

Species Profile

Amazonian Tapir (*Tapirus terrestris*)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

University of Michigan Museum of Zoology. animaldiversity.ummz.umich.edu/

Club Tapir. www.tapirback.com/

photo © Katherine Davis

Anatomy

Amazonian tapirs (also known as lowland or Brazilian tapirs) are one of the largest mammals found in South America. Weighing in at anywhere between 350 and 600 pounds, adult tapirs have rather corpulent bodies. Unusual in appearance, tapirs have thick necks, stumpy tails and large ears. Short trunks, used for lifting food into their mouths, are also characteristic of the tapir. They are a tan to dark brown color, and have a ridge with a fringe of hair running along the backs of their necks. Baby tapirs are born with spotted and striped coats for camouflage; this will darken as the tapir ages. The three to four toes on each foot are spread out to help them navigate on soft, muddy ground. Tapirs have sharp senses of smell and hearing that are useful in evading predators.

Habitat

The Amazonian tapir is found in South America, from northern Colombia to northern Argentina and southern Brazil on the eastern side of the Andes Mountains. Tapirs are generally most active at night, although they are often active during the day. Known for their reclusive, solitary

lifestyles, tapirs are difficult to see in the wild. Although they appear to be sedentary, tapirs are able to cover great distances in the forest. Adaptable to different habitats, tapirs may be found in swamp and hillside areas, savanna, and in cloud forests and rainforests. Preferring moist areas, they are often found near waterways where they can feed, rest and bathe.

Diet

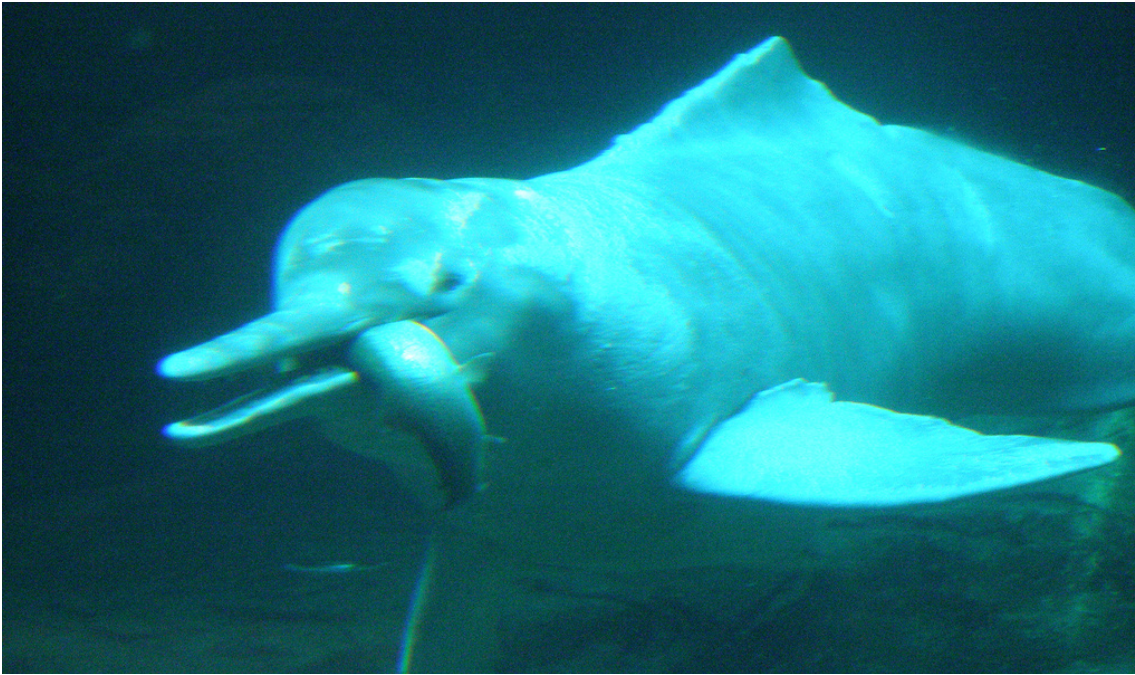
Tapirs are browsing herbivores, feeding on herbaceous vegetation and fruits, with a particular affinity for bananas. As they swim well and can walk on pond bottoms, they will also feed on aquatic plants.

Threats

Being such a large mammal means also being a great source of protein for people. Tapirs are widely hunted by indigenous people in the forest. Although they are rather large, tapirs are quite defenseless, and it is believed that pumas, jaguars and alligators may prey on small tapirs. Low reproductive rates and habitat loss due to deforestation have also diminished populations. Amazonian tapirs are considered a highly vulnerable species.

Species Profile

Amazon River Dolphin (*Inia geoffrensis*)



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Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

University of Michigan
Museum of Zoology.
[animaldiversity.ummz.
umich.edu/](http://animaldiversity.ummz.umich.edu/)

photo © Frank Wouters

Anatomy

The Amazon River dolphin averages about 6.5 feet in length. They come in all shades of pink, from a dull gray-pink, to rosy pink, to a bright pink like that of the flamingo. This variation is due to water clarity; the darker the water, the pinker the dolphin will be. The sun's rays cause the dolphins to lose their pink pigmentation. Murky water helps to protect the dolphin's bright hue. These animals are also known to flush to a bright pink when excited. There are several anatomical differences between the Amazon River dolphin and other types of dolphins. For one, Amazon River dolphins are able to turn their necks from side to side, while most species of dolphins cannot. This trait, coupled with the ability to paddle forward with one flipper and backward with the other, helps them maneuver when the river floods. These dolphins will actually swim up over the flooded land and their flexibility helps them to navigate around trees. Other characteristics that set them apart are molar-like teeth that allow them to chew their prey and bristle-like hairs at the ends of their snouts that help them search for food on the muddy river bottoms.

Habitat

The Amazon River dolphin can be found in the Amazon River system and the Orinoco River system, which flow throughout Brazil, Bolivia, Ecuador, Venezuela, Colombia, Guyana and Peru.

Diet

Amazon River dolphins eat more than 50 types of fish as well as crustaceans found on the river bottom and the occasional turtle.

Threats

Human activity is the main threat to the Amazon River dolphin. Although these dolphins have long been respected and unharmed because of the local belief that they have magical powers, these beliefs are changing. Some humans see them as competition and kill them so they will not have to share the river's fish. The dolphins often become tangled in the nets of fishermen and die. Additionally, the building of hydroelectric dams in South American rivers, pollution, the loss of habitat and decrease in food sources all threaten this unique species of dolphin.

Species Profile

Andean Condor (*Vultur gryphus*)



Sources

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Cleveland Metroparks Zoo. www.clemetzoo.com/rttw/condor/allabt.htm

Vulture Culture. www.vulture-territory.com/andean.html

photo © Keven Law

Anatomy

The Andean condor is the national animal of Colombia and one of the largest birds of prey in the world, weighing as much as 20 to 25 pounds. Adults can reach heights of four feet, with a wingspan of up to 10 feet. Males are typically larger than females. Andean condors are mostly black with a fluffy white collar around their neck and white patches along their wings. These birds have bald grayish-red heads, and the males have a fleshy lump at the front of their heads called a caruncle. Their beaks are large and hooked, and they have large feet with sharp claws, allowing them to easily tear apart their meals.

Habitat

At one time, the Andean condor could be found along the entire western coast of South America from Venezuela to the southern tip of Patagonia. Today, these majestic birds inhabit only northern Venezuela, Colombia, Peru, Argentina and Chile. They spend their time in high mountains, lowland deserts, open grasslands, along coastlines and in alpine regions. Unlike many other birds, the condor doesn't build nests, but lays its eggs only once ev-

ery two years among boulders or in caves or holes. These places are typically harder for other predators to reach and offer their eggs and chicks more safety.

Diet

Andean condors are scavengers and eat mainly carrion, or dead or decaying flesh. Their excellent eyesight allows them to seek out dead or dying animals while hovering high in the sky. They use their sharp, curved beaks and claws to remove meat from carcasses or weak animals. To clean their bald heads after a meal, they scrape them along the ground to remove any food scraps. Baby animals and eggs are also occasionally part of the condor's diet.

Threats

The Andean condor was placed on the Endangered Species List in 1973 and is in danger of becoming extinct due primarily to over-hunting. Many farmers shoot these birds because they mistakenly believe the condors kill their livestock. Pesticide poisoning through the food chain has also hurt populations. Thanks to the repopulation efforts of many zoos, the Andean condor is beginning to make a comeback.

Species Profile

Banana (*Musa acuminata*)



Botany

Contrary to popular belief, banana plants are not trees but giant herbs, which reach their full height of between 10 and 20 feet after only a year. Every banana blossom develops into a fruit, which is ripe enough for consumption after about three or four months. After producing fruit, the plants' stems die off and are replaced by new growth. The number of bananas produced by each plant varies. However, 10 or more bananas growing together forms a "hand." Banana stems have on average 150 "fingers" and weigh nearly 100 pounds. The trunks of banana plants are not woody but composed of sheets of overlapping leaves wrapped tightly around one another, a design feature that enables them to conserve water. Because banana plants are approximately 93 percent water, even moderate winds can knock them down and destroy entire plantations. Powerful storms devastated banana crops throughout Honduras when Hurricane Mitch swept through the country on October 26, 1998.

Habitat

Bananas are indigenous to the tropical portions of India, Southeast Asia and

northern Australia, and were brought to South America by the Portuguese in the early 16th century. Today, banana plants grow in the humid, tropical regions of Central and South America, Africa and Southeast Asia, where there are high temperatures and rainfall. Modern agricultural technologies also enable people to cultivate banana plants in non-tropical regions such as California in the United States.

Significance to Humans

Grown in every humid, tropical region on Earth, bananas are the fourth largest fruit crop in the entire world and the most popular fruit in the United States. In Central and South America, bananas are vital to the economy. Most bananas sold in the United States originated there. Banana leaves are used worldwide as cooking materials, plates, umbrellas, seat pads for benches, fishing lines, clothing fabric and soles for inexpensive shoes. For much of its history, the banana industry was notorious for environmentally destructive and socially irresponsible farming practices. As companies attempted to keep production high and costs low, they tended to cultivate only single crops in their plantations. The lack of biodiversity made the plants susceptible to disease, which farm managers controlled using frequent applications of pesticides that would leak into drinking water, pollute irrigation canals and endanger the health of workers, their families and communities. In 1991, the Rainforest Alliance, along with local nonprofit organizations, scientists and farmers, established the first standards for responsible banana production. Rainforest Alliance Certified™ farms are guaranteed to meet a rigorous set of standards that protect wildlands and wildlife, soil and water, reduce agrochemical use, and improve the quality of life for farm workers and their families. The environment and the communities surrounding Rainforest Alliance Certified banana plantations benefit from both on-farm improvements and off-farm recognition, setting the pace for the rest of the banana sector.

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California Rare Fruit Growers. www.crfg.org/pubs/ff/banana.html

International Banana Association.

photo © Gemma Longman

Species Profile

Blue Morpho Butterfly (*Morpho peleides*)



Anatomy

As its common name implies, the blue morpho butterfly's wings are bright blue, edged with black. The blue morpho is among the largest butterflies in the world, with wings spanning from 5 to 8 inches. Their vivid, iridescent blue coloring is a result of the microscopic scales on the backs of their wings, which reflect light. The underside of the morpho's wings, on the other hand, is a dull brown color with many eyespots, providing camouflage against predators such as birds and insects when its wings are closed. When the blue morpho flies, the contrasting bright blue and dull brown colors flash, making it look like the morpho is appearing and disappearing. The males' wings are broader than those of the females and brighter in color. Blue morphos, like other butterflies, also have two clubbed antennae, two fore wings and two hind wings, six legs and three body segments—the head, thorax and abdomen.

Habitat

Blue morphos live in the tropical forests of Latin America from Mexico to Colombia. Adults spend most of their time on the forest floor and in the lower shrubs and trees of the understory with their wings folded. However, when looking for mates, the blue morpho will fly through all layers of the forest. Humans most commonly see morphos in clearings and along streams where their bright blue wings are most visible. Pilots flying over rainforests have even encountered large groups of blue morphos above the treetops, warming themselves in the sun. The blue morpho's entire lifespan lasts only 115 days, which means most of their time is spent eating and reproducing.

Diet

The blue morpho's diet changes throughout each stage of its lifecycle. As a caterpillar, it chews leaves of many varieties, but prefers to dine on plants in the pea family. When it becomes a butterfly it can no longer chew, but drinks its food instead. Adults use a long, protruding mouthpart called a proboscis as a drinking straw to sip the juice of rotting fruit, the fluids of decomposing animals, tree sap, fungi and wet mud. Blue morphos taste fruit with sensors on their legs, and they "taste-smell" the air with their antennae, which serve as a combined tongue and nose.

Threats

Blue morphos are severely threatened by deforestation of tropical forests and habitat fragmentation. Humans provide a direct threat to this spectacular creature because their beauty attracts artists and collectors from all over the globe who wish to capture and display them. Aside from humans, birds like the jacamar and flycatcher are the adult butterfly's natural predators.

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Earth's Birthday Project, Rainforest Exploration. www.earthsbirthday.org/explore/teachers/infoblumorpho.htm

Saint Louis Zoo. www.stlzoo.org/animals/abouttheanimals/invertebrates/insects/butterfliesandmoths/bluemorpho.htm

Species Profile

Bromeliad (Bromeliaceae)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

Bromeliad Society International. www.bsi.org/

photo © Paul Burland

Botany

There are more than 2,700 species of bromeliads. One of the most well-known bromeliads is the pineapple. Bromeliads typically have bright red, orange, purple or blue flowers, and can grow in a number of different ways: they can be terrestrial, growing on the ground; saxicolous, growing on rocks; or epiphytic, growing on other plants and trees. Epiphytic bromeliads have the ability to absorb nutrients and moisture from the atmosphere, so they are sometimes called "air plants." Hundreds of these plants can grow on branches of tropical trees, sometimes causing the branches to break under their weight.

Habitat

Bromeliads are native to the Neotropics. One species now thrives in western Africa, and is thought to have been introduced accidentally.

Did You Know?

Many bromeliads have stiff, overlapping leaves which hold rainfall like buckets. Leaves and debris fall into these reservoirs and help algae and other single-celled organisms to grow, which in turn feed mosquitoes, insect larvae and other organisms. The bromeliad is like a small ecosystem in itself—animals such as tree frogs, snails, flatworms, tiny crabs and salamanders might spend their entire lives inside them.

Species Profile

Cock-of-the-Rock (*Rupicola peruviana*)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

Ecology Info. www.ecology.info/cock-of-the-rock.htm

Houston Zoo. www.houstonzoo.org/

photo © Panegyrics of Granovetter

Anatomy

A beautiful orange crest adorns the head of the cock-of-the-rock and brilliant orange, black and white feathers cover its back and wings. As with most birds, the female coloring is subtler. Their strong claws and legs allow them to grip onto steep cliffs and rocks.

Habitat

Found in the Andes from Venezuela to Bolivia, the cock-of-the-rock lives only in mountainous regions and builds its nests on the rocky surfaces of cliffs, large boulders and caves.

Diet

The cock-of-the-rock's diet consists mainly of fruit. Often, these colorful birds do

not digest the seeds of their fruity meals. Instead, the seeds pass through their digestive tracts and are eventually scattered along the ground, making these birds extremely important seed dispersers. In addition to fruit, cocks-of-the-rock eat insects and small vertebrates.

Threats

Many predators are attracted to the cock-of-the-rock's beautiful plumage. These include birds of prey such as eagles and hawks, puma and jaguars and even boa constrictors. The loss of habitat, predominantly from forestland being converted to farmland, is a major threat to the survival of this brilliant bird.

Species Profile

Coffee (*Coffea* spp.)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

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Botany

Though it can grow up to 30 feet tall, the coffee plant is considered to be a bush or shrub. It may grow with a single stem, but often it develops multiple stems by branching at the base. The coffee plant is an evergreen, with light gray bark and five-inch leaves that are dark green and glossy. Coffee flowers are small, white and fragrant, helping to attract pollinating insects. When the flowers fall off the plant, berries begin to develop in their place, ripening from a dark green to a bright crimson. Two small green coffee beans, surrounded by skin and pulp, are found inside the berry. It takes six to eight years of growth for a plant to be in full fruit production. Coffee plants can live to be 100 years old.

Habitat

Coffee is a shade-loving plant that thrives in areas of high altitude, where there is a wet and dry season. Originating in Ethiopia and Sudan, today more than two-thirds is grown in Latin America.

Significance to Humans

Coffee is the second most valuable commodity today in international commerce after oil; \$2 billion worth is traded every

year. In every country in the world, people are drinking coffee. The two economically important species of coffee are *C. Arabica* and *C. Robusta*. Coffee was traditionally grown in the shade of trees. However, in the 1970s, coffee farmers began planting dwarf shrubs that produced higher yields and required no shade, resulting in the clearing of shade trees. But the dwarf shrubs require fertilizers, pesticides and constant care. In addition, many species of migratory birds suffer as their winter tropical habitat is converted from forests to full-sun coffee farms.

Did You Know?

Legend has it that the energizing effects of coffee were first discovered by a goat. Thousands of years ago in what is now Ethiopia, an Abyssinian herder noticed that after his goats ate the bright red berries of the coffee plant, they became quite energetic. He showed his discovery to some monks at a nearby monastery, who then brewed the berries into a beverage to keep them awake during evening prayers. Thus, the first cups of coffee were born. From Ethiopia, coffee spread across Arabia, and eventually found its way into cups around the world.

Species Profile

Collared Peccary (*Pecari tajacu*)



Anatomy

Collared peccaries, also called *javelinas*, look a lot like pigs, but are actually part of a different family of mammals. Their coarse coat is a "salt and pepper" color with a hint of yellow on the cheeks. The white "collar" running around their shoulders and neck gives them their name. Collared peccaries have a large, ovaloid head and a flat snout. They have sharp straight tusks that fit tightly together. Their legs seem slender under their proportionally large body. Collared peccaries can grow up to 3.3 feet (one meter) long and weigh 66 pounds (30 kg). A very social species, collared peccaries make a lot of noise—barking, grunting, purring, woofing and coughing—because they have strong hearing but poor vision and thus rely on vocalizations to communicate with each other. These smelly creatures are sometimes called "musk hogs" because of the odor they emit from glands located on their rump and near their eyes. They use this scent to recognize other herd members and to mark their territories. When threatened, they run away and scatter. On rare occasions they will stand together

defensively, clack their intimidating teeth and then charge. Even large predators such as coyotes may get scared off!

Habitat

Collared peccaries are found in the southern United States (Arizona, Texas and New Mexico) and throughout Central America to northern Argentina. They live in tropical rainforests except in the United States, where they live in desert habitats. Collared peccaries have very close social relationships and live in hierarchical herds of five to 15 members. They cannot withstand extremely cold temperatures, so they huddle should to shoulder in caves or similar enclosures to keep warm. Females give birth to one to three young, avoiding the herd for one day afterwards lest another herd member eats their young. Attracted by food handouts, some herds have moved to urban areas.

Diet

Collared peccaries use their sensitive noses to root out food from underground, including tubers, bulbs, nuts and fruits. Their complex stomachs enable them to eat poorly-chewed food that is rich in cellulose. Although they are mainly herbivorous, some people believe they also consume insects, snakes and other animals. In the desert, collared peccaries eat mostly agave and prickly pear cacti, which have high water content.

Threats

For centuries, collared peccaries were an important meat source to people in Central and South America. In the southwestern U.S., they are hunted for sport. Wild felines are their main natural predators. However, those activities have a minor impact on collared peccary populations compared to habitat loss to farms, pastures and human developments. Frustrated farmers organize collared peccary extermination programs to protect their crops. In the past, commercial sale of their hide and meat in global markets reduced their populations significantly.

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photo © Andrew
Culverston

Species Profile

Great Curassow (*Crax rubra*)



Anatomy

The great curassow is a 36-inch tall, hearty bird. All great curassows have a peak of forward-curling feathers on their heads and long tails. The base of the bill is yellow, decorated with a round yellow bulge. The coloring of the females varies; they can be black or chestnut-colored with black or white bars; their heads and crests may be barred with black and white. The males are a lustrous blue or black color and have white bellies. Although they have low rates of reproduction, they are long-lived birds.

Habitat

While the range of the great curassow extends from southern Mexico to western Ecuador, their habitat is usually limited to parks. They build their nests of leaves and twigs in forks and depressions in trees.

The male curassow leads his family and whistles when there are signs of danger. Females lay two eggs at a time. Curassows are monogamous and travel in pairs or in small groups. The group can communicate by grunting. Like chickens, they tend to run rather than fly.

Diet

The curassow finds its food by foraging on fallen fruits, berries and seeds. Additionally, they may scrape the ground in search of insects or small animals.

Threats

Deforestation of tropical forests is the major threat to the survival of the great curassow. Humans are a direct threat to the great curassow because the local inhabitants hunt them for food. Besides humans, snakes are also their predators.

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Food and Agriculture Organization of the United Nations. www.fao.org/

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photo © RK & Tina

Species Profile

Heliconia (Heliconia spp.)



Botany

There are about 40 different species of heliconia. The leaves of this plant are paddle-shaped, and they are related to the banana family. Heliconias are sometimes called "lobster claws" or "parrot flowers" because of their beak-like "bracts," which can be orange, purple, red, yellow, pink, green or a combination of these. A bract is a leaf structure at the base of a flower. The heliconia's flowers are tiny and found inside these bracts, which are so large and colorful that they almost hide the flowers altogether. This keeps the flower's sweet nectar tucked away so that only specialized birds can get to it. Some species of heliconia have upright-facing flowers, and in some called hanging heliconia, the flowers dangle down from the main stem.

Habitat

Heliconias are found throughout the Neotropics and are actually quite common in the rainforest. They are also often found as ornamental plants in gardens and landscaped areas. People enjoy their colorful, gravity-defying ornamentation.

Did You Know?

The heliconia, like the bromeliad, can be home to other living things. Water collects in the bracts of the straight stems, which provides a habitat for many species of tiny aquatic organisms. Many other animals depend on the heliconia as well. Hummingbirds and butterflies like to drink the sweet nectar from the heliconia's flowers.

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Species Profile

Black Howler Monkey (*Alouatta pigra*)



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Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

The Belize Zoo. www.belizezoo.org/

Smithsonian National Zoological Park. nationalzoo.si.edu/Animals/SmallMammals/Exhibits/HowlerMonkeys/LoudestAnimal/default.cfm

photo © Steve Jurvetson

Anatomy

Howler monkeys are among the largest primates in the Neotropics. They can grow to be 22 to 36 inches tall when standing, and their tails are about the same length as their bodies. Male howlers are black, while females are brown. They have prehensile tails that they can use to grab branches. They make loud vocalizations to mark their territory, thus earning their name. Their howls—which resemble a strong wind blowing through a tunnel—have been heard more than two miles away by researchers. While most individuals do not live for more than 15 years in the wild, it is possible for howlers to surpass 20 years in age.

Habitat

Howler monkeys are found only in the rainforests of the Americas. They live in the tall rainforest trees in groups of between four and 19 members. They travel from tree to tree in search of food—walking from limb to limb, rather than jumping. While not particularly perky primates,

they are most active during the day (diurnal), sleeping high in trees at night.

Diet

Howlers are strict vegetarians, eating only flowers, fruits and leaves. In Belize, special community-managed protected areas have been established to keep people from over-harvesting the fruit and flowers that the howlers need to survive.

Threats

Howlers have both natural and human-induced threats to their existence. The black howler monkey, known as the "baboon" in Belize, is endangered throughout much of its range due to hunting and habitat destruction. As forests are cleared, howlers, who need several acres of forest per troop to survive, are becoming increasingly rare. Throughout the region in which they are found, howlers are hunted both for food and for sport. Some experts believe that howlers could become extinct within the next 35 years.

Species Profile

Jaguar (*Panthera onca*)



Sources

Isle of Wight Zoo. www.isleofwightzoo.com/jaguars.aspx

Big Cats Online. dspace.dial.pipex.com/agarman/bco/jaguar.htm

photo © Naturalia A.C.
Mexico

Anatomy

Jaguars can measure six feet from nose to tail and stand three feet tall at the shoulder. The average male weighs about 120 pounds, but some weigh as much as 300. At birth, most jaguars weigh only two pounds. Jaguars are most famous for their spots, which are broken rosettes, rather than true spots like a leopard. These allow the jaguar to hide amongst the grasses, bushes and trees that dominate its habitat. Although less common than the yellow and black jaguar, it is not unusual to find an all-black (melanistic) jaguar.

Habitat

Jaguars are found in rainforests, seasonally-flooded forests, grasslands, woodlands and dry deciduous forest throughout their range. Jaguars spend much of their time on the ground, using their specially-padded paws to move silently through the forest. Although not as agile as leopards, jaguars can climb trees to hunt or to rest.

Diet

Jaguars are mostly nocturnal hunters. They use their excellent vision to ambush prey and crush their skulls with their sharp teeth. Jaguars are known to prey on

more than 85 species, including armadillos, peccaries, capybara, tapir, deer, squirrels, birds and even snails. Not confined to hunting on land, they are adept at snatching fish, turtles and young caiman from the water. They even hunt monkeys and other tree-dwellers who occasionally wander to lower branches. Unfortunately, jaguars compete with humans for most of their prey. In many regions they are shot on sight because of fear, concern for livestock or competition for prey.

Threats

The jaguar faces no natural threat from rival cats or other predators—with the exception of humans. At the height of their decline in the 1960s and 70s, more than 15,000 jaguars were killed each year for their beautiful fur. While trade in jaguar fur has been reduced by consumer awareness campaigns, they continue to face pressure from hunters. In addition, habitat loss is forcing increasing interactions between people and jaguars. There are believed to be 15,000 alive in the wild today. If jaguars are to exist in the future, scientists believe it will be through a combination of special protected areas and increased community awareness.

Species Profile

Kapok Tree (*Ceiba pentandra*)



Sources

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Ceiba Foundation for Tropical Conservation.
www.ceiba.org/ceiba.htm

Botany

A giant in the rainforests, the kapok tree can reach up to 200 feet in height, sometimes growing as much as 13 feet per year. Due to its extreme height, the kapok, or ceiba tree, towers over the other rainforest vegetation. The trunk can expand to nine or 10 feet in diameter. In the nooks and grooves of this huge plant live a diverse number of species, including frogs, birds and bromeliads. The kapok tree is deciduous, shedding all of its leaves during the dry season. As its seeds are easily blown into open areas, kapok trees are some of the first to colonize open areas in the forest. The white and pink flowers of the kapok tree emit a foul odor that attracts bats. As the flying mammals move from flower to flower feasting on the nectar, they transfer pollen on their fur, thus facilitating pollination. The kapok tree does a great job at spreading its seeds, producing anywhere between 500 and 4,000 fruits at one time, with each fruit

containing 200 seeds. When these fruit burst open, silky fibers spread the many seeds all over the forest.

Habitat

The kapok tree is found throughout the Neotropics, from southern Mexico to the southern Amazon and even to parts of West Africa. Because the unopened fruit won't sink when submerged in water, many believe the fruit of the kapok tree floated its way from Latin America to Africa.

Significance to Humans

The majestic kapok tree has many uses for humans. Its wood is lightweight and porous; good for making carvings, coffins and dugout canoes. The silky fibers that disperse the seeds are too small for weaving but make great stuffing for bedding and life preservers. Soaps can be made from the oils in the seeds. Other parts of the giant tree are used as medicines.

Species Profile

King Vulture (*Sarcoramphus papa*)



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The Belize Zoo. www.belizezoo.org/birds/king-vulture.html

University of Michigan Museum of Zoology. animaldiversity.ummz.umich.edu/

photo © Keven Law

Anatomy

The king vulture is one of the larger species of vulture. It can grow to be 32 inches long. Unlike other vultures, which are dark in color, king vultures are creamy white, with darker tail feathers. The feathers around their heads and necks are blue, red, orange and yellow. The skin drooping over their beak, called a wattle, is a bright red-orange. Their beak is thick and strong, great for shredding flesh, and their long thick claws are good for keeping a tight grip on their dinner.

Habitat

These large birds live in the uppermost branches of emergent canopy trees anywhere from Mexico to central Argentina and Trinidad. They perch high up in these trees so that they have a great view of what is going on below them. They have excellent eyesight and rely on it to watch out for other vultures that have spotted

carrion. The king vulture's sense of smell is not as good as that of other types of vultures, so they do not always use it to detect food. When it sees that other scavenger birds have discovered a meal, it shoots down from the sky and pushes the others out of the way. All of the other vultures are quick to move aside for the "king."

Diet

Like other scavengers, the king vulture does not kill its own food. Instead, it feasts on the carcasses and remains of animals that have been killed by some other means (known as carrion).

Threats

Though the species is not universally listed as endangered, the populations of king vultures are in decline due to habitat destruction. These royal birds cannot survive if their home forests disappear.

Species Profile

Leafcutter Ant (*Atta* spp. and *Acromyrmex* spp.)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

www.animaldiversity.org

www.thewildones.org

photo © Charles and Clinton Robertson

Anatomy

Leafcutter ants practice advanced methods of sustainable agriculture, and operate under one of the most studied social caste systems in the natural world. Naturalist E.O. Wilson offered that leafcutters have perfectly evolved to address every small need necessary for their survival over their 50 million years in existence. Different ants are responsible for each step in the process of cultivation of fungi. According to their size, ants fulfill specific roles such as defenders of the colony, caretakers of the young, gardeners, foragers and leafcutters. Incredibly, there are even tiny ants that straddle the backs of larger worker ants and defend them from carnivorous flies. No survival task is left unassigned. Researchers marvel at the complex form of sustainable agriculture that the ants practice. Careful not to overuse a single vegetation source, leafcutters gather fragments from different plants and trees, minimizing the vegetation's tendency to build up its defenses. Some ants are equipped with a bacterium that acts as a pesticide on a particular mold, the largest threat to their fungus gardens. The ants' sparing use of this protectant has kept the

mold from developing a resistance, allowing the bacterium to remain an effective defense over time.

Habitat

Found mainly in Latin America and the Caribbean, leafcutter ants inhabit the forest floor and construct an underground web of chambers where they "farm" and harvest their staple food, fungus. They create underground fungus "gardens" by clipping and gathering fresh vegetation and injecting the pieces with a fungal secretion that digests the often-poisonous plants into an edible and nutritious mushroom form.

Diet

These ants consume more vegetation than any other animal group. Their own fungal secretion, which they inject into the leaves, can change poisonous plants into a nutritious meal.

Threats

The main natural predator of the leafcutter ants is the armadillo. However, as the leafcutter ants are an integral part of the rainforest ecosystem, as the forests disappear, so do the ants.

Species Profile

West Indian Manatee (*Trichechus manatus*)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

University of Michigan Museum of Zoology. animaldiversity.ummz.umich.edu

Save the Manatee Organization. www.savethemanatee.org/manfacts.htm

The South Carolina Wildlife Federation. www.scwf.org/index.php/education-programs/theendangered#West%20Indian%20Manatee

National Park Service. www.nps.gov/ever/naturescience/manateepage.htm

photo © U.S. Fish & Wildlife Service

Anatomy

Manatees, slow and gentle giants of the ocean, can weigh up to 1,000 pounds and grow to about 10 feet in length. They have small heads and rotund bodies. Manatees are very solitary animals that spend their entire lives submerged feeding on marine grasses. When they surface to breathe, only their bristly nostrils poke above the surface of the water.

Habitat

West Indian manatees live in the waters surrounding the southern United States, the Caribbean islands, eastern Central America and off the northeast coast of Brazil. They can be found in both fresh and marine waters, muddy or clear. They seem to prefer water between three and seven feet deep. They will not go in water more than 20 feet deep or where the current is faster than three miles per hour.

Diet

These creatures are the only marine mammals that are strictly herbivorous. They eat a wide variety of plants, preferring mostly sea-grass leaves. They have a tendency to stay away from the more

bitter-tasting plants. They have even been known to dig with their flippers to get roots. As far as water goes, no one is sure if they need to drink fresh water to survive, but some manatees have been seen drinking from hoses to quench their thirst!

Threats

Tragically, the main cause of the depletion of manatee populations is human activity. Manatees are slow-moving underwater animals. With the increase in boating activities there has been an increase in manatee death and injury from boat propellers. The boaters do not see the manatees underwater and the manatees cannot swim away quickly enough. They can also get caught in the nets of fishermen. There are some that hunt the manatee for its meat. The friendly nature of the creature, which often results in them approaching divers or swimmers, also makes them an easy target for hunters.

Species Profile

Capuchin Monkey (*Cebus capucinus*)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

University of Michigan Museum of Zoology. animaldiversity.ummz.umich.edu/

Mindy's Memory Primate Sanctuary. www.mindysmem.org/

Monkeys. www.monkeys-monkeys.com/

Animal Info. www.animalinfo.org/

Capuchin Monkeys. www.capuchin-monkeys.com/

photo © Ma José Paniagua

Anatomy

Agile and lean, capuchin monkeys weigh only three to nine pounds (1.4–4.9 kg). The fur of the capuchin monkey varies, but is most commonly cream or light tan around the face, neck and shoulders and dark brown on the rest of the coat. The hair is shorter and darker on the capuchin's back than on other parts of its body. The face of this cute monkey will range from white to pink in color. The tail is long, covered in hair, and partially able to wrap around branches.

Habitat

The exact range of the capuchin monkey is not known, although it is assumed that they inhabit a large range in Brazil and other parts of Latin America. Capuchin monkeys usually live in large groups (10–35 individuals) within the forest, although they can easily adapt to places colonized by humans. Each group is wide-ranging, as members must search for the best areas to feed. Group members communicate using calls. Capuchins can jump up to nine feet (3 m), and they use this mode of transport to get from one tree to another. To mark their territories, capuchin

monkeys leave a scent by soaking their hands and feet in urine. Remaining hidden among forest vegetation for most of the day, capuchins sleep on tree branches and descend to the ground only for the purpose of obtaining drinking water.

Diet

A typical diet for capuchin monkeys includes fruit, insects, leaves and small birds. They are particularly good at catching frogs and cracking nuts, and it is suspected that they may also feed on small mammals.

Threats

Capuchin monkeys are very clever, and easy to train. Because of this, they are used to help people who are quadriplegics in many developed countries. Alternatively, they have also become popular pets and attractions for street entertainment, and are hunted for meat by local people. As they have a high reproductive rate and flexibility of habitat, loss of the forest does not negatively impact the capuchin monkey populations as much as other species. Natural predators include jaguars and birds of prey.

Species Profile

Blue-Crowned Motmot (*Momotus momota*)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

Coraciiformes Taxon Advisory Group. www.coraciiformestag.com/Motmot/momotus/momotus.html

Cornell University Department of Ecology and Evolutionary Biology.

photo © Christopher Ciccone

Anatomy

Similar to all members of the motmot genus, the blue-crowned motmot has a large head with a short, broad down-curved beak, which is serrated along the upper edge. Their tarsi are unique in that they are particularly short with a middle toe almost completely fused to the inner toe and only one rear toe. Most of the species of motmots have tail feathers that distinguish them from other birds. The center tail feathers, which twitch like the pendulum of a clock when the motmot is perched, have bare spines at the tip. This makes them easily recognizable. The plumage of the blue-crowned motmot is shades of green and blue. They have red eyes, a turquoise crown and a black face. Motmot eggs are round and white. They incubate for three weeks. Motmots make a double hoot sound with a resonance similar to that of an owl.

Habitat

Motmots are found in Mexico, Central America and the majority of South America in rainforests, second-growth forests, forest edges, shady gardens and shaded

coffee farms. Motmots dig their nests in the shape of tunnels five to 14 feet long and four inches in diameter with a nesting chamber at the end, which is 10 by 14 inches in length. Both males and females begin excavating during the rainy season from August to October, when the soil is soft. They leave the nest area until breeding season the following March or April. Both males and females share parental responsibility. Motmots choose to live near water, not only for consumption, but also for bathing.

Diet

Motmots eat fruit, small reptiles and insects such as crickets, mealworms, waxworms and earthworms.

Threats

Due to their ability to live in many different forest types ranging from rainforests to shaded coffee farms, the blue-crowned motmot is not on the endangered list. However, as shaded coffee farms and forests are destroyed, the survival of this beautiful bird is threatened.

Species Profile

Nine-Banded Armadillo (*Dasypus novemcinctus*)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

Pelotes Island Nature Preserve. pelotes.jea.com/armad.htm

The Big Zoo. www.thebigzoo.com/Animals/Nine-Banded_Armadillo.asp

Wonderclub. www.wonderclub.com/Wildlife/mammals/armadillo.html

The Library of Congress. www.loc.gov/rr/scitech/mysteries/armadillo.html

photo © Art Wolfe

Anatomy

Dressed in a suit of armor, the head, body, legs and tail of the nine-banded armadillo are protected by bony plates. Armadillos spend most of their time in burrows under the ground. Accordingly, their sense of smell far outpowers their vision and hearing. About the size of a cat, these creatures have elongated, pointed noses and long, sticky tongues used for catching insects. Their short, strong legs have sharp claws that come in handy when digging burrows.

Habitat

Found from South and Central America to Oklahoma, the armadillo tends to live in forests near swampy areas. These adaptive creatures can live anywhere that is warm and has plenty of food. They prefer rainforests, temperate forests, savannas and grasslands where the soil is good for digging burrows. Armadillos can hold their breath for six minutes. When cross-

ing a body of water, armadillos can either inflate their stomachs and intestines with air and float across, or sink down to the bottom and use their claws to walk across.

Diet

Armadillos' favorite foods are insects. Their special tongue allows them to consume up to 40,000 ants in one meal! They also enjoy feeding on small animals, bird eggs, roots, fruits and even rotting animal flesh (called "carrion").

Threats

When startled, armadillos can jump three to four feet in the air. Even with their suit of armor, bears, coyotes, wild cats, foxes and dogs feed on armadillos. But cars continue to pose the biggest threat, and many are killed crossing the road each year. Loss of habitat is forcing increasing interactions between people and armadillos, further threatening the survival of these curious-looking creatures.

Species Profile

Ocellated Turkey (*Meleagris ocellata*)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

National Wild Turkey Federation. www.nwtf.org/all_about_turkeys/history_ocellated_wild_turkey.html

photo © Tim Proffitt-White

Anatomy

Male ocellated turkeys look similar to the North American wild turkey, but have more vibrant coloring and weigh significantly less than the North American bird. Unlike North American turkeys, breast feathers of male and female ocellated turkeys do not differ and cannot be used to determine sex. The body feathers of both male and female ocellated turkeys are an iridescent bronze-green, with males more brightly colored than females. Males weigh just over 10 pounds and average three feet in length. At around six pounds, females are slightly smaller, though they gain weight during the mating season. Both sexes have bluish-gray tails with a well-defined, eye-shaped, blue-bronze colored spot near the end followed by a bright gold tip. These spots give the ocellated turkey its name, as the Latin word for eye is *oculus*. Males and females have a blue-colored head and neck with distinctive orange to red warty growths that are more pronounced on males. The head of the male also has a fleshy blue crown this adorned with yellow-orange growths simi-

lar to those on the neck. Ocellated turkeys also have a distinct eye-ring of bright red skin, especially visible on adult males during the breeding season.

Habitat

The ocellated turkey is endemic to Mexico's Yucatan Peninsula, Guatemala and Belize, and can be found across an area extending 50,000 miles. Ocellated turkeys are most often found in tropical deciduous and lowland evergreen forests as well as clearings and abandoned farm plots.

Diet

Ocellated turkeys tend to remain in small groups, and their diet consists mainly of seeds, berries, insects and leaves.

Threats

Large-scale timbering operations followed by slash-and-burn agriculture in Central America threatens the habitat of the ocellated turkey. The alarming rate of this destruction is a major threat to the future of this beautiful bird.

Species Profile

Ocelot (*Felis pardalis*)



Sources

Big Cats Online. dialspace.dial.pipex.com/agarman/bco/ver4.htm

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

University of Michigan Museum of Zoology. animaldiversity.ummz.umich.edu/

photo © sometimesong

Anatomy

Measuring up to four feet long, ocelots are about twice the size and weight of ordinary house cats. Female ocelots are slight smaller than male, usually growing to two and a half feet in length. She carries a litter of two kittens and parents them for a year. Males do not share in the parental responsibilities. The ocelot's buff-to-sandy brown coat is covered in a mixture of black spots and small rosettes with distinct markings around the mouth and eyes. Its underbelly is light with black spots and its 14-inch-long tail is covered in dark spots.

Habitat

The ocelot's main requirement for survival is a dense cover for living space. This cover can vary from arid scrub to tropical forest. This flexibility makes it possible for ocelots to populate an area from southern Texas through Central and South America. Ocelots are terrestrial and mostly nocturnal. They tend to sleep hidden in thick vegetation on the ground, but may climb trees

during the day to rest. Males and females will sometimes share a territory, which may be up to three square miles in area.

Diet

Being nocturnal, ocelots hunt at night with varying techniques. Because they swim well, they will often hunt for fish. As occasional climbers, they will catch birds. Small rodents, rabbits, opossum and iguanas are also main prey for the terrestrial ocelot. The female ocelot's range is about one and a half miles, while the male's can be up to 11 miles.

Threats

Ocelots have been hunted since the ancient Aztec civilization. The highly-prized, distinctive coat of the ocelot is an incentive to poachers. Their numbers continue to diminish today because along with fur hunting, ocelots are being trapped for the exotic pet trade. Deforestation combined with direct human threats put the ocelot on the endangered species list in 1972.

Species Profile

Orchid (*Orchidaceae*)



Botany

Popular around the globe for their beauty and variety, orchids are the largest family of plants in the entire world. There are 25,000–30,000 different species of orchid, and at least 10,000 of them can be found in the tropics. Orchid species can differ greatly from one another, with extreme variations in size, weight and color. While some orchids may only be the size of a nickel when in bloom, others may weigh up to one ton, with petals as long as 30 inches and sprays of small flowers 12–14 feet long. Orchid blossoms appear in almost every imaginable color except for true black. In general, the floral arrangement of all orchid species is the same, with each orchid flower having six parts. The outer three flower parts are green “sepals,” and the inner three flower parts are beautifully-colored “petals.” Some orchids live underground (subterranean), some grown on rocks (lithophytes), and some grow in the soil, but most are epiphytes,

which means they grow on other plants and trees. Orchids tend to obtain their nourishment from the air, rain or moisture in the soil. While some are self-pollinating, most rely on specific insects or birds for pollination. Another unique fact about the orchid is that the plant compensates for its lack of a true water-retentive root system by working with a certain type of fungi called mycorrhizae fungi during some portion of their life cycle. During this period, the fungi grow partly inside orchid roots, helping the plant to absorb water and minerals. The orchid “repays” the fungi by producing some nutrients during photosynthesis that help the fungi to survive. This kind of relationship, where two organisms help one another, is called a symbiotic relationship.

Habitat

Orchids are extremely adaptable, and grow in almost all climates except for frigid and arid extremes. Orchid groups are both pantropical, able to grow in different tropical countries, and endemic, only found in specific countries or habitats. Most orchid species grown in tropical forests, but others can be found in semi-desert regions, near the seashore and in the tundra. The majority of neotropical orchid species can be found in southern Central America, northwest South America and countries that lie along the Andes Mountains.

Did You Know?

Because most orchids depend on a single species of bird, bee or other insect for pollination, if that species is eliminated, the particular orchid that depends on that species becomes threatened by extinction. Thus habitat fragmentation and rainforest destruction may eventually prove devastating to the great number of orchid species in existence today.

Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

Botany.com. www.botany.com/orchidaceae.html

photo © Nadia Prigoda-Lee

Species Profile

Praying Mantid (Mantidae)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

Insecta Inspecta World.

Desert USA. www.desertusa.com/mag00/dec/papr/mantis.html

Anatomy

The praying mantid's name comes from its at-rest stance, with its forelegs folded up, as if praying. These insects are masters of camouflage, using their coloration to blend in with foliage, allowing them to hide from predators and better stalk their prey. They not only blend in with the foliage, but also mimic it, sometimes looking like leaves, grass or stones. Mantids can range from one to 10 inches in size, have large heads, small grasshopper-like mandibles and large leg segments with the middle and hind legs being thinner and the front legs containing spines that they use to capture their prey. They can only move the top part of their bodies, which enables them to approach their prey without startling it. Praying mantids have great eyesight and catch their prey with their powerful forelegs, hold it in place, and devour it using their strong jaws. Their antennae are relatively short, and they have long narrow wings that are folded, fan-like, over the abdomen. Mantids are hemi-metabolic, meaning they undergo simple metamorphosis that includes only the egg, nymph and adult stages. The nymph is almost identical to the adult but lacks wings and

functioning reproductive organs. Females and males can be identified by the number of abdominal segments they have. Females have six and males have eight. Mantids are also one of the only insects that can turn their heads.

Habitat

Praying mantids can be found throughout the world in tropical areas and sunnier parts of temperate zones, including North America and southern Europe. There are many species of mantids, but most are tropical, belonging to the *Mantidae* family.

Diet

As a mantid grows, its diet frequently changes. They eat insects, such as beetles, butterflies, grasshoppers and other mantids; spiders and small vertebrates including frogs, lizards, mice and hummingbirds.

Threats

Though their ability to camouflage helps protect them, mantids have many predators, including birds and bats. Some species have developed an ability to hear the high-pitched sonar that bats use to navigate in order to avoid these predators.

Species Profile

Ruby-Throated Hummingbird (*Archilochus colubris*)



Anatomy

The ruby-throated hummingbird is among the smallest of the North American hummingbirds, measuring just three to 3.75 inches in length from beak to tail with a wingspan of four to 4.75 inches. These tiny birds weigh only 0.1 ounces and males are typically smaller than females. Both males and females are a metallic bronze-green color on their crown, nape, back and middle two tail feathers. Males typically have green sides, while females have brownish sides, and the wings and outer tail feathers of both sexes are dark, with a hint of purple. The female's tail is rounded and has white on the tips of the outer feathers, while the male's tail does not have this white coloration and is slightly notched. Males can be easily distinguished from females because of their brilliant, iridescent red throats, which seen from the side may appear golden, greenish or even dark. The chin and side of the male's head below the eyes is black, while the female's chin is white. The young of both sexes look like the adult female.

Habitat

Ruby-throated hummingbirds migrate south each year, some flying nearly 600 miles from the eastern U.S. across the Gulf of Mexico to the Yucatan Peninsula each winter and back to their breeding grounds in the U.S. each spring. In the summer breeding season, the ruby-throated hummingbird is often found in the "ecotone," or edge, between forest and meadow. This habitat allows the birds to remain close to the trees they nest in, while also having a supply of flowering plants and insects nearby for food, shelter and space. For this reason, you can often find hummingbirds in backyards and wooded parks. When wintering in Mexico and Central America, ruby-throated hummingbirds tend to choose habitats similar to those they use in the U.S. for breeding and nesting during the summer. This includes the edges of thickets and second-growth forests where forests meet clearings such as pastures.

Diet

While hummingbirds often drink plant nectar, even sugar water from feeders, they also eat pollen and tiny insects such as bees, ants, flies and beetles. Some studies have even shown that while hummingbirds are overwintering in the tropics, they eat more insect matter than plant matter. Before migrating, ruby-throated hummingbirds often double in weight, allowing a typical hummingbird to fly nearly 600 miles without having to stop for food!

Threats

Ruby-throated hummingbirds are preyed upon by hawks, praying mantids, bullfrogs and even large orb-weaving spiders. Habitat destruction due to agricultural growth and clear-cutting of forests poses a major threat to the survival of these birds, since they depend on specific forest plants for nourishment, nesting and roosting.

Sources

Cornell Laboratory of Ornithology. www.allaboutbirds.org/guide/Ruby-throated_Hummingbird/id

Operation Ruby Throat. www.rubythroat.org/

National Wildlife Federation. www.nwf.org/Wildlife/Wildlife-Library/Birds/Ruby-Throated-Hummingbird.aspx

photo © Art Bromage

Species Profile

Rufous-Bellied Thrush (*Turdus rufiventris*)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

Arthur Grosset. www.arthurgrosset.com/sabirds/rufous-belliedthrush.html

Brazilian Embassy. www.brasilemb.org/brazil/national-symbols/128-the-national-bird/131-the-nationalbird

photo © Dario Sanches

Anatomy

Also known as the red-bellied thrush, the rufous-bellied thrush belongs to the family *Turdidae*, which also includes well-known birds such as the American robin, blue-bird and nightingale. It is easy to recognize with its bright orange-red belly and dark streaks along its white throat. Sometimes you can spot a yellow ring around its eyes. Thrushes have relatively long, slender legs and hop, rather than walk, along the ground.

Habitat

The rufous-bellied thrush is found throughout southern and eastern Brazil, Paraguay, Uruguay and neighboring parts of Bolivia and Argentina. It is one of the best-known thrushes in this region and is commonly seen in woodland areas, gardens, parks, backyards and the edges of forests. The rufous-bellied thrush migrates north to the warmer tropical zone during the winter and returns to the temperate zone when the climate in southern Brazil becomes warmer again. These birds prefer to live alone or in pairs, and

the female builds a cup-shaped nest made from grass, leaves and moss and incubates two to six light-colored spotted eggs. These thrushes can live 25 to 30 years in the wild.

Diet

Rufous-bellied thrushes are mainly insectivorous, which means a large part of their diet consists of insects and spiders. They also like to feed on oranges, mature papayas and the coconuts of several species of palm tree, spitting out the pits after about an hour, which helps contribute to the distribution of these plants.

Threats

Like many thrushes, this bird has a very attractive song and for this reason, it is often sold as a cage bird in Brazil. Habitat destruction due to deforestation is also an ongoing threat to the lives of these birds. The rufous-bellied thrush became the national bird of Brazil in October 2002, which may help to ensure its protection in that country.

Species Profile

Scarlet Macaw (*Ara macao*)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

Belize Zoo. www.belizezoo.org/birds/scarlet-macaw.html

photo © Loren Sztajer

Anatomy

Macaws are the largest parrots in the world—the body of the scarlet macaw from beak to tail can be as long as 33 inches. This beautiful macaw has a creamy white, almost featherless face, with bright red plumage covering most of its body, wings and long tail. Brilliant blue and yellow feathers also adorn the lower wings. The bird's strong beak is adapted to breaking hard nuts found in the rainforest.

Habitat

The scarlet macaw can be found from southern Mexico to Peru, as well as Bolivia, eastern Brazil and the island of Trinidad. They prefer to spend their time in tall, deciduous trees in forests and near rivers, usually in large, noisy groups. Macaws also mate for life, nesting from January through April in the holes of dead canopy trees. Mated adults lay up to two eggs per year, and preen each other and their offspring for hours, cleaning bugs from their feathers.

Diet

Nuts, leaves, berries and seeds from the rainforest make up the bulk of the scarlet macaw's diet. Its strong, hooked beak is perfect for breaking nuts and seeds. Interestingly, the scarlet macaw can eat fruits toxic enough to kill other animals. This could be because they also eat large amounts of clay, which is thought to neutralize plant poisons.

Threats

The primary threats to the scarlet macaw are habitat loss from rainforest destruction and heavy exploitation for pet trading. In Costa Rica, these birds, which are frequently stolen from their nests, can be sold on the black market for \$200. In the United States, baby birds smuggled into the country can be sold for as much as \$4,000. Because tourists bring almost \$14,000 a year to see birds like the scarlet macaw in the wild, biologists hope that local governments will devote more attention to the protection of these magnificent birds.

Species Profile

Spectacled Bear (*Tremarctos ornatus*)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

University of Michigan
Museum of Zoology.
[animaldiversity.ummz.
umich.edu/](http://animaldiversity.ummz.umich.edu/)

photo © Markus Schroeder

Anatomy

The spectacled bear's real name is the Andean bear. It is called the spectacled bear because it has circles of cream-colored fur around its eyes, which make it look like it's wearing glasses. This cream-colored fur can also extend down its throat and chest. Each bear has its own unique pattern of "spectacle" markings. The rest of its fur is black or dark brown. They have specialized claws for climbing trees. In the wild, they live for about 25 years.

Habitat

The spectacled bear is the only species of bear that lives in Latin America. These bears can live in the Andean deserts and up through the misty cloud forests to the mountaintop *paramo* grasslands. Their range extends from Panama all the way south to Argentina.

Diet

The spectacled bear's favorite foods are fruits and bromeliads. They are known to

spend days up in trees collecting fruit.

Sometimes they will even build platforms out of broken branches in order to reach their desired treat! They also enjoy dining on berries, grasses, tree bark, honey, sugarcane and insects. If necessary, they will eat small animals like rodents, rabbits and birds. These bears do not hibernate, as their food sources are available all year round. The spectacled bear plays an important role in the health of its habitat—it disperses tree seeds that are too large for other animals to digest. Scientists believe that the bears are responsible for the spreading of three important types of trees in their habitat.

Threats

There are many legends about spectacled bears having mystical powers. However, these fabled mystical powers have not kept the animals from becoming endangered. People who want to prevent them from raiding their cornfields or attacking their livestock frequently kill these bears.

Species Profile

Brown-Throated Three-Toed Sloth (*Bradypus variegatus*)



Sources

Jukofsky, Diane. *Encyclopedia of Rainforests*. Connecticut: Oryx Press, 2002.

San Francisco State University. bss.sfsu.edu/holzman/courses/Fall99Projects/sloth.htm

Enchanted Learning. www.enchantedlearning.com/subjects/mammals/sloth/Sloth3printout.shtml

photo © F. Arteaga

Anatomy

This cat-sized mammal typically weighing eight to nine pounds has a round head, a short snout, small eyes, long legs, tiny ears and a stubby tail. Sloths have long, coarse fur that is light brown in coloration, but often appears green due to the blue-green algae that grow there. Instead of toes, their front and hind feet have three curved claws that allow them to easily hook onto three branches and hang upside-down. Sloths can rotate their heads nearly 90 degrees, and their mouths are shaped so they look like they are always smiling. Males are distinguishable from females because they usually have a bright yellow or orange patch of fur located between their shoulders.

Habitat

The three-toed sloth is an arboreal animal, inhabiting the tropical forests of Central and South America. Their algae-covered

fur helps camouflage the sloth in its forest environment. Sloths spend nearly all of their time in trees, descending to the ground only once a week to defecate.

Diet

Sloths are herbivores (plant-eaters), feeding on a low-energy diet of leaves, twigs and fruit. Because of their slow movement and metabolism, it can take up to a month for the sloth to digest a single meal.

Threats

Sloths are among the slowest-moving animals on Earth. They can swim but are virtually unable to walk. This makes them an easy target for jaguars, eagles and people that hunt sloths for their meat. The brown-throated three-toed sloth population is threatened by deforestation, habitat fragmentation and human encroachment. In addition, their restricted diet prevents them from thriving in captivity.

Species Profile

Red-Eyed Tree Frog (*Agalychnis callidryas*)



Anatomy

Thanks to their big bulging red eyes, it's not hard to recognize red-eyed tree frogs! This alien-like feature is a defense mechanism called "startle coloration." When the frog closes its eyes, its green eyelids help it to blend in with the leafy environment. If the nocturnal frog is approached while asleep during the day, its suddenly open eyes will momentarily paralyze the predator, providing the frog with a few seconds to escape. However, the frogs' eyes are not their only fashion statement! These frogs have bright lime green bodies that sometimes feature hints of yellow or blue. According to their mood, they can even become a dark green or reddish-brown color. They have white bellies and throats, but their sides are blue with white borders and vertical white bars. Their feet are bright red or orange. Adept climbers, red-eyed tree frogs have cup-like footpads that enable them to spend their days

clinging to leaves in the rainforest canopy, and their nights hunting for insects and smaller frogs. Male red-eyed tree frogs can grow up to two inches in length and females up to three inches.

Habitat

First identified by herpetologist Edward Cope in the 1860s, the red-eyed tree frog is found in the lowlands and on slopes of Central America and as far north as Mexico. As with other amphibians, red-eyed tree frogs start life as tadpoles in temporary or permanent ponds. As adult frogs, they remain dependent on water to keep their skin moist, staying close to water sources such as rivers found in humid lowland rainforests. Red-eyed tree frogs can be found clinging to branches, tree trunks and even underneath tree leaves. Adults live in the canopy layer of the rainforest, sometimes hiding inside bromeliads.

Diet

Red-eyed tree frogs are carnivores, feeding mostly on insects, including crickets, flies, grasshoppers and moths. Sometimes, they eat smaller frogs. For tadpoles, fruit flies and pinhead crickets are the meals of choice.

Threats

Frogs have historically been an indicator species, evidence of an ecosystem's health or its impending vulnerability. Not surprisingly, the world's amphibian population has experienced a decline in recent years; research indicates that factors include chemical contamination from pesticide use, acid rain and fertilizers; the introduction of foreign predators and increased UV-B exposure from a weakened ozone layer that may damage fragile eggs. Though the red-eyed tree frog itself is not endangered, its rainforest home is under constant threat.

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University of Michigan Museum of Zoology. animaldiversity.ummz.umich.edu/

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Species Profile

Honduran White Bat (*Ectophylla alba*)



Anatomy

Averaging four centimeters long, Honduran white bats are relatively tiny. True to their name, they have a fluffy white coat. Their ears, face, nose and parts of their legs and wings are bright orange. Almost no hair grows on their black wings. Since their nose protrudes from their face in a triangular shape, scientists call members of their family “leaf-nosed bats.” A thin black membrane covers their skull and may provide the bats with protection from ultraviolet radiation—a natural form of sunscreen!

Habitat

Honduran white bats live in the lowland rainforests of eastern Honduras, northern Nicaragua, eastern Costa Rica and western Panama. By cutting along the veins of heliconia leaves, the bats force the leaves to collapse into upside-down V-shaped “tents” that might shelter only one bat, or as many as 12. When they roost, they hang close together upside-down in the center of the leaf. The tents help protect them during the day from rain, the hot sun and predators. In fact, the bats choose leaves that are six feet off the ground—high enough to be out of the reach of terrestrial

predators. Heliconia stems are not very strong, so any predator brushing against the leaf causes the bats’ tent to shake. This alerts the bats to danger and they fly quickly away. Why do Honduran white bats have bright white coats rather than green like the leaves they hide inside? When the sun shines through the leaves of their tent, it makes the bats’ white coat appear green, making them hard to spot! However, their tent is not home sweet home for long. The bats rarely return to the same tent for more than a day.

Diet

During the day, Honduran white bats roost under their tents. At night, they emerge to search for food. However, these creatures are not looking to suck your blood—they only eat fruit or vegetation.

Threats

Since Honduran white bats live mainly under heliconia leaves, rainforest destruction is a serious threat. For this species to survive, rainforests in the Central American lowlands that have heliconia must remain standing. Natural predators may include opossums, snakes and other carnivorous animals.

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University of Michigan Museum of Zoology. animaldiversity.ummz.umich.edu

photo © Wanja Krah

Species Profile

Yucatan White-Tailed Deer (*Odocoileus virginianus yucatanensis*)



Anatomy

The white-tailed deer is an animal that almost all of us in the United States are familiar with—we've seen them in our backyards, in the woods and even along roads. The Yucatan white-tailed deer is reddish-tan in color, with gray along its chest and white on its throat, inner thighs, abdomen and underside of its tail. When threatened, they flip their white tail straight up to signal danger to others. The Yucatan white-tailed deer is smaller than its North American relatives—just three feet tall, 4.5 feet long and weighing 70–80 pounds—yet it is considered a relatively large mammal. It has long legs, a long flat back, and a long narrow head. All white-tailed deer are known to be excellent runners, jumpers and even swimmers. Males, called “bucks,” have curved, branched antlers that are shed each year. They use these antlers to attract mates, mark their territory and sometimes to fight or defend their territory against other males. About six months after mating, the female

deer, called a “doe,” will have one to three offspring, known as “fawns.” The fawns are reddish-brown at birth, and are covered with white spots to help camouflage them from predators. Female fawns may stay with their mother for up to two years, but males usually depart after about one year.

Habitat

There are 38 subspecies of white-tailed deer residing throughout Central, North and South America. Their range extends from northern South America all the way up to southern Canada. White-tailed deer live in temperate and tropical deciduous forests and are often found at forest edges and open fields. In Honduras, one is most likely to encounter a white-tailed deer at an inland national park or forest like La Tigra.

Diet

White-tailed deer are herbivorous, meaning they eat only plants. They feed day and night on grass, leaves, sprouts, lichens, mosses, tree bark and some fruit. In Honduras, they are often accused of raiding bean fields while farmers sleep. Like cows, all deer species are ruminants. Ruminants have a stomach with four separate chambers for food digestion.

Threats

In June of 1993, the National Congress of the Republic of Honduras declared the Yucatan white-tailed deer its national mammal and the national symbol of all Honduran wildlife. But even the national mammal of Honduras has threats to its existence. Its main natural enemies are the cougar and the jaguar. Ticks, horseflies and mosquitoes plague the white-tailed deer. However, as with most rainforest animals, humans pose the biggest threat. Humans hunt white-tailed deer for their meat, antlers, hides and sometimes just for sport, and they destroy the habitat upon which the animal depends.

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