Subfamily: Pitheciinae—Sakis and uakaris

<i>Cacajao melanocephalus</i> (Humboldt, 1812)	VA
--	----

<i>Chiropotes satanas</i> (Hoffmannsegg, 1807)	VA BO GU SU FG
--	----------------

<i>Pithecia pithecia</i> (Linnaeus, 1766) Endemic to the Guiana Shield	VA BO DA GU SU FG
---	-------------------

### Order: Carnivora—Carnivores

#### Family: Canidae—Dogs

<i>Cerdocyon thous</i> (Linnaeus, 1766)	VA BO DA GU SU
---	----------------

<i>Speothos venaticus</i> (Lund, 1842)	VA BO GU SU FG
--	----------------

#### Family: Felidae—Cats

Subfamily: Felinae—Cats

<i>Leopardus pardalis</i> (Linnaeus, 1758)	VA BO DA GU SU FG
--	-------------------

<i>Leopardus tigrinus</i> (Schreber, 1775)	VA BO DA GU SU FG
--	-------------------

<i>Leopardus wiedii</i> (Schinz, 1821)	VA BO DA GU SU FG
<i>Puma concolor</i> (Linnaeus, 1771)	VA BO DA GU SU FG
<i>Puma yagouaroundi</i> (E. Geoffroy, 1803)	VA BO DA GU SU FG
Subfamily: Pantherinae—Large cats	
<i>Panthera onca</i> (Linnaeus, 1758)	VA BO DA GU SU FG
<b>Family: Mustelidae—Weasels</b>	
Subfamily: Lutrinae—Otters	
<i>Lontra longicaudis</i> (Olfers, 1818)	VA BO DA GU SU FG
<i>Pteronura brasiliensis</i> (Gmelin, 1788)	VA BO DA GU SU FG
Subfamily: Mustelinae—Weasels	
<i>Eira barbara</i> (Linnaeus, 1758)	VA BO DA GU SU FG
<i>Galictis vittata</i> (Schreber, 1776)	VA BO GU SU FG
<i>Mustela frenata</i> Lichtenstein, 1831	VA BO GU
Positive visual identification: B. Lim (unpublished data)	
<b>Family: Procyonidae—Raccoons and allies</b>	
Subfamily: Potosinae—Kinkajous and olingos	
<i>Bassaricyon beddardi</i> Pocock, 1921	VA BO GU
Includes <i>B. gabbi</i> of Ochoa <i>et al.</i> (1993) & Linares (1998)	
<i>Potos flavus</i> (Schreber, 1774)	VA BO DA GU SU FG
Subfamily: Procyoninae—Raccoons and coatis	
<i>Nasua nasua</i> (Linnaeus, 1766)	VA BO DA GU SU FG
<i>Procyon cancrivorus</i> (G. Cuvier, 1798)	VA BO DA GU SU FG

### Order: Cetacea—Dolphins

<b>Family: Delphinidae—Estuarine dolphins</b>	
<i>Sotalia fluviatilis</i> (Gervais & Deville, 1853)	BO DA GU SU FG
<b>Family: Platanistidae—River dolphins</b>	
<i>Inia geoffrensis</i> (de Blainville, 1817)	VA BO DA GU

### Order: Sirenia—Manatees and dugongs

<b>Family: Trichechidae—Manatees</b>	
<i>Trichechus inunguis</i> (Natterer, 1883)	GU
<i>Trichechus manatus</i> Linnaeus, 1758	BO DA GU SU

### Order: Perissodactyla—Odd-toed ungulates

<b>Family: Tapiridae—Tapirs</b>	
<i>Tapirus terrestris</i> (Linnaeus, 1758)	VA BO DA GU SU FG

### Order: Artiodactyla—Even-toed ungulates

<b>Family: Tayassuidae—Peccaries</b>	
<i>Pecari tajacu</i> (Linnaeus, 1758)	VA BO DA GU SU FG
<i>Tayassu pecari</i> (Link, 1795)	VA BO DA GU SU FG
<b>Family: Cervidae—Deer</b>	
<i>Mazama americana</i> (Erxleben, 1777)	VA BO DA GU SU FG
<i>Mazama gouazoubira</i> (G. Fischer, 1814)	VA BO DA GU SU FG
<i>Odocoileus cariacou</i> (Boddaert, 1784)	VA BO DA GU SU FG
Includes <i>O. virginianus</i> of Ochoa <i>et al.</i> (1993) & Linares (1998)	

## Order: Rodentia—Rodents

**Family: Sciuridae**—Squirrels

<i>Sciurillus pusillus</i> (E. Geoffroy, 1803) Recorded by Linares (1998) in Bolívar without evidence	GU SU FG
<i>Sciurus aestuans</i> Linnaeus, 1766	VA BO DA GU SU FG
<i>Sciurus flammifer</i> Thomas, 1904 Endemic to lowlands of Bolívar	BO
<i>Sciurus gilvicularis</i> Wagner, 1842	VA BO
<i>Sciurus igniventris</i> Wagner, 1842	VA BO
<b>Family: Muridae</b> —Rats and mice	
Subfamily: Sigmodontinae—New World rats and mice	
<i>Akdon urichi</i> J.A. Allen & Chapman, 1897 Includes <i>A. saturatus</i> of Linares (1998)	VA BO GU
<i>Calomys hummelincki</i> (Husson, 1960)	BO
<i>Holochilus sciureus</i> Wagner, 1842	VA BO DA GU SU FG
<i>Neacomys dubosti</i> Voss <i>et al.</i> , 2001 Endemic to lowlands of the eastern Guiana Shield	SU FG
<i>Neacomys guianae</i> Thomas, 1905 Endemic to the Guiana Shield	VA BO GU SU
<i>Neacomys paracou</i> Voss <i>et al.</i> , 2001 Endemic to the Guiana Shield; includes <i>N. tenuipes</i> of Ochoa <i>et al.</i> (1993) & Linares (1998)	BO GU SU FG
<i>Nectomys melanius</i> Thomas, 1910 Includes part of <i>N. squamipes</i> of Ochoa <i>et al.</i> (1993) & Linares (1998)	VA BO GU SU FG
<i>Nectomys palmipes</i> J.A. Allen & Chapman, 1893 Includes part of <i>N. squamipes</i> of Ochoa <i>et al.</i> (1993) & Linares (1998)	BO DA
<i>Neusticomys oyapocki</i> (Dubost & Petter, 1978) Endemic to lowlands of the eastern Guiana Shield	FG
<i>Neusticomys venezuelae</i> (Anthony, 1929)	VA BO GU
<i>Oecomys auyantepui</i> Tate, 1939 Endemic to the Guiana Shield; includes <i>O. paricola</i> of Ochoa <i>et al.</i> (1993) & Linares (1998)	BO GU SU FG
<i>Oecomys bicolor</i> (Tomes, 1860)	VA BO DA GU SU FG
<i>Oecomys concolor</i> (Wagner, 1845) Confined in this checklist to southern VA (see Voss <i>et al.</i> , 2001)	VA BO
<i>Oecomys rex</i> Thomas, 1910 Endemic to the Guiana Shield; Surinam records not verified	BO GU SU? FG
<i>Oecomys roberti</i> (Thomas, 1904)	VA BO GU
<i>Oecomys rutilus</i> Anthony, 1921 Endemic to the Guiana Shield	BO GU SU FG
<i>Oecomys</i> sp. 1 Ochoa <i>et al.</i> , ined.	BO
<i>Oecomys</i> sp. 2 Ochoa <i>et al.</i> , ined.	BO
<i>Oecomys speciosus</i> (J.A. Allen & Chapman, 1893)	BO
<i>Oecomys trinitatis</i> (J.A. Allen & Chapman, 1893)	VA BO GU
<i>Oligoryzomys fulvescens</i> (Sausaure, 1860)	BO DA GU SU FG
<i>Oligoryzomys</i> sp. Ochoa <i>et al.</i> , ined.	BO
<i>Oryzomys macconnelli</i> Thomas, 1910	VA BO GU SU FG
<i>Oryzomys megacephalus</i> (Fischer, 1814) Includes <i>O. capito</i> of Ochoa <i>et al.</i> (1993) and Linares (1998)	VA BO DA GU SU FG
<i>Oryzomys yunganus</i> Thomas, 1902 Probably includes some of <i>O. capito</i> of Linares (1998) but see Musser <i>et al.</i> (1998)	VA BO DA GU SU FG
<i>Podoxymys roraimae</i> Anthony, 1929 Endemic to the summit of Mount Roraima	BO GU
<i>Rhipidomys leucodactylus</i> (Tschudi, 1844) Includes <i>R. sclateri</i> of Linares (1998)	VA BO GU FG
<i>Rhipidomys macconnelli</i> de Winton, 1900 Endemic to highlands of the Guiana Shield	VA BO GU
<i>Rhipidomys nitela</i> Thomas, 1901	VA BO GU SU FG
<i>Rhipidomys wetzeli</i> Gardner, 1990 (1989) Endemic to highlands of the Guiana Shield	VA BO GU

<i>Sigmodon alstoni</i> (Thomas, 1881)	VA BO GU SU FG
<i>Zygodontomys brevicauda</i> (J.A. Allen & Chapman, 1893)	VA BO DA GU SU FG
<b>Family: Erethizontidae—Porcupines</b>	
<i>Coendou prehensilis</i> (Linnaeus, 1758)	VA BO DA GU SU FG
<i>Sphiggurus melanura</i> (Wagner, 1842) Endemic to the Guiana Shield	VA BO DA GU SU FG
<b>Family: Caviidae—Cavies</b>	
<i>Cavia aperea</i> Erxleben, 1777	VA BO GU SU
<b>Family: Hydrochaeridae—Capybaras</b>	
<i>Hydrochoeris hydrochaeris</i> (Linnaeus, 1766)	VA BO DA GU SU FG
<b>Family: Dasyproctidae—Agoutis and acouchies</b>	
<i>Dasyprocta fuliginosa</i> Wagler, 1832	VA BO
<i>Dasyprocta guamara</i> Ojasti, 1972 Endemic to Delta Amacuro	DA
<i>Dasyprocta leporina</i> (Linnaeus, 1758)	VA BO DA GU SU FG
<i>Myoprocta acouchy</i> (Erxleben, 1777)	GU SU FG
<i>Myoprocta pratti</i> (Pocock, 1913)	VA BO
<b>Family: Cuniculidae—Pacas</b>	
<i>Cuniculus paca</i> (Linnaeus, 1766)	VA BO DA GU SU FG
<b>Family: Echimyidae—Spiny rats</b>	
Subfamily: Dactylomyinae—Bamboo rats	
<i>Dactylomys dactylinus</i> (Desmarest, 1817)	VA BO
Subfamily: Echimyinae—Spiny rats	
<i>Echimys chrysurus</i> (Zimmermann, 1780)	GU SU FG
<i>Echimys semivillosus</i> (I. Geoffroy, 1838)	BO DA
<i>Isothrix bistrriata</i> Wagner, 1845	VA BO
<i>Isothrix sinnamariensis</i> Vié <i>et al.</i> , 1996 Endemic to lowlands of the Guiana Shield; Guyana record: Lim <i>et al.</i> (2005)	GU FG
<i>Makalata didelphoides</i> (Desmarest, 1817) Includes <i>Echimys didelphoides</i> of Ochoa <i>et al.</i> (1993) and Linares (1998)	VA BO DA GU SU FG
Subfamily: Eumysopinae—Spiny rats	
<i>Mesomys hispidus</i> (Desmarest, 1817)	VA BO GU SU FG
<i>Proechimys cuvieri</i> Petter, 1978 Probably present in VA based on distribution of Patton <i>et al.</i> (2000)	VA BO GU SU FG
<i>Proechimys guyannensis</i> (E. Geoffroy, 1803)	VA BO DA GU SU FG
<i>Proechimys hoplomyoides</i> (Tate, 1939) Endemic to the western Guiana Shield; includes part of <i>P. guyannensis</i> of Linares (1998)	VA BO GU
<i>Proechimys quadruplicatus</i> Hershkovitz, 1948 <i>P. amphichoricus</i> is a junior synonym (Patton <i>et al.</i> , 2000)	VA

### Order: Lagomorpha—Lagomorphs

<b>Family: Leporidae—Rabbits and hares</b>	
<i>Sylvilagus brasiliensis</i> (Linnaeus, 1758)	VA BO SU
<i>Sylvilagus floridanus</i> (J.A. Allen, 1890)	VA BO



Plate 1. A few habitats characteristic of the Guiana Shield. A, Mount Roraima, a major tepui on the eastern edge of the highlands of the Guiana Shield, at the convergence of Guyana, Venezuela, and Brazil. This shows the “prow” of Roraima viewed from Guyana looking towards the west. Photo: Francis X. Faigal, Royal Ontario Museum. B, The Rupununi Savanna and Kanuku Mountains, Guyana. Tropical savannas are common in many parts of the Guiana Shield. Photo: Lynn Gillespie, Canadian Museum of Nature. C, Mangrove swamps are common along undisturbed segments of the Atlantic coast and fringes of tidal rivers of the Guianas and Delta Amacuro, Venezuela. This swamp of prop-rooted *Rhizophora racemosa* trees is located on the tidal Waini River of northern Guyana. Photo: Tom Hollowell, USNM. D, Cerro Autana, a flat-topped tepui in Amazonas state, Venezuela. Many of these isolated tepuis of the Guiana Shield are home to endemic species of amphibians and reptiles. Photo: Vicki Funk, USNM. E, Montane cloud forests are typical of middle elevations in the Pakaraima Mountains of Guyana and Venezuela. Pictured is epiphyte-rich vegetation on Waukauyeng-tipu in western Guyana near the Venezuelan border. Photo: Tom Hollowell, USNM.



Plate 2. Some types of habitat disturbance in the Guiana Shield region. A, A fire-damaged *Avicennia* mangrove swamp behind a cultivated beach ridge on the northwestern Guyana coast. The fires occurred during the El Niño-related drought in 1998. High mortality of *Kinosternon* turtles occurred in the pictured area. Photo: Tom Hollowell, USNM. B, River systems and the organisms dependent on them are damaged by bank dredging during mining operations, resulting in erosion and heavy siltation. Pictured is the Potaro River below Kaieteur Falls, Guyana. Photo: Carol Kelloff, USNM. C, An unpaved road through lowland rain forest in Guyana. Roads can be linked to several environmental concerns, including destruction of broad swaths of forest, erosion, increased access to wilderness, and obstruction of organism movement. Photo: Tim McDowell, Eastern Tennessee State University. D, Shifting cultivation can have significant impacts on lowland forest habitats, particularly where population densities become too high to allow the land to recover over long periods between rotations. Photo: Tim McDowell, Eastern Tennessee State University. E, Logging causes significant impacts in many parts of the Guiana Shield, both from small-scale operations and, increasingly, from concessions utilized by larger corporations. Photo: Pedro Acevedo, USNM. F, Agricultural conversion for rice and sugar is a major impact, particularly to land on the coastal plain of the Guianas and the State of Delta Amacuro, Venezuela. Pictured are sugar fields along the lower Demerara River in Guyana. Photo: Tom Soderstrom, USNM.



Plate 3. Characteristic amphibians. A, *Colostethus beebei* (Dendrobatidae), the Golden Frog, at Kaieteur Falls, Guyana. This small frog breeds in the small pools of water that occur in the bases of large bromeliads, particularly *Brocchinia micrantha*. Photo: Carol Kelloff, USNM. B, *Hyla geographica* (Hylidae). Photo: William W. Lamar, University of Texas at Tyler. C, *Oreophrynella* sp. (Bufonidae). This is probably an undescribed species endemic to Mt. Ayanganna, Guyana. Photo: Amy Lathrop, Royal Ontario Museum. D, *Stefania coxi* (Hylidae), with recently hatched young on her back. This species is endemic to Mt. Ayanganna, Guyana. Photo: Amy Lathrop, Royal Ontario Museum. E, *Epicrionops niger* (Rhinatreumatidae), with its eggs. This caecilian is endemic to the highlands of western Guyana and eastern Venezuela. Photo: Amy Lathrop, Royal Ontario Museum. F, *Leptodactylus knudseni* (Leptodactylidae). Photo: William W. Lamar, University of Texas at Tyler.



Plate 4. Characteristic reptiles. A, *Eunectes murinus* (Boidae), the Green Anaconda. This individual had recently eaten a peccary when it was photographed on the banks of the Kuyuwini River, in southern Guyana. Photo: Karen Redden, George Washington University. B, *Bothrops brazili* (Viperidae), a venomous snake known from the southern Guiana Shield region and much of Amazonia. Members of this genus are among the best known fieldwork hazards. Photo: William W. Lamar, University of Texas at Tyler. C, *Amphisbaena fuliginosa* (Amphisbaenidae), the Sooty Wormlizard. Photo: Cheryl Roesel, USNM. D, *Thecadactylus rapicauda* (Gekkonidae). Photo: William W. Lamar, University of Texas at Tyler. E, *Anolis fuscoauratus* (Iguanidae). Photo: William W. Lamar, University of Texas at Tyler. F, *Geochelone denticulata* (Testudinidae), the Yellow-Footed Tortoise. Photo: William W. Lamar, University of Texas at Tyler.





Plate 5. Characteristic birds. A, *Fluvicola pica* (Tyrannidae), the Pied Water-Tyrant. Photo: Chris Milensky, USNM. B, *Bucco capensis* (Bucconidae), the Collared Puffbird. Photo: Chris Milensky, USNM. C, *Glaucidium hardyi* (Strigidae), the Amazonian Pygmy Owl. Photo: Brian Schmidt, USNM. D, *Buteogallus aequinoctialis* (Accipitridae), the Rufous Crab-Hawk. Photo: Brian Schmidt, USNM. E, *Onychorhynchus coronatus* (Tyrannidae), the Royal Flycatcher. Photo: Chris Milensky, USNM. F, *Opisthocomus hoazin* (Opisthocomidae), the Hoatzin. Photo: Shawn Lehman, University of Toronto.



Plate 6. Characteristic mammals. A, *Platyrrhinus aurarius* (Phyllostomidae), the Golden White-lined Bat, is endemic to the Guiana Shield. Photo: Francis X. Faigal, Royal Ontario Museum. B, *Pteroneura brasiliensis* (Mustelidae). The Giant River Otter is a social animal with groups consisting of up to 9 individuals. Photo: Bruce Hoffman, University of Hawaii. C, *Euphractus sexcinctus* (Dasypodidae), the Yellow Armadillo, from the savannas near Dubulay in northeastern Guyana. This photo provides documentation for this species' presence in Guyana. Photo: Brenda E. Rodgers, West Texas A&M University, 1999. D, *Hydrochaeris hydrochaeris* (Hydrochaeridae). The Capybara is the world's largest Rodent. Photo: Pedro Acevedo, USNM. E, *Cebus olivaceus* (Cebidae), the Wedged-Capped Capuchin Monkey, which is common in the Guiana Shield and adjacent lowland forests. Photo: Shawn Lehman, University of Toronto. F, *Trichechus manatus* (Trichechidae), the West Indian Manatee, feeding. This individual was a resident of the Georgetown Botanic Garden, Guyana. Photo: Lynn Gillespie, Canadian Museum of Nature.