



# Lubee Bat Conservancy

*Saving Bats. Conserving Ecosystems. Inspiring Stewardship.*

*Lubee Bat Conservancy is an international non-profit organization dedicated to saving bats and their habitats through research, conservation, and education, with a focus on children and community engagement.*

## Bat Natural History Facts

- Bats are mammals: warm-blooded, have fur, give birth to live young and nurse their babies (also called pups).
- Bats typically give birth to 1 pup/year, although some species can have twins or triplets.
- Pups can weigh as much as 10-20% of the mother's body weight.
- Bats are the only mammals that can fly.
- The Mexican free-tailed bat can fly up to 160kph (100mph) the fastest speed of any mammal.
- Some species may reach altitudes of 3000-4000m (10000-13000ft).
- Bats belong to the order Chiroptera, which is Latin for "Hand wing".
- To date, 1,421 species have been discovered which accounts for 20% of all known mammals.
- Bats are divided into two main groups - Megabats and Microbats.
- Megabats are typically larger, do not echolocate (with the exception of a few Roussettus species), eat fruit and plant parts, and are found in the Old World - roughly 200 species.
- Microbats are typically smaller, use echolocation, eat a variety of food sources depending on the species (insects, fruit, fish, birds, blood, reptiles, amphibians, small mammals) and are found throughout the world - roughly 1200 species.
- 70% of bat species feed on insects, 20% on fruit. The other 10% have varied diets including nectar, fish, and small vertebrates.
- Bats occupy nearly every ecological food niche.
- Bats live everywhere except for the Arctic, Antarctica, extremely arid areas, and some remote islands.
- A group of bats is called a colony.
- Bats live in a variety of habitats including trees, leaves, caves, mines, bat houses, manmade structures, and even termite nests.
- Comparing body mass to age, bats are the longest-lived mammals on the planet. Depending on the species, average lifespan can be 15-35 years.
- Natural predators include hawks, owls, snakes, crocodilians, foxes and raccoons. Man, however, is the greatest predatory threat.
- Largest bat – Malayan Flying Fox, 6' wingspan, weighs up to 5 lbs.
- Smallest bat - Bumblebee Bat, 2.5" wingspan, weighs less than a penny (3 grams).
- Of the 1,421-bat species, only 3 are vampire bats that feed exclusively on blood. They are found from Mexico to South America and weigh less than 56g (2oz).

## Bat Natural History Facts cont.

- There are 4 families and 45 species of bats found in the US.
- Most bats in the US feed on insects although some species in the SW feed on cactus and agave nectar, and are essential to desert ecosystems.
- Florida is home to 13 bat species, all of which eat insects.
- There are 500,000+ bats in the University of Florida bat houses. The majority are Mexican Free-tailed Bats, although Southeastern Myotis and Evening Bats are also residents.
- Bats play an important role in the ecosystems in which they live.
- Insect-eating bats are the primary predator of night flying insects, many of which are agricultural pests and mosquitoes.
- One Big Brown Bat can eat hundreds of insects a night.
- Bracken cave in Texas is home to 20 million Mexican Free-tailed Bats, which eat 250 tons of insects every night, many of which are agricultural pests.
- A 2011 USGS study found that bats save U.S. farmers \$3.7-\$53bn per year by consuming crop pests and reducing the need for pesticides.
- Fruit and nectar bats spread seeds, pollinate flowers, and help regenerate forests.
- Fruit bats swallow large amounts of small seeds while consuming fruits. These seeds are passed out in feces over clear-cut areas resulting in reforestation.
- In some tropical areas of the world, over 90% of the regrowth of the rainforest is due to bat-dependent plants and trees.
- Numerous agricultural products depend on bats for seed dispersal or pollination: banana, mango, avocado, coconut, figs, cashews, agave (tequila).
- Fruit bats can fly up to 40km (25 miles) every night in search of food.
- In some island countries, bats are the only native mammals and are of cultural importance to indigenous people.
- 25% of bat species worldwide are threatened with extinction.
- 40% of bat species in the U.S. are listed as threatened or endangered.
- Habitat destruction, overhunting, and diseases such as White-nose Syndrome (WNS) pose the biggest threats to bat species.
- White-nose Syndrome is a disease caused by the fungus (*Pseudogymnoascus destructans*) and was first found in a NY cave in 2006.
- Currently, the fungus is found in 36 states and 7 Canadian provinces, primarily affecting bat species that are true hibernators.
- The disease essentially wakes bats, depleting crucial fat reserves and causing them to search for food or water which is scarce in winter months. The bats then starve or freeze to death.
- The fungus also affects the respiratory and immune systems.
- To date, 6-7 million North American bats have died due to WNS.
- Old World fruit bats (Pteropodidae) are more endangered than other bats, with 7 species thought to have become extinct in the last 100 years and a higher proportion currently at risk of extinction when compared to microbats.
- Despite nearly two decades of international conservation attention, Old World fruit bats remain in the extinction "hot zone".

## Lubee Facts

- Lubee was founded in 1989.
- Previously known as Woods Haven Farm, the property was used as a field station for the UF Veterinary Medical Teaching Hospital.
- Lubee places animal care, conservation, and education as its three core institutional purposes.
- We currently house over 200 bats representing 13 species.
- Lubee is a certified member of the Association of Zoos and Aquariums (AZA).
- Most of the bats at Lubee are fruit-eating Flying Foxes from the genus *Pteropus*, although we also care for rescued native insectivorous bats.
- We house the largest species of bat in the world, the Malayan Flying Fox, which can attain a 6' wingspan.
- We breed and loan bats to other AZA institutions throughout North America, including Disney's Animal Kingdom, Oakland Zoo, and Columbus Zoo.
- Field conservation projects and education programs have been conducted in 19 countries including: Malaysia, Thailand, Nepal, Madagascar, Guam and the Commonwealth of the Northern Marianas Islands, Africa, Solomon Islands, Papua New Guinea, and USA (FL).
- Lubee is the premier global leader in the care, husbandry, and medical management of Old-World fruit bats.
- Lubee is helping to find cures for the world's deadliest diseases by maintaining an active research program with partners such as the CDC, NIH, and US Army.
- Every year we reach nearly 30,000 people through tours, outreach activities and events.
- Lubee is the only bat conservation organization that houses endangered bats while maintaining active field conservation and education programs.

## Frequently Asked Questions

- *Are bats blind?* No, all bats can see. Microbats use echolocation as an easier means of navigation and food detection. Megabats do not echolocate (with the exception of a few *Rousettus* species) and use keen eyesight and smell to find fruit.
- *Why do bats hang upside down?* Hanging upside down enables bats to take flight by simply letting go, dropping into the air and taking flight. This is also an easy means of predator avoidance.
- *Do bats get caught in your hair?* No, bats may fly by to catch insects, but they do not get caught in hair.
- *Do all bats have rabies?* No, only .01% of bats carry rabies. However, all bats should be left undisturbed.
- *Are there vampire bats?* Yes, 3 species of vampire bats are found from Mexico to South America.
- *Are bats mice with wings?* No, bats are in their own mammalian order, Chiroptera, and are more closely related to carnivores and insectivores than rodents.
- *Why doesn't the blood rush to their heads?* The same way that blood doesn't rush to our feet - valves in the circulatory system prevent this and keep blood continuously flowing.