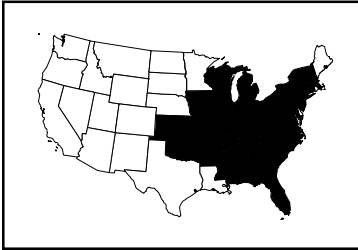




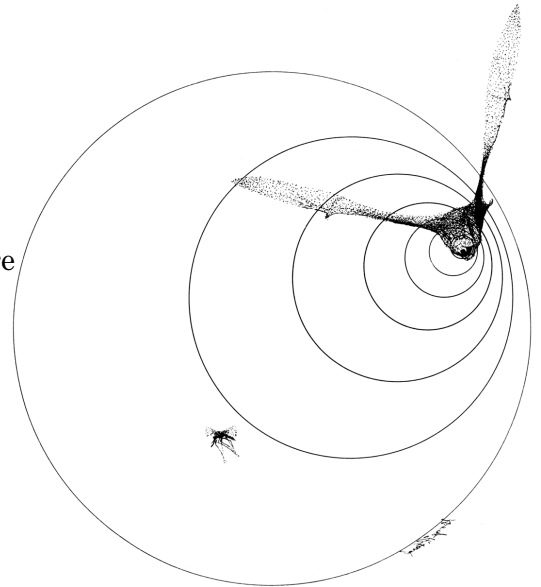
Endangered Species Facts

Indiana Bat



States in which the Indiana bat may be found.

The Indiana bat is an *endangered species*. Endangered species are animals and plants that are in danger of becoming extinct. *Threatened species* are animals and plants that are likely to become endangered in the foreseeable future. Identifying, protecting, and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program.



What is the Indiana Bat?

- Scientific Name - *Myotis sodalis*
- Appearance - The Indiana bat is a medium-sized member of the genus *Myotis*. It looks like the little brown bat (*Myotis lucifugus*) but differs in color and averages less in body length and weight. The fur is a dull grayish chestnut rather than bronze and the basal portion of the hairs on the back are dull lead colored. The color of the underparts is pinkish to cinnamon. The heel of the foot is strongly keeled.
- Habitat - Indiana bats hibernate during winter in caves and abandoned mines, often along with many other species of bats. Areas in caves that are suitable for hibernation are draft free and have a constant winter temperature. After hibernation, Indiana bats migrate to their summer habitats. During summer they roost under loose tree bark, usually on dead or dying trees. Summer roost trees are generally hardwoods next to streams and lakes, but upland trees are also used. During summer, males roost alone or in small groups, whereas females may roost in groups with up to 100 bats.
- Reproduction - Indiana bats have an interesting feature called “delayed fertilization.” They mate during fall before they enter caves for hibernation. Females store the sperm through the winter and become pregnant in spring soon after coming out of hibernation. In the spring (March - April) the bats migrate to their summer areas, usually north of the hibernation sites. Female bats, in groups of a few to 100, roost under the peeling bark of dead and dying trees. Such a group of female bats is called a nursery colony and it is here that the young are born.
- Feeding Habits - The bats eat a variety of flying aquatic and terrestrial insects found along rivers or lakes and in upland areas.
- Range - Indiana bats are found over most of the eastern half of the United States. However, large hibernating populations are found only in Indiana, Missouri, and Kentucky. Smaller populations of Indiana bats at either winter hibernation sites or at summer roost and maternity sites have been recorded from Alabama, Arkansas, Connecticut, Florida, Georgia, Illinois, Iowa, Maryland, Massachusetts, Michigan, Mississippi, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Vermont, Virginia, and West Virginia.

Why is the Indiana Bat Endangered?

- Human Disturbance - Indiana bats were listed as endangered mostly because of their habit of living in large numbers in only a few caves. As a result, they are extremely vulnerable to disturbance. The density of hibernating bats can range from 300 to 484 bats per square foot, with some of the most important caves supporting over 80,000 Indiana bats. Thus a significant portion of the total population can be affected by just one event. Episodes of large numbers of deaths of Indiana bats have occurred due to human disturbance at hibernacula.
- Cave Commercialization and Improper Gating - The commercialization of caves drives bats away. Any gating on the cave that prevents access or alters the air flow, temperature, humidity, and amount of light is harmful.
- Habitat Loss or Degradation - In some areas, trees that can be used as roost sites during the summer are no longer plentiful and the habitat that Indiana bats use during summer has been degraded and eliminated due to forest fragmentation. This may have caused declines in local situations.
- Pesticides - Bats seem to have an unlimited food supply (insects), but in local areas insects may not be plentiful because of chemical applications. Also, the quality of that food source may be a problem. Many scientists believe that the population declines that continue today may be due to pesticide use; possibly by eating contaminated insects, drinking contaminated water, or absorbing chemicals when feeding in areas that have been recently treated.
- Low Birth Rate - Indiana bats have only one or two young each year. If large numbers of deaths occur, it takes a long time to replace those individuals since so few young are born each year.

What is Being Done to Prevent Extinction of the Indiana Bat?

- Listing - The Indiana bat was added to the U.S. List of Endangered and Threatened Wildlife and Plants on March 11, 1967.
- Recovery Plan - The U.S. Fish and Wildlife Service developed a recovery plan in 1976, followed by a revision in 1983. Currently, the Recovery Plan is being revised for the third time. The Recovery Plan describes actions needed to help the bat survive.
- Habitat Protection - Public lands like National Wildlife Refuges and Forest Service lands are managed for Indiana bats by protecting streamside forests. This means ensuring that there are the size and species of trees that Indiana bats need for roosting; and ensuring that there is a supply of dead and dying trees that can be used as roost sites.

Most of the major caves and abandoned mines that are used for hibernation have been gated or protected in other ways to guard against human disturbance during winter.
- Research - Research continues so that we will discover the cause of the dramatic declines of Indiana bats in Missouri and take action to conserve this species before its extirpated.

For More Information

- Call or write to:
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