

FOR-173

Identifying and Addressing River Otter Damage Issues in Kentucky

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River otters (*Lontra canadensis*) were once abundant throughout North America, but unregulated harvest, water pollution, and overall habitat degradation decimated river otter populations across the contiguous United States. By the early 1900s, river otters were scarce in Kentucky; however, due to restoration programs implemented by Kentucky Department of Fish and Wildlife Resources (KDFWR), this species has rebounded in the state. River otters can now be found throughout Kentucky.

River otters have a streamlined body, with thick muscular necks and shoulders (Figure 1a). Otters have wide heads, often as wide as their necks. Otters have short legs that they hold parallel to their bodies as they swim. Otters use their webbed feet to efficiently propel themselves through water. Otter tails are long and flattened, so that they appear wide from the top and narrower from the side.

River otter fur is short and typically two-toned. Dorsally (on top) otters have dark-brown fur that can appear black when wet. Ventrally (below), the fur is typically lighter brown to beige. This coloration, known as countershading, helps otters to avoid predators from above and hide from prey below. On the muzzle, otters have prominent whiskers

for sensing prey movement. River otters are adapted to a semi-aquatic lifestyle and can typically be seen “playing” in a stream, river, or alongside the banks of a waterway.

Typically, otters in northern regions are larger than otters in southern regions, and males are usually larger than females. The average male otter weighs 25lbs and is 48in long including the tail while the average female otter weighs 19lbs and is 44in long. However, because there is overlap in body size between males and females, it can be difficult to determine the difference between male and female otters without having them “in hand.” Females can be distinguished from males by four mammary glands on the abdomen and males from females by the presence of a baculum (penile bone). Sexual maturity of both males and females occurs around two years of age; although, reproduction has been reported in yearling females.

Breeding generally begins in December and ends in April, with an approximate 60-day gestation period. An interesting feature otters have is delayed implantation which help aid in timing birth of litters to periods when resources are more abundant and helps increase their chance for survival to adulthood. Litters will be born



Figure 1. River otters (A) are becoming a common sight across Kentucky and as this species will sometimes be highly social are sometimes seen in large group. A very close relative to the river otter, the American mink (B) is found in many of the same areas as river otters, but they are substantially smaller in size. Photo courtesy: Shutterstock

as early as January and as late as June, with peak birth numbers from February through April. Litter size varies between one and three pups; however, litters of five individuals have been recorded. Pups are born blind and toothless; they can remain with the mother for up to three years. In this time, the mother will provide food for the pups while teaching them to hunt. With adequate food sources, suitable habitat, and lack of predators, river otters can be relatively long lived with records of individuals surviving 17 years in the wild and over 20 years in captivity.

Otters have two main prey groups: fish and crayfish; however, otters will also consume amphibians, snakes, birds, mollusks, insects, and small mammals. Prey selection is often based on abundance and catchability (i.e., what's available and easiest to catch). In colder months, fish are more accessible to otters, as colder water slows fish down and makes them easier for otters to catch. In summer months, crayfish become available as waters warm, while fish swim faster and are more difficult to catch than in winter. Thus, otters typically increase their consumption of easy-to-catch crayfish in the summer months, although fish still remain a large part of their diet.

Otters do not have many aquatic or terrestrial predators. In coastal regions, orcas, *Orcinus orca*, (Pacific coast) and alligators, *Alligator mississippiensis*, (Gulf coast) will prey on otters, but in Kentucky, aquatic predation is rare. On land, otters lose their agility and become vulnerable to terrestrial (land) predators, including coyotes and domestic dogs. The highest otter mortality within Kentucky is most likely human-caused events: trapping, shooting, roadkill, and accidental capture in fishing nets or set lines.

IDENTIFYING OTTER PRESENCE

Although river otters spend a large part of their time in the water of lakes, rivers, and streams, they frequently leave the water providing several forms of evidence of their presence. Commonly confused with their close relative the mink (*Neovison vison*; Figure 1b.) but also occasionally confused with weasels (*Mustela spp.*), and sometimes beavers (*Castor canadensis*) and muskrats (*Ondatra zibethicus*), otters can easily be distinguished from other semi-aquatic mammals by their body characteristics and behavior.

Tracks

River otter tracks are probably the most abundant form of evidence and are easily identified. Typically, the forefoot measures 2-3 inches wide, and 3-4 inches long; the hind foot measures 3-4 inches wide and 4-5 inches long. Otter tracks are similar to others in the weasel family. Tracks are asymmetrical, with five toes, claws, and a c-shaped palm. In the natural environment, not all of these features are always seen in otter tracks due to variation in substrate (ground) conditions. Often, tracks will show four toes instead of five, or have no claw marks present.



Figure 2. Otter tracks have circular pads with toes visible and depending on the substrate the webbing between toes will sometimes also be seen. Photo courtesy: Stacy White, University of Kentucky

Slides, Trails, and Tail Drags

Otter slides and tail drags are often useful to confirm their presence. Slides are often 6-10 inches wide, can vary in length, and are mostly found near water. When sliding uphill, the slide will be punctuated by track marks. On downhill slides, the slide will be continuous. Tail drags occur when the otter is walking or galloping. When tail drags are present, there will be a line approximately 12 inches in length and wider at base and slimmer at the tip accompanying the tracks. Because otters are highly social it is common to see more than one set of tracks or slides at a location. It must be noted that otters will use beaver slides when available which have similar characteristics to otter slides. Examination of the area around slide usually yields tracks, scat, or feeding sign that help identify which species are currently in the area.

Scat

Otter scat is typically found along waterways, on logs, or in communal latrines (i.e., areas where multiple otters defecate). A distinguishing factor that helps to distinguish otter scat from that of other animals is that otter scat is generally packed with fish scales, crayfish exoskeletons, bones, and other undigested animal material. Otter scat can occasionally be confused with raccoon (*Procyon lotor*) and coyote (*Canis latrans*) scat, but there are distinctive characteristics between each species' scat. Since otters are strictly carnivores (while raccoon and coyotes are omnivores), you will never find berries or other plant materials in otter scat. Raccoon scat, in contrast, will commonly contain berries or other plant material. Coyotes, while omnivorous, are typically distinguished from otters from the high abundance of fur in their scat. Although rare,

otters might opportunistically consume a small aquatic mammal; regardless, otter scat will not contain fur in the abundance of that in coyote scat.

DAMAGE IDENTIFICATION

Common damage issues include consumption of fish in stocked ponds and the use of boat docks and fishing piers as latrine sites, which can require routine clean-up and can be sources of disease (bacteria, parasitic, etc. as well as damage to carpet and/or seats on boats or anything else that can be assessed from docks.

Before developing an otter control plan, be sure to correctly identify the source of the problem. Partially consumed fish aren't automatically indicative of otter presence. Fish deaths can have a variety of natural causes including but not limited to: illness, parasites, and low oxygen levels. Dead fish will float to the surface and become available to a variety of scavengers, including raccoons, skunks, mink, birds-of-prey, and others. Although a visual sighting is best, it is not always possible to identify an otter at a distance. A combination of fish heads, tracks and scat will provide more certainty of otter presence in an area. The use of trail cameras to monitor suspected areas can aid in the confirmation of the animals causing the issue as otters are easily captured on these cameras if present when placed at suspected areas. If you suspect an otter issue, but are uncertain, contact your local county Agriculture and Natural Resource Extension agent to help confirm the cause of the problem.

Species Often Confused with River Otters:

Correctly identifying otter presence can be challenging, especially if you've only had a quick glance of the animal or sign (tracks, scat, or damage). Species that are often confused with otter are beavers, raccoons, mink, and muskrats. Knowing a little about each of these other species can help you easily distinguish them from otters.

Beaver

Beavers are confused with otters because beavers and otters look alike while swimming, and both leave slides along the banks. When swimming, beavers have their backs and head out of the water, while river otters have just their head and neck above the water's surface. Slides can be almost indistinguishable, but chewed trees and sticks are a telltale sign of a beaver, while fish heads are indicative of otters. Beaver scat is easily distinguished from otter scat by its lack of fish scales and crayfish remains, cylindrical shape, and often sawdust like texture. In addition, both beaver and otter tails are flattened; however, beaver tails are flattened like a wide, rounded paddle, while otter tails are much narrower, taper to a point, and are covered with fur.

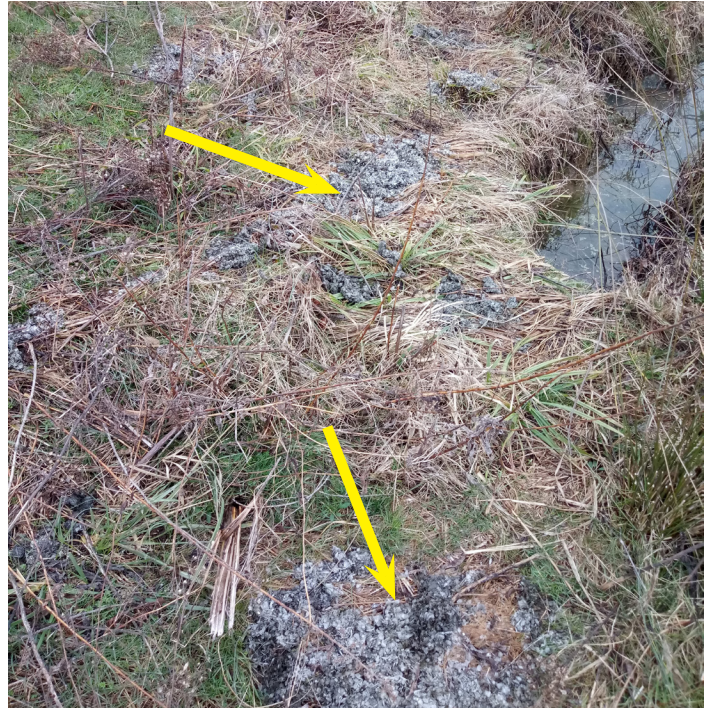


Figure 3. Otter scat is fairly easily identified as it often has fish or crayfish parts in it and is found at latrine sites, locations used repeatedly for voiding their bowels and communication to other individuals. Photo courtesy: Stacy White, University of Kentucky



Figure 4. Otter trails and slides are often easily visible as they repeatedly travel them making it a great location to place traps during control efforts. Photo courtesy: Stacy White, University of Kentucky

Raccoon

As mentioned previously, raccoons and otters have scat that resembles one another. Raccoon scat, however, will consist of berries and other vegetation while otter scat is primarily composed of fish scales, especially in the winter months. Raccoon tracks can be distinguished by their shape (raccoon tracks often resemble pointed hands or a five-pointed flipper), and otters, unlike raccoons, have webbing between their toes which can be present in an otter track.

Mink

Because mink and otters are in the same family (*Mustelidae*), they highly resemble each other. To tell these two species apart, size is the most important factor. Otters are large, almost four feet long, while mink are significantly smaller, measuring less than two feet in length. Mink tracks will also resemble those of otters in appearance, however they are much smaller (up to 2in x 2in). Additionally, the tails of mink are short and slightly bushy; whereas, otter tails are long, sleek, and tapered.

Muskrat

Musk rats could be confused with otters as they swim; although, like with mink, size is the key factor in determining the different. Muskrats are medium sized rodents that measure 1-2 feet long, while river otters are 2-4 times longer than a muskrat. Additionally, the tails of muskrats are small, slender, and can appear smooth from a distance, while otter tails are longer, thicker, and visibly furred.

DAMAGE PREVENTION AND CONTROL

Dealing with otters can be difficult, as otters are agile, curious, and can get around many types of exclusions. There are various options to help prevent future damage and provide at least a level of damage control for many potential otter-human issues. Like all wildlife-human conflicts, however, dealing with otter damage, no matter the method used, will ultimately be a short-term fix to a long-term problem. Prevention methods, generally more costly, tend to have longer success at keeping problems from reoccurring as lethal methods will likely have to be repeated in the future as new issues arise.

Non-lethal options:

Otters can be discouraged from areas by sealing existing den sites and water impoundment outlets (i.e., culverts, drainage pipes, etc.). The sealing of water impoundment outlets should be done to allow water flow, but exclude otters. Fish loss from otters can be reduced by providing fish escape options from predation, thus increasing the difficulty for otters to catch them. This can be done by maintaining aquatic vegetation and placing brush or other structures in the water impoundment or pond to provide fish a place to hide.

Electric fencing or netting is also an option, but it is often too expensive or impractical for larger areas. If using electric fence, use at least four strands, spaced 4-5 inches apart. These strands should be tight and clear of weeds to prevent grounding. The bottom wire should also be low to the ground. The goal is to make spacing between strands small enough that an otter cannot pass through without getting shocked.

Otter removal may be necessary if damages are significant. Relocation is rarely the best solution because otters have to be moved long distances to prevent their return. In addition, the moving of wildlife should be done carefully and according to local regulations, as diseases and parasites travel with their host and may infect more individuals and spread disease. In areas where otter populations are high, understand that removing one otter may mean a new one moves in to take its place quickly.

Lethal options:

Lethal methods (hunting and trapping) should be used only when non-lethal options (exclusion, deterrence etc.) are not feasible or have been exhausted. Given that otters are managed at the state level dealing with damage issues is regulated on a state-by-state basis. Lethal methods can be used throughout the year depending on the situation. However, it is recommended removing otters during the state trapping season (mid-November to end of February) to provide the potential to sell the pelt if desired. During the trapping season, you can purchase a trapping license and trap the problem otter(s) yourself, or you can seek assistance from a licensed fur trapper to remove otters. Fur trappers will often trap otters for little or no charge since they may sell the otter's pelt for profit. KDFWR offers a trapper registry by county that can be used to find fur trappers in your area. Refer to KDFWR hunting and trapping guides for specific season dates and legal methods for trapping. Information to find Kentucky trapping regulations will be in the References section of this document. Trapping regulations may change year to year, so make sure to check the most up-to-date regulations.

Another option, particularly outside of trapping season, is to either personally obtain a Commercial Nuisance Wildlife Control (CNWC) permit, or hire someone who is a CNWC operator, to remove the nuisance otter(s). If you are dealing with otter issues on your personal property, then you have more legal powers related to dealing with the problem. The Kentucky Revised Statute, KRS 150.170 allows Kentucky citizens, or designees, the ability to remove nuisance wildlife at any time of the year if it is causing damage to your property as long as the species is not federally-protected. However, otters removed under this statute may not be used for any purpose (i.e., sale of pelt) and are required to be left onsite or destroyed.

To summarize, under KRS 150.170, you have the right to lethally remove an otter if it is a nuisance (causing damage) outside of the trapping/hunting season without tags/permit requirements, but you are not allowed to keep the otter pelt or carcass.

River otters are listed in the Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This means that although they are not currently threatened with extinction, their use and trade must be monitored to prevent overexploitation. KDFWR states that “harvested otters must be telechecked (a method of reporting) by calling 1-800-245-4263 by midnight on the day the animal is recovered, before processing the carcass, and before transporting raw fur, pelt, or unskinned carcasses out of Kentucky.” It is necessary to attach a KDFWR issued CITES tag to raw fur of a river otter taken in Kentucky you intend to sell or export internationally. If you have any questions, you can contact your local KDFWR conservation officer or wildlife biologist. These resources are listed in the *References* section.

Shooting

Shooting is a viable option if you have the time and ability to stalk an otter or time to wait to see one causing damage. Otters have poor vision and may not see a person nearby, and occasionally otters will become curious enough to even approach a hunter. Both rifles and shotguns can be used to shoot river otters in Kentucky. When choosing a rifle caliber to shoot an otter any rimfire or centerfire rifle is legal in Kentucky per KDFWR regulations at time of writing. At close range (50 yards or closer for a rifle;

30 yards or closer for a shotgun) any rimfire cartridge (i.e., .17 HMR, .22 long rifle) or shotgun gauge will work. There is no shot size restriction per KDFWR regulations for shotgun shells, but if possible use #5 shot or larger. If shooting longer distances, any .22 caliber centerfire cartridge or similar (i.e., .22-250, .223, etc.) is sufficient, but larger centerfire calibers can be used. As with anytime you are firing a weapon at or near water extreme caution should be taken to avoid ricochets by bullets off the water. Also, you need to be aware of any local regulations or ordinances relating to discharging weapons/firearms.

Trapping

Trapping is the most effective removal method; once set, a well-placed trap does the work for you. In other words, you can catch an otter without having to physically be there. However, traps do not discriminate between what they catch, the location must be chosen strategically in order to reduce bycatch (non-target animals). Common bycatch that occurs when trying to catch otters are beavers and raccoons. Beavers, raccoons, and otters often frequent the same trails and travel corridors where traps are likely to be placed. Additionally, otters and beavers often use the same slides and trails to access water. Proper placement of traps is important to help limit bycatch, particularly when domestic animals and other species that could cause undesired issues are in the area.

Otters can be trapped in a variety of traps, including cage traps, footholds, and body-grip traps. Correctly choosing a trap will depend on your objectives and trap location. When trapping, make sure that all traps are anchored



Figures 5 & 6. Common trap sets for otters along trails and in pinch points both on land and in the water to trap them using a body gripping trap (conibear). These sets can occur on land or water as long as the trap size remains smaller than the legal land trap jaw spread set by Kentucky Department of Fish and Wildlife Resources. Photo courtesy: Stacy White, University of Kentucky



Figure 6.

securely, so that captured animals cannot break free with the trap. Footholds are best anchored with cable stakes; body-grip traps with cable in conjunction with metal stakes, however multiple options exist to properly anchor traps just ensure that captured animals cannot unintentionally leave the area if trapped. Reference material is available online and in trapping manuals on how to set traps for the highest chance of success.

Cage traps for otters can be expensive and are often less efficient than other trapping methods; however, they offer the best method for live trapping otters and reducing harm to non-target animals. Cage traps come in a variety of forms and can be used baited or un-baited depending on the situation. Comstock traps are a fast-closing, versatile, and heavy-duty type of cage trap often used to trap beaver and otter. These can be placed along slides and trails in a variety of positions. Un-baited traps include runway traps and colony traps. (Colony traps are typically set underwater to drown otters). Baited cage traps can be set next to trails or in shallow water to live trap otters.

Foothold traps for otters can be effective choice, but may require a little more experience and trapping skill. These are often rigged so otters drown when captured; however, if the otter is not drowned caution should be used when dispatching the otter in order to prevent personal injury. Foothold traps can also offer a way to release non-target animals when drowning rigs are not used. Foothold traps can be set in or out of water, but there is a size limit on trap inside jaw spread for land traps in Kentucky (≤ 6 inches). (**NOTE:** Once again, check the most up-to-date state trapping regulations for the specific size).

Foothold traps are sized using numbers, with smaller numbers indicating a smaller trap; however, state trapping regulations go by the size of the jaw spread when the trap is set due to variation in trap sizing by different manufacturers. Therefore, jaw spread size is what you need to be concerned about when selecting a trap for land use. When trapping otters with foothold traps, use traps that have a jaw spread of four inches or larger. (**NOTE:** In Kentucky, any trap with an inside jaw spread of greater than 6 inches must be placed in water). Foothold traps can be placed in trails or at the bottom of slides, and are often used with bait or scent lures. Drowning sets are foothold traps that are placed near water and attached with a one-way slide on a cable that is anchored to both the bank and the bottom of the pond, lake, or stream in at least four feet of water. When caught, the otter will swim down the cable and will not be able to return to the surface for air due to the one-way slide.

A body grip trap is effectively a kill trap; however, to ensure a quick death, proper size and placement of the trap is important. Body grip traps are set in trails, slides, or channels that otters travel. Several sizes of body-grip traps can be used for otters, but the 220 (7in x 7in), 280 (8in x 8in) and 330 (10in x 10in) are the most common and effective. In Kentucky, 280s and 330s can only be set in water. If you want to set a body-grip trap on land for an otter, use the 220-sized trap. Use 280s and 330s at the bottom of slides and in swimming channels in the water. With body-grip traps, it is impossible to release bycatch, so make sure to place body-grip traps on known otter travel ways to reduce the chance of harming other species, pets, or other non-target species.

NOTE: Body grip traps can be dangerous if they are not handled or set properly. Using a set tool and a safety latch system can help ensure that setting and placing traps is as safe as possible. Additionally, steel traps are indiscriminate and some sets are lethal. When placing traps around populated areas, make sure to take precautions to avoid catching domestic animals (i.e., dogs and cats). This may mean using un-baited traps, or only setting traps in water for otters.

CONCLUSION

Otters are a key component in Kentucky's aquatic ecosystems and are often appreciated for their economic and wildlife-viewing value. As the otter population grows in Kentucky, there is an increased chance of conflict between otters and humans, usually relating to the use and management of water systems, fish farming, or recreational fishing in small farm ponds. Sightings, scat, sign, and damage can all be used to determine if otters are the cause of the issues that you are having. If otters are a problem, then deterrents or removal may be necessary to deal with the issue. Deterrents can be prohibiting further entrance to damaged areas by using fences or other barriers, but may not be practical in many situations. Lethal methods are always recommended to be used as a last resort, particularly in situations where hunting or trapping seasons are not open at the time the problem is occurring, however situations may arise where this is the quickest and most efficient solution. Individuals will have to make a determination on the best course of action for their given situations. Finally, it is important to note that wildlife-human conflicts are often a reoccurring issue and solving the problem now does not guarantee that the same or a similar problem will not occur again in the future.

References

There are a variety of resources in print and online. The following were used to create this document but are not the only resources available on the topic.

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Kentucky Hunting and Trapping Regulations

Kentucky Department of Fish and Wildlife Resources' Yearly Kentucky Hunting and Trapping Guides can be found at FW.KY.GOV

Contact Information

Kentucky Department of Fish and Wildlife Resources:
Local: 502-564-3400 | Toll Free: 1-800-858-1549
Email: info.center@KY.gov

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