# ALL ABOUT BATS

On the occasion of the ***INTERNATIONAL YEAR OF BATS 2011***, Bio-Vision Presents an article '**ALL ABOUT BATS'**

The United Nations Convention on Migratory Species (CMS) and the Agreement on the Conservation of Populations of European Bats (EUROBATS) have joined together to celebrate the Year of the Bat.

**"Together with Bats"**

## BATS

**Often mistaken for birds and as with most mysterious creatures, associated with a lot of misconceptions, superstition and of course, evil, bats are ordinary mammals made extraordinary by being the only mammal capable of true flight.**

**Bats, also known as flying foxes, belong to the Chiroptera order, the second largest group of mammals. Around 1100 species bats have been reported worldwide and since they prefer warm climate, they don't normally make their homes north or south of the sub-tropics.**

**First, let's deal with the myths…bats are not bad…although we just called them Bad Airborne Tropical Species. They are just one of Nature's best creations yet. Amazing, mysterious and in so many ways the most efficient survivor in the world's ecosystems.**

**bats being associated with the devil and all that is nothing but rubbish…they are just one of the most beautiful and intriguing and by and far, the most misunderstood animals that belong to planet Earth. So what are bats?**

## Mammals or Birds

**Good question…and a question that every single child and adult would ask if they have not attended, or paid attention in high school. Well, they fly, so they should be birds…but they give birth to their young and suckle them with their mammary glands…so they should be mammals right? True. But there are other mammals like the Duck Billed Platypus which lay eggs – Oviparous Mammals. So how do we really classify bats as mammals?**

**Mammals are identified not merely by the presence of mammary glands or by being Viviparous or animals that give birth to their offspring. They are identified by**

- **External Ears or Pinnae. If you notice, Fishes or Pisces, have the Lateral Line Sense Organ that senses vibration in the water. Amphibians have the Tympanic membrane that senses sound. Reptiles, either have the tympanic membrane or like snakes, completely do away with hearing and focus on ground vibrations. In birds or Aves, the tympanic membrane is located in a recess with a tube that connects it to the surface of their body.**
- **However, Mammals and all of them have pronounced external ears called Pinnae**
- **Hair on the body: Yes, Bats have hair and it is nothing like the furry legs of the tarantula or any other non-mammalian species that may have hair on their legs. This is a typical characteristic of all mammals, which distinguishes the Bat from its avian counterparts**
- **The presence of mammary glands: All mammals have a specially modified set of sweat glands called mammary glands that in the females, produce milk that the offspring nurse on before they are weaned to their normal diet. Bats being mammals have these glands and they suckle their young ones as humans and other mammals do.**

**They need their habitat and they need warm climates to survive and many of the bat species are vulnerable to extinction due to deforestation, habitat loss, and excessive use of insecticides. Providing bats with bat houses can help to control the population decline by arranging areas for them to roost, hibernate and raise their young pups. Wouldn't you be proud to say you saved 1 family of bats by building a small bat house in your back yard? After all they are such amazing animals and it would be a shame to lose them.**

# Fun Bat Facts

**Many people have misconceptions about bats. In this article we will explore some of those and find out how amazing facts on bats really are**

**The first misconception is that bats are related to the rodent family and that they are basically "flying mice". This is simply not true; in fact, bats are a group all their own named 'Chiroptera', which means hand-wing. Bats are closer to groups like primates and lemurs versus the rodents**

**The next fact about bats that people are often wrong about is they think bats are blind. The old saying goes 'as blind as a bat' but in fact, many bats actually have very good vision. They can see almost as well as us and while their sight is definitely better in the darkness, they can still see pretty well. Some bats even see in color! But to see in the dark, like inside a cave, bats use "Echolocation". These are very high frequency vocalizations similar to radar that the bat emits as it flies**

**Not all bats are vampire bats, though we hear about those most. While many people believe that bats are vampires by nature, out of the 900 species of bats, there are only three vampire bats in the entire world. These three bat species generally stick to Latin America and they do not usually get their blood meal from humans. The remaining species of bats that are all over the world feed off of fruit, nectar, pollen and insects. There are so many types of bats that they make up 1/5 of the world's mammals!**

**Bats usually only have one live young per year? Their slow reproduction makes them vulnerable to extinction. They also, just like us, feed their young by pectoral breasts until they are old enough to get food for themselves. The average life-span of a bat is similar to ours as well, as they can live up to forty or fifty years old. The majority of bats could fit in the palm of your hand!**

**A lot of people have no idea that bats do not like the cold weather. As soon as the weather changes, a lot of bats will migrate to South America and while there are some bats that will simply hibernate until the weather breaks, many bat species migrate and will fly over a thousand miles in order to get to places that are warm**

**The places that you will mainly find a lot of bat species are in some of the warmest parts of the world. The tropics are fantastic places for bats to live, not only do that have a lot of insects and flowers for their food source, but they are also the perfect climate for these furry little creatures. Mexico, Hawaii and even California are just a few of the places that many bats can be found**

**A great bat fact is one that makes gardeners and homeowners love them: a single bat can eat up to 600 mosquitoes in just 1 hour! Almost 40% of American bat species are having a severe decline in populations, for reasons including habitat loss.**

# Save the Bats

**Of the 900 species of bats in the world, only 45 of them live in the United States, and most of these species are quite localized, such as**

**the Indiana bats that only use nine caves in Indiana to hibernate in during the winter months. Of those 45 species of American bats, seven of them are on the endangered species list due to being killed off by chemical insecticides over the years.**

**You can help save the bat population by building them a bat habitat. It is very easy to do, you don't have to plant anything or build a big glass house for them. In fact, it is doubtful that they would enjoy that very much. All that is needed are a few bat houses and a couple of big trees. But why would you want to save the bats? Aren't they dirty little dangerous creatures?**

**In fact, most bats are not dangerous at all. They are quite clean and they don't usually carry rabies. They won't attack people, quite the opposite. Bats will stay as far away from people as they can. And American bats don't suck blood. The closest vampire bats live in Central and South America and a few in Mexico, and even these bats don't feed on people's blood. They prefer sleeping animals to get their nightly few drops of blood, and the animals don't even know the bats were there.**
**Bats are actually quite beneficial to humans. Some species of bats pollenate many plants. But better than that, American bats will control the insect population near their habitat. Bats especially like to eat mosquitoes, and they like to eat a lot of them – at the rate of about 1,200 mosquitoes per hour during feeding time. Have you ever seen that many mosquitoes in your lifetime? Imagine how much even one bat feeding in your back your can do! Now, imagine how many mosquitoes you would have in your yard if there were no bats eating them. That's a scary thought, isn't it?**

**There are some great places to go if you want to see a lot of bats. Carlsbad National Park in New Mexico has a cavern that houses nearly a million bats. At one time, only about 70 years ago, there were more than 8 million bats living in Carlsbad Caverns. The park has erected a bat stadium where you can go to watch the bats come out of their caverns at dusk. There are so many of them that they will actually darken the sky.**

**Another great place to see bats is in Austin, Texas. There is a bridge in town that is affectionately called the "bat cave". Every night during the warmer months thousands of bats fly out from under this bridge at feeding time. They have actually caused traffic accidents! If you're ever in Austin, ask any local to point you in the direction of the bat cave, they'll know exactly what you are talking about. But while you are home, get started on your bat habitat and help to save these wondrous creatures.**

# The Gray Bat: It's Beautiful

**There are many things about the gray bat that people do not know and we'll explore some facts here. The gray bat is one of the largest species of the Myotis group and generally speaking, this beautiful creature tends to stick to the eastern United States.  Places like Kentucky, Missouri, Tennessee, Florida, Georgia, Kansas, Indiana, Illinois, Oklahoma, Mississippi, Virginia and maybe even North Carolina are all places that the gray bat lives or has lived.**

**The gray bat is it is roughly four inches in length and it is the only Myotis to have the wing membrane attached to its ankle instead of it being attached at the base of the toe.  The gray bat is also the only bat with back hair that is the same color from base to tip. Usually, the fur on a gray bat is … gray, but sometimes it can look russet in the summer.**

**The habitat of a gray bat is caves.  While you may think that most bats love caves, that is not actually true. There are many bats that do not use caves as their home, rather they use hollow trees, old buildings, old homes; the gray bat however, uses caves.  The gray bat is also one of the bats that hibernate and while most bats would rather make the journey to warmer climates, because of the location, gray bats are willing to hibernate inside their caves.  In order for a bat to go into hibernation, the cave needs to stay at forty-two to fifty-two degrees; this will keep them cool yet not too cold.**

**These beautiful creatures do not only use caves in the wintertime, they utilize caves in the summertime as well. They usually just have to relocate themselves to a cave near a river or a lake so they can feed during the summer.  A grey bat is more than willing to fly as far as twelve miles from their home cave in order to find food though, so if there are no caves near any streams or rivers, a gray bat can fly a ways to find food elsewhere**

**Like many 'microbats', the gray bat's diet consists generally of insects and small fish. This is one of the main reasons why a gray bat likes to be near the water, as it is easier to find food there.  Like most bats, gray bats do all of their hunting at night and feed at night.**

**There is also something different about the gray bat that many people do not know of; it is on the endanger species list.  There are not all that many grey bats left.  Slow reproduction and habitat destruction have contributed to their population decline.**

# Different Types of Bats

**Bats, also known as flying foxes are mammals which can fly. They belong to the Chiroptera order and form the second largest group of mammals. Around 1100 bats have been reported worldwide and since they prefer warm climate, they do not occur in the Polar Regions. Out of the 1100 bats, 70% feed on insects and similar creatures (insectivores) while the rest feed on fruits (frugivores). They play a major and important role in the ecosystem by helping to keep the insect population under control, pollinate flowers and distribute seeds of various plants.**

**Bats fall under two main categories – Megabats (megachiroptera) and Microbats (microchiroptera). Megabats are usually large sized (though there a few of them that are smaller than the microbats) with well-developed eyes and small ears. Their eye sight is so good that they do not depend on echolocation for navigation and finding food. They feed on fruits, nectar and pollen. Microbats on the other hand are relatively smaller with small eyes and large ears. They have poor eyesight and hence have to use echolocation. These types of bats mainly feed on insects and small creatures and a few of them (Vampire Bats) love to drink blood.**

**Megabats belong to the Pteropodidae family which is further divided into 7 subfamilies. Afew of the megabats are described below.**

## MEGABATS

- **Eastern Tubenosed Bat (*Nyctimene robinsoni*) - Also known as or Queensland Tubenosed Bat, the Eastern Tubenosed Bat belongs to the subfamily Nyctimeninae and genus Nyctimene (Tube-nosed fruit bats). It is a dark brown bat with gray colored head and yellow spots scattered here and there. Unlike most other species of this family, this bat has raised tubular nostrils.**
- **Pygmy Fruit Bat *(Aethalops alecto)* – Also known as the Grey Fruit Bat, this bat is a species of Old World fruit bat. It belongs to the subfamily Cynopterinae and genus Aethalops (pygmy fruit bats).This bat is highly restricted to montane forest above 1000 m from Peninsular Malaysia, Sumatra and Java. It had been reported at Mount Kinabalu in Borneo and Crocker Range in Sabah; Gunung Mulu and Bareo in Sarawak.**
- **Spotted-winged Fruit Bat *(Balionycteris maculate)* – This bat, belonging to the subfamily Cynopterinae and genus Balionycteris is the smallest fruit bat in the whole world. It is found in southern Thailand, Malaysia, and on the island of**

**Borneo, this bat is the only type within this genus. The name Spotted-winged Fruit Bat comes from its dark wings with a pale spot at each joint. It occupies forest areas where they can be found roosting in small groups in caves and trees.**

- **Lesser Short-nosed Fruit Bat *(Cynopterus brachyotis)* - A small bat that belongs to the subfamily Cynopterinae and genus Cynopterus (dog-faced fruit bats or short-nosed fruit bats). Itis brown to yellowish brown with a dark orange collar in males and yellowish collar in females. It has a fox-like face with large black eyes. They roost in small groups in trees, caves and under leaves. This is a widely distributed species. Its range includes Sri Lanka, southwest India, northeast India, Andaman and Nicobar Islands, southern China, southern Burma, Indochina, Thailand, the Malay Peninsula, Sumatra, Java, Bali, Sulawesi, the Philippines and also on the Lesser Sunda Islands. It plays a vital role in plant pollination. Various plants such as avocadoes, dates, bananas, mangoes, and peaches depend on them for seed distribution. Since they feed on fruits, they are considered as crop pests.**
- **Greater Short-nosed Fruit Bat (*Cynopterus sphinx*) – This bat, belonging to the subfamily Cynopterinae and genus Cynopterus (dog-faced fruit bats or short-nosed fruit bats) is found in South and Southeast Asia. It is also known as the Short-nosed Indian Fruit Bat. It is brown to grey-brown on the upper side and paler below and has very soft and silky fur. Its range includes Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Philippines, Sri Lanka, Thailand, and Vietnam. These bats make nests high up in palm trees. They chew the palm fronds to make tents. When palms are not available, they construct tents by closely weaving together the leaves and twigs of creeping vines that grow over buildings. Short-nosed fruit bats are carriers of the deadly disease, Japanese encephalitis in humans. Even though they play important roles in pollination and seed dispersal in many plants, they are considered to be pests on fruit crops.**
- **Salim Ali's fruit bat *(Latidens salimalii)* – A rare megabat that belongs to the subfamily Cynopterinae and genus Latidens. It is the only type belonging to this genus. It is a middle-sized bat with no external tail. Its wing is light brown and the head is covered by blackish brown fur. The lower side is light grey-brown with the hairless brown wing membrane. It was first recorded at an altitude of 750 meters in the High Wavy Mountains of the Annamalai Western Ghats, Theni district, Tamilnadu, South India. This bat is considered to be a critically endangered species.**

- **Dusky Fruit Bat *(Penthetor lucasi)* - This bat, belonging to the subfamily Cynopterinae and genus Penthetorthe only type within this genus. The upper side is dark grey-brown and lower side is pale buff-grey. It roosts in large groups in rock shelters or caves, sometimes in darkness. These bats attack fruit plantation for their food and hence they are considered to be crop pests. They are useful as a seed dispersing agent. Range of this bat includes South-East Asia - Peninsular Malaysia and extreme South Thailand. Also Borneo, Sumatra and Riau archipelago.**
- **Talaud Flying Fox *(Acerodon humilis)* – This bat belongs to the subfamily Pteropodinae and genus Acerodon. It is found only in the islands of Salebabu and Karekaleng in the Talaud archipelago of Indonesia. It occurs in habitats like subtropical or tropical swamps. This bat is listed as an endangered species. The decline in its population is due to hunting and loss of habitat from logging.**
- **Giant golden-crowned flying fox *(Acerodon jubatus)* - Also known as the Golden-capped fruit bat, this bat belongs to the subfamily Pteropodinae and genus Acerodon. It is the largest known bat in the whole world and is found only in Philippines. These bats are considered vulnerable to extinction due to hunting and deforestation. This bat gets its common name from the golden fur around its head. Its natural habitat is the rainforests of the Philippines. It helps in the pollination and dispersal of seeds of many fruit trees in Philippines. An interesting characteristic of this bat is that it uses water for grooming.**
- **Panay Giant Fruit Bat *(Acerodon lucifer)* - This is a fruit bat belonging to the subfamily Pteropodinae and genus Acerodon. It is found in the Philippines. This species was declared extinct in 1996. The reasons that led to the extinction of these bats include deforestation and/or excessive hunting of the species.**
- **Straw coloured fruit bat *(Eidolon helvum)* – An African fruit bat that is one of the most widely distributed species. It derives its name from the yellowish or straw color of their exterior. It belongs to the subfamily Pteropodinae and genus Eidolon (straw-coloured fruit bats). Range of this bat extends from southwestern Arabian Peninsula, forest and savanna zones of Africa (south of the Sahara) and to the offshore island of Madagascar. Males are bright orange whereas the females are usually silky yellowish. It has very big eyes, ears and cheeks. Its wings are long, black and pointed at the tip. These bats live in large communities or groups of over 100,000. They leave their roost in groups at night time in search of food. They**

**detect their food by smell and sight.  They are useful creatures that help in pollination and seed dispersal.**

- **Black flying fox *(Pteropus alecto)*– One of the largest bats belonging to the subfamily Pteropodinae and genus Pteropus. This bat has short black hair with a reddish-brown mantel and has an average weight of 710 grams and a wing-span of more than one meter. They are residents of Australia, Papua New Guinea and Indonesia. These bats roost in large groups in mangroves, patches of rainforest, paperbark swamps, and bamboo forests, and sometimes in caves or underneath overhangs. They are single brooded. The mother carries her young one for the first month and after that she flies alone in search of food at night. Black flying-foxes feed on pollen and nectar from native eucalyptus, paperbark, Lilypillies and turpentine trees.**
- **Spectacled Flying Fox *(Pteropus conspicillatus)* - A large black flying fox also known as the Spectacled Fruit Bat belonging to the subfamily Pteropodinae and genus Pteropus. It has straw-colored fur surrounding its eyes. The mantle is dull yellow and extends across the back, neck, and shoulders. Some species have pale yellow fur on the face and top of the head. These bats live in forests and rainforests are their favored habitat. They build colonies in rain forests, mangroves, paperbark, and eucalypt forests. The Spectacled Flying-fox feeds on  rainforest fruits, riparian zone flowers, and flowers from Myrtaceae (primarily Eucalyptus and Syzygium species) and fruits from the Moraceae (figs) and Myrtaceae (primarily Syzygium**

- ## MICROBATS

**The second category of types of bats, the Microbats or echolocating bats are usually referred to by their scientific name. As mentioned before, these bats rely on echolocation to find food and for navigation. A few of the microbats are described below.**

- **Seychelles sheath-tailed bat *(Coleura seychellensis)*– belongs to the family Emballonuridae and genus genus Coleura. It is found in the central granitic islands of the Seychelles Islands north of Madagascar. It is one of the most endangered species due to habitat loss and effects of introduced plant species. This bat weighs about 10 - 11 g. It roosts in caves and houses, in crevices and cracks. It feeds on a variety of insects and similar creatures.**
- **Northern Ghost Bat (*Diclidurus albus)* – Also known as the Jumby Bat, this bat comes from South America, Trinidad, and Central America. It belongs to the family Emballonuridae and genus genus Diclidurus. It is a rather rare and white bat with a**

**strange sac at the base of its tail. It feeds on insects and roosts in caves, deep rock crevices, and old mines.**

- **Kitti's Hog-nosed Bat *(Craseonycteris thonglongyai)*– belongs to the family Craseonycteridae and genus Craseonycteris. Also known as the bumblebee bat, this is the smallest species / type of bat and comes from western Thailand and southeast Burma. Upperside has a reddish-brown or grey coat and underside is paler. It has a prominent pig-like snout. Its ears are large whereas its eyes are small and mostly covered by fur. Wings are large and black with long tips. These bats roost in the caves of limestone hills and feed on insects.**
- **Lesser Horseshoe Bat *(Rhinolophus hipposideros)* – This is a European bat that is one of the smallest bats in the world. It has a wingspan of about 192-254 mm and weighs only 5 to 9 grams. The common name is derived from its prominent horse-shoe shaped nose. This bat has very small eyes and strong feet that help in holding on to rocks and branches of trees. It lives in groups and hunts food by relying on echolocation (frequency ranges from between 93-111 kHz). Their natural diet includes small insects. The Lesser Horseshoe bat is single brooded. It gives birth to only one pup in a year. These bats hibernate during winter inside caves, cellars, mines and old buildings. This species is vulnerable to extinction due to destruction of its habitat, over use of insecticides etc.**
- **Ghost Bat *(Macroderma gigas)* -Also known as the False Vampire Bat, this species belongs to the family Megadermatidae and genus Macroderma. It is found only in Australia. Its wings have a very thin membrane that gives it a ghostly appearance at night and hence the common name Ghost Bat. Upperside is covered with grey fur and the lower side has pale grey- white fur. Its wings are long and slender and it lacks a tail. It has large ears and very sharp teeth. Apart from insects, their natural diet consists of small creatures like frogs, lizards and sometimes even other bats. It uses both eyesight as well as echolocation for hunting. It can be found roosting in caves, tunnels and mines in small groups. This species is also considered to be vulnerable to extinction due to destruction of its habitat.**
- **Vampire bats – These are bats that feed on blood. There are 3 species, all native to Americas that belong to this type. They are the Common Vampire Bat (Desmodus rotundus), the Hairy-legged Vampire Bat (Diphylla ecaudata), and the White-winged Vampire Bat (Diaemus youngi). They have small ears and short tail membrane. Their teeth are very sharp which helps to bite and cut into the prey. The saliva of the vampire bats contain a substance called Draculin which helps to prevent clotting of**

**the prey's blood and prolong bleeding. These bats feed on the blood by licking at the bleeding site. They do not suck blood. This bat has an interesting behavior of adopting a orphaned young bats, may be because of the strong bond that it shares with other members of the group. It is also interesting to note that they share their food with other hungry bats. Vampire bats prefer to live in colonies in completely dark places, such as caves, old wells, hollow trees, and buildings.**

**Out of the 1100 kinds / types of bats, a large number of them are vulnerable to extinction due to deforestation, habitat loss, and excessive use of insecticides. Providing bats with bat houses can help to control the population decline by arranging areas for them to roost, hibernate and raise their young pups**

# About Fruit Bats

**Fruit bats are some of the most popular bats in the world– they are furry, cute mammals and do not inspire the fear that some people have of bats. In this article, we will explore some fruit bat factsthat you may not know about, for example, did you know that another name for a fruit bat is a 'megabat'? If not, then this article will definitely help you learn a little bit more about this ever-so-popular bat!**

**While fruit bats are generally dubbed megabats that does not always mean that the bat is going to be large. Actually, fruit bats have some of the smallest bats in the world in their family, the very smallest being just six centimeters long. Megabats do have some larger bats in their family as well, some of them having a wing span of about five feet and weighing in at about two pounds, so the largeness of the megabat group really does vary.**

**The fruit bat has an excellent sense of smell. While many people believe all bats are blind, fruit bats are really the only bats that do not have the best sight, they mostly do everything with their nose. The other group of bats called 'microbats' (the bats that eat insects) have excellent sight, especially at night.**

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**Fruit bats diet contains mostly just fruit and no insects or blood at all. They do tend to feed from flowers, taking a cue from the butterfly and eating the sweet nectar out of the flowers, but generally speaking a fruit bat will stick to just fruit. Now, the fruit does not always have to be whole, there are many fruit bats that love to lick the juices from crushed fruit, but if they have to, these bats do have teeth which allow them to bite through the hard fruit skins if needed.**

**Larger fruit bats will sometimes eat an entire fruit piece whole, for they have a larger mouth, bigger teeth and they are able to swallow a larger fruit whole. The smaller fruit bats will just hover and flap their wings in front of the fruit or flower, stealing bites from the fruit or some of that sweet nectar from the flower.**

**Generally speaking, fruit bats can be found anywhere in the world! Although, they mostly like to stay in the tropical areas because not only do the tropics have an abundance of fruit, but also they have the heat. Bats do not, by nature, like the cold weather and while some bat species are willing to hibernate, the fruit bat or megabat is not one of them. This is one of the main reasons why you will find more bats in places like Hawaii, Mexico and the tropics**

# Vampire Bats: What You Don't Know!

**Vampire bats are one of the main reasons why people are not only scared of bats but why bats have gotten a bad reputation over the years. One of the main things that you need to understand about vampire bats is that they do not usually attack humans. Vampire bats would much rather feed off of sleeping, smaller animals in order to get their teaspoon-sized meal instead of attacking a human. There are a few different types of vampire bats and in this article; we will dive deep into detail about one of the most feared bats in the world.**

**Firstly, there are just three different kinds of bats that feed strictly on blood and they are: the common vampire bat, the hairy-legged vampire bat and the white-winged vampire bat. All three of these species of vampire bats are native to Latin America, Mexico, Brazil, Chile and Argentina. However, these bats are mainly found in Latin America.**

**Now even though these three bats have the same diet of food, they are extremely different from each other in attitudes and also in the families that they are in. They all look very different and fly differently. But their main food source is exactly the same and therefore they do all hunt the same.**

**Now, vampire bats will only hunt for their food when it is fully dark outside, so if you are walking around in the daytime, you will never have to worry about running into one of these beautiful yet frightening creatures. Like most fruit eating bats and fish eating bats, vampire bats will emit only a very low-energy sound that can be heard by bats in small pulses.**

**The common vampire bat is one that will feed from mammals mostly, where the hairy-legged vampire bat and the white-winged vampire bat alike will mostly feed from the blood of birds. When a vampire bat locates their prey, they usually try to find prey that is sleeping. Once the prey is spotted, the vampire bat will land and approach it on the ground; these bats are very agile and graceful and quick as lightning. Vampire bats are also some of the only bats that can walk, and run at a speed of about 4.9 miles per hour.**

**When they have located their prey and they have landed, a vampire bat will usually use its canine and cheek teeth in order to shave away some of the hairs or feathers on their prey and use their upper incisors to cut deep and drain some of the blood from whichever animal they have picked to feed from. Now, as soon as the vampire has bitten into their food source, some of the bats saliva will be**

**inserted into the animal. Vampire bats saliva is specifically designed to prolong bleeding, so they can feed from a single animal for quite a long time as soon as they bite them. Vampire bats saliva does not allow the blood to clot and that is the main reason they can feed from their prey for a long period of time**

# The Bumblebee Bat: Do You Know What It Is?

**There are many people who have no idea what the bumblebee bat really is or how it got its name. Well, the name 'bumblebee bat' is just a nickname. The real name for this beautiful bat is the 'Kitti's Hog-Nosed bat', but 'bumblebee bat' is a better name all together as it is more descriptive. The bumblebee bat used to be seen all over the world many years ago, but now-a-days it is confined to just a few lucky countries and a few very lucky limestone caves.**

**One of the main reasons that this hog-nosed bat got the nickname of bumblebee bat is due to its size. This small creature is one of the world's smallest animals. It can basically fit into anyone's palm and it is definitely one of the cutest little bats in the entire world. The bumblebee bat has a reddish-brown coat or sometimes a grey one, it has a hog's upturned nose, hence the reason for the actual name of this cute critter.**

**In total, the bumblebee bat is about one inch long and weighs about 0.7 grams. There are many distinct features about this little bat, such as the pig-like snout, the large ears, the small eyes and the very small mouth. Bumblebee bats are not part of the megabat bat family. They are 'microbats' and that means that they do hunt and ingest insects as part of their main diet.**

**Limestone caves that are located along rivers are generally where these tiny bats can be found, mostly in Thailand but they have been seen in other countries as well. A normal colony of the hog-nosed bat is between one hundred and five hundred bats, all huddled together in one single limestone cave, far from the entrance.**

**Now, there are not that many insects that these tiny creatures can eat simply because of their size, so they tend to feed off of small spiders, gnats, flies, hymenopterans and psocopteans and mostly any other prey that they can catch in the air. These bats usually hunt most of the night and sleep all day, although they do have an activity period roughly twenty minutes before dawn.**

**Female bats will generally only give birth to one young bat a year; they will care for that bat until they are grown and able to have their own family.  This usually takes about a full year and as soon as that year is over, the female will get pregnant again and will give birth to another single baby bat. This slow reproduction makes bats susceptible to extinction. While it may be difficult to find a bumblebee bat in this day and age as they are on the endangered species list, there are still are few colonies of these cute bats.**

# About Evening Bats

**The Evening Bat**

**One of the most distinct features about the Evening Bat, Nycticeius Humeralis, that you may notice is that it looks almost exactly like a Brown bat. While the Evening bat is quite a bit smaller than the Big Brown bat, the glossy brown fur, black face, feet and wings give it the impression that it could be a baby brown bat. Upon closer inspection though, you will notice that the Evening bat reaches only about four inches long with a wingspan of about eleven inches.**

**You will not find these beautiful bats in a cave. Evening bats can often be located in hollow trees or under bridges. Evening bats are pretty active throughout the year, especially since they usually make their home in states that are a warmer climate. This bat is one of the bats that migrate to the southern states when it becomes colder, generally, these bats are only willing to fly roughly three hundred and forty miles versus other bats that are willing to fly thousands of miles to South America.**

**The Evening bat is a slow and steady flyer that will feed off of insects higher in the air the evening and when it gets darker it will swoop in lower. It is one of the many bats that make up their diet of insects**

# The Big Brown Bat "Eptesicus Fuscus"

**Big Brown Bat Catching a Moth**

**The Big Brown Bat, which is also referred to by its scientific name of “Eptesicus Fuscus”, can be found in the south of Canada, as well as temperate areas of North American.  They are also indigenous to parts of Central and South America, as well as the West Indies. They are no less versatile in their specific roosting locations.  You**

**can find the Big Brown Bat in large cities, small towns, and of course in rural locations. Surprisingly, it is not at all common in areas that have heavy forests. They prefer a very stable environment and an extremely well insulated habitat, which is necessary for their hibernation. The Big Brown bat has a stronger, more adaptable constitution than most of its brethren, so it can stand winter climates better.**

**So what sort of habitat is their favorite? Like many other bats, the Big Brown Bat will frequently take up residence in domestic dwellings (see picture). Also like other bats, the Big Brown likes barns, silos and even churches. You can even find these bats roosting in storm drains, sewers, expansion joints in stadiums, and in copper mines too. Clearly, they are versatile in their choice of home. Before much of the world was settled, they frequently inhabited hollows in trees, natural caves, and the rocky crevices in ledges, cliffs, and outcrops. Even today, you can still frequently find Big Brown bat colonies living in trees. Quite recently, a batch of them was found in caves located in Minnesota, hibernating the winter away. But along with civilization came human habitats and the bats prefer those to their natural habitats.**

**As you would expect, the Big Brown Bat *is* a big, brown bat. They average between one hundred and ten and one hundred and thirty millimeters in length. Their tails run about half the length of their bodies and their wingspan runs approximately thirteen inches – that's over a foot across! The females are bigger than the males. Their heads are big as well, and they have thirty-two sharp, potentially lethal, and very heavy teeth (see picture). They do indeed look brown but colors can run the gamut between tan with pink undertones to a color like rich, dark chocolate.**

**As mentioned, the females tend to be longer, a species trait which is known as 'sexual dimorphism'. The breeding season for the Big Brown Bat is in the fall – later rather than in the earlier months. The female of this species can carry one to two embryos in her womb at a time and the normal gestation period lasts about sixty days. At birth, the babies only way about four pounds but they can be weaned anywhere between eighteen days and thirty-five. They take up to 2 years before they are old enough to breed.**

**These bats eat insects (see picture), so they are known as being 'insectivorous'. They particularly enjoy eating beetles. They also enjoy certain types of flies, moths, winged ants, and even dragonflies. They typically eat only when the whether is warmer, which means they have to eat a lot to store up for the winter, when they hibernate.**

# The Little Brown Bat

**Have you heard about the Big Brown Bat? Well, now it is time to discuss the Little Brown Bat, which is also known, scientifically, as Myotis Lucifugus. Although these bats are qualified as being medium in size, they really are small compared to most of their brethren. They only measure four inches long on average and their wingspan is approximately ten inches. They are indeed brown, ranging in color from medium to a buff kind of brown, and their fur tends to be very glossy (see picture).**

**The Little Brown Bat is very common in the eastern portion of the United States but in actuality, it can be found all across the United States in a number of different locations. However, it does not typically occur in the southern portion of the Great Plains or in the southeastern portion of the Coastal Plain. That being said, you can find quite a lot of them in Alaska, Canada, California, Arizona, the Rocky Mountains, and even in Mexico.**

**The Little Brown Bat is very adaptable, especially where humans are concerned. They have reached the point where they are largely not bothered at all by our presence. The versatility of where they live and occur extends throughout other aspects of their lives as well. Like most other bats, these bats hibernate. They like to do so in caves, in mines, and in quarries located underground. However, all of these areas have to have acceptable temperatures. The Little Brown Bat likes warm, moist areas, especially when they choose to hibernate in a cave.**

**These bats are not solitary creatures by any means. However, when they roost, they do not do so in groups or clusters. They do not like to be tightly packed together. Quite the contrary, when these bats roost, they instead hang in single rows, typically in the cracks located along the rocks. Sometimes, they are known to hang in very loose clusters.**

**Like a lot of bats, the Little Brown Bats migrate. They head south in the fall and typically hibernate in portions of the southern United States, such as Kentucky, Texas, and so on. After they come out of hibernation in the spring, the females of the specials begin forming birthing colonies, also known as a maternity colony. These colonies can encompass a few hundred bats. The members of these colonies like to roost in buildings and barns, especially attics, which are known for being extremely warm and appropriately excluded. The baby bats are born in June. The Little Brown Bats only has one pup. They can fly in as little as three weeks after they are born. Sometimes, the male bats will roost with the females, but more**

**often than not, they roost by themselves, typically in buildings, trees, loose bark, and bridges. Like most other bats, both the male and female Little Brown Bat enjoy feeding on small, winged insects, especially beetles of all kinds**

# The Brazilian Free-Tailed Bats

**There is a huge amount of information known about the Brazilian Free-Tailed bat, scientific name: "Tadarida Brasiliensis". The Brazilian Free-tailed Bat is a medium size. It has broad ears and big feet. Half of its tail is not attached by with wing membranes, so it's considered a 'free tail' thus the name. The upper part of its body ranges from being a reddish shade to being black. The underside of its body is much more pale. It has very large teeth, and can have as many as six incisors. In fact, that is the average, though some of these bats have four incisors and others have five. Although it is classified as being medium in size, it is much larger than a number of other medium sized bats at ninety-five millimeters long. Its tail is thirty eight millimeters long, its feet are ten millimeters long, its ears are an astounding nineteen millimeters long, and its forearms are forty two millimeters long. It can weigh anywhere between eleven grams and fourteen grams. These bats are common in the United States, especially down south. They are frequently spied in Central and South America as well, as you might expect.**

**The Brazilian Free-tailed Bat is very versatile in its choice of daytime roosts. They like to use mine tunnels, caves, hollows in trees, old and/or abandoned wells, bridges, domestic houses, and a variety of other buildings. Despite that versatility, this bat has some very specific requirements for what qualifies as a good roost. Most notably, they choose the roost as a colony, so there must be enough room for all the bats in the colony to roost. This is a pretty big requirement, because while some of the colonies only have a few dozen bats, others of them can have as many as a few million. The roost needs to be fairly dark, and it also has to be dry. There must also be plenty of room below, because they need the room to drop when they take off to fly. So, the hollow spaces under roofs, open spaces between buildings, hollow places in walls, attics, and even the smaller spaces located between buildings and signs can be used. When a colony of Brazilian Free-tailed Bats choose a cave in which to roost, it can be known as a "guano cave." If you have ever seen any of the bats found in the famous Carlsbad Caverns, then you have likely seen quite a few of these bats, as they comprise most of the bats in those caves.**

**They are easy to identify when they are flying as well. They typically take off and begin to fly right before it gets dark. They**

**tend to drop very close to the ground and then swoop up and go high.  They fly very quickly and are known for being very aggressive when they are on the wing.  This can be attributed to their build, especially their wings, which are sharply angled, long, and very narrow.  Because they are so big and strong, catching food is easy. They eat mostly moths but are also known to dine on leaf chafers, ground beetles, leaf beetles, weevils, water boatmen, winged ants, leafhoppers, and green blowflies.**

# About The Eastern Red Bats

**Lasiurus Borealis', the Eastern Red Bat, is just about medium in size and, as the name implies, has a distinct red color (see picture). It has short ears that are broad, rounded at the tips, and slightly furry. It is very difficult to mistake the Eastern Red Bat with any other of its bat brethren. This bat looks a little frosted, due to white tips on its reddish fur – at least in the females. The majority of the males in this species do not have white tips on their fur. As such, they tend to look much more red than the females. Their average length is one hundred and eight millimeters and in general they weigh anywhere between ten and fifteen grams**

**Like most other bats, the Eastern Red Bat migrates, going north in the spring and south in the fall. Typically, they like to spend the winters in the southern portion of the United States, as well as locations south of the border, like Bermuda, Mexico, and the Antilles**

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**Eastern Red Bats prefer to dwell in the forests and, for the most part, they are creatures that enjoy solitude. They are a primarily solitary species of bats. They are not the only solitary species, of course, but unlike most other species in North American they will roost either out in the open or up in trees. Although most bats enjoy the occasional cave or tunnel, the Eastern Red Bat usually do not even consider them as a possible roosting site. They greatly prefer trees, especially the foliage. Down south, they are not above going**

**to roost in a lush hang of Spanish moss. Their love of this and tree foliage is due to the fact that, when concealed in a proper roost, a roosting Eastern Red Bat will look quite a lot like a red leaf.**

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**When they feed, they like to go out during the early evening hours. They hunt near to the ground and prefer to do so in orchards and shaded groves. They tend to be territorial in their feeding patterns. Their favorite prey consists of insects that fly at night, namely winged ants, moths, planthoppers and leafhoppers, and any number of different beetles, such as scarabs, ground beetles, and assassin beetles.**

# The Long Legged Bat

**As their name implies, Long-legged bats, the 'Myotis Volans', are fairly long bats. Their tails are long, their ears are short, and they have big feet as well. Surprisingly, given that they are known specifically as long legged bats, the length of their legs is not readily known. However, all of their other measurements have been documented. Therefore, we know that they range from anywhere between ninety to ninety four centimeters long, their feet are about seven millimeters long, their tails are about forty five millimeters long, their forearms are about thirty nine millimeters long, and their ears are about thirteen millimeters long. They have a wingspan that ranges between twenty-five centimeters and twenty-seven centimeters. We also known that they are relatively light for bats, no matter how big they are. They can weigh from five to nine grams. The Long-Legged Bat can be found in parts of southern Alaska, in the western portion of Canada, extending due south, all the way into the northern portion of Mexico.**

**The Long-Legged Bat prefers to dwell in the forest. They particularly love woods that are very high and very open. They are also fond of mountains, especially the terrain associated with them. Like a lot of other bats, the females form maternity colonies when they are pregnant or ready to give birth. The birthing colonies are not typically built in the woods or in the mountains. Instead, the females form them in the crevices of cliffs and rocky outcrops, in**

**buildings, out over the water, and in trees. Unlike many of their brethren, they do not seem to even consider using caves as a place to roost during the day. They do sometimes use caves at night, though. We are not really sure what these bats do in the winter; let alone what their habits are then.**

**However, we do know when and where they like to hunt. The Long-legged Bat comes out just before it gets dark outside. They like to look for food in the areas around trees, cliffs, and they also look for prey out over the water. As a predator, it is very direct and very quick. It can and will fly over long distances to find food. It stays active during the majority of the night; however, its energetic activities tend to reach their peak during the first few hours after the sun has set.**

**What we do know of the Long-legged Bat's hibernation habits leads us to believe that, in the hibernation roosts, there are typically more males roosting there than there are females. We also know that, since this bat can still fly when the temperatures are cold, their prehibernation period can last much longer than it does for other bats.**

**The Long-legged Bat definitely has a favorite food: it loves to eat moths. However, it does feast on other things. It seems to enjoy insects and invertebrates that have soft bodies the best. For example, it seems to be quite fond of termites, flies, wasps, lacewings, small beetles, true bugs and leafhoppers**

# The Northern Long Eared Bat

### The Long Eared Bat

**Myotis Septentrionalis, better known simply as the Northern Long-eared Bat, is located in different parts of the eastern portion of the United States, as long as they are heavily forested. However, despite their wide distribution, they are also quite sparse. There are many forested regions of Canada where you can find the Northern Long-eared Bat as well, such as Newfoundland, southern Canada, and British Columbia, among other locations. In the United States, this bat can be found in North Dakota, South Dakota, Florida, and along some parts of the east coast.**

**On average, the Northern Long-eared Bat weighs about seven and a half grams, though their weight can range between six and nine grams. In general, their wingspan ranges from twenty-three centimeters to twenty-six centimeters; the average wingspan**

**measures in at twenty-four and a half centimeters. As far as length goes, most of these bats are just under eight millimeters (3 inches) long on average. As the name of the bat implies, they do have very long ears, measuring between seventeen millimeters and nineteen millimeters. Just like it happens with a lot of bats, the Northern Long-eared Bat is bat that includes sexual dimorphism. All this means is that the females of the species are bigger than the males.**

**The females breed in the fall months. In general, they only have one pup – baby bat – at a time. In fact, it is very rare for a female to give birth to more than one pup. The average gestation period lasts fifty-five days, but it can range between fifty and sixty days. Also on the average, the pups will be weaned from their mothers in thirty days. Like most other bats, they do not choose one mate to stay with for life, or even from one breeding period to the next.**

**The Northern Long-eared bat is considered to be an insectivore. They emerge just after the sun sets in order to hunt their prey. They also hunt again right before dawn. Their favorite insects are small and fly at night; they include caddisflies, beetles, moths, leafhoppers, and flies. Sometimes, however, these bats are known to get prey while in a sitting position as well**

# The Seminole Bat

**Lasiurus Seminolus, better known as the Seminole bat, is medium in size. It is dark in color, characterized by a brown fur that is the color of deep, rich mahogany. However, its appearance is not dark, due to frosted tips that give these bats distinctly red, almost maroon, color. That is what makes them different from Lasiurus Borealis, the Eastern Red Bat, whose red fur has a more orange overtone. The Seminole Bat's tail is very furry, as is the rest of it, especially along its underarms, wrists, and shoulders. They tend to weigh anywhere between eight and fifteen grams.**

**For example, most people assume that the Seminole Bat mates late in the autumn and/or early in the winter. This is very much like the habits of the Eastern Red Bat. In fact, there are a lot of similarities between these two species. Like their red brethren, Seminole bats are very solitary creatures, especially during the winter months and early in the spring. In fact, it does not appear that they hibernate either. However, when there are extended cold spells it does seem like they fall into a sort of torpor. When it gets warmer, they wake up to search for food and eat.**

# The Silver-Haired Bat

**The Silver Haired Bat, otherwise known as Lasionycteris Noctivagans, is one of the most common bats in North America. It is most abundant in areas of Canada and the United States that have a lot of forests. It is medium in size and they typically weigh between nine and twelve grams. Most of these bats have black fur – not brown or dark brown, but black, though there are some rare exceptions. The fur is tipped with silver, as implied by the name. The upper half of this bat's tail has a lot of fur. This is not seen in most other species of bats.**

**Most often, the Silver Haired Bat prefers to be alone. As a species, this one is very solitary. The females experience their mating season during the autumn months, right before they are ready to migrate. The sperm from the males is stored during hibernation. The female Silver Haired Bats then ovulate once spring comes again, and typically get pregnant around April or May. The gestation period lasts fifty to sixty days. In general, the females will have one or two babies at a time. The young of the Silver Haired Bat species are very small, they only weigh about two grams. The babies are usually raised in the northern part of the United States and in Canada.**