

Kananaskis Canyon Trail

Welcome to Kananaskis Canyon in Peter Lougheed Provincial Park. Take this guide with you along the trail. At each numbered trail stop, open it for some exciting discoveries about the Kananaskis high country.

Footsteps from the Past

(Stop 1) Listen with your imagination and you may hear moccasined footfalls of the early men who travelled this valley.

Hundreds of years before the first white man came to the valley, Kootenay Indians crossing the mountains from British Columbia probably walked this path on their annual quest for buffalo meat and hides. The dense forest offered safety from detection by their traditional enemy, the Blackfoot. While on these hunting forays, the Kootenays often plundered the Blackfoot prairie camps, capturing women, children and horses.

Less than 200 years ago, Stoney Indians followed this trail along the Minithni-ozada or, as we know it, the Kananaskis River, on their way to summer camps near the Lower Kananaskis Lake.

The Stoneys, like the prehistoric peoples before them, lived in the lower Kananaskis and Bow Valleys. Their summers were spent following the migrating wapiti (elk) and wood bison from the lower valleys into this high country near the lakes. The lake also provided a good supply of trout to be dried for winter food.

A Mountain Journey

(Stop 2) The year was 1854 . . . 11 women, their children, and 28 men followed their leader, James Sinclair, along what was then called the Strong Current River toward this spot. Sinclair's group found the going difficult - most Indians had deserted the valley because of the scarcity of game, leaving the trails unused and obstructed with timber deadfall.

Packing their worldly possessions on oxen and horses, and herding 250 head of cattle, this hardy band of Red River settlers made their way to Oregon territory. The evening campfires offered the exhausted travellers their only comfort on those cold autumn nights. Worse yet, by the time they reached this part of the valley, their Cree Indian guide, Mackipictoun, was completely lost!

Winter was whispering on the wind, but Sinclair would not give up as he led his people around the lakes and finally over the North Kananaskis Pass. From the Bow River, it had taken them 30 days of grueling travel to cross the mountains!

As you walk leisurely to the next stop, look at the trees and deadfall. You will see why it took the Red River settlers so long to travel such a short distance.

The Watershed

(Stop 3) The Kootenay, Blackfoot and Stoney Indian tribes, the Red River pioneers led by James Sinclair and many others passed this way. Yet neither Indian nor white man settled here. Then, as now, the long, harsh winters and deep snows forced men and animals to move from this high-country valley. But, with each spring's melting snow, the wapiti, mule deer and, before their extinction, the wood bison, moved from the lower valleys back to the Kananaskis Lakes.

Ever since the glaciers melted back to their origins in the high mountain peaks more than 10,000 years ago, the forest community has prospered here. The forest thrives on the melting snow and rainfall. The trees, shrubs and soil soak up water like a giant sponge, preventing floods and rapid run-off.

The valley watershed and its plants, animals, soil, lakes and streams are linked by the Kananaskis River to the man-made world of farms, towns and cities. If you live in Calgary or almost anywhere in southwestern Alberta, waters which flow from the Kananaskis watershed are important for your comfort and, in some cases, your livelihood.

The Kananaskis River is only a short distance down the trail. As you walk toward it let your senses absorb the sights, sounds and smells of the forest.

The River

(Stop 4) Minithni-ozada, Strong Current, Kananaskis . . . the name of the river has changed, just as the river itself has changed.

Ten thousand years ago the last great glacier receded from the valley, leaving the depressions that form the lake basins. Melting ice filled the basins to create the lakes. The river channel was cut thousands of years before the ice age; in fact, the original channel was produced about the same time as the mountains.

Millions of years ago this area was covered by a shallow sea. Layer upon layer of bottom sediments built up, creating tremendous pressures which transformed the sediments into solid limestone rock. After millions of years the sediment layers were slowly lifted, bent and thrust upward to form the mountains.

This mountain-building process was so slow that the erosion caused by the river kept pace with the uplifting of the rock. Notice the smoothness of the rock layers around you. The constant movement of water and sand particles acts like sandpaper, smoothing and wearing away the rock.

To get some idea of what this river was like when the Indians roamed this area, go up to the next stop.

Water and Time

(Stop 5) Less than 50 years ago the river below you was a crashing, roaring torrent! Rapids as high as this fence pounded the area by the bridge you just crossed. The noise of the rushing water drowned out all other sounds near the river.

Today the river is quiet, but the geological processes that occurred when the river was a roaring torrent continue. The water still carries particles of sand and rock which wear away the riverbed. The slower flow of today's river has reduced the rate of this erosion as well as the size of the rock particles that can be moved by the force of the water. The limestone rock is not only worn away, but also slowly dissolved by the water.

The rock and sand that make up the riverbed originally came from this canyon and from the high mountains above the lakes.

At the next stop you will see how man has altered the river's natural state to tap its energy.

Man's River

(Stop 6) This large pipe, or penstock contains the waters of the Kananaskis River. Thousands of gallons of water flow from the dam on the Lower Kananaskis Lake through the penstock to the powerhouse, where more than 14,000 kW of electricity are produced per hour, enough electricity to power your home for a year!

The Lower Kananaskis Lake dam and powerhouse were completed in 1955. The redirection of water through the penstock has changed the river's course and altered the erosional pattern that had been taking place in the canyon since the ice age.

Here we see one of the sources of electrical power for residents of Calgary and many small towns in this part of Alberta. Hydroelectric power is a "clean" energy source since no oil or coal smoke is produced in the process.

Think of the Kananaskis River when you next flick the light switch. The harnessing of this river's energy allows people to enjoy the conveniences of modern living. Imagine the reaction of James Sinclair and his followers, were they to see today this massive project and the lively urban centres which use its leashed power for their homes and industries.

The next section of the trail will take you down into the canyon. Watch your step on the stairway as it can be slippery.

Underwater!

(Stop 7) Before the dams were built and the river was diverted through the penstock, the turbulent waters of the Kananaskis River flowed over this spot.

The quiet pool in front of you was a raging cauldron of water and rock particles. If you look closely at the smooth walls surrounding the pool, you can see the scratches and abrasions left by the moving rocks. These rock abrasions were enlarged by the dissolving action of the water. The bowl-like formation was produced as the river swirled against the limestone walls.

The plants growing at the bottom of the pool are types of algae. The algae established themselves here after the dams were constructed in 1955. The small amount of water now flowing through the canyon is actually seepage from the lower lake dam. The slow-moving water deposited fine particles of sand and debris in the pool, allowing the algae a place to grow.

As you wander along the canyon trail, try to imagine what this area was like just 100 years ago.

Look for signs of water abrasion on the walls of the canyon and other indications of the river's power.

The Biting Water

(Stop 8) Erosion literally means "biting or gnawing". At previous trail stops you have seen the effects of erosion by the water and small rock particles carried by the river. The pieces of rock near the edge of the trail were, in effect, the river's teeth!

If you look among the rocks you may see several that are rounded off. These rocks were rolled along the bottom by the force of the water. This rolling action rounded the rocks, which in turn wore away other rocks along the way.

The flatter rocks in the area probably fell into the river from the canyon walls. These rocks were also moved by the water and by the bumping action of other rocks.

The sand and gravel particles resting among the larger rocks are there as a result of the grinding, rolling and colliding of the large rocks as the river pushed them along.

The old riverbed that you are walking along was once a moving jumble of what you see now. This constant shifting of material was powered by the once mighty Kananaskis River.

As you walk to the next stop, keep your eyes open for other evidence of the river's power. At the next stop you will see how the decrease in the river's energy has influenced living things.

A Water Forest

(Stop 9) Since a flood in 1982 this small pool of clear water has had a forest growing in it! Of course, it is not the same type of forest you were walking through on the first part of the trail. Here, instead of pine and spruce trees, we find algae. The long green strands swaying with the current are called *Rhizocloniwn* and the shorter tufts growing along the pool bottom are *Chara*. Both of these algae are used for food and shelter by hundreds of microscopic animals living in the pool, just as the elk and deer use the pine and spruce.

The water provides nutrients that the algae need for growth and the sun provides the power that allows the algae to produce food. This sun-powered process, or photosynthesis, is used by all green plants, including the pine and spruce trees.

This small community is in balance with the flow of water in the river. If too much or too little water flows through this pool, it will change the types of algae that can grow here. If the types of algae change then so will the types of animals. The same principle holds true in the larger forest of pine and spruce trees. If a fire destroys that forest, new plants will grow, allowing different types of animals to utilize the area.

Now walk to the last stop and discover the Kananaskis River Valley.

The River's Valley

(Stop 10) Today you had a look into history. Think back: a seafloor uplifted by tremendous forces; the prehistoric river cutting through ancient sedimentary rock; Stoney Indians following the annual migration of the wapiti; Sinclair and his settlers struggling along the river's trail; surveyors and builders harnessing the river's power.

Many of today's visitors to this river valley are people in search of what the river was . . . the turbulent water tumbling from the lake, surrounded by a virgin forest of spruce and pine. The wild river is gone with the past, but there are other wild rivers and untouched forests in this high-country. They are there for your discovery.

The southern Kananaskis Valley, now part of the larger Peter Lougheed Provincial Park, offers a variety of recreational opportunities. Take part in an interpretive program or a guided walk, tour the visitor centre or take a hike along a high-country trail. See the works of the ancient glaciers and this once raging river, the Kananaskis.