NEBRASKA'S

Threatened and Endangered Species

River Otter

NEBRASKA GAME AND PARKS COMMISSION

Nebraska Biology Technical Note Handbook (NEBTNH)
Biology Technical Note 80
June 2009

River Otter — *An endangered species*

Status

The river otter *(Lutra canadensis)*, found in all major waterways of the United States and Canada, is native to Nebraska and was commonly reported in journals of early explorers of this area. Although early fur trappers generally were in pursuit of beavers, otters were also valued for their pelts, and considerable numbers were trapped. The take of river otters listed in the records of fur trading companies, including the famous Hudson's Bay and Northwest companies, indicate that otter harvest peaked in about 1800 when some 65,000 otters were taken in North America. Otter take gradually declined to a low of about 4,500 in 1904, about the time otters disappeared from Nebraska.

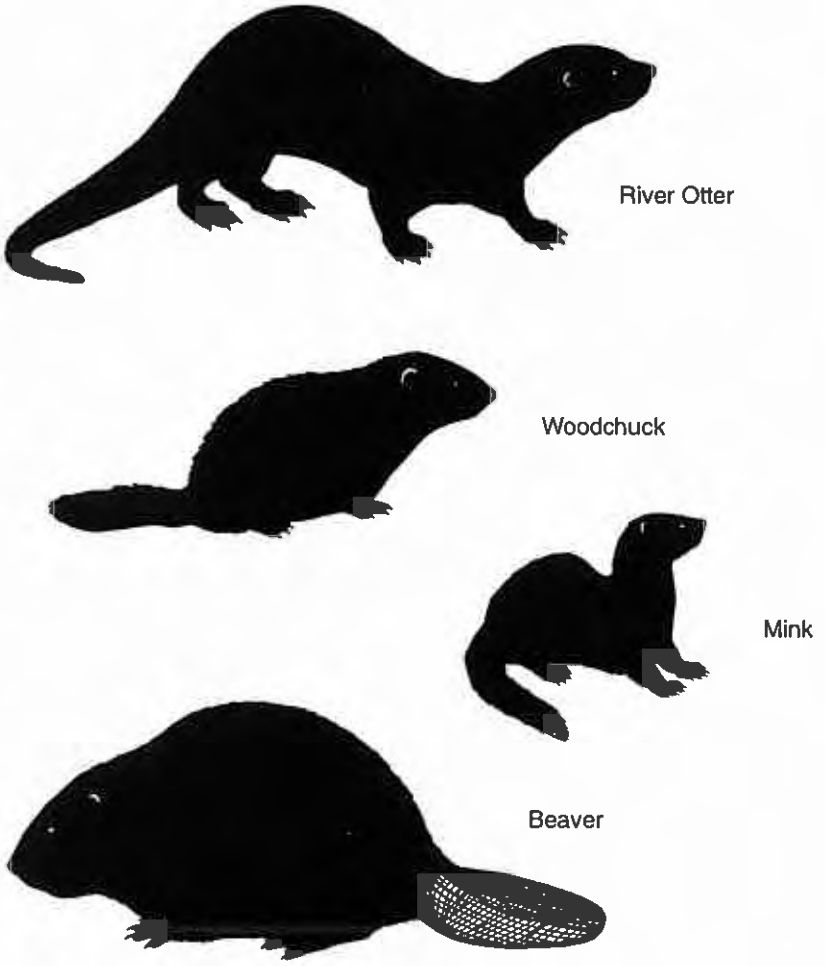
Unregulated trapping was probably the most important factor leading to the complete disappearance of otters from Nebraska. For about the next 75 years, few otters were reported from Nebraska, and none were verified. In 1977, an otter was inadvertently trapped along a tributary of the Republican River in Furnas County. Otters continued to be reported in various parts of the state, mainly in the Republican River drainage. Because otter sightings were infrequent and no concentrations of animals were ever found, it is likely the animals observed since 1977 were transients rather than part of an established population.

Although otters are endangered and fully protected in Nebraska and are uncommon in neighboring states, they are relatively abundant in Alaska, most of Canada, the Pacific Northwest, the Great Lakes states and most states along the Atlantic Coast and Gulf of Mexico. Currently, about half the lower 48 states, Alaska and all the Canadian provinces have otter trapping seasons. In some recent years, more than 50,000 otters have been taken in North America. The otter harvest in Louisiana sometimes exceeds 10,000 animals, usually surpassing that in any other state.

Although otters are common in many areas, their population densities, as predators near the top of the food chain, never approach those of animals lower on the food chain.

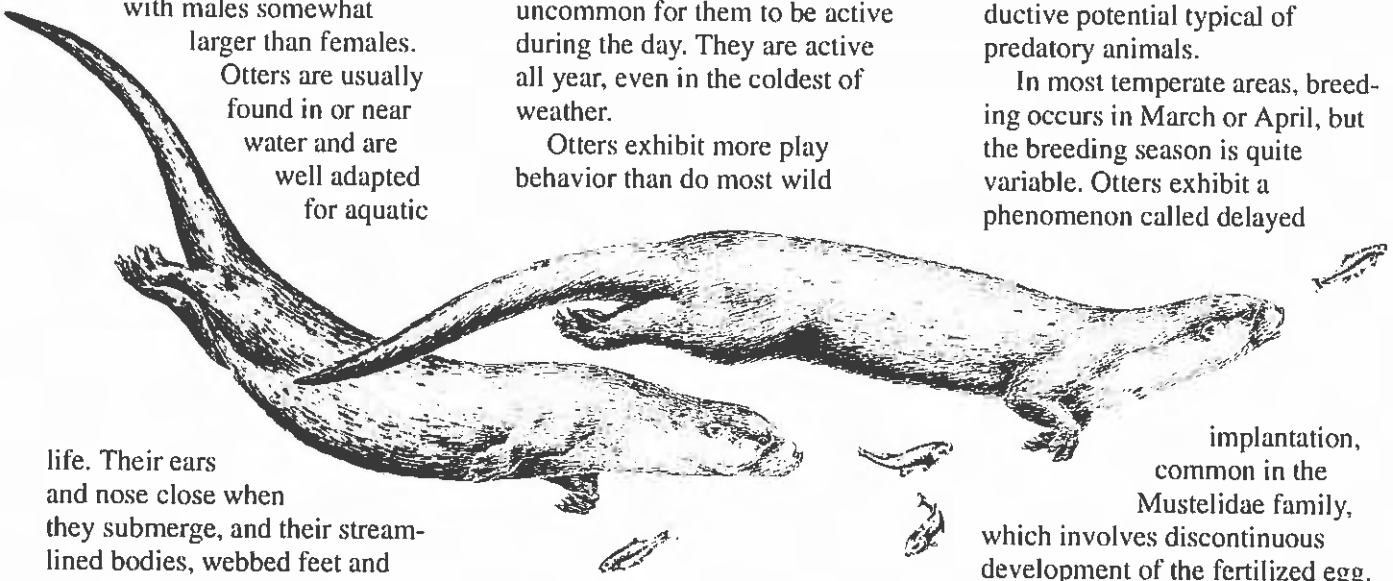
Description

The river otter is the largest member of the Mustelidae family which, in Nebraska, includes the mink, weasels, skunks and badger. Its body is long and slender, whiskers and nose pad are prominent, and the ears are small. Upper parts of the body are dark brown, and the underside is gray to brown. The tail is long and heavy, and it is furred the entire length. It is flat on the bottom and thick at the base, tapering toward the tip. The legs are short, with five webbed toes on each foot. Adult animals are three to four feet long, including



Size comparison of the river otter to species which look similar

the 12- to 18-inch tail, and generally weigh 15 to 25 pounds, with males somewhat larger than females. Otters are usually found in or near water and are well adapted for aquatic life. Their ears and nose close when they submerge, and their streamlined bodies, webbed feet and long tails contribute to their excellent swimming ability. Their eyes are located near the top of the skull, allowing otters to see above the surface while swimming nearly submerged. A fat layer under the skin and its dense, oily fur protect the otter in extremely cold water. The facial whiskers are extremely sensitive to touch, enabling the otter to locate food items in turbid water. The sense of smell is also acute, but the senses of sight and hearing are less well developed.



Habits

River otters require a large amount of space to meet their annual requirements. This home range varies considerably depending on age, gender and food availability. Throughout a year, an otter may occupy 50 or more miles of stream course. At any given time, otters may occupy only a few miles of stream, but will often move from one area to another.

River otters are most active from early evening through early morning, although it is not uncommon for them to be active during the day. They are active all year, even in the coldest of weather.

Otters exhibit more play behavior than do most wild animals, including wrestling, chasing other otters, tossing and diving for rocks and clamshells, the repeated capture and release of live prey and, occasionally, sliding. Although sliding can be a play activity, and otters will repeatedly slide down a wet bank, sliding is more commonly a wintertime mode of overland travel. Otters will bound several times, then use their momentum to slide in the snow for 10 feet or more.

Reproduction

River otters generally reach sexual maturity when they are two years old. Most females do not become pregnant until their third year. Although males become sexually mature at about two years of age, in high density situations they often are not successful breeders until about five years of age. Litter size varies from one to six, but litters of two or three are most common. The small litter size, along with the fairly late maturity, results in a low reproductive potential typical of predatory animals.

In most temperate areas, breeding occurs in March or April, but the breeding season is quite variable. Otters exhibit a phenomenon called delayed implantation, common in the Mustelidae family, which involves discontinuous development of the fertilized egg. After conception, the fertilized egg remains floating in the uterus for about nine months. The egg then implants in the uterine wall, and following a gestation period of about 60 days, the young are born — nearly a year after conception.

Young otters are helpless at birth, and their eyes do not open until they are at least three weeks old. Young otters grow quickly, and when they are about 60 days old, they venture from the den and are introduced to the water. The females are devoted parents, teaching the young to swim and even catching and releasing prey to improve the young otters' foraging skills. Adult male otters are not known to participate in caring for the young.

Young otters can care for themselves in about five or six months, but the family usually stays together for at least two months longer, often until the birth of a new litter. Although dispersal of young is quite variable, it generally occurs at about 12 to 13 months of age.

ILLUSTRATION BY NEAL ANDERSON

Food

Fish make up the greatest portion of the otter's diet. Crayfish are also an important food when available. Other foods include amphibians, insects, mammals and birds. Foods and foraging techniques vary in different areas and at different times of the year. In clear water, otters use their excellent swimming ability to capture fish by sight and direct pursuit. In murky water, they use their whiskers to locate prey.

Otters are opportunistic and will take foods that are most available. The most available fish tend to be the slower-swimming species and those that are most abundant. Although anglers are sometimes concerned that otters will have a detrimental effect on game fish, the fishing activity of otters has not been found to be a problem with sport fisheries. Food-habit studies have generally found game fish to be taken less often than the slower-swimming rough fish. Several authors suggest that otters may even improve a fishery by removing rough fish.

Otters have occasionally caused depredation problems at fish hatcheries and rearing areas. There, only game fish at artificially high densities are present, and the fish cannot escape capture. Otters have also been accused of damaging fur resources in some areas, but studies have shown predation on other furbearers to be very unusual.

Habitat

River otters are quite adaptable, utilizing a variety of habitat types. Although they frequent lakes and ponds, they typically live in marshes and along wooded rivers and streams with sloughs and backwater areas.

Otters live in dens in the ground most of the year. Otters rarely dig dens themselves; instead, they utilize dens built by beavers or other animals. Brush piles, root areas under large trees and similar sites are used as temporary homes. The presence of beavers in an area is important to otters, not only because of the dens they build, but also because the ponds created by beaver dams make ideal otter habitat.

Limiting Factors

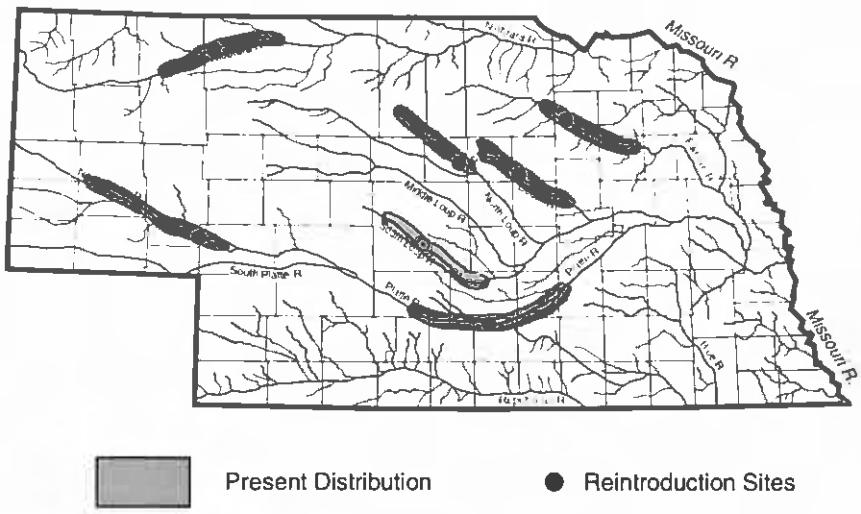
River otters have been reported to live nearly 25 years in captivity and about 15 years in the wild. They have few natural enemies, especially while they are in water. On land, young otters are vulnerable to a variety of predators.

Most otter mortality is related to the actions of humans. Although in many areas, the legal harvest of otters serves to remove animals that are part of an annual surplus above what the habitat will support, other human activities can be detrimental to otter populations. Because otters are fairly easily trapped, accidental trapping, primarily in beaver sets, can be a problem when otters are being established and their numbers are still low. In Nebraska, accidental trapping has been the largest known mortality factor for reintroduced animals.

Other detrimental human actions are more indirect and include habitat destruction and

Many states not included in the present distribution are reintroducing otters.

Historically, otters were found in rivers throughout Nebraska.
Otters are expected to expand their distribution from that illustrated.



the introduction of pesticides and pollutants into the food chain. Through biomagnification, pesticides and pollutants become more concentrated in the tissues of otters and other organisms at the top of the food chain.

Mercury, DDT, dieldrin and polychlorinated biphenyls have all been identified in river otter tissues. Little is known regarding toxic levels of these residues to otters or their effects on reproduction and long-term survival. These contaminants are known to cause a variety of problems in other wildlife and humans.

Management and Outlook

In 1986, the river otter was designated an endangered species in Nebraska. The Game and Parks Commission has the responsibility to undertake whatever actions are necessary to restore all endangered species populations to a more secure status. For the river otter, the goal is to restore a self-sustaining statewide population. To achieve that goal, a minimum of 20 animals was released at suitable sites on seven river systems in the state. Sources of wild-trapped otters included Wisconsin, Idaho, Michigan, Alaska, Louisiana, British Columbia and Ontario. Some otters were obtained from private trappers, while others were obtained through cooperative efforts of other fish and game agencies.

Between August 1986, and March 1991, releases were completed at seven sites including the South Loup River in Custer County, the Calamus River above Calamus Reservoir in Loup County, the North Platte River above Lake McConaughy, the Platte River near Kearney, the Cedar River in Wheeler County, the Elkhorn River in Antelope County and the Niobrara River in Sheridan County. With adequate legal protection as an endangered species and the continued availability of suitable habitat, otters are expected to expand their range from these release sites into suitable areas throughout Nebraska.

Early indications are that the otter project is off to a good start. Some otters have been lost to accidental trapping and collisions with vehicles, and some were found dead of unknown causes. However, losses have not jeopardized the success of the project, and efforts are being made to minimize the number of otters trapped and to reduce other human-related mortality. In part, optimism about the success of the otter reintroduction is based on frequent reports of animals, including some family groups, in the vicinity of the release sites. The excellent physical condition of recovered carcasses also indicates that otters are faring well in Nebraska. An interesting note is that two otters released on the South Loup River in Custer County were recovered along the Missouri River in eastern Missouri, some 600 river miles downstream. This is unusual movement, and fortunately, most animals appear to be remaining relatively near the release sites.

Individuals can assist with the otter project by reporting observations of otters to the local conservation officer, to a Game and Parks Commission district office or to the headquarters in Lincoln. Observations of family groups of otters are especially important because successful reproduction is vital to the success of the project. Beyond the establishment of self-sustaining populations of otters within the river systems where they were released, the Commission's ultimate goal is to recover the otter population to a

level that will allow their removal from the endangered species list in Nebraska.

The otter project is one of many being carried out through the Nebraska Game and Parks Commission's Threatened and Endangered Species Program. Funding for this project comes primarily from the Nongame Wildlife Tax Check-off and a donation from the Nebraska Safari Club. The river otter needs the concern and support of Nebraskans if it is to increase its numbers and expand its range throughout the state. Nebraskans can assist with the reintroduction of otters and with other nongame projects by donating all or a portion of their state income tax refunds to the nongame wildlife program.

Although the river otter may never become economically important ot Nebraska, its re-introduction restores to the state a component of its native fauna. Moreover, the aesthetic value of river otters cannot be overlooked. Anyone fortunate enough to observe an otter in the wild will not likely forget its playful, inquisitive nature or its graceful, effortless swimming ability.

Otters from Lousiana are introduced to their new home on the Platte River.

Ideal habitat has flowing water and backwater sloughs with vegetated shorelines.

River Otter is one in a series of *Nebraska's Threatened and Endangered Species* brochures published by NEBRASKAland Magazine and the Nebraska Game and Parks Commission with funds from Nebraska's Nongame Wildlife Tax Checkoff. *River Otter* was also supported by a contribution from the Nebraska Forest Service's Forest Stewardship Program. Text by Nongame Biologist Frank Andell, Nebraska Game and Parks Commission. Illustrations by Randall Bright. Photos by Jon Farrar. December 1992.

Note: New data on the occurrence and distribution of this species are being collected constantly, and some of the information in this publication may be outdated. It should be used for a general understanding of the status of this species in Nebraska and not as the sole source of locational information for any report, project, regional/local planning or environmental impact assessment. For current information on this or other threatened and endangered species, or for additional copies of this publication, contact the Wildlife Division, Nebraska Game and Parks Commission, P.O. Box 30370, Lincoln, NE 68503.

Nongame Wildlife Tax Checkoff Fund

Forest Stewardship Program