

Acton WildAware Beacon article

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By Paula Goodwin

Muskrats

Muskrats are the largest member of the rodent Family that includes mice, rats, lemmings, and voles. They most closely resemble the vole for their small ears hidden in their fur and their similar rounded, blunt snout. Beavers are also rodents but muskrats are not related to them, even though they share a set of traits that have allowed them to adapt to life in the watery habitats of ponds and slow moving streams. Convergent evolution is the term for describing the process for different species such as muskrats and beavers which share similar characteristics. Muskrats are significantly smaller than beavers. A muskrat weighs roughly two-and-a-half pounds, while a beaver weighs between 35 to 70 pounds. Like beavers, muskrats build lodges except that their lodges are made of cattails and sedges, not sticks, stones and mud. Muskrats build in shallow water and access the nest chambers via underwater tunnels like beavers. A muskrat lodge is smaller than a beaver lodge with a diameter of six to eight feet at the base. Muskrats do not build dams but muskrat lodges can often be found in beaver ponds because beaver dams increase habitat for muskrats by flooding new areas.

Muskrats are mostly nocturnal and shy, but may be seen feeding or swimming during late afternoon to early evening. They rely on escape cover provided by open water, which makes them difficult to observe. They prefer cattails which grow in dense stands, as a source of food and building material, to keep them well hidden as long as there is also open water available to dive into for safety. Muskrats can hold their breath under water for up to 15 minutes. When spotting a swimming muskrat look for three separate humps—its head, its upper back and its tail which snakes back and forth. Signs that muskrats are living in a pond or marsh are the structures they build; lodges made of cattail stems, and floating "feeding station" mats made of woven twigs and reeds. The best time to see muskrats is when they are on their feeding stations - they will stay in view as long as they feel safe. Current drought conditions may be challenging for muskrats whose homes were built in shallow ponds that have dried up and cannot support emergent plants, especially cattails, which need abundant water. Muskrats also require protein in their diet provided by insect larvae, small frogs, salamanders and freshwater shellfish, all of which rely on some open water.

Muskrats emit a strong, musky odor which they use both to mark territory boundaries and communicate during the spring mating season. It seems that muskrat musk has not been commercially important for the perfume industry. Most musk for perfumes comes from musk deer, and in recent decades, from artificial chemicals that mimic animal musk. The scientific name for muskrats, *Ondatra zibethicus*, is not entirely Greek or Latin, as it is for most species. *Ondatra* is the name given to the muskrat by

the Native American Huron people. The second part, zibethicus, is Latin meaning "like a civet", a catlike animal from Africa and Asia that also produces a strong, musky odor.

Mates stay together during the breeding season. Several litters are born each year and the babies grow rapidly, dispersing at 6 weeks of age. Most of the young will not survive due to being washed away by flooding, competition for territory and predation. Because muskrats have the ability to reproduce quickly they are widespread and abundant; a conservation species of least concern. Populations remain stable even when, as furbearers, they are being hunted or a target for large predator populations such as raccoons , otters, coyotes and owls.

Resources:

JUNE 1984-HABITAT SUITABILITY INDEX MODELS:MUSKRAT
<http://www.nwrc.usgs.gov/wdb/pub/hsi/hsi-046.pdf>

BioKids: Kids' Inquiry of Diverse Species
http://www.biokids.umich.edu/critters/Ondatra_zibethicus/

Muskrats by Amy-Jane Beer

Naturally North Idaho
<http://www.naturallynorthidaho.com/2012/11/muskrats-beavers-similar-but-not-related.htm>

Ask A Naturalist
<http://askanaturalist.com/are-muskrats-used-to-make-perfume/>

Paula Goodwin is a member of the Acton Conservation Commission who introduced WildAware with Acton Natural Resource Assistant Bettina Abe. WildAware is a program sponsored by the Town of Acton Natural Resources Department that began

in September, 2015 and will continue through the summer of 2017. The purpose of WildAware is to educate the community about the existence and habits of wild creatures, and the goal is increased community awareness of shared habitats. For information, call 978-929-6634 or send email to nr@acton-ma.gov.