

## **A Look at Nature “Hooked on a Snag”**

No, this is not a story about fish, though they will make a brief appearance. Our subject this time will be dead and decaying trees. Standing dead trees are commonly called snags; when they fall down they are called logs. The latest term for all standing and fallen dead trees is coarse woody debris, but you can impress your forester friends by calling it “CWD”.

“One dead tree is worth a thousand living trees to many animals.” I don’t recall where I first heard this statement, but it makes a case for the value of snags in our forests. Many animals use snags for nesting, feeding, perching, roosting, drumming and singing.

Birds are probably best associated with snags. Cavities in trees (holes, like in your teeth) are normally made by woodpeckers, and dead trees are used far more often than living trees for excavation. Colorado has 41 bird species that are known to nest in trees. Some of these found around Eldora include mountain and black-capped chickadees, hairy and downy woodpeckers, flickers, nuthatches, creepers, mountain bluebirds, tree and violet-green swallows, and house wrens. All of our small forest-dwelling owls (pygmy, saw-whet and boreal) nest in tree cavities. And winter use of cavities in trees by birds for protection from the weather has been documented. Communal winter roosting by pygmy nuthatches has reached witnessed numbers of 167 birds in one snag.

Snags can be excellent sites for the foraging of insects by birds. Recently deceased trees, whether killed by fire or disease, are prime habitat for insects. Woodpeckers, nuthatches and creepers have the tools to seek and feed upon insects located within and under the bark. The birds provide an important function of helping to control insect populations in dead and living trees.

Some bird species favor snags over living trees as perches. Olive-sided flycatchers generally sing while perched on a snag or dead limb. Studies of bald eagles suggest they prefer dead trees for daytime perches.

Birds are not the only benefactors of snags. Eight of the 18 species of bats known to Colorado use cavities in snags for summer and/or daytime roosts. Raccoons will use hollows in snags. Bushy-tailed woodrats use cavities close to the ground. Large-diameter snags were found to be important den sites for pine martens.

When snags fall over, their value to animals takes on a whole new posture. They can be used for drumming and foraging by birds. They provide hiding cover or may help in the formation of under-snow pathways for small mammals. They tend to retain moisture and provide a wetter microhabitat, providing benefits to a host of animals and plants. Microorganisms will continue the decay process until the fallen log becomes decomposed and part of the soil.

Fallen logs are also important components of stream ecology. While spanning the creek, they provide pathways for small mammals to disperse and mix with populations on the other side. When logs fall into the water they provide habitat for aquatic invertebrates, contribute to organic enrichment of ecosystems, and serve as hiding and resting cover for fish. Logs alter stream velocity allowing for the sorting of streambed

material and providing habitat for aquatic organisms. Logs help create pools that provide important overwintering habitat for fish.

We seem to have a cultural bias against dead trees. Some of that is based on a learned aesthetics. We say, "It looks bad." We fear lightning strikes on dead trees (though there is no evidence they are struck more, and in fact living trees are better conductors) and call it a fire hazard (though a standing dead tree with no needles is less of a hazard than a green living tree). In the end, we tend to find a reason for removing the dead tree from the land. Even in our local streams, extreme kayakers are removing logs because they are a hazard to their fun.

Aesthetics is partly a matter of taste. Some view twisted old trees as a thing of beauty. Many of the photographs of Don Kemp (son of Eldora's founding father John Kemp) are of twisted, wind-blown limber pine trees. Aesthetics can also be influenced by knowledge. We can learn to see things differently.

There is love at first site, but there is also love that grows from learning about the value of something. That is what dead trees do for me. There is an old snag on the hillside just east of our house where Diane and I got married. It continues to be one of our favorite places. Band-tailed pigeons regularly perch on it. Great horned owls occasionally hoot from it. It has been an ecological adventure to wander through the site of the Beaver Reservoir fire, which occurred in the late 1980s, a little north of Ward. Woodpeckers were abundant for the first several years, including the hard to find three-toed woodpecker, as they were feeding on all the insects under the burned bark. Much of the bark had been shredded by black bears, also in search of insects. In later years, bluebirds, wrens and swallows, which found homes first constructed by the woodpeckers, inhabited the standing snags. Snags make our landscape a richer place to live in.

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