Howler Monkeys

As the sun rises over the tropical forests of the New World, a powerful bellow echoes through the treetops. Louder than any dawn chorus suna by birds, this is how howler monkeys areet the day. Their supersized voice boxes amplify the sound to carry up to 3 miles (5 km), informing other groups that this patch of forest is occupied.

Perhaps it was the distinctive call of howler monkeys that led the Maya to believe they were divine creatures. The ancient Maya civilization worshipped howler monkey gods, and although this culture has long since disappeared, the monkeys still roam the ruins of Mayan cities in Honduras and Guatemala. More of a roaring, guttural whoop than a howl, their powerful call is the loudest sound made by any land animal. The "long calls," as they are known, may serve to maintain distance between groups, avoiding the need for confrontation or aggressive encounters, and thus conserving energy.

Why do howler monkeys need to conserve energy? The answer can be found in the food they eat: a large part of their diet is made up of leaves. Leaves are a poor energy source, so a howler monkey has dental adaptations to grind the leaves better. In addition, large salivary glands produce saliva to break down the poisonous tannins in the leaves. The food then stays in the gut for a long time, giving gut bacteria more time to ferment the foliage.

This produces a gaseous by-product, which is reabsorbed and used. In this way, a howler monkey gains the maximum amount of energy from each leaf. Studies of red howler monkeys show that they eat 195 plant species and on average consume 2.7 lb (1.23 kg) of fresh food per day.

Sedentary lifestyle

Howler monkeys spend up to 80 percent of their time resting so as not to waste energy, further conserving energy by howling a warning rather than patroling their territory on the lookout for encroachers. After their nap, they may move to a new area to find more food, but not very far—they don't need to, because leaves are always nearby in a forest. Their daily travel is no more than about 765 yards (700 m). Howlers do not eat only leaves, however-fruit is also an important energy source, and the monkeys are important seed dispersers for many trees. Insects are also eaten.



announcing that this family of Venezuelan Red Howlers is awake and active and would prefer that the neighbors keep their distance.



Howler monkeys have a wide range and can be seen and heard in a variety of forest types from northern Argentina to the Yucatan Peninsula of Mexico. They move slowly through the trees, using their powerful prehensile tail and all four limbs to grasp branches, and they may hang from the tail while feeding. The tail is also coiled round a branch to act as an anchor while the monkey sleeps.

Home ranges of howler monkeys vary widely depending on the quality of the habitat. Some groups' ranges do not overlap very much; others overlap almost entirely but the groups keep their distance by calling. The nine different species also vary in how they organize their social lives, and there are differences within species too. Groups seldom exceed 15 members, often led by one alpha male, although groups with two or three males are also common. Females nearly always outnumber the males and are subordinate to them.

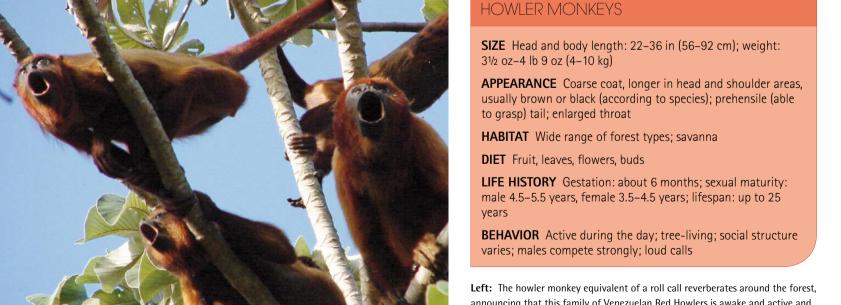
Social mobility

Within howler monkey society, members of either sex may leave their family group upon reaching sexual maturity. Males that disperse in this way can usually fight their way into other groups, but females are normally forced to start their own group. Mantled Howlers, are an exception. They form groups of 40 males and females; either sex may disperse and females have more success in joining new groups than those of other howler species. Ambitious male howlers will go to great lengths to become the alpha male and father the next generation. This may even involve killing the young of other males when taking over a new group.

> rate compared to other members of their family (Atelidae), the spider monkeys, woolly monkey, and muriquis (see pages 96-99), and they can recover more quickly from hunting. Even so, the scale of hunting today is not sustainable. In addition, the habitats in which howler monkeys live are threatened by clearance for roads, electricity networks, and other forms of development. If better protection is not achieved, extinction looms and mornings in the tropical forests of the New World may never sound the same again.

Howler monkeys have a relatively fast reproduction

KEY TO RANGE MAP Alouatta



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