



# Virginia Big-Eared Bat

North Carolina Wildlife Profiles



Photo by Larisa Bishop-Boros

## Virginia Big-Eared Bat

*Corynorhinus townsendii*

The Virginia big-eared bat is a very rare resident of the northwestern mountains of North Carolina. Most populations of this species, often called the western big-eared bat, live in the western United States. The eastern race of the western big-eared bat is rare. Biologists know of only one colony of these interesting bats in North Carolina. They stay in the Grandfather Mountain and Beech Mountain areas most of the time, and a small cave near the Blue Ridge Parkway provides them with a winter sanctuary. Conservationists built a gate at the cave entrance to keep visitors from disturbing the bats during their hibernation.

### History and Status

Biologists found Virginia big-eared bats in North Carolina in 1981. Several specimens collected from the population years ago were incorrectly identified as Rafinesque's big-eared bat (*Corynorhinus rafinesquii*), a closely related species. Once the mistake became apparent, a check of known caves in the area turned up a small population of Virginia big-eared bats. The U.S. Fish and Wildlife Service listed the Virginia big-eared bat as endangered in 1979 because the bat occurred in just a few caves in the Appalachian mountains and populations in these caves were declining. Conservation actions taken since then have apparently stabilized these populations.

### Description

The Virginia big-eared bat is one of North Carolina's largest bats. Its 1-inch long, ribbed ears and glandular lumps on its nose distinguish it from all but one other bat — Rafinesque's big-eared bat. The Virginia big-eared bat has brown fur on its back and tan underparts, while the Rafinesque's big-eared bat has gray fur on its back and white underparts. The Virginia big-eared bat has shorter hair on its toes than the Rafinesque's big-eared bat. The Virginia big-eared bat is an agile flier. It is capable of hovering, as well as swift flight. It flies with deep wing beats, interspersed with brief glides. When the bat is flying slowly, its ears stand erect. During fast flights, the bat's ears are parallel with the ground and hardly noticeable.

### Habitats and Habits

The western big-eared bat lives in varied habitat in the western United States, including desert scrub, dry coniferous forests and humid coastal forests. In the eastern

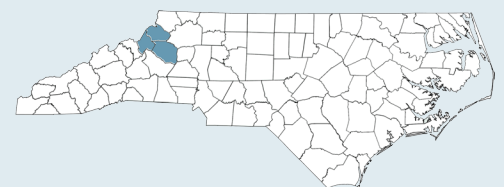
**A docile animal with  
gremlin-like looks**



Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), which is similar in appearance to the Virginia big-eared bat. (Photo by Michael Durham)

### Range and Distribution

The Virginia big-eared bat exists in isolated colonies in Virginia, West Virginia, North Carolina, Tennessee and Kentucky. The Grandfather Mountain colony uses habitats in Avery, Caldwell and Watauga counties in North Carolina, and Carter and Johnson counties in Tennessee. The Rafinesque's big-eared bat lives in eastern and western North Carolina.



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### Habitats and Habits (continued)

United States, favorite habitats include oak-hickory forests having caves or cliffs. Several populations of Virginia big-eared bats live in northern hardwood forests, including North Carolina's population.



USFWS

Little is known regarding the habits of North Carolina's Virginia big-eared bats. Much of the population hibernates in a small cave on Grandfather Mountain each year. The number of bats using this cave increases during late summer and fall. Mating presumably occurs here. Many of the cave's bats depart during February and March. The females move to a maternity colony near Beech Mountain. The females give birth to a single young in June. At first, the females leave the young at the maternity colony while they feed each night. Each female recognizes her own young and nurses it until it is about two months old. The young grow quickly and can fly when about three weeks old.

### People Interactions

Few people see this bat in its natural habitat because it is rare in North Carolina and sleeps (roosts) and hibernates in caves and mines throughout the year. These bats can also roost in old barns, houses or outbuildings, and people with these structures in northwestern North Carolina may encounter them in spring or summer. Disturbance to hibernating Virginia big-eared bats may cause the loss of stores of fat needed to survive the winter. Disturbance to maternity colony sites can kill young bats. Virginia big-eared bats may fly when disturbed, but close passes by flying bats are not attacks.

Many people are afraid of bats. This bat is a docile animal, though its gremlin-like looks frighten some people. While bats in buildings can cause a mess with guano (bat droppings), they rarely harm the people living there. Contrary to popular belief, most bats are not rabid. However, any wild mammal has the potential to carry rabies and any easily caught is likely ill or injured. People, especially children, should not handle any wild mammals, including bats. This simple precaution is the most practical way to prevent rabies transmission from wild mammals.

#### References

Barbour, Roger W. and Wayne H. Davis. *Bats of America* (Lexington, Ky.: The University Press of Kentucky, 1969); Tuttle, Merlin D. *America's Neighborhood Bats* (Austin, Tx.: University of Texas Press, 1988); Webster, William D., James F. Parnell and William Biggs, Jr. *Mammals of the Carolinas Virginia and Maryland* (Chapel Hill, N.C.: The University of North Carolina Press, 1985).

#### Credits

Written by Allen Boynton and Phil Spivey; updated by Katherine Caldwell and Joey Weber, NCWRC, 2016.

### Wild Facts

#### Classification

Class: Mammalia

Order: Chiroptera

#### Average Size

Total Length: 3 to 4 inches

Wingspread: 11 to 12 inches

Weight: 0.4 ounces

#### Food

Moths

#### Breeding

Mating occurs during hibernation. Sperm stored until ovulation in March, when fertilization occurs.

#### Young

Single young born after gestation of around 2 months. First flight occurs at 3 weeks of age. Young weaned at 2 months of age.

#### Life Expectancy

Adult survivorship is about 80 percent. Some individuals live for 15 to 20 years.

### NCWRC Interaction: How You Can Help

The N.C. Wildlife Resources Commission is gathering data on the Virginia big-eared bat, which faces extinction because of habitat destruction and disturbances at cave roost sites in Avery, Watauga, Yancey counties in N.C. and Carter and Johnson counties, Tennessee.

If you find a bat in a building, don't touch it and don't panic. Open windows or doors so the bat can fly outside. If it is in an outbuilding, leave it alone.

If you see a Virginia big-eared bat, please report it to: [photos@ncwildlife.org](mailto:photos@ncwildlife.org). Send photos, if available.