A Look at Nature
"The Darkest Jungles of Eldora"

Along Middle Boulder Creek, which bisects our community, is some of the richest habitat in the valley. The plant community is called Ariparian,@ a term which means associated with flowing water. Many of the plants thrive in areas seasonally flooded. Their root systems are tapped into the high water table. These are places where your feet normally get wet.

The overstory is dominated by Engelmann spruce (*picea engelmannii*), a tree common in the forests of the Indian Peaks Wilderness, but which is also found at lower elevations in cooler and wetter microclimates, such as on north facing hillsides and along streams. These are some of the largest trees found in the valley. You'll need a friend or two to get your arms around them. Their reddish-gray bark develops scales that easily flake off. As the bark gets weathered it turns grayer. And you might notice that the side of the tree facing the wind (west) is grayer while the east side is redder. The tendency for bark-searching birds, such as nuthatches and creepers, to more heavily search for insects on the leeward side of trees during the winter, thereby knocking off the older scales, contributes to this color differential.

Other types of coniferous trees are mixed in, including subalpine fir (*Abies lasiocarpa*), lodgepole pine (*Pinus contorta*) and Douglas-fir (*Pseudotsuga menziesii*), as well as deciduous aspen (*Populus tremuloides*). Also present, mostly in the center of town along the creek, are balsam poplars (*Populus balsamifera*). They are a dominant riparian plant along the streams of Canada and Alaska; those found in Colorado are most likely relicts of the Pleistocene era, a time when the local climate was much colder and wetter.

The understory vegetation along the creek is also dominated by moisture loving plants: thinleaf alder (*Alnus incana*), willows (*Salix* species), swamp honeysuckle (*Distegia involucrata*), cow parsnip (*Heracleum sphondylium*), twisted-stalk (*Streptopus fassetti*), horsetail (*Equisetum arvense*), false Solomon=s seal (*Maianthemum amplexicaule*), bluejoint reedgrass (*Calamagrostis canadensis*), sedges (*Carex* species), and rushes (*Juncus* species) to name a few.

Riparian habitat wants to be crowded with vegetation; the ground is damp or wet, while the dense canopy keeps the understory shaded. Sections are difficult to walk through, the closest thing we have to a real jungle. And this is the way it should be. The more it gets opened up, the more it dries out and resembles adjacent habitat types, which are more common on the landscape. Riparian habitat is only found along streams and is far less common, so should be viewed as something special and unique.

Some of the important functions of dense vegetation along streams are to anchor the stream bank and act as a filter for the water that runs off the surrounding land into the stream. The plants help slow runoff and reduce the amount of sediment and debris reaching the stream after a hard rain or as the snow melts. Having a healthy riparian zone helps maintain good stream quality.

Humans have some tendencies that work against good riparian habitat. We tend to disfavor jungles and want more sunlight. We want to be able to see throughout our surroundings, or particularly want to see the creek from our cabin, so we thin the trees and cut out the shrubs. And some think that thinning some trees is helping those that

remain. But Engelmann spruce are shallow rooted; the more open the stand, the more they become vulnerable to windthrow, and we do have some wind in the valley.

Riparian zones are less fire prone than the surrounding lands in the valley. Most of the trees have their roots within the water table, so they maintain higher moisture content than trees on the side of Eldorado Mountain. The forest floor being shaded, cool, and moist is also a deterrent to fire. But again, as the riparian canopy gets opened up, the drier the forest floor becomes and the more vulnerable to fire.

But it's OK to have some trees fall into the stream. While above the water, fallen logs provide pathways for small mammals to disperse and mix with other populations. When they fall into the water, fallen logs 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. Unfortunately, farther upstream, extreme kayakers have "cleaned out" a portion of the North Fork (from the falls down to Hessie) of fallen logs so they can run the creek for a few weeks of the year when the flow is high enough. They have simplified the ecology of the stream, removing an important component that is naturally present in headwater streams.

Several areas of beaver ponds are found adjacent to the creek. Beaver colonies are most successful where the stream gradient is fairly level and the valley is wide; the stretch of the creek between Hessie and Nederland meets these requirements and several colonies are active. In building dams, beavers raise the water table and enhance the development of wetlands adjacent to the stream. These wetland plant communities are dominated by willow shrublands and wet sedge marshes and lack the tree overstory common along the stream. Well-developed willow shrub wetlands, such as the Lazzarino Wildlife Preserve, located on the north bank of the creek east of the intersection of Eldorado and Klondyke avenues, are some of the richest habitats found in the mountains. They support high densities of breeding birds and some unusual species such as fox sparrow and veery.

We are fortunate to have Middle Boulder Creek flow through the valley. In a sense it interconnects us. And the riparian habitat along side the creek is also a special gift. Try and keep it cool and moist. In the age of global warming, it seems only logical.

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