

The Black Cottonwood - Mainstay of a Healthy Riparian Zone



Black Cottonwoods line the Kettle River

smelling buds, its fuzzy fruit and cottony white fluff (hence the name) which blows down from the tree in the spring wind like snow.

The cottonwood is the fastest growing tree in North America, reaching a height of 100+ feet and a diameter of 3 feet or more. Preferring wet sites, it is often found along the banks of lakes and streams, in wet lowlands and swamps. A pioneer species, it is shade intolerant and will establish itself on an open disturbed site such as a sandbar or an eroded bank. With its very aggressive root system, it provides stability for stream banks, helping minimize the damaging effects of floods, while at the same time quickly stabilizing a flood-disturbed site.

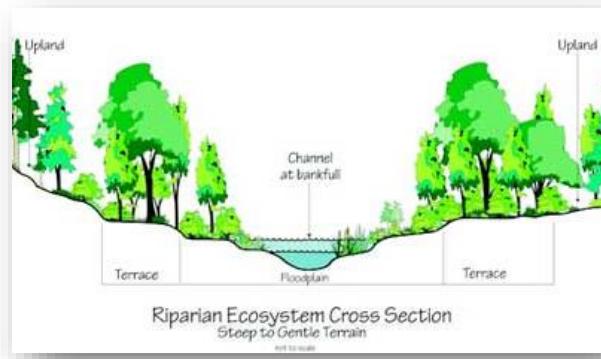
In this way, the black cottonwood plays a very important role in the riparian zone, the natural feature creating a transition zone between a stream or lake and the drier upland. A healthy riparian zone (or buffer) is essential to the health of an aquatic system.

How does the riparian area work? Elevated groundwater and nutrient-rich silt deposits from periodic floodwaters make the riparian zone a very good medium for the growth of grasses, woody shrubs and small and large trees (such as the cottonwood). The roots of these plants anchor the banks, protecting them from eroding under the strong influence of annual high water and periodic large floods. With reduced erosion, the stream water stays clearer. Occasionally a super flood will erode banks and even carve a new riverbed, but eventually, equilibrium will be reached again, with high water depositing nutrients and the resultant healthy plant growth (including, again, the fast-growing cottonwood) holding the banks in place.

The cottonwood, along with other riparian plants, provides important habitat for many animals. In the summer, this deciduous tree shades shorelines and waterways, providing cover for animals, while keeping the water temperature cooler and improving the aquatic habitat. The tree's leaves provide nutrients for aquatic invertebrates which become sustenance for a variety of fish species. Dead trees

Found in great numbers up and down the banks of the Kettle and Sanpoil Rivers (and their tributaries) is a tall, rough-barked, deciduous tree. This tree, the black cottonwood (*Populus basamifera* ssp *trichocarpa*), is a member of the willow family and a close relative of the quaking aspen. While various species of cottonwood are found in most the United States, the range of this species extends from Alaska to the Baja Peninsula and from the Pacific coast inland to Montana.

The tree is well known for its resinous, sweet-



A healthy riparian ecosystem provides many benefits. (graphic courtesy US Forest Service)



The “cotton” of a cottonwood serves as the tree’s seed dispersal mechanism.

are a home for insects which, in turn, are a food source for many birds, especially several species of woodpeckers. These dead trees, as well as older live trees with heart rot, develop trunk cavities which provide nesting sites for a number of bird species. It is nearly guaranteed that a kayaker, paddling our local rivers in July, will see the colorful Lewis’ woodpecker entering and exiting these cavities in the mature and dead cottonwoods.

When they can no longer stand, the dead trees and branches eventually fall into the stream, slowing the current (reducing bank erosion) and providing habitat (pools and protection) for fish and other animals. The riparian area, with its rich vegetation, also provides excellent habitat for many terrestrial mammals.

Humans, too, benefit from the enhanced water quality which results from healthier riparian zones. Not only do the stable stream banks contribute less sediment to the stream, but the riparian zone filters nutrients and other pollutants out of the runoff from adjacent uplands. This improves fisheries, swimming, public water supplies, and general aesthetic value of property. Reduced flow during high water also correlates to less property damage.

Unfortunately, riparian zones on many of our shorelines have been affected detrimentally by human activity. Land-clearing along streams for a variety of purposes has taken a toll on this critical habitat. As the importance of these buffers is more appreciated, increased efforts are being made to restore those that have been lost.

Planting cottonwood trees is a step towards this goal. To that end, The FCD will be offering black cottonwood cuttings at its 2019 Spring Plant Sale. For landowners desiring to plant cottonwood trees to restore riparian areas or simply to enhance their property (cottonwood is not drought-tolerant, so it must be planted near water or where subsurface water is available), look for the FCD Plant Sale flyer in your mailbox around January 1 or visit the FCD website (www.ferrycd.org) for information.

Presently, the Natural Resource Conservation Service (NRCS) is accepting applications for its Environmental Quality Incentive Program (EQIP) grants, which provide cost-share funds for selected conservation projects, including riparian work. To apply for the EQIP program, call Patrice Beckwith at (509)775-3473, ext. 102.

The Ferry Conservation District (FCD) has recently wrapped up a two-year Water Quality in Ferry County Grant (WA State Department of Ecology) project, which included riparian restoration projects on Ferry County stream banks. This project was managed by Liz Carr, FCD Water Quality Specialist, from January 2015 until July 2018. The FCD may have more grant funds available in the future to assist landowners with such projects.

For more information visit the office (84 E. Delaware, Republic, above the Credit Union), or call (509-775-3473). The FCD and the NRCS are non-regulatory agencies. Our services are available to all without discrimination.