

BOGDIVERSITY THURSDAY



—*from Head Naturalist Clinton*

Northern Short-tailed Shrew

POST #83—December 14, 2023

While the mammals found in the Sax-Zim Bog entice mammal watchers from all over the world, our list of mammals is not very long! Today's feature species is one that has been popping up in photos clicked by visitors to the bog lately, and is a species you might not expect to be active during the winter! For this Bogdiversity Thursday post, let's consider one of Head Naturalist Clinton's favorite mammals: Northern Short-tailed Shrew!

When you think of winter mammal watching in the Sax-Zim Bog, you likely do not include many small mammals on that list. Most small mammals are tucked under the snow, away from predators and the freezing cold temps of the world above ground. Shrews are probably the most unlikely group of mammals you may think of being active in the winter. Typically, shrews are characterized by not only their tiny eyes, amazing reddish teeth, sleek grayish fur, and pointed snouts, but also by their incredibly high metabolism! Most shrews need to eat at least twice to three times their body weight in a day or risk starving to death. A study out of the University of Michigan noted that Northern Short-tailed

Shrews had a metabolic rate at least 2 times higher than other mammals in normal conditions, with an increased metabolic rate due to cold weather equal to 8-9 times the rate of other mammals!

Of the small mammals seen in the Bog during the winter, Northern Short-tailed Shrew makes up a large component of observations (whether folks know it or not!). With their pointy snouts and sleek bodies, they are quite different in shape from voles. Voles also have short tails, like shrews, but are more rounded in profile. As noted above, Northern Short-tailed Shrew has been showing up in photos by visitors to the Bog lately. These photos show Northern Short-tailed Shrew as prey items for Short-tailed Weasel and Northern Hawk Owl! Head Naturalist Clinton recently found an owl pellet at the Welcome Center, made by a Barred Owl, that contain four (!) Northern Short-tailed Shrew skulls! So it seems, for mammals and birds, that these shrews have been easy to find with the small amounts of snow cover so far this winter.

Shrews are amazing mammals, but Northern Short-tailed Shrew takes the cake (at least for Minnesota's mammals!). The claim to fame of this species is that it is the only VENOMOUS (!) mammal in Minnesota! Yes, you read that right, Northern Short-tailed Shrews are one of a small handful of venomous mammals in the world and the only venomous mammal in the United States! They do not have venom glands like snakes, but instead have venomous saliva that is strong enough to kill some prey items and paralyzes others. These paralyzed prey items often get stored

(alive!) for later consumption. Bites from Northern Short-tailed Shrews are not medically significant to humans, but may cause swelling and some pain.

Perhaps not as cool as venom, shrews do something else unexpected from small mammals: they vocalize! Shrews are highly vocal, using a series of different vocalizations to help find their way through tunnels and burrows, but as a way to communicate with other shrews. Their clicks, warbles, and twitters are audible to humans and are used both above and below ground.

More information about these cool critters can be found in the photos below!

(Photos by Head Naturalist Clinton)



The pointed snouts of shrews are well seen by most observers, but their tiny eyes rarely direct much attention. Most shrews cannot see very well and rely on their noses to help find food. This Northern Short-tailed Shrew is coming out from below the Admiral Road feeders to snag peanut butter from a dropped peanut butter dispersal stick.



Shrews are fast! Often just a blur as they run across the road seeking their next prey item, they do often get confused for voles! But the long snout, tapering body, and uniformly colored coat help separate them from voles.