

# BOGDIVERSITY THURSDAY



—*from Head Naturalist Clinton*

## Bats

POST #9—October 28, 2021

In honor of Bat Week, our next Bogdiversity Thursday post will feature the bat diversity in the Sax-Zim Bog!

Bats are incredibly important parts of an ecosystem. They control insect pests, pollinate night blooming plants, act as important seed dispersers, and in some cases are food to snakes and birds! Minnesota has 9 species of bat documented, with 2 new species documented in the last few years! In the Sax-Zim Bog, we have documented 5 species.

The bats in Minnesota have interesting ecology. In Minnesota, we have species that overwinter in and species that migrate to and from our state. Little Brown, Big Brown, Northern Long-eared, and Tri-colored Bats overwinter in caves, mine shafts, buildings, and hollow trees. Hoary, Eastern Red, and Silver-haired Bats all migrate south during the fall and can sometimes be seen migrating during the day! Most bats are solitary, except for the cave roosting species like Little and Big Brown, as well as Northern Long-eared Bat.

Bats can be sorted into two main groups: megabats and microbats. As the names suggest, size plays a role in this grouping, but the real difference is in behavior! Microbats tend to be small, nocturnal insect eaters, and are able to echolocate prey. Megabats, on the other hand, tend to be very large, dayflying fruit eaters, and use their excellent eyesight to find food. All bats are acrobatic fliers, even if they don't hunt at night. All of Minnesota's bats are considered to be microbats and are active primarily at night.

With species that are active at night and in the dark, how do you document these species? Similar to birds, some researchers capture bats in mist nets for study before being released. And, like birds, bats have unique and distinct vocalizations. In the Sax-Zim Bog, we are lucky to have a way to listen in and record these vocalizations with a specialized microphone. Check out some of the spectrograms included below!

In Minnesota, 4 species of bat have conservation needs, with 1 species listed as Federally Threatened. Much of this conservation need is due to White-nose Syndrome, a fungus that has caused massive declines in cave roosting and wintering bats in the United States. Bats are in particular need of conservation, not just in Minnesota, but globally. A very misunderstood group of mammals, bats are worth our attention and appreciation.

If you are interested in learning more about bats, Bat Week, or bat conservation, here are some links to check out:

[https://batweek.org/...](https://batweek.org/)

[https://www.batcon.org/about-bats/bats-101/...](https://www.batcon.org/about-bats/bats-101/)

<https://www.merlintuttle.org/>

<https://www.dnr.state.mn.us/wns/index.html>

As always, more information about bats included with the photos below!

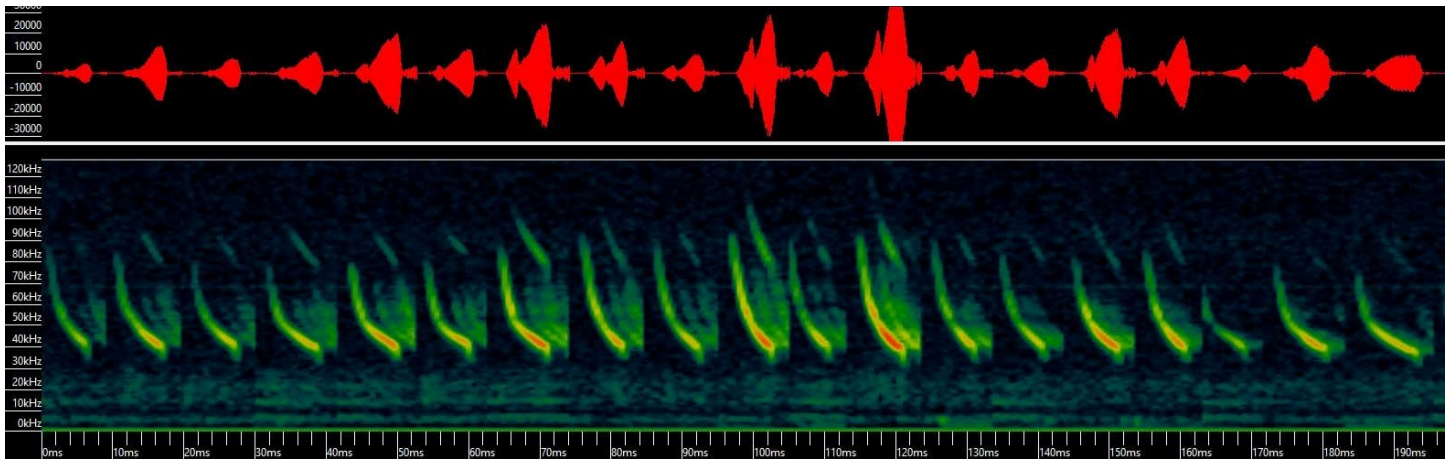
(Photos by Head Naturalist Clinton)



Hoary Bat is the largest bat in Minnesota! This beautiful species roosts in trees and is quite solitary. This bat was seen taking a break during its fall migration along Lake Superior! Uniquely, Hoary Bats are the only native species of mammal in Hawaii!

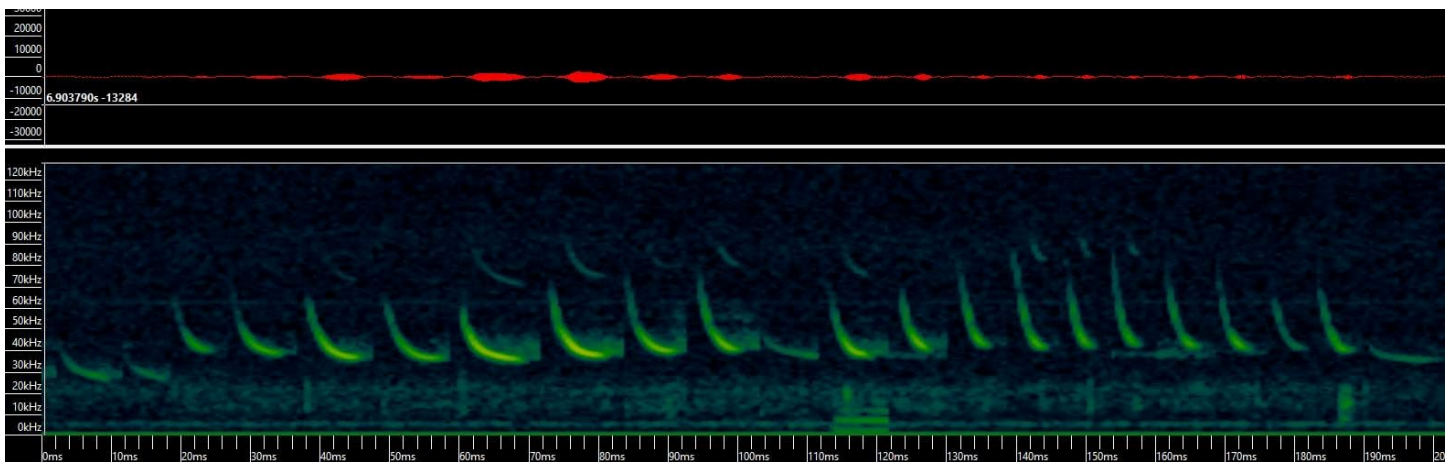


Big Brown Bats are a species that often gets inside homes or garages. They can be alarming to see, but they roost in buildings frequently and are usually just getting out of the cold. Here are some tips at keeping bats out of your house: <https://www.dnr.state.mn.us/livingwit.../bats/exclusion.html>.

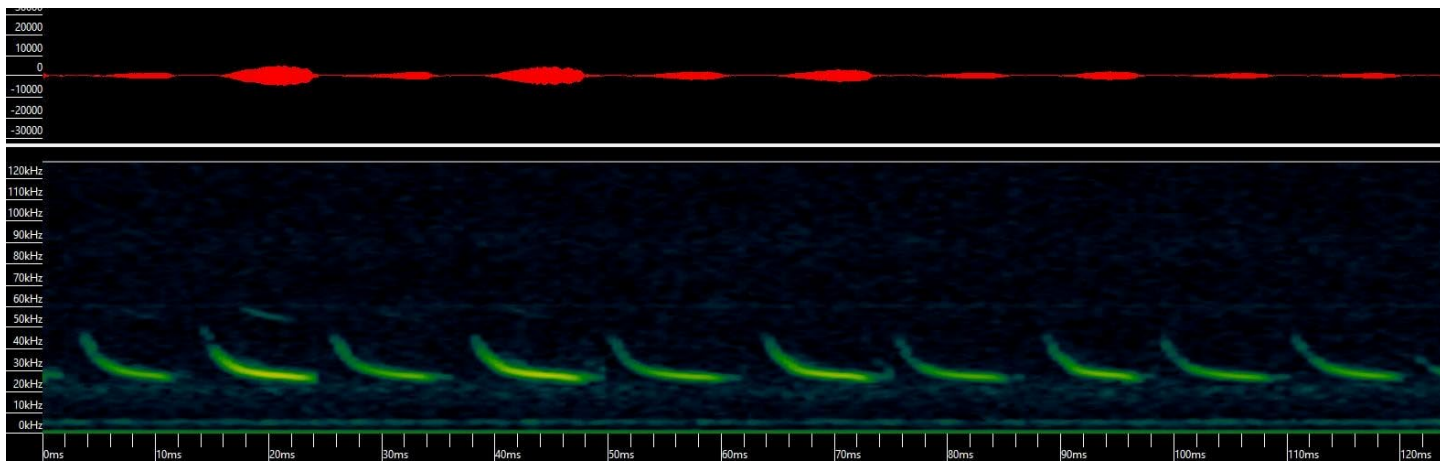


Vocalizations are an easy way to ID bat species! The follow are recordings and visualizations of three different species of bat in the Sax-Zim Bog. The vocalization above is from Little Brown Bat!

Note the tall, skinny, hockey stick shaped vocalization at a moderately high frequency with a short drop off or tail at the end of each note.



Eastern Red Bats vocalizations are variable and can range from lower to higher frequencies. Their vocalizations vary from wide hooks, to tall skinny L-shapes. Their calls lack the short tail at the end of Little Brown Bat's calls.



One of the most distinct vocalizations in our area are from Silver-haired Bats! They have very long and shallow hook shaped vocalizations that are low frequency.