

# Beavers in winter

Bill Betz



Seasonal workers in Summit County face a double dilemma (some say crisis) of low wages and unaffordable housing. There is one group of seasonal workers, however, who work for free and provide their own, year 'round housing! I'm speaking, of course, about our beavers. This keystone species provides a host of environmental benefits – enhancing plant and animal diversity, keeping groundwater aquifers charged, and creating beautiful, recreational ponds. But they disappear during ski season. They don't hibernate like some other rodents, nor do they migrate south. They are here, and awake, all winter, but confined to their lodges in ponds that were created by the dams that they build.

Beavers mate for life, and the winter lodge contains the parents, last year's brood, and sometimes two year olds. In addition, the family may host houseguests – voles, muskrats, and mice sometimes live there. The abundance of warm bodies helps keep the temperature livable; the lodge can be above freezing when the temperature outside is near zero degrees.

The surface of the pond is of course frozen in winter, but a "plungehole" in the lodge leads out to the water under the ice, where a cache of food is stored. The cache is created in the fall as the beavers prepare for winter. Trees are cut and the lodge is fortified with stout branches and mud. Tender branches – mainly aspen, willow, and alder – are piled in the water near the lodge, creating a stash of winter food. During the winter the beavers swim out from the lodge under the ice, gather some branches, and return to the lodge for a meal.

Lodges contain a living chamber with two levels, one level just above water level at plungehole portals. A second level, for living and sleeping, is a bit higher, and lined with soft plant materials. Housecleaning happens every 2-3 days, as the bedding is tossed into the plungehole for a few hours, then retrieved to be reused. The roof above the chamber is thick and solid (except for a vent), and provides good insulation.

While family life in the lodge sounds cozy, in fact the beavers are at their most vulnerable in the winter. A food cache too small or a plungehole frozen solid due to a breached dam can spell disaster, and even death.

As spring approaches, the ice on the pond melts first at sites where water flows over the dam, giving beavers access to fresh food. With deep snow still on the ground, when they cut an aspen tree, the resulting stump can be four feet high! The first time I saw one (in summer), I wondered if the ancient giant beavers, which weighed more than 400 pounds and were 7 feet long, had returned, but they went extinct about 10,000 years ago, along with the woolly mammoths.

Kits are born in May or June. Their eyes open within minutes of birth. They are weaned at about two weeks of age. A two year old sibling, when present, may play a special role, helping to feed, groom, and guard the kits. These activities may postpone its own dispersal and breeding for a year or more. This strategy is useful particularly under adverse conditions (overpopulation, drought, food shortage) when dispersing would be risky. This so-called "cooperative breeding" is found in other animals, including crows, jays, and woodpeckers. The 2-year old thereby increases its own survival success by boosting the survival chance of its siblings<sup>1</sup>.

While beavers seem as absent in winter as migrating hummingbirds and hibernating chipmunks, they are still with us, and wide awake, too, living in family lodges.

<sup>1</sup> *The Beaver: Natural History of a Wetlands Engineer*, by Dietland Müller-Schwarze, 2001, Cornell U. Press.



*Bill Betz is a board member of the Eagle Summit Wilderness Alliance, a local all-volunteer nonprofit that helps the U.S. Forest Service protect and preserve the wilderness areas in Eagle and Summit counties. For more information, a list of volunteer opportunities, or to become a member, visit [EagleSummitWilderness.org](http://EagleSummitWilderness.org).*