





The Amazon is the largest rainforest on Earth. It's famed for its unrivalled biological diversity, with wildlife that includes jaguars, river dolphins, manatees, giant otters, capybaras, harpy eagles, anacondas and piranhas.

The many unique habitats in this globally significant region conceal a wealth of hidden species, which scientists continue to discover at an incredible rate.

Between 1999 and 2009, at least 1,200 new species of plants and vertebrates have been discovered in the Amazon biome (see page 6 for a map showing the extent of the region that this spans). The new species include 637 plants, 257 fish, 216 amphibians, 55 reptiles, 16 birds and 39 mammals. In addition, thousands of new invertebrate species have been uncovered. Owing to the sheer number of the latter, these are not covered in detail by this report.

This report has tried to be comprehensive in its listing of new plants and vertebrates described from the Amazon biome in the last decade. But for the largest groups of life on Earth, such as invertebrates, such lists do not exist – so the number of new species presented here is no doubt an underestimate.

Cover image: Ranitomeya benedicta, new poison frog species © Evan Twomey

### Foreword

Ahmed Djoghlaf, Executive Secretary, Convention on Biological Diversity

The vital importance of the Amazon rainforest is well known. As the largest tract of tropical rainforest in the world, the region has unparalleled biodiversity. It harbours one in 10 known species in the world and one in five of all birds. The Amazon rainforest supports the highest diversity of plant species on Earth: depending where you are, you can find from 150 to 900 individual trees per hectare. The Amazon is also home to a diverse array of indigenous communities, and its rich natural resources base provides a source of livelihoods for many both within and outside the region.

However, this treasure trove of our planet has not escaped the gigantic appetite of unsustainable development. At least 17% of the Amazon forest has been destroyed, and much more is severely threatened as the destruction continues. In the words of the respected Amazon ecologist Dan Nepstad, "The Amazon is a canary in a coalmine for the Earth."

The loss of tropical rainforest has a profound and devastating impact on the world because rainforests are so biologically diverse. The 1,220 new species in this report illustrate the richness of biodiversity found in this the world's largest rainforest and river basin, and also how much there is still to learn about this incredible biome.

Many scientific explorers have ventured deep into the unknown and spectacular reaches of the Amazon and have made significant contributions to increasing our knowledge of Amazonia. However,

very basic work on the natural history of the Amazon is still being conducted due to the current lack of knowledge. The surface of the Amazon has only been scratched and there is much that remains unknown to scientists. The scientific world is only just realising what indigenous people in the Amazon have known for centuries: that many ancestral cultures still alive in the Amazon have a deep knowledge of the riches of the region; and that this knowledge may prove to be essential for the success of future efforts to preserve it.

In the face of increasing human pressure on the planet's resources, an effective protected area system is vital for conserving ecosystems, habitats and species. The Convention on Biological Diversity (CBD)'s programme of work on protected areas (www.cbd.int/protected) provides a blueprint on how to establish protected areas, how to manage them, how to govern them, and what tools can be used to achieve the planned work. It charts the way forward in detail and with clear targets. The end result will be protected areas that fulfil their key role of conserving in situ biodiversity of the world. It is a framework for cooperation between governments, donors, NGOs and local people - without such collaboration projects cannot be sustainable over the long term.

On this note, the Secretariat of the CBD would like to congratulate WWF for supporting the Latin American Network of Protected Areas (REDPARQUES) by promoting a regional dialogue and vision for the Amazon to implement the CBD programme of work on protected areas.



The need for conserving the Amazon cannot be better expressed than in the words of Chico Mendes, the Brazilian rubber tapper and environmental activist: "At first, I thought I was fighting to save rubber trees. Then, I thought I was fighting to save the Amazon rainforests. Now, I realise I am fighting for humanity."

Today, when the world is reeling under the threat of climate change, conserving large intact tracts of tropical rainforests assumes paramount importance, not only for the people of the Amazon countries, but for all the individuals of the world. In this the International Year for Biodiversity, a shift in the paradigm of development must begin, with utmost urgency, to safeguard the Amazon biome's functionality and its incredible biodiversity.

### Francisco José Ruiz Marmolejo, Leader, Living Amazon Initiative, WWF

### Preface

Nowhere else on Earth is the web of life as tangled and lush as in the Amazon region. Here, the planet's largest river basin is a massive, life-giving system for the world's most extensive and diverse tropical rainforest. For millennia, indigenous people have relied on the region's environmental services and natural resources which, as this report shows, we're still striving to fully comprehend.

The Amazon's natural wealth is beyond superlatives. And the significant volume of recent findings we present here shows that we're still learning about the full extent of its diversity. Between 1999 and 2009, more than 1,200 new species of plants and vertebrates were discovered in the Amazon region. That's a rate of one new discovery every three days – before we even consider invertebrates.

This report introduces new species from eight countries plus one overseas territory. Fabulous findings include a surrealistic blind red fish; a coinsized, pink-ringed dart frog; a 4m-long new species of anaconda; a floor-dwelling, blue-fanged tarantula; and a bald parrot. The discoveries add to our appreciation of the immense value of the Amazon.

Unfortunately, research is revealing that many Amazon species are under grave threat, even as we unearth them. For instance, the discovery of one of the smallest species of tree porcupine ever recorded was made during wildlife rescue efforts at a hydropower dam site in the Amazon.

People have inhabited the Amazon for over 11,000 years. Yet it's in just the last 50 years that humankind has caused the destruction of at least 17% of the Amazon rainforest. Most of the region remains fairly undisturbed, but the threats to it are considerable. Inappropriate development models, rapid regional economical growth, increasing energy demands, and unsustainable agribusiness market trends are all impacting on the Amazon at an exponential rate. Climate change, too, is compounding the problems.

For over 40 years, WWF has been instrumental in safeguarding the Amazon. We've supported the establishment of iconic protected areas such as Manu National Park, Guiana Amazonian Park, Jaú National Park, Mamirauá Sustainable Development Reserve and Montanhas do Tumucumaque National Park. These have been the starting point for some of the most important conservation efforts in the region, including initiatives such as the Amazon Region Protected Areas programme.

Other examples of WWF conservation efforts in the Amazon include our work with local communities to establish sustainable fisheries management in the Brazilian Varzeas. We've assisted indigenous communities in their battle against oil exploitation contamination in the Amazonian wetlands of northern Peru. And we've promoted certified timber production in Peru, Bolivia and Guyana.

However, despite this progress, the degradation continues. So, the approach that WWF and our partners take to conservation continues to evolve to



face increasing threats, and to ensure ever-larger areas are protected.

Today, we're bringing to bear our experience of more than 40 years of conservation work, under our Living Amazon initiative. We're promoting sustainable development across all countries in the Amazon. We're building alliances among local people, national and regional authorities and the private sector. And we're seeking to ensure that the vital environmental and cultural contributions the Amazon makes locally, regionally and globally are maintained sustainably, in a way that's fair to people who live there.

The Amazon helps to support life as we know it. Now it is in our hands to safeguard the Amazon, its amazing diversity of species, and the immeasurable services it provides to us all.

## **Executive summary**



The Amazon is one of the most diverse regions on Earth. This fact has been supported not least by the extraordinary wealth of new species discovered there between 1999 and 2009. Many of the discoveries have been made in the growing network of protected areas being established in the region.

Some 1,200 new species of plants and vertebrates were discovered in the Amazon biome in this period. This is a greater number than the combined total of new species discovered over a similar 10-year period in other areas of high biological diversity – including Borneo, the Congo Basin and the Eastern Himalayas. The new discoveries illustrate the extent of the amazing biodiversity found in the world's largest rainforest and river basin. They also show how much there is still to learn about this incredible place. And of course, this report would not be possible without the professionalism and dedication of dozens of local and international scientists and research supporters.

This report celebrates the unique and fascinating species that can be found in the Amazon – a region that spans eight South American countries and one overseas territory, and is home to 30 million people. The report also highlights many vital habitats that face growing pressures as a consequence of unsustainable development. The Amazon still contains around 83% of its original habitat, but a disastrous combination of threats is increasingly eroding the Amazon's connectivity. And numerous endemic species are subjected to waves of resource exploitation. After centuries of limited human disturbance, at least 17% of the forests of the Amazon have been destroyed in just 50 years.

The main cause of this transformation is rapid expansion in regional and global markets for meat, soy and biofuels. These have increased demand for land.

Large-scale transportation and energy infrastructure projects, coupled with poor planning, weak governance and the lack of an integrated vision of sustainable development for the Amazon are also contributing to deforestation and degradation of forest and freshwater habitats. They're also increasing pressure on the Amazon's natural resources and environmental services, on which millions of people depend.

Increased temperatures and decreased precipitation caused by climate change will exacerbate these trends. They could lead to a 'tipping point' where the tropical moist forest ecosystem collapses. The implications of this massive ecosystem shift for biodiversity, global climate and human livelihoods would be profound. The Amazon's forests store 90-140 billion tonnes of carbon.

Releasing even a portion of this would accelerate global warming significantly. In addition to 30 million people, one in 10 known species on Earth live here. They all depend on the Amazon's resources and services. So do many millions more, in North America and Europe, who are still within the Amazon's far-reaching climatologic influence<sup>1</sup>.

The Amazon provides life-giving natural resources and services, and is a source of livelihood for many within and outside the region. But the fate of the region depends on a significant shift in the current way development is embraced by Amazon countries. It's vital that the Amazon is sustainably managed as one functioning whole. A desire to safeguard the biome's functionality for the common good must become the core business of the Amazon nations.

Responsible stewardship of the Amazon is critical, not least because of the role the region plays in the fight against global climate change. In this sense, it is in the long-term self interest of individuals and societies across the globe to keep an ecologically healthy Amazon that maintains its environmental and cultural contribution to local peoples, the countries of the region, and the world, within a framework of social equity, inclusive economic development and global responsibility.

Through our Living Amazon initiative, WWF works with national and regional stakeholders from all nine Amazon countries to create the high-level conditions that will enable the conservation and sustainable development of the Amazon.

As part of our initiative, WWF together with the IUCN, Amazon Cooperation Treaty Organisation and the Secretariat for the Convention of Biological Diversity and others are supporting the Latin American Technical Cooperation Network on National Parks, other Protected Areas and Wildlife (REDPARQUES) in building a conservation vision for the Amazon. This vision will build on the conservation strategies and protected area systems in each of the Amazon countries. It will help to meet commitments under the UN's Convention on Biological Diversity – in particular, its work on protected areas. In the Amazon, the whole is more than the sum of its parts, and the development of a vision for conservation will help maintain the integrity and functionality of the Amazon region – and its resilience to growing threats, particularly climate change.





### Geography

The Amazon contains the planet's largest remaining rainforest, which has an unparalleled diversity of species and habitats. It is unrivalled in scale and complexity, and its importance is world renowned.

The region spans 6.7 million sq km across Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname and Venezuela. It is dominated by moist dense tropical forest, but also encompasses several other unique habitat types – such as montane forests, lowland forests, floodplain forests, grasslands, swamps, bamboos and palm forests.

This rainforest brings rain showers and freshwater to cities and farms across South America. Spreading over an area 50% larger than the European Union's 27 countries, the Amazon rainforest is so large that it helps to keep the global climate in balance.

Not only does the Amazon contain almost half the world's remaining rainforest but also the largest river basin on Earth. The Amazon river flows east, and empties into the Atlantic Ocean. This river basin is contained by the Guiana shield or highlands to the north, the central Brazilian shield or plateau to the south, and the Andes to the west. The Amazon is by far the world's largest river in terms of the volume of water it discharges into the sea. At an average of approximately 219,000 cubic metres per second, it represents 15-16% of the world's total river discharge into the oceans. Just two hours of its flow could meet the freshwater needs of New York City's 7.5 million residents for a whole year<sup>2</sup>.

The river system is the lifeline of the rainforest, and it has played an important part in the development of its people. More than 30 million people live across the region, and over 280 different languages are spoken here. About 9% (2.7 million people) of the Amazon's population is made up of more than 320 indigenous groups, 60 of which still remain largely uncontacted or are living in voluntary isolation<sup>3</sup>. The identities and traditions of people, their customs, lifestyles and livelihoods have been shaped by their environment, and they remain deeply dependent on the Amazon in spite of becoming increasingly integrated into the national and world economies.

The Amazon's unparalleled wealth of terrestrial and aquatic biodiversity conjures some of the most powerful images of what nature can offer. The Amazon houses a staggering 10% of the world's known biodiversity, including endemic<sup>i</sup> and endangered flora and fauna.

The Amazon sustains the world's richest diversity of birds, freshwater fish and butterflies. It is the world's last refuge for threatened species such as harpy eagles and pink river dolphins. Here, too, there are jaguars, giant otters, scarlet macaws, southern two-toed sloths, pygmy marmosets, saddleback and emperor tamarins, Goeldi's monkeys and howler monkeys. More species of primates can be found here than anywhere else.

Such is the Amazon's immense biological wealth that it incorporates elements of 56 Global 200 Ecoregions, landscapes of international importance, either completely or partially<sup>4</sup>. In addition, six natural UNESCO World Heritage Sites<sup>5</sup> and over 10 Endemic Bird Areas<sup>6</sup> can be found here. The region consists of over 600 different types of terrestrial and freshwater habitats.

A considerable number of the world's plants and animals live in the Amazon. To date, at least 40,000 plant species have been found here<sup>7</sup>, with 75% of its plants being endemic to the region. In addition, by 2005, 427 mammals, 1,300 birds, 378 reptiles, more than 400 amphibians, and at least 3,000 species of fish had been scientifically classified in the region<sup>8</sup>. This is the largest number of freshwater fish species in the world. The same can almost certainly be said for invertebrates. In approximately five hectares of Amazon rainforest, 365 species from 68 genera of ants were found<sup>9</sup>.

The extent of many of the unique habitats, and the inaccessibility of much of the vast Amazon region has also hidden many species from scientific discovery.

**Biodiversity** 

<sup>&</sup>lt;sup>1</sup>Endemic refers to a species that is exclusively native to a specific place and found nowhere else. For example, the kiwi is a bird endemic to New Zealand.

## 1,200 New species discoveries

### Introduction

Humans have lived in the Amazon region for over 11,000 years<sup>10</sup>. But it was not until the 16th century that the Amazon river was first navigated by a Spanish explorer and conquistador, Don Francisco de Orellana (1511-1546). In search of vast forests of cinnamon and the fabled city of gold, El Dorado, Orellana left Quito, Ecuador in February 1541. The expedition found neither cinnamon nor gold, but rather the greatest river on Earth – arriving at the junction of the Napo and the Amazon on 11 February 1542. Orellana named the 'newly-discovered' river the Rio de Orellana, a name that would later be abandoned in favour of the more familiar Rio Amazonas, named after the mythical tribe of warrior women.

It was a great many years before another Amazon expedition – the first to travel all the way upriver. In 1637-38, the first detailed information about the Amazon and its natural history and people was recorded by Father Cristobal de Acuña, who travelled as part of a large expedition led by the Portuguese general Pedro Teixeira. He noted amazingly precise data on the length and size of the Amazon, and the topography of its course, with detailed descriptions of the flooded forest areas along the river, the farming systems and crops of the indigenous people, and aquatic fauna.

The first 'modern' scientific exploration of the Amazon region was by Alexander von Humboldt and Aimé Jacques Goujaud Bonpland, who would prove the existence of a water connection between the Amazon and Orinoco river systems. After von Humboldt, a number of scientific explorers and adventurers came – including von Spix and von Martius, who made huge botanical and zoological collections in the Brazilian Amazon in 1817-1820. Henry William Bates, who spent 11 years in the interior of Amazonia, amassed the single largest collection of insects ever made by one individual in the region, collecting nearly 15,000 species, about 8,000 of which were new to science.

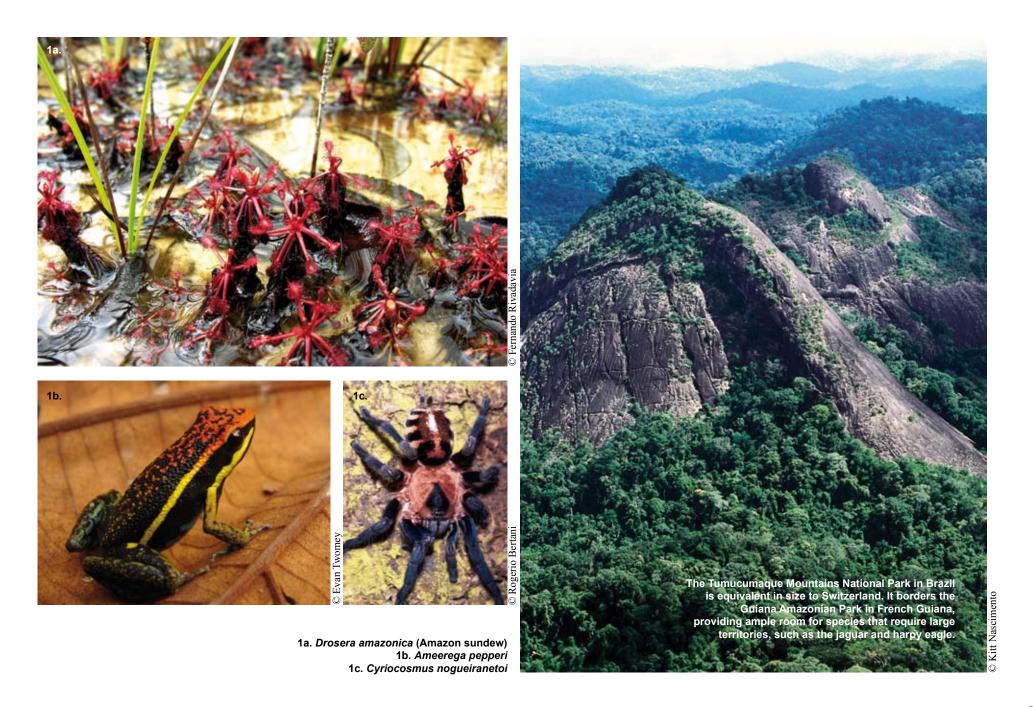
### Protected areas

Increases in the coverage of the Amazon protected area network, and with it the securing of important habitats, ecosystems, and biological diversity, have certainly aided scientists in their discoveries of new species.

One of the most high-profile protected areas is Tumucumaque Mountains National Park, established in 2002. The park's borders were strategically designed to protect its high biodiversity and were conceived by WWF and IBAMA (the Brazilian Institute of Environment and Renewable Natural Resources), under the guidance of Brazil's Ministry of the Environment. At 38,800 sq km, the park is the world's largest tropical forest national park – equivalent in size to Switzerland. Threatened species there include jaguars and harpy eagles, animals that require large areas of rainforest for their survival.

With support from the Amazon Region Protected Areas (ARPA) programme, by the end of 2009 a total of 25 million hectares of new protected areas had been created in the Brazilian Amazon, more than doubling the area under protection prior to the programme's initiation.

The park's designation was the first success of the ARPA programme, which is securing long-term protection for some of the Amazon's most important biological and ecological features in a system of well-managed parks and reserves. In protecting key portions of the Amazon forest, ARPA is also providing security to numerous local communities that depend on the forest, while protecting an amazing range of bird, mammal, fish, reptile and amphibian species. It is expected that ARPA will eventually support the establishment and effective management of 60 million hectares (600,000 sq km) of protected areas in the Brazilian Amazon.





Ecuador's Yasuni National Park has possibly the highest biological diversity in the world. Manu National Park in Peru, a UNESCO World Heritage Site, is home to 850 species of birds, and protects 10% of plant species on Earth. A single hectare of rainforest in Manu can shelter more than 220 species of trees, whereas in Europe and North America a hectare of temperate woodland might have only 20 species of trees.

It is in parks such as these that scientists have been able to further explore the wild and beautiful rainforest and the real extent of the biodiversity found in Amazon. This has led to some remarkable species being discovered by dedicated scientists in the last decade. Recent surveys have yielded extraordinary results, such as the rufous twistwing (Cnipodectes superrufus), discovered in Manu National Park; the Amazon sundew (Drosera amazonica) discovered in the Parque Estadual do Rio Negro Setor Sul in Brazil; a new snake species (Atractus tamessari) discovered in the Kaieteur National Park, Guyana; and a stunning poison dart frog (Ranitomeya amazonica) from the Reserva Nacional Alpahuayo Mishana, Peru.

Such is the phenomenal rate of discovery in the Amazon that between 1999 and 2009 at least 1,222 new species of plants and vertebrates have been discovered in the region. The new species include 637 plants, 257 fish, 216 amphibians, 55 reptiles, 16 birds and 39 mammals, in addition to thousands of new invertebrate species not covered in detail by this report.

Many of the new species are highly endemic or rare, further highlighting the importance of protected areas in the conservation of species.

But this represents just scratching the surface of the Amazon. Much remains unknown to scientists. The scientific world is only just realising what indigenous people in the Amazon have known for centuries: the many ancestral cultures still alive in the Amazon have a deep knowledge of the riches of the region. This knowledge may prove essential for the success of future efforts to preserve them.

Right: Brazilian ornithologist Alexandre Aleixo from the Museu Paraense Emilio Goeldi with a scythebill.

It is one of 11 species with no known scientific description discovered during a scientific expedition, supported by WWF, to the Altamira National Forest in 2009.

### Scientific expedition traverses unstudied areas in Brazil

In June 2009, WWF supported a scientific expedition to the Altamira National Forest, a 689,012ha protected area in the heart of Pará State, Brazil. This part of the Amazon still holds secrets unknown even to the most experienced researchers.

The expedition discovered 11 species with no known scientific description in the depths of the national forest: eight fish species, a possibly new genus of crab and two species of birds.

The new species of fish include catfishes from the Trichomycteridae family (catfishes), two species of ray-finned fishes from the Anostomidae family, two characids (Characidae) and one armoured catfish (Loricariidae). Two unfamiliar bird species discovered in the area, including a kind of scythebill (*Campylorhamphus sp.*), are expected to be confirmed as a new species this year.

WWF supports scientific expeditions as part of our efforts in promoting the creation of protected areas in the Amazon region. In Brazil, we've organised 10 expeditions in the last five years to raise information and scientific data about the flora and the fauna of the region. This information is used to create new protected areas or to strengthen existing ones.



### **Plants**



Already home to around 40,000 species of plants, the world's largest rainforest revealed 637 new plant discoveries in the last 10 years.

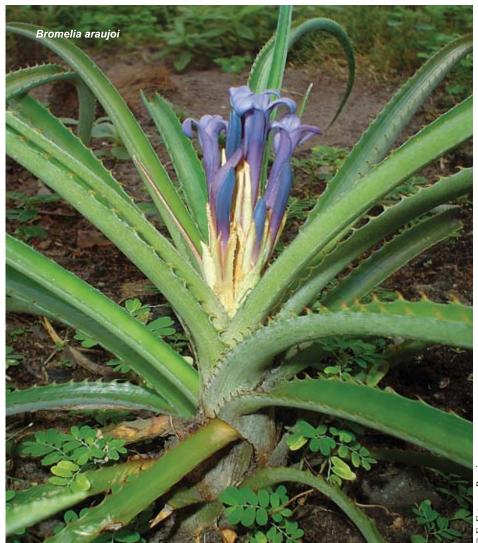
To say that the Amazon possesses a high number of plant species is a considerable understatement. The scale of plant diversity uncovered by scientists in some areas of the Amazon is mindboggling. For example, 473 tree species and a total of 1,000 vascular plant species have been documented in one hectare of lowland rainforest in Amazonian Ecuador<sup>11</sup>, and 3,000 species have been found in 24ha in the Chribiquete-Araracuara-Cahuinarí region of the Colombian Amazon<sup>12</sup>. What's more, the level of scientific knowledge regarding plant diversity in the region is far from its peak.

Within the last decade, hundreds of new plants, with a staggering diversity, have been recorded. The plants are from an eclectic mix of plant families and include herbaceous, perennials and bulbous flowering plants, trees and shrubs, vines, ferns and lilies.

Among the huge number of new species are members of the custard apple family (Annonaceae), dogbane family (Apocynaceae), ivy family (Araliaceae), palm family (Arecaceae), daisy or sunflower family (Asteraceae), and forget-me-not family (Boraginaceae). There have also been additions to the bromeliad family (Bromeliaceae – known for the pineapple), heath or heather family (Ericaceae), torchwood or incense family (Burseraceae), caper family (Capparaceae), spurge family (Euphorbiaceae), laurel family (Lauraceae), mallow family (Malvaceae – which includes hibiscus), and myrtle family (Myrtaceae – known for clove, guava and eucalyptus).

Numbers in the cabbage family (Brassicaceae), melon family (Cucurbitaceae) and the Solanaceae family have also swelled. The latter is famous for agriculturally-important plants like the potato, pepper, tobacco and tomato, but also toxic plants like the deadly nightshade.

An expedition revealed the existence of a new, undescribed endemic sundew in the Pakaraima mountains south-east of the famous Mt Roraima, which is



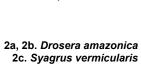
at the border of Venezuela, Guyana and Brazil<sup>13</sup>. The species *Drosera solaris* was officially described in 2007 and recorded only from swamps on a small plateau at 2,065m, just below the summit of Mt Yakontipu. It was discovered in an isolated population within a small clearing in the cloud forest. The name 'solaris' (Greek for 'sunny' or 'sunloving') was chosen to illustrate the bright and shiny appearance of this sundew, with its bright yellowish-green petioles, which contrast with its bright red leaf blades. These bicoloured rosettes are unique among all known South American species of *Drosera*<sup>14</sup>.

One of the more bizarre finds is a tree that grows 'noodles'. Officially described in 2004, *Syagrus vermicularis*<sup>15</sup> is a medium-sized, solitary, attractive palm that grows to about 10m tall, with a smooth, green trunk thinly covered by a whitish velvety layer. It has a dense crown of dark green fronds made up of soft, glossy, pinnate leaves which form a graceful, arching canopy. The tight squiggling tangle of bright yellow 'noodles' form the palm's newly-emerging flowering shoots. After considering a fun name, like *Syagrus ramennoodlensis*, Dr Larry Noblick opted for something that sounded a bit more sophisticated: *Syagrus vermicularis* (Latin for 'resembling a worm'). The species was originally described from Maranhão, Brazil, but has since also been discovered in Carajás, Pará, Tocantins, Rondônia and possibly in Mato Grosso<sup>16</sup>.

Among other new discoveries are an incredible 78 new orchid species.

"Pleased hardly describes how ecstatic I felt when I finally discovered this plant after 10 years of searching for it".

Dr Fernando Rivadavia, discoverer of the Amazon sundew (Drosera amazonica)









### The Amazon sundew, a discovery 10 years in the making

Particularly significant, owing to its unusual location and its sheer abundance, was the discovery of the Amazon sundew (*Drosera amazonica*) officially described by scientists in 2009<sup>17</sup>. This plant species is red and yellow, and grows to just 10cm tall. Because the species is found on white quartz sand savannas, which are seasonally flooded, the soil is highly acidic and extremely poor in nutrients. To supplement the poor mineral nutrition that these species can derive from the soil, they lure, capture and digest insects using glandular tentacles topped with sticky secretions, and exude a sweet perfume.

After 10 years of searching for the elusive plant, in 2006 Dr Fernando Rivadavia found two extensive populations roughly 500m apart in the Parque Estadual do Rio Negro Setor Sul, a protected area relatively safe from deforestation. The two populations were located on opposite sides of a small tributary of the Cuieiras river, which empties into the Rio Negro in Amazonas state. Here, in natural clearings in the rainforest consisting of savannah vegetation and wet-sandy habitats, the new *Drosera* was encountered growing by the "millions". Another population of the species was discovered around 450km north of this area in the Viruá National Park, in the central part of Roraima state<sup>18</sup>.

This find is particularly significant as very few *Drosera* species are found in the lowlands of Brazil. Those that have been recorded occur in sandy coastal habitats. Very few have been discovered inland, as *Drosera amazonica* was.

## Fish



More species of freshwater fish can be found in the Amazon than anywhere else. The mightiest river basin in the world has been the location of some remarkable new species discoveries over the past decade. At least 257 new fish species have been found in the Amazon's rivers and tributaries, including three new species of piranha, a goliath catfish and a bright red subterranean blindfish.

A new giant catfish was discovered here in 2005. The so-called 'goliath catfish', *Brachyplatystoma capapretum*, was found in the Amazon river. A migratory species, the fish has been recorded from Belém, Brazil, upriver to at least Iquitos, Peru, and in several large tributary rivers and lakes<sup>19</sup>. A record specimen of this fish, measuring nearly 1.5m and weighing 32kg, was later caught in 2007 in the Rio Pasimoni, Amazonas, Venezuela. The *Brachyplatystoma* genus includes some of the largest Amazonian catfish species, including the piraíba (*Brachyplatystoma filamentosum*), which reaches about 3.6m and can weigh 200kg. Although normally having a diet of fish, the stomach contents of larger members of the genus have occasionally included parts of monkeys<sup>20</sup>.

One of the most colourful discoveries has been a green and red variety of the bloodfin tetra family. The species identified in 2003<sup>21</sup> has been given the Latin name *Aphyocharax yekwanae* in honour of the Ye'Kwana Indians who live in the area, which consists of pristine tropical forest and waterways tucked away in the highlands. Experts fear that the 5cm-long new species, as well as the Ye'Kwana who depend on the water, could eventually fall prey to encroaching human settlements as well as the adverse effects of increased farming and fishing. The region could also be threatened by future hydroelectricity plans.

A number of strikingly coloured species from the genus *Apistogramma* have been discovered from areas of the Amazon in Peru and Bolivia. These include the species *Apistogramma barlowi*, officially recorded as new to science in 2008<sup>22</sup>. Discovered in the region of Loreto in the Peruvian Amazon, it is quite different from all other *Apistogramma* species in that the species has an enlarged head and mouth, with massive jaws. Females take their larvae into

their mouths and keep them inside during development, right up to the freeswimming stage. The larvae are usually put down only to allow the females to feed.

A rather unusual fish was discovered in 2009 in the Amazon river in Peru and Brazil<sup>23</sup>. The electric knifefish (*Compsaraia samueli*) is strange in that the males exhibit an extremely elongated and smooth snout and jaws. The species is semi-translucent white, fading to semi-translucent pink, giving the species its specific name of 'pelican knifefish'. Few specimens of *Compsaraia samueli* are known, and the ecology of this species is poorly understood. Males are highly aggressive and prone to fighting each other. This can escalate from noncontact aggressive posturing to biting and jaw-locking within minutes. Such sparring is used by sexually mature males to assess dominance in competing for nest sites and/or females. Electric knifefish are so called because they emit a high frequency wave to communicate.

New species are sometimes discovered in the unlikeliest places. The new catfish *Phreatobius dracunculus*, described in 2007 from Rondônia State, Brazil, is one of the most peculiar members of neotropical freshwater fish fauna. It lives mainly in subterranean waters, and most specimens so far have been secured from hand-dug wells<sup>24</sup>. The bright red species is blind and tiny, measuring only 3.5cm long. According to locals in Rio Pardo, a village 90km south of the city of Porto Velho, in the state of Rondônia, the fish began to appear after a well was dug, and were accidentally trapped in buckets used to extract water. The species has since been found in another 12 of 20 wells in the region. Because of its appearance, and perhaps due also to its underground nature, scientists named the species dracunculus – the Latin *draco* meaning dragon. The discovery also extended the known range of the *Phreatobius* by an extraordinary 1,900km.

There are certainly many more fish species to be discovered in the Amazon. For example, a recent expedition to the Serra do Cachimbo Xingu and Tapajos rivers in Pará State, Brazil, to sample a very species-rich and poorly known ichthyofaunal region in the neotropics, recorded nearly 250 species of fishes,





3a. Otocinclus cocama © Ingo Siedel 3b. Apistogramma baenschi © Kris Weinhold 3c. Apistogramma baenschi © Nicholas Poey 3d. Compsaraia samueli © William Crampton 3e. Hypancistrus contradens © M.H. Sabaj 3f. Brachyplatystoma capapretum © John G Lundberg 3g. Aphyocharax yekwanae © Barry Chernoff 3h. Phreatobius dracunculus © Janice Muriel Cunha 3i. Compsaraia samueli © Mark Sabaj-Pérez

including at least 86 species of catfish. Of this number, approximately 35 (40%) are considered to be new to science<sup>25</sup> and are currently in the necessary, but laborious, process of official description, which can frequently take years. Scientists say that with so many threats facing fish in the region, it really is a case of too many fish and too little time.

### New piranha species

The Amazon contains 20 freshwater ecoregions<sup>26</sup>, rich areas of diversity that are globally significant. Among these flows the Uatumã river, a tributary of the Amazon in the state of Amazonas, Brazil. In 2000, among dense rainforest, a new species of piranha was discovered here<sup>27</sup>. The species Serrasalmus altispinis can grow to 19cm in length and is predatory. Species in the Serrasalmus genus feed themselves mainly on the fins and scales of other fish, and do not need the same musclepacked lower jaw to rip through muscle and bone. With the exception of a few species, piranhas from this genus are solitary and do not feed in shoals. In general, they will not tolerate other fish, and are very aggressive and territorial. Due to lack of research, their behaviour in the wild is largely unknown. Piranhas are split into 11 separate genera, with some fish in the Serrasalmus genus certainly among the largest, and some species capable of exceeding 50cm.

Described in 2002, the species Tometes lebaili<sup>28</sup> and Tometes makue<sup>29</sup> are different from others in the genus because both are herbivorous, feeding mainly on the Podostemaceae river weed family of aquatic herbs. They are also unusual in that they are both giants, capable of reaching over 50cm in length. Both species were found in the northern Guiana shield region. According to Dr Michel Jegu, one of the scientists who discovered the species, both piranhas are endemic to the area in which they were found, and are directly and highly dependent on the persistence of the Podostemaceae aquatic herbs on which they feed. The Podostemaceae in the region is fragile, with the health of the weed depending on the frequency of the rising water, the water quality and the clearness of water for photosynthesis. Threats including hydroelectric dams, the effluents of mining, and the gathering of the weed for drug companies are increasing the pressures on this unique food source<sup>30</sup>.





# Amphibians

new amphibian species

Beneath the canopy of the largest rainforest in the world, 216 new amphibian species have been discovered in the last decade.

Between 1999 and 2009, 24 new poison dart frogs spanning four different genera were discovered by scientists. The overwhelming majority have been found in the Peruvian Amazon. Poison dart frogs are small – between 1.5cm and 6cm - vibrantly coloured and toxic. In the wild, the frogs use their toxicity to defend themselves against would-be predators.

The species Ranitomeya benedicta, officially described in 2008<sup>31</sup>, has a striking appearance: a black body and limbs, with blue markings that resemble a water pattern. Its head is bright red, with black markings over the eyes. Some populations have a greater amount of blue on their bodies, causing the legs and back of the body to seem uniform blue. The species is widely distributed in the lowlands of the Loreto and San Martin regions of Peru.

Equally stunning is the species Ranitomeya summersi, also discovered in 2008<sup>32</sup>. Although from the same genus, the species is remarkably different from Ranitomeya benedicta in that the frog is jet black with orange cross-bands that almost seem to be painted on to the frog. The frog's face is orange, with a black mask over the eyes. The species is known from the San Martin region of the Peruvian Amazon.

There has also been a host of stunning poison dart frogs from the Ameerega genus. These include the formal description in 2009 of the species Ameerega yoshina, Ameerega ignipedis and Ameerega pepperi, from Ucayali and Huallaga in Peru<sup>33</sup>.

The common name, poison dart frogs, is derived from the practice of indigenous people in the Chocó forests of western Colombia, who rub their blowgun darts onto the backs of the frogs (historically the species Phyllobates terribilis or the golden poison frog) to load the darts with poison when hunting animals<sup>34</sup>. Despite their name, only three frogs in Colombia are documented as being used for this purpose. Poisonous plants are more commonly used.

It is not just Peru that can showcase some extraordinary-looking new frogs. In Amazonian Ecuador, Nympharqus wileyi is known only from the cloud forests in the vicinity of the Yanayacu Biological Station, Napo Province<sup>35</sup>. The species was described in 2006 and is known only from six specimens collected during three years of inventory work at Yanayacu. This suggests that Nymphargus wileyi is a rare species<sup>36</sup>. The species is a so-called glass frog. While glass frogs have a general background colour of vivid lime green, the abdominal skin of some members of this family is transparent. The heart, liver and gastrointestinal tract are visible through this translucent skin, hence the common name.

If transparent frogs were not amazing enough, imagine the surprise of the scientist who discovered a black frog with psychedelic shocking pink rings. Although currently awaiting formal description, the new species from Suriname, believed by scientists to belong to the Atelopus genus<sup>37</sup>, is otherworldly. While science is still unable to ascertain the status of the pink frog, the species deserves a mention as a further example of the bewildering array of life still being uncovered in the Amazon.













4a. Ameerega pongoensis 4b. Ranitomeya summersi 4c Scinax iquitorum (male) 4d. Hypsiboas liliae (male) 4e. Nymphargus wileyi



### Ranitomeya amazonica

Perhaps presenting the best of Amazon diversity, uniqueness and wonderment, Ranitomeya amazonica is certainly one of the most extraordinary new species. Described in 1999, from north-eastern Amazonian Peru<sup>38</sup>, the pattern displayed by the species is simply stunning. The frog has an incredible burst of flames on its head, and starkly contrasting water-patterned legs. The main habitat of this species, near the Iquitos area in the region of Loreto, is primary lowland moist forest. The frog has also been encountered in the Alpahuayo Mishana National Reserve. Although the park affords the species some protection, this frog is currently threatened by increasing habitat loss occurring in the south of the protected area due to agricultural activities. In addition, because of the species' attractive appearance, it is currently threatened by wildlife trade<sup>39</sup>.

## Reptiles



new reptile species

A turtle, 28 snakes and 26 lizards have been discovered in the Amazon in the last 10 years. The 55 new reptile species discoveries dot the landscape, with species steadily emerging over the years in all the states that comprise the Amazon.

Two of the new discoveries are members of the Elapidae family. This is the most venomous snake family in the world and includes among its number the taipans, black mamba, cobras, fierce snake, and sea snakes. The coral snake, Micrurus pacaraimae, was discovered in 2002 in Brazil's border with Venezuela, in the state of Roraima<sup>40</sup>. The 30cm, red and black-ringed species is one of over 65 known species, and many are among the most venomous snakes in the Amazon. A further species, Leptomicrurus reniifoi, was found in the tropical semi-deciduous forest of the eastern Colombian llanos, a grassland in the Amazon<sup>41</sup>. Officially described in 2004, this 40cm species, a so-called short-tailed coral snake, is unique in that it is the smallest of its genus and differs from other coral snakes by possessing a pattern of black rings separated by equally long (or longer) pale orange rings. The eastern llanos of Colombia is a complex of savannahs and a dozen types of forests. It is also home to the endemic Orinoco crocodile (Crocodylus intermedius), a species that reaches 7m, and is one of the most critically-endangered reptiles on Earth.

Another vibrantly-coloured snake species, *Pseudoboa martinsi*, was described in 2008 from the Amazon States of Pará, Amazonas, Roraima and Rondônia, Brazil<sup>42</sup>. The new metre-long species has a black head cap, a large black vertebral stripe, bright red flanks, and a uniformly white belly. One of the most notable characteristics of pseudoboine snakes is the developmental colour change that individuals undergo. Scientists suggest this is likely to be related to their reaching sexual maturity. The new species, however, is unique among its contemporaries as it retains its pale collar and bright colour pattern throughout its life.

Individuals of this new species were found in both primary and disturbed

forested areas. The species seems to be predominantly nocturnal and secretive, and was found foraging at night among the leaf litter of a primary forest, near streams. According to scientists, despite its bright colouration and the fact that it is known to eat other snakes, when handled the species was harmless, and did not attempt to constrict or bite. The species is a member of the Colubridae family, a predominately harmless and non-venomous family, which accounts for roughly two thirds of all snake species on Earth, including a vast majority of the new Amazon snake discoveries.

Thirteen new species of colubrid snakes from the *Atractus* genus, or ground snakes, were also discovered over the past decade. Most of the nearly 100 species comprising the genus have restricted distributions. In Guyana, where knowledge of the herpetofaunal diversity is still very limited, a new species, *Atractus tamessari*, was discovered in Kaieteur National Park. The snake is medium brown to brownish-black, with dark brown mottling and rust-coloured spots<sup>43</sup>. A further species, the tiger-striped *Atractus davidhardi* was described a year later from the Brazilian and Colombian Amazon<sup>44,45</sup>.

Snake discoveries in the Brazilian Amazon have been particularly prevalent but, despite this, up to 30% of the Brazilian fauna of snakes is still unknown, according to the Brazilian Society of Herpetology. This means more than 100 species could yet be discovered, with the total number of snakes exceeding 350.

Other significant reptile finds include a new turtle, found in an array of Amazonian habitats in the upper Amazon basin, including southern Venezuela, western Brazil, north-eastern Peru, eastern Ecuador and south-eastern Colombia. The new Amazon toadhead turtle (*Batrachemys heliostemma*), discovered in 2001<sup>46</sup>, is a medium to large-sized toadhead turtle and has a large, wide, round head. The name given to the species is a combination of Greek: *helios*, 'sun', and *stemma* 'wreath', in reference to the bright yellow-orange horseshoe-shaped facial bands the species displays on its head. Little is known of the behaviour or feeding preferences of this species in the wild,



5a. Pseudoboa martinsi 5b. Atractus davidhardi

<sup>5</sup>c. Anolis cuscoensis

<sup>5</sup>d. Anolis williamsmittermeierorum



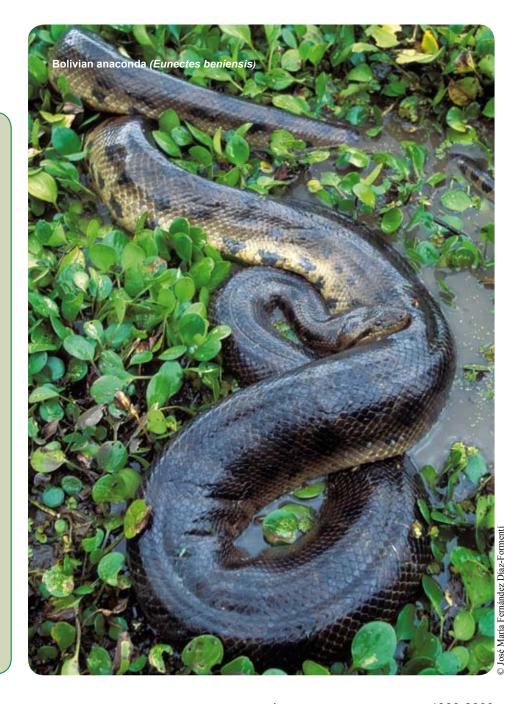
but it seems to prefer shallow and clear waters, and has been observed only in high, non-flooded forests near permanent water bodies and slow-moving streams.

### A new anaconda for the Amazon

Among the incredible new species finds is a new species of perhaps one of the most well-known and feared reptiles of the Amazon: the anaconda<sup>47</sup>. Described in 2002 from treeless-savannas of Bolivia's north-eastern Amazon province, the new species was initially believed to be the result of hybridisation between green and yellow anacondas. However, after further morphological and molecular genetic studies, the snake was determined to be a distinct species and subsequently named the beni, or Bolivian anaconda (*Eunectes beniensis*)<sup>48</sup>. The species was subsequently found also in the floodplains of Bolivia's Pando province. The new anaconda is particularly significant, as the snake is the first valid anaconda species to be described since 1936, and joins only three other known anaconda species.

The Bolivian anaconda can grow up to a lengthy four metres, but possibly even longer according to scientists. Its basic colour is brown to dark olive green, possessing five stripes on its head, and is patterned with fewer than 100 large, dark, solid blotches – fewer and larger than other species. According to experts, the Bolivian anaconda is more closely related to the yellow anaconda (*Eunectes notaeus*) and the dark-spotted anaconda (*Eunectes deschauenseei*) than to the green anaconda (*Eunectes murinus*).

All anacondas are primarily aquatic boas, with small, dorsally-positioned eyes and relatively narrow heads. They predominantly rely on ambush – catching, suffocating and eating a wide variety of prey, almost certainly anything they can manage to overpower, including amphibious and aquatic reptiles, mammals and birds as well as fish. Large individuals have even been known to eat large caiman, and mammals as big as capybaras, tapirs and jaguars.



## Birds



new bird species

A total of 16 new bird species have been discovered in the Amazon in the past 10 years. The new avian additions to the region span a diverse range of bird families and include the discovery of a raptor from southern Amazonia. The cryptic forest-falcon (*Micrastur mintoni*) was discovered in 2002<sup>49</sup>. This Brazilian species has bright orange skin around its eyes. The overall population of the falcon is presumed to be large, given its wide range. But little is generally known about this new species.

In 2007, a new bird was described from the Peruvian Amazon<sup>50</sup>. The rufous twistwing (*Cnipodectes superrufus*) displays a multitude of red-brown variations. Despite extensive ornithological research in the south-eastern region of Madre de Dios, this species had escaped notice, largely because of its inaccessible natural habitat: it is restricted to thickets of thorny 5m-tall bamboo (*Guadua weberbaueri*), a habitat poorly surveyed in Amazonia.

Originally only known from a few sites in Madre de Dios and a neighbouring region, the known distribution of the bird was later extended from 3,400 to 89,000 sq km of Guadua-dominated forest across Madre de Dios (Peru), Pando (Bolivia) and Acre (Brazil). The former includes Manu National Park<sup>51</sup>.

According to scientists, the rufous twistwing is probably the least abundant of all bamboo specialists in Amazonia. The risk of extinction in the short term is low, but recent development projects, including the paving of the Interoceanic highway, will increase human settlement and habitat destruction in the region<sup>52,53</sup>. In addition, the socioeconomic value of large bamboos and the increasing tendency to harvest them<sup>54</sup> suggest the extent of suitable habitat for the species may decline in the future.

Already considered critically endangered is the Iquitos gnatcatcher (*Polioptila clementsi*), discovered in 2005<sup>55</sup>. Also from the Peruvian Amazon, this new bird was discovered in the Reserva Nacional Allpahuayo-Mishana, just west of Iquitos, in the Loreto region of Peru. It is a rare sight in the white-sand forest it inhabits. Surveys of available habitat within the reserve have only located 15 pairs. And since its discovery, the species has apparently become more difficult

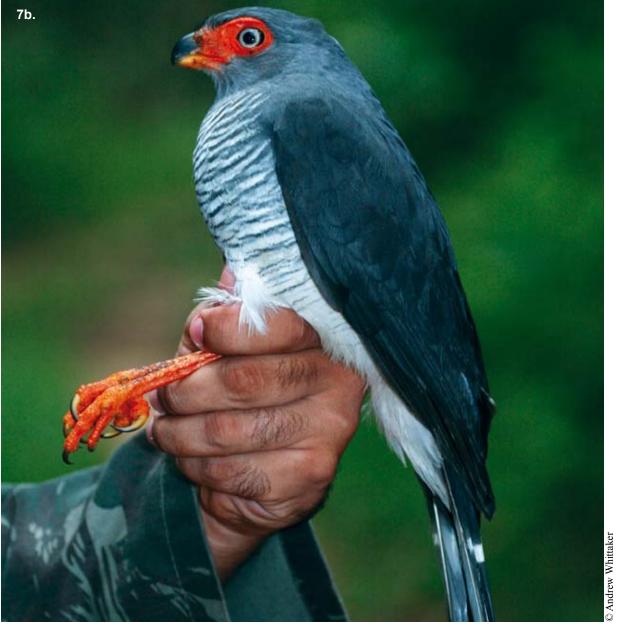
to locate year on year. Today the species is at real risk of extinction, owing to an extremely small range and population, and deforestation in the zone. Available habitat continues to be threatened by clearance for agriculture, facilitated by government incentives to encourage colonisation of land surrounding Iquitos; and logging of forest within a national reserve, for construction, fuelwood and charcoal<sup>56</sup>. The ancient and slow-growing varillal forests, prime habitat of *Polioptila clementsi*, occur on especially nutrient-poor, quartzitic soils, and may never be able to regenerate if destroyed<sup>57</sup>.

Amazonian forests growing on white sand and other nutrient-poor soils hold many ornithological surprises. A few years earlier, in 2001, another new species, the mishana tyrannulet (*Zimmerius villarejoi*) was described, again from the white-sand varillal forest near Iquitos, in the Loreto region of Peru<sup>58</sup>.

Among the many birds of the Amazon, parrots are often the most spectacular in colour. The bald parrot (*Pyrilia aurantiocephala*, originally known as *Pionopsitta aurantiocephala*), a member of the true parrot family, caused a sensation when it was described in 2002<sup>59</sup>, mainly because it is hard to believe that such a large and colourful bird could have escaped the notice of the world. As its name suggests, the species has an extraordinary bald head, devoid of plumage, but is otherwise a strikingly colourful bird. It displays an extraordinary spectrum of colour, from an "intensely orange-coloured head"<sup>60</sup>, to yellow-green nape, parrot green body with wings of green, suffused with ultramarine blue, cyan, orange-yellow, emerald green and scarlet, and feet of orange-yellow.

The parrot is known only from a few localities in the Lower Madeira and Upper Tapajós rivers in Amazonian Brazil. It is currently known only from two habitat types and from a relatively small area. This population of birds is currently under threat from logging; scientists point out that although the region in which they collected specimens of *Pionopsitta aurantiocephala* is currently economically managed through environmental tourism, nearby regions around the headwaters of the Tapajós river and the entire southern fringe of Amazonia are constantly threatened by the destructive activities of logging companies<sup>61</sup>.





7a. Bald parrot (Pionopsitta aurantiocephala) 7b. Cryptic forest-falcon (Micrastur mintoni) 7c. Rufous twistwing (Cnipodectes superrufus)



The species has been listed as 'near threatened', due to its moderately small population, which is declining owing to habitat loss<sup>62</sup>.

A further new species of parrot, *Aratinga pintoi*, was found in the Amazon river basin in 2005<sup>63</sup>. The sulphur-breasted parakeet, as the species is commonly known, was found only in open areas with sandy soils in Monte Alegre, on the northern bank of the lower Amazon river, in the State of Pará, Brazil. The species has a splendidly-coloured body, adorned with a green crown, orange forehead, a yellow back mottled with flecks of green, a sulphur-coloured breast, and bright blue wing tips. It was originally believed to be a juvenile of another species or a hybrid of two species and, remarkably, scientists had been collecting, examining and misidentifying the species since the beginning of the 20th century. Today, *Aratinga pintoi* is a fairly common bird at Monte Alegre, easily located along the main roads in groups of up to 10 individuals, and flying over the city. However, as is usual with new species of parrots, scientists now fear that breeders will soon begin to obtain and trade these birds through the illegal market<sup>64</sup>.

Some scientists are concerned not just about the conservation of the threatened, endangered and newly-described Amazonian avifauna, but foremost about the "forgotten taxa" out there Many species are desperately waiting on dedicated ornithologists and often poorly-funded South American museum staff to dedicate their own time and finances to officially describe the birds, while there is also a huge demand for ecological studies to better understand and define the threat status of a large number of 'data deficient' species. Like a race against time, ornithological research to describe properly this planet's richest and most complicated avifauna is lagging behind the pace of development in the region, and many species are already endangered endangered.



### Mammals



new mammal species

In the last decade, 39 new species have joined the large list of mammals found in the Amazon. The new mammal species found in the Amazon include a pink river dolphin, seven monkeys, two porcupines, eight mice, nine bats, six opossums, five rats and a guinea pig.

In 2001, two new species of porcupines were discovered in the Amazon<sup>67</sup>. The new species are unique in that they provide the first documented records of small porcupines from western Amazonia, where only large porcupines (Coendou prehensilis and Coendou bicolor) were previously known. Coendou ichillus was encountered in dense rainforest in the Amazonian lowlands of eastern Ecuador. This species is distinguished from others by its long tail, a lack of visible fur in the adult pelage, quills with more extensive black tips, and pale-tipped tricolored bristle-quills. It has many 8cm-long quills, and has a dark-brown or blackish middle band. The particular name given to this species, ichilla, means 'small' in the dialect of the lowland Quichua, within whose tribal territory the new species occurs.

The second porcupine, *Coendou roosmalenorum*, is from both banks of the middle Rio Madeira, Brazil, a major Amazonian tributary and one of the largest rivers in the world. Remarkably, this species was captured during the course of faunal rescue efforts at the Samuel hydrolectric dam site. At 600g, scientists believe that *Coendou roosmalenorum* may be one of the smallest living erethizontids (large arboreal rodents).

Seven new monkey species were also discovered during the period. An inhabitant of the lowland Amazon rainforest, the Rio Acari marmoset (*Mico acariensi*), discovered in 2000, is a marmoset species endemic to Brazil<sup>68</sup>. It was originally being kept as a pet by inhabitants of a small settlement near the Rio Acari, in central Amazonia, Brazil. The species weighs 420g, is 24cm tall, with a total length of 35cm, and it has a striking bright orange coloration of its lower back, body underparts, legs and tail base. This species occurs in a relatively remote region of the Amazon, away from major human disturbance. It has not been studied in the wild, and there is currently no reliable information on its population status or major threats.







8a. 8b. Bolivian river dolphin (Inia boliviensis)

### The Bolivian river dolphin

The Amazon river dolphin, or pink river dolphin, was recorded by science in the 1830s and given the scientific name of *Inia geoffrensis*. In 1977, it was first suggested that the Bolivian river dolphin could be a distinct species. In the last decade, genetical science has provided further evidence that it is indeed a separate species – *Inia boliviensis* – although some still consider it a subspecies of *Inia geoffrensis*. Known locally as the bufeo, the Bolivian river dolphin is separated from its closest neighbours in Brazil by a series of 18 rapids along a 400km stretch of the Madeira River between Bolivia and Brazil, which would account for its evolutionary distinctiveness. When the Bolivian river dolphin was identified as a separate species in 2006, it was immediately adopted by the Beni departmental government as a symbol of the region's conservation efforts.

In contrast to Amazon river dolphins, their Bolivian relatives have more teeth, smaller heads, and smaller bodies. Scientists also consider the species to be wider and rounder.

The declaration of the new species happened during the first-ever South American river dolphin census, which was led by Fundación Omacha, Wildlife Conservation Society, Whale and Dolphin Conservation Society, Faunagua, WWF and other partners. Over 15 months, from 2006 to 2007, scientists navigated over 2,000 miles between the Amazon and Orinoco rivers and their tributaries. They surveyed 13 rivers in five countries – Bolivia, Colombia, Ecuador, Peru and Venezuela – and counted more than 3,000 river dolphins. Scientific studies of the dolphin helps to measure and evaluate threats to these freshwater systems, including pollution from hydrocarbons and mercury, and the impact of infrastructure projects such as dams and waterways.

As a unique and endemic species for Bolivia, this river dolphin is considered an important indicator of the quality of the freshwater ecosystems it inhabits. During the expedition along the Iténez river in Beni, a total of 1,008 Bolivian river dolphins were sighted in good conservation state.

### Invertebrates



new invertebrate species

Ants from Mars, and purple tarantulas...

In Brazil alone, which encompasses 60% of the Amazon region, between 96,660 and 128,840 species of invertebrates have been described by scientists to date<sup>69</sup>. Dominating the Amazon, insects make up over 90% of the animal species found here. About 50,000 species of insects can be found in any 2.5 sq km of the forest. Many thousands of new invertebrates have been discovered in this region since the beginning of the new millennium. These have not been included in the appendix, but a selection of the new finds is presented here.

At least 503 new spiders have been discovered in the last 10 years across the Amazon, spanning a diverse number of arachnid families<sup>70</sup>.

The genus *Pamphobeteus* comprises some of the largest spiders in the world. Two new species in the genus were recently discovered in the Brazilian Amazon: *Pamphobeteus crassifemur*, a striking black species from the states of Rondônia and western Mato Grosso; and *Pamphobeteus grandis*, from Amazonas and western Acre<sup>71</sup>. The latter is particular interesting as this tarantula has a striking purple colouration. Found deep in the Amazon forest, the name of this species means 'huge' – the spider's body measures over 6cm long.

Further new tarantula species include *Cyriocosmus nogueiranetoi* from Rio Branco, Acre<sup>72</sup>. This reddish-brown species, officially described in 2005, has an unusual pattern on its back: five pairs of clear 'tiger-stripes'. Species in the *Avicularia* genus, or pinktoes, have very distinguishable pink feet pads. The bluegreen pinktoe (*Avicularia geroldi*), so named because it is blue with a metallic sheen, was found in the Amazon regions of Venezuela and Brazil<sup>73,74</sup>. According to experts, this spider is quick, but not aggressive. A key characteristic of species in the *Avicularia* genus is their preference for jumping and fleeing as quickly as possible when threatened. Occasionally, though, they will launch a jet of excrement at the perceived threat, which can accurately hit a target up to a metre away.







9a. Pamphobeteus crassifemur (female) 9b. Avicularia braunshauseni 9c. Cyriocosmus nogueiranetoi (female)





© Keegan Row



The bluefang (*Ephebopus cyanognathus*) is a remarkable-looking spider. Discovered in French Guiana in 2000, the species is entirely brown except for two vivid blue fangs<sup>75</sup>. Both *Avicularia* and *Ephebopus* spiders are considered to be bird eaters.

The Amazon rainforest is also famous for its many ant species. Some scientists estimate that 15% of the animal biomass of the Amazon is made up of ants<sup>76</sup>. A single Amazonian tree was found to have 43 species of ants, roughly the same number of ant species as all of Germany<sup>77</sup>.

A new species of blind, subterranean, predatory ant was described from the Brazilian Amazon in 2008. It belongs to the first new genus of living ants discovered since 1923, and is likely to be a direct descendant of one of the very first ants to evolve on Earth, over 120 million years ago<sup>78</sup>.

Dr Christian Rabeling, a scientist from the University of Texas at Austin, collected the only known specimen of the new ant species in 2003 from leaf litter at the Empresa Brasileira de Pesquisa Agropecuária area in Manaus, Brazil. An account of the discovery is given in primatologist Jane Goodall's latest book:

He found the pale, eyeless ant by pure chance. One evening, when it was nearly dark, he was sitting in the forest getting ready to go home. He saw a strange white ant walking over the leaf litter and, not recognising it, popped it into preservative in one of the small vials that he always carried and put it into his pocket. When he got back home, he was tired and had quite forgotten about it. Three days later, he found the specimen in the pocket of his pants. It was then that he realised he had found something extraordinary<sup>79</sup>.

The new ant was named *Martialis heureka*, which translates roughly as 'ant from Mars', because it has a combination of characteristics never before recorded. It is adapted for dwelling in the soil, is two to three millimetres long, pale, has no eyes, and has large mandibles, which Dr Rabeling and his colleagues suspect it uses to capture prey.

According to scientists, this discovery hints at a wealth of species, possibly of great evolutionary importance, still hidden in the soils of the remaining Amazon rainforest. Rabeling says his discovery will help biologists better understand the biodiversity and evolution of ants, which are abundant and ecologically important insects<sup>80</sup>.

Although not a new species discovery, it is nonetheless fascinating that in 2009 scientists found that the leaf-cutter ant species *Mycocepurus smithii* is all female<sup>81</sup>. Surviving in a world without males, the ants have evolved to reproduce only when the queens clone themselves. No male of the species has ever been found. According to experts, the unique asexual reproduction and cloning behaviour also renders the species vulnerable to extinction.





10a. Ephebopus cyanognathus

10b. Martialis heureka

10c. Cyriocosmus perezmilesi

10d. Avicularia braunshauseni

## Amazon under threat

Despite its magnitude, the Amazon is an increasingly fragile place. The world's biggest tropical forest is being cleared for cattle and crops.

By all accounts, compared to other tropical forests around the world, the Amazon is in relatively good shape. However, while the Amazon still has 83% of its natural ecosystems standing<sup>82</sup>, the picture is shifting rapidly. A disastrous combination of threats is increasingly eroding the Amazon's connectivity. And numerous endemic species are being subjected to waves of resource exploitation. After centuries of limited human disturbance, at least 17% – some 930,000 sq km – of the seemingly boundless forests of the Amazon have been destroyed in just 50 years<sup>83</sup>. This is an area greater than the size of Venezuela, or twice the size of Spain.

The primary cause of this transformation is the rapid expansion in regional and global markets for meat, soy and biofuels. These have increased the demand for land.

In almost every Amazon country, extensive cattle ranching is the number one cause of deforestation<sup>84</sup>. Of the 930,000 sq km of forest cleared in the Amazon by 2000, 80% was replaced with pasture. Amid rising overseas and domestic demand for beef, cattle numbers in the Amazon have more than doubled to 57 million since 1990.

Brazil is a giant for both cattle ranching and agriculture. In the case of livestock production, Brazil has 84% of the pasture land area and 88% of the Amazon herd. The next biggest producers are Peru and Bolivia<sup>85</sup>. In 2003, Brazil surpassed Australia as the world's largest exporter of beef. The area of the cattle industry where most of this growth is occurring is the Amazon, where Brazilian herds are expanding at an annual rate of 9% compared to the growth rate of 6% of the national herd<sup>86,87</sup>. The result has been an astonishing growth of the cattle industry in the Brazilian Amazon. Between 2004 and 2008, the supply of beef slaughtered from the Amazon States of Mato Grosso, Pará, Rondônia and Tocantins increased rapidly from 107 tonnes, with a value of US\$155 million, to 494 tonnes, with a value of US\$1.1 billion<sup>88</sup>.

In addition to forest conversion, cattle ranching is the main cause of conversion of floodplains in the Amazon<sup>89</sup>. Together with agricultural practices, it causes significant soil erosion and river siltation, as well as aquatic contamination through fecal matter from cattle and the use of agrochemicals<sup>90,91</sup>.

The second biggest driver of forest conversion is agriculture. In contrast to cattle ranching, agriculture in the Amazon is extremely diverse. At one end of the spectrum, there is small-scale agriculture for subsistence, producing crops such as manioc, beans, rice, corn, coffee, bananas and other fruit for subsistence. At the other end of the spectrum, and arguably of greatest impact, are the agro-industrial sectors, with trends of rapid expansion in the Amazon – particularly in Brazil and Bolivia.

Brazil is the world's number one exporter of orange juice, ethanol, sugar, coffee and soy<sup>92</sup>. Brazil's significant investment in the agro-industrial sector has rippled throughout the country and in the Amazon in particular. Soy production in the Brazilian Amazon has tripled, increasing from two million to over six million hectares from 1990 to 2006. Other crops such as sugar cane and palm oil for biofuels, as well as cotton and rice, are also expanding in the Amazon.

The cultivation of coca for cocaine production has been an important contributor to the conversion of forests found on the upper watersheds of the Amazon basin, and in the eastern slopes of the Andes in Colombia, Peru and Bolivia. The cultivation of illicit crops was responsible for half the area deforested in Colombia in 1998<sup>93</sup>.

Cattle ranching and agriculture are the two gravest threats facing the Amazon today, and they are interlinked. Logging is the first activity in a new area, and roads are created to access remote stands of timber. Then, in some areas, small-scale farmers gradually clear the forest alongside the logging roads using slash-and-burn methods. Ranchers then come in, buy smaller landholdings and consolidate them into larger ranches, pushing smaller farmers deeper into the forest. Once pastures become degraded, if land is suitable for large-scale agriculture, it is bought by larger farmers. Otherwise,



degraded pastures are often rotated or abandoned as idle land. In other areas, it is the expansion of large-scale agriculture that is consolidating lands previously owned for pasture. This is a cycle that is being fuelled particularly by soy producers, who buy these degraded lands from ranchers. This enables the soy producers to expand their lands without having to resort to expensive loans. Land speculation and unclear land tenure are also underlying drivers.

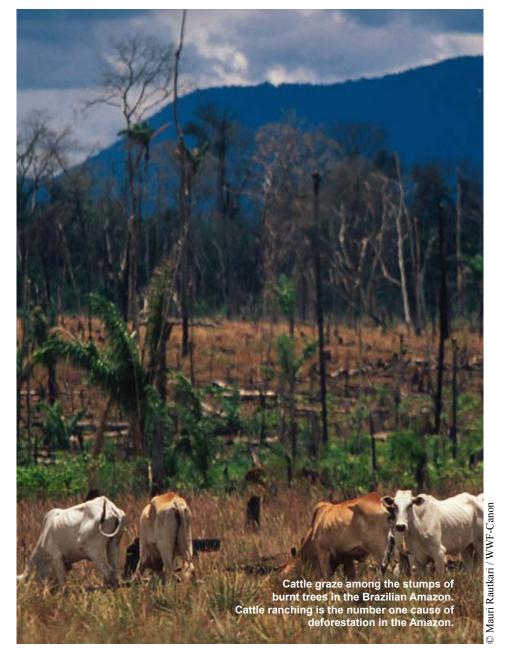
The impact of cattle-ranching and agriculture on the Amazon are compounded by a series of other ever-growing threats, such as intensive logging, climate change, and large-scale transportation and energy infrastructure projects – primarily large-scale water infrastructure – and to a lesser degree by mining to tap important reserves of industrial minerals. In 2000, 90% of Brazil's energy was supplied by hydroelectric power, and its dam network is now being expanded to meet Brazil's growing energy needs. Dams can cause biodiversity and habitat loss, and can impact on fisheries and cause riverine and coastal erosion. They can also disrupt several stages in the life cycle of fish – spawning, growth and breeding. Many Amazon fish are migratory, requiring unobstructed journeys across large stretches of river to critical spawning grounds.

Aside from causing deforestation in their construction, transportation infrastructure projects push deeper into the Amazon, thus enabling other unsustainable activities to expand further into former wilderness areas.

The Initiative for the Integration of Regional Infrastructure in South America (IIRSA) is a bold effort by the governments of South America to construct a new infrastructure network for the continent, including roads, waterways, ports, and energy and communications interconnections.

The economic transformation of the Amazon is gaining momentum and yet, as those forces grow in strength, we're also finding that the Amazon plays a critical role in maintaining climate functions regionally and globally. It's a contribution that everyone – rich or poor, in Manaus or London – depends on. The Amazon's canopy cover helps to regulate temperature and humidity, and is intricately linked to regional climate patterns through hydrological cycles that depend on the forests.

Given the enormous amount of carbon stored in the forests of the Amazon, there is tremendous potential to alter global climate if the forests are not properly stewarded. Currently, land conversion and deforestation in the



Amazon release up to 0.5 billion tonnes of carbon per year, not including emissions from forest fires. This makes the Amazon an important factor in regulating the global climate<sup>94</sup>.

Like a vicious circle, changes in the global and regional climate are likely to exacerbate desiccation or extreme drying of habitats, as well as fires and drought throughout the Amazon. Rainfall patterns and climate will change, which underscores the Amazon's importance locally, regionally and globally<sup>95</sup>.

Increased temperatures and decreased precipitation caused by climate change will exacerbate these trends. They could lead to a 'tipping point', where the tropical moist forest ecosystem collapses and is replaced over large areas by a mixture of savannah and semi-arid landscapes<sup>96</sup>. The implications of this massive ecosystem shift for biodiversity, global climate and human livelihoods would be profound. The Amazon's forests contain 90-140 billion tonnes of carbon. Releasing even a portion of this would accelerate global warming significantly.

In addition to 30 million people, one in 10 known species on Earth live here. They all depend on the Amazon's resources and services. So do many millions more, in North America and Europe, who are still within the Amazon's far-reaching climatologic influence.

For the many diverse species in the region, the combination of these pressures is pushing many populations to the brink of extinction. The impact that continued human activity has wrought on the unique diversity of the region is devastating. Across the Amazon range states, this means that today an alarming 4,800 species are now considered globally threatened according to the IUCN Red List<sup>97ii</sup>.

The future of the Amazon depends on ecosystems and the services they provide being managed sustainably. The governments of the region recognize the importance of sustainable development in the Amazon for biodiversity, livelihoods and fresh water, and are actively engaged with the work of conserving ecosystems. They have prepared national sustainable development strategies, established environmental protection agencies, legislated to protect the environment, and signed up to numerous environmental agreements and treaties at the international and regional levels.

In 2009, the Brazilian government announced that the rate of deforestation in the Amazon had dropped by 45%, and was the lowest on record since monitoring began 21 years ago. According to the latest annual figures, just over 7,000 sq km was destroyed between July 2008 and August 2009, compared with the previous year's 12,911 sq km. Furthermore, the Brazilian government's climate change policy includes a commitment to reduce deforestation in the Amazon by 80% between 2006 and 2020.



<sup>&</sup>lt;sup>11</sup> The number of species considered Critically Endangered, Endangered or Vulnerable in each country according to the IUCN Red List (2009) is: Bolivia 159, Brazil 769, Colombia 658, Ecuador 2,211, French Guiana 56, Guyana 69, Peru 545, Suriname 65 and Venezuela 268. Figures represent total number of threatened species in the Amazon range states, not just in the Amazon biome.

# Conclusions



#### Conservation of the Amazon is central to the future of humankind

The many threats facing the Amazon are increasing pressure on the natural resources and environmental services that millions of people depend on. Such major threats are ultimately linked to global market forces as well as the everyday practices of those who rely on the Amazon for its goods and services.

The Amazon influences global weather patterns and helps to stabilise the planet's climate. So it's vital to conserve the Amazon forests if we're to tackle global climate change.

Any development in the Amazon must be managed in an integrated and sustainable manner, so that the region's main ecological attributes and functions are maintained. Historically, each country in the region has only considered the part of the Amazon that lies within its national borders – concerning itself with the benefits that it provides to its citizens.

This has resulted in fragmented policy-making as well as unchecked overexploitation of the goods and services of the Amazon. It has also overlooked the viability of the region as a whole.

The negative effects of this approach are exacerbated by the growth of key sectors such as agriculture, cattle-ranching and energy. These economic sectors are expanding in response to global demand. They depend on infrastructure development investments, such as those contained in the IIRSA.

These are the forces currently forming the basis for the 'integration' of the Amazon into the national and global economies. They are generating short-term income and improving national macro-economic indicators. But consideration of the environmental and social costs of such developments still needs to be incorporated into to the mainstream of development planning.

Around the world, the environmental and social impacts of unsustainable development are frequently borne by marginalised or minority groups within

society, particularly indigenous people and rural communities. The Amazon is no exception. Conservation of the Amazon, first of all, is crucial for the survival of the 2.7 million people from more than 320 indigenous groups who have depended on its riches for centuries.

Given this context, the fate of the Amazon ultimately depends on a significant shift in the way development is currently embraced by Amazon countries. It is vital for the Amazon to be sustainably managed as one functioning whole. A desire to safeguard the region's functionality for the common good must become the core business of the Amazon nations.

Responsible stewardship of the Amazon is critical to help the world tackle climate change. In this sense, it is also in the long-term self interest of individuals and societies across the globe to keep the Amazon healthy.

### WWF's vision for a living Amazon

For centuries, the Amazon has been regarded as an exotic region that needed to be dominated, and as an infinite source of resources to be exploited. Today, the Amazon and its many vital ecological functions are critical to the survival of humankind, at a moment when people's enormous demands on the Earth exceed its capacity to provide for them.

So, protecting the planet's most extensive tropical rainforest is not only a priority task for the nine Amazon countries, but a global duty.

Through our Living Amazon Initiative, WWF works with national and regional stakeholders from the eight countries plus one overseas territory to create the high-level enabling conditions for the conservation and sustainable development of the Amazon.

WWF's vision for a living Amazon is "an ecologically healthy Amazon biome that maintains its environmental and cultural contributions to local peoples, the countries of the region, and the world, within a framework of social equity, inclusive economic development and global responsibility".

# For more information on WWF's Living Amazon Initiative, visit panda.org/amazon

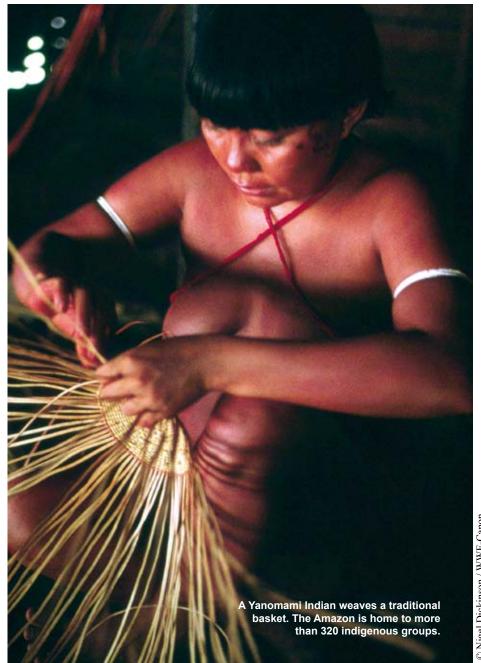
We're supporting this vision by developing far-reaching and powerful partnerships with governments, civil society and the private sector to achieve the following:

- · Governments, local people and civil society in the region share an integrated vision of conservation and development that is environmentally, economically and socially sustainable;
- · Natural ecosystems are valued appropriately for the environmental goods and services they provide and the livelihoods they sustain;
- Tenure and rights to land and resources are planned, defined and enforced to help achieve this conservation and development vision;
- Agriculture and ranching are carried out following best management practices on lands that are appropriate and legal;
- Transportation and energy infrastructure development is planned, designed and implemented to minimise the impact on natural ecosystems. hydrological disruption and impoverishment of biological and cultural diversity.

As part of our initiative, WWF together with the IUCN, Amazon Cooperation Treaty Organisation and the Secretariat for the Convention of Biological Diversity and others are supporting The Latin American Technical Cooperation Network on National Parks, other Protected Areas and Wildlife (REDPARQUES) in building a protected areas conservation vision for the Amazon.

This vision will build on the existing conservation strategies and protected area systems in each of the Amazon countries. It will help to meet commitments under the Convention on Biological Diversity and, in particular, its programme of work on protected areas.

In the Amazon, the whole is more than the sum of its parts, and the development of a vision for conservation will help maintain the integrity. functionality and resilience of the Amazon, now faced with growing threats, particularly climate change.



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- <sup>94</sup> Nepstad, D. 2007. Climate Change and the Forest. The American Prospect, 18:A6.
- <sup>95</sup> Nepstad, D. 2007. The Amazon's Vicious Cycles. Drought and Fire in the Greenhouse. A report for the World Wide Fund for Nature (WWF), Gland, Switzerland.
  <sup>96</sup> Ibid.
- <sup>97</sup> IUCN, 2009. *IUCN Red List of Threatened Species*. Version 2009.2. www.iucnredlist. org. Downloaded on 2 December 2009.

# Appendix. New species discoveries

# Methodology

We've only included new discoveries that have been described in peer-reviewed scientific journals in this report. The new species were identified by scientists from a number of institutions around the world, including museums, universities, government departments and non-governmental organisations.

WWF was involved in the discovery of some of the new finds. In addition, we've assisted scientists from other institutions by organising research permits, helping with logistics, and identifying research locations.

This report presents a list of new species. The list was informed by a variety of expeditions and data retrieved from scientific databases, appendices, reports and scientific journals. It was then further informed and refined through correspondence and advice received from scientists. The list is not an exhaustive record of new species found in the Amazon biome between 1999 and 2009.

In addition, many other species that may eventually turn out to be new to science will have been encountered and collected in the Amazon biome over the past 10 years. These species are currently awaiting official scientific recognition. For scientific credibility, these species have not been included in the list.

Species	Scientist(s)	Date	Location
Acalypha simplicistyla	Cardiel	2003	San Martin Region, Peru
Adiantum krameri	Zimmer	2007	French Guiana
Adiantum windischii J	Prado	2005	States of Acre, Amazonas, Mato Grosso, Para, Brazil
Ageratina feuereri	H.Rob.	2006	La Paz, Bolivia
Alatiglossum culuenense	Docha Neto & Benelli	2006	Mato Grosso State, Brazil
Alchornea websteri	Secco	2004	Zamora Chinchipe Province, Ecuador
Aldina amazonica	M.Yu.Gontsch. & Yakovlev	2006	Amazon
Aldina diplogyne	Stergios & Aymard	2008	Bolivar, Venezeula
Aldina microphylla	M.Yu.Gontsch. & Yakovlev	2006	Amazon
Aldina stergiosii	M.Yu.Gontsch. & Yakovlev	2006	Amazon
Alstroemeria paraensis	Assis	2006	State of Para, Brazil
Anthurium ancuashii	Croat & Carlsen	2004	Amazon
Anthurium apanui	Croat	2005	Amazon
Anthurium atamainii	Croat	2005	Amazon
Anthurium baguense	Croat	2005	Amazon
Anthurium ceronii	Croat	2005	Napo Province, Ecuador
Anthurium chinimense	Croat	2005	Amazon
Anthurium constrictum	Croat & Carlsen	2004	Zamora Chinchipe Province, Ecuador
Anthurium curicuriariense	Croat	2005	Amazon
Anthurium diazii	Croat	2005	Amazon
Anthurium galileanum	Croat	2005	Amazon
Anthurium huampamiense	Croat	2005	Amazon
Anthurium huashikatii	Croat	2005	Amazon
Anthurium kayapii	Croat	2005	Loreto Region, Peru
Anthurium kugkumasii	Croat	2005	Amazon
Anthurium kusuense	Croat	2005	Amazon
Anthurium leveaui	Croat	2005	Amazon
Anthurium ligulare	Croat	2005	Loreto Region, Peru
Anthurium mariae	Croat & Lingán	2005	Amazon
Anthurium moonenii	Croat & E.G.Gonç.	2005	French Guiana
Anthurium moronense	Croat & Carlsen	2004	Morona-Santiago Province, Ecuador
Anthurium mostaceroi	Croat	2005	Amazon
Anthurium palacioanum	Croat	2007	Napo Province, Ecuador
Anthurium penae	Croat	2005	Amazon
Anthurium pinkleyi	Croat & Carlsen	2004	Napo Province, Ecuador
Anthurium quipuscoae	Croat	2005	Amazon
Anthurium rojasiae	Croat	2005	Amazon
Anthurium shinumas	Croat	2005	Amazon
Anthurium sidneyi	Croat & Lingán	2005	Loreto Region, Peru
Anthurium ternifolium	Croat & Carlsen	2004	Pastaza Department, Ecuador
Anthurium tsamajainii	Croat	2005	Amazon
Anthurium tunquii	Croat	2005	Amazon
Anthurium yamayakatense	Croat	2005	Amazon
Arachis gregoryi	Simpson, Krapov. & Valls	2005	Mato Grosso State, Brazil
Arachis linearifolia	Valls, Krapov. &Simpson	2005	Mato Grosso State, Brazil
Arachis submarginata	Valls, Krapov. & Simpson	2005	Mato Grosso State, Brazil
Aristolochia kanukuensis	Feuillet	2007	Guyana
Arthrostylidium berryi	Judziewicz & Davidse	2008	Amazon
Asplenium palaciosii	A.Rojas	2008	Zamora-Chinchipe Province, Ecuador
Asplenium sessilipinnum	A.Rojas	2008	Napo Province, Ecuador
Aulonemia nitida	Judz.	2005	Guyana
Bactris nancibaensis	J.J. de Granville	2007	French Guiana
Banisteriopsis macedae	W.R.Anderson	2007	Madre de Dios Region, Peru

Species	Scientist(s)	Date	Location	Species	Scientist(s)	Date	Location
Bauhinia arborea	Wunderlin	2006	Napo Province, Ecuador	Cremastosperma cenepense	Pirie & Zapata	2004	Amazon
Besleria neblinae	Feuillet	2008	Amazon	Cremastosperma yamayakatense	Pirie	2004	Amazon
Besleria vatuana	Feuillet	2008	Amazon	Cremersia platula	Feuillet & Skog	2003	French Guiana
Blechnum bicolor	M.Kessler & A.R.Sm.	2007	La Paz, Bolivia	Croton faroensis	Secco	2004	Para State, Brazil
Blechnum bolivianum	M.Kessler & A.R.Sm.	2007	La Paz. Bolivia	Croton subasperrimum	Secco, Berry & Rosário	2005	Amazon
Blechnum bruneum	M.Kessler & A.R.Sm.	2007	La Paz, Bolivia	Cuphea alatosperma	T.B.Cavalc. & S.A.Graham	2008	Amazon
Blechnum guayanense	A.Rojas	2008	Guyana	Cuphea exilis	T.B.Cavalc. & S.A.Graham	2008	Para State, Brazil
Blechnum pazense	M.Kessler & A.R.Sm.	2007	La Paz, Bolivia	Curtia ayangannae	L. Cobb & JansJac.	2007	Guyana
Blechnum repens	M.Kessler & A.R.Sm.	2007	La Paz, Bolivia	Cyathea bettinae	Lehnert	2004	La Paz, Bolivia
Blechnum smilodon	M.Kessler & Lehnert	2007	La Paz. Bolivia	Cyathea obnoxia	Lehnert	2006	Zamora-Chinchipe Province, Ecuador
Bocoa ratteri	H.E.Ireland	2007	Maranhao State, Brazil	Cyathea plicata	Lehnert	2006	Zamora-Chinchipe Province, Ecuador
Bomarea amazonica	Hofreiter & E.Rodr.	2006	Amazon	Cybianthus tayoensis	Pipoly & Ricketson	2006	Amazon
Borreria amapaensis	E.L.Cabral & Bacigalupo	2004	Amapa State, Brazil	Dacryodes edilsonii	Daly	2005	Acre State, Brazil
Borreria guimaraesensis	E.L.Cabral & Bacigalupo	2004	Mato Grosso State. Brazil	Danaea ushana	Christenh.	2006	French Guiana
Borreria pazensis	E.L.Cabral & Bacigalupo	2005	La Paz, Bolivia	Daphnopsis granitica	Pruski & Barringer	2005	French Guiana
Borreria tocantinsiana	E.L.Cabral & Bacigalupo	2004	Tocantins State, Brazil	Daphnopsis granvillei	Barringer	2005	French Guiana
Brachionidium condorense	L.Jost	2004	Morona-Santiago Province, Ecuador	Davilla neei	Aymard	2007	Amazon
Brachionidium deflexum	L.Jost	2004	Morona-Santiago Province, Ecuador	Dieffenbachia wurdackii	Croat	2005	Loreto Region, Peru
Bromelia araujoi	P.J.Braun, Esteves & Scharf	2008	Maranhao State, Brazil	Dilkea lecta	Feuillet	2009	Suriname, French Guiana
Bromelia braunii	Leme & Esteves	2003	Tocantins State, Brazil	Dilkea vanessae	Feuillet	2009	French Guiana
Bulbostylis medusae	Prata, Reynders & Goetgh.	2007	Amazon	Diospyros gallo	Wallnöfer	2000	Bolivar State, Venezeula
Butia exospadix	Noblick	2006	Para State, Brazil	Diospyros gano Diospyros ottohuberi	Wallnöfer	2000	Bolivar State, Venezeula
Byrsonima homeieri	W.R.Anderson	2007	Zamora-Chinchipe Province, Ecuador	Diospyros onomioeri Diospyros paraensis	Sothers	2003	Para State. Brazil
Calathea hopkinsii	Forzza	2007	Amazon	Diospyros tepu	Wallnöfer	2000	Bolivar, Venezeula
Caluera tavaresii	Campacci & J.B.F.Silva	2008	Para State, Brazil	Diospyros xavantina	Sothers	2003	Mato Grosso State, Brazil
Calycolpus aequatorialis	Landrum	2005	Sucumbios Province, Ecuador	Diplusodon cryptanthus	T.B.Cavalc.	2003	Tocantins State, Brazil
Calycolpus andersonii	Landrum	2008	Para State, Brazil	Doliocarpus schultesianus	Aymard	2007	Vaupes Department, Colombia
Calyptranthes ishoaquinicca	M.L.Kawas. & B.Holst	2005	Sucumbios, Ecuador	Doryopteris surinamensis	Yesilyurt	2008	Suriname
Calyptranthes manuensis	B.Holst & M.L.Kawas.	2006	Madre de Dios Region, Peru	Dracontium guianense	G.H.Zhu & Croat	2004	French Guiana
Campyloneurum amazonense	B.León	2004	Amazon	Dracontium iquitense	E.C.Morgan & J.A.Sperling	2007	Loreto Region, Peru
Capparidastrum frondosum	X. Cornejo & H.H. Iltis	2008	French Guiana; Guyana; Suriname;	Dracula mendozae	Luer & V.N.M.Rao	2004	Zamora-Chinchipe Province, Ecuador
cappai iaasii airi ji onaosairi	na comejo a mm. mas	2000	States of Amazonas, Bolivar, Venezeula	Drosera amazonica	Rivadavia, Fleischm, & Vicent.	2009	States of Amazonas, Roraima, Brazil
Capparidastrum osmanthum	X. Cornejo & H.H. Iltis	2008	Bolivar, Delta Amacuro, Venezeula,	Drosera grantsaui	Rivadavia	2003	States of Mato Grosso, Tocantins, Para, Brazil
Castelnavia noveloi	C.T.Philbrick & C.P.Bove	2008	Tocantins State, Brazil	Drosera solaris	A.Fleischm., Wistuba & S.McPherson	2007	Guyana
Catasetum apolloi	Benelli & Grade	2008	Mato Grosso State. Brazil	Elaphoglossum arachnidoideum	Mickel	2008	Guyana
Catasetum dejeaniorum	Chiron	2006	French Guiana	Elaphoglossum boudriei	Mickel	2008	Guyana
Catasetum hopkinsonianum	G.F.Carr & V.P.Castro	2008	Rondonia State, Brazil	Elaphoglossum choquetangae	M.Kessler & Mickel	2006	La Paz. Bolivia
Catasetum rionegrense	Campacci & G.F.Carr	2008	Amazon	Elaphoglossum cotapatense	M.Kessler & Mickel	2006	La Paz. Bolivia
Catasetum teixeiranum	Campacci & J.B.F.Silva	2008	Amazon	Elaphoglossum cremersii	Mickel	2008	French Guiana
Catostemma lemense	Sanoja	2005	Bolivar State, Venzuela	Elaphoglossum crispipalea	M.Kessler & Mickel	2006	La Paz, Bolivia
Cayaponia ferruginea	Gomes-Klein	2005	Amazon	Elaphoglossum elkeae	M.Kessler & Mickel	2006	La Paz. Bolivia
Ceiba lupuna	P.E.Gibbs & Semir	2003	San Martin Region, Peru	Elaphoglossum ellenbergianum	M.Kessler & Mickel	2006	La Paz, Bolivia
Ceratostema oyacachiensis	Luteyn	2005	Napo Province, Ecuador	Elaphoglossum gonzalesiae	M.Kessler & Mickel	2006	La Paz, Bolivia
Ceratostema pendens	Luteyn	2005	Morona-Santiago Province, Ecuador	Elaphoglossum inquisitivum	M.Kessler & Mickel	2006	La Paz, Bolivia
Cereus yungasensis	Fuentes & Quispe	2009	La Paz, Bolivia	Elaphoglossum madidiense	M.Kessler & Mickel	2006	La Paz, Bolivia
Chrysophyllum wilsonii	T.D.Penn.	2006	Amazon	Elaphoglossum murinum	M.Kessler & Mickel	2006	La Paz, Bolivia
Cissus flavens	Desc.	2009	French Guiana	Elaphoglossum neei	M.Kessler & Mickel	2006	La Paz, Bolivia
Cissus kawensis	Desc.	2009	French Guiana	Elaphoglossum paucinervium	M.Kessler & Mickel	2006	La Paz, Bolivia
Cnidoscolus adenochlamys	Fern.Casas	2004	Maranhao State, Brazil	Elaphoglossum paxense	A.Rojas	2003	La Paz, Bolivia
Cnidoscolus aurelii	Fern.Casas	2004	Tocantins State, Brazil	Elaphoglossum puberulentum	M.Kessler & Mickel	2006	La Paz. Bolivia
Cnidoscolus graminifolius	Fern.Casas	2006	Tocantins State, Brazil	Elaphoglossum rosettum	R.C.Moran & Mickel	2004	La Paz, Bolivia
Cnidoscolus mitis	Fern.Casas	2005	Mato Grosso State, Brazil	Elaphoglossum semisubulatum	R.C.Moran & Mickel	2004	La Paz, Bolivia
Cochlidium acrosorum	A.Rojas	2007	Bolivar State, Venzuela	Elaphoglossum solomonii	A.Rojas	2003	La Paz, Bolivia
Cochlidium nervatum	A.Rojas	2007	Amazon	Elaphoglossum sunduei	M.Kessler & Mickel	2006	La Paz, Bolivia
Cordia cremersii	Feuillet	2003	French Guiana	Encyclia chironii	V.P.Castro & J.B.F.Silva	2004	Amazon
Cordia fanchoniae	Feuillet	2008	French Guiana	Encyclia clovesiana	L.C.Menezes & V.P.Castro	2007	Rondonia State, Brazil
Cordia marioniae	Feuillet	2003	Guyana	Endlicheria arachnocome	Chanderb.	2004	Loreto Region, Peru
Coryanthes pacaraimensis	Campacci & J.B.F.Silva	2007	State of Roraima, Brazil	Endlicheria arenosa	Chanderb.	2004	Amazon
Coussarea longilaciniata	Delprete	2006	Guyana	Endlicheria argentea	Chanderb.	2004	Loreto Region, Peru
Coussarea spicata	Delprete	2006	French Guiana	Endlicheria aurea	Chanderb.	2004	La Paz, Bolivia
Cremastosperma bullatum	Pirie	2004	Amazon	Endlicheria chrysovelutina	Chanderb.	2004	Loreto Region, Peru

Species	Scientist(s)	Date	Location	Species	Scientist(s)	Date	Location
Endlicheria coriacea	Chanderb.	2004	Amazon	Hibiscus chancoae	Krapov. & Fryxell	2004	San Martin Region, Peru
Endlicheria ferruginosa	Chanderb.	2004	Napo Province, Ecuador	Hibiscus ferreirae	Fryxell & Krapov.	2004	Mato Grosso State, Brazil
Endlicheria griseosericea	Chanderb.	2004	Napo Province, Ecuador	Hibiscus manuripiensis	Krapov.	2008	Pando, Bolivia
Endlicheria lorastemon	Chanderb.	2004	Zamora-Chinchipe Province, Ecuador	Hibiscus paludicola	Fryxell & Krapov.	2004	Mato Grosso State, Brazil
Endlicheria rubra	Chanderb.	2004	San Martin Region, Peru	Hibiscus saddii	Krapov. & Fryxell	2004	Mato Grosso State, Brazil
Endlicheria ruforamula	Chanderb.	2004	San Martin Region, Peru	Hibiscus windischii	Krapov. & Fryxell	2004	Mato Grosso State, Brazil
Ephedranthus boliviensis	Chatrou & Pirie	2003	Acre State, Brazil	Hiraea glabrata	W.R.Anderson & C.Davis	2005	Rondonia State, Brazil
Epidendrum dejeaniae	Chiron, Hágsater & L.Sánchez	2006	French Guiana	Hypolytrum leptocalamum	M. Alves & W.W. Thomas	2002	Guyana
Epidendrum foulquieri	Chiron	2005	French Guiana	Inga loubryana	Poncy	2007	Guyana, French Guiana
Epidendrum paruimense	G.A. Romero & Carnevali	2004	Guyana	Ixora araguaiensis	Delprete	2008	Tocantins State, Brazil
Epidendrum reclinatum	Carnevali & I.Ramírez	2003	Guyana	Ixora irwinii	Delprete	2008	Tocantins State, Brazil
Epidendrum strobilicaule	Hágsater & Benelli	2008	Mato Grosso State, Brazil	Justicia mcdowellii	Wassh.	2003	Guyana
Episcia duidae	Feuillet	2008	Amazon	Justicia mesetarum	Wassh. & J.R.I.Wood	2004	Mato Grosso State, Brazil
Episcia rubra	Feuillet	2008	Amazon	Justicia obovata	Wassh. & J.R.I.Wood	2004	States of Acre, Amazonas, Brazil
Erythroxylum timothei	Loiola & Sales	2009	Maranhao State, Brazil	Justicia rhomboidea	Wassh. & J.R.I.Wood	2004	States of Amazonas, Rondonia, Brazil
Eugenia breviracemosa	Mazine	2009	Amazon	kanukuensis Feuillet	Feuillet	2007	Guyana
Eugenia caducibracteata	Mazine	2009	States of Amazonas, Maranhao, Para, Brazil	Kreodanthus rotundifolius	Ormerod	2005	Amazon
Eugenia galbaoensis	Mattos	2005	French Guiana	Lampadaria rupestris	Feuillet & L.E. Skog	2003	Guyana
Eugenia pallidopunctata	Mazine	2009	Para State. Brazil	Larnax bongaraensis	S.Leiva	2006	Amazon
Eugenia tenuiflora	Mazine	2009	Amazon	Larnax maculatifolia	E.Rodr. & S.Leiva	2006	Amazon
Festuca sumapana	Stančík	2003	Meta Department, Colombia	Larnax pomacochaensis	S.Leiva	2006	Amazon
Ficus duartei	C.C. Berg & Carauta	2003	French Guiana	Lecointea guianensis	Gontsch. & Yakovlev	2006	French Guiana
Ficus duckeana	C.C. Berg & Ribeiro	2003	French Guiana	Lepanthes neillii	L.Jost	2004	Morona-Santiago Province, Ecuador
Fosterella batistana	Ibisch, Leme & J.Peters	2009	Para State, Brazil	Lepanthes rigidigitata	Luer & Hirtz	2004	Morona-Santiago Province, Ecuador
Galactophora angustifolia	J.F.Morales	2005	Caqueta Department, Colombia	Lepidagathis callistachys	Kameyama	2009	States of Mato Grosso, Rondonia, Brazil
Galeandra santarena	S.H.N.Monteiro & J.B.F.Silva	2003	Para State, Brazil	Lepidagathis paraensis	Kameyama	2009	Para State. Brazil
Galianthe boliviana	E.L.Cabral	2005	La Paz, Bolivia	Lepidagathis wasshausenii	Kameyama	2009	Mato Grosso State, Brazil
Galianthe sudyungensis	E.L.Cabral	2005	La Paz. Bolivia	Lessingianthus longicuspis	Dematt.	2008	Mato Grosso State, Brazil
Galipea congestiflora	Pirani	2004	States of Maranhão, Para, Tocantins, Brazil	Licaria aureosericea	van der Werff	2000	Guyana
Galipea maxima	Pirani & Kallunki	2007	Loreto Region, Peru	Licaria rufotomentosa	van der Werff	2003	French Guiana
Gongora jauariensis	Campacci & J.B.F.Silva	2009	Amazon	Ligeophila chinimensis	Ormerod	2005	Amazon
Grosvenoria zamorensis	H.Rob.	2006	Zamora-Chinchipe Province, Ecuador	Ligeophila unicornis	Ormerod	2008	Amazon
Guadua incana	Londoño	2008	Caqueta Department, Colombia	Lindmania vinotincta	B.Holst & Vivas	2009	Bolivar, Venzuela
Guatteria alticola	Scharf & Maas	2005	Guyana	Lindsaea digitata	Lehtonen & Tuomisto	2008	Amazon
Guatteria anteridifera	Scharf & Maas	2008	French Guiana; Amapa, Brazil	Lissocarpa kating	B.Walln.	2004	Loreto Region, Peru
Guatteria anthracina	Scharf & Maas	2006	French Guiana: Guyana: Suriname	Lissocarpa ronliesneri	B.Walln.	2004	Zamora-Chinchipe Province, Ecuador
Guatteria arenicola	Maas & Erkens	2008	Acre State. Brazil	Lissocarpa uyat	B.Walln.	2004	Amazon
Guatteria ayangannae	Scharf & Maas	2005	Guyana	Lycopodiella krameriana	B.Øllg.	2004	Suriname
Guatteria duodecima	Maas & Westra	2008	Acre State, Brazil	Macrocarpaea ayangannae	J.R. Grant, Struwe & J.K. Boggan	2001	Guyana
Guatteria elegans	Scharf	2006	French Guiana	Macrocarpaea berryi	Grant	2005	Zamora-Chinchipe Province, Ecuador
Guatteria flabellata	Erkens & Maas	2008	States of Amazonas, Rondonia, Brazil	Macrocarpaea chthonotropa	Grant	2005	San Martin Region, Peru
Guatteria intermedia	Scharf	2006	States of Amazonas, Amapa, Brazil; French Guiana;	Macrocarpaea claireae	Grant	2008	Zamora-Chinchipe Province, Ecuador
Guarier la intermedia			Suriname	Macrocarpaea dies-viridis	Grant	2007	Zamora-Chinchipe Province, Ecuador
Guatteria japurensis	Maas & Westra	2008	Amazon	Macrocarpaea dillonii	Grant	2004	Amazon
Guatteria leucotricha	Scharf & Maas	2006	French Guiana	Macrocarpaea gran-pajatena	Grant	2005	San Martin Region, Peru
Guatteria minutiflora	Scharf & Maas	2006	Guyana; Suriname	Macrocarpaea hilarula	Grant	2005	Meta Department, Colombia
Guatteria montis-trinitatis	Scharf	2006	French Guiana	Macrocarpaea innarrabilis	Grant	2004	Amazon
Guatteria pakaraimae	Scharf & Maas	2005	Guyana	Macrocarpaea jactans	Grant	2005	Napo Province, Ecuador
Guatteria pannosa	Scharf & Maas	2006	French Guiana; Amapa State, Brazil	Macrocarpaea kuelap	Grant	2004	Amazon
Guatteria partangensis	Scharf & Maas	2005	Guyana	Macrocarpaea laudabilis	Grant	2005	Caqueta Department, Colombia
Guatteria wokomungensis	Scharf & Maas	2005	Guyana	Macrocarpaea luctans	Grant	2007	Amazon
Guzmania pseudodissitiflora	H.Luther & K.F.Norton	2008	Zamora-Chinchipe Province, Ecuador	Macrocarpaea luya	Grant	2004	Amazon
Guzmania pseudodissitijiora Guzmania vinacea	H.Luther & K.F.Norton	2008	Amazon	Macrocarpaea neillii	Grant	2005	Zamora-Chinchipe Province, Ecuador
Habenaria ludibundiciliata	J.A.N.Bat. & Bianch.	2006	States of Mato Grosso, Maranhao, Para, Roraima, Brazil	Macrocarpaea opulenta	Grant	2007	Zamora-Chinchipe Province, Ecuador
Habranthus minor	Ravenna	2003	Tocantins State, Brazil	Macrocarpaea pringleana	Grant	2004	Pastaza Province, Ecuador
Hekkingia bordenavei	H.E. Ballard & Munzinger	2003	French Guiana	Macrocarpaea quechua	Grant	2005	San Martin Region, Peru
Heteropsis croatii	M.L.Soares	2009	States of Amazonas, Acre, Brazil	Macrocarpaea quechaa Macrocarpaea quizhpei	Grant	2003	Zamora-Chinchipe Province, Ecuador
Heteropsis duckeana	M.L.Soares	2009	States of Amazonas, Para, Brazil	Macrocarpaea weigendiorum	J.R.Grant	2008	Ucayali Region, Peru
Heterotaxis schultesii	Ojeda & G.A.Romero	2005	Amazon	Macrocarpaea vpsilocaule	Grant	2004	Putumayo Department, Colombia
Hibiscus andersonii	Krapov. & Fryxell	2003	Mato Grosso State. Brazil	Macroclinium paraense	Campacci & J.B.F.Silva	2009	Para State. Brazil
The seas and comme	import of region	200-	Grosso butte, Diuzii		Campacer & J.D.I. Dire	2007	,,

Species	Scientist(s)	Date	Location	Species	Scientist(s)	Date	Location
Malouetia gentryi	M.E.Endress	2004	Loreto Region, Peru	Nautilocalyx paujiensis	Feuillet	2008	Bolivar State, Venzuela
Mandevilla amazonica	J.F.Morales	2005	Amazon	Nautilocalyx pusillus	Feuillet	2008	Bolivar State, Venzuela
Mandevilla columbiana	J.F.Morales	2005	Caqueta Department, Colombia	Nautilocalyx roseus	Feuillet	2008	Bolivar State, Venzuela
Mandevilla matogrossana	J.F.Morales	2005	Mato Grosso State, Brazil	Nautilocalyx ruber	Feuillet	2008	Amazon
Mandevilla megabracteata	J.F.Morales	2007	Guyana	Nautilocalyx vestitus	Feuillet	2008	Bolivar State, Venzuela
Mandevilla similaris	J.F.Morales	2007	Bolivar State, Venzuela	Neocalyptrocalyx morii	X. Cornejo & H.H. Iltis	2008	French Guiana
Manihot baccata	Allem	1999	French Guiana	Neosprucea paterna	M.H.Alford	2008	Guyana
Maranta coriacea	S. Vieira & V.C. Souza	2008	States of Mato Grosso, Tocantins, Brazil	Ocotea badia	van der Werff	2005	Amazon
Maranta longiflora	S. Vieira & V.C. Souza	2008	Tocantins State, Brazil	Ocotea hirtandra	van der Werff	2005	Amazon
Maranta pulchra	S. Vieira & V.C. Souza	2008	Mato Grosso State, Brazil	Ocotea imazensis	van der Werff	2005	Amazon
Maranta purpurea	S. Vieira & V.C. Souza	2008	Mato Grosso State, Brazil	Ocotea laevifolia	van der Werff	2005	Amazon
Marcgraviastrum grandiflorum	de Roon & Bedell	2006	Amazon	Ocotea lenitae	van der Werff	2005	San Martin Region, Peru
Margaritopsis inconspicua	C.M.Taylor	2005	States of Acre, Amazonas, Brazil	Ocotea leptophylla	van der Werff	2005	Amazon
Markea vasquezii	E.Rodr.	2006	Amazon	Ocotea vasquezii	van der Werff	2005	Amazon
Mascagnia aequatorialis	W.R.Anderson & C.Davis	2005	Napo Province, Ecuador	Octomeria portillae	Luer & Hirtz	2004	Zamora-Chinchipe Province, Ecuador
Mascagnia affinis	W.R.Anderson & C.Davis	2005	Mato Grosso State, Brazil	Ophiocaryon barnebyanum	Aymard & Daly	2006	Amazon
Mascagnia arenicola	C. Anderson	2001	Guyana	Ornithidium elianae	Carnevali & M.A. Blanco	2008	French Guiana; Guyana; Suriname
Mascagnia conformis	W.R.Anderson	2007	French Guiana	Oryctanthus minor	Kuijt	2009	French Guiana
Mascagnia glabrata	W.R.Anderson & C.Davis	2005	States of Mato Grosso, Rondonia, Brazil	Oryctina atrolineata	Kuijt	2003	Guyana
Masdevallia aptera	Luer & L.O'Shaughn.	2004	Zamora-Chinchipe Province, Ecuador	Ouratea acicularis	R.G.Chacon & K.Yamam.	2008	Tocantins State, Brazil
Masdevallia frilehmannii	Luer & Vasquez	2001	Madidi National Park, La Paz, Bolivia	Ouratea candelabra	Sastre	2006	Guyana
Masdevallia lynniana	Luer	2004	Zamora-Chinchipe Province, Ecuador	Ouratea claudei	Salvador, E.P.Santos & Cervi	2006	Tocantins State, Brazil
Matelea quindecimlobata	Farinaccio & W.D.Stevens	2009	Amazon	Ouratea jansen-jacobsiae	Sastre	2007	Guyana; Suriname
Maxillaria kelloffiana	Christenson	2009	Guyana; Roraima State, Brazil	Ouratea javariensis	Sastre	2005	Amazon
Megalastrum alticola	Kessler & Sm.	2006	La Paz, Bolivia	Ouratea miniguianensis	Sastre	2007	French Guiana
Megalastrum ciliatum	Kessler & Sm.	2006	La Paz, Bolivia	Ouratea pseudogigantophylla	Sastre	2006	Suriname
Megalastrum marginatum 6]	Kessler & Sm.	2006	La Paz, Bolivia	Ouratea retrorsa	Sastre	2007	French Guiana
Megalastrum rupicola	Kessler & Sm.	2006	La Paz, Bolivia	Ouratea sipaliwiniensis	Sastre	2007	Suriname
Melpomene caput-gorgonis	Lehnert	2009	La Paz, Bolivia	Ouratea superimpressa	Sastre	2007	Guyana
Melpomene flagellata	Lehnert	2009	La Paz, Bolivia	Ouratea takutuensis	Sastre	2007	Guyana
Melpomene huancabambensis	Lehnert	2009	San Martin Region, Peru	Palicourea gelsemiiflora	C.M.Taylor	2006	Amazon
Melpomene jimenezii	Lehnert	2009	La Paz, Bolivia	Palicourea gemmiflora	C.M.Taylor	2006	Zamora-Chinchipe Province, Ecuador
Melpomene occidentalis	Lehnert	2009	Zamora-Chinchipe Province, Ecuador	Palicourea lemoniana	C.M. Taylor	2006	Amazon
Melpomene paradoxa	Lehnert	2009	La Paz, Bolivia	Palicourea loxensis	C.M.Taylor	2006	Zamora-Chinchipe Province, Ecuador
Melpomene personata	Lehnert	2009	La Paz, Bolivia	Palmorchis caxiuanensis	Rocha, S.S.Almeida & Freitas	2006	Para State, Brazil
Melpomene vulcanica	Lehnert	2009	Napo Province, Ecuador	Paloue sandwithii	Redden	2008	Guyana
Mezilaurus manausensis	van der Werff	2003	Amazon	Paradrymonia barbata	Feuillet & L.E. Skog	2003	Guyana
Microchilus borjaquijosae	Ormerod	2007	Napo Province, Ecuador	Paradrymonia glandulosa	Feuillet	2009	Amazon
Microchilus brunnescens	Ormerod	2005	Napo Province, Ecuador	Paradrymonia hamata	Feuillet	2009	Amazon
Microchilus campanulatus	Ormerod	2008	Guyana; States of Amazonas, Bolivar, Venezeula	Paradrymonia lutea	Feuillet	2009	Amazon
Microchilus constrictus	Ormerod	2005	Amazon	Paradrymonia maguirei	Feuillet	2009	Amazon
Microchilus guianensis	Ormerod	2008	Guyana	Paradrymonia tepui	Feuillet	2009	Amazon
Microchilus microcaprinus	Ormerod	2005	San Martin Region, Peru	Paradrymonia yatua	Feuillet	2009	Amazon
Microchilus pedrojuanensis	Ormerod	2005	Para State, Brazil	Paspalum veredense	G.H.Rua, R.C.Oliveira, Valls &	2008	Tocantins State, Brazil
Microchilus pseudobrunnescens	Ormerod	2005	Napo Province, Ecuador	D	Graciano-Ribeiro	****	
Microchilus putumayoensis	Ormerod	2005	Putumayo Department, Colombia	Passiflora angusta	Feuillet & J.M. MacDougal	2008	Bolivar State, Venezeula; Guyana
Microchilus rioesmeraldae	Ormerod	2005	Bolivar State, Venzuela	Passiflora arta	Feuillet	2007	Guyana
Microchilus rioitayanus	Ormerod	2005	Loreto Region, Peru	Passiflora ascidia	Feuillet	2002	Guyana
Mikania urcuensis	H.Rob. & W.C.Holmes	2006	Napo Province, Ecuador	Passiflora balbis	Feuillet	2002	Guyana
Monstera aureopinnata	Croat	2005	Amazon French Guiana	Passiflora compar	Feuillet	2007	Guyana, French Guiana
Monstera barrieri	Croat, Moonen & Poncy	2005		Passiflora curva	Feuillet	2009	French Guiana
Monstera cenepensis	Croat	2005	Amazon	Passiflora davidii	Feuillet	2007	French Guiana
Monstera vasquezii	Croat	2005	Amazon	Passiflora gabrielliana	Vanderpl.	2006	French Guiana
Mormodes gurupiensis	Campacci & J.B.F.Silva	2009	States of Maranhao, Para, Brazil	Passiflora longicuspis	Vanderpl. & S.E. Vanderpl.	2006	French Guiana
Mostuea muricata	Sobral & Lucia Rossi	2003 2003	Mato Grosso State, Brazil	Passiflora pardifolia	Vanderpl.	2006 2008	Maranhao State, Brazil
Napeanthus rupicola Nasa victorii	Feuillet & L.E. Skog	2003	Guyana Son Mortin Pagian, Paru	Passiflora rufa Passiflora tecta	Feuillet & J.M. MacDougal Feuillet	2008	French Guiana; Guyana; Suriname Guyana; Suriname; Bolivar, Venezeula
Nasa victorii Nautilocalyx coccineus	Weigend Feuillet & L.E. Skog	2004	San Martin Region, Peru Guyana	Passiflora tecta Passiflora venusta	R. Vásquez & M. Delanoy	2008	La Paz, Bolivia
Nautilocalyx coccineus Nautilocalyx crenatus	Feuillet & L.E. Skog Feuillet	2003	Amazon	Passiflora venusia Passiflora vescoi	D.Rignon & L.Rignon	2007	French Guiana
Nautilocalyx crenatus Nautilocalyx orinocensis	Feuillet	2008	Amazon Amazon	Passinora vescoi Pepinia martinellii	H.Luther	2003	Para State, Brazil
maumocatyx orthocensis	1 Cunict	2008	AIIIazoii	1 еріпій тагипенн	11.Duuid	2009	r ara state, Diazii

Species	Scientist(s)	Date	Location	Species	Scientist(s)	Date	Location
Peritassa manaoara	Lombardi	2007	Amazon	Pouteria flavilatex	T.D.Penn.	2006	Amazon
Phainantha shuariorum	C.Ulloa & D.A.Neill	2006	Zamora-Chinchipe Province, Ecuador	Pouteria freitasii	T.D.Penn.	2006	Amazon
Philodendron ampamii	Croat	2005	Amazon	Pouteria maxima	T.D.Penn.	2006	Amazon
Philodendron ancuashii	Croat	2005	Amazon	Pouteria pentamera	T.D.Penn.	2006	Amazon
Philodendron aureimarginatum	Croat	2004	Loreto Region, Peru	Pouteria resinosa	T.D.Penn.	2006	Amazon
Philodendron avenium	Grayum & Croat	2005	Amazon	Pouteria stipulifera	T.D.Penn.	2006	Amazon
Philodendron barbourii	Croat	2005	Amazon	Pouteria stylifera	T.D.Penn.	2006	Amazon
Philodendron brent-berlinii	Croat	2005	Amazon	Prestonia acrensis	J.F.Morales	2004	Acre State, Brazil
Philodendron campii	Croat	2004	Pastaza Department, Ecuador	Prestonia amabilis	J.F.Morales	2004	Pastaza Department, Ecuador
Philodendron cardosoi	E.G.Gonc.	2004	Para State, Brazil	Prosthechea regentii	V.P.Castro & Chiron	2005	Roraima State, Brazil
Philodendron carinatum	E.G.Gonc.	2005	Amapa State, Brazil	Prosthechea roraimensis	V.P.Castro & Campacci	2004	Roraima State, Brazil
Philodendron condorcanquense	Croat	2005	Amazon	Protium aidanianum	Daly	2005	Napo Province, Ecuador
Philodendron huashikatii	Croat	2005	Amazon	Protium calendulinum	Daly	2007	French Guiana
Philodendron lupinum	E.G.Gonç. & J.B.Carvalho	2008	Acre State, Brazil	Protium gallosum	Daly	2007	Amazon
Philodendron moonenii	Croat	2004	French Guiana	Protium retusum	Daly	2007	Guyana
Philodendron palaciosii	Croat & Grayum	2005	Napo Province, Ecuador	Protium urophyllidium	Daly	2007	Amazon
Philodendron paucinervium	Croat	2004	Loreto Region, Peru	Pseudoxandra acreana	Maas	2006	States of Acre, Amazonas, Brazil
Philodendron reticulatum	Grayum	2005	Amazon	Pseudoxandra borbensis	Maas	2003	Amazon
Philodendron scottmorianum	Croat & Moonen	2007	French Guiana	Pseudoxandra cauliflora	Maas	2003	Amazon
Philodendron swartiae	Croat	2005	Amazon	Pseudoxandra duckei	Maas	2003	Amazon
Philodendron ushanum	Croat & Moonen	2006	French Guiana	Pseudoxandra obscurinervis	Maas	2003	Amazon
Philodendron wadedavisii	Croat	2006	Amazon	Pseudoxandra papillosa	Maas	2003	Amazon
Phoradendron acuminatum	Kuijt	2003	Suriname	Pseudoxandra pilosa	Maas	2003	Amazon
Phoradendron bicarinatum	Kuijt	2003	Amazon	Psittacanthus acevedoi	Kuijt	2009	Amazon
Phoradendron granvillei	Kuijt	2003	French Guiana	Psittacanthus atrolineatus	Kuijt	2009	Rondonia State, Brazil
Phoradendron juruanum	Kuijt	2003	Amazon	Psittacanthus baguensis	Kuijt	2009	Amazon
Phoradendron krameri	Kuijt	2003	Suriname; Guyana	Psittacanthus bergii	Kuijt	2009	Mato Grosso State, Brazil
Phoradendron krukovii	Kuijt	2003	Amazon	Psittacanthus brachypodus	Kuijt	2009	Para State. Brazil
Phoradendron lindemanii	Kuijt	2003	Mato Grosso State, Brazil	Psittacanthus carnosus	Kuijt	2009	Rondonia State, Brazil
Phoradendron oliveirae	Kuijt	2003	Para State, Brazil	Psittacanthus crassipes	Kuijt	2009	Amazon
Phoradendron singulare	Kuijt	2003	Amazon	Psittacanthus dentatus	Kuijt	2009	Para State, Brazil
Phyllanthus puntii	Webster	2004	Acre State, Brazil	Psittacanthus elegans	Kuijt	2009	Amazon
Pilocarpus trifoliolatus	Skorupa & Pirani	2004	Para State, Brazil	Psittacanthus geniculatus	Kuijt	2009	Acre State, Brazil
Piper aulacospermum	Callejas	2005	French Guiana	Psittacanthus ovatus	Kuijt	2009	Amazon
Piper ciliomarginatum	Görts & Christenh.	2005	Guyana	Psittacanthus rugostylus	Kuijt	2009	Para State, Brazil
Piper remotinervium	Görts	2005	French Guiana	Psychotria ceronii	C.M.Taylor	2006	Napo Province, Ecuador
Pitcairnia amboroensis	Ibisch, Vásquez, Gross & Kessler	1999	Amboró National Park, Santa Cruz, Bolivia	Psychotria cutucuana	C.M.Taylor	2006	Morona-Santiago Province, Ecuador
Pitcairnia buscalionii	W.Till	2003	Amazon	Psychotria montivaga	C.M.Taylor	2006	Zamora-Chinchipe Province, Ecuador
Pitcairnia cremersii	Gouda	2009	Suriname; French Guiana	Psychotria poyoana	C.M.Taylor	2006	Pastaza Department, Ecuador
Pitcairnia heydlaufii	Vásquez & Ibisch	2000	Cochabamba Department, Bolivia	Qualea johannabakkerae	MarcBerti	2002	Amazon
Pitcairnia rojasii	H.Luther	2007	Amazon	Qualea marioniae	Marcano-Berti	2002	Guyana
Pitcairnia saxosa	Gouda	2009	French Guiana	Quiina berryi	J.V.Schneid. & Zizka	2003	States of Amazonas, Para, Brazil
Pitcairnia semijuncta	Baker	2009	French Guiana; Guyana; Suriname	Quiina cidiana	J.V.Schneid. & Zizka	2003	Amazon
Pitcairnia vargasii	Vásquez & Ibisch	2009	Cochabamba Department, Bolivia	Quiina piresii	J.V.Schneid. & Zizka	2003	Amazon
Platystele paraensis	Campacci & J.B.F.Silva	2009	Para State, Brazil	Raddiella vanessiae	Judziewicz & Sepsenwol	2007	French Guiana
Pleurothallis feuilletii	Luer	2004	French Guiana	Raputia praetermissa	Pirani & Kallunki	2005	Amazon
Pleurothallis tiarata	Luer & Hirtz	2004	Morona-Santiago Province, Ecuador	Rauvolfia gracilis	Koch & Kin.	2007	States of Mato Grosso, Rondonia, Brazil
Pleurothallis ximenae	Luer & Hirtz	2004	Morona-Santiago Province, Ecuador	Remijia hubbardiorum	B.M.Boom	2005	Amazon
Polylychnis ovata	Wassh.	2006	Amapa State, Brazil; Suriname	Rhodospatha acosta-solisii	Croat	2005	Amazon
Polypsecadium apolobamba	Al-Shehbaz & A.Fuentes	2008	La Paz, Bolivia	Rhodospatha brent-berlinii	Croat	2005	Amazon
Polystichum albomarginatum	Kessler & Sm.	2005	La Paz, Bolivia	Rhodospatha katipas	Croat	2005	Amazon
Polystichum congestum	Kessler & Sm.	2005	La Paz, Bolivia	Rhodospatha piushaduka	Croat	2005	Amazon
Polystichum giganteum	Kessler & Sm.	2005	La Paz, Bolivia	Rhodostemonodaphne crenaticupula	Madriñán	2004	Amazon
Polystichum lepidotum	Kessler & Sm.	2005	La Paz, Bolivia	Rhodostemonodaphne curicuriariensis	Madriñán	2004	Amazon
Polystichum rufum	Kessler & Sm.	2005	La Paz, Bolivia	Rhodostemonodaphne longipetiolata	Madriñán	2004	Napo Province, Ecuador
Polystichum solomonii	Kessler & Sm.	2005	La Paz, Bolivia	Rhodostemonodaphne napoensis	Madriñán	2004	Napo Province, Ecuador
Potalia coronata	Struwe & V.A.Albert	2004	Amazon	Rhodostemonodaphne negrensis	Madriñán	2004	Amazon
Pourouma cordata	C.C.Berg	2004	Amazon	Rhodostemonodaphne parvifolia	Madriñán	2004	Amazon
Pouteria ericoides	T.D.Penn.	2006	Amazon	Rhodostemonodaphne peneia	Madriñán	2004	Amazon
Pouteria erythrochrysa	T.D.Penn.	2006	Amazon	Rhodostemonodaphne sordida	Madriñán	2004	Loreto Region, Peru

Species	Scientist(s)	Date	Location	Species	Scientist(s)	Date	Location
Rhodostemonodaphne	Madriñán	2004	Amapa State, Brazil	Stelis strobilacea	Luer	2007	Morona-Santiago Province, Ecuador
tumucumaquensis				Stelis uncifera	Luer & Hirtz	2007	Morona-Santiago Province, Ecuador
Rhynchospora acanthoma	Araújo & Longhi-Wagner	2008	Para State, Brazil	Stenospermation ancuashii	Croat	2005	Amazon
Rhynchospora	M.T. Strong	2001	Guyana	Stenospermation parvum	Croat & A.Gomez	2005	Pastaza Department, Ecuador
angustipaniculata	•		•	Struthanthus prancei	Kuijt	2003	Amazon
Rhynchospora bracteovillosa	Araújo & Thomas	2003	Mato Grosso State, Brazil	Styrax griseus	P.W.Fritsch	2004	Para State, Brazil
Rhynchospora cordatachenia	M.T.Strong	2005	French Guiana	Swartzia canescens	Torke	2007	States of Amapa, Para, Brazil; French Guiana;
Rhynchospora eurycarpa	Araújo & Longhi-Wagner	2004	Mato Grosso State, Brazil				Suriname
Rhynchospora leucoloma	Araújo & Longhi-Wagner	2003	States of Mato Grosso, Para, Brazil	Swartzia coriaceifolia	Torke	2004	Amazon
Rhynchospora rupestris	Araújo & Thomas	2008	States of Mato Grosso, Para, Brazil	Swartzia juruana	Torke	2004	Acre State, Brazil
Rhynchospora rupicola	M.T. Strong	2001	Guyana	Swartzia manausensis	Torke	2007	Amazon
Rhynchospora saxisavannicola	Strong	2005	French Guiana	Swartzia ramiflora	Torke	2007	Amazon
Ribes amazonica	Weigend & E.Rodr.	2005	Amazon	Swartzia trimorphica	Mansano & A.L.Souza	2005	Amazon
Roraimaea aurantiaca	Struwe, Nilsson & Albert	2008	Roraima State, Brazil	Syagrus vermicularis	Noblick	2004	Maranhao State, Brazil
Roupala nonscripta	K.S.Edwards & Prance	2003	Amazon	Tachia lancisepala	Struwe, Kinkade & Maas	2005	Rondonia State, Brazil
Roupala psilocarpa	K.S.Edwards & Prance	2003	States of Amapa, Amazonas, Brazil	Tachia siwertii	Struwe, Kinkade & Maas	2005	States of Para, Amazonas, Brazil
Ruellia exserta	Wassh. & Wood	2003	States of Mato Grosso, Rondonia, Brazil	Tachigali barnebyi	van der Werff	2008	Rondonia State, Brazil
Ruyschia andina	de Roon	2005	Zamora-Chinchipe Province, Ecuador	Tachigali candelabrum	van der Werff	2008	Amazon
Salacia negrensis	Lombardi	2007	Amazon	Tachigali chrysaloides	van der Werff	2008	States of Acre, Mato Grosso, Rondonia, Brazil
Scaphispatha robusta	E.G.Gonç.	2005	Para State, Brazil	Tachigali fusca	van der Werff	2008	Acre State, Brazil
Scelochilus newyorkorum	Vásquez, Ibisch & Vargas	2003	Río Cotacajes, La Paz, Bolivia	Talisia croatii	AcevRodr.	2003	States of Acre, Amazonas, Brazil
Schefflera ciliatifolia	Fiaschi & Frodin	2008	Amazon	Talisia douradensis	AcevRodr.	2003	Para State, Brazil
Schefflera dichotoma	Fiaschi & Frodin	2008	Amazon	Talisia ghilleana	AcevRodr.	2003	Amazon
Schefflera plurifolia	Fiaschi & Frodin	2008	States of Amazonas, Mato Grosso, Rondonia, Brazil	Talisia granulosa	AcevRodr.	2003	Amazon
Schefflera umbrosa	Fiaschi & Frodin	2008	States of Amazonas, Para, Brazil	Talisia parviflora	AcevRodr.	2003	Amazon
Schwenckia alvaroana	Benítez	2006	Caqueta Department, Colombia	Tetracera maguirei	Aymard & B.M. Boom	2003	Guyana
Selaginella gynostachya	Valdespino	2008	Guyana; French Guiana	Tetrapterys anomala	W.R.Anderson	2005	Guyana
Selaginella karowtipuensis	Valdespino	2008	Guyana	Tococa costoides	Michelang.	2006	Amazon
Senna biglandularis	Araujo & Souza	2007	Tocantins State, Brazil	Tococa leticiana	Michelang.	2006	Amazon
Serjania souzana	Ferrucci & AcevRodr.	2005	Mato Grosso State, Brazil	Tocoyena arenicola	Delprete	2008	Tocantins State, Brazil
Sida castanocarpa	Krapov.	2007	States of Maranhao, Tocantins, Brazil	Tovomita calophyllophylla	García-Villacorta & Hammel	2004	Loreto Region, Peru
Sida simpsonii	Krapov.	2007	Mato Grosso State, Brazil	Tovomita gazelii	Poncy & Offroy	2006	French Guiana
Sida teresinensis	Krapov.	2007	Para State, Brazil	Trichocentrum loyolicum	Pupulin, Karremans & G.Merino	2008	Zamora-Chinchipe Province, Ecuador
Siparuna lewisiana	S.S.Renner & Hausner	2005	Amazon	Triplophyllum boliviense	Prado & Moran	2008	States of Acre, Amapa, Amazonas, Brazil;
Sobralia cardosoi	Campacci & J.B.F.Silva	2009	Roraima State, Brazil				French Guiana; Guyana
Solanum eitenii	Agra	2008	Maranhao State, Brazil	Triplophyllum glabrum	Prado & Moran	2008	States of Para, Amazonas, Para, Rondonia, Brazil;
Solanum megaspermum	Agra	2008	Amazon				Guyana
Solanum pedemontanum	M.Nee	2006	States of Acre, Amazonas, Brazil	Turnera amazonica	Arbo	2005	Amazon
Spathiphyllum barbourii	Croat	2005	Amazon	Turnera discors	Arbo	2005	Rondonia State, Brazil
Spathiphyllum brent-berlinii	Croat	2005	Amazon	Turnera kuhlmanniana	Arbo	2005	Rondonia State, Brazil
Spathiphyllum buntingianum	Croat	2005	Amazon	Turnera laciniata	Arbo	2005	Para State, Brazil
Spathiphyllum diazii	Croat	2005	Amazon	Turnera occidentalis	Arbo & Shore	2005	San Martin Region, Peru
Specklinia feuilletii	Luer	2005	French Guiana	Turnera reginae	Arbo	2005	Maranhao State, Brazil
Spigelia amazonica	Fern.Casas	2004	Amazon	Unonopsis heterotricha	Maas & Westra	2007	Para State, Brazil
Spigelia megapotamica	Fern.Casas	2008	Amazon	Weinmannia davidsonii	Fuentes & Rogers	2007	La Paz, Bolivia
Spigelia rondoniensis	Fern.Casas	2006	Rondonia State, Brazil	Weinmannia yungasensis	Fuentes & Rogers	2007	La Paz, Bolivia
Staelia tocantinsiana	R.M.Salas & E.L.Cabral	2007 2007	Tocantins State, Brazil	Xanthosoma baguense	Croat Many & Standard	2005	Amazon
Stelis abbreviata	Luer & Hirtz Luer & Hirtz	2007	Napo Province, Ecuador	Yanomamua araca	Grant, Maas & Struwe	2006	Amazon
Stelis adinostachya			Napo Province, Ecuador	Zollernia surinamensis	Mansano, A.M.G.Azevedo & G.P.Lewis	2005	Suriname; French Guiana
Stelis aliquantula	Luer & Hirtz	2007 2006	Morona-Santiago Province, Ecuador				
Stelis bricenorum	G.A.Romero & Luer	2006	Amazon Manara Santiaga Brassinga Egyadan				CURTOTAL C27
Stelis bucculenta	Luer & Hirtz	2007	Morona-Santiago Province, Ecuador				SUBTOTAL: 637

Stelis encephalota

Stelis laudabilis

Stelis mnemonica

Stelis nigrescens

Stelis sparsiflora

Stelis lapoi

Stelis orecta

Stelis picea

Luer & Hirtz

2007

2007

2007

2007

2007

2007

2007

2007

Zamora-Chinchipe Province, Ecuador

Zamora-Chinchipe Province, Ecuador

Zamora-Chinchipe Province, Ecuador

Morona-Santiago Province, Ecuador

Zamora-Chinchipe Province, Ecuador

Zamora-Chinchipe Province, Ecuador

Morona-Santiago Province, Ecuador Morona-Santiago Province, Ecuador

### Fish

Species	Scientist(s)	Date	Location	Species	Scientist(s)	Date	Location
Acestridium colombiense	Retzer	2005	Colombia	Corydoras noelkempffi	Knaack	2004	Bolivia
Acestridium gymnogaster	Reis & Lehmann	2009	Rio Madeira, Brazil	Corydoras ortegai	Britto, Lima & Hidalgo	2007	Rio Putumayo in Peru
Acestridium scutatum	Reis & Lehmann	2009	Rio Madeira, Brazil	Corydoras paragua	Knaack	2004	Bolivia
Acestridium triplax	Rodriguez & Reis	2007	Eastern Amazon Basin, Brazil	Corydoras paucerna	Knaack	2004	Bolivia
Acestrocephalus acutus	Menezes	2006	Para State, Brazil	Corydoras tukano	Britto & Lima	2003	Rio Tiquié, upper Rio Negro Basin, Brazil
Acestrocephalus pallidus	Menezes	2006	Amazonas State. Brazil	Creagrutus barrigai	Vari and Harold	2001	Northern and west central portions of Amazon Basin
Adontosternarchus nebulosus	Lundberg & Cox Fernandes	2007	Amazon Basin	Creagrutus britskii	Vari and Harold	2001	Rio Tocantins, Brazil
Amazonspinther dalmata	Bührnheim, Carvalho, Malabarba & Weitzman	2008	Amazon Basin	Creagrutus changae	Vari and Harold	2001	Western Amazon
Ammoglanis amapaensis	Mattos, Costa & Gama	2008	Brazil	Creagrutus cracentis	Vari and Harold	2001	Rio Tapajos
Ancistrus parecis	Ancistrus parecis Fisch-Muller, Cardoso,	2005	Amazon	Creagrutus ephippiatus	Vari and Harold	2001	Rio Negro
incisi as parceis	da Silva & Bertaco	2000		Creagrutus figuiredoi	Vari and Harold	2001	Rio Tocantins, Brazil
Ancistrus tombador	Fisch-Muller, Cardoso, da Silva & Bertaco	2005	Tapajós and Tocantins Rivers, Brazil	Creagrutus flavescens	Vari and Harold	2001	Western Amazon
Anostomoides passionis	Dos Santos & Zuanon	2006	Rio Xingu, Brazil	Creagrutus gracilis	Vari and Harold	2001	Western Amazon
Apareiodon agmatos	Taphorn B., D.C., H. López-Fernández &	2008	Mazaruni River, Guyana	Creagrutus holmi	Vari and Harold	2001	Western Amazon
Apareioaon agmaios	C.R. Bernard	2008	mazaram m.v., ouyana	Creagrutus ignotus	Vari and Harold	2001	Rio Tapajos
Aphyocharax yekwanae		2003	Guyana Shield of Venezuela	Creagrutus manu	Vari and Harold	2001	Southwestern Amazon Basin
Aphyolebias boticarioi	Willink, Chernoff & Machado-Allison	2003	Rio Purus Basin. Brazil	Creagrutus menezesi	Vari and Harold	2001	Rio Negro and Rio Tocantins, Brazil
Apistogramma baenschi	Costa	2004	Peru	Creagrutus molinus	Vari and Harold	2001	Rio Tocantins, Brazil
Apistogramma barlowi	Römer, Hahn, Römer, Soares & Wöhler	2004	Northern Peru	Creagrutus mucipu	Vari and Harold	2001	Rio Tocantins, Brazil
	Römer & Hahn	2008	Peru		Vari and Harold	2001	Western Amazon Basin
Apistogramma eremnopyge	Ready & Kullander	2004	Rio Mamoré. Bolivia	Creagrutus occidaneus			
Apistogramma erythrura	Staeck & Schindler	2008	Rio Meta Basin. Colombia	Creagrutus ortegai	Vari and Harold	2001 2001	Western Amazon
Apteronotus galvisi	de Santana, Maldonado-Ocampo & Crampton		State of Amazonas, Brazil	Creagrutus ouranaster	Vari and Harold		Western Amazon Basin
Astyanax ajuricaba	Marinho and Lima	2009		Creagrutus petilus	Vari and Harold	2001	Southwestern Amazon
Astyanax clavitaeniatus	Garutti	2003	Rio Surumu, Roraima State, Brazil	Creagrutus pila	Vari and Harold	2001	Western Amazon Basin
Astyanax dnophos	Lima & Zuanon	2004	Rio Xingu, Brazil	Creagrutus runa	Vari and Harold	2001	Rio Negro
Astyanax siapae	Garutti	2003	Rio Siapa, Amazonas State, Venezuela	Creagrutus saxatalis	Vari and Harold	2001	Rio Tocantins, Brazil
Astyanax utiariti	Bertaco & Garutti	2007	Rio Tapajós, Brazil drainage, Central Brazil	Creagrutus seductus	Vari and Harold	2001	Rio Tocantins, Brazil
Astyanax villwocki	Zarske & Géry	1999	Amazon Basin of Peru and Bolivia	Creagrutus ungulus	Vari and Harold	2001	Southwestern Amazon Basin
Attonitus bounites	Vari & Ortega	2000	Western Amazon	Creagrutus zephyrus	Vari and Harold	2001	Rio Negro
Attonitus ephimeros	Vari & Ortega	2000	Western Amazon	Crenicichla zebrine	Montaña, López-Fernández & Taphorn	2008	Ventuari River, Upper Orinoco River Basin, Amazonas State,
Attonitus irisae	Vari & Ortega	2000	Western Amazon				Venezuela
Baryancistrus beggini	Lujan, Arce & Armbruster	2009	Venezuela: Amazonas, Rio Orinoco drainage, Rio Ventuari	Crossoloricaria bahuaja	Chang & Castro	1999	Madre de Dios, southeastern Peru
Baryancistrus demantoides	Werneke, Sabaj, Lujan and Armbruster	2005	Venezuela, Amazonas, Rio Orinoco drainage, Rio Ventuari	Cynopotomas xiagunao	Menezes	2008	Rio Xingu, Brazil
Brachyplatystoma capapretum	Lundberg & Akama	2005	Amazon Basin	Cyphocharax derhami	Vari & Chang	2006	northeastern Peru
Bryconadenos weitzmani	Menezes, Netto-Ferreira & Ferreira	2009	Rio Curuá, Rio Xingu, Brazil drainage, Brazil	Denticetopsis epa	Vari, Ferraris & de Pinna	2005	Rio Tocantins, Brazil
Bryconamericus carlosi	Román-Valencia	2003	Amazon	Denticetopsis seducta	Vari, Ferraris & de Pinna	2005	Amazon Basin
Caenotropus schizodon	Scharcansky & Lucena	2007	Rio Tapajós, Brazil drainage, Brazil	Derhamia hoffmannorum	Géry & Zarske	2002	Mazaruni River in Guyana
Caiapobrycon tucurui	Malabarba & Vari	2000	Rio Tocantins, Brazil Basin, Brazil	Dicrossus gladicauda	Schindler & Staeck	2008	Colombia
Callichthys serralabium	Lehmann A. & Reis	2004	Upper Orinoco and Negro Rivers	Entomocorus melaphareus	Akama & Ferraris	2003	Rio Amazonas
Centromochlus macracanthus	Soares-Porto	2000	Rio Negro drainage, Amazon Basin, Brazil	Gelanoglanis nanonocticolus		1999	Orinoco and Amazon River Basins
Cetopsidium ferreirai	Vari, Ferraris & de Pinna	2005	Rio Trombetas, Brazil	Gelanoglanis travieso	Rengifo, Lujan, Taphorn & Petry	2008	Marañon River (Amazon Basin), northeastern Perú
Cetopsidium pemon	Vari, Ferraris & de Pinna	2005	Rio Branco, Brazil	Geophagus gottwaldi	Schindler & Staeck	2006	Rio Orinoco in Venezuela
Cetopsidium soniae	Vari & Ferraris Jr.	2009	Rio Branco, Brazil	Gladioglanis anacanthus	Rocha, de Oliveira & Rapp Py-Daniel	2008	Rio Aripuaña, Amazonas, Brazil
Cetopsis arcana	Vari, Ferraris & de Pinna	2005	Rio Tocantins, Brazil	Guianacara cuyunii	López-Fernández, Taphorn Baechle	2006	Guiana Shield of Eastern Venezuela
Cetopsis caiapo	Vari, Ferraris & de Pinna	2005	Rio Tocantins, Brazil		& Kullander		
Cetopsis montana	Vari, Ferraris & de Pinna	2005	Rio Tocantins, Brazil	Guianacara stergiosi	López-Fernández, Taphorn Baechle	2006	Guiana Shield of Eastern Venezuela
Cetopsis parma	de Oliveira, Vari, Ferraris,	2001	Western Amazon Basin		& Kullander		
Cetopsis pearsoni	Vari, Ferraris & de Pinna	2005	Western Amazon	Gymnotus arapaima	Albert & Crampton	2001	Amazon floodplain
Cetopsis sandrae	Vari, Ferraris & de Pinna	2005	Rio Tapajos	Gymnotus curupira	Crampton, Thorsen & Albert	2005	Amazon Basin
Cetopsis sarcodes	Vari, Ferraris & de Pinna	2005	Rio Tocantins, Brazil	Gymnotus jonasi	Albert & Crampton	2001	Amazon floodplain
Cetopsis starnesi	Vari, Ferraris & de Pinna	2005	Southwestern Amazon Basin	Gymnotus mamiraua	Albert & Crampton	2001	Amazon floodplain
Chaetostoma changae	Salcedo	2006	Central Peru	Gymnotus melanopleura	Albert & Crampton	2001	Amazon floodplain
Chaetostoma daidalmatos	Salcedo	2006	Huallaga River in central Peru	Gymnotus obscurus	Crampton, Thorsen & Albert	2005	Amazon Basin
Chaetostoma stroumpoulos	Salcedo	2006	Huallaga River in central Peru	Gymnotus onca	Albert & Crampton	2001	Amazon floodplain
Characidium xavante	de Garca et al	2008	Rio Xingu, Brazil	Gymnotus ucamara	Crampton, Lovejoy & Albert	2003	Peruvian Amazon
Compsaraia samueli	Albert & Crampton	2009	Amazon River	Gymnotus varzea	Crampton, Thorsen & Albert	2005	Amazon Basin
Corumbataia veadeiros	Carvalho	2008	Rio Tocantins, Brazil	Harttia depressa	Rapp Py-Daniel & Oliveira	2001	Guyana
Corydoras albolineatus	Knaack	2004	Bolivia	Harttia dissidens	Rapp Py-Daniel & Oliveira	2001	Guyana
Corydoras isbrueckeri	Knaack	2004	Bolivia	Harttia duriventris	Rapp Py-Daniel & Oliveira	2001	Guyana
Corydoras negro	Knaack	2004	Bolivia	Harttia guianensis	Rapp Py-Daniel & Oliveira	2001	Guyana
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# Fish

Species	Scientist(s)	Date	Location	Species	Scientist(s)	Date	Location
Harttia merevari	Provenzano	2005	Venezuela, Bolívar State, Caura River	Leptodoras oyakawai	Birindelli, Sousa & Sabaj Pérez	2008	Tapajós and Xingu Basins, Brazil
Harttia punctata	Rapp Py-Daniel & Oliveira	2001	Guyana	Lithoxus jantjae	Lujan	2008	Guayana Highlands
Harttia trombetensis	Rapp Py-Daniel & Oliveira	2001	Guyana	Lithoxus jantjae	Lujan	2008	Venezuela, Amazonas
Harttia uatumensis	Rapp Py-Daniel & Oliveira	2001	Guyana	Loricaria lundbergi	Thomas & Rapp Py-Daniel	2008	River channels of the Amazon Basin
Hasemania nambiquara	Bertaco & Malabarba	2007	Upper Rio Tapajós, Brazil drainage, Brazil	Loricaria pumila	Thomas & Rapp Py-Daniel	2008	River channels of the Amazon Basin
Hemiancistrus guahiborum	Werneke, Armbruster, Lujan	2005	Venezuela, Amazonas, Rio Ventuari	Loricaria spinulifera	Thomas & Rapp Py-Daniel	2008	River channels of the Amazon Basin
Ü	& Taphorn			Megadontognathus kaitukaensis	Campos-da-paz	1999	Amazon Basin
Hemiancistrus pankimpuju	Lujan & Chamon	2008	Amazon Basin	Megalonema amaxanthum	Lundberg and Dahdul	2008	Bolivia, Pando State
Hemiancistrus subviridis	Werneke, Sabaj, Lujan	2005	Venezuela, Amazonas, Rio Orinoco	Megalonema orixanthum	Lundberg and Dahdul	2008	Orinoco Basin, Venezuela Amazonas State
	& Armbruster			Moema apurinan	Costa	2004	Rio Purus Basin, Brazil
Hemibrycon divisorensis	Bertaco, Malabarba, Hidalgo	2007	Rio Ucayali drainage, Sierra del Divisor, Peru	Moenkhausia cosmops	Lima, Britski & Machado	2007	Rio Tapajôs
	& Ortega			Moenkhausia diktyota	Lima & Toledo-Piza	2001	Rio Negro of Brazil
Hemigrammus arua	Lima, Wosiacki and Ramos	2009	Brazil, Pará State	Moenkhausia dorsinuda	Zarske & Géry	2002	Rio Iténez in Bolivia
Hemigrammus geisleri	Zarske & Géry	2007	Central Amazonas	Moenkhausia levidorsa	Benine	2002	Rio Aripuanã, Amazon Basin, Brazil
Hemigrammus neptunus	Zarske & Géry	2002	Rio Manuripi in Bolivien (Departamento Pando)	Moenkhausia margitae	Zarske & Géry	2001	Rio Ucayali in Peru
Hemigrammus ora	Zarske & Géry	2006	French Guiana	Moenkhausia petymbuaba	Lima & Birindelli	2006	Serra do Cachimbo, Rio Xingu, Brazil
Hemigrammus silimoni	Britski & Lima	2008	Rio Tapajós, Brazil Basin in Brazil	Myloplus planquettei	C / /	2003	Guiana Shield
Hemiodus jatuarana	Langeani	2004	Rio Trombetas, Brazil, Amazon Basin, Brazil	Myoglanis koepckei	Chang	1999	Rio Amazonas, Peru
Hemiodus tocantinensis	Langeani	1999	Rio Tocantins, Brazil, Brazil	Nannacara quadrispinae	Staeck & Schindler	2004	Orinoco Delta in Venezuela
Hisonotus chromodontus	Britski & Garavello	2007	Rio Tapajós, Brazil, Mato Grosso State, Brazil	Nannostomus rubrocaudatus	Zarske	2009	Loreto, Peru
Hisonotus luteofrenatus	Britski & Garavello	2007	Rio Tapajós, Brazil, Mato Grosso State, Brazil	Odontostilbe ecuadorensis	Bührnheim & Malabarba	2006	Amazon Basin
Hoplias curupiru	Oyakawa & Mattox	2009	Amazon	Odontostilbe nareuda	Bührnheim & Malabarba	2006	Amazon Basin
Hypancistrus contradens	Armbruster, Lujan & Taphorn	2007	Amazonas, Venezuela	Odontostilbe parecis	Bührnheim & Malabarba	2006	Amazon Basin
Hypancistrus debilittera	Armbruster, Lujan & Taphorn	2007	Amazonas, Venezuela	Otocinclus batmani	Lehmann A.	2006	Rio Puré in Colombia, and two creeks emptying
Hypancistrus furunculus	Armbruster, Lujan & Taphorn	2007	Amazonas, Veneuzela		n :		into the Rio Amazonas near Iquitos, Peru
Hypancistrus lunaorum	Armbruster, Lujan & Taphorn	2007	Amazonas, Veneuzela	Otocinclus cocama	Reis	2004	Departamento Loreto, Peru
Hyphessobrycon borealis	Zarske, Le Bail & Géry	2006	French Guiana	Otocinclus cocama	Reis	2004	Rio Ucayali, Peru
Hyphessobrycon heliacus	Moreira, Landim & Costa	2002	Rio Tapajós, Brazil Basin, Central Brazil	Pachyurus stewarti	Casatti & Chao	2002	Rio Napo Basin, Eastern Ecuador
Hyphessobrycon hexastichos	Bertaco & Carvalho	2005	Mato Grosso, Brazil	Panaqolus changae	Chockley & Armbruster	2002	Eastern Peru
Hyphessobrycon melanostichos		2006	Rio Tapajós, Brazil Basin on Chapada dos Parecis, central Brazil Rio Madre de Dios in Peru	Panaque bathyphilus	Lujan & Chamon	2008	Itaya and Momon River Basins in Peru
Hyphessobrycon nigricinctus	Zarske & Géry	2004 2006		Parancistrus nudiventris Pariosternarchus amazonensis	Rapp Py-Daniel & Zuanon Albert & Crampton	2005 2006	Rio Xingu, Brazil, Brazil Amazon River
Hyphessobrycon notidanos Hyphessobrycon oritoensis	Carvalho & Bertaco García-Alzate, Román-Valencia & Taphorn		Rio Tapajós, Brazil Basin on Chapada dos Parecis, central Brazil Putumayo River drainage, Colombian Amazon	Pariosternarchus amazonensis Peckoltia cavatica		2005	Amazon River Guyana
Hyphessobrycon pando	Hein	2008	Departamento Pando, Bolivia	Peckoltia sabaji	Armbruster, J.W. and D.C. Werneke	2003	Guyana Shield
Hyphessobrycon scutulatus	Lucena	2003	Rio Tapajós, Brazil system	Phallobrycon adenacanthus		2009	Rio Xingu, Brazil Basin
Hypostomus ericae	Hollanda Carvalho & Weber	2005	Middle and lower Amazon System	Phenocogaster apletostigma	de Lucena, Z.M.S. and C. de S. Gama		State of Amapá, Brasil
Hypostomus ericius	Armbruster	2003	Rio Amazonas drainage in Peru	Phreatobius dracunculus		2007	Southwestern Amazon Basin
Hypostomus faveolus	Zawadzki, Birindelli & Lima	2003	Rio Tocantins, Brazil and Rio Xingu, Brazil Basins in central Brazil	Phreatobius sanguijuela	Fernández, Saucedo, Carvajal-Vallejos		Iténez River, Bolivia
Hypostomus hemicochliodon	Armbruster	2003	Rio Amazonas drainage in Peru	1 mediootus sanguijacia	& Schaefer	2007	iteliez kivel, Bolivia
Hypostomus macushi	Armbruster, J.W. and L.S. de Souza	2005	Guyana	Physopyxis ananas	Sousa and Rapp	2005	Rio Jutaí, Rio Solimões Basin, Amazonas State, Brazil
Hypostomus paucipunctatus	Hollanda Carvalho & Weber	2005	Middle and lower Amazon System	Physopyxis cristata	Sousa and Rapp	2005	Rio Negro, Amazonas State, Brazil
Hypostomus simios	Hollanda Carvalho & Weber	2005	Middle and lower Amazon System	Pimelodus haisodus	Ribeiro et al	2008	Rio Tocantins, Brazil
Hypostomus soniae	Hollanda Carvalho & Weber	2005	Middle and lower Amazon System	Pimelodus joannis	Ribeiro et al	2008	Rio Tocantins, Brazil
Hypostomus waiampi	Hollanda Carvalho & Weber	2005	Middle and lower Amazon System	Pimelodus stewarti	Ribeiro et al	2008	Rio Tocantins, Brazil
Ituglanis mambai	Bichutte & Trajano	2008	Rio Tocantins, Brazil	Pimelodus tetramerus	Ribeiro & Lucena	2006	Rios Tapajós, Tocantins, Brasil
Jupiaba isasy	Netto-Ferreira et al	2009	Rio Tapajos	Platyurosternarchus crypticus	de Santana & Vari	2008	Rio Branco, Brazil
Jupiaba kurua	Birindelli, Zanata, Sousa & Netto-Ferreira	2009	Rio Curuá, Rio Xingu, Brazil Basin, Brazil	Potamotrygon boesemani	Rosa, Carvalho, and Wanderley	2008	Suriname
Jupiaba paranatinga	Netto-Ferreira et al	2009	Rio Tapajos	Propimelodus caesius	Parisi, Lundberg & DoNascimiento	2006	Amazon Basin
Jupiaba poekotero	Zanata & Lima	2005	Rio Tiquié, Upper Rio Negro Basin, Brazil	Pseudancistrus corantijniensis		2008	Guyana Shield
Knodus borki	Zarske	2008	Iquitos, Peru		Burgos		
Knodus shinahota	Ferreira & Carvajal	2007	Rio Shinahota, Rio Chapare Basin (Mamoré system), Bolivia	Pseudobunocephalus lundbergi	Friel	2008	Venezuela, Bolivar
Knodus tiquiensis	Ferreira & Lima	2006	Rio Tiquié, upper Rio Negro System, Brazil	Pterygoplichthys weberi	Armbruster and Page	2006	Colombia, Amazonas, Amazon River
Laetacara fulvipinnis	Staeck & Schindler	2007	Rio Orinoco and Rio Negro in Venezuela	Pyrrhulina elongata	Zarske & Géry	2001	Rio Tapajos in Brazil
Lasiancistrus saetiger	Armbruster	2005	Brazil, Pará	Rhabdolichops lundbergi	Correa, Crampton & Albert	2006	Central Amazon
Leporinus amazonicus	Dos Santos & Zuanon	2008	Amazon lowlands, Brazil	Rhabdolichops navalha	Correa, Crampton & Albert	2006	Central Amazon
Leporinus bleheri	Géry	1999	Rio Guaporé-Iténez Basin	Rhabdolichops nigrimans	Correa, Crampton & Albert	2006	Central Amazon
Leporinus geminis	Garavello & Santos	2009	Araguaia-Tocantins system, Amazon Basin, Brazil	Rhinodoras armbrusteri	Sabaj et al	2008	Rio Branco, Brazil
Leporinus guttatus	Birindelli & Britski	2009	Rio Curuá, Rio Xingu, Brazil Basin, Serra do Cachimbo, Brazil	Rineloricaria daraha	Rapp Py-Daniel & Fichberg	2008 2008	Rio Daraá, Rio Negro Basin, Amazon, Brazil
Leporinus unitaeniatus	Garavello & Santos	2009 2005	Araguaia-Tocantins system, Amazon Basin, Brazil Venezuela, Amazonas	Rivulus amanan	Costa & Lazzarotto Costa	2008	Japurá River drainage, Amazonas River Basin, Brazil
Leptodoras cataniai	Sabaj	2005	venezueia, Amazonas	Rivulus amanapira	Costa	∠004	Rio Negro, Brazil

#### Fish

Species	Scientist(s)	Date	Location
Rivulus caurae	Radda	2004	Rio Caura, Bolivar State, Venezuela
Rivulus gaucheri	Keith, P., L. Nandrin & PY. Le Bail	2006	French Guiana
Rivulus kayabi	Costa	2007	Tapajós River Basin, southern Brazil
Rivulus kirovskyi	Costa	2004	Central Amazon, Brazil
Rivulus mahdiaensis	Suijker, W.H. and G.E. Collier	2006	Guyana
Rivulus sape	Lasso-Alcalá, O.M., D.C. Taphorn,	2006	Guyana Shield, Venezuela
	C.A. Lasso & O. León-Mata		
Rivulus uakti	Costa	2004	Rio Negro, Brazil
Rivulus uatuman	Costa	2004	Central Brazil
Roeboides oligistos	Lucena	2000	Rios Orinoco and Amazonas
Scoloplax baskini	Rocha, de Oliveira & Rapp Py-Daniel	2008	Rio Aripuanã, Amazonas, Brazil
Serrasalmus altispinis	Merckx, Jégu & Santos	2000	Rio uatumã, Amazonas, Brazil
Simpsonichthys inaequipinnatus	Costa	2008	Rio Tocantins, Brazil
Simpsonichthys reticulatus	Costa & Nielsen	2003	Rio Xingu, Brazil floodplains, Brazil
Skiotocharax meizon	Presswell, Weitzman & Bergquist	2000	Guyana
Sorubim maniradii	Littmann, Burr & Buitrago-Suarez	2001	Upper and middle Amazon Basin
Steatogenys ocellatus	Crampton, Thorsen & Albert	2004	Lowland Amazon Basin
Steindachnerina notograptos	Lucinda & Vari	2009	Rio Tocantins, Brazil
Sternarchorhynchus caboclo	de Santana & Nogueira	2006	Amazon Basin, Brazil
Sternarchorhynchus curumim	de Santana & Crampton	2006	lowland Amazon Basin, Brazil
Sternarchorhynchus severii	de Santana & Nogueira	2006	Amazon Basin, Brazil
Sternopygus branco	Crampton, Hulen & Albert	2004	Lowland Amazon Basin
Synbranchus lampreia	Favorito, Zanata & Assumpção	2005	Brazil, Pará
Teleocichla centisquama	Zuanon & Sazima	2002	Xingu River, Amazon
Tetragonopterus lemniscatus	Benine, R.C., G.Z. Pelição & R.P. Vari	2004	Corantijn River Basin in Suriname
Tetranematichthys wallacei	Vari & Ferraris	2006	Rio Negro
Tometes lebaili	Jégu, Keith & Belmont-Jégu	2002	Mana River and Maroni Basins in French Guiana,
			and Commewine River in Suriname
Tometes makue	Jégu, Santos & Belmont-Jégu	2002	Rio Negro (Brazil) and Orinoco(Venezuela)
Trichomycterus therma	Fernandez & Miranda	2007	Bolivia

SUBTOTAL: 257

# **Amphibians**

Species	Scientist(s)	Date	Location
Adelophryne patamona	MacCulloch, Lathrop, Kok, Minter, Khan, and Barrio-Amoros	2008	Guyana
Allobates caeruleodactylus	Lima and Caldwell	2001	State of Amazonas, Brazil
Allobates cepedai	Morales	2002	Meta Department, Colombia
Allobates conspicuus	Morales	2002	Manu, Madre de Dios Region, Perú; Acre State, Brazil
Allobates craspedoceps	Duellman	2004	San Martín Region, Peru
Allobates crombiei	Morales	2002	Río Xingú, Para State, Brazil
Allobates fratisenescus	Morales	2002	Pastaza River. Ecuador
Allobates fuscellus	Morales	2002	Amazonas and Rondonia States, Brazil
Allobates gasconi	Morales	2002	Río Juruá in Acre State and Amazonas State, Brazil
Allobates granti	Kok, MacCulloch, Gaucher, Poelman,	2006	French Guiana
Anooutes grunn	Bourne, Lathrop, and Lenglet	2000	i iciicii Guiana
Allobates insperatus	Morales	2002	Santa Cecilia, Napo Province, Ecuador
Allobates masniger	Morales	2002	Para State, Brazil
Allobates melanolaemus	Grant and Rodriguez	2002	Loreto Region, Peru
Allobates nidicola	Caldwell and Lima	2001	Amazonas State, Brazil
Allobates ornatus	Morales	2003	
			San Martín Region, Perú
Allobates picachos	Ardila-Robayo, Acosta-Galvis,	2000	Western slopes of the Cordillera Oriental Boyacá and
	& Coloma		Santander and eastern slopes of the Cordillera Central Caldas
	T. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	2005	and Antioquia, Colombia
Allobates spumaponens	Kok and Ernst	2007	Mabura Hill Forest Reserve, Guyana
Allobates subfolionidificans	Lima, Sanchez, and Souza	2007	Acre State, Brazil
Allobates sumtuosus	Morales	2002	Para State, Brazil; Loreto Region, Peru
Allobates undulatus	Myers and Donnelly	2001	State of Amazonas, Venezuela
Allobates vanzolinius	Morales	2002	Amazonas State, Brazil
Ameerega altamazonica	Twomey and Brown	2008	San Martin and Loreto Regions, Peru
Ameerega ignipedis	Brown and Twomey	2009	Loreto Region, Peru
Ameerega pepperi	Brown and Twomey	2009	Upper Huallaga valley, Peru
Ameerega pongoensis	Schulte	1999	Pongo de Aguirre, Amazonas Region, Peru
Ameerega yoshina	Brown and Twomey	2009	San Martin Region, Peru
Ameerega yungicola	Lötters, Schmitz, and Reichle	2005	La Paz Department, Bolivia
Anomaloglossus baeobatrachus	Boistel and Massary	1999	French Guiana, Suriname, Brazil
Anomaloglossus breweri	Barrio-Amorós	2006	Bolívar State, Venezuela
Anomaloglossus kaiei	Kok, Sambhu, Roopsind, Lenglet & Bourne	2006	Kaieteur National Park, Guyana
Anomaloglossus moffetti	Barrio-Amorós and Brewer-Carias	2008	Brazil, Venezuela
Anomaloglossus triunfo	Barrio-Amorós, Fuentes-Ramos & Rivas-Fuenmayor	2004	Bolívar State, Venezuela
Anomaloglossus wothuja	Barrio-Amorós, Fuentes-Ramos & Rivas-Fuenmayor	2004	Amazonas State, Venezuela
Atelopus dimorphus	Lötters	2003	Cordillera Azul, Huánuco Region, Peru
Atelopus epikeisthos	Lötters, Schulte, and Duellman	2005	Amazonas Region, Peru
Atelopus mittermeieri	Acosta-Galvis, Rueda-Almonacid, Velásquez-Álvarez, Sánchez-Pacheco, and Peña-Prieto	2006	El Encino Municipal, Santander Department, Colombia
Atelopus monohernandezii	Ardila-Robayo, Osorno-Muñoz & Ruiz-Carranza	2002	Santander Department, Colombia
Atelopus oxapampae	Lehr, Lötters, and Mikael	2008	Chontabamba District, Pasco Province, Pasco Region, Peru
Atelopus petersi	Coloma, Lötters, Duellman, & Miranda-Leiva	2007	Napo Province and (provisionally) Chimborazo, Ecuador
Atelopus petriruizi	Ardila-Robayo	1999	Caquetá Department, Colombia
Atelopus pyrodactylus	Venegas and Barrio	2006	Mariscal Cáceres Province, San Martín Region, Peru
Atelopus reticulatus	Lötters, Haas, Schick, and Böhme	2002	Ucayali Region, Peru
Brasilotyphlus guarantanus	Maciel, Mott and Hoogmoed	2009	North of Mato Grosso State, city of Guaranta do Norte
Centrolene condor	Cisneros-Heredia and Morales-Mite	2008	Western slope of the Cordillera del Cóndor, Zamora-Chinchipe Province, Ecuador
Centrolene durrellorum	Cisneros-Heredia	2007	Zamora-Chinchipe Province and Napo Province, Ecuador

# **Amphibians**

Species	Scientist(s)	Date	Location	Species	Scientist(s)	Date	Location
Centrolene mariaelenae	Cisneros-Heredia and McDiarmid	2006	Napo Province, Tungurahua, Morona-Santiago Province and Zamora-Chinchipe Province, Ecuador	Hypsiboas jimenezi	Señaris and Ayarzagüena Kok	2006 2006	Bolívar State, Venezuela Potaro-Siparuni District, Guyana
Chiasmocleis avilapiresae	Peloso and Sturaro	2008	Known from south of the Amazon river, but within its	Hypsiboas liliae Hypsiboas nympha	Faivovich, Moravec, Cisneros-Heredia	2006	Upper Amazon Basin of eastern Ecuador, northeastern Peru
Chiasmocieis aviiapiresae	1 closo and Stararo	2008	drainage from central Amazonas State and eastern	11ypsioous nympnu	& Köhler	2000	and vicinity of Leticia, Colombia
			Rondonia State, northwestern Mato Grosso State, to	Hypsiboas rhythmicus	Señaris and Ayarzagüena	2002	Parque Nacional Jaua-Sarisariñama, Bolívar State, Venezuela
			south-central Para State to near the mouth of the Amazon	Hypsiboas tepuianus	Barrio-Amorós and Brewer-Carias	2008	Southern slope of Sarisariñama-tepui, Locality VI, Bolívar State,
Chiasmocleis devriesi	W. Chris Funk & David C. Cannatella	2009	Amazonian Peru				Venezuela
Chiasmocleis jimi	Caramaschi and Cruz	2001	Amazonas State and Para State, Brazil	Leptodactylus heyeri	Boistel, Massary, and Angulo	2006	French Guiana
Chiasmocleis magnova Cochranella amelie	Moravec and Köhler Cisneros-Heredia and Meza-Ramos	2007 2007	Iquitos, Amazonas Region, Peru Pastaza Province, Ecuador	Leptodactylus paraensis Nannophryne apolobambica	Heyer De la Riva, Ríos, and Aparicio	2005 2005	Para State, Brazil Franz Tamayo Province, La Paz Department, Bolivia
Cochranella erminea	Torres-Gastello, Suárez-Segovia &	2007	Tambo River Basin, Satipo Province, Junín Region,	Nobella ritarasquinae	Kolher	2003	Bolivian Amazon
Состинени егтиней	Cisneros-Heredia	2007	Peru Peru	Noblella duellmani	Lehr, Aguilar, and Lundberg	2004	Paucartambo District, Pasco Province, Pasco Region, Peru
Cochranella mcdiarmidi	Cisneros-Heredia, Venegas, Rada	2008	Peru, Ecuador	Noblella pygmaea	Lehr and Catenazzi	2009	Upper Cosnipata Valley in southern Peru Cusco Region
	& Schulte		•	Nymphargus laurae	Cisneros-Heredia and McDiarmid	2007	Orellana Province, Ecuador
Cochranella phryxa	Aguayo-Vedia and Harvey	2006	La Paz Department, Bolivia	Nymphargus mixomaculatus	Guayasamin, Lehr, Rodríguez & Aguilar	2006	Cordillera de Carpish, Huánuco Province, Huánuco Region, Peru
Dendrobates nubeculosus	Jungfer and Böhme	2004	Mazruni Potaro District, Guyana	Nymphargus wileyi	Guayasamin, Bustamante, Almeida-	2006	Napo Province, Ecuador
Dendropsophus coffeus	Köhler, Jungfer, and Reichle	2005	Peru; La Paz Department, Bolivia		Reinoso & Funk		
Dendropsophus delarivai	Köhler and Lötters	2001	Yungas of Cochabamba, Bolivia	Oreobates choristolemma	Harvey and Sheehy	2005	Caranavi Province, La Paz Department, Bolivia
Dendropsophus gaucheri	Lescure and Marty	2000	French Guiana, Suriname Pando Department, Bolivia	Oreobates lehri Oreobates madidi	Padial, Chaparro, and De la Riva Padial, Gonzáles, and De la Riva	2007 2005	Cloud forests of the Apurimac and Kosñipata valleys, southern Peru
Dendropsophus joannae Dendropsophus juliani	Köhler and Lötters Moravec, Aparicio, and Köhler	2001 2006	Madre de Dios Region, Peru; Pando Department,	Oreobates maatat Oreobates sanderi	Padial, Reichle, and De la Riva	2005	Franz Tamayo Province, La Paz Department, Bolivia Franz Tamayo Province, La Paz Department, Bolivia
Denaropsophus Junani	Woravec, Aparicio, and Komer	2000	Bolivia and possibly also from the Santa Cruz	Oreophrynella dendronastes	Lathrop and MacCulloch	2007	Mount Ayanganna, Guyana
			Department, suggesting its likely occurrence in	Oreophrynella seegobini	Kok	2009	Pakaraima Mountains, Guyana
			adjacent Brazil.	Oreophrynella weiassipuensis	Señaris, Nascimento, and Villarreal	2005	Wei-Assipu Tepui on the Guyana-Brazil border
Dendropsophus reichlei	Moravec, Aparicio, Guerrero-Reinhard,	2008	Pando Department, Bolivia	Osornophryne puruanta	Gluesenkamp and Guayasamin	2008	Cordillera de Pimampiro, Imbabura Province, Ecuador
	Calderon, & Köhler			Osteocephalus castaneicola	Moravec et al	2009	Amazonian Bolivia
Gastrotheca atympana	Duellman, Lehr, Rodríguez, and von May	2004	Pampa Hermosa, Tarma Province, Junín Region, Peru	Osteocephalus deridens	Jungfer, Ron, Seipp, and Almendáriz	2000	Napo Province, Francisco de Orellana Province and Sucumbíos
Gastrotheca carinaceps	Duellman, Trueb, and Lehr	2006	Province of Oxapampa, from the vicinity of San Alberto,	0. 11 111	0.34 134	2001	Province, Ecuador
Castusthana ancilaminia	Duellman and Venegas	2005	Peru San Martín Region, Peru	Osteocephalus exophthalmus Osteocephalus fuscifacies	Smith and Noonan Jungfer, Ron, Seipp, and Almendáriz	2001 2000	Tepui south of Imbaimadai, Guyana Napo Province, Orellana Province and Sucumbíos Province, Ecuador
Gastrotheca ossilaginis Gastrotheca phalarosa	Duellman and Venegas  Duellman and Venegas	2005 2005	San Martin Region, Peru San Martin Region, Peru	Osteocephalus Juscijacies Osteocephalus heveri	Lynch	2000	Amazonas Department, Colombia and adjacent Loreto Region, Peru
Gastrotheca piperata	Duellman and Köhler	2005	Cochabamba Department, Bolivia	Osteocephalus leoniae	Jungfer and Lehr	2002	Oxapampa Province, Pasco Region, Peru
Gastrotheca zeugocystis	Duellman, Lehr, Rodríguez, and von May	2004	Cordillera de Carpish, Huánuco Province, Huánuco	Osteocephalus mutabor	Jungfer and Hödl	2002	Ucayali Region, Peru
	3,,		Region, Peru	Osteocephalus phasmatus	MacCulloch and Lathrop	2005	Mount Ayanganna, Guyana
Hemiphractus helioi	Sheil and Mendelson	2001	Brazil, Peru, Bolivia	Osteocephalus yasuni	Ron and Pramuk	1999	Upper Amazon Basin in Ecuador; Loreto Region, Peru;
Hyalinobatrachium carlesvilai	Castroviejo-Fisher, Padial, Chaparro,	2009	Amazonian slopes of the Andes in Peru and Bolivia				Amazonas Department, Colombia
	Aguayo & De la Riva			Phyllomedusa camba	De la Riva	1999	Southwestern Amazon Basin from southeastern Peru (Regions of
	Myers and Donnelly	2001	Amazonas State, Venezuela				Madre de Dios and Ycayali ), western Brazil (States of Acre,
Hyalinobatrachium ignioculus Hyalinobatrachium mesai	Noonan and Bonett Barrio-Amorós and Brewer-Carias	2003 2008	Venezuela, Guyana Brazil, Venezuela				Amazonas and Rondonia) to eastern Bolivia (Departments of Beni, Cochabamba, La Paz, Pando and Santa Cruz)
Hyalinobatrachium mesai Hyalinobatrachium mondolfii	Señaris and Ayarzagüena	2008	Delta Amacura and Monagas, Venezuela	Pristimantis achuar	Elmer and Cannatella	2008	Pastaza Province and Napo Province, Ecuador
Hyalinobatrachium monaoiji Hyalinobatrachium nouraguense		2000	Nouragues Reserve, French Guiana; President	Pristimantis adiastolus	Duellman and Hedges	2007	Lower humid montane forest on the eastern slopes of the Cordillera
11) announ acmam nour agachic	Ecocare and Marry	2000	Figueiredo, Amazonas State, Brazil	1 / isimumis datasions			Yanachaga in Pasco Region, Peru
Hyloscirtus tapichalaca	Kizirian, D., Coloma, L.A. &	2003	Zamora-Chinchipe Province, Ecuador	Pristimantis albertus	Duellman and Hedges	2007	Río San Alberto, Oxapampa, Pasco Region, Peru
	Paredes-Recalde, A.			Pristimantis altamnis	Elmer and Cannatella	2008	Napo Province, Ecuador
Hyloxalus aeruginosus	Duellman	2004	San Martín Region, Peru	Pristimantis andinognomus	Lehr and Coloma	2008	Cordillera Oriental of the southern Ecuadorian Andes
Hyloxalus chlorocraspedus	Caldwell	2005	West of Porto Walter, Acre State, Brazil and from the	Pristimantis aniptopalmatus	Duellman and Hedges	2005	Western slopes of the Cordillera Yanachaga, Oxapampa Province,
H.L. a. L. al. al. a. L. d. a.	Deviller	2004	Ucayali Region, Peru	Detection and the second	I she Assiles Cir. Time and I salfe	2007	Pasco Region, Peru
Hyloxalus eleutherodactylus Hyloxalus insulatus	Duellman Duellman	2004 2004	San Martín Region, Peru Amazonas Region, Peru	Pristimantis aquilonaris Pristimantis aracamuni	Lehr, Aguilar, Siu-Ting, and Jordán Barrio-Amorós and Molina	2007	In montane forests, northern Piura Region, Peru Known only from the summit of Cerro Aracamuni, a granitic
Hyloxalus Insulaius Hyloxalus leucophaeus	Duellman	2004	Amazonas Region, Peru	1 ristimantis aracamuni	Darrio-Amoros and Monna	2000	mountain associated with the Neblina massif, southern Amazonas
Hyloxalus patitae	Lotters et al	2003	Upper Amazonian Basin, Peru				State. Venezuela
Hyloxalus saltuarius	Grant and Ardila-Robayo	2002	Caquetá Department, Colombia	Pristimantis ardalonychus	Duellman and Pramuk	1999	Rioja Province, San Martín Region, Peru
Hyloxalus sordidatus	Duellman	2004	San Martín Region, Peru	Pristimantis atrabracus	Duellman and Pramuk	1999	Bagua Province, Amazonas Region, Peru
Hyloxalus spilotogaster	Duellman	2004	Amazonas Region, Peru	Pristimantis aureolineatus	Guayasamin, Ron, Cisneros-Heredia,	2006	Amazon Basin of eastern Ecuador and northeastern Peru
Hypodactylus araiodactylus	Duellman and Pramuk	1999	Amazonas Region, Peru		Lamar & McCracken		
Hypodactylus fallaciosus	Duellman	2000	State of Amazonas, Peru	Pristimantis auricarens	Myers and Donnelly	2008	Summit of Auyantepui, Bolívar, Venezuela
Hypodactylus lundbergi	Lehr	2005	Paucartambo District, Pasco Province, Pasco Region,	Pristimantis avicuporum	Duellman and Pramuk	1999 2007	Bagua Province, Amazonas Region, Peru
Hypsiboas angelicus	Myers and Donnelly	2008	Peru Bolívar State, Venezuela	Pristimantis bellator Pristimantis bicantus	Lehr, Aguilar, Siu-Ting & Jordán Guayasamin & Funk	2007	Northern Piura Region and adjacent Cajamarca Region, Peru Amazonian slopes of the Andes of Ecuador
11ypsibous ungelicus	wryers and Donneny	2008	Donvar State, Venezuera	1 risumanus vicanius	Guayasaiiiii & Fulik	2009	Amazonian stopes of the Andes of Ecuador

# **Amphibians**

Species	Scientist(s)	Date	Location	Species	Scientist(s)	Date	Location
Pristimantis bipunctatus	Duellman and Hedges	2005	Distributed in lowland and cloud forests of Ucavali, Peru	Psychrophrynella illimani	De la Riva & Padial	2007	Sud Yungas Province, La Paz Department, Bolivia
Pristimantis caeruleonotus	Lehr, Aguilar, Siu-Ting, and Jordán	2007	Huancabamba Province, Piura Region, Peru	Psychrophrynella kallawaya	De la Riva & Martínez-Solano	2007	La Paz Department, Bolivia
Pristimantis coronatus	Lehr and Duellman	2007	Huancabamba Province, Piura Region, Peru	Psychrophrynella katantika	De la Riva & Martínez-Solano	2007	Franz Tamayo Province, La Paz Department, Bolivia
Pristimantis corrugatus	Duellman, Lehr, and Venegas	2006	Northern part of the Cordillera Central in northern Peru	Psychrophrynella quimsacruzis	De la Riva, Reichle & Bosch	2007	La Paz Department, Bolivia
Pristimantis cuneirostris	Duellman and Pramuk	1999	Bagua Province, Amazonas Region, Peru	Psychrophrynella saltator	De la Riva, Reichle & Bosch	2007	La Paz Department, Bolivia
Pristimantis dendrobatoides	Means and Savage	2007	Wokomung Massif in west-central Guyana in cloud forest habitat	Ranitomeya amazonica	Schulte	1999	Northeastern Amazonian Peru
Pristimantis exoristus	Duellman and Pramuk	1999	Morona-Santiago Province, Ecuador	Ranitomeya benedicta	Brown, Twomey, Pepper	2008	Loreto Region and eastern San Martin Region, Peru
Pristimantis flavobracatus	Lehr, Lundberg, Aguilar, and	2006	Chontabamba District, Oxapampa Province, Pasco Region, Peru	Tamioneya venedicia	& Sanchez-Rodriguez	2000	zoroto region una castorii sun martin region, i ora
	von May			Ranitomeya defleri	Twomey and Brown	2009	Río Apaporis region in southeastern Colombia
Pristimantis guaiquinimensis	Schlüter and Rödder	2007	Guaiquinima Tepui, Bolivar State, Venezuela	Ranitomeya duellmani	Schulte	1999	Northeastern Amazonian Peru, possibly into eastern
Pristimantis huicundo	Guayasamin, Almeida-Reinoso, and	2004	Provinci Sucumbíos, Cordillera Oriental in northern Ecuador				Ecuador and adjacent Colombia
	Nogales-Sornosa		,	Ranitomeya flavovittata	Schulte	1999	Northeastern Amazonian Peru
Pristimantis infraguttatus	Duellman and Pramuk	1999	Morona-Santiago Province, Ecuador	Ranitomeya intermedia	Schulte	1999	Huallaga Canyon, San Martin Region, Peru
Pristimantis jester	Means and Savage	2007	Wokomung Massif of west-central Guyana	Ranitomeya summersi	Brown, Twomey, Pepper	2008	San Martin Region, Peru
Pristimantis kichwarum	Elmer and Cannatella	2008	Napo Province, Ecuador	•	& Sanchez-Rodriguez		
Pristimantis koehleri	Padial and De la Riva	2009	Santa Cruz Department, Bolivia	Ranitomeya uakarii	Brown, Schulte & Summers	2006	Tamshiyacu-Tahuayo Reserve, Loreto Region, Peru
Pristimantis leucorrhinus	Boano, Mazzotti, and Sindaco	2008	Chontabamba District, Oxapampa Province, Pasco Region, Peru	Rhinella cristinae	Vélez-Rodriguez & Ruiz-Carranza	2002	Caquetá Department, Colombia
Pristimantis lucasi	Duellman and Chaparro	2008	Humid elfin montane forest, Oxapampa District, Pasco Region, Peru	Rhinella lescurei	Fouquet, Gaucher, Blanc	2007	French Guiana
Pristimantis marahuaka	Fuentes-Ramos and Barrio-Amorós	2004	Amazonas State, Venezuela		& Vélez-Rodriguez		
Pristimantis melanogaster	Duellman and Pramuk	1999	Amazonas Region, Peru	Rhinella magnussoni	Lima, Menin, and Araújo	2007	State of Para, Brazil
Pristimantis metabates	Duellman and Pramuk	1999	Bagua Province, Amazonas Region, Peru	Rhinella manu	Chaparro, Pramuk, and	2007	Manu National Park in southeastern Peru
Pristimantis minutulus	Duellman and Hedges	2007	Oxapampa, Pasco Region, Peru		Gluesenkamp		
Pristimantis muscosus	Duellman and Pramuk	1999	Rioja Province, San Martín Region, Peru	Rhinella martyi	Fouquet, Gaucher, Blanc & Vélez-	2007	French Guiana, Guyana, Suriname
Pristimantis nephophilus	Duellman and Pramuk	1999	Rioja Province, San Martín Region, Peru		Rodriguez		
Pristimantis ornatus	Lehr, Lundberg, Aguilar, and	2006	Pasco Region, Peru	Rhinella stanlaii	Lötters and Köhler	2000	La Paz Department, Bolivia
	von May			Rhinella tacana	Padial, Reichle, McDiarmid, and	2006	Franz Tamayo Province, La Paz Department, Bolivia
Pristimantis pataikos	Duellman and Pramuk	1999	Bagua Province, Amazonas Region, Peru; Zamora-Chinchipe Province,		De la Riva		
			Ecuador	Scinax iquitorum	Moravec, Tuanama, Pérez & Lehr	2009	Area of Iquitos, Loreto Region, Peru
Pristimantis reichlei	Padial and De la Riva	2009	Huánuco Region, Peru	Scinax jolyi	Lescure and Marty	2000	French Guiana
Pristimantis rhabdocnemus	Duellman and Hedges	2005	Western slopes of the Cordillera Yanachaga, Oxapampa Province, Pasco	Stefania ackawaio	MacCulloch and Lathrop	2002	Pakaraima Mountains, Guyana
			Region, Peru	Stefania ayangannae	MacCulloch and Lathrop	2002	Pakaraima Mountains, Guyana
Pristimantis rhodostichus	Duellman and Pramuk	1999	Amazonas Region, Peru; Zamora-Chinchipe Province, Ecuador	Stefania breweri	Barrio-Amorós and Fuentes-Ramos	2003	Amazonas State, Venezuela
Pristimantis royi	Morales	2007	Huancabamba Province, Pasco Region, Peru	Stefania coxi	MacCulloch and Lathrop	2002	Pakaraima Mountains, Guyana
Pristimantis rufioculis	Duellman and Pramuk	1999	Rioja Province, San Martín Region, Peru	Telmatobius espadai	De la Riva	2005	La Paz Department, Bolivia
Pristimantis sagittulus	Lehr, Aguilar, and Duellman	2004	Cordillera Oriental in the yungas formation, Oxapampa Province, Pasco	Telmatobius sibiricus	De la Riva and Harvey	2003	La Paz Department, Bolivia
B		****	Region, Peru	Telmatobius timens	De la Riva, Aparicio, and Ríos	2005	Franz Tamayo Province, La Paz Department, Bolivia
Pristimantis saltissimus	Means and Savage	2007	Wokomung Massif, west-central Guyana				
Pristimantis sarisarinama	Barrio-Amorós and Brewer-Carias Lehr	2008 2007	Sarisariñama-tepui, Bolívar, Venezuela				SUBTOTAL: 216
Pristimantis seorsus		2007 1999	Cordillera de Vilcabamba, Satipo Province, Junín Region, Peru				SUBTOTAL: 216
Pristimantis serendipitus	Duellman and Pramuk	2008	Amazonas Region, Peru; Zamora-Chinchipe Province, Ecuador Santa Bárbara, Huancabamba District, Oxapampa Province, Pasco Region,				
Pristimantis spectabilis	Duellman and Chaparro	2008	Peru Paroara, Huancaoamoa District, Oxapampa Province, Pasco Region,	Reptiles			
Pristimantis stegolepis	Schlüter and Rödder	2007	Guaiquinima Tepui, Bolívar, Venezuela	. toptillo			
Pristimantis stegotepis Pristimantis stictoboubonus	Duellman, Lehr, and Venegas	2006	Northern part of the Cordillera Central, Mariscal Cáceres Province, San Martín	Species	Scientist(s)	Date	Location
1 ristimantis stictobotioonus	Duciman, Len, and venegas	2000	Region, Peru	species	Scientist(s)	Date	Location
Pristimantis stictogaster	Duellman and Hedges	2005	Western slope of the Cordillera Yanachaga, Pasco Province, Pasco Region, Peru	Adercosaurus vivadnevus	Myers & Donnelly	2001	Yutajé-Corocoro Massif, Venezuela
Pristimantis tantanti	Lehr, Torres-Gastello & Suárez	2007	Amazonian lowlands of the northern Cusco Region, Peru	Anolis cuscoensis	Poe and Miranda.	2008	Andean Amazonia, Peru
1 / ISIMamio tamami	-Segovia	2007	Think than to that the normen cases region, I eta	Anolis soinii	Poe, Miranda & Lehr	2008	Andean Amazonia, Peru
Pristimantis tanyrhynchus	Lehr	2007	Cordillera de Vilcabamba, Satipo Province, Junín Region, Peru	Anolis	Poe & Yanez-Miranda	2007	Rioja, San Martin Region, Peruvian Amazon
Pristimantis tepuiensis	Schlüter and Rödder	2007	Guaiquinima Tepui, Bolívar, Venezuela	williamsmittermeierorum			2.00,00, 2.00. 2.00
Pristimantis wagteri	Venegas	2007	Vicinity of the Lake Los Cóndores, San Martín Region, Peru	Apostolepis striata	De Lema	2004	Rondônia State, Brazil
Pristimantis waoranii	McCracken, Forstner, and Dixon	2007	Yasuni National Park, Orellana Province, Ecuador	Arthrosaura guianensis	MacCulloch and Lathrop	2001	Northeast plateau of Mount Ayanganna,
Pristimantis yuruaniensis	Rödder and Jungfer	2008	Yuruaní-tepui, Bolívar State, Venezuela	g	r		Pakaraima Mountains, Guyana
Pristimantis zoilae	Mueses-Cisneros	2007	Putumayo Department, Colombia	Arthrosaura hoogmoedi	Kok	2008	Summit plateau of Mount Maringma,
Proceratophrys concavitympanu	um Giaretta, Bernarde & Kokubum	2000	Rondonia State, Brazil				Cuyuni-Mazruni District, Guyana
Psychrophrynella ankohuma	Padial & De la Riva	2007	La Paz Department, Bolivia	Arthrosaura montigena	Myers & Donnelly	2008	Auyantepui, Venezuela
Psychrophrynella chacaltaya	De la Riva, Padial & Cortéz	2007	Nor Yungas Province, La Paz Department, Bolivia	Arthrosaura testigensis	Gorzula & Senaris	1999	Bolívar State, Venezuela
Psychrophrynella condoriri	De la Riva, Aguayo & Padial	2007	La Paz Department, Bolivia	Atractus altagratiae	Passos and Fernandes	2008	Pará State, Brazil
Psychrophrynella guillei	De la Riva	2007	La Paz Department, Bolivia	Atractus caxiuana	Prudente & Santos-Costa	2006	Pará State, Brasil
Psychrophrynella iani	De la Riva, Reichle & Cortéz	2007	La Paz Department, Bolivia	Atractus charitoae	Silva Haad	2004	Vaupés Department, Colombia
Psychrophrynella illampu	De la Riva, Reichle & Padial	2007	La Paz Department, Bolivia	Atractus davidhardi	Silva Haad	2004	Letícia Department, Colombia

# Reptiles

Species	Scientist(s)	Date	Location	
Atractus emersoni	Silva Haad	2004	Colombia	
Atractus franciscopaivai	Silva Haad	2004	La Pedrera, Colombia	
Atractus guerreroi	Myers & Donnelly	2008	Auyantepui, Venezuela	
Atractus heliobelluomini	Silva Haad	2004	La Chorrera, Colombia	
Atractus janethae	Silva Haad	2004	Colombia	
Atractus lucilae	Silva Haad	2004	La Pedreira, Colombia	
Atractus natans	Hoogmoed & Prudente	2003	Amazonas State, Brazil	
Atractus surucucu	Prudente & Passos	2008	Roraima State, Brazil	
Atractus tamessari	Kok	2006	Kaieteur National Park, Potaro-Siparuni district,	
			Guyana	
Batrachemys heliostemma	McCord et al	2001	Brazil, Colombia, Ecuador, Peru and Venezeula	
Cercosaura nigroventris	Gorzula & Senaris	1999	Cerro Guanay, alto Río Paraguaza, Bolívar State,	
			Venezuela	
Dipsas baliomelas	Harvey	2008	Meta, Colombia	
Dipsas pakaraima	MacCulloch and Lathrop	2004	Northeast plateau of Mount Ayanganna, Pakaraima	
			Mountains, Guyana	
Echinosaura sulcarostrum	Donnelly	2006	Guyana, Baramita	
Eunectes beniensis	Dirksen	2002	Beni and Pando, Bolivia	
Gonatodes alexandermendesi	Cole & Kok	2006	Kaieteur National Park, on the Potaro River, Guyana	
Gonatodes infernalis	Rivas & Schargel	2008	Amazonas State, Venezuela	
Gonatodes superciliaris	Barrio-Amoros & Brewer-Carias	2008	Bolívar State, Venezuela	
Gymnophthalmus vanzoi	Carvalho	1999	Roraima State, Brazil	
Helicops tapajonicus	Da Frota	2005	Pará State, Brasil	
Kaieteurosaurus hindsi	Kok	2005	Kaieteur National Park, Potaro-Siparuni district,	
			Guyana	
Leposoma ferreirai	Rodrigues & Avila-Pires	2005	Rio Negro, Amazonas State, Brazil	
Leptomicrurus renjifoi	Lamar	2003	Eastern Colombian Ilanos	
Liophis janaleeae	Dixon	2000	Moyombamba, Peru	
Liotyphlops haadi	Silva-Haad, Franco	2008	Colombia	
	& Maldonado			
Mabuya altamazonica	Miralles et al	2006	Peru	
Micrurus pacaraimae	Carvalho	2002	Roraima State, Brazil	
Morunasaurus peruvianus	Kohler	2003	Río Cenepa, Amazonas Region, Peru	
Pantepuisaurus rodriguesi	Kok	2009	Maringma tepui, western Guyana	
Phalotris labiomaculatus	De Lema	2002	Brazil	
Phyllodactylus delsolari	Venegas et al	2008	Peru	
Phyllodactylus thompsoni	Venegas, Townsend, Koch and Böhme	2008	Amazonas Region, Peru	
Phyllopezus maranjonensis	Koch et al	2006	Amazonas Region, Peru	
Pseudoboa martinsi	Zaher et al	2008	Brazil	
Pseudogonatodes gasconi	Avila-Pires & Hoogmoed	2000	Acre State, Brazil	
Riolama luridiventris	Esqueda et al	2004	Amazonas State, Venezuela	
Riolama uzzelli	Molina & Senaris	2003	Amazonas State, Venezuela	
Stenocercus prionotus	Cadle	2001	Huánuco Region, Perú	
Taeniophallus quadriocellatus	Santos, Di-Bernardo & Lema	2008	Pará State, Brazil	
Thamnodynastes ramonriveroi	Manzanilla & Sanchez	2005	Border of Brazil, Guyana, Suriname and Venezeula	
Thecadactylus solimoensis	Bergmann & Russell	2007	Bolivia; Rondonia State, Brazil;	
w	M 0 D 11	2001	S Columbia; Ecuador; S Peru	
Tropidurus panstictus	Myers & Donnelly	2001	Yutajé-Corocoro Massif, Venezuela	

#### SUBTOTAL: 55

### **Birds**

Species	Scientist(s)	Date	Location	
Amaurospiza carrizalensis	a carrizalensis Lentino & Restall		Isla Carrizal in the Caura River, in northern Venezuela	
Aratinga pintoi	Silviera, de Lima & Höfling	2005	Para State, Brazil	
Atlapetes melanopsis	Valqui & Fjeldså	1999	Peru	
Capito wallacei	O'Neill, Lane, Kratter, Capparella et al	2000	Cordillera Azul, Ucayali Region, Peru	
Cnipodectes superrufus			Madre de Dios Region, Peru; Pando Department, Bolivia Acre State, Brazil	
Grallaria ridgelyi	Krabbe, Agro, Rice, Jacome, Navarrete & Sornoza	1999	Ecuador and Peru	
Micrastur mintoni	Whittaker	2003	Para State, Brazil	
Myiopagis olallai	Coopmans and Krabbe	2000	Napo Province, Zamora-Chinchipe Province and above Bermejo in Sucumbíos Province, Ecuador; Apurímac in southern Peru	
Percnostola arenarum	M.L. Isler, J.A. Alonso, P.R. Isler & B.M. Whitney	2001	Peru	
Pionopsitta aurantiocephala	Gaban-Lima, Raposo & Höfling	2002	Brazil	
Poecilotriccus luluae	Johnson & Jones	2001	Peru	
Polioptila clementsi	Whitney & Alonso	2005	Iquitos, Loreto Region, Peru	
Scytalopus stilesi	Cuervo, Cadena, Krabbe & Renjifo	2005	Cordillera Central, Colombia	
Thamnophilus divisorius	Whitney, Oren & Brumfield	2004	State of Acre, Brazil	
Xiphocolaptes carajaensis	da Silva, Novaes & Oren	2002	Rio Xingu and Rio Tocantins, Brazil	
Zimmerius villarejoi	Alonso & Whitney	2001	Peru	

#### SUBTOTAL: 16

### **Mammals**

Species	Scientist(s)		Location
Cacajao ayresi	Boubli et al	2008	Aracá River, a left bank tributary of the Negro River,
			Amazonas State, Brazil
Cacajao hosomi	Boubli et al	2008	Brazil
Callicebus aureipalatii	Wallace et al	2006	Boliva, Peru
Callicebus bernhardi	Van Roosmalen et al	2002	Brazil
Callicebus stephennashi	Van Roosmalen et al	2002	Brazil
Carollia benkeithi	Solari & Baker	2006	Bolivia, Brazil, Peru
Carollia manu	Pacheco, Solari and Velazco	2004	Cuzco Region, Peru
Coendou ichillus	Voss, Silva	2001	Ecuador
Coendou roosmalenorum	Voss, Silva	2001	Brazil
Cuscomys ashaninka	Emmons	1999	Cuzco Region, Peru
Echimys vieirai	De Vivo & Percequillo	2005	Amazon River between the lower Madeira River to the
			right bank of the Tapajós, respectively in the states of
			Amazonas and Pará, Brazil
Galea monasteriensis	Solmsdorff et al	2004	Cordillera Oriental
Hyladelphys kalinowskii	Voss, Lunde, and Simmons	2001	French Guiana, Guyana and Peru.
Inia boliviensis	Martínez-Agüero, Flores-Ramírez	2006	Bolivia
	& Ruiz-García		
Isothrix barbarabrownae	Patterson and Velazco	2006	Cuzco Region, Peru
Lonchophylla orcesi	Albuja & Gardner	2005	Ecuador
Lonchophylla pattoni	Woodman & Timm	2006	Peru
Lophostoma yasuni	Fonseca and Pinto	2004	Equador
Mesomys occultus	Patton et al	2000	Rio Jurua (type locality) and upper Rio Urucu, State of
			Amazonas, Brazil
Mico acariensis	Van Roosmalen et al	2000	Brazil
Mico manicorensis	Van Roosmalen et al	2000	Manaus, near the Madeira River, Brazil
Micronycteris matses	Simmons, Voss, Fleck	2002	Loreto Region, Peru; Brazil
Monodelphis handleyi	Solari	2007	Lowland forests of Loreto Region, Peru
Monodelphis ronaldi	Solari	2004	Manu National Park, Peru
Neacomys dubosti	Voss, Lunde & Simmons	2001	Amapá State, Brazil; French Guiana; Suriname

# Mammals

Species	Scientist(s)	Date	Location
Neacomys minutus	Patton et al	2000	Central and lower drainage of the Rio Juruá, Brazil
Neacomys musseri	Patton et al	2000	Headwaters of the Rio Juruá, Peru; Brazil
Neacomys paracou	Voss, Lunde & Simmons	2001	States of Amapa, Amazonas, Para, Brazil; French Guiana; Guyana, Suriname; Venezuela
Neusticomys ferreirai	Percequillo et al	2005	Mato Grosso State, Brazil
Philander deltae	Lew et al	2006	Flooded swamp forests, Orinoco River delta region and nearby rivers of Venezuela
Philander mondolfii	Lew et al	2006	Eastern side of Cordillera Oriental in Colombia and Venezuela
Philander olroji	Flores, Barquez & Díaz	2008	Peru, Bolivia
Platyrrhinus albericoi	Velazco	2005	Eastern slope of the Andes in Bolivia, Ecuador and Peru
Platyrrhinus ismaeli	Velazco	2005	Both slopes of the Andes in Colombia, Ecuador and Peru
Platyrrhinus masu	Velazco	2005	Province of Paucartambo, Cuzco Region, Peru
Rhagomys longilingua	Luna, Patterson	2003	Manu National Park, Peru
Rhipidomys gardneri	Patton et al	2000	State of Acre, Brazil; lowlands of southeast Peru, perhaps including the valley of the Río Ucayali
Thomasomys onkiro	Luna & Pacheco	2002	Single locality (which includes Otishi National Park) in the Cordillera Oriental, Peru
Thomasomys ucucha	Voss	2003	Cordillera Oriental of the Andes of north central Ecuador.

SUBTOTAL: 39

TOTAL: 1,220

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