



Small and Secretive

Six of Michigan's nine species of bats live in Pictured Rocks National Lakeshore, mostly during the warmer months. All Michigan bats are small (only 3 – 6 inches long) although their wingspans can reach up to 15 inches. Bats are not rodents - they are unique creatures, the only true flying mammals. They spend their days roosting (resting) in rock crevices, cracks and holes in trees, under roof shingles and eaves of buildings, and other sheltered places where they feel safe. They emerge at dusk to feed on night-flying insects, particularly beetles and moths, which they detect through echolocation. Lucky park visitors may get a rare glimpse of them swooping and darting after prey after sunset. In winter, some species hibernate communally in caves and abandoned mines in the western Upper Peninsula; others migrate south.



Little Brown Bat



The **Little Brown Bat** (*Myotis lucifugus*), also called little brown myotis, ranges from 3 - 4 inches and weighs less than half an ounce. In summer, the solitary males roost in tree hollows and building crevices. The females form maternity colonies of 150 - 300 adults, often in hot attics, where

females give birth to a single pup. Both sexes hibernate together in large colonies in caves and abandoned mines. The little brown bat prefers insects with an aquatic larval stage, such as mayflies, so a good place to watch for them is near streams and ponds.

Big Brown Bat



The **Big Brown Bat** (*Eptesicus fuscus*) is 4 - 5 inches long with reddish brown fur. Since it prefers farmland, the big brown is not as common in heavily forested areas like Pictured Rocks. Big brown bats are masters at hunting night-flying beetles, their preferred food. This species

is especially important in controlling agricultural pests. They hibernate in caves and mines, but may also spend the winter inside the walls and attics of heated buildings. In the Great Lakes region, if there is a bat in your house, it is most likely a big brown.

Northern Long-Eared Myotis



Large ears make the nearly 4 inch **Northern Long-Eared Myotis** (*Myotis septentrionalis*) easy to identify at close range. Like all bats in this region, it locates prey through echolocation. This species feeds just after sunset, darting between trees to catch a wide variety of

forest insects. Adult females form small maternity colonies of about 30 bats in a tree hollow or under bark. These bats stay in Michigan during the winter, hibernating in small colonies within caves and mines.

Eastern Red Bat



The 4-inch **Eastern Red Bat** (*Lasiurus borealis*) can be readily identified by its reddish cinnamon color. This fast flier targets an insect every 30 seconds and succeeds in capturing its prey about 40% of the time. Typical of small bats, the eastern red consumes almost half its body weight

in insects each night. This solitary species spends summer in Great Lakes woodlands, then migrates south in winter. Like other local bats, the eastern red is preyed upon by great horned owls, and occasionally hawks and snakes.

Hoary Bat



The 6-inch **Hoary Bat** (*Lasiurus cinereus*) is Michigan's largest with a 15-inch wingspan. Heavy furred, its dark-colored hair is tipped with white. The hoary is a solitary species rarely encountered by people. Unlike other local bats, which feed in the first couple of hours after sunset, the

hoary feeds mostly in the early morning hours. Large moths and beetles are typical prey. The hoary spends summer months in forest trees near water and migrates south in the winter.

Silver-Haired Bat



The **Silver-Haired Bat** (*Lasionycteris noctivagans*) is dark brown to black with specks of white frosting. Another solitary species, this bat lives in forested areas near streams and lakes during summer, then migrates south out of the Great Lakes region in winter. The silver-haired can be identified by its slow flight, which

is typically close to the ground as it searches for prey. At twilight, surprised fishermen occasionally snag this bat in mid-flight as they cast for trout. The bat apparently mistakes the baited hook for an insect.

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Bat Conservation International

Is that a bird or a bat?

In dim light, you can tell birds and bats apart by how they fly. Bats are more agile and acrobatic than birds – their stretchy, elastic wings allow them to dip, dart,

swoop, swerve and make other quick, erratic moves and sharp turns as they chase flying insects.

Why are bats important?



Bats make up 1/5 of all mammal species and are essential to the health of our natural world. They help control insect pests and are critical seed-dispersers and pollinators for countless plants. Bat guano is an important source of nutrients in cave ecosystems.

In the United States, bats eat a staggering number of insects, including many damaging agricultural pests. A study of one colony of 150 big brown bats

showed that they consumed 1.3 million insects in a single summer. At Pictured Rocks, bats help keep certain forest insects in check and reduce mosquito populations. One little brown bat can eat as many as 1,000 mosquito-sized insects in an hour, and consume almost half its body weight each night.

A healthy bat population may also slow the spread of invasive insects as well as insect-borne diseases in humans, such as West Nile Virus.

What problems currently face bats in the U.S.?

Disease, loss of habitat and unwarranted fear of bats are causing serious decline in populations worldwide. Bats that congregate in large numbers are especially vulnerable. A single act of careless vandalism or introduction of disease can kill millions. Disturbances by humans during hibernation, especially in caves and abandoned mines, cause bats to use

up their precious supply of stored fat. Currently the greatest threat to U.S. bats is **white-nose syndrome**. Millions of bats in the eastern part of the U.S. have already died from this devastating fungal disease, which was officially detected in three Michigan counties (including the Upper Peninsula) in early 2014.

White-nose syndrome is currently the most serious threat facing North American bats, including those that live at Pictured Rocks National Lakeshore. For more information ask for the brochure **Bats and White-Nose Syndrome** at any park visitor center.

What bat research is occurring at Pictured Rocks?

Studying small secretive animals that are active at night is a challenge. At Pictured Rocks, past research has included a limited study to identify the presence of bat species through mist netting.

In 2014 the park will begin using automatic acoustic recording equipment specifically designed for bat research, which will allow staff to listen to echolocation calls, identify species and monitor bat activity. This will reduce physical contact with bats and the risk of accidentally spreading white-nose syndrome through human contact.

It is unlikely you will see a bat during the daytime. If you do see one, it is probably a juvenile bat who is learning its life skills and not one that is ill or distressed. Few dead or ill bats have been found at Pictured Rocks National Lakeshore.

However, if you come across a dead bat or one that appears sick, do not pick up or approach it. Keep others from approaching it. Contact a park ranger or visitor center as soon as possible.