

Nutria

Nutria (*Myocastor coypus*, Fig. 1) are semi-aquatic rodents native to southern parts of South America. In the 1930s, they were sold throughout North America to fur farmers and as a means of controlling unwanted aquatic vegetation. Various associations, magazine and newspaper articles, and demonstrations at county fairs promoted the sale of nutria in Washington.

More than 600 nutria farms existed in Oregon and Washington from the 1930s to the 1950s. Flooding and storms damaged holding structures, allowing nutria to escape. Farmers also released their stock when nutria farming became uneconomical. By the 1940s, nutria had been captured by trappers on both sides of the Cascade Mountains in Washington.

Adult nutria average 24 inches long from the nose to the base of the tail. The tail itself is 12-16 inches long, round, and nearly hairless. Males are slightly larger than females; males weigh 12-20 pounds and females weigh 10-18 pounds.

Depending on the nutria's ancestry and current habitat, its fur will vary from light yellowish brown to dark reddish brown, and black. Their hind legs are much larger than the forelegs. When moving on land, a nutria may drag its chest and appear to hunch its back.

Nutria are found in lakes, wetlands, sloughs, drainage ditches, and irrigation canals along the Columbia River and north to Skagit County. Cold temperatures seem to reduce the distribution of nutria, as they don't live in areas where water surfaces freeze for long periods.

Facts about Nutria

Foods and Feeding Habitats

- Nutria are herbivores and consume approximately 25 percent of their weight daily.
- Succulent, lower portions of plants being preferred food.
- Roots, rhizomes, tubers, and tree bark are important during winter when the green parts of plants aren't available.
- Nutria also eat crops and lawn grasses found next to water.
- Because their forepaws are small and dexterous, nutria can excavate soil and handle small food items.

Reproduction and Family Structure

- Males reach sexual maturity between 4 and 9 months, whereas, females reach sexual maturity between 3 and 9 months.



Figure 1. A nutria is three times the size of a muskrat and its tail is round, not flattened vertically, as is the muskrat's. Nutria and beaver are similar in size, but the beaver has a large tail, which is flattened horizontally.

(From Christensen and Larrison, *Mammals of the Pacific Northwest: A Pictorial Introduction*.)

- With a gestation period of only 130 days, in one year, adult nutria can produce two litters and be pregnant for a third.
- Litter size averages 5 young. Females can breed within a day of having a litter.
- Newborn nutria feed on vegetation within hours and will nurse for 7-8 weeks.
- A rather unusual characteristic of the female nutria is that her teats are so high on her sides the babies can nurse even while their mother is lying on her stomach or swimming in the water.



Figure 2. *Nutria have large incisors that are yellow to orange-red on the outer surface. The head of the nutria is large and almost triangular. The whiskers are obvious, about 4 inches in length and numerous.*

(Photo from U.S. Geological Survey.)

Family Structure

- Nutria are thought of as colonial because the same den is shared by the dominant male with two or three females and their offspring.
- Two to 13 individual nutria form a group. Adult males are sometimes solitary.

Burrow and Den Sites

- Nutria will dig their own burrow, or use an abandoned burrow or lodge of a beaver or muskrat.
- Burrow entrances are often a foot or two beneath the water's surface and as much as two feet in diameter.
- Burrows range from a simple, short tunnel with one entrance to complex systems with several tunnels and entrances at different levels. Tunnels are usually 3 to 18 feet long.
- Young are born in a grass-lined den within the burrow or sometimes on a floating platform nest made of vegetation.

Mortality and Longevity

- Predators of adult nutria include coyotes, domestic dogs, and humans. Great horned owls, foxes, great blue herons, hawks, eagles, and raccoons prey on the young.
- In the early 1990s, 5,300 to 7,700 nutria were taken per year in Oregon, with prices for pelts ranging from \$2.00 to \$4.00 apiece.
- Nutria are sensitive to low temperatures. Cold winter temperatures are believed to be the main limiting factor preventing nutria from becoming established in much of eastern Washington and at high elevations in western Washington.
- In the wild, most nutria live less than three years.

Viewing Nutria

Nutria are active throughout the year. Although they may be seen at any time, they are most active at twilight and throughout the night. They may be seen feeding during the day when food is scarce, or basking in the sun when temperatures are low.

Nutria generally occupy a small area throughout their lives. Daily travel distances for most nutria are less than 600 feet, although some individuals may travel much farther. Rarely will nutria be seen very far from water, and they are usually seen swimming. They tend to swim with their narrow, pointed tails snaking in the water behind them, or arched out of the water; you never see a beaver's rounded tail as it swims.

When startled, nutria enter the water with a loud splash, and, being strong swimmers, they may swim long distances underwater before surfacing. (Nutria can remain submerged for as long as 10 minutes.) They can also remain motionless under sparse vegetation, with only their noses and eyes above water.

When cornered or captured, nutria are aggressive biters and scratchers and can seriously injure pets and humans.

Feeding Areas

Evidence of nutria feeding includes rushes, sedges and other plants gnawed to a stubble, floating cattail roots or other vegetation that has been clipped, and piles of clipped vegetation under overhanging vegetation or in a well-concealed spot at the water's edge.

Nutria often build flattened circular feeding platforms of vegetation in shallow water. Constructed of coarse emergent vegetation, these platforms are also used for loafing, grooming, and birthing and are often misidentified as muskrat houses. Feeding platforms measure 3 to 6 feet across and there may be travel channels through the mud leading to them.

Tracks

Nutria tracks can be found in mud or sand along shorelines (Fig. 3). The mark of a dragging tail is sometimes apparent.

Nutria have five clawed toes on each foot; the front feet are not webbed. Nutria tracks are easily confused with beaver tracks when the beaver's fifth toe webbing does not print.

Droppings

Nutria droppings are dark green, brown, or almost black. Nutria droppings are 2 inches long and 1/2 inch in diameter (Fig. 3). The droppings are unique in that they have distinct parallel grooves along their entire length, making them distinguishable from droppings of muskrat and beaver.

Nutria droppings can be found floating in the water, along shorelines, on objects protruding out of the water, and at feeding sites. The animals may repeatedly use these spots, and more than one nutria may use the same spot.

Slides

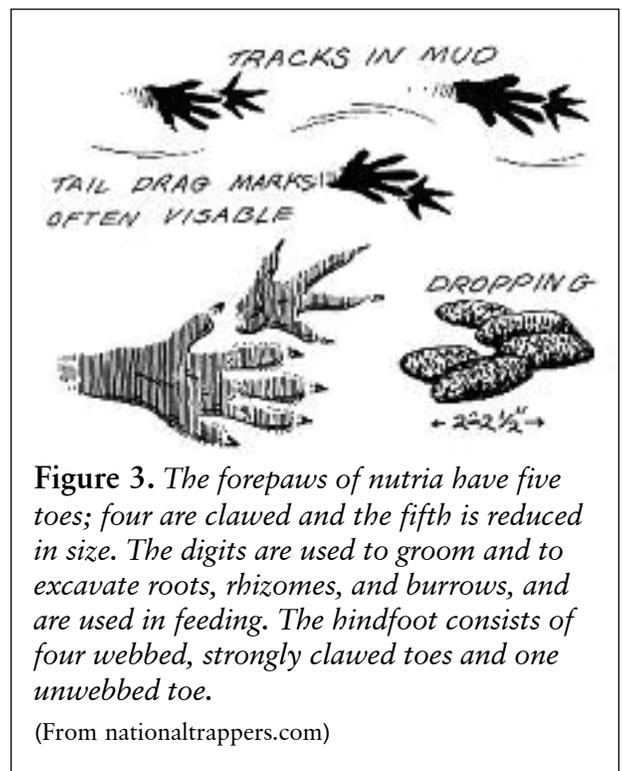
Slides are the narrow trails nutria make where they enter and leave the water. Nutria slides are twice the width of a hand. (Beaver slides can be up to 20 inches wide.) Slides look like muddy trails and may be slicked down from the animals' sliding down them on their bellies.

Calls

Where large numbers of nutria are present at dusk, a chorus of pig-like grunts may be heard.

Preventing Conflicts

Nutria damage is related to burrowing and feeding. Nutria construct burrows in the banks of rivers, sloughs, and ponds, sometimes causing considerable erosion. Burrows can weaken roadbeds, stream banks, dams, and dikes, which may collapse when the soil is saturated by rain or high water. Rain action can wash out and enlarge collapsed burrows and compounds the damage.



Their large size makes it possible for nutria to girdle orchard trees, landscape trees, and ornamental shrubs.

Nutria numbers may increase to the point where an area is denuded of aquatic vegetation. After foraging on entire plants, including the roots, they leave the area pitted with digging sites and deep swimming canals. This feeding behavior can destroy existing root mats that bind and secure a wetland together, and the area can be quickly eroded by wind and wave action. In parts of southern Washington, nutria may be out-competing muskrats for food and places to live.

The following suggestions will help to reduce conflicts. You can do the work yourself or hire a company to do all or part of the work (see the “Hiring a Wildlife Damage Control Company” handout for information.) In cases where these methods are not practical, contact your local County Extension Agent or Department of Agriculture’s Wildlife Services for further information.

Fences and Other Barriers

Nutria are not climbers. A properly designed and maintained 3-foot tall wire fence will exclude them. The fence must be taller if snow or other materials are likely to build up near it. Because nutria are diggers, the fence will need to extend at least 12 inches below ground. Alternately, a tight fit to the ground and an L extension that runs 24 inches out on the soil surface toward the animal will also prevent entering from underneath (See Figures 4-6 for samples of barriers).

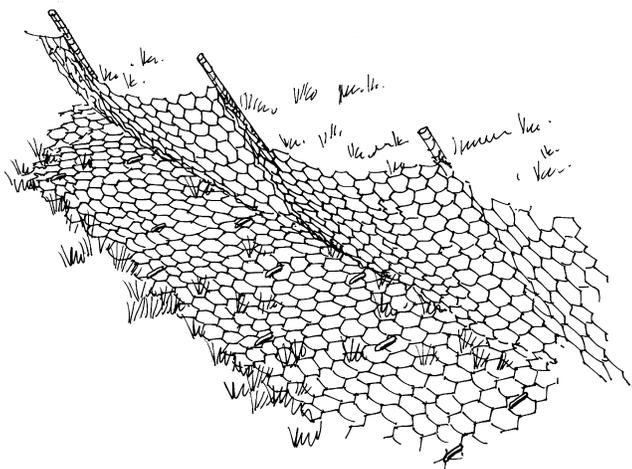


Figure 4. A mini floppy fence constructed of 1-inch mesh wire or heavy plastic needs to be at least 2 feet high and staked so that it's wobbly. The fence should not be pulled tight between the stakes, but rather there should be some “give” so that when the nutria tries to climb the fence, it will wobble, discouraging further climbing. Constructing the fence so that it leans slightly toward the nutria’s side will increase its effectiveness.

To prevent nutria from digging under the fence, keep a 2-foot wide wire apron on top of the ground on the animal’s side of the fence. Keep the apron flush to the ground with rocks and/or stakes, or young nutria will shimmy under it.

(Drawing by Jenifer Rees.)

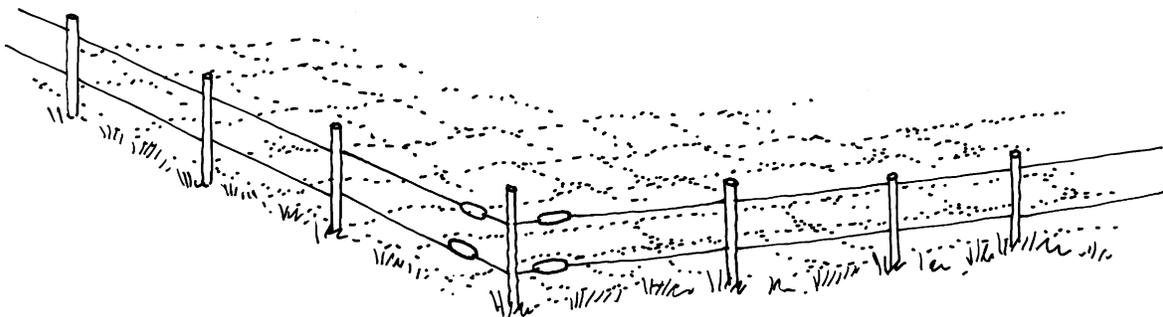


Figure 5. A single strand of electric wire set alone, or placed 6 inches above the ground and the same distance outside the fence will also help prevent nutria from burrowing and climbing. Vegetation near any electric fence should be removed regularly to prevent the system from shorting out.

(Drawing by Jenifer Rees)

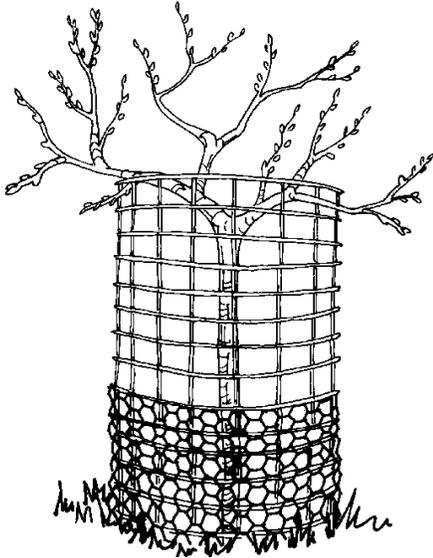


Figure 6. Wire cylinders around individual plants are often used where only a few plants need to be protected. A combination deer/nutria fence is shown here. Note: Lightweight plastic protectors do not work because nutria can chew through them.

(Drawing by Jenifer Rees)

Water-Level Management

Nutria (and muskrats and Old World rats) burrow into dams, dikes, and other embankments to make dens (Fig. 7). Typically dens have 2 feet or more of earth above them. However, when fluctuating water levels flood their initial den, nutria burrow farther into the bank or dig new, higher den chambers close to the surface. In such cases this can weaken the bank, or livestock and other large animals can pierce holes in the bank, starting the erosion process.

To prevent nutria from tunneling higher in an embankment, keep fluctuations in water levels to a minimum. This can require frequently monitoring the spillway to ensure an unobstructed flow, or widening the spillway to carry off surplus water so that it never rises more than 6 inches on the dam.

Water-level manipulation can also be used to force nutria to other suitable habitat. Raising the water level in the winter to a near-flood level, and keeping it there, will force the animals out of their dens. Similarly, dropping water levels during the summer will expose nutria dens to predators, forcing them to seek a more secure area.

Slope Management

Nutria prefer to burrow on steep slopes covered with vegetation. Hence, they can be discouraged by keeping side slopes to a 3:1 or less ratio, and by controlling vegetation growth. Managing vegetation by hand can be difficult in large areas, but routine mowing or cutting with a weed whacker can be effective. Only herbicides registered for use next to water should be used, and then only per the manufacture's

recommendations.

If possible, keep livestock off embankments to avoid the chance that an animal will put a hoof through a den chamber. If a roof is pierced, immediately fill in the cavity with soil, rocks, or a mudpack (see below).

Embankment Barriers

A wire or stone barrier installed 1 foot above to 3 feet below normal water level can prevent nutria from burrowing into an earth embankment.

A barrier can be made from 1-inch mesh hardware cloth (aluminum and stainless steel are also available), or heavy-duty plastic or fiberglass netting. The barrier should be placed flat against the bank and anchored every few feet along all edges. To extend the life of galvanized hardware cloth, spray it with automobile undercoat paint or other rustproof paint before installation. Since the wire will eventually corrode, do not use this material where people are likely to swim.

Riprapping areas with stone creates an effective barrier and protect slopes from wave action. Stone should be at least 6 inches thick.

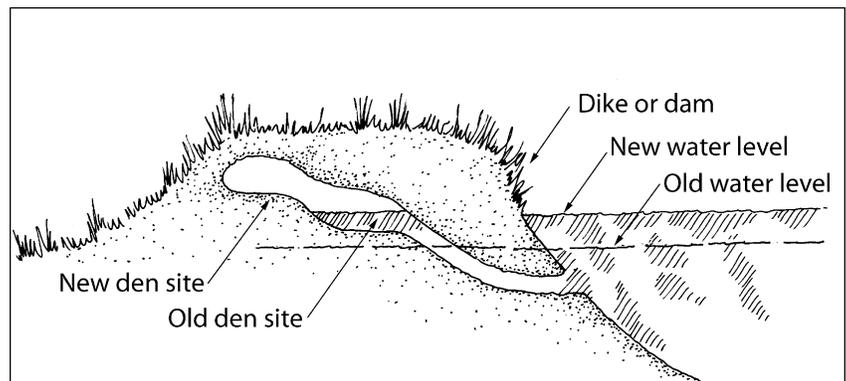


Figure 7. In dams, dikes, and banks, nutria tunnel upward from below the water surface into the soil to make dens that remain dry. When fluctuating water levels flood their initial den, they burrow farther into the bank or dig new, higher den chambers close to the surface.

(Drawing by Jenifer Rees. Adapted from Hygnstrom, et al. *Prevention and Control of Wildlife Damage.*)

Where a burrowing problem is extreme, use a gas-powered trenching machine (available at rental stores) to dig a narrow trench along the length of the embankment. Hand digging will be required to dig to the recommended depth—3 feet below the high-water level. Next, fill the trench with a mudpack. A mudpack is made by adding water to a 90 percent earth and 10 percent cement mixture until it becomes a thick slurry. The resulting solid core will prevent nutria from digging through the embankment.

Harassment and Repellents

Nutria are wary animals and will try to escape when threatened. When new burrows are discovered early on, the entry holes can be stuffed with rocks, balled-up window screen, and/or rags sprinkled with predator urine (mink, coyote, or bobcat—available from trapper supply outlets and over the Internet). Some people have had success using old cat litter in this way. Exposing their tunnels from above may also work. The success of this type of control depends on persistence from the harasser and thus is often short-lived.

Loud noises, high-pressure water sprays, and other types of harassment have been used to scare nutria from lawns and golf courses. However, the success of this type of control is usually short-lived and problem animals soon return. Large dogs that are awake during the night can be effective at keeping nutria out of areas. Bold nutria often intimidate small dogs.

Crop Location

Unfenced crops and gardens located close to water will be more attractive to nutria than those further from water. If you have a choice of where to locate your garden, consider nutria damage. Natural vegetation buffers next to water bodies can provide feeding areas and reduce the attractiveness of vegetation further from the water.

Trapping and Lethal Control

Nutria are easily captured in single door three or four foot long live traps. Bait live traps with sweet potatoes or carrots and place them along active trails or wherever nutria or their sign are seen. A small amount of bait leading to the entrance of the live trap will increase capture success.

Due to its classification as a Prohibited Aquatic Animal Species (see “Legal Status”), all live-trapped nutria should be euthanized and not returned to the wild.

When cornered or captured, nutria are aggressive and can inflict serious injury to pets and humans. Extreme care should be taken when handling captured nutria.

Trapping may not be legal in some urban areas; check with local authorities. See the handout “Trapping Wildlife” for additional information, including euthanization.

Since nutria are usually found in waterways, there is often an unlimited supply of replacement animals upstream and downstream from where the damage is occurring. Rapid immigration coupled with a high reproductive rate makes ongoing lethal control a “high-effort” method of damage control that is often ineffective. (Lethal control can be effective in areas where the local population of nutria is still small.) The methods described and referenced in “Preventing Conflicts” are the best long-term solution.

Shooting has been an effective in eliminating small isolated groups of nutria. For safety considerations, shooting is generally limited to rural situations and is considered too hazardous in more populated areas, even if legal. No fumigants are currently registered for nutria control.

Public Health Concerns

Nutria, rabbits, hares, voles, muskrats, and beavers are some of the species that can be infected with the bacterial disease **tularemia**. **Tularemia** is fatal to animals and is transmitted to them by ticks, biting flies, and via contaminated water. Animals with this disease may be sluggish, unable to run when disturbed, or appear tame.

Tularemia may be transmitted to humans if they drink contaminated water, eat undercooked, infected meat, or allow an open cut to contact an infected animal. The most common source of tularemia for humans is to be cut or nicked by a knife when skinning or gutting an infected animal. Humans can also get this disease via a tick bite, a biting fly, ingestion of contaminated water, or by inhaling dust from soil contaminated with the bacteria.

A human who contracts tularemia commonly has a high temperature, headache, body ache, nausea, and sweats. A mild case may be confused with the flu and ignored. Humans can be easily treated with antibiotics.

Nutria are among the few animals that regularly defecate in water, and their droppings (like those of humans and other mammals) may cause a flu-like infection when contaminated water is ingested. The technical name for this illness is “giardiasis.” It is more commonly referred to as “giardia”—derived from *giardia*, the single-cell protozoa that causes the disease. Another popular term, “beaver fever,” may be a misnomer. It has never been demonstrated that the type of giardia beavers carry causes giardiasis in humans. Giardia has been found in many animal species, including pets, wildlife, and livestock.

Anyone handling a dead or live nutria should wear rubber gloves, and wash his or her hands well when finished.

Legal Status

The nutria is classified as a Prohibited Aquatic Animal Species (WAC 220-12-090). Due to this classification, all live-trapped nutria should be euthanized and not returned to the wild.

No special trapping permit is necessary for the use of live traps. However, a special trapping permit is required for the use of all traps other than live traps (RCW 77.15.192, 77.15.194; WAC 232-12-142). There are no exceptions for emergencies and no provisions for verbal approval. All special trapping permit applications must be in writing on a form available from the Department of Fish and Wildlife (WDFW).

It is unlawful to transport nutria, and all other wildlife, anywhere within the state without a permit to do so (RCW 77.15.250; WAC 232-12-271).

Additional Information

Books

Verts, B. J., and Leslie N. Carraway. *Land Mammals of Oregon*. Los Angeles: University of California Press, 1998.

Internet Sites

USDA National Invasive Species Information Center:

<http://www.invasivespeciesinfo.gov/aquatics/nutria.shtml>

Virtual Dirt Time: An Adventure in Tracking Online:

<http://dirttime.ws/Notebook/Nutria.htm>

Adapted from “Living with Wildlife in the Pacific Northwest” (see <http://wdfw.wa.gov/wlm/living.htm>)

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