

Agassiz National Wildlife Refuge
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U.S. Fish & Wildlife Service
1 800/344 WILD

July 1998



U.S. Fish & Wildlife Service

Agassiz

National Wildlife Refuge *Mammal List*



Introduction



The "Blue Goose" symbolizes the National Wildlife Refuge System, a network of over 500 refuges protected and managed for wildlife, habitat and people.

Agassiz National Wildlife Refuge, established in 1937, occupies part of the eastern bed of glacial Lake Agassiz in northwestern Minnesota. This aspen parkland area is located between the tall grass prairie to the west and the coniferous forest to the east. Open water and freshwater marshes occupy 40,000 acres of the refuge. Extensive areas of willow, trees and grasses are found on an additional 21,500 acres on higher ground. Common trees growing in the hardwood forest are aspen, bur oak, green ash, elm and box elder. Two black spruce-tamarack bogs with associated bog lakes comprise a 4,000 acre wilderness area.

Prior to colonization 81 species of mammals were found in Minnesota. Today there are 74 resident species within the state. Over half, 49 species, can be found on the refuge, because of the plant diversity which provides food and shelter.

Mammals on the refuge range in size from the small pygmy shrew to the large Northwestern moose. Mammals are important in the ecology of the refuge. Herbivores such as mice, squirrels, rabbits, hares, muskrats and deer change plant food energy into animal protein which then becomes available to predators such as mink, gray wolf, hawks and owls. Some of the mammals such as raccoon, red fox and coyote play the role of scavengers, as well as predators.

Many mammals are fairly common and are most active during early morning or late evening. Others are rare, secretive, or appear only at night. Mammals select habitat which provides good cover making observation more difficult than birds. Some of the best ways to determine a mammal's presence is to look for their tracks, droppings, dens, holes, beds, or mounds. Binoculars and a picture field

guide will help you identify mammals. Should you observe an unlisted, rare, or uncommon mammal species, please contact the refuge office.

Scientific names and the order in which they appear follow Jones, et. al., "*Revised Checklist of North American Mammals North of Mexico, 1975*;" while common names are taken from Burt and Grossenheider "*A Field Guide to the Mammals, 1962*."



Bull Moose
(J. Mattson)

Moose

Four subspecies of moose are recognized in North America. Agassiz is home to the third largest subspecies, the Northwestern. Standing six feet tall from the shoulders, bulls weigh from 800 to 1100 pounds and cows weigh from 600 to 800 pounds.

Moose are the largest member of the deer family. Both sexes have a "bell" attached to the throat, which is a distinct pendulous flap of skin and hair.

Rutting, or breeding season, lasts from mid-September through October. After an eight month gestation period cows calve in late May and June, usually producing a single calf, weighing between 25 to 35 pounds. For at least the first year of their life calves are dependent on the cow for protection, warmth, and in the winter for gaining access to food and shelter by following her trail through the snow. Normal winter population of moose on the refuge and the three adjoining state wildlife management areas is 250 animals. Willow is their preferred food, but in summer they also feed on submerged aquatic plants.

Moose can be observed throughout the refuge and state areas. Cows with calves are best observed in June and bulls are frequently observed during the breeding season. For your safety do not approach cows with calves or bulls during the breeding season.



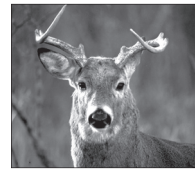
Gray Wolf
(*J. Mattson*)

Wolf

In February 1982, establishment of a wolf pack on Agassiz was confirmed. Since 1982 a second pack has been established on the refuge and adjoining state wildlife management areas. Although secretive, wolves may be observed throughout the year .

Gray wolves are divided into five subspecies in North America. Wolves in Minnesota are considered to be the Great Plains Wolf subspecies. Adult wolves stand 30 inches high at the shoulder and weigh from 60 to 120 pounds. Color varies from almost white in the arctic to nearly black, with gray being most common. The number of wolves in a pack ranges from 6 to 12 animals. The pack is composed of a dominant breeding pair of adults, which mate for life, and offspring from previous years. Four to seven pups are born in late April. Pup mortality exceeds 50% during the first year of life. A wolf pack's territory varies from 50 to 150 square miles depending on food availability.

Gray wolves were originally the most widely distributed land mammal in the world, living on all four northern hemispheric continents. Gray wolves lived throughout North America before colonial settlers arrived. With settlement, the wolf was eradicated throughout most of its former range. Consequently, it was protected under the Endangered Species Act of 1973. Before 1973, there were about 650 wolves in Minnesota. As of 1997, their numbers have increased to about 2000. This increase has prompted the U.S. Fish and Wildlife Service to consider removing the gray wolf from the Endangered Species List in Minnesota and the Great Lakes Area.



White-tailed Deer
(*J. Jave*)

White-tailed Deer

White-tailed deer are one of the more commonly observed animals on the refuge. Annual deer population ranges from 1,000 to 3,500 deer on Agassiz and the three adjoining state wildlife management areas. Look for deer in all types of habitats. Fawns are born in late May or June.



Fisher
(*D. Licht*)

Fisher

Fisher, a tree dwelling weasel larger than the ground living weasel species, is about the size of a red fox. Pine marten, a close relative to the fisher, is smaller and lives in the coniferous forest of Minnesota. Color of the fisher is dark brown, almost black, with a grizzled appearance caused by white bands on the guard hairs. The tail is long, hairy and bushy. One to four young are born in late March or early April. Although fisher have lived on the refuge for many years, the first documentation of fisher born on the refuge was in June of 1993. Fishers are solitary, except during mating and when rearing their young. Fishers live mainly in the hardwood forest and are rarely observed.



River Otter
(*D. Licht*)

River Otter

River otters are large weasel-like mammals, three to four times the size of a mink. Otters present a sleek appearance with their fairly small head, long slender body and long, thick tapering tail with short hair. Fur color is dark brown, a bit lighter on the underside, and often grayish or silvery on the throat. The otter's eyes are located toward the front of the face giving better frontal vision. Usually 2 to 4 young are born in April or May. Otter crossings between pools and ditches can be observed along the roads and trails. Otters can be observed in wetlands, especially ditches, throughout the refuge.



Muskrat
(J. Mattson)

Muskrat

Muskrat are rich brown in color with a silver colored belly and a long, black, naked tail. Muskrat are sometimes confused with beaver, but beaver are larger and have a flat, broad tail. Five to six young are born per litter with some females producing up to three litters per year.

Muskrat begin building houses in September out of cattail, bulrush, and other wetland vegetation. Their houses provide loafing and resting sites to Canada geese and ducks which nest on top of muskrat houses.



Mink (D. Engler)

Mink

Mink may be observed in any of the wetlands. Mink and otters look similar, except mink are smaller in size and have a hairy, bushy tail. In the winter, mink feed almost exclusively on muskrat.



Coyote (D. Licht)

Coyote

Coyote, sometimes referred to as a "brush wolf", look like a medium-sized dog and are gray or reddish gray, with rusty legs, feet, and ears. Throat and belly are white color. Five to ten pups are born in April. Since the gray wolf became established, coyote numbers have declined and are rarely observed.



Red Fox
(K. Hollingsworth)

Red Fox

Red fox have the appearance of a small dog. Four to nine pups are born in April. Young fox disperse from the parent's territory in September - October. Red fox may be observed on roads, trails and dikes or in any of the upland habitats throughout the year.

Complete Mammal Listing

Masked shrew (*Sorex cinereus*)
 Water shrew (*Sorex palustris*)
 Arctic shrew (*Sorex arcticus*)
 Pygmy shrew (*Microsorex hoyi*)
 Short-tailed shrew (*Blarina brevicauda*)
 Star-nosed mole (*Condylura cristata*)
 Little brown myotis (*Myotis lucifugus*)
 Big brown bat (*Eptesicus fuscus*)
 Red bat (*Lasiurus borealis*)
 Hoary bat (*Lasiurus cinereus*)
 Eastern cottontail (*Sylvilagus floridanus*)
 Snowshoe hare (*Lepus americanus*)
 White-tailed jackrabbit (*Lepus townsendii*)
 Woodchuck (*Marmota monax*)
 Thirteen-lined ground squirrel (*Spermophilus tridecemlineatus*)
 Franklin's ground squirrel (*Spermophilus franklini*)
 Eastern chipmunk (*Tamias striatus*)
 Gray squirrel (*Sciurus carolinensis*)
 Fox squirrel (*Sciurus niger*)
 Red squirrel (*Tamiasciurus hudsonicus*)
 Northern flying squirrel (*Glaucomys sabrinus*)
 Plains pocket gopher (*Geomys bursarius*)
 Beaver (*Castor canadensis*)
 Deer mouse (*Peromyscus maniculatus*)
 White-footed mouse (*Peromyscus leucopus*)
 Gapper's red-backed vole (*Clethrionomys gapperi*)
 Meadow vole (*Microtus pennsylvanicus*)
 Muskrat (*Ondatra zibethicus*)
 ●Norway rat (*Rattus norvegicus*)
 House mouse (*Mus musculus*)
 Meadow jumping mouse (*Zapus hudsonius*)
 Porcupine (*Erethizon dorsatum*)
 Coyote (*Canis latrans*)
 Gray wolf (*Canis lupus*)
 Red fox (*Vulpes vulpes*)
 Gray fox (*Urocyon cinereoargenteus*)
 Black bear (*Ursus americanus*)
 ◆Raccoon (*Procyon lotor*)
 Fisher (*Martes pennanti*)
 Ermine (Shorttailed weasel) (*Mustela erminea*)
 Least weasel (*Mustela nivalis*)
 Long-tailed weasel (*Mustela frenata*)
 Mink (*Mustela vison*)
 Badger (*Taxidea taxus*)
 Striped skunk (*Mephitis mephitis*)
 River otter (*Lutia canadensis*)
 Bobcat (*Lynx rufus*)
 ★American elk (*Cervus elaphus*)
 White-tailed deer (*Odocoileus virginianus*)
 Moose (*Alces alces*)

● Exotic species

◆ Not native to area before colonial settlement

★ Not a resident mammal of the refuge