



Wildlife Notes

Beaver (*Castor canadensis*)

Description

Beavers are the largest members of the rodent family in North America. Adults weigh an average of 44 pounds and measure approximately 42 inches. Noted for prominent chisel-shaped front teeth (incisors) and large paddle-shaped tails (a third of the body's length), beavers are notorious woodcutters and industrious dam builders.

Incisors grow continuously and are self-sharpening. The orange front layer of hard enamel is backed by softer white dentin, enabling teeth to wear to a sharp edge as the beaver gnaws trees and shrubs.

The broad tail and webbed hind feet serve this semi-aquatic mammal well. Small eyes with transparent inner eyelids enable vision underwater, and the ears and nose can be closed while submerged. Able to remain underwater for considerable periods, dives may last up to 15 minutes.

The beaver's brown fur is pale underneath on the chest and belly. Fine wool underneath coarser top fur traps air to provide warmth and keep skin dry. A layer of fat under the skin also insulates the beaver. Beaver fur also hosts flea-like beetles that feeds on surface skin particles and keep fur clean. The larvae of these beneficial parasites live and pupate in the nests of beaver dens.

To waterproof fur beavers use specialized split toenails to spread an oily substance called 'castor' which is secreted by glands near the beaver's anus. Beavers also use this substance to mark territory. Interestingly, humans have used castor in perfumes for centuries to distinguish themselves from others and attract mates.

Behavior

Since before recorded history began, humans have identified with the behavior of beavers which sometimes is very similar to our own. Beavers modify their environment to create habitat for food, shelter and protection. With rocks, mud, logs and sticks beavers dam shallow streams and form ponds in which they construct lodges. Dams may reach heights of six feet or more and extend over large areas to form complex networks.

Beaver lodges are large cone shaped dwellings constructed of sticks plastered together with mud. Built in deep water, the inner den is accessible only by an underwater tunnel. The living chamber inside the den is lined with grass above the high water line. Thick walls provide excellent insulation—when combined with the animal's body heat an ambient temperature of 70–90°F is maintained, even during winter. Along larger river banks beavers rarely build stick dens, but instead tunnel into the bank below the water line and dig upward to construct nesting chambers.

Beavers are social and live in small family colonies consisting of four to eight related individuals—often a mated pair and several one to two year old offspring. Adult females are usually the dominant member of the colony.

Beavers are mostly nocturnal when outside the lodge. It is uncertain whether this is biological behavior or the result of generational memory from being hunted and trapped by humans for centuries. In areas where hunting and trapping has not occurred for extended periods of time, beaver are diurnal, active during daylight.

Twelve years is the approximate natural life expectancy for beavers in the wild.



Diet

Beavers are herbivores, feeding on aspen, poplar, birch, willow and Alder. They do not eat wood but rather the layer of cambium tissue underneath bark. Twirling stems with their forefeet, beavers slice off bark with their incisors—similar to humans eating corn-on-the-cob. Beavers also eat buds, roots, herbaceous plants and the tubers of aquatic plants.

Beavers may travel away from water to search for food. When a rich food source is found, beaver often dig a channel from the source to their pond to transport the food.

As winter approaches, family colonies work together to cache twigs and small branches into the muddy bottom of ponds or streams near their lodge. As water freezes on the surface, the cache is held in place and preserved in the cold water underneath to be retrieved safely and eaten.

Breeding

Beavers sexually mature at approximately 21 months of age and mate for life. After shoving contests with males, the female selects a mate based on how well she can push the male. Beavers breed in early winter and annually produce a single litter—usually four to five pups. Gestation lasts approximately 105 days and in New Mexico birth usually occurs in April or May. Newborns are fully furred with eyes open and weigh from six–ten ounces. If a colony becomes too large, shortly before the dominant female gives birth, older offspring will be driven off and travel alone tens to hundreds of miles along rivers and tributaries in search of mates and ample food to start a new colony.

Ecological Impact

In years past, damming of small streams by beavers created a vast catchment system for rain and snow across North America's watersheds. This system naturally modulated flows and flooding of larger rivers. As hunting and trapping for the fur trade reduced beaver populations severe flooding occurred more frequently and continues on the lower reaches of rivers today.

Though beaver activity can be a nuisance to human urban and agricultural enterprises (i.e damage to irrigation ditches or fruit orchards), their benefit far outweighs the negative impact.

Beaver dams increases total water surface area, stabilizes stream flows, prevent erosion and raise the level of water tables. As ponds behind beaver dams fill, new nesting, feeding and winter habitat for trout, cavity nesting and migratory birds and other mammals is created. Retention of water improves soil and helps plant diversity, such as increases of Alder, willow and cottonwood trees which are staples of the beaver diet.

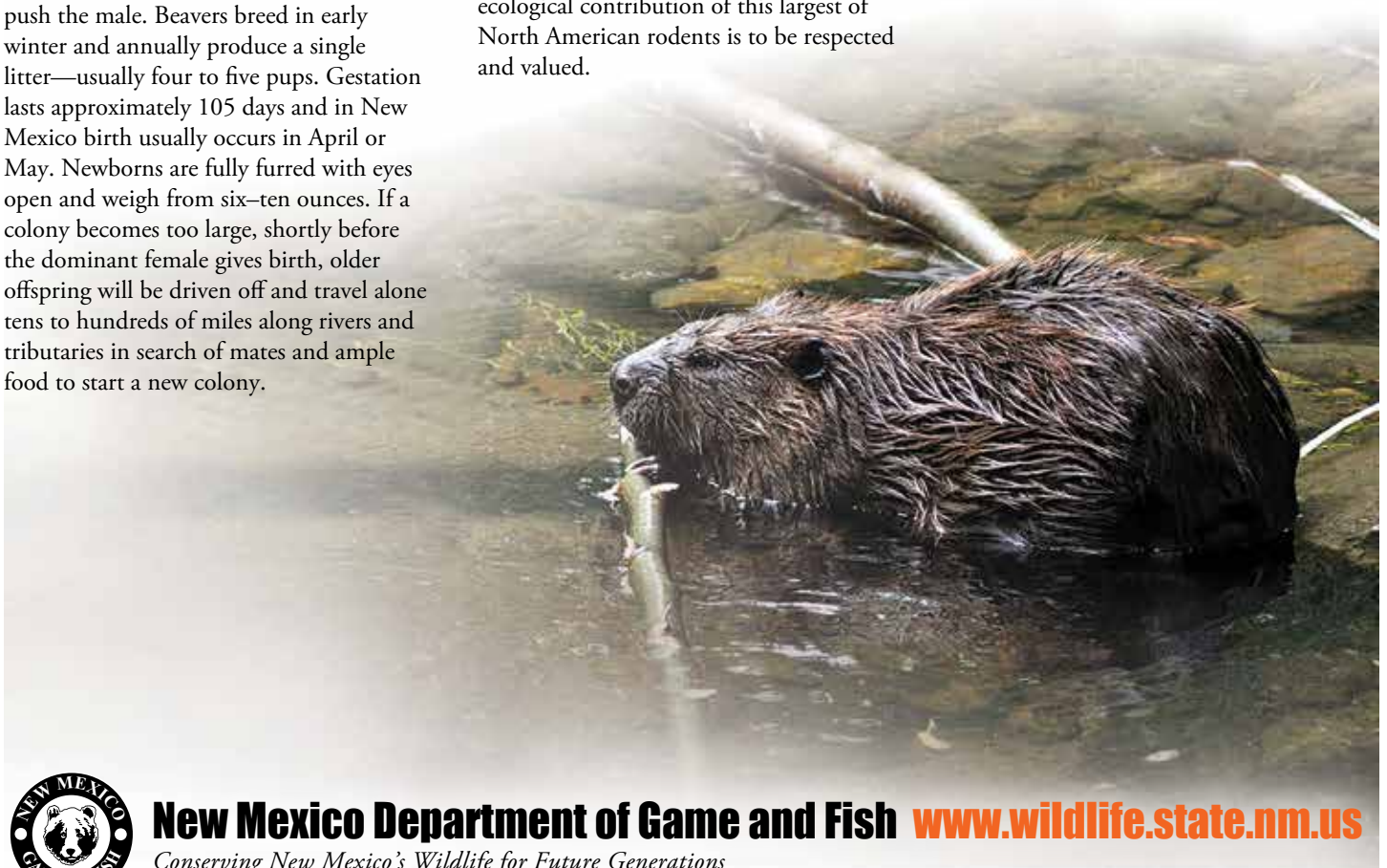
Overall the positive industriousness and ecological contribution of this largest of North American rodents is to be respected and valued.

New Mexico Range

During early explorations of North American millions of beavers were trapped for fur. Pelts were shipped to European markets to be turned to felt for top hats, and by the early 1900's beaver populations in New Mexico were decimated. In the early 1930's restoration began, and from 1947–1958 large numbers of beavers were trapped and reintroduced in New Mexico streams. Currently the population in New Mexico is estimated to be 6,000 beavers. Although much of this population lives in the northern portion of the state, beavers can be found in most every elevation and life zone in New Mexico.

Protected Furbearer

Beaver are a protected furbearer in the state of New Mexico and may be hunted and trapped.



New Mexico Department of Game and Fish www.wildlife.state.nm.us

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