



# Foothills Nature Trail

*The City of Loveland does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in the provision of services. For disabled persons needing reasonable accommodation to apply for, attend, or participate in a Mountain Park service, program or activity, please call Adam Clark at (970) 667-5181 or TDD (970) 962-2620 (for the hearing impaired) as far in advance as possible.*

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## A Road For Discovery

This narrow dirt road is not too different from most of Colorado's other winding mountain roads. Constructed by the City of Loveland, its main use before 1971 was to provide access to the water line, which runs from the dam above to the hydroelectric plant below. Now, however, it is a combination of two nature trails for your enjoyment.

As you stroll up the road to the overlook, you will discover **PONDEROSA LANE**. The Ponderosa Pine is the most common tree in this area. In the plains below, few plants grow higher than the grasses and sagebrush and Spruces and Firs take over in the Montane Life Zone at higher elevations.

But here, the Ponderosa is King. His domain is the Foothills Life Zone and his subjects are numerous - from tiny lichen plants to the sleek mountain lion. His forests provide homes, food and protection for them. He helps hold the soil in place and contributes to its enrichment. He even scratches the back of the black bear.

**(970) 667-5181 (MTN PARK)**  
**(970) 962-2727 (ADMIN)**

**Part of the Round Mountain National Recreation Trail**

**PARKS AND RECREATION DEPT.**  
**MOUNTAIN PARKS SECTION**



But Kings have enemies too. Fire, insects and disease rank among them. Even the plodding porcupine eats the bark and damages the tree. All of this is but a portion of a dynamic web of life - The Ponderosa Community - that you will discover as you stroll along the Ponderosa Lane on your way to the overlook.

The return trip will be along the same route, but with a different perspective - observing the **PATHS OF MEN**. The reminders of man's intrusion into the natural world are evident all around us and along the remaining stations of the trail, you will see many different "paths" where man has altered the natural landscape.

Some intrusions are very noticeable, and the scars will require many decades to heal. Others have been made with care and sensitivity so that the natural setting remains undisturbed and the results of this work are barely noticeable. As you return along the Paths of Men, you will discover that with careful planning and proper use of the land, we can work with nature to assure that the beauty of our natural areas will never be destroyed.

The entire trip is 2.1 miles and takes about two hours of leisurely walking to fully enjoy the trail. The City of Loveland hopes you will enjoy your visit, but please leave the park untouched by your stay so that others may enjoy it too.

*Please See Inside For Trail Marker Information*

8 Please leave all motorized vehicles at the trailhead.

7 Please do not litter on the trail.

6 Alcoholic beverages are prohibited.

5 Pets must be kept on a leash.

4 No use of firearms, fireworks or explosives is permitted.

3 No Overnight Camping.

2 Please leave all wildflowers for the next person to enjoy.

1 Do not remove, destroy, or injure any natural or manmade trail features or facilities.

*Rules and Regulations...*

*please obey the following*

*Foothills Nature Trail,*

*To Help Preserve the*



Have you wondered why some plants are often found in one area but not in another? All plants require a certain combination of soil, moisture, and climatic conditions for healthy growth, and plants with similar needs will be found in the same vicinity. Some plants are so sensitive to these conditions that they may be restricted to the life zone that best fills their needs. Others, such as the fringed sage, are tolerant of many conditions and survive in several life zones.

A group of different plants, which live together in the same life zone, make up the plant community of that area. Animals, too, are sometimes restricted to a certain life zone depending upon their need for food, water and shelter. Life zones differ greatly as one travels north or south of the equator, but changes in altitude also produce great changes in soil, moisture, sun and climate. A mountain 18,000 feet high at the equator would contain all the life zones found from the equator to the Arctic Circle, as well as the communities associated with each zone. Because of the many different elevations, Colorado is fortunate to have a variety of life zones - and a variety of plants and animals. You are standing in the Foothills Life Zone and can now open this trail guide to begin your walk along the Foothills Nature Trail.

*This self-guiding nature trail is administered by the City of Loveland through cooperation with the Arapaho-Roosevelt National Forest.*

#### **Marker 1: Adaptability**

In their constant search for nutrients and water, this Ponderosa pine's tiny roots push into cracks in the rocks. As they grow larger, the rocks split more. The process continues, the tree grows, and the first stage of soil production begins. Of course it is not necessary for all trees to find a pile of rocks to grow well. The construction of the road has given us a "worm's view" of this root system. The exposed roots, now open to harsh elements, have adapted and survived by developing a layer of bark on their outer surface for protection. This is but a small portion of the tree's ability to adapt to changes in its environment.

#### **Marker 2: Useful Plants**

##### **Yucca**

This sharp-leaved plant, common in arid soils, was used in many different ways. The flowers, fruit and stalks were eaten and the root was often used for a soap substitute. The spine-tipped leaves produce a fiber used in weaving baskets and mats.

##### **Wild Onion**

This member of the lily family is a common edible plant found throughout the ponderosa pine zone. Bulbs were eaten then, as they are now, and the whole plant was sometimes rubbed on the body to repel insects.

##### **Squaw Currant**

Hopi Indian squaws pinched off dried flower parts at the top of the fruit and gave a few to their men and children to remedy stomachaches. But eating too many would result in worse stomachaches, as they are slightly poisonous in large quantities.

##### **Prickly Pear**

Indians and early pioneers treated wounds and bruises with the pulp of this spiny succulent. The fruits may be eaten in a variety of ways after peeling and the seeds may be eaten in soups or dried and ground into flour.

#### **Marker 3: The Mountain Pine Beetle**

On the mountainside to the west, you may have noticed patches of Ponderosa pines with reddish-brown needles and a dead appearance. In Colorado, especially along the Front Range, the mountain pine beetle usually causes this condition. The beetles lay eggs in late summer, which soon hatch into burrowing larvae. These larvae feed on the inner bark of the tree for an entire year until they develop into adults. If enough of them infest a tree, it will become severely damaged and die a slow

death. Woodpeckers and abnormally cold weather are natural enemies of the beetle, but the only certain control method is the removal of infested trees to prevent the spread of beetles.

#### **Marker 4: Nature's Culvert**

This little ravine and others like it function in much the same way as do the storm drains and culverts in your town. Both carry off excess surface water from rain and snow. Unlike the river below, this ravine doesn't stay wet long enough to support streamside vegetation, and there is little vegetation change from the surrounding slopes. Think what would happen if the timber and brush were cut from this hillside. There would be no trees to break the fall of raindrops, no leaves to replace the protective layer of dead leaves on the ground and no tiny roots to help hold the soil. Dragging logs off the slopes could further disturb and expose the soil. However, improper logging is not the only thing that can create unsightly erosion gullies and barren hillsides. Man must be careful any time he enters the forest and consider all possible results of his actions there.

#### **Marker 5: A River & A Canyon**

The power of water as an erosive force is well illustrated in the canyon below. Over the centuries water has tumbled through this canyon, eating at its walls and bottom, depositing most of the eroded rocks, sand and gravel onto the plains. The Big Thompson flood in 1976 was only one of the many terrible floods endured by this canyon throughout the centuries. With each flood, tons of rock and gravel are swept along with the rushing water, scouring the riverbank and reshaping the river channel. This erosion process has continued for over 60 million years, since the birth of these Rocky Mountains. The scale of this land-leveling force is staggering: today, the Rockies are only half their original height.

#### **Marker 6: The Soil is Formed**

The natural processes, which form soil from stone, are hard at work on this large rock. On the front surface, tiny multi-colored lichens are clinging to the rock and slowly crumbling it with their minute root systems. The sun, wind and rain all join together to gradually wear away its outer surface. Water seeps into cracks in the winter and helps split the rock by constant freezing, thawing, and expansion of the ice. The roots from this large Ponderosa are pushing the rock away from the bank so more surface is exposed. Roots also work their way into cracks to further split the rock into stone, then sand, and finally into soil.

#### **Marker 7: Bitterbrush**

This little bush is "dinner on the table" for the mule deer that roam throughout the park. Although Bitterbrush can be found almost anywhere in the foothills life zone, it is abundant on the summer, open slopes. This characteristic makes it one of the most important winter foods for the deer. The amount of nipping these little bushes receive from deer is studied by wildlife researchers to determine the health of the herd, and whether or not the herd is overpopulated.

#### **Marker 8: Common Juniper**

Beneath this clump of pines you will see a low, spreading shrub with evergreen leaves. Various forms of the common juniper are found over northern North America, Europe, and Asia, making it the most widespread of all conifers (cone-bearing trees). In the Rockies, it can even be found in all life zones, even above timberline. Notice the two distinctive white lines on the underside of the awl-shaped leaves. The bluish berry-like cones take three years to ripen, and are commonly used to lend flavor to gin. The name of the liquor itself is derived from "juniper".

#### **Marker 9: Rocky Mountain Juniper**

The wood of the Rocky Mountain juniper (sometimes called Rocky Mountain red cedar) closely resembles that of the eastern red cedar. Actually, neither are true cedars, but their wood is used for cedar chests, cigar boxes, pencils and fence-posts. However, Rocky Mountain junipers are so scattered in occurrence that their only major use is for fence-posts. Indians sometimes used the shredded bark of the juniper for bedding. The Rocky Mountain juniper is a relative of the mountain common juniper.

#### **Marker 10: Nature's Recycling**

Just as the farmer fertilizes his fields, Nature does likewise to her vast gardens. Trees and plants drop their leaves and twigs to the ground, where they help conserve soil moisture by slowing evaporation and runoff. Bacteria and fungi that thrive in warm, moist conditions decompose this dead plant material. Many insects, rodents, and other small creatures make their homes in the surface soil, where they help mix the litter and humus into the soil and provide additional openings for water and air to penetrate into the ground. All this produces a soil with enough essential nutrients to sustain life in the Ponderosa community.

the power plant, and travels swiftly through the steel, wood, and concrete pipeline. Above the plant, the water plummets down, building up pressure, which will be converted to electrical energy by the turbines. The power plant provides about 5% of Loveland's electrical power. With your ear on the pipe you can listen to the water rushing by on its journey back to the river.

#### **Marker 21: A River & A Road**

The completion of the Big Thompson Canyon Road in 1905 provided free and quicker passage to Estes Park, but in the process the river lost some of its natural character. The road pinched the river along in some stretches and covered part or all of the flat bottomland in others. The road also made the land accessible for development. C home sites, business enterprises, and recreational facilities. Some of these blend in nicely with the natural setting of the canyon, while others seem very much out of place.

#### **Marker 22: From Homestead to Park**

From this point the main park area along the river can be seen. Louis Papa was the first homesteader on the park. He was the French-Indian stepson of Mariano Medina, the first permanent settler on the Big Thompson River. With his horse, two six-shooters, a small cabin, and a few rustic furnishings, Louis Papa managed to raise a few cattle in the canyon. He sold his property to the City of Loveland on December 11, 1926 for ten dollars and "other valuable considerations" and signed the deed with an X. His little cabin stood until 1954.

*We hope that you  
enjoyed your hike.*

*Please come to visit us again.*

#### **Marker 11: The Leaners**

These young, slender Ponderosas are leaning because of their requiring for light. Different kinds of trees need varying amounts of light to grow large and strong. Some grow best in shade, while others (such as the Ponderosa) require more light. A young ponderosa completely surrounded by shade will grow tall, slender and straight in order to reach the light above. If adequate light were suddenly available, the tree would reduce this rapid growth and begin to grow "fatter" while producing strong, well-developed branches. These young Ponderosas have been growing rapidly away from the shade and toward the greatest amount of light. The leaning effect has been compounded by their weight.

#### **Marker 12: Sun & Soil**

Notice the difference in the number of Ponderosa pines on this and the opposite side of the canyon. For Ponderosas to establish themselves and grow, there must be sufficient moisture in the soil. On its east to west journey, the sun stays in the southern half of Colorado's sky. Hence, the south-facing slopes absorb more of the sun's energy. The extra heat produced evaporates more soil moisture, making the drier, south facing slopes unable to support as many Ponderosas.

#### **Marker 13: Overlook**

Use and Arapaho Indians could very well have been on this knoll in days past. Perhaps one crouched behind these rocks and bushes, his eyes searching the slopes for deer or other game. He could have watched early settlers cautiously winding their way up to Estes Park. C Possibly Joel Estes himself. Or, he might have stood with arms outstretched, seeking council from his Great Spirit. In the 1930's, the Civilian Conservation Corps (CCC) saw this knoll as a place for nature contemplation. These men worked for the federal government during the depression years, building this overlook as well as many other outdoor projects throughout the country. The rock placement and massive appearance of this building are characteristic of their construction technique.

#### **Marker 14: The Trail**

This stretch of trail was constructed to replace the steeper, eroding one to the left. The trampling of many feet over such a steep trail dislodges rocks and loosens the soil so that it may be more easily washed away, and plants cannot grow quickly enough to hold the remaining soil in place. The new trail utilizes switchbacks and a more gradual incline to reduce the danger of erosion.

#### **Marker 15: Yesteryear's Wood Path**

These old, wooden pipe sections were part of the two-mile wooden water line built in the 1920's. The line produced pressurized water to run the turbines in the power plant below. Some of the wooden line is still in use, including the segment, which tunnels 160 feet beneath this hill. Imagine the difficulties encountered by the men who built this line.

#### **Marker 16: Rocks of Prevention**

The workers in the CCC took great pains to prevent this road from becoming an agent for destructive erosion, which would destroy the soil below while washing out the road itself. When water drains from the side ditches and the ravine, it passes over this rock terrace and tumbles down to the rocks below. The rocks reduce the potential erosive energy water has for undercutting the road and allowing an erosion gully to gain a foothold. This attractive rockwork is not commonly practiced with today's high labor costs.

#### **Marker 17: A Path of Many Miles**

This path does distract from the natural landscape, but man needs the services, which these lines provide. Many utilities are now trying to design their lines and routes to better blend in with the surroundings. Perhaps someday, technology and economic conditions will allow all these lines to be hidden underground.

#### **Marker 18: The Road**

This road was constructed as a means of access for maintaining the wooden water line. Consider the difference in this little one-lane road and a large four-lane highway. This one twists and turns as it flows with the natural curves of the landscape. Because of this, it doesn't necessitate large cuts in the upper banks or large fills on the downhill slope. The trees and positioning of the road causes much of the road-cuts to go unnoticed from the highway below.

#### **Marker 19: The Bridge**

The two large boulders beside the road did not simply fall into place, but were carefully laid in by the builders of the road. Their purpose is to prevent crumbling and washing away of the roadbed beside this tiny bridge, and time has shown that they are extremely effective. This is a good example of working with nature to better serve man's purposes without causing unsightly damage to the natural surroundings.

#### **Marker 20: A Path of Steel**

This portion of the steel water line was installed near the end of World War II to replace the older, wooden sections. The water is diverted from a dam on the Big Thompson two miles upstream from