

Cottonwoods Benefit Wildlife And People

Eye on the Environment

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It's hard to imagine trees in the Swan Valley that are more important to wildlife than black cottonwoods, *Populus trichocarpa*, now turning gold along our streams and wetlands.

Just ask the moose, elk and deer that feed on the young tree sprouts, or the great horned owls that raise their young in trunk cavities, or the warblers, vireos and other small birds that hide their nests in the leafy foliage, or the bees that in spring use the sticky resin of the buds to glue and waterproof their hives, or the black bears that den in hollow trunks.

Bear biologist Rick Mace, of Montana Fish, Wildlife and Parks, as a young researcher was baffled by a signal he was receiving from a radio-collared black bear. The beeps from his antenna brought him to a large cottonwood, but where was the bear? He eventually realized it was sleeping high overhead inside the tree's hollow trunk. Rick had to climb the tree and descend into the trunk to inspect the bear and take its measurements. He has since learned cottonwoods are common high rise condos for black bears in the Swan Valley.

Hérons like to build communal nesting colonies, called heronries, in cottonwood trees. Each twig and stick nest can be 45 inches wide and two feet tall. So the sturdy cottonwood branches make good platforms.

A heronry might have six to 12 nests arranged in one or more cottonwoods. But heronries in some parts of the country have been known to have up to 400 nests. Herons choose sites near feeding areas where they can spot predators.

Kathy Koors and Rick Birdwell, who have a home on the Swan River, once watched a small black bear climb into a cottonwood to eat the eggs and nestlings in each heron nest. The bear destroyed the entire colony, which was never rebuilt. Ed Foss, a longtime resident now deceased, had watched the same thing happen 25 years earlier in the same area.

The cottonwood's large, shiny, wedge-shaped leaves provide amazing cover for little birds and help keep their nests and eggs safe from ravens and other predators. As most birdwatchers know, it's almost impossible to spot small birds among cottonwood leaves, even when they're singing nonstop, unless they catch sight of them flying and see where they land.

Cottonwoods store an amazing amount of water. You can't burn a freshly cut cottonwood log. If you cut a tree down, gallons of water will bleed out the sawed off end. Because of its water

storage capacity and its thick bark, cottonwoods can survive many wildfires unscorched.

Cottonwoods have plenty of uses for humans. A dairy farmer once told me cottonwood boards were preferred for barn floors because they absorb the cows' urine and hold the moisture better than most other wood. The boards swell and seal the cracks as long as the cows are using the barn. The wood can also be used as lumber, plywood and veneer.

The Lone Pine Plants of the Rocky Mountains field guide lists several uses for cottonwood. The dried wood burns with little smoke so it was good for tipi fires. The sap is sweet and was eaten by many American Indians. The bark, which is slightly poisonous as tea, was used to treat tuberculosis and whooping cough. By mixing the buds with blood you can make a permanent black ink. The twigs and bark were fed to horses in winter when other forage wasn't available.

Swan Valley resident Kathy Kinzfohl, known affectionately as Little Bird, blends the sap of cottonwood buds with olive oil to make a pleasing natural perfume, and she uses the infused oil to rejuvenate achy muscles and joints, and relieve pain. She says cottonwood oil is also soothing after bug bites.

Kathy is careful when collecting buds from live trees to pick only from the very end of the branch so as not to interfere with tree growth. Better yet she collects buds from cottonwoods that have been downed by beavers or wind. She puts the buds in a Mason jar and pours olive oil over the top, then lets the buds' juices soak into the oil for six weeks to two months. When the oil is poured off the buds it's a beautiful rich red color.

Some people are allergic to cottonwood seeds. When the air is full of cottonwood flurries, people who suffer from allergic reactions stock up on antihistamines and Kleenex. Most allergy sufferers can control the symptoms. But extreme sufferers might be better off taking an extended vacation. Only the female trees cause allergies. The male and female blossoms look similar so it takes skill to tell them apart. Both sexes have drooping, hairy catkins that emerge before the leaves in spring.

Statewide, cottonwood trees are getting older but there are fewer young trees. Cottonwood seeds need moist, bare mineral soil to germinate. They are usually the first trees to reestablish on gravel bars after a flood. In fact, researchers who study stream dynamics have learned to date historic floods by counting the rings of cottonwood trees.

Stream stabilization efforts that constrict a stream's ability to move from side to side within its banks can cause a decline in

young cottonwoods, and drought may play a role in the decline of saplings, because fewer floods occur in dry years. But once the trees are established they stabilize the stream banks until the next flood occurs.

Of course the young trees are favored by beavers as well as deer and elk. So a lot of young cottonwoods never reach maturity. But many hundreds can get started in the right seed bed. On a recent visit to the 2003 Crazy Horse Fire burned area I noticed several saplings flourishing in ditches along roads in areas where the fire was severe.

Allergies aside, it's hard to fault our cottonwoods, especially in early October when the golden leaves brighten our days. They are a cheery sight even when the clouds are low.