

# Big Cypress

National Park Service  
U.S. Department of the Interior

Big Cypress  
National Preserve



Photo Courtesy of Ralph Arwood

Photo courtesy of Ralph Arwood, NPS/VIP

## Going Batty in Big Cypress

*Many visitors to Big Cypress search for migratory birds, but overlook beneficial flying mammals, bats, as they are harder to spot primarily flying in the night sky. Bats have forelimbs that function like wings, making them the only mammal capable of flight. Other mammals, such as flying squirrels can glide for limited distances.*

What mammal swims through the air? Bats do! Bats are mammals in the order Chiroptera. The word Chiroptera is a Greek word meaning “hand wing.” The structure of the bat’s open “hand wing” is very similar to an outspread human hand, with a membrane between the fingers that also stretches between hand and body. With these wings, bats defy the norm by swimming through the air, unlike birds which must flap their wings up and down. Bat pups are born feet first (unique among mammals) in the spring, and can fly within six to eight weeks. Most bats have one pup per year, sometimes two.

### Beneficial Bats

World-wide there are nearly 1,000 species of bats and most of these are highly beneficial. Bats not only feed on the notorious mosquitos that afflict Big Cypress visitors, but they also control many agricultural pests. The bats that call the Preserve home feed entirely on insects. A single bat can eat up to 3,000 insects in one night.

In the tropics, fruit and nectar feeding bats play a vital role in the survival and regrowth of the rain forests. Fruit-eating

bats spread seeds as they fly and digest their food. Nectar feeding bats pollinate many valuable plants such as bananas, balsa wood, agave and more.

### Threats to survival

Bats are disappearing at an alarming rate and their greatest threat is us. The famous Carlsbad Caverns National Park population, estimated to contain 8.7 million in 1936, had fallen as low as 218,000 by 1973. Florida bat roosting sites are threatened by increasing development. Ironically, the species is very important for the control of insect pests but are disappearing at an alarming decline due to pesticide poisoning and intentional habitat destruction.

Human disturbance and vandalism of key roosting sites in caves are likely the single most serious causes of decline. Bats lose roosting habitat as old buildings are destroyed. They move into new buildings and are eradicated as pests. Grossly exaggerated media stories about rabies have led to the intentional destruction of large colonies. Humans have even been known to set fires in caves destroying thousands of roosting bats.

### Bat Facts?

- There are 13 species of bats in Florida, all insectivores.
- Forty percent of bats in the U.S. are endangered, threatened, or species of special concern. There are about 1,000 species of bats worldwide.
- Bats can live up to 20 years.
- The fastest recorded bat speed is a big brown bat flying at 40mph.
- Their wing beats may be as rapid as 20 per second.
- The tiniest bat is the size of a bumble bee.
- Bats fly with their mouths open to use echolocation.

Here in South Florida, the Florida Mastiff bat has not been seen in over twenty years. The last Florida Mastiff bat sighting was thought to be in 1978, but in 1989 the bat was found once again roosting in a South Florida office building, pregnant and dangerously dehydrated. The bat was rehabilitated but escaped. It is currently listed as an endangered species in Florida.

### Helping Florida's Bats

You can help Florida's bats by learning more about them and sharing bat information with others. One of the most cost-effective ways to help bats is through protecting roosts, public education, and provision of "bat-friendly" bridge designs and other artificial roosts.

Bat boxes are another form of artificial roost that are highly successful. The bat box (pictured below) is an artificial bat house made of wood or plastic and if mounted correctly can become home to a bat colony.



Photo courtesy of Ralph Arwood, NPS/VIP

A bat box is a great way to conserve bats and to control insects in the yard. For more information on how to build a bat box, visit the Florida Bat Conservancy's website.

### Shedding Light on Bat Myths

There are many myths and misconceptions regarding bats. Many tales and movies have led people to fear them. Bats, however, are beneficial creatures.

Dracula by Bram Stoker is largely responsible for establishing negative bat stereotypes as blood sucking vampires. Stoker popularized the fictional idea that vampires could shapeshift into a bat and suck human blood. Vampire bats that don't shapeshift from human to bat do exist but only live in Mexico and Central and South America. Vampire bats have an anticoagulant in their saliva thus they don't suck blood; they lap it up much like a dog laps water. They do feed entirely on blood, mostly from chickens, turkeys, ducks, and geese, and sometimes from pigs, cattle, and horses. The saliva of vampire bats dissolves blood clots very well and is used to treat stroke victims.

Some believe bats are blind, but they actually have keen vision adapted to low light levels. Florida bats have a highly developed navigation and prey-detection system

called echolocation. Bats don't fly into or build nests in your hair, and they rarely attack people. Despite most bat photographs depicting a snarling animal, they actually are quite timid, and are snarling in self-defense when disturbed.

A very small percentage of bats contract rabies. However, just like any other mammal, usually once a bat gets rabies, it dies before spreading the virus. Never handle or play with any wild animals, including bats. If you find a bat that you believe to be injured or hurt, do not touch it, but instead contact the Florida Fish and Wildlife Conservation Commission.

### Did you know?

White Nose Syndrome is a devastating threat to bats. It is a white fungus that grows on the noses and wings of infected bats causing them to wake frequently during winter hibernation and use limited fat reserves. They may awake too early from hibernation and die in the winter cold or from starvation. Fortunately, White Nose Syndrome has not surfaced in Florida, but is prolific in the Northeastern United States and Canada.

### Big Cypress Bats

Rafinesque's big-eared bat, *Corynorhinus rafinesquii*

Big brown bat, *Eptesicus fuscus*

Florida bonneted bat *Eumops floridanus*, was previously classified as Wagner's bonneted bat *Eumops glaucinus*

Northern yellow bat, *Lasiurus intermedius*

Seminole bat, *Lasiurus seminolus*

Evening bat, *Nycticeius humeralis*

Brazilian / Mexican free-tailed bat, *Tadarida brasiliensis*

Tri-colored bat, *Perimyotis subflavus*, was previously classified as Eastern Pipistrelle, *Pipistrellus subflavus*

### References

Florida Bat Conservancy, <http://www.floridabats.org>.

Bat Conservation International, <http://www.batcon.org>.

Florida Fish and Wildlife Conservation Commission, <http://myfwc.com>.



Photo courtesy of Ralph Arwood, NPS/VIP

**A Tri-colored bat looks down from its roost. Uniquely adapted feet allow bats to grasp structures to hang upside down.**