

Virginia big-eared bat

Plecotus townsendii virginianus



Virginia big-eared bat, Robert Currie

Status: Endangered

Description: The Virginia big-eared bat is one of two endangered subspecies (Virginia and Ozark) of Townsend’s big-eared bat (*Plecotus townsendii*). This medium-sized bat (less than half an ounce) is, as the name implies, characterized by large ears (more than 1 inch long) that are connected across the forehead. It has mitten-shaped glandular masses on the muzzle and elongated nostril openings.

Big-eared bats principally feed on moths but eat other insects as well. Flying along forest edges, they use their highly efficient sonar to detect insects in the air and on vegetation and capture them “on the wing.” These docile animals provide us a valuable service by eating many harmful insects on their nightly excursions. In the early spring, females congregate in maternity colonies in the warm parts of certain caves and give birth to a single young. Most males are solitary during this time. The large offspring (25 % of the adult female’s weight) are capable of flight in about three weeks and are fully weaned at six weeks. Before the young can fly, they females leave them in the cave while they forage, returning periodically to allow the young to suckle. Virginia big-eared bats hibernate in the cooler, well-ventilated portions of caves during the winter and may lose half their autumn body weight before spring.

Habitat: The non-migratory Virginia big-eared bat inhabits caves year-round. These caves are typically located in karst regions (landscape characterized by limestone caves and sinkholes) dominated by oak-hickory or beech-maple-hemlock forest.

Range: The Virginia big-eared bat is known from parts of western North Carolina, eastern Tennessee, southwestern Virginia, eastern Kentucky, and southern West Virginia

Listing: Endangered, November 30, 1979. 44 FR 69206 69208

Critical habitat: Designated, November 30, 1979. 44 FR 69206 69208

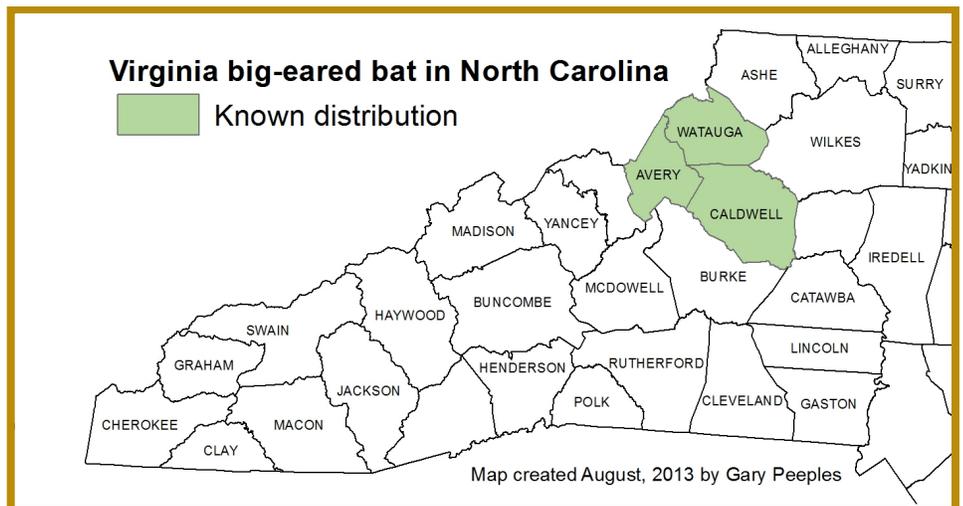
Threats: The major causes of the species’ decline are loss of habitat, vandalism, and increased human visitation to maternity roosts and hibernacula. Virginia big-eared bats are extremely sensitive to human disturbance. Even slight disturbances can cause adults to abandon caves, abandon young, and force bats to use valuable energy reserves needed to survive hibernation.

Why should we be concerned about the loss of species? Extinction is a natural process that has been occurring since long before the appearance

of humans. Normally, new species develop through a process known as speciation at about the same rate that other species become extinct. However, because of air and water pollution, forest clearing, loss of wetlands, and other man-induced environmental changes, extinctions are now occurring at a rate that far exceeds the speciation rate.

All living things are part of a complex and interconnected network. We depend on the diversity of plant and animal life for our recreation, nourishment, many of our lifesaving medicines, and the ecological functions they provide. One-quarter of all the prescriptions written in the United States today contain chemicals that were originally discovered in plants and animals. Industry and agriculture are increasingly making use of wild plants, seeking out the remaining wild strain of many common crops, such as wheat and corn, to produce new hybrids that are more resistant to disease, pests, and marginal climatic conditions. Our food crops depend on insects and other animals for pollination.

Healthy forests clean the air and provide oxygen for us to breathe. Wetlands clean water and help minimize the impacts of floods. These services are the foundation of life and



U.S. Fish & Wildlife Service

depend on a diversity of plants and animals working in concert. Each time a species disappears, we lose not only those benefits we know it provided but other benefits that we have yet to realize.

What you can do to help

Cave ecosystems evolved in relative isolation. They are a simple yet intricate system that involves relatively few organisms. Food is scarce in caves and is generally limited to animals that either die in or are preyed upon in the cave, and organic nutrients that wash or filter in through cracks and crevices. The loss or decline of one organism can disrupt the interdependent relationship between species, causing other species to disappear or decline.

When entering caves, be careful not to disturb bats, other cave creatures, or their habitat. Avoid entering significant bat caves, especially during the hibernation and maternity seasons.

Build a bat house and join a bat conservation group. Educate others to the value and uniqueness of our American bat species.

Many caves have streams and pools that are inhabited by unique species. Be concerned with the quality of these and all waters. Watch for fish kills, illegal dumping of waste, unusual water color or smell, and other changes in the water's condition. Report such events to your state conservation agency.

**Prepared by:
U.S. Fish and Wildlife Service
Asheville Field Office
160 Zillicoa Street
Asheville, North Carolina 28801
(828) 2583939**

November, 2011