

Notable Natives

Beaver

Castor canadensis, the beaver, is a keystone species and as such is irreplaceable in

its habitat. Just as a keystone is the center piece of an arch, allowing the frame to stand and keeping it balanced, so a keystone species provides supporting habitat for many other species. If the keystone is removed, the arch, or the ecosystem, collapses.

As a creator of wetlands, the beaver provides a healthy environment for hundreds of other species; native Americans called it the “sacred center” of the land for creating rich, wet habitat for fish, turtles, frogs, migrating water birds, and mammals as well as native wetland plants and insects. Many of these species are now threatened or endangered.

The beaver was nearly extirpated early in the European occupancy of North America. Trappers sought their pelts for the European felt industry, top hats being all the rage. Beaver are still trapped for fur and because their activities interfere with man’s wishes. Their populations are estimated at five percent of pre-settlement numbers.

The biodiversity-rich wetlands the beaver creates are frequently drained for agriculture and development. Nonetheless beaver are slowly repopulating portions of their former range and are creating the wetland habitat for which we should protect them. Beaver ponds equal or surpass rain forests and coral reefs in the amount of biodiversity they support.

Adult beavers weigh over forty pounds and mate for life. Their young remain in the family group for two years, acting as babysitters for the newest kits and helping to repair dams and lodges and procuring food for the colony. Beavers prefer to live in shallow valleys where they can dam a stream to raise the water level around their lodge. This pond protects them and creates deep underwater food storage space during the winter. The beaver colony, including parents, yearlings and kits, coexists in the lodge during cold weather with underwater access to their food supply.

Their preferred food is the water lily *Nuphar lutea*. Beaver also gnaw the inner bark of birch, poplar and willow trees, including berries and other plant food during the summer. They fell saplings to use as food and to repair and build lodges and dams, carrying mud and stones with their forepaws to seal the constructions. Late in autumn beavers cover their lodges with fresh mud which will freeze into an impenetrable protection from predators. Lodges often have two separate levels, one wetter level where the beaver enters from the water



and another drier bench where the family lives (see drawing).

Beaver activity that people see as destructive—cutting trees and damming streams—actually provides their greatest environmental benefits. When they fell trees, more sunlight

reaches the water. Combined with aquatic nutrients, sun and water are the foundation of the wetland food chain, promoting the growth of plants, algae, microorganisms and invertebrates, creating the prolific biodiversity of the beaver pond ecosystem. These ponds are seven times more productive than fertile farmland.

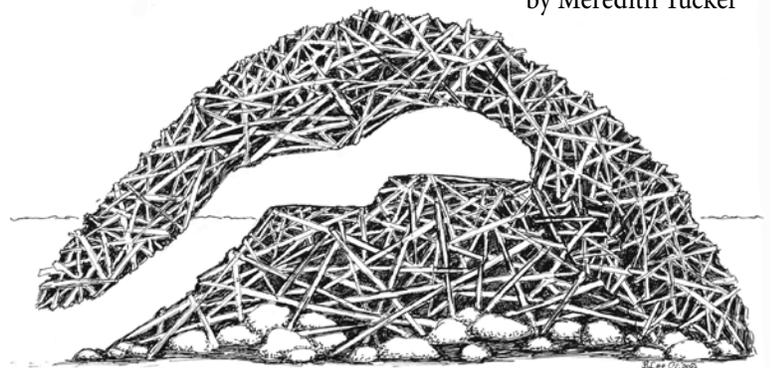
What about the trees that die as the water level rises in the pond? The dead snags provide vital habitat for cavity-nesting birds like wood ducks and woodpeckers as well as perches for eagles and ospreys. Swallows and blue herons also rely on the snags.

Direct benefits of beaver ponds to people include: decreasing floods, recharging of aquifers, purifying water, protecting against drought, and decreasing stream erosion. Beavers also provide habitat for fish and other wildlife, supporting biodiversity that includes 43% of our endangered species. They also preserve open space, and maintain stream flow.

No doubt the beavers’ lifestyle sometimes conflicts with man’s interests, but their importance to the health and well-being of our environment—human and non-human—is so enormous that it is worth the added effort to save them rather than to trap them. The Internet provides a large number of non-lethal solutions to beaver/human interactions and conflicts.

“... beaver wetland once enlivened the now arid rangelands of the West (The) decline in beaver population, and in beaver dams, caused the first major shift in the country’s water cycle The river of life receded when the water receded, and the primeval splendor of the land disappeared with the beaver’s demise.” *Water: A Natural History* by Alice Outwater.

by Meredith Tucker



Beaver lodge with two separate levels. Illustrations by Beth Lee Cripe.