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# EARTHHERO



• Mammals • Birds • Reptiles • Insects



# MAMMALS

## (WESTERN TARSIER)

Tarsiers are one of the oldest primate groups on the planet. Fossil records show that this primate was once found in Asia, North America, and Europe. Today, they are only found in the Philippines, Indonesia, Brunei, and Malaysia.

Tarsiers are divided into three species groups which are Eastern, Western, and Philippine. The Eastern tarsier inhabits Sulawesi and the surrounding islands, while the Western tarsier can be found in Brunei, East Malaysia, and Indonesia. The Philippine tarsier can only be found in the Philippines. Each of these three different tarsier species have its distinctive tails and inhabits different types of habitats. The Philippine tarsier has no hair on its tail and feet, while the Western tarsier tail is tufted at the tip. The Eastern tarsier has the hairiest tail of the three species. The Philippine and Western tarsiers are mostly found in lowland forests. The Eastern tarsier can be found in both primary and secondary forests but prefer secondary forests due to higher food abundance. Its habitat ranges from lowland evergreen forests, close to sea level, to lower montane forests up to 1500m high. They can also be found in mangroves and scrub forests. This month, the species that we want to highlight is the Western tarsier.





The Western tarsier can live in both primary and secondary rainforests. They can also be found near mangrove areas and forest edges near fruit plantations.

The tarsier is believed to get its name from the tarsus bones in its feet. It has extraordinarily long hind legs which enable them to leap distances over five meters. They have shorter forelimbs and long, thin fingers. The longest finger is the third finger which has the same length as the upper arm. Their fingers have a disc-like pad that helps them to grip or cling to the branches and tree stems. Its second and third fingers have long, curved claws which are used for grooming.

The tarsier has velvety soft fur which is generally grey or brown. The head to body length of a tarsier ranges between 11.5 to 14.5 cm, while the tail length is double the length of the body and ranges between 20 to 23.5 cm. Males weigh around 122 to 134g, while the females are much lighter, weighing between 107 to 127g. The most obvious physical feature of the tarsier is its bulging eyes, the largest eyes relative to the body size of any other mammal. The size of each eyeball is about 16 mm in diameter. It helps them avoid predators in the dark and hunt for prey. They also have bat-like ears. Another unique feature of the Western tarsier is the round-shaped head has the capability to turn 180 degrees in each direction, allowing them to rotate their head almost 360 degrees to see their surroundings without even moving their body.



Western tarsiers are carnivores and they mostly feed on insects, including grasshoppers, butterflies, moths, cockroaches, ants, and cicadas. They also eat birds, bats, frogs, and poisonous snakes. They are ambush predators, capturing prey that moves, including ones bigger than its size. The tarsier kills its prey by biting the back of the neck multiple times. It grips to its prey by using its forelimbs and swallows it from the head with its strong jaws and teeth. The tarsier has a wide mouth that allows it to devour larger prey. It can eat around ten percent of its body weight every 24 hours. To wash their food down, a tarsier obtains water by licking the drops



from bamboo leaves or the runoff from tree barks. Having a small body size, being active at night, and being an arboreal mammal is an advantage to the Western tarsier as it helps decrease predation from snakes and other arboreal mammals such as the slow lorises.

The Western tarsier is a nocturnal mammal and is most active after sunset until midnight. While the other tarsier species live in groups, the Western tarsier is a solitary mammal, preferring to live alone rather than in pairs or groups. The only occasions where they stay in pairs are during mating and establishing territory. The Western tarsier is a non-seasonal breeder, and after six months of gestation, the female tarsier gives birth to a single infant. The infant is born with its eyes open and with a full coat of fur. Unlike other mammals, baby tarsiers are not carried by their mother all the time. This might be due to



the large size of the infants. Besides providing milk and food, the mother also protects the young from male tarsiers. The average lifespan of Western tarsiers is eight years. This relatively long lifespan may be due to lack of predators and limited fecundity.



The other two tarsier species are able to produce 15 different vocalizations, including food calls, infant calls, alarm calls, and play whistles. On the other hand, the Western tarsier is the least communicative species that only produces 4 different calls, this is most likely due to its solitary life. The Western tarsier mostly communicates with its potential mate via squeaks and whistles. Besides using calls to attract mates, the tarsier also marks its territory by using a scent gland (urine and glandular secretions). The tarsier will shriek loudly and chase away intruders aggressively. A previous study tracked the home range between male and female Western tarsiers. The studies show that the males travel farther during the night with a range of 0.045 km<sup>2</sup> to 0.113 km<sup>2</sup> while the females have an average range of 0.085 km<sup>2</sup>.



There is little known about this elusive species. However, the Western tarsier has a big role in the ecosystem. Being insectivores, they help control the insect populations in the wild. Unfortunately, the Western tarsiers are threatened by habitat loss. Over the last 20 years, 30 percent of its habitat has disappeared. It has been classified as a vulnerable species on the IUCN's Red List of Threatened Species. This means that the species is facing a high rate of extinction in the wild. Besides habitat loss, the Western tarsiers are also targeted for the illegal pet trade. They are protected by law in Malaysia and Indonesia, so keeping them as pets is prohibited. Continuous enforcement and habitat protection by the authorities are needed to ensure the population of the Western tarsier remains stable and does not further decline towards extinction.