

COLLINS PINE NATURE TRAIL

Points of Interest

#1 Ever wonder how the Feather River keeps flowing when it hasn't rained for months? What if there was no snow left on Mt. Lassen? Water would still seep out of the ground at higher altitudes, forming channels by carrying soil as it seeks its lowest level. Gravity guides it into rivers farther down. The movement of soil by water is called erosion. Why might some areas erode more than others?

Note how the erosion on this side of the river has washed the soil out from under the Jeffrey Pine. Where does this tree get its nutrients? It must have enough roots in the ground to obtain nitrogen, phosphorous and water. It also obtains Carbon dioxide from the air.

What do you see, hear and feel, standing next to the river?

#2 This channel is evidence of the flooding, which used to occur before the dam and diversion ditch were constructed farther up the river. The water would overflow the bend in the river on the other side of these Cottonwood trees, and roar through here on its way to Willow Street. When you see Cottonwood trees, the ground water is usually not far down. Looking down the channel toward Chester, you see exposed rocks and not much vegetation. What happened to the top soil?

#3 Here is a meadow with willows in the background. Willows like streams and streams like willows. Water is needed by the willows and the willows shade the water, keeping the temperature down. Insects on the willow leaves fall into the stream and feed the fish. The roots of the willows hold the bank of the stream in place. Small birds make their nests in willows. The leaves or bark can be boiled as tea or broth, for relieving pain.

The young trees that seeded into this meadow are Lodgepole Pine and Jeffrey Pine. Can you identify these two species by the number of needles per bundle?

#4 Did you ever wonder how long some of these trees have been alive? This large Jeffrey Pine would probably be around 300 years old. Note the build-up of needles and twigs at its base. This material slows down the evaporation of water from the soil, keeps soil from washing away, and rots down to form rich humus layers. It also stores carbon for long periods of time, as do the trees themselves. Can you see how this might reduce the build-up of carbon dioxide in the atmosphere? As trees grow, carbon is pulled from the atmosphere into the forest by photosynthesis and it is released back to the atmosphere through decomposition when trees die or burn up in a forest fire.

#5 Can you imagine the order in which plants pioneered this meadow? This area is a former flood plain. The perennial grass that you see here can resprout from its own roots each spring, whereas annual grass must germinate from seed each year. Would perennial grass be more likely to survive flooding?

#6 Do you see the large marsh in the distance? Why are there so many dead trees over there? Beaver dams along Stover Creek have produced this wetland by causing water to spread out over this area. This raised the level of the ground water, causing water to seep out at depressions to form channels. You will see evidence from this trail of these channels, which have dried up in recent years. Why did they dry up since the 1990s?

#7 Do you see a young pine tree here with finer needles and five to a bundle? This is a Sugar Pine, the largest one found in this fifty-acre area. This tree was probably established in the early 1980s. Sugar Pine is seldom found on the Chester flat, but there are smaller ones scattered through this area. How did these Sugar Pines get established here? Why are they surviving here now when they previously did not?

#8 Notice the range of sizes in the Jeffrey Pines. The largest one you see is 53 inches in diameter. Lumber can be obtained from most trees over eleven inches in diameter. The most valuable lumber comes from the bigger trees where boards sawn farther from the center of the tree will have fewer knots. Limbs on trees cause knots in boards. As a tree grows bigger, the lower limbs die and eventually fall off in a process known as self pruning. Can you see why bigger trees would produce more clear lumber?

Have you noticed that the deciduous trees (with leaves) in this little patch differ from the Cottonwood trees along other parts of the trail? These are Aspen, and like Cottonwood, they like soils with water close to the surface. Openings like this with lush grass also indicate a high water table.

#9 Can you see evidence of water channels here? In an area without hills, with water close to the surface, the water courses above ground can change their own location by washing soil from one place and depositing it someplace else (erosion and sedimentation), thereby changing the banks that define the water flow. Changing water patterns in this area back in the 1990s saturated the soil at the base of some trees, causing them to fall over. Can you see evidence of that? These channels have all dried up in recent years.

#10 This large marsh that you see was caused by beaver dams along Stover Creek. If you sat here quietly for a while, you might be intrigued by what you would see. Wherever there is water there is a greater variety of life forms. Wetlands also slow down the water flow, enabling soil particles to settle to the bottom rather than being carried farther downstream. Why would that be beneficial?

Do you see evidence of a fire that burned to the West of here? Grass is one of the first things to come in after a fire. Disturbances like fire also encourage the regeneration of Pine by removing the litter from the forest floor.

#11 This double Jeffrey Pine, now dead, formed a perfect den with its lower branches where deer used to like to bed down. The “broomlike” growth on these branches was caused by Mistletoe, a parasitic plant which grows into the branch and clogs the tubes which transport water and nutrients, causing the branch to keep growing new shoots below the Mistletoe.

#12 This Cottonwood grove and the lush grass indicate a moist site. Can you sense the moisture here? Cottonwoods are deciduous trees, which drop their leaves in the fall and grow new ones in the spring. The Jeffrey Pine trees on the other side of the trail are evergreen trees, which have needles all year. What is the purpose of leaves and needles?

COLLINS PINE NATURE TRAIL “A Closer Look”

The trail starts at the West end of Chester Park, making two loops through about fifty acres of second growth woodland with mixed evergreen and deciduous trees, grassy flood plain, channels, and beaver ponds. The far end of the trail is six tenths of a mile from the park. There are four benches at places along the trail, and twelve numbered points at sites of special interest. This guide contains information and thought provoking questions for each numbered point.

Nature is restoring this area from past disturbances. Collins Pine Company encourages people to take care of it so that we can continue to provide this benefit to the community. We can all enjoy it if we keep it free of litter, and refrain from making loud noises, harassing wildlife and damaging vegetation and structures.

