

OTTERS



Figure 1. River otters (*Lontra canadensis*). Photo by Jim Leopold of FWS.

OBJECTIVES

1. Understand the biology of river otters and why they have important recreational and aesthetic values.
2. Explain control options and restrictions to clients.
3. Explain why snares are not ideal for controlling river otters.

SUMMARY OF DAMAGE PREVENTION AND CONTROL METHODS

HABITAT MODIFICATION

No practical solution

EXCLUSION

3 x 3 inch fencing

Electric fencing

FRIGHTENING

Nothing is effective

REPELLENTS

None are available

TOXICANTS

None are registered

FUMIGANTS

None are registered

SHOOTING

Rifle, .22 cal

Shotgun, 12-gauge

TRAPPING

Cage traps at least 12 x 12 x 48 inches long

Conibear®-style traps (No. 220, 330)

Padded-jaw foothold (No. 1.5 in 4-coil configuration, No. 3-2 coil))

Double-long spring (No. 11 laminated)

Snares ($\frac{3}{32}$ aircraft cable with multiswivels)

OTHER CONTROL METHODS

None are known

SPECIES PROFILE

IDENTIFICATION

River otters (*Lontra canadensis*) are best known for their continuous and playful behavior, their aesthetic value, and the value of their durable, high-quality fur. They have long, streamlined bodies, short legs, and a robust, tapered tail, all of which are well adapted to their mostly aquatic habitat (Figure 1). They have prominent whiskers just behind and

below the nose, thick muscular necks and shoulders, and feet that are webbed between the toes. Their short but thick, soft fur is brown to almost black except on the chin, throat, cheeks, chest, and occasionally the belly where it usually is lighter, varying from brown to almost beige.

Adult males attain lengths of nearly 45 inches and weights of about 25 pounds but may reach 45 inches and 31 pounds. Sex is distinguished by the presence of a baculum (penile bone). Females have four mammae on the upper chest and are slightly smaller than males. Female adults measure about 36 inches and weigh 19 pounds. The mean weights and sizes of river otters in southern latitudes tend to be lower than those in latitudes farther north.

SPECIES RANGE

River otters occur throughout North America except on the arctic slopes, the arid portions of the Southwest, and the intensive agricultural and industrialized areas of the Midwestern US (Figure 2).



Figure 2. Range of river otter. Image by Stephen M. Vantassel.

VOICE AND SOUNDS

Otter vocalizations include a snarling growl or hissing bark when disturbed, loud piercing screams when injured, low grunts when playing or travelling, and a loud snort through the nose when alarmed. A chirp is not as frequent as low-frequency chuckles uttered when in groups.

TRACKS AND SIGNS

Otters habitually use specific sites (toilets) for defecation (Figure 3).



Figure 3. Otter latrine in sandy soil. Scat is in the upper right portion of the photo. Photo by Amy Williams.

Otters usually eat entire small catfish except for the head and major spines, whereas small trout, salmon, and many of the scaled fishes may be totally eaten. Uneaten fish carcasses with large puncture holes suggest heron predation.

GENERAL BIOLOGY

River otters are nocturnal but they are frequently active during daylight hours in undisturbed areas. The basic social group is the female and her offspring. They spend much of their time feeding and at group play, repeatedly sliding down steep banks of mud or snow. They are powerful swimmers and exhibit great activity, characteristics that give them immense aesthetic and recreational value. Their webbed feet, streamlined bodies, and long,

tapered tails enable them to move through water with agility, grace, and speed. Seasonally, they may travel distances of 50 to 60 miles along streams or lake shores, and their home ranges may be as large as 60 square miles. Males have been recorded to travel up to 10 miles in a single night.

REPRODUCTION

Sexual maturity in young probably occurs at about 2 years of age in males and females. Occasionally, a yearling female will produce young. The reproductive biology of river otters and other weasels is complex because of a characteristic known as delayed implantation. Mating occurs between December and April. The fertilized eggs (blastocysts) exist in a free-floating state until the following winter or early spring. When they implant, fetal growth lasts 60 to 65 days until kits are born between February and April in most areas. In the southern portion of the range the dates of birth are earlier, in January and February, implying implantation in November and December. Litters usually contain two to four kits, and only the female cares for the young. The female and her young usually remain together as a family group through the fall and into the winter.

NESTING COVER

River otters use a variety of denning sites that seem to be selected based on availability and convenience. Hollow logs, rock crevices, nutria houses, and abandoned beaver lodges and bank dens (Figure 4) are used as dens. River otters have been found living in lodges with beavers. They will frequent unused or abandoned human structures or shelters. Natal dens tend to be located on small headwater branches or streams leading to major drainages or lakes.



Figure 4. Entrance to the den of a river otter. Photo by Amy Williams.

BEHAVIOR

River otters are active year round. Young, at 12 to 13 months of age, disperse in April and May. Family groups of otters tend to reduce daily movement by almost 50% during winter months.

Their precolonial range apparently included all of North America except the arid Southwest and the northernmost portions of Alaska and Canada. Otter populations are confined to water courses, lakes, and wetlands, and therefore, population densities are lower than those of terrestrial species. Their extirpation from many areas is believed to have been related more to poisoning by pesticides bio-magnified in fishes, and to the indirect adverse effects of water pollution on fish, their main food, than to excessive harvest. The loss of ponds and other wetland habitat that resulted from the extirpation of beaver in the late 1800s may have adversely affected continental populations of river otters more than any other factor. Increases in the range and number of river otters in response to the return of beaver has been dramatic, particularly in the southeastern U.S. Releases totaling more than 1,000 otters have been made in Arizona, Colorado, Iowa, Kansas, Kentucky, Missouri, Nebraska, Oklahoma, Pennsylvania, Tennessee, and West Virginia in efforts to reestablish local populations.

HABITAT

River otters are almost invariably associated with water (fresh, brackish, and salt water), although they may travel overland for considerable distances. They inhabit lakes, rivers, streams, bays, estuaries, and associated riparian habitats. They occur at much higher densities in the Great Lakes regions, in brackish marshes and inlets, and in other coastal habitats than farther inland. In colder climates otters frequent rapids and waterfall areas that remain ice-free. Vegetative cover and altitude do not appear to influence distribution as much as adequate water quality, the availability of forage fish, and suitable denning sites.

FOOD HABITS

River otters eat about 2½ pounds of food per day. The diet of river otters throughout their range includes numerous species and varieties of fresh and anadromous fishes and crayfish. Otters prey opportunistically on amphibians, reptiles, and crustaceans. They rarely eat birds, though otters are one of the main predators of beaver in the boreal forest. Consumption of game fish in comparison to nongame (rough) fish is generally in proportion to the difficulty or ease with which they can be caught. The loss of warm water sport fish are believed to be minor in comparison to the loss river otters can inflict on cold water species such as trout and salmon; there are abundant alternate food species in warm water.

LEGAL STATUS

River otters are listed in Appendix II of the Convention on International Trade in Endangered Species of Flora and Fauna (CITES). The inclusion in this appendix subjects river otters to international restrictions and state/province export quotas because of their resemblance to European Otters. River otters are totally protected in 17 states. Twenty-seven states, including Alabama, have

trapping seasons, and four states and two provinces have hunting seasons.

DAMAGE IDENTIFICATION

River otter damage is minor compared to that of other species, and their legal status under the CITES Agreement have resulted in little control research and experimentation for these animals. Careful assessment should be made of reported damage to determine if nonlethal preventative measures can be employed and to ensure that if any lethal corrective measures are employed they do not violate state or federal laws. Damage problems should be approached on an individual basis.

Otter scats or toilets that contain scales, exoskeletons, and other body parts of the species being produced are evidence that damage is ongoing. Uneaten parts of fish in shallow water and along the shore are evidence that fish are being taken. River otters occasionally cause substantial damage to populations of fish in marine aquaculture facilities. The damage often involves learned feeding behavior by one or a family of otters.

DAMAGE TO STRUCTURES

Otters damage boats by tearing covers and contaminate areas through defecation.

DAMAGE TO PETS AND LIVESTOCK

The presence of river otters around or in a fish hatchery, aquaculture, or fish culture facility is a good indication that a damage problem is imminent. Inherently slow moving channel catfish are more vulnerable to otter predation than scaled fish. Otters can represent a threat to pets in park areas when they occupy stocked ponds in urban locations. Otter may react aggressively to domestic dogs with lethal force.

DAMAGE TO LANDSCAPES

Otters cause only occasional damage to gardens and landscapes.

HEALTH AND SAFETY CONCERNS

River otters are susceptible to canine distemper and can contract parasites such as the giant kidney worm and *Toxoplasma gondii*. A study in California showed that 17% of otters tested positive for *T. gondii*.

DAMAGE PREVENTION AND CONTROL METHODS

INTEGRATED PEST MANAGEMENT

TIMING, ECONOMICS, AND METHODS

Otters are active throughout the year. Control of damage should be initiated as soon as legally possible.

Although individual incidences of river otter damage and predation can cause substantial loss to pond owners to fresh water and marine aquaculture interests, their total effects are believed to be insignificant. Given the aesthetic and recreational value and current legal status of river otters, consideration of broad control programs is unwarranted and undesirable.

HABITAT MODIFICATION

No practical habitat modification has been found to control river otters.

EXCLUSION

Fencing with 3 x 3 inch or smaller mesh wire can be an economically effective method of preventing damage at aquaculture sites that are relatively small, or where fish or aquaculture activities are concentrated. Fencing is more economical for

protection of small areas where research, experimental, or propagation facilities, such as raceways, tanks, ponds, or other facilities hold concentrations of fish. Hog wire-type fences also have been used effectively but these should be checked occasionally to ensure that the lower meshes have not been spread apart or raised to allow otters to enter.

Electric fences have also been used but they require frequent inspection and maintenance and like other fencing, usually are impractical for protecting individual small ponds, raceways, or tanks in a series. They are of greater utility as a supplement to perimeter fences surrounding an aquaculture facility. Use at least four strands separated at 4 to 5 inches with the lowest strand 4 inches off the ground.

FRIGHTENING DEVICES

No frightening devices are effective for otter control.

REPELLENTS

No repellents are available for otter control.

TOXICANTS

No toxicants are registered for otter control.

FUMIGANTS

No fumigants are registered for otter control.

SHOOTING

Shooting offending otters will often effectively prevent continued losses. Although shy, otters are inquisitive and will often swim within close range of a small rifle or shotgun. Extreme caution should be taken to avoid ricochet when shooting a rifle at objects surrounded by water.

Permits to remove an otter causing damage at aquaculture facilities are available from District

Wildlife and Freshwater Fisheries offices. Check local, state, and federal laws and permit requirements governing shooting, the use of lights after dark, seasons, and possession of otter carcasses or parts to ensure that all control activities are legal.

TRAPPING

CAGE TRAPS

Cage traps 12 x 12 x 48 inches or larger are effective for capturing otters (Figure 5). Use 72 inch cages for double-door traps. Place on land, partially in water, or in floating sets. Bait with fresh fish or crayfish. Live bait is preferable where legal.

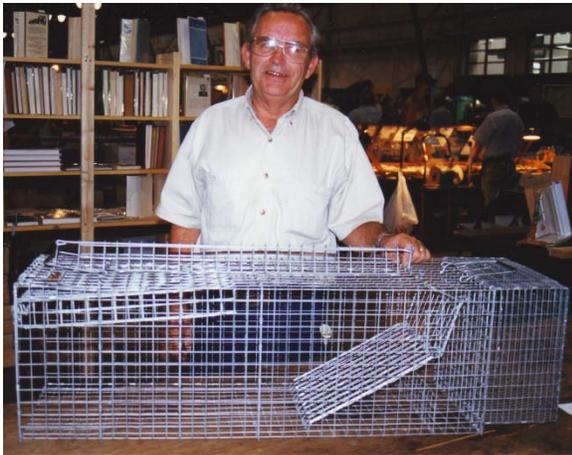


Figure 5. Inventor William Weeks of Lightning Trap Company with his otter cage trap. Photo by Stephen M. Vantassel.

BODY GRIPPING TRAPS

Conibear® (sizes 220 and 330) or other similar body-gripping traps are usually placed beneath the water surface or partially submerged where runs become narrow or restricted (Figure 6). Alabama regulation 220-2-.30 requires all Conibear or body gripping traps with a jaw width exceeding five inches to be used in water sets only. They are effective when partially submerged at dam crossings, main runs in beaver ponds, or other locations where otters

frequently leave the water. Body-gripping traps are also effective in otter trails that connect pools of water or that cross small peninsulas. In these sets the trap should be placed at a height to blend with the surrounding vegetation to catch an otter that is running or sliding. After ice forms on the surface of streams and lakes some trappers bait the triggers of body-gripping traps with whole fish. River otter trapping is legal in Alabama but prohibited in 21 states and one Canadian province.

The 220 body grip is the optimum configuration for otters in terms of size and killing efficiency. It works well in baited sets where the approach to the trap can be better controlled by means of fencing, cubbies or bait boxes.

For blind sets on beaver runs, dams sets or toilets the 330 body grip is more efficient at catching but often poor catches are made around the belly of the otter rather than a lethal neck or chest catch. For this reason only hard hitting magnum traps in this size should be used and the traps should be set to slide or entangle in deep water whenever possible so that a poorly caught animal drowns quickly. Spreading the trigger wide and using a stainless wire filament stretched between the tips of the trigger will give a more consistent lethal strike on an otter when using the larger body grip traps.

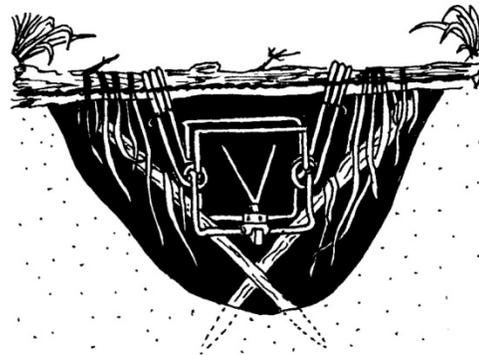


Figure 6. Body-gripping trap suspended with a pole through the spring loops in a channel set to capture a river otter. Image by PCWD.

FOOTHOLD TRAPS

Padded-jaw (No. 1½) and double-longspring (No. 11 with laminated jaws) footholds have been used effectively to capture river otter. They also have been employed to capture river otters for restocking purposes. If a No. 1.5 padded-jaw trap is used then the four coil configuration is best. The standard No. 1.5 padded-jaw with two springs may not hold a big otter.

Make sets in narrow trails and pullouts where shallow water forces otters to walk rather than swim. Placement of traps in shallow edges of trails leading to otter toilets or other areas frequented by otters are also effective. Foothold traps set on land trails and peninsula crossings should be covered with damp leaves or other suitable covering.

If lethal sets are desired, attach footholds to slide-wire (16 gauge) leading to water at least 4 feet deep.

SNARES

Snares are neither the most efficient nor the most convenient devices for capturing river otters and should not be the first choice for control. Snares are only legal in Alabama when used in water sets. A good snare is made with $\frac{3}{32}$ aircraft cable, a sliding lock, several swivels, and No. 9 wire. Secure the snare to a tree at least 12 inches in diameter or to stakes anchored in the soil as trapped otters will not stop fighting. The loop of the snare should be 5 to 6 inches in diameter and set to close quickly. Set snares at the bottom of otter slides, crossovers, or other trails used by otters in water environments. Otters damage snares; do not reuse them after a capture. While snaring may cause moderate injuries to otters, most can be released unharmed.

HANDLING

RELOCATION

Relocation of otter is illegal within Alabama.

TRANSLOCATION

Since otters can travel great distances, translocation is not practical for most situations and is illegal in Alabama.

EUTHANASIA

River otters may be euthanized with carbon-dioxide. For euthanasia by shooting, draw an imaginary line between the left eye and right ear and another between the right eye and left ear and place a .22 caliber bullet or greater at the intersection.

DISPOSAL

Refer to Volume 1 of the National Wildlife Control Program and your state regulations regarding carcass disposal.

OTHER CONTROL METHODS

No other control techniques are available for river otter control.

ACKNOWLEDGMENTS

- Figure 1 from Schwartz and Schwartz (1981)
- Figure 2 from Toweill and Tabor (1982), adapted by Dave Thornhill, University of Nebraska-Lincoln
- Figure 3 by Clint Chapman, University of Nebraska-Lincoln

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repellents and toxicants in accordance with the EPA-approved label and your local regulations.

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RESOURCES

KEY WORDS

River otters, wildlife damage management, nuisance wildlife control, nwco

ON-LINE RESOURCES

<http://pcwd.info>

<http://icwdm.org>

Trapperman.com

DISCLAIMER

Implementation of wildlife damage management involves risks. Readers are advised to implement the safety information contained in Volume 1 of the National Wildlife Control Training Program.

Some control methods mentioned in this document may not be legal in your location. Wildlife control providers must consult relevant authorities before instituting any wildlife control action. Always use