



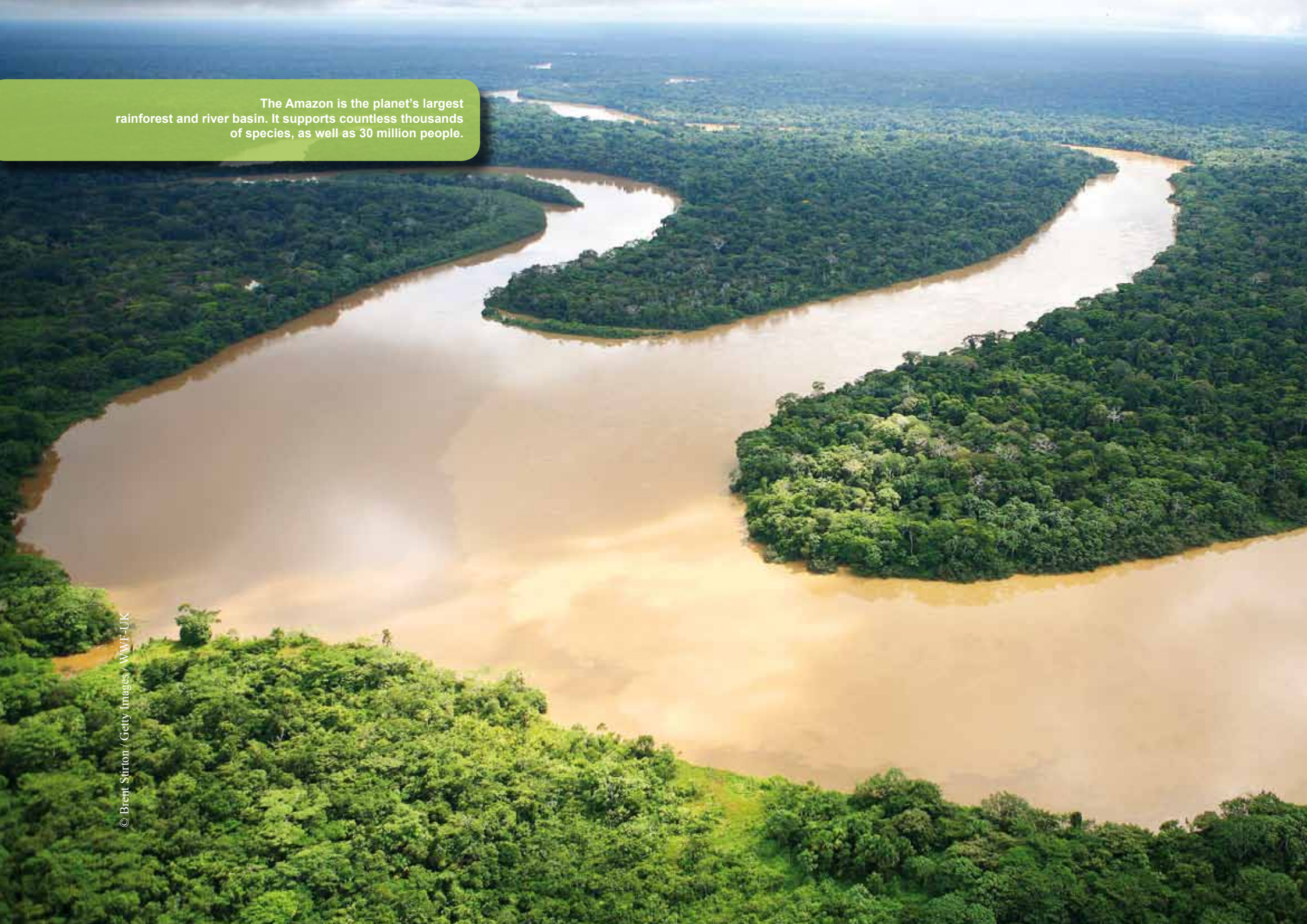
for a living planet



Amazon Alive!

A decade of discovery 1999-2009

The Amazon is the planet's largest rainforest and river basin. It supports countless thousands of species, as well as 30 million people.





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 Djoghlaif,
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*



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 coin-sized, 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 influence¹.

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.



The Amazon Biome



The largest rainforest and river basin in the world, and home to one in 10 known species on Earth.

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 year².

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 isolation³. 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.

¹ 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.

Biodiversity

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 endemic¹ 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 partially⁴. In addition, six natural UNESCO World Heritage Sites⁵ and over 10 Endemic Bird Areas⁶ 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 here⁷, 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 region⁸. 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 found⁹.

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.

1,200 New species discoveries



Introduction

Humans have lived in the Amazon region for over 11,000 years¹⁰. 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.



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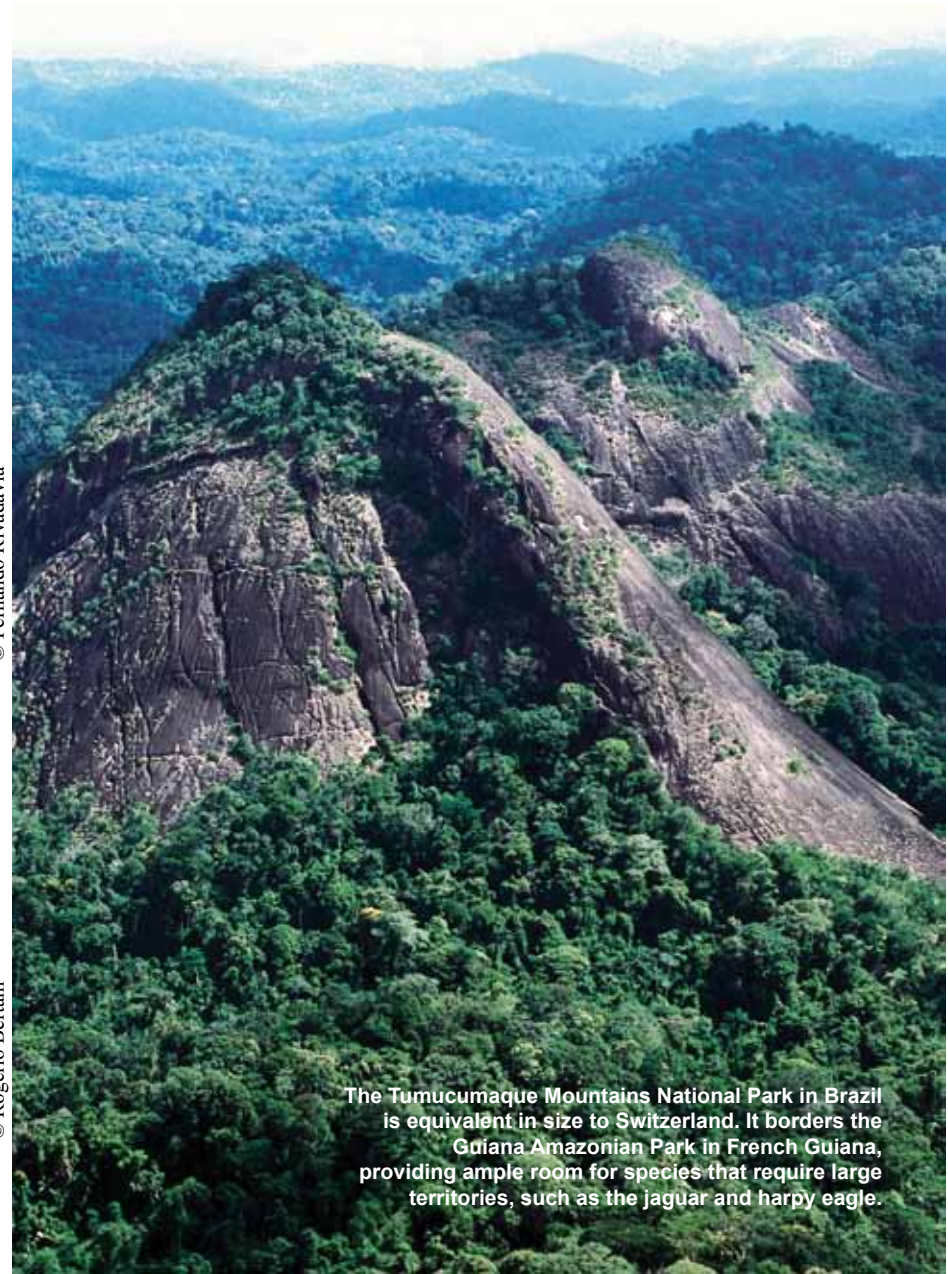


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1a. *Drosera amazonica* (Amazon sundew)
 1b. *Ameerega pepperi*
 1c. *Cyriocosmus nogueiranetoi*



The Tumucumaque Mountains National Park in Brazil is equivalent in size to Switzerland. It borders the Guiana Amazonian Park in French Guiana, providing ample room for species that require large territories, such as the jaguar and harpy eagle.

© Kitt Nascimento

Atractus tamessari (male)



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 Alpuhuayo 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.



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Plants

637

new plant species

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

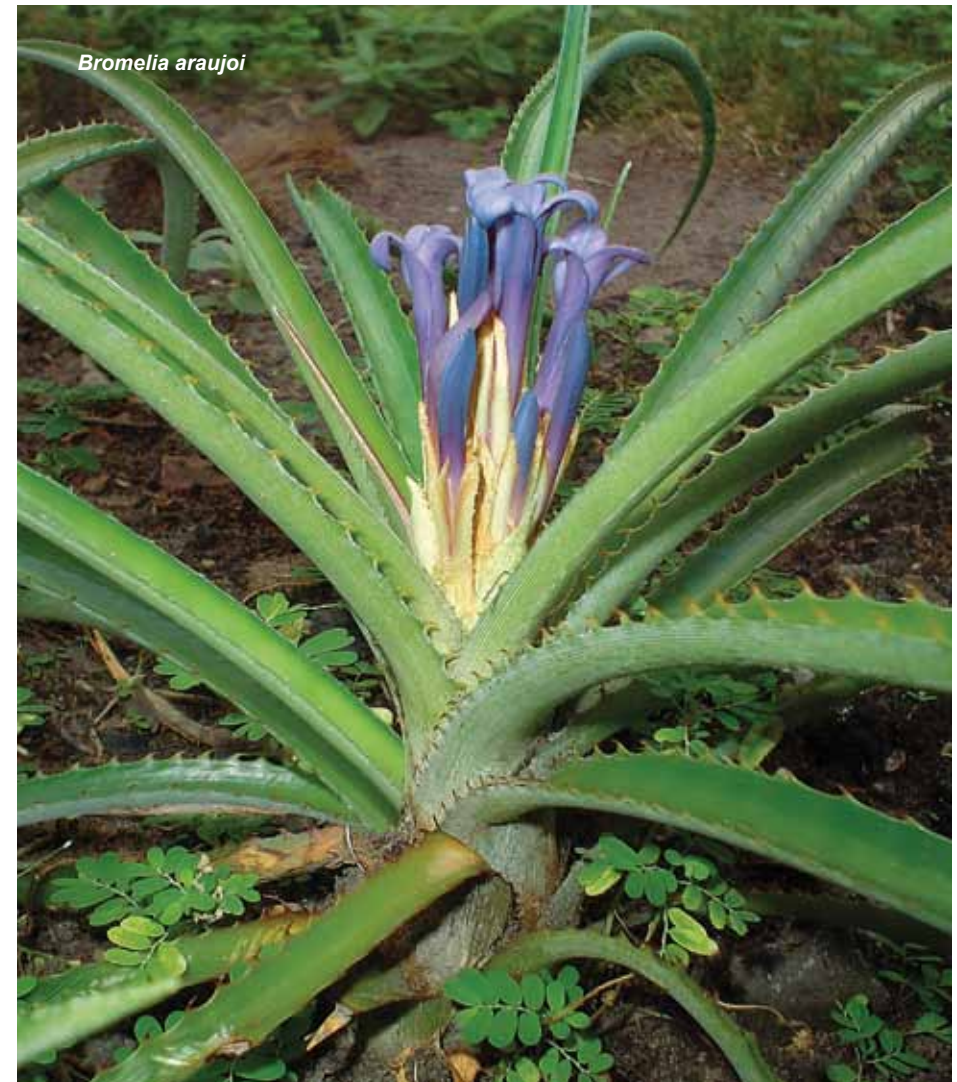
To say that the Amazon possesses a high number of plant species is a considerable understatement. The scale of plant diversity uncovered by scientists in some areas of the Amazon is mindboggling. For example, 473 tree species and a total of 1,000 vascular plant species have been documented in one hectare of lowland rainforest in Amazonian Ecuador¹¹, and 3,000 species have been found in 24ha in the Chribiquete-Araruacura-Cahuinari region of the Colombian Amazon¹². 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



© E. Esteves Pereira

at the border of Venezuela, Guyana and Brazil¹³. 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*¹⁴.

One of the more bizarre finds is a tree that grows 'noodles'. Officially described in 2004, *Syagrus vermicularis*¹⁵ 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 ramen noodlensis*, 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 Grosso¹⁶.

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*)

2a, 2b. *Drosera amazonica*
2c. *Syagrus vermicularis*



© Andreas Fleischmann

© Fernando Rivadavia

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 2009¹⁷. 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 state¹⁸.

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.



© Larry Noblick

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 lakes¹⁹. 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 monkeys²⁰.

One of the most colourful discoveries has been a green and red variety of the bloodfin tetra family. The species identified in 2003²¹ 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 2008²². 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 free-swimming 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 Brazil²³. 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 non-contact 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 wells²⁴. 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,

Apistogramma barlowi





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. *Irاندuba capapretum* © John G Lundberg
 3g. *Aphyocharax yekwanae* © Barry Chernoff 3h. *Phreatobius dracuncululus* © 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 science²⁵ 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 ecoregions²⁶, 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 here²⁷. 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 muscle-packed 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 leballi*²⁸ and *Tometes makue*²⁹ 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 source³⁰.

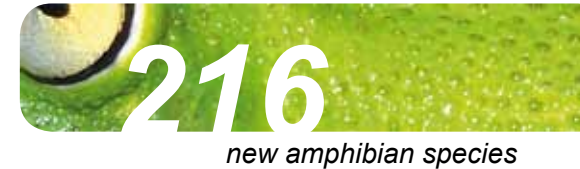


© Jerry Plakyda



© Michel Jegu

Amphibians



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 2008³¹, 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 2008³². 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 Peru³³.

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 *Phylllobates terribilis* or the golden poison frog) to load the darts with poison when hunting animals³⁴. 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, *Nymphargus wileyi* is known only from the cloud forests in the vicinity of the Yanayacu Biological Station, Napo Province³⁵. 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 species³⁶. 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* genus³⁷, 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.



Atelopus sp.

© Paul Ouboter



© Devin Edmonds



© Evan Twomey



© Jiri Moravec



© Philippe J. R. Kok



© Chris Funk

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



© Lars K

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 Peru³⁸, 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 trade³⁹.

Reptiles



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 Roraima⁴⁰. 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 renjifo*, was found in the tropical semi-deciduous forest of the eastern Colombian llanos, a grassland in the Amazon⁴¹. 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, *Pseudoboia martinsi*, was described in 2008 from the Amazon States of Pará, Amazonas, Roraima and Rondônia, Brazil⁴². 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 spots⁴³. A further species, the tiger-striped *Atractus davidhardi* was described a year later from the Brazilian and Colombian Amazon^{44,45}.

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 2001⁴⁶, 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,



© Vinicius Carvalho



© Jairo H Maldonado



© Steven Poe



© Steven Poe

5a. *Pseudoboa martinsi*

5b. *Atractus davidhardi*

5c. *Anolis cuscoensis*

5d. *Anolis williamsmittermeierorum*

Bolivian anaconda (*Eunectes beniensis*)



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 anaconda⁴⁷. 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*)⁴⁸. 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.



© José María Fernández Díaz-Formenti

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 2002⁴⁹. 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 Amazon⁵⁰. 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 Park⁵¹.

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 Inter-oceanic highway, will increase human settlement and habitat destruction in the region^{52,53}. In addition, the socioeconomic value of large bamboos and the increasing tendency to harvest them⁵⁴ suggest the extent of suitable habitat for the species may decline in the future.

Already considered critically endangered is the Iquitos gnatcatcher (*Polioptila clementsii*), discovered in 2005⁵⁵. 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 charcoal⁵⁶. The ancient and slow-growing varillal forests, prime habitat of *Polioptila clementsii*, occur on especially nutrient-poor, quartzitic soils, and may never be able to regenerate if destroyed⁵⁷.

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 Peru⁵⁸.

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 2002⁵⁹, 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"⁶⁰, 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 companies⁶¹.



7a.

© Arthur Grosset



7c.

© Joseph Tobias



7b.

© Andrew Whittaker

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

Unbroken forest canopy in the Peruvian Amazon. In the last decade, several new bird species were discovered here.

The species has been listed as 'near threatened', due to its moderately small population, which is declining owing to habitat loss⁶².

A further new species of parrot, *Aratinga pinto*, was found in the Amazon river basin in 2005⁶³. 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 pinto* 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 market⁶⁴.

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 there⁶⁵. 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 endangered⁶⁶.



Rufous Twistwing (*Cnipodectes superrufus*)

© Arthur Grosset

Mammals

39

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 Amazon⁶⁷. 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 hydroelectric 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 acariensis*), discovered in 2000, is a marmoset species endemic to Brazil⁶⁸. 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.



Rio Acari marmoset (*Mico acariensis*)

© Georges Néron



8a.

© Fernando Trujillo, Fundación Omacha



8b.

© Fernando Trujillo, Fundación Omacha

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

503
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 date⁶⁹. 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 families⁷⁰.

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 Acre⁷¹. The latter is particularly 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, Acre⁷². 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 geroaldi*), so named because it is blue with a metallic sheen, was found in the Amazon regions of Venezuela and Brazil^{73,74}. 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.



© Rogerio Bertani



© Karl Csaba



© Rogerio Bertani

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

Pamphobeteus grandis



© Rick C. West



© Keegan Rowlinson

The bluefang (*Epebopus cyanognathus*) is a remarkable-looking spider. Discovered in French Guiana in 2000, the species is entirely brown except for two vivid blue fangs⁷⁵. Both *Avicularia* and *Epebopus* 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 ants⁷⁶. A single Amazonian tree was found to have 43 species of ants, roughly the same number of ant species as all of Germany⁷⁷.

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 ago⁷⁸.

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 extraordinary⁷⁹.



© Christian Rabeling

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 insects⁸⁰.

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 female⁸¹. 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.



© Mathieu Lapointe



© Karl Csaba

- 10a. *Epebopus 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 standing⁸², 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 years⁸³. 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 deforestation⁸⁴. 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 Bolivia⁸⁵. 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^{86,87}. 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 billion⁸⁸.

In addition to forest conversion, cattle ranching is the main cause of conversion of floodplains in the Amazon⁸⁹. 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^{90,91}.

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 soy⁹². 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 1998⁹³.

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,

Fire and deforestation go hand in hand in the Amazon. Land is burned as a way of clearing it for pasture and crops. At least 17% of the Amazon forest has already been destroyed.



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



Cattle graze among the stumps of burnt trees in the Brazilian Amazon. Cattle ranching is the number one cause of deforestation in the Amazon.

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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 climate⁹⁴.

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 globally⁹⁵.

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 landscapes⁹⁶. 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 List⁹⁷ⁱⁱ.

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.



A Peruvian Brazil nut harvester shows off his harvest. Brazil nuts are one of many forest products that can be harvested sustainably, providing an income for local people.

ⁱⁱ 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 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.



A Yanomami Indian weaves a traditional basket. The Amazon is home to more than 320 indigenous groups.

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References

- ¹ Nepstad, D. 2007. *The Amazon's Vicious Cycles. Drought and Fire in the Greenhouse*. A report to the World Wide Fund for Nature (WWF), Gland, Switzerland.
- ² Goulding, M. Barthem, R. and Ferreira, E. 2003. *The Smithsonian Atlas of the Amazon*. Smithsonian Books, Washington DC.
- ³ COICA (Coordinator of the Indigenous Organizations of the Amazonian River Basin), 2004 – *Returning to the Maloca – Amazon Indigenous Agenda*. www.coica.org.ec/ingles/aia_book/present03.html
- ⁴ Olson, DM. Dinerstein, E. Abell, R. Allnutt, T. Carpenter, C. McClenachan, L. D'Amico, J. Hurley, P. Kassem, K. Strand, H. Taye, M. and Thieme, M. 2000. *The Global 200: a representation approach to conserving the Earth's distinctive ecoregions*. Science Program, World Wildlife Fund-US, Washington DC.
- ⁵ UNESCO World Heritage Centre.
- ⁶ Birdlife International.
- ⁷ Da Silva, JMC. Rylands, AB. da Fonseca, GAB. 2005. The Fate of the Amazonian Areas of Endemism. *Conservation Biology* 19 (3), pp 689-694.
- ⁸ Ibid.
- ⁹ Tobin, JE. 1994. Ants as primary consumers: Diet and abundance in Formicidae. Pp 279-307. In Hunt, JH. and Nalepa, CA. (eds.) *Nourishment and Evolution in Insect Societies*. Westview Press, Boulder, Colorado.
- ¹⁰ Schaan, DP. 2008. A Amazônia antes do Brasil. In *Scientific American — Brasil*. Coleção Amazônia, Vol. I Origens, 28-35.
- ¹¹ Valencia, R. Balslev, H. and Paz y Mino, G. 1994. High tree alpha-diversity in Amazonian Ecuador. *Biodiversity and Conservation* 3: 21-28.
- ¹² Davis, SD. Heywood, VH. Herrera-MacBryde, O. Villa-Lobos, JL. and Hamilton, AC. (eds.), 1997. *Centres of Plant Diversity. A Guide and Strategy for their Conservation*. Vol. 3: The Americas. IUCN Publications Unit, Cambridge.
- ¹³ Fleischmann, A. Wistuba, A. and McPherson, S. 2007. *Drosera solaris* (Droseraceae), a new sundew from the Guayana Highlands. *Willdenowia* 37(2): 551-555.
- ¹⁴ Ibid.
- ¹⁵ Noblick, L. 2004. Palms (1999+). 48(3): 111 ((109-116; figs. 1-6). 2004 [3 Sep 2004].
- ¹⁶ Noblick, L. Pers comm. 23 November 2009.
- ¹⁷ Rivadavia, F. Vicentini, A. and Fleischmann, A. 2009. A new species of sundew (*Drosera*, Droseraceae), with water-dispersed seed, from the floodplains of the northern Amazon basin, Brazil. *Ecotropica* 15: 13-21.
- ¹⁸ Ibid.
- ¹⁹ Lundberg, JG. and Akama, A. 2005. *Brachyplatystoma capapretum*: a new species of Goliath catfish from the Amazon basin, with a reclassification of allied catfishes (Siluriformes: Pimelodidae). *Copeia* (3):492-516.
- ²⁰ Burgess, WE. 1989. *An atlas of freshwater and marine catfishes. A preliminary survey of the Siluriformes*. TFH Publications, Inc, Neptune City, New Jersey (USA). 784 p.
- ²¹ Willink, PW. Chernoff, B. Machado-Allison, A. Provenzano, F. and Petry, P. 2003. *Aphyocharax yekwanae*, a new species of bloodfin tetra (Teleostei: Characiformes: Characidae) from the Guyana Shield of Venezuela. *Ichthyol. Explor. Freshwat*, 14(1): 1-8.
- ²² Römer, U. and Hahn, I. 2008. *Apistogramma barlowi* sp. N.: description of a new facultative mouth-breeding cichlid species (Teleostei: Perciformes: Geophaginae) from Northern Peru., *Vertebrate Zoology* 58(1): 49-66.
- ²³ Albert, JS. and Crampton, WGR. 2009. A new species of electric knifefish, genus *Compsaraia* (Gymnotiformes: Apterodontidae) from the Amazon River, with extreme sexual dimorphism in snout and jaw length. *Systematics and Biodiversity* 7 (1): 81-92.
- ²⁴ Shibatta, OA. Muriel-Cunha, J. and De Pinna, MCC. 2007. A new subterranean species of *Phreatobius* Goeldi, 1905 (Siluriformes, Incertae Sedis) from the southwestern Amazon basin. *Papéis Avulsos de Zoologia* 47(17):191-201.
- ²⁵ Birindelli, JL. Pers comm. 30 November 2009.
- ²⁶ Olson, DM. Dinerstein, E. Abell, R. Allnutt, T. Carpenter, C. McClenachan, L. D'Amico, J. Hurley, P. Kassem, K. Strand, H. Taye, M. and Thieme, M. 2000. *The Global 200: a representation approach to conserving the Earth's distinctive ecoregions*. Science Program, World Wildlife Fund-US, Washington DC.
- ²⁷ Merckx, A. Jégu, M. and Mendes Dos Santos, G. 2000. Une nouvelle espèce de *Serrasalmus* (Teleostei: Characidae: Serrasalminae), *S. altispinis* n. sp., décrite du rio uatumã (Amazonas, Brésil) avec une description complémentaire de *S. rhombeus* (Linnaeus, 1766) du plateau Guyanais. *Cybium* 24(2):181-201.
- ²⁸ Jégu, M. Keith, P. and Belmont-Jégu, E. 2002. Une nouvelle espèce de *Tometes* (Teleostei: Characidae: Serrasalminae) du Bouclier Guyanais, *Tometes lebaili* n. sp. *Bull. Fr. Pêche Piscic.* 364: 23-48.
- ²⁹ Jégu, M. Mendes dos Santos, G. and Belmont-Jégu, E. 2002. *Tometes makue* n. sp. (Characidae: Serrasalminae), une nouvelle espèce du bouclier guyanais décrite des bassins du Rio Negro (Brésil) et de l'Orénoque (Venezuela). *Cybium* 26(4):253-274.
- ³⁰ Jegu, M. Pers comm. 1 December 2009.
- ³¹ Brown, JL. Twomey, E. Pepper, M. and Rodriguez, MS. 2008. Revision of the *Ranitomeya fantastica* species complex with description of two new species from Central Peru (Anura: Dendrobatidae). *Zootaxa*, 1823: 1-24.
- ³² Ibid.
- ³³ Brown, JL. and Twomey, E. 2009. Complicated histories: three new species of poison frogs of the genus *Ameerega* (Anura: Dendrobatidae) from north-central Peru. *Zootaxa* 2049: 1-38.
- ³⁴ Myers, CW. Daly, JW. and Malkin, B. 1978. A dangerously toxic new frog (Phyllobates) used by Embera Indians of western Colombia, with discussion of blowgun fabrication and dart poisoning. *Bull. Amer. Mus. Nat. Hist.* 161 (2): 307-366.
- ³⁵ Guayasamin, JM. Bustamante, MR. Almeida-Reinoso, D. and Funk, CW. 2006. Glass

frogs (Centrolenidae) of Yanayacu Biological Station, Ecuador, with the description of a new species and comments on centrolenid systematics. *Zoological Journal of the Linnean Society of London*, 147, 489-513.

³⁶ Guayasamin, JM. 2008. *Nymphargus wileyi*. In: IUCN 2009. *IUCN Red List of Threatened Species*. Version 2009.2. www.iucnredlist.org. Downloaded on 3 December 2009.

³⁷ Ouboter, P. Pers comm. 6 November 2009.

³⁸ Schulte, R. 1999. Pfeilgiftfrosche 'Artenteil – Peru'. *INBICO*, Wailblingen, Germany.

³⁹ Icochea, J, Angulo, A, Jungfer, K-H, 2004. *Ranitomeya amazonica*. In: IUCN 2009. *IUCN Red List of Threatened Species*. Version 2009.2. www.iucnredlist.org. Downloaded on 1 December 2009.

⁴⁰ Morato de Carvalho, C. 2002. Descrição de uma nova espécie de *Micrurus* do Estado de Roraima, Brasil (Serpentes, Elapidae). *Papéis Avulsos de Zoologia*, Museu de Zoologia da Universidade de São Paulo 42(8):183-192.

⁴¹ Lamar, WW, 2003. A new species of slender coral snake from Colombia, and its clinal and ontogenetic variation (Serpentes, Elapidae: *Leptomicrurus*). *Rev. Biol. Trop.* 51 (3-4): 805-810.

⁴² Zaher, H. Oliveira, ME. and Franco, FL. 2008. A new, brightly colored species of *Pseudoboa* Schneider, 1801 from the Amazon Basin (Serpentes, Xenodontinae). *Zootaxa* 1674: 27-37 (2008).

⁴³ Philippe, J. and Kok, R. 2006. A new snake of the genus *Atractus* Wagler, 1828 (Reptilia: Squamata: Colubridae) from Kaieteur National Park, Guyana, northeastern South America. *Zootaxa* 1378: 19-35.

⁴⁴ Passos, P. Borges Fernandes, R. and Nojosa, DM. 2007. A New Species of *Atractus* (Serpentes: Dipsadinae) from a relictual Forest in Northeastern Brazil. *Copeia* 2007 (4): 788-797.

⁴⁵ Silva Haad, JJ. 2004. The snakes of the genus *Atractus* Wagler, 1828 (Colubridae; Xenodontinae) in the Colombian Amazon. *Journal of the Colombian Academy of Exact, Physical and Natural* (108): 409-446.

⁴⁶ McCord, WP. Mehdi, JO. and Lamar, WW. 2001. A taxonomic re-evaluation of *Phrynops* (Testudines: Chelidae) with the description of two new genera and a new species of *Batrachemys*. *Rev. Biol. Trop.*, 49 (2): 715-764.

⁴⁷ Dirksen, L. 2002. Anakondas: monographische revision der Gattung *Eunectes* Wagler, 1830 (Serpentes, Boidae). *Natur und Tier Verlag*, Münster, 192 pp.

⁴⁸ Dirksen, L. and Böhme, W. 2005. Studies on anacondas III. A reappraisal of *Eunectes* *beniensis* Dirksen, 2002, from Bolivia, and a key to the species of the genus *Eunectes* Wagler, 1830 (Serpentes: Boidae). *Russian Journal of Herpetology* 12 (3): 223-229.

⁴⁹ Whittaker, A. 2002. A new species of forest-falcon (Falconidae: *Micrastur*) from south eastern Amazonia and the rain forests of Brazil. *Wilson Bulletin*, 114, 421-445.

⁵⁰ Lane, DF. Servat, GP. Thomas Valqui, HA. and Lambert, FR. 2007. A Distinctive New

Species of Tyrant Flycatcher (Passeriformes: Tyrannidae: *Cnipodectes*) From Southeastern Peru. *The Auk* Volume 124, Issue 3 (July 2007).

⁵¹ Tobias, JA. Lebbin, DJ. Aleixo, A. Andersen, MJ. Guilherme, E. Hosner, PA. and Seddon, N. 2008. Distribution, Behavior, And Conservation Status of The Rufous Twistwing (*Cnipodectes Superrufus*). *The Wilson Journal of Ornithology* 120(1):38-49, 2008.

⁵² Nepstad, D. Carvalho, G. Barros, A. Alencar, A. Capobianca, J. Bishop, J. Moutinho, P, Lefebvre, P. Lopes, SU. and Prins, E. 2001. Road paving, fire regime feedbacks, and the future of Amazon forests. *Forest Ecology and Management* 154:395-407.

⁵³ Conover, T. 2003. Peru's long haul: highway to riches or ruin. *National Geographic* June: 80-111; Tobias, JA and Brightsmith, DJ, 2007. Distribution, ecology and conservation status of the Blueheaded Macaw *Primolius couloni*. *Biological Conservation* 139:126-138.

⁵⁴ Bystrakova, N. Kapos, V. and Lysenko, I. 2004. *Bamboo biodiversity*. UNEP-WCMC/ INBAR, Cambridge, United Kingdom.

⁵⁵ Whitney, BM. and Alvarez, J. 2005. A New Species of Gnatcatcher from White-Sand Forests of Northern Amazonian Peru with Revision of the *Polioptila guianensis* Complex. *The Wilson Bulletin*, Vol. 117, No. 2 (Jun., 2005), pp. 113-127.

⁵⁶ BirdLife International 2008. *Polioptila clementsi*. In: IUCN 2009. *IUCN Red List of Threatened Species*. Version 2009.1. Downloaded on 27 October 2009.

⁵⁷ Whitney, BM. and Alvarez, J. 2005. A New Species of Gnatcatcher from White-Sand Forests of Northern Amazonian Peru with Revision of the *Polioptila guianensis* Complex. *The Wilson Bulletin*, Vol. 117, No. 2 (Jun., 2005), pp. 113-127.

⁵⁸ Alonso, JA. Whitney, BM. 2001. A new *Zimmerius* tyrannulet (Aves: Tyrannidae) from white sand forests of northern Amazonian Peru. *The Wilson Bulletin* 2001, vol. 113, no1, pp. 1-9.

⁵⁹ Gaban-Lima, R. Raposo, MA. and Hofling, E. 2002. Description of a New Species of *Pionopsitta* (Aves: Psittacidae) Endemic to Brazil. *The Auk* 119(3):815-819, 2002.

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² BirdLife International 2008. *Gypopsitta aurantiocephala*. In: IUCN 2009. *IUCN Red List of Threatened Species*. Version 2009.1. Downloaded on 27 October 2009.

⁶³ Silveira, LF. de Lima, FCT. and Höfling, E. 2005. A new species of *Aratinga* parakeet (Psittaciformes:Psittacidae) from Brazil, with taxonomic remarks on the *Aratinga solstitialis* complex. *The Auk* 122:292-305.

⁶⁴ Ibid.

⁶⁵ Whittaker, A. Pers comm. 21 October 2009.

⁶⁶ Ibid.

⁶⁷ Voss, RS. and Da Silva, MNF. 2001. Revisionary Notes on Neotropical Porcupines (Rodentia: Erethizontidae). 2. A Review of the *Coendou vestitus* Group with

Descriptions of Two New Species from Amazonia. *American Museum Novitates*, Number 3351, 36 pp.

⁶⁸ Van Roosmalen, MGM. van Roosmalen, T. Mittermeier, RA. and Rylands, AB. 2000. Two new species of marmoset, genus *Callithrix* Erxleben, 1777 (Callitrichidae, Primates), from the Tapajos/ Madeira interfluvium, south central Amazonia, Brazil. *Neotropical Primates*. Vol. 8(1), 2-18.

⁶⁹ Lewinsohn, TM. and Prado, PI. 2005. How Many Species Are There in Brazil? *Conservation Biology*. Volume 19 (3), 619.

⁷⁰ Platnick, NI. 2009. The World Spider Catalog. Version 10.0. American Museum of Natural History.

⁷¹ Bertani, R. Fukushima, CS. and da Silva Jr, PI. 2008. Two new species of Pamphobeteus Pocock 1901 (Araneae: Mygalomorphae: Theraphosidae) from Brazil, with a new type of stridulatory organ. *Zootaxa* 1826: 45-58.

⁷² Fukushima, CS. Bertani, R. and da Silva, Jr, PI. 2005. Revision of Cyriocosmus Simon, 1903, with notes on the genus Hapalopus Ausserer, 1875 (Araneae: Theraphosidae). *Zootaxa* 846: 1-31.

⁷³ Tesmoingt, M. 1999. Description de *Avicularia geroldi* n. sp (Ile de Santana-Bresil) (Araneae: Theraphosidae: Aviculariinae). *Arachnides* 43: 17-20.

⁷⁴ Van Overdijk, S. 2002. Geslaagd kweek *Avicularia geroldi* met. *Tijdschrift van Vogelspinnen Vereniging Nederland* 10 (34). 20 (3): 73-77. 2/2 2002.

⁷⁵ West, RC. and Marshall, SD. 2000. Description of two new species of *Epebopus* Simon, 1892 (Araneae, Theraphosidae, Aviculariinae). *Arthropoda* 8(2): 6-14.

⁷⁶ Fittkau, EJ. and Klinge, H. 1973. On biomass and trophic structure of the Central Amazonian rain forest ecosystem. *Biotropica* 5:2-14.

⁷⁷ Wilson, EO. 1987. Causes of ecological success: The case of the ants. *Journal of Animal Ecology*, 56: 1-9.

⁷⁸ Rabeling, C. Brown, JM. Verhaagh, M. 2008. Newly discovered sister lineage sheds light on early ant evolution. *Proc. Nat. Acad. Sci.* 105: 14913-14917.

⁷⁹ Goodall, J. with Maynard, T. and Hudson, G. 2009. *Hope for Animals and Their World: How Endangered Species Are Being Rescued from the Brink*. Grand Central Publishing.

⁸⁰ Rabeling, C. Brown, JM. Verhaagh, M. 2008. Newly discovered sister lineage sheds light on early ant evolution. *Proc. Nat. Acad. Sci.* 105: 14913-14917.

⁸¹ Himler AG. Caldera, EJ. Baer, BC. Fernández-Marín, H. Mueller, UG. 2009. No sex in fungus-farming ants or their crops. *Proc Biol Sci.* 2009 Jul 22;276 (1667):2611-6.

⁸² Nepstad, D. Olmeida, O. Rivero, S. Soares-Filho, B. and Nilo, Jr, J. 2008. *Assessment of the Agriculture and Livestock Sectors in the Amazon and Recommendations for Action* (Penultimate draft).

⁸³ Ibid.

⁸⁴ Ibid.

⁸⁵ Ibid.

⁸⁶ Nepstad, D. Stickler, C. and Almeida, O. 2006. Globalization of the Amazon soy and beef industries: opportunities for conservation. *Conservation Biology* Vol. 20:1595-1603.

⁸⁷ Smeraldi, R. and May, PH. 2008. O Reino do Gado: uma nova fase da pecuarização da Amazônia. Amigos da Terra-Amazônia Brasileira, São Paulo, Brazil.

⁸⁸ Ibid.

⁸⁹ McGrath, T. and Olmeida, A. 2007. *Amazon Fisheries: Status, Threats, and Conservation priorities*.

⁹⁰ Ibid.

⁹¹ Nepstad, D. Olmeida, O. Rivero, S. Soares-Filho, B. and Nilo Jr, J. 2008. *Assessment of the Agriculture and Livestock Sectors in the Amazon and Recommendations for Action* (Penultimate draft).

⁹² Ibid.

⁹³ Alvarez, MD. 2005. Colombia, the Many Faces of War. *European Tropical Forest Research Network News*, 43-44, no. 05: 63-65.

⁹⁴ Nepstad, D. 2007. Climate Change and the Forest. *The American Prospect*, 18:A6.

⁹⁵ 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.

⁹⁶ Ibid.

⁹⁷ 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.

Plants

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

Plants

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

Plants

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

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

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

Plants

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

SUBTOTAL: 637

Fish

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

Fish

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

Fish

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

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Amphibians

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

Amphibians

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

Amphibians

Species	Scientist(s)	Date	Location
<i>Pristimantis bipunctatus</i>	Duellman and Hedges	2005	Distributed in lowland and cloud forests of Ucayali, Peru
<i>Pristimantis caeruleonotus</i>	Lehr, Aguilar, Siu-Ting, and Jordán	2007	Huancabamba Province, Piura Region, Peru
<i>Pristimantis coronatus</i>	Lehr and Duellman	2007	Huancabamba Province, Piura Region, Peru
<i>Pristimantis corrugatus</i>	Duellman, Lehr, and Venegas	2006	Northern part of the Cordillera Central in northern Peru
<i>Pristimantis cuneirostris</i>	Duellman and Pramuk	1999	Bagua Province, Amazonas Region, Peru
<i>Pristimantis dendrobatoides</i>	Means and Savage	2007	Wokomung Massif in west-central Guyana in cloud forest habitat
<i>Pristimantis exoristus</i>	Duellman and Pramuk	1999	Morona-Santiago Province, Ecuador
<i>Pristimantis flavobracatus</i>	Lehr, Lundberg, Aguilar, and von May	2006	Chontabamba District, Oxapampa Province, Pasco Region, Peru
<i>Pristimantis guaiquinimensis</i>	Schlüter and Rödder	2007	Guaiquinima Tepui, Bolívar State, Venezuela
<i>Pristimantis huicundo</i>	Guayasamin, Almeida-Reinoso, and Nogales-Sornosa	2004	Provinci Sucumbios, Cordillera Oriental in northern Ecuador
<i>Pristimantis infraguttatus</i>	Duellman and Pramuk	1999	Morona-Santiago Province, Ecuador
<i>Pristimantis jester</i>	Means and Savage	2007	Wokomung Massif of west-central Guyana
<i>Pristimantis kichwarum</i>	Elmer and Cannatella	2008	Napo Province, Ecuador
<i>Pristimantis koehleri</i>	Padial and De la Riva	2009	Santa Cruz Department, Bolivia
<i>Pristimantis leucorrhinus</i>	Boano, Mazzotti, and Sindaco	2008	Chontabamba District, Oxapampa Province, Pasco Region, Peru
<i>Pristimantis lucasi</i>	Duellman and Chaparro	2008	Humid elfin montane forest, Oxapampa District, Pasco Region, Peru
<i>Pristimantis marahuaka</i>	Fuentes-Ramos and Barrio-Amorós	2004	Amazonas State, Venezuela
<i>Pristimantis melanogaster</i>	Duellman and Pramuk	1999	Amazonas Region, Peru
<i>Pristimantis metabates</i>	Duellman and Pramuk	1999	Bagua Province, Amazonas Region, Peru
<i>Pristimantis minutulus</i>	Duellman and Hedges	2007	Oxapampa, Pasco Region, Peru
<i>Pristimantis muscosus</i>	Duellman and Pramuk	1999	Rioja Province, San Martín Region, Peru
<i>Pristimantis nephophilus</i>	Duellman and Pramuk	1999	Rioja Province, San Martín Region, Peru
<i>Pristimantis ornatus</i>	Lehr, Lundberg, Aguilar, and von May	2006	Pasco Region, Peru
<i>Pristimantis pataikos</i>	Duellman and Pramuk	1999	Bagua Province, Amazonas Region, Peru; Zamora-Chinchi Province, Ecuador
<i>Pristimantis reichlei</i>	Padial and De la Riva	2009	Huánuco Region, Peru
<i>Pristimantis rhabdocnemus</i>	Duellman and Hedges	2005	Western slopes of the Cordillera Yanachaga, Oxapampa Province, Pasco Region, Peru
<i>Pristimantis rhodostichus</i>	Duellman and Pramuk	1999	Amazonas Region, Peru; Zamora-Chinchi Province, Ecuador
<i>Pristimantis royi</i>	Morales	2007	Huancabamba Province, Pasco Region, Peru
<i>Pristimantis rufioculis</i>	Duellman and Pramuk	1999	Rioja Province, San Martín Region, Peru
<i>Pristimantis sagittulus</i>	Lehr, Aguilar, and Duellman	2004	Cordillera Oriental in the yungas formation, Oxapampa Province, Pasco Region, Peru
<i>Pristimantis saltissimus</i>	Means and Savage	2007	Wokomung Massif, west-central Guyana
<i>Pristimantis sarisarinama</i>	Barrio-Amorós and Brewer-Carias	2008	Sarisariñama-tepui, Bolívar, Venezuela
<i>Pristimantis seorsus</i>	Lehr	2007	Cordillera de Vilcabamba, Satipo Province, Junín Region, Peru
<i>Pristimantis serendipitus</i>	Duellman and Pramuk	1999	Amazonas Region, Peru; Zamora-Chinchi Province, Ecuador
<i>Pristimantis spectabilis</i>	Duellman and Chaparro	2008	Santa Bárbara, Huancabamba District, Oxapampa Province, Pasco Region, Peru
<i>Pristimantis stegolepis</i>	Schlüter and Rödder	2007	Guaiquinima Tepui, Bolívar, Venezuela
<i>Pristimantis stictobouabonus</i>	Duellman, Lehr, and Venegas	2006	Northern part of the Cordillera Central, Mariscal Cáceres Province, San Martín Region, Peru
<i>Pristimantis stictogaster</i>	Duellman and Hedges	2005	Western slope of the Cordillera Yanachaga, Pasco Province, Pasco Region, Peru
<i>Pristimantis tantanti</i>	Lehr, Torres-Gastello & Suárez-Segovia	2007	Amazonian lowlands of the northern Cusco Region, Peru
<i>Pristimantis tanyrhynchus</i>	Lehr	2007	Cordillera de Vilcabamba, Satipo Province, Junín Region, Peru
<i>Pristimantis tepuiensis</i>	Schlüter and Rödder	2007	Guaiquinima Tepui, Bolívar, Venezuela
<i>Pristimantis wagteri</i>	Venegas	2007	Vicinity of the Lake Los Cóndores, San Martín Region, Peru
<i>Pristimantis waorani</i>	McCracken, Forstner, and Dixon	2007	Yasuni National Park, Orellana Province, Ecuador
<i>Pristimantis yuruaniensis</i>	Rödder and Jungfer	2008	Yuruani-tepui, Bolívar State, Venezuela
<i>Pristimantis zoilae</i>	Mueses-Cisneros	2007	Putumayo Department, Colombia
<i>Proceratophrys concavitypanum</i>	Giarretta, Bernarde & Kokubum	2000	Rondonia State, Brazil
<i>Psychrophrynella ankohuma</i>	Padial & De la Riva	2007	La Paz Department, Bolivia
<i>Psychrophrynella chacaltaya</i>	De la Riva, Padial & Cortéz	2007	Nor Yungas Province, La Paz Department, Bolivia
<i>Psychrophrynella condoriri</i>	De la Riva, Aguayo & Padial	2007	La Paz Department, Bolivia
<i>Psychrophrynella guillei</i>	De la Riva	2007	La Paz Department, Bolivia
<i>Psychrophrynella iani</i>	De la Riva, Reichle & Cortéz	2007	La Paz Department, Bolivia
<i>Psychrophrynella illampu</i>	De la Riva, Reichle & Padial	2007	La Paz Department, Bolivia

Species	Scientist(s)	Date	Location
<i>Psychrophrynella illimani</i>	De la Riva & Padial	2007	Sud Yungas Province, La Paz Department, Bolivia
<i>Psychrophrynella kallawayaya</i>	De la Riva & Martínez-Solano	2007	La Paz Department, Bolivia
<i>Psychrophrynella katantika</i>	De la Riva & Martínez-Solano	2007	Franz Tamayo Province, La Paz Department, Bolivia
<i>Psychrophrynella quimsacruzisi</i>	De la Riva, Reichle & Bosch	2007	La Paz Department, Bolivia
<i>Psychrophrynella saltator</i>	De la Riva, Reichle & Bosch	2007	La Paz Department, Bolivia
<i>Ranitomeya amazonica</i>	Schulte	1999	Northeastern Amazonian Peru
<i>Ranitomeya benedicta</i>	Brown, Twomey, Pepper & Sanchez-Rodriguez	2008	Loreto Region and eastern San Martín Region, Peru
<i>Ranitomeya defleri</i>	Twomey and Brown	2009	Rio Apaporis region in southeastern Colombia
<i>Ranitomeya duellmani</i>	Schulte	1999	Northeastern Amazonian Peru, possibly into eastern Ecuador and adjacent Colombia
<i>Ranitomeya flavovittata</i>	Schulte	1999	Northeastern Amazonian Peru
<i>Ranitomeya intermedia</i>	Schulte	1999	Huallaga Canyon, San Martín Region, Peru
<i>Ranitomeya summersi</i>	Brown, Twomey, Pepper & Sanchez-Rodriguez	2008	San Martín Region, Peru
<i>Ranitomeya uakarii</i>	Brown, Schulte & Summers	2006	Tamshiyacu-Tahuayo Reserve, Loreto Region, Peru
<i>Rhinella cristinae</i>	Vélez-Rodriguez & Ruiz-Carranza	2002	Caquetá Department, Colombia
<i>Rhinella lescurei</i>	Fouquet, Gaucher, Blanc & Vélez-Rodriguez	2007	French Guiana
<i>Rhinella magnussoni</i>	Lima, Menin, and Araújo	2007	State of Para, Brazil
<i>Rhinella manu</i>	Chaparro, Pramuk, and Gluesenkamp	2007	Manu National Park in southeastern Peru
<i>Rhinella martyi</i>	Fouquet, Gaucher, Blanc & Vélez-Rodriguez	2007	French Guiana, Guyana, Suriname
<i>Rhinella stanlarii</i>	Lötters and Köhler	2000	La Paz Department, Bolivia
<i>Rhinella tacana</i>	Padial, Reichle, McDiarmid, and De la Riva	2006	Franz Tamayo Province, La Paz Department, Bolivia
<i>Scinax iquitorum</i>	Moravec, Tuanama, Pérez & Lehr	2009	Area of Iquitos, Loreto Region, Peru
<i>Scinax jobyi</i>	Lescure and Marty	2000	French Guiana
<i>Stefania ackawaio</i>	MacCulloch and Lathrop	2002	Pakaraima Mountains, Guyana
<i>Stefania ayangannae</i>	MacCulloch and Lathrop	2002	Pakaraima Mountains, Guyana
<i>Stefania breweri</i>	Barrio-Amorós and Fuentes-Ramos	2003	Amazonas State, Venezuela
<i>Stefania coxi</i>	MacCulloch and Lathrop	2002	Pakaraima Mountains, Guyana
<i>Telmatobius espadai</i>	De la Riva	2005	La Paz Department, Bolivia
<i>Telmatobius sibiricus</i>	De la Riva and Harvey	2003	La Paz Department, Bolivia
<i>Telmatobius timens</i>	De la Riva, Aparicio, and Rios	2005	Franz Tamayo Province, La Paz Department, Bolivia

SUBTOTAL: 216

Reptiles

Species	Scientist(s)	Date	Location
<i>Adercosaurus vixadnexus</i>	Myers & Donnelly	2001	Yutajé-Coroco Massif, Venezuela
<i>Anolis cuscoensis</i>	Poe and Miranda	2008	Andean Amazonia, Peru
<i>Anolis soinii</i>	Poe, Miranda & Lehr	2008	Andean Amazonia, Peru
<i>Anolis williamsmittermeierorum</i>	Poe & Yanez-Miranda	2007	Rioja, San Martín Region, Peruvian Amazon
<i>Arthrosaura guianensis</i>	De Lema	2004	Rondônia State, Brazil
<i>Arthrosaura hoogmoedi</i>	MacCulloch and Lathrop	2001	Northeast plateau of Mount Ayanganna, Pakaraima Mountains, Guyana
<i>Arthrosaura montigena</i>	Kok	2008	Summit plateau of Mount Maringma, Cuyuni-Mazruni District, Guyana
<i>Arthrosaura testigenis</i>	Myers & Donnelly	2008	Auyantepui, Venezuela
<i>Atractus altagratiae</i>	Gorzula & Senaris	1999	Bolívar State, Venezuela
<i>Atractus caxiuana</i>	Passos and Fernandes	2008	Pará State, Brazil
<i>Atractus charitoae</i>	Prudente & Santos-Costa	2006	Pará State, Brazil
<i>Atractus davidhardi</i>	Silva Haad	2004	Vaupés Department, Colombia
	Silva Haad	2004	Leticia Department, Colombia

Reptiles

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

SUBTOTAL: 55

Birds

Species	Scientist(s)	Date	Location
<i>Ammaurospiza carrizalensis</i>	Lentino & Restall	2003	Isla Carrizal in the Caura River, in northern Venezuela
<i>Aratinga pinto</i>	Silveira, de Lima & Höfling	2005	Para State, Brazil
<i>Atlapetes melanopsis</i>	Valqui & Fjeldsá	1999	Peru
<i>Capito wallacei</i>	O'Neill, Lane, Kratter, Capparella et al	2000	Cordillera Azul, Ucayali Region, Peru
<i>Cnipodectes superrufus</i>	Lane, Servat, Valqui & Lambert	2007	Madre de Dios Region, Peru; Pando Department, Bolivia; Acre State, Brazil
<i>Grallaria ridgelyi</i>	Krabbe, Agro, Rice, Jacome, Navarrete & Sornoza	1999	Ecuador and Peru
<i>Micrastur mintoni</i>	Whittaker	2003	Para State, Brazil
<i>Myiopagis olallai</i>	Coopmans and Krabbe	2000	Napo Province, Zamora-Chinchipe Province and above Bermejo in Sucumbios Province, Ecuador; Apurimac in southern Peru
<i>Pernostola arenarum</i>	M.L. Isler, J.A. Alonso, P.R. Isler & B.M. Whitney	2001	Peru
<i>Pionopsitta aurantiocephala</i>	Gaban-Lima, Raposo & Höfling	2002	Brazil
<i>Poecilatriccus luluae</i>	Johnson & Jones	2001	Peru
<i>Poliopitila clemensi</i>	Whitney & Alonso	2005	Iquitos, Loreto Region, Peru
<i>Scytalopus stilesi</i>	Cuervo, Cadena, Krabbe & Renjifo	2005	Cordillera Central, Colombia
<i>Thamnophilus divisorius</i>	Whitney, Oren & Brumfield	2004	State of Acre, Brazil
<i>Xiphocolaptes carajaensis</i>	da Silva, Novaes & Oren	2002	Rio Xingu and Rio Tocantins, Brazil
<i>Zimmerius villarejo</i>	Alonso & Whitney	2001	Peru

SUBTOTAL: 16

Mammals

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

Mammals

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

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Alex Borisenko PhD, University of Guelph, Ontario (Canada)
Janalee P Caldwell, University of Oklahoma, Norman, Oklahoma (USA)
Jonathan A Coddington, National Museum of Natural History, Smithsonian Institution, Washington, DC (USA)
Luis A Coloma PhD, Pontificia Universidad Católica del Ecuador, Quito (Ecuador)
Gabriel Costa, Universidade Federal do Rio Grande do Norte (Brazil)
Dr Janice Muriel Cunha, Universidade Federal do Pará, Belém, Pará (Brazil)
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Dr Raffael Ernst, Technischen Universität Berlin (Germany)
Terry Erwin, National Museum of Natural History, Smithsonian Institution, Washington, DC (USA)
Dr Marcelo Felgueiras Napoli, Universidade Federal da Bahia, Salvador, Bahia (Brazil)
Dr Andreas Fleischmann, University of Munich (Germany)
Dr Francisco Luís Franco, Instituto Butantan, São Paulo (Brazil)
Jossehan Galúcio da Frota, Instituto Federal de Educação, Ciência e Tecnologia, Pará (Brazil)
Vicki A Funk PhD, Smithsonian Institution, Washington DC (USA)
W Chris Funk, Colorado State University (USA)
Ariovaldo A Giaretta, Universidade Federal de Uberlândia, Minas Gerais (Brazil)
Dr Steve Gorzula, Consultant Biologist (Venezuela)
Kristofer M Helgen PhD, National Museum of Natural History, Smithsonian Institution, Washington, DC (USA)
Ron Heyer, National Museum of Natural History, Smithsonian Institution, Washington, DC (USA)
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Dr Marinus S Hoogmoed, Museu Paraense Emílio Goeldi, Pará (Brazil)
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Burton K Lim PhD, Royal Ontario Museum (Canada)
Albertina Lima, Instituto Nacional de Pesquisas Amazônicas, Amazonas (Brazil)
Daniel Loebmann, Universidade Estadual Paulista, São Paulo (Brazil)
Dr Stefan Lötters, Trier University (Germany)
John G Lundberg, Academy of Natural Sciences, Philadelphia (USA)
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Jennifer B Pramuk PhD, Wildlife Conservation Society/Bronx Zoo, New York (USA)
Dr Christian Rabeling, Instituto Butantan, São Paulo (Brazil)
Roberto E Reis, Pontificia Universidade Católica do Rio Grande do Sul, Rio Grande do Sul (Brazil)
Dr Fernando Rivadavia, Applied Biosystems, Foster City, California (USA)
Dennis Rödder, Trier University (Germany)
Dr Uwe Römer, Trier University (Germany)
Dr Tony Russell, University of Calgary (Canada)
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Dr Andreas Schlüter, Naturkunde Museum, Stuttgart (Germany)
Prof Dr Luís Fábio Silveira, Universidade de São Paulo (Brazil)
F Christian Thompson, Smithsonian Institution, Washington, DC (USA)
Dr Joseph Tobias, University of Oxford (UK)
Josiah Townsend, Florida Museum of Natural History, Gainesville (USA)
Evan Twomey, East Carolina University (USA)
Richard P Vari, National Museum of Natural History, Smithsonian Institution, Washington, DC (USA)
Dr Andrew Whittaker, Birding Brazil, Manaus, Amazonas (Brazil)
Philip Willink PhD, The Field Museum, Chicago (USA)
Don E Wilson, Chairman, National Museum of Natural History, Smithsonian Institution, Washington, DC (USA)

WWF

Maria Ximena Barrera, WWF Living Amazon Initiative
Ligia Barros, WWF-Brazil
Sandra Charity, WWF-UK
Carmen Ana Dereix, WWF-Colombia
Monica Echeverria, WWF-US
Marie Louise Felix, WWF-Guianas
Julio Mario Fernandez, WWF-Colombia
Mariana Ferreira, WWF-Brazil
Marco Flores, WWF Living Amazon Initiative
Sarah Hutchison, WWF-UK
Guy Jowett, WWF-UK
Amanda Larsson, WWF-UK
Claudio Maretti, WWF-Brazil
Luis German Naranjo, WWF-Colombia
Kjeld Nielsen, WWF Living Amazon Initiative
Denise Oliveira, WWF-Brazil
Viviane von Oven, WWF-Bolivia
Juan Carlos Riveros, WWF Living Amazon Initiative
Manlio Roca, WWF-Bolivia
Francisco José Ruiz Marmolejo, WWF Living Amazon Initiative
Lila Sainz, WWF-Bolivia
Meg Symington, WWF-US
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Bolivia

WWF-Bolivia
Santa Cruz
Av. Beni Calle Los Pitones No. 2070 Santa Cruz
Bolivia
Tel. +591 3 31150 41
Fax +591 3 31150 42
bolivia.panda.org

Colombia

WWF-Colombia
Carrera 35 No.4A-25
Cali Colombia
Tel. +57 2 558 2577
Fax +57 2 558 2588
wwf.org.co

Suriname, French Guiana and Guyana

WWF-Guianas
Paramaribo
H.A.E. Arronstraat 63
Suite D,
E Paramaribo Suriname
Tel. +597 42 2357
Fax +597 42 2349
wwfguianas.org

United States

WWF-US
1250 Twenty-Fourth Street, N.W.
Washington, DC 20090-7180
Tel. +1 202 495 4800
Fax +1 202 495 4211
worldwildlife.org

Brazil

WWF-Brasil
Brasilia
SHIS EQ QL 6/8 Conjunto E - 2° andar
71620-430 Brasilia
Tel. +55 61 3364 7400
Fax +55 61 3364 7474
wwf.org.br

Peru

WWF-Peru
Trinidad Morán 853 Lince Lima 14
Peru
Tel. +51 1 440 5550
Fax +51 1 440 2133
peru.panda.org

United Kingdom

WWF-UK
Panda House
Weyside Park
Godalming
Surrey GU7 1XR
Tel. +44 1483 426 444
Fax +44 1483 426 409
wwf.org.uk

WWF International (Secretariat)

Avenue du Mont-Blanc
1196 Gland
Switzerland
Tel. +41 22 364 9111
Fax +41 22 364 5358
panda.org



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- promoting the reduction of pollution and wasteful consumption.

Written and researched by Christian Thompson, the green room, with advisory from WWF Living Amazon Initiative.
Designed by Torva Thompson, the green room.

WWF Living Amazon Initiative
WWF-Brazil,
SHIS EQ QL 6/8 Conjunto "E"
71620-430 - Brasília, DF
Tel. +55 61 3364 7400
Fax +55 61 3364 7474
panda.org/amazon