Union Soil & Water Conservation District

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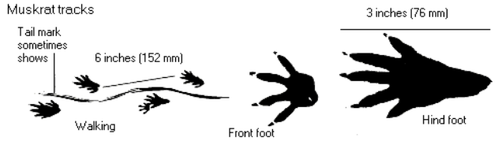
http://www.co.union.oh.us/GD/Templates/Pages/UC/UCDetail.aspx?page=559

Conservation Now…
Natural Resources Forever!

Muskrat Den Entrance at Embankment's Waterline

Muskrat Lodge made of cattails—in cattails. (circled)



Conflict Resolution Summary

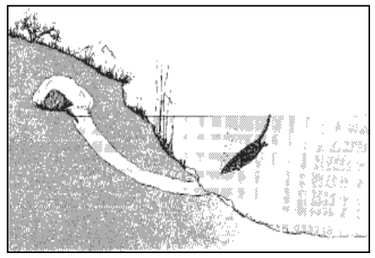
Human-Wildlife conflict is as old as The Age. Only the generations change.

To resolve muskrat conflicts one must be persistent.

Below, one will find an incomplete list of local trappers that may be able to assist.

It is always best to arrange for trappers to trap muskrats during the regulated furbearer season.

Should one want to trap muskrats on their own, there is a great 4-H Project Book titled: **4-H 622—Trapping Muskrats in Ohio...**available at county OSU Extension Offices for a small fee. It is a good way to learn the trapping basics.



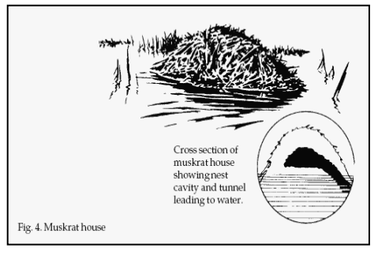


Fig. 4. Muskrat house

Incomplete List of Local Trappers

If number is not a working one, please contact me immediately!

Name	Telephone	Area
Robert Blue	**(937) 355-0355**	Marysville
Cory Rausch	(614) 558- 3908	Union County
Rick Bright & Steve Bump	**(937) 243-4644 & (937) 642-4560**	Marysville Area
Pete Browning	(937) 644-3034	Union County
Greg Buck	**(937) 644-9607**	Marysville
Eric Canter	**(614) 873-5135**	Marysville & Pln City
David Coffman	**(937) 642-0691**	Marysville
Richard Griggs	**(937) 642-0374**	Marysville
Dick Westfall	**(937) 642-9142**	Union County
Mill Creek Wildlife Control	**(614) 348-8970**	Union County
Don Rockenbaugh	**(614) 774-4159 (937) 642-0222**	Marysville
Tom Ross	**(740) 943-2129**	Richwood
Dana Roush, Roush Wildlife Nuisance Control	**(937) 642-8847** Cell 937-594-2221 or Cell 937-597-8845	Marysville

This publication offers solutions—not just more suggestions. Ultimately, you will determine the level of success that is realized.

Union Soil & Water Conservation District

Muskrat Conflict Management
...*forget Control!*

Latest Update:
JANUARY 15, 2014

The Reality of Truth:

"If one owns or manages a shallow water conservation wetland, a storm water retention pond, or a deeper water "people" pond, Muskrats will eventually discover it and exploit its habitat potential."

Muskrat Management Contents

Gracefully Surrender to Muskrat Management

Forget about muskrat "control". One can remove a fence post and it will stay removed. Remove a muskrat from a body of water and in uncommon hours, another one will replace it.

Throughout the year – all year long, the number one species of human-wildlife conflict in Ohio's ponds is the native muskrat - ***Ondatra zibethicus***. Dismiss the havoc of deer browsing and the defecations of Canada geese; it is the mighty burrowing muskrat that drives pond owners and pond managers crazy.

Many pond owners report going for years or decades without experiencing muskrats, but under the cover of darkness, one – then two, show up. Unless one is present at dawn or dusk to witness the wake's "V" formation from the swimming muskrat, they often go unnoticed. It is the inexplicable cattail cuttings that wash ashore from the previous night's feeding, or the lawnmower's wheel that drops into a subsided burrow that causes alarm. "What's this", they ask.

Though often confused with the much larger beaver, muskrats are actually related to mice and rats. A rodent, it is easy to envision a wet muskrat as being a large rat – owing to its nearly hairless tail.

However, when dry, they have a beautifully brown soft coat comprised of a thick undercoat (warmth) and an outer coat of long, shining and waterproof hairs.

Why so many muskrats and why now? Like never before, new "people ponds", as well as storm water management ponds, are erupting upon the Ohio landscape. This, combined with the muskrat's high biotic potential, spells human conflict. Muskrats breed from February to August. The birthing activity takes places from March to September, with the peak period being May. In as little as 26 days, a litter of 1 to 11 arrives. Like many rodent family species, population cycles ebb and flow.

There may be 2 to 3 litters – *or more*, each breeding season. One can now begin to see why muskrats can suddenly explode in numbers around a quiet pondscape. In 10 to 12 months, newborns will be of breeding age. It doesn't take a math major to see what is coming. Even factoring in a high mortality rate, a breeding pair of muskrats can exponentially increase in just one summer. Above water lodges are seen seasonally in wetlands, but in deeper water ponds muskrats burrow into embankments. If there is any light at the end of the tunnel – *or den*, it is that muskrat lives are short.

No matter how one manages their pond, there is always something for the muskrat to feed upon. Their diet consists of plant stems, roots, rhizomes, and foliage of aquatic plants, cattails, water lilies, pondweed, and sedge – as well as clams, snails, mussels, insects, crayfish, small fish, frogs, and even neighboring gardens and crops.

So what is the solution to reducing the damage and the presence of muskrats? Right now is a great time to begin planning-for, or actively recruiting, trappers to harvest muskrats during the regulated statewide furbearer season dates in **November to February.** This is an important time to reduce their numbers. If active damage is occurring outside of the regulated season, *on a case by case and county by county basis*, state wildlife officers can issue a permit to legally trap muskrats.


Muskrat in preferred habitat.

There are non-lethal tactics to <u>discourage</u> muskrats from burrowing into pond embankments.

- Rock rip-rap placed along the shoreline may be effective if it is extended well below the anticipated low water line. **No guarantees**—muskrats dig.
- Some pond owners have chosen to lay flattened chain link fence along shorelines extending well below the projected low water line. Vegetation is then left to grow up into the flattened chain link fence.
  PLEASE NOTE: I HAVE OBSERVED WHERE MUSKRATS DIG UNDER THE FENCE AND THUS COMPOUND THE PROBLEMS.

The most effective solution is a comprehensive trapping program during the annual regulated season. One thing is for certain; doing nothing will result in a dangerous place to walk, fish, and mow as former underground burrows collapse.

For many pond owners and pond managers, muskrat management has become a perpetual maintenance item.

Never-ever assume that once muskrats are perceived to be eliminated from the site, that they are gone forever!

MUSKRAT *(Ondatra zibethicus)*...Ohio's Muskrat Territory

Fig. 3. Range of the muskrat in North America.

If you have ever walked by a pond or stream and noticed small mounds of marsh plants sticking up out of the water, then you have probably been in muskrat territory!

Muskrats are large freshwater rodents that look very much like a beaver, but are actually related to mice and rats. This is where they get the second part of their name, because their tail looks like that of a rat. The first part of their name comes from the strong-smelling odor, or musk, that the muskrat produces during mating season and to mark its territory.

Muskrats have had many names given to them over the years: marsh rabbit, mud cat, mud beaver, and the Algonquin Indian tribe called it musquash.

Muskrats have two coats of hair. The thick fur undercoat keeps the muskrats warm in winter, and the outer coat is made up of long, shiny waterproof hairs. The muskrat's fur is a dark brown that gets lighter around its throat. The tail is long, flattened, and nearly hairless, making it a perfect rudder for swimming.

Swimming is what muskrats do best. They can swim up to speeds of two to three miles per hour. It would take an Olympic swimmer to catch up with them! Muskrats spend much of their time sleeping during the day and slip into the water in the evening. They dive underwater for food, or in search of vegetation for their lodges. Like beavers, muskrats also build lodges. However, their lodges consist of more aquatic vegetation than sticks. Sometimes they even make their own feeding stations to protect themselves from predators while they are eating. These private dining rooms are made from weeds and plants and are built on top of floating rafts of reeds. The muskrat lodges usually have one nesting chamber and several underwater entrances for quick escape routes.

Females normally produce 1 to 5 litters per year, with each litter containing four to seven young. **That's up to 35 young a year!**

The females will often breed while still nursing. Young are born three to four weeks after breeding and are born hairless. Only two weeks after birth the young muskrats have fur and are able to swim.

They are able to take care of themselves within a month and are on their own.

Muskrats are part of a group that is known as furbearers. Muskrats are the most important and most numerous of the furbearers in Ohio. Their rich, dark brown fur is very popular for coats. The yearly average of furbearers trapped in Ohio is around 600,000 and muskrats make up half of this number.

Muskrats are very common in Ohio. Next time you visit a pond or stream watch carefully for signs of muskrats. Sure signs that muskrats are in the area are small feeding stations, cuttings of plants floating in the water, or a lodge near the shore.

"To hold a species down or to build it up requires the same research. Both operations require the same detailed knowledge of life history and relation to the environment. Research in short, is an indispensable insurance against losses arising from too much wildlife, or too little."
- Aldo Leopold, 1937

Muskrat Trapping Outside of the Annual Regulated Season

OHIO DEPARTMENT OF NATURAL RESOURCES — DIVISION OF WILDLIFE

"The most effective solution is a comprehensive trapping program during the annual regulated season."

On a case by case and county by county basis, if one is experiencing active muskrat damage, the county's state wildlife officer may issue a permit to trap this regulated furbearer outside of the annual regulated season (November—February dates).

In **Union County—District 1:**
Josh Shields
State Wildlife Officer—Union County
ODNR Division of Wildlife—District 1
1500 Dublin Road
Columbus, Ohio 43215
(614) 644-3929 Extension 1213
E-Mail Address: joshua.shields@dnr.state.oh.us

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More Insights into a Muskrat's Life History

If there is adequate food, water, shelter, and space—in a suitable arrangement...throughout the seasons, there will be muskrats.

- Mating — Monogamous
- Breeding Period — February—August (Peak Activity: April)
- Gestation — 22—30 Days
- Birth Period — March—September (Peak Activity: May)
- Litter Size — 1—11 (Average 6)
- Litters Per Year — 2—3 (Usually 2, but up to 5)
- Birth Weight — 3/4 Ounce (21 Grams)
- Eyes of Young Open — 15 Days
- Young Weaned — 4 Weeks
- Breeding Age — 10—12 Months
- Adult Weight — 2—5 Lbs. (Average 3 Lbs.)
- Adult Body Length — 12"
- Tail Length — 10"
- Total length — 16—24"
- Life Expectancy — Less than 2 Years
- Movement — Range Radius ~ 100—200 Yards from Lodge or Den
- Feeding Period — Mostly at night, but also during the day in secure habi tats where there is no consequence to their presence.
- Typical Foods — Primarily aquatic plants and roots; less often small fish, amphibians, and aquatic macro invertebrates

MUSKRAT PREDATORS
Mink, Hawks, Owls, Dogs, Fox, Coyotes, and Raccoons.

Note:
ators cannot be relied upon to keep Muskrat populations in-check.

"In summary, randomly releasing live-trapped wildlife off-site can be very inhumane and illegal in the case of raccoons, skunks, opossums, coyotes, and fox—Ohio Revised Code ORC 1501:31-15-03."

Muskrat Burrow Repairs
It is best to always repair the immediate cave-in area!
However, there is probably ecological merit in leaving the deeper burrows alone as they serve as seasonal habitat for mink, snakes, turtles, frogs, salamanders, and more. One may want to consider creating a dedicated area of piled soil to serve as a stockpile for Muskrat burrow repair throughout the seasons.

The Realities of Relocating Live-Trapped Wildlife

Look, no one has to live with nuisance wildlife, or with wildlife causing property damage. Should non-lethal tactics prove unsuccessful, any targeted wildlife that is successfully live-trapped should be quickly done away with on-site—not relocated. Or released.

Wildlife lives in, *or disperses to*, areas of suitable habitat. Releasing live-trapped wildlife "someplace down the road" is not in the best interest of the trapped species, or the existing population where it is being released.

Once released, the already distressed and disoriented animal must make life & death decisions immediately:

- ***Where are the food, water, shelter, and space sources?***
- ***Are the above in a suitable arrangement throughout the seasons?***
- ***What and where are the prey and predators?***