

Northern Water Shrew (*Sorex palustris albibarbis*)

Pennsylvania Candidate Rare Species

State Rank: S3 (vulnerable), **Global Rank: G4T5** (apparently secure)

Identification

The northern water shrew (*Sorex palustris albibarbis*) is a relatively large member of the *Sorex* genus, reaching lengths of 130-170mm and weighting 10-16 grams. Water shrews are black to gray in color with a silvery-gray belly and a bicolored tail. Thin chin and throat of this species are whitish, noticeably more so than the belly. The large, partially webbed hind feet have hairs on the toes and sides and there are some hairs present on the fore feet. The northern water shrew (*Sorex palustris albibarbis*) can be distinguished from other water shrews by very specific physical characteristics such as dental and skull features.



Photo source: Charlie Eichelberger (PNHP)

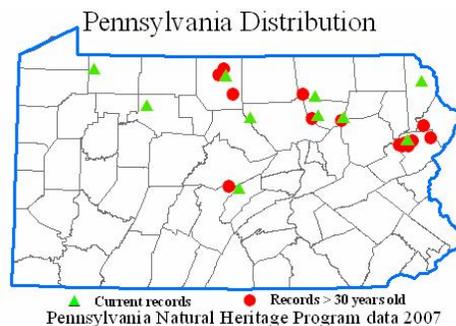
Habitat/Behavior

Water shrews are solitary, short-lived species with an average life span of 18 months. They breed from December to September and have 2-3 litters per year. They are active both day and night and spend their lives in and around water. Water shrews can be found along streams and lake edges, in boulders and sphagnum moss. They dive and swim into water when foraging for food and to avoid predators. Air trapped in the fur allows them to immediately come to the surface when they stop swimming. The fringe of hairs on the hind foot trap air and allow the shrews to walk on water. Easy access to food is essential to the survival of this species. Water shrews can only survive without food for up to three hours. In captivity, they have been found to feed almost every 10 minutes.

Status

Sorex palustris is found throughout most of Canada, the western U.S., the upper northeastern U.S. and the Appalachian mountains. The *albibarbis* subspecies is found in southeastern Canada and the upper northwestern U.S. including north central and northeastern Pennsylvania.

Globally, this species is considered secure. However, in Pennsylvania, the northern water shrew is vulnerable and a candidate for listing as rare. It is only found in a few sites around the state and is affected by many factors, which could lead to declines in their populations.



Conservation

Decreased water quality may have a significant effect on this species. A decrease in numbers of aquatic insects may be very detrimental to this species since food is such a limiting factor. Timber harvesting along streams and lake edges may also be detrimental to this species. Many times, they will live in vegetation or crevices along the waters edge. The loss of the overstory could dramatically change the microhabitat conditions on the forest floor. Maintaining natural stream corridors and lake buffers is essential to the protection of this species.

References

- ENature.com Field Guide. Water Shrew (*Sorex palustris*). <http://www.enature.com/fieldguide/>
- Genoway, H.H. and F.J. Brenner. 1985. Species of Special Concern in Pennsylvania. Carnegie Museum of Natural History. Pittsburgh, PA. 430pp.
- The University of Michigan Museum of Zoology Animal Diversity Web. Species Account: *Sorex palustris* (water shrew). http://animaldiversity.ummz.umich.edu/site/accounts/information/Sorex_palustris.html .



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