



## U.S. Fish & Wildlife Service

# Indiana Bat

## *Oklahoma Ecological Service Field Office*

### Indiana Bat

*Myotis sodalis*

#### Description

The Indiana bat is a medium-sized bat with dull gray to brown fur. The bat has a wingspan of 9 to 11 inches, weighs between 5 to 11 grams, and typically is about 2.9 – 3.9 inches long. The calcar (i.e., bone attached to the foot that helps support the tail membrane) is strongly keeled in most individuals. The hind feet appear small and delicate and the hair on the toes does not extend past the claws.

#### Distribution

The Indiana bat primarily is found in the eastern and Midwestern United States. The species is rare in eastern Oklahoma, which represents the western limit of its range.

#### Life History

The Indiana bat is a migratory bat that hibernates in cool caves and mines in the winter and wooded areas in the spring and summer. During autumn, they begin their migration towards hibernacula. They swarm and forage around hibernacula to replenish fat stores and mate prior to entering hibernation. Only a small percentage of caves and cave-like structures meet the specific conditions required by Indiana bats, which explains why so much of the known population hibernates in just a few sites. Females become pregnant when they emerge from hibernation in spring. They form small maternity colonies (typically 100 or fewer individuals) under the exfoliating bark of large, often dead, trees. Young bats are able to fly within three to five weeks after birth. The maternity colony begins to disperse after the young can fly. Less is known about the summer life history of males and non-reproductive females. Some males spend the summer near their hibernacula while others disperse widely. Males and non-reproductive females will either roost individually or in small numbers. Indiana bats forage for insects along forest edges, in or beneath forest canopy, over ponds, and along streams.

#### Conservation

The Indiana bat was federally-listed as endangered on March 11, 1967. Indiana bats are subject to both natural and



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human threats. Due to the concentration of a large number of individuals in a relatively few hibernacula, human disturbance or natural catastrophes at these sites are serious threats. Other threats include degradation and loss of summer habitat. Conservation efforts include protecting important hibernacula and preventing disturbance to winter populations; protecting foraging and nursery roost habitat from destruction; and educating the public about the danger of disturbing bats and their ecological importance.

#### What Can You Do to Help

Do not enter gated caves/mines or caves/mines with a sign at the entrance which indicates it is used by endangered bats. These gates and signs are in place to protect bat colonies that are sensitive to human disturbance. Disturbance during early summer before the young can fly can result in thousands of flightless young

becoming dislodged and falling to their deaths. Every arousal during hibernation is energetically expensive. Fat reserves required to sustain the bats are utilized to some extent during each winter arousal. Too many arousals during hibernation can exhaust a bat's limited fat reserves and result in mortality.

#### References

U. S. Fish and Wildlife Service. 2007. *Indiana Bat (Myotis sodalis) Draft Recovery Plan: First Revision*. Fort Snelling, MN. 258 pp.

#### For Further Information

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August 2011