





Rainforest Day

Blue Morpho Flying



Scientific Name: Morpho peleides



Fun Fact: The wings of these large butterflies have scales that refract light. They sparkle like blue gems. The underside is a dull brown with eyespots for *camouflage*. Their wingspan is 5 to 8 inches (12 to 20 centimeters).



Food: As an adult, this butterfly favors the juices of rotting fruit or fungal growths. As a caterpillar, it eats plants from the pea family.



Activity: They are *diurnal*. Their entire lifespan is only 115 days, so most of their time is devoted to eating and reproducing.



Territory: When flying over a *tropical* rainforest of Latin America, you might see a group—also called a rabble, flutter, lek, or swarm—of butterflies sunning themselves on treetops. Rainforest destruction threatens the *habitat* of these butterflies.









Rainforest Day

Rapid Stream





Fun Fact: After a heavy rain or near a waterfall, a stream rushes more rapidly. Very rapid flow from a downpour can uproot trees and dislodge rocks, changing the course and flow of a stream. These logjams naturally slow the current to prevent excessive erosion. Natural environmental variations such as this are part of the rainforest ecosystem. The logjams and rock piles provide habitat for animals who live in a stream or the riparian zone around it. In a natural water cycle, a rainforest heats up as water evaporates into the atmosphere. Clouds form to make the next day's rain, which rolls from the leafy canopy (nature's umbrella) down tree trunks to the soil, where it recharges the groundwater, forms puddles, or flows into streams, so that animals always have fresh water to drink. Manmade disturbances, such as destruction of rainforests, disrupt the water cycle and destroy root systems that would otherwise absorb rain and runoff.









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Black-headed Saltator



Scientific Name: Saltator atriceps



Fun Fact: People have described its call as "gruff, accelerating, raucous, rolling laugh, chortling chatter, loud, and scratchy." How would you describe it?



Food: This rainforest bird eats fruit, tender buds, nectar, and slow-moving insects.



Activity: It is *diurnal*. Between April and July, the female lays two black-marked pale blue eggs in a grass-lined cup nest high in a thicket. A shy bird, it bows and turns from side to side while vocalizing, and often duets with its mate.



Territory: It lives in dense rainforest brush and is a common resident in the Caribbean lowlands. At about 9 or 10 inches (24 centimeters) in length and weighing about a fifth of a pound (85 grams), it is about as heavy as a lemon.









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Green Ibis



Scientific Name: Mesembrinibis cayennensis



Fun Fact: This wading bird flies with its neck outstretched. It fashions a platform of twigs in a tree to use as a nest.



Food: It eats fish, frogs and other water creatures, as well as insects. Because of its long down-curved bill, it can capture and eat creatures that live in shallow water.



Activity: It is diurnal and most vocal at dusk.



Territory: It lives in swampy areas on the edge of forests and is found commonly on the Caribbean side of Costa Rica.









Rainforest Day

Mantled Howler Monkeys CallResponse



Scientific Name: Alouatta Palliatia



Fun Fact: The loud call of this monkey prompts responses from other monkeys. Two howlers may vocalize at length or at intervals, and the calls can be a way for a male to assess the strength of another male or to give support to a female and perhaps her infant.



Food: They eat leaves from the top of the rainforest *canopy*, as well as fruit, nuts, buds, and flowers. They steal eggs from birds' nests and can pick fruit with their tails.



Activity: The significance of their calls has long been studied by humans. In ancient Mayan times, howlers were worshipped for their beauty and soulfulness.



Territory: Central and South America. They stay in groups of 10 to 20 members in home areas of 25 to 150 acres (10 to 60 hectares). Groups travel up to about a half mile each day.









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Mantled Howler Monkey



Scientific Name: Alouatta palliatia



Fun Fact: Howler monkeys are known for being the loudest land animal. It has a call that can travel three miles through the rainforest. A howler's enlarged *hyoid* bone in its neck allows its throat to expand for vocalizing.



Food: This monkey eats leaves from the top of the rainforest *canopy*, as well as fruit, nuts, buds, and flowers. It steals eggs from birds' nests and can pick fruit with its *prehensile* tail.



Activity: They are *diurnal*. They are competitive, protecting their food sources by calling loudly to other howlers at dawn and dusk. If awakened from sleep, they make lots of noise at night.



Territory: Central and South America. They stay in groups of 10 to 20 members in home areas of 25 to 150 acres (10 to 60 hectares).









Rainforest Day

Mealy Amazon



Scientific Name: Amazona farinosa



Fun Fact: This parrot is one of the largest in the *genus* Amazona at nearly 16 inches (40 centimeters) long. A social bird, it gathers in pairs or flocks and often interacts with other birds in its family of true parrots, including the Scarlet Macaw, and in a related family, including cockatoos. It can live to be 70 years old!



Food: An herbivore, it eats fruits, seeds, berries, nuts, blossoms, and leaf buds.



Activity: It's diurnal. Usually a gentle and calm bird, it can be heard vocalizing loudly at dawn and dusk.



Territory: Humid and semi-humid forests and plantations of Central and South America are favorite *habitats*. You'll rarely find these parrots in deciduous forests or open, dry regions.









Rainforest Day

Montezuma Oropendola



Scientific Name: Psaracolius montezuma



Fun Fact: This bird makes a pouch nest that hangs from a tree branch. They live in colonies, usually filling a single tree with many of their tear-shaped nests, which are woven from fiber and vines.



Food: These birds are *omnivores* because they eat a variety of fruit, seeds, insects, and small *vertebrates*. They drink nectar from the flowers of banana and balsa.



Activity: The male's call, a loud bubbling and gurgling, is a distinctive sound of the rainforest. When protecting their young, they scream. They are *diurnal*.



Territory: These large birds live in the rainforest near clearings, streams, rivers, and coastal lowlands. They also can be found close to banana plantations. They range from southern Mexico to central Panama in Central America.









Rainforest Day

Purple-Throated Mountaingem



Scientific Name: Lampornis calolaemus



Fun Fact: Hummingbird wings can beat more than 60 times per second in normal flight and during highspeed flight up to 200 times per second.



Food: These birds eat throughout the day and can consume more than their body weight in one single day. They like nectar from flowers and small spiders and insects for protein.



Activity: They are *diurnal*. At night, they find a safe place to perch and fall into a very, very deep sleep called *torpor*, in which their *metabolism* slows to one fifteenth of their normal rate.



Territory: The male of this *species* will aggressively defend his feeding territory, which includes plants and flowers in the area, and dominate over other hummingbirds.









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Scarlet Macaw



Scientific Name: Ara macao



Fun Fact: The bright feathers of these birds are primarily red. Upper wings and tail feathers are shades of blues and yellows. In the wild, they can live to be 30 years old! They are in the family of true parrots, including the Mealy Parrot. They live in groups of 3 to 4 and flock in groups of 25.



Food: This bird is an *omnivore*. It eats mostly plants, fruits, seeds and nuts. During the breeding season, it also eats insects and *larvae*.



Activity: They are *diurnal*. They sleep together at night in communal roosts of up to 50 birds. They lay eggs in cavities in tall trees and in old woodpecker holes.



Territory: These birds live high in the rainforest *canopy*. In Costa Rica, they are found mostly on the Pacific side of the country.









Rainforest Day

Mantled Howler Monkeys Group



Scientific Name: Alouatta palliatia





Fun Fact: Howler monkey groups have a ratio of one male to four females—or three males to 12 females in a group of 15. Juveniles emigrate from their *natal group* to spend their adult lives with unrelated monkeys.



Food: Howlers eat leaves from the top of the rainforest *canopy*, as well as fruit, nuts, buds, and flowers. They steal eggs from birds' nests and can pick fruit with their tails.



Activity: Their loud howling may serve purposes of intergroup spacing, establishing hierarchy of alpha males to subordinate males, warning away intruders, and guarding mates.



Territory: Central and South America. They stay in groups of 10 to 20 members in home areas of 25 to 150 acres (10 to 60 hectares). Groups travel up to about a half mile each day.









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Leaves Rustling





Fun Fact: Tropical rainforests cover less than 2% of Earth's surface, and contain 50% of our plants and animals. Rainforest *biodiversity* is essential to life on Earth. Thousands of rainforest plants provide medicines and thousands more may be discovered. Rainforests support an array of *flora* and *fauna*, which adapt in fascinating ways to the *forest floor*, *understory*, *canopy*, or *emergents*. Every layer of the rainforest bustles with activity seen and heard, unseen and silent. If a branch falls, a snake slithers, a bird flies, or an animal scurries, leaves rustle. They also bustle with communities of insects living lifespans sheltered and fed by one leaf. Large leaves have surface area for absorbing light in the *understory*, which receives only 5% of the sunlight that shines above on the *canopy*. When devoured by insects, leaves become lacy and fall to decay on the forest floor. Roots absorb the nutrients for growth. Plants' *photosynthesis* converts sun energy to fuel plant growth and is crucial for maintaining Earth's oxygen levels.









Rainforest Day

Steady Rain





Fun Fact: Rain is essential for a fresh water supply to maintain life on Earth. The water cycle, also called the hydrologic cycle or H2O cycle, is continuous water movement on, above and below Earth's surface. Evaporation, condensation, and rain are crucial to that cycle. When water evaporates, it forms water vapor in the atmosphere. The vapor condenses into liquid water and, when droplets are heavy enough, they fall back to Earth as rain. The rainforests of Costa Rica, where the sounds for Nature Maestro® were recorded, have high yearly average rainfall. For example, Manuel Antonio National Park receives 151 inches (383 centimeters) of rain, La Selva receives 156 inches (396 centimeters) of rain, and Tortugeuro receives 240 inches (609 centimeters) of rain! Rain is a constant feature of any rainforest.









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Strawberry Poison Dart Frog



Scientific Name: Oophaga pumilio





Fun Fact: It's easy to hear these frogs, but you don't always see them because they're so small, and they stay hidden in the leaf litter of the rainforest.



Food: It eats ants and beetles. It's able to capture prey by secreting toxic chemicals.



Activity: When breeding, the male defends and waters the nest. He can care for several nests at a time. The female feeds the tadpoles her *unfertilized* eggs. Only 5 to 12% of the clutch (incubating eggs) develops into tadpoles.



Territory: When challenged by another poison-dart frog, the male of this **species** will jump on top of the other and wrestle with it, standing on his hind legs and pushing the other frog to the ground.

