

A Look at Nature “Not All Land Was Created Equal”

You may notice differences in the amount of animal activity while taking a walk. Some places seem to have more happening than others. An aspen forest in June will be alive with bird song and chatter, whereas a stand of lodgepole pine may seem quite. The time of year will also influence the abundance of what we see and hear. A willow shrub wetland will be chock-full of birds in summer but in winter you are lucky to see a single chickadee.

Some places in the landscape also seem to have a competitive advantage and attract more animals than others. At the top of the list is what ecologists call montane parklands. We know them from common names that reflect some of their cultural history: Arapaho Ranch, Caribou Ranch, Tolland Park, and Wild Basin. We have come to understand that these sites are exceptional nodes of biodiversity. Within Colorado, places like North Park, Middle Park, South Park, and the San Luis Valley are the largest parklands. Think of our local montane parklands as smaller versions.

Why are these parklands so much richer than surrounding areas? Start with the fact that these sites are relatively flat. A large expanse of flat land is a unique thing within the Rocky Mountains. Most of the land has a tilt to it and you are either hiking up or down. Going up takes more energy, while heading down hill gives energy. Flat areas tend to slow things up that are coming down hill.

Montane parklands slowed glaciers, which flowed down the river valleys such as Middle Boulder Creek, resulting in most of them stopping within or near the parkland. The valleys and adjacent hills are filled with rock left behind when the glaciers melted and receded. The spaces between the glacial rocks in the valley floor became filled with water, creating large underground aquifers. On the surface, some of this aquifer presents itself in the form of wetlands.

Rivers are also slowed by a flatter landscape. When moving water slows it loses its ability to hold sediment, which is then deposited. Montane parklands tend to have a greater amount of finer alluvial soils. Much of the soil was probably deposited when the glaciers were first receding. Finer soils favor grasslands over forests.

Therefore, the flatness of the land helped create two of the distinguishing habitat types found in montane parklands: grasslands and wetlands. Most of the surrounding landscape is covered with forests. The parklands are grassland and wetland islands within a sea of forest.

The flatness of the land is also very attractive to beaver, which play an important role of making wetlands larger. Beaver favor sites along rivers that are flat and wide. Their engineering works better where they can spread out the flow of water, and their dams and lodges last longer when off of the main stem of a major river. Beaver dams raise the water level, which can create new wetlands or expand existing ones. So montane parklands are prime sites for long-term beaver habitation, and they in turn enhance wetland habitat.

What makes montane parklands good for wildlife is exceptional habitat diversity. Wetlands, meadows, and riparian forests along streams, combined with aspen and coniferous forests and woodlands on adjacent hillsides, create a mosaic of different habitat types unequalled anywhere else in our landscape. Size matters: these are some of

the largest wetlands and meadows in the mountains. Also, the location of the parklands at 8,300' – 8,700' places them at the upper end of the montane where elements of subalpine habitats begin to appear. They are toward the upper end of where ponderosa pine forests are found and the lower end of Engelmann spruce forests. Throw in lodgepole pine, aspen, limber pine on exposed hillsides, Douglas-fir, and narrowleaf cottonwood and a few balsam poplar (relicts of the Pleistocene) along the rivers and the exceptional habitat diversity cannot be overstated.

Coming as no surprise we find that bird and small mammal diversities are exceptional. Close to 100 species of birds will nest in the parklands. This represents about 85% of all breeding bird species found in western Boulder County. In terms of total numbers of breeding birds and small mammals, willow shrub wetlands have the highest densities in the mountains. And meadows are very rich sites for many types of small mammals. With all this diversity and density of small things the larger carnivores will come looking for abundant food. That's why coyote, fox, weasel, and red-tailed hawk can make a good living in the parklands. All the plants and insects make a fine feast for a black bear. And the deer and elk that come to eat the grasses and shrubs provide dinner for mountain lions.

All of the montane parklands have a closely associated herd of elk. They generally leave lower elevation winter ranges in April for places like Arapaho and Caribou Ranches, often making a 10-15 mile movement in one or two nights. After making an energy consuming uphill migration, the elk find themselves at a large, flat expanse of grassland habitat, and will stay for several months. By June many of the pregnant cow elk will calve on or near the parklands, then head for higher ground in the Indian Peaks. They will return in fall, some for the rut, while others will rut higher and wait for deep snows to drive them down. Continued snow drives the elk to lower and milder habitat east of the Peak-to-Peak Highway. Some may stay on the ranches if the winter is mild.

People have utilized the rich plant and animal resources of the parklands for thousands of years. Prehistoric people found large and small game, as well as plants for food, clothing and tools. The parklands were some of the first places homesteaded in the 1860s. The settlers were attracted to the grass, water, and relatively good soils. They could grow some of their own food, but more importantly, they were able to irrigate and cut grass and sell it to others that needed food for their horses. Grass was the oil of the time.

We are fortunate that most of the parklands in western Boulder County remained as large ranches and were not subdivided and developed. This helped make it easier for their current owners to protect the lands from further development and save them as important sanctuaries for wildlife and plants. Lee & Virginia Evans and their family took action to protect the Arapaho Ranch, while Jim & Lucy Guercio and their family have done the same for Caribou Ranch. Thanks to their actions, these properties will continue to function as exceptional nodes of biodiversity.

Dave Hallock