18. Wetlands Are Special Places

Wetlands are unique biological habitats found within the larger, arid ecosystem here at Eleven Mile State Park. Many organisms live out their lives in the micro-habitat of these watery worlds. Predatory dragonfly larvae will one day become swiftly moving dragonflies soaring above the wetland's rushes and sedges. *Copepods* (small, shrimp-like crustaceans) strain microscopic plant food from the water. They are eaten by small fish and shorebirds, which are in turn eaten by larger fish and more predatory birds and mammals.

19. What's The Catch?

Coves like this are excellent places to catch rainbow trout, carp and northern pike. These fish all find the cove a wonderful feeding ground. The shoreline is a favorite nesting and feeding area for many types of ducks, geese, red-winged blackbirds and shorebirds such as avocets, ibises, herons and sandpipers. Nocturnal animals like raccoon, badgers, coyote and deer all visit these same shorelines for food and water during their nightly prowls. Can you find any signs of these creatures along the shoreline?

20. Folk Remedy

Squeeze the needles of this plant and you will smell its distinct odor. Can you guess the name of this plant? That's right – it is juniper, a shrub that grows in a spreading pattern over the ground of dry forests or open slopes. The needles of juniper taper to a spiny tip and the fruits grow round, bluish-black in color and are covered with a whitish powder. Juniper berries are used to flavor gin and other alcoholic beverages. If dried, it can be used as a seasoning. It was once used as a folk remedy for stomachaches, colds and bronchitis. Studies on juniper berries have shown it to lower blood sugar levels and it is believed to be active against tumors. **WARNING! Excessive amounts of juniper can be harmful.**

Colorado State Parks

Eleven Mile State Park
4229 County Road 92
Lake George, CO 80827
719.748.3401
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CSP-ELEV-4.5M-6/05

COYOTE RIDGE NATURE TRAIL

Eleven Mile State Park

Colorado State Parks

Coyote Ridge Nature Trail

What is your initial impression of Eleven Mile State Park? Do you see it simply as a lake surrounded by grass and rocks? Hopefully, after hiking this trail your initial impression may be enhanced. As you walk the loops of the trail pay special attention to the different feelings that you experience along the way. The varied micro-habitats offer many chances to view wildlife. Please respect the wildlife that lives here. You are a visitor to their home. Do not approach any wildlife too closely or attempt to feed it. Walk quietly and speak softly. Noise will frighten wildlife away. Early morning and late afternoon lighting provides the best photo opportunities. Please take only pictures and leave only your footprints behind as you hike. By the end of your hike, we hope that you will discover that Eleven Mile Is Worth The While!

Precautions:

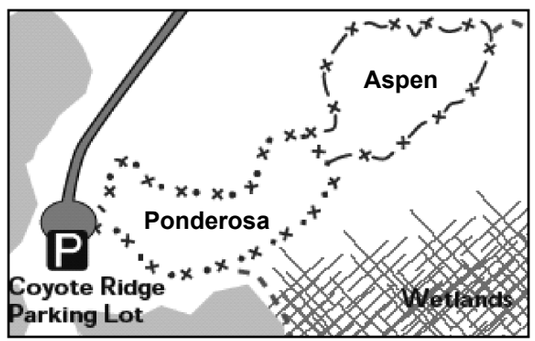
- Wear appropriate clothing and footwear.
- Drink plenty of water.
- Pets must be leashed at all times.
- Please do not touch or feed the wildlife.

This trail is made possible through Colorado State Parks, Great Outdoors Colorado, the Volunteers for Outdoor Colorado, the Colorado Youth Corps Association and the Boy Scouts of America.

Coyote Ridge Nature Trail Map (1.4 Miles)

x • x • Ponderosa Loop (.75 Miles)

x – x – Aspen Loop (.6 Miles)



1. Climate Influences Habitat

Eleven Mile is located in an arid, sub-alpine climatic region. This climatic condition, along with thin soils, determines the types of trees and other vegetation that may be found along the trail. Wind plays a major role in producing the arid condition of the region, as well as producing the bare spots of soil and rock that you see before you. Geologists call these spots *blowouts*. Blowouts are erosional features caused by prevailing winds. As you hike the trail, notice the different types of trees that live here: aspen, Engelmann and blue spruce, ponderosa and limber pine. Can you spot any of the special adaptations that help each species survive in the shallow soils, high wind, and extreme temperatures that exist here?

2. Picture The Past

Howbert, a small sawmill and railroad town that flourished in the late 1800's, now lies on the bottom of the reservoir directly south from this spot. The town once boasted 20 buildings and a population of about 100 people. Imagine the old post office and café where people met for coffee every morning. Did they hear the mill's saw as it began cutting logs at the start of each new day? Did the school bell resonate across the valley as it summoned children to classes? Perhaps the whistle of the Colorado Midland Railroad locomotive interrupted their conversations as it rolled into town. The town is quiet now, inhabited only by fish and other underwater creatures. Do you suppose that a school of fish might now inhabit the school house?

3. Picture Perfect

Corral Cove is one of the most beautiful areas of the park. The slanting rays of sunlight in the early morning and late evening produce some of the best pictures that can be taken at Eleven Mile. Plan to return if you did not get your winning shot today. Directly south and across the lake is Thirty-nine Mile Mountain. To the west, you can easily see some of the peaks that make up the spine of the Continental Divide. In front of these peaks, and much closer, is Spinney Mountain. The small island in front you is Duck Island. It is located between Deer Island to the east and Goose Island to the west.

4. Wildlife Hotels

The dead and decaying trees before you are actually serving an important purpose. They are wildlife hotels. Just like our hotels, they provide wildlife with a place to sleep, get a meal or simply rest for a few minutes. How many creatures might find a home in a tiny hollowed out cavity? Abert's squirrels, wrens, woodpeckers, bats and raccoons all like these cozy accommodations, not to mention the numerous insects that live here. The insects living here are actually feeding upon the dead tree and they will in turn be fed upon by some of the tree's other residents. Try to spot other wildlife hotels as you continue along the trail.

5. A Home Through The Ages

Caves like this provide shelter for all types of wildlife. The char-blackened walls are from past fires and are evidence that humans once used the cave as well. Ute Indians, mountain men, early settlers, ranchers and campers may have all found shelter from the elements within this cave. Warmth was hard to come by so they needed the fire. Natural wind protection and ventilation made it possible to build a fire within the cave. How would you like to spend the night here?

6. Dancers In The Wind

Aspen leaves flutter and rattle in the wind due to their flat *petioles* (stems). For centuries, Native Americans used the aspen for both food and medicinal purposes. Aspens are *vegetative reproducers*, meaning they grow from root sprouts. It is why some aspen groves have survived over 10,000 years. Forget your sunscreen? The Utes used the white powder from the bark as a form of sun block, but please don't try that with these trees — it could damage them.

7. Rock Solid Habitat

Rock outcroppings provide great habitat for raptors such as great horned owls, hawks and golden eagles. Birds, insects, bats, bobcat, chipmunks, bears, weasels and mountain lions all find refuge among the rock crevices. Some use the crevices for shelter. Others discover food within them. Imagine a golden eagle perched on its high rocky throne above the slopping meadow below. The height advantage provided by the rocks gives every predator an upper hand when it comes to finding tonight's dinner!

8. Sweet Smelling Ponderosa

Place your nose next to the bark of the one of these ponderosa pine trees. Can you smell the scent of vanilla or butterscotch? The aroma is only produced after a ponderosa has lived about 75 years. The Abert's squirrel chooses a certain ponderosa as its preferred home and food source simply because of the tree's scent. Short, debarked sticks left at the base of the tree are evidence of the gnawing activity of these rodents and their preference for this particular tree.

9. Renewal Through Fire

A lightning strike that hits a tree can produce a fire that quickly consumes the tree and then spreads to the matted needles and decaying timber lying on the ground below. This often produces a forest fire that will burn everything in its path. But before the summer is over, new growth will begin as grasses and forage plants start to re-colonize the area into a brand new meadow. The new meadow will soon become the home to many new types of wildlife. As you hike the trail, look for other lightning struck trees.

10. The Rock Cycle

Over time, rocks are constantly changing from one rock type to another. This is known as the *rock cycle*. The rock before you was originally Pikes Peak granite. It was changed into what you see today by such geologic forces as deep burial, uplift, erosion, and *hydrothermal* activity ("hydro" meaning water, "thermal" meaning heat). Solutions that were forced through the cracks in the *country rock* (rock already in place) deposited minerals in those cracks. Other processes at work in the rock cycle are *metamorphism* (caused by heat and deep burial) and *recrystallization* (that results from this heat and produces layering or banding in the rocks).

11. Bunches Of Grass

Look at the various grasses in the meadow before you. Notice how they are all growing in clumps. This type of grass is called bunch grass. Its method of growth is a unique adaptation for survival in dry or arid environments. Bunch grass needs to spread itself out over as much territory as possible to capture every drop of moisture it can. But it can not grow in a mat like out east because it is too dry here. Instead, bunch grasses have adapted to grow in clumps so they can conserve energy during the dry periods. If those clumps are scattered all over when flood waters come then the rushing water is directed right to them by the channels created between the bunches. How many different types of bunch grass can you spot?

12. Why Corral Cove?

Look carefully to the north. Do you see the remains of an old corral? The corral belonged to a settler during the early 1900's. He settled on this land because of the abundant water supply. The remains of early human habitation are scattered throughout the park in the form of old foundations, chimneys, sod homes, timbered logs, arrowheads, mortars and trash piles. All these remains are called *artifacts*, valued by anthropologists who study earlier cultures. Artifacts can be any item left by an earlier culture that tells who used to live in the area, how they hunted, what they ate and how they lived. How would you tell the story of the settler who owned that corral?

13. Shrubby Indications

Shrubs are a necessary component of any meadow. Their seeds provide food for birds and rodents while their new growth shoots & stems provide food for deer and rabbits. They also provide shelter from both the heat and predators. Shrubby cinquefoil and rabbitbrush are two shrubs found in this meadow that thrive in poor soil. Both plants are *indicator species*. Indicator species are used by land managers to tell them whether their land is healthy or not. Cinquefoil is characterized by yellow flowers and five fingered leaves. Rabbitbrush also has yellow flowers that bloom late in the summer. It has a distinct scent and like cinquefoil, serves as a reserve food source for mule deer, antelope, jackrabbits, bighorn sheep and elk. The presence of rabbitbrush tells where soil has been eroded or over-grazed. The more rabbitbrush found in an area, the worse the soil condition. How many of these indicator plants are in the meadow? Do you think the meadow is healthy?

14. A Mouse Outhouse

Look carefully at the rock pile in front of you. The black mass on the ledge is the accumulated droppings of a small rodent called the western jumping mouse. Year after year, this mouse uses the same location to deposit its waste. As time goes by, a mound builds up. Minerals within the waste cause stains as they are leeched out by liquids. Jumping mice are different from other mice because of their extremely long tail and large feet. The long tails are used for balance as the mice launch themselves in jumps with their hind legs. These changes in body structure are adaptations that help them escape predation. Imagine a coyote's surprise when the small mouse it is chasing suddenly leaps up onto a rock crevice instead of running under a bush. As you walk along the trail, see if you can find any other jumping mouse waste deposits.

15. Symbiosis in Action

Look carefully at the rock before you. Do you see that colorful plant material growing upon it? This is lichen, a combination of fungus and algae growing in a *symbiotic relationship* (both plants benefit). There are many different colors of lichen. How many have you seen today? They need no organic food source (like fungi) and unlike algae they remain alive even when *desiccated* (dried out). They require only light, air and a few minerals, which they apparently absorb from the surface upon which they grow. Lichens are often the first plant colonists in bare rocky areas and form the initial layer of soil that other plants require to grow in.

16. Engelmann Spruce

The Engelmann spruce that stands before you is identified by its dull, flexible, four-sided needles. It typically grows to heights of 100-120 feet and has a lifespan of about 400 years. A typical old age tree today was born about the time that the Puritans were landing on Plymouth Rock! In addition to being a major source of construction lumber, it is used for pianos and violins due to its resonant qualities. This tree is highly utilized by mule deer, bighorn sheep, elk, porcupine and red squirrels. Squirrels eat the seeds within the cones and leave behind piles of cone scales beneath the tree. Over the years, the heap builds up and is called a *midden*. Keep a watch for other middens as you continue your hike. Blue spruce is similar to Engelmann and is named for its blue-gray needles that make it a highly prized ornamental tree.

17. You decide!

Look at the large boulders in the meadow below you. They seem out of place. How did they get there? Were they deposited by the slow moving valley glacier that sculpted this U-shaped valley about 10,000 years ago? Perhaps gravity pulled them down from the nearby hillside when they broke loose.