Queen's Garden

At Sunrise Point

Trail Guide

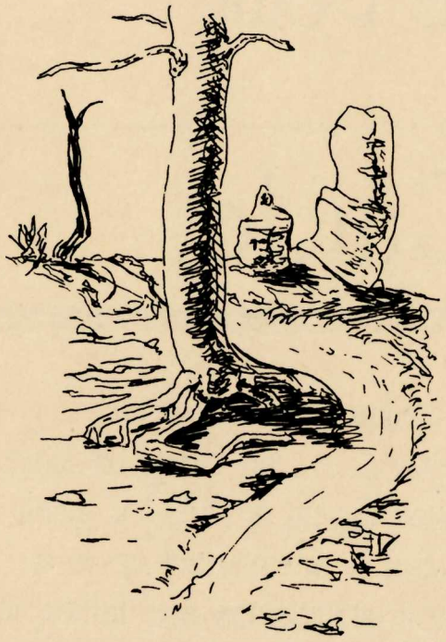
"Standing obelisks, prostrate columns, shattered capitals, panels, niches, buttresses . . . all bring to mind suggestions of the work of giant hands, a race of genii once rearing temples of rock, but now chained up in a spell of enchantment, while their structures are falling in ruins through centuries of decay."

- C. E. Dutton, 1880

Survival

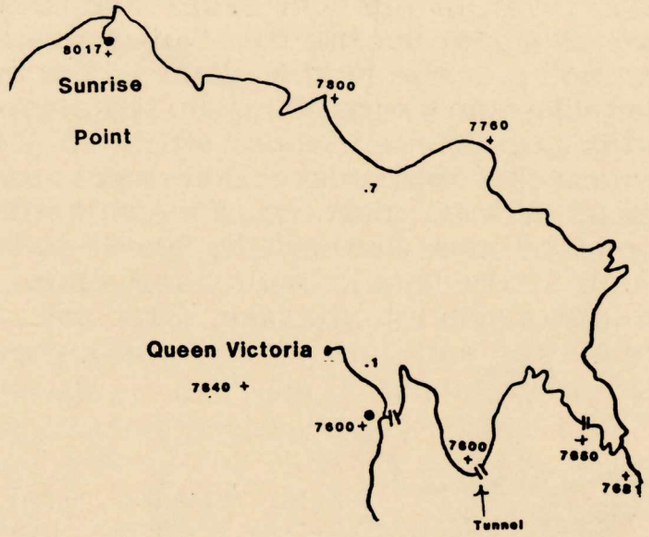
As you descend into the canyon, you will see that this loosely-cemented rock is solid, angular, and weather-beaten. Out of this rock, water has carved a beautiful area of narrow, steep-walled gorges leaving high-standing rock pinnacles or "hoodoos".

Leave the rim behind and experience a special place you can only glimpse from above. A place where life is a struggle for survival. Along this trail you will learn about ways in which plants and animals survive in this land of colorful rock.



Trails are necessary if anyone is to enter this geological wonder, but we pay a price for these trails in increased erosion. Making new trails or shortcutting existing trails encourages gullying and discourages plant life. Limit human impact by staying on the trails. You can make a difference!

Please help preserve this natural area by keeping the park clean, and by not feeding the animals. Pets are not allowed on trails in the canyon.



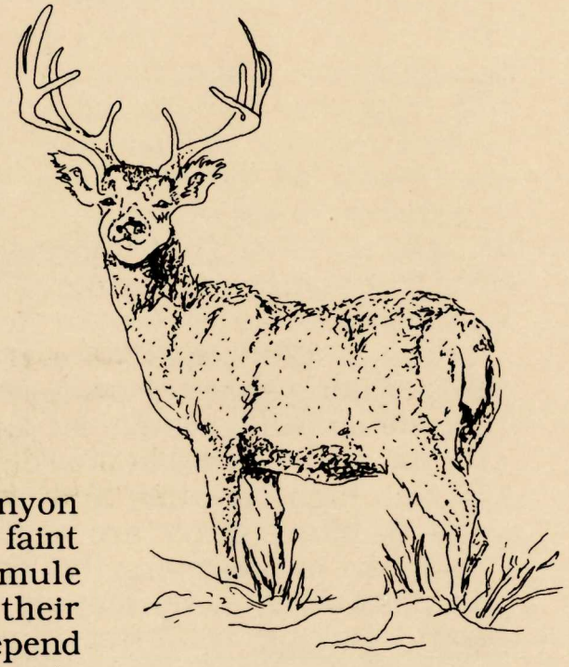
Trail Information

The Queen's Garden Trail winds slowly downward from the rim to the valley floor below, a drop of 320 feet (98m) over .7 miles (1.2 km). Good hiking shoes or boots with waffled soles are recommended. Watch for small rocks lying on the trail--they are like marbles under your feet! At this high elevation and in this dry air, a hat and drinking water are a good idea. Please do your part in preserving this natural area as much as possible . . . by staying on the established trail, picking up litter, and not feeding the animals. Numbered posts along the trail correspond to paragraphs and illustrations in this guide.

Fresh Water Lake

Look out across the cliffs in the distance. Find a layer in the cliff-side, and trace it horizontally. Now imagine that the layer you have been tracing is the muddy bottom of a broad, shallow lake... as it was, 60 million years ago.

Imagine yourself, shoes off, knee deep in water near this ancient lake shore, sand and mud oozing up between your toes. You can hardly see the opposite shore because the lake is so large. Streams carry sand, mud, and lime from surrounding hills into the lake. Over time, these layers of mud and lime pile up, are buried, and harden to limestone.



Mule Deer
(Odocoileus hemionus)

Look for:

On steep canyon slopes, you may see faint trails made by mule deer. Named for their large ears, they depend in part on their acute hearing to warn them of approaching predators.

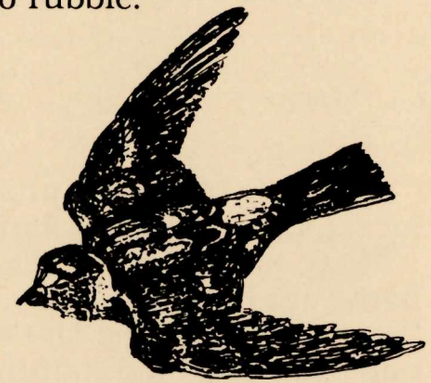
Exposure

Surface layers of rock erode, exposing new layers of rock beneath. Flowing water continues its erosion today, removing an average of one foot of the rim every 65 years! Runoff during spring snowmelt and summer thunderstorms is rapidly cutting the deep gully in front of you. The rock between these gullies is more slowly eroded, forming spires and pinnacles or "hoodoos" which survive for a while. Eventually even the high standing hoodoos are reduced to rubble.

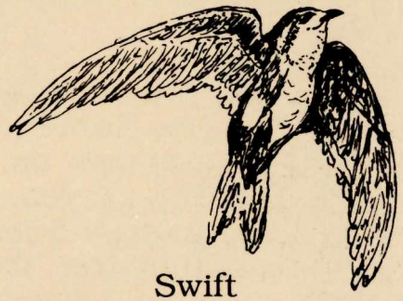
Look for:

Swallows and swifts, the small birds that zoom in and around the cliffs in late spring and summer are hard to tell apart.

Violet-green swallows have a glossy green and violet back. White-throated swifts are black and white. They both nest in cliff crevices.



Swallow
(Hirundo pyrrhonota)



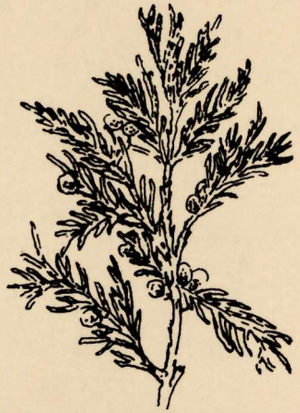
Swift
(Aeronautes saxatalis)

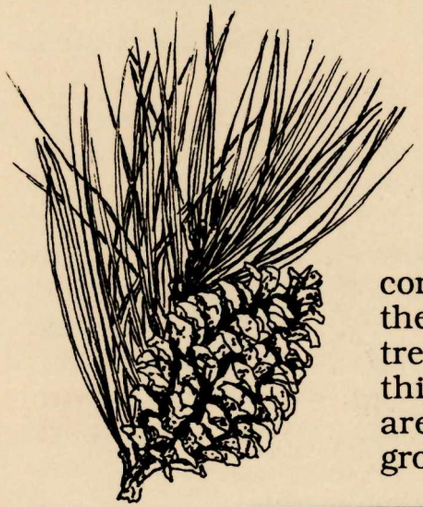
Breathe Deeply!

You may have noticed that the thin air at this 8,000 foot elevation requires it, but also, it's good! Bryce Canyon has some of America's cleanest air--which allows you to see at least 100 miles on an average day! Remind yourself of what pure air is like...and why it's so precious. Try to catch the sweet scent of a nearby ponderosa pine, especially during the warmer months.

Look for:
Rocky Mountain juniper
(Juniperus scopulorum)

Flat, scale-like needles, shaggy bark, and small green or blue "berries", mark this United States native. Rocky Mountain juniper is found on the plateau.





Ponderosa pine
(Pinus ponderosa)

Some ponderosa pine, common on the plateau, spill into the canyon. Red bark on mature trees and long needles distinquish this tree from all others in the area. Ponderosa needles usually grow in clusters of three.

Microclimates

On north-facing slopes and in narrow gullies, the climate differs from south-facing slopes, resulting in different vegetation. Instead of the juniper and pinyon pine usually found when you descend into the canyon, north-facing slopes support Douglas fir, limber pine, and common juniper--flora usually found at higher elevations. Gullies form more easily on the south sides of slopes, where more frequent winter freeze-thaw cycles loosen the crust to wash away in snowmelt and summer runoff.

Look for:
Common juniper
(Juniperus communis)

Unlike its tree-sized relatives, common juniper is a shrub with short, sharp needles--like those of a spruce. The green or blue fleshy cones (berries) identify this shrub as a juniper.

Douglas fir
(Psuedotsuga menziesii)

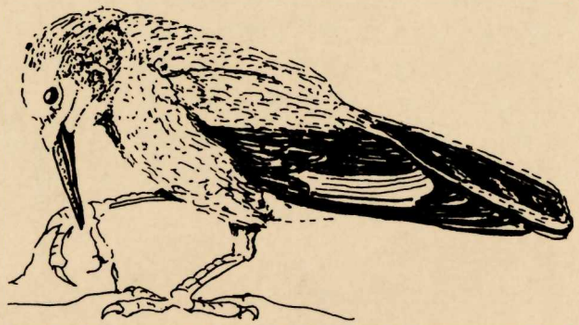
Douglas fir is not a true fir. True firs have flat, flexible, single needles. Both cones and needles grow upright. Douglas fir needles grow out in all directions and their cones hang downward on the branches. Three pronged bracts on the cones mark the Douglas fir.

Bryce's Canyon

"...a helluva place to lose a cow."-Ebenezer Bryce

You may be surprised at the amount of greenery here. In places, there is even enough grass for cattle to graze...although grazing is no longer allowed in this natural area. Ebenezer Bryce grazed cattle in some of the small canyons near this trail. The neighbors called the area "Bryce's Canyon," and when the national monument was created in 1923, the local name was used. Congress also used the name when they made this area a national park in 1928.

You may have noticed that Bryce is not really a canyon. Actually, it is a series of 3-sided bowls, or amphitheaters, and you are in the largest one.



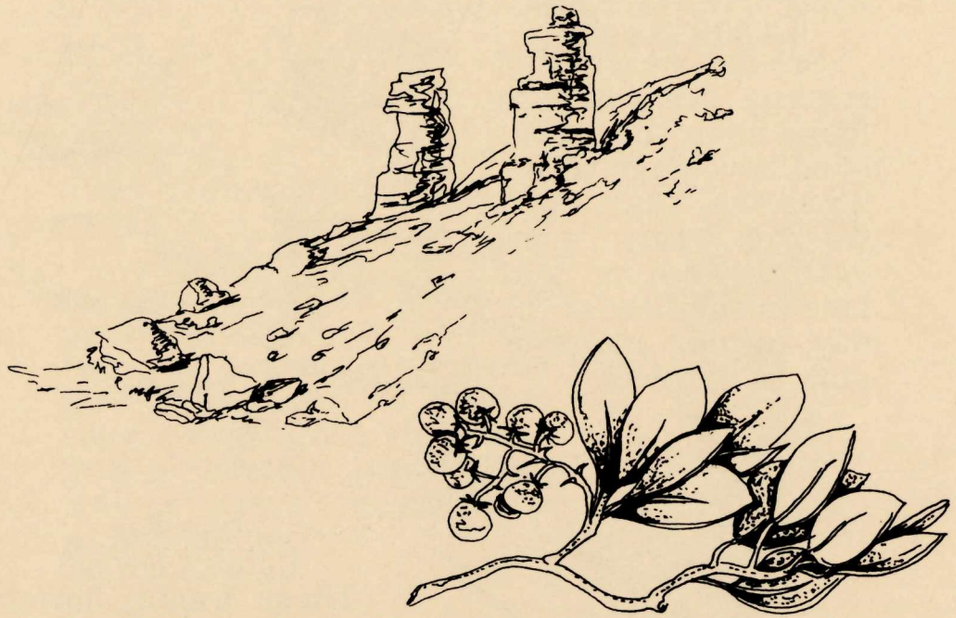
Clark's nutcracker
(Nucifraga columbiana)

Look for:

Clark's nutcracker, a gray bird with a long bill, black wings and tail with white patches, belongs to the jay family. In campground and picnic sites, it steals food scraps. It can hold several nuts in a special pouch under its tongue.

Hoodoo Graveyard

Notice the boulders strewn on the smooth slope before you. They are all that remain of rock ridges and hoodoos that once stood here. Such is the fate, in time, of all the pinnacles you have seen. New ridges and hoodoos are being carved out of the plateau edge to replace them. Look for the rockslide which occurred in 1987.



Look for:

Greenleaf manzanita
(Arctostaphylos patula)

Manzanita, Spanish for "little apple," has red bark and round evergreen leaves. In spring, small clusters of pink flowers cover these shrubs, and in summer, they develop into tiny apple-like fruits. The shrub and its fruits are favored foods for birds, bears, and squirrels. Indians crushed the leaves and used them to cure poison ivy.

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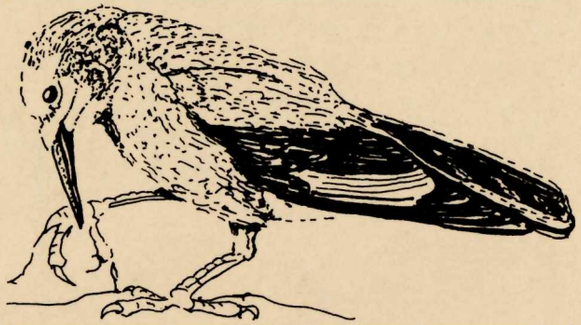

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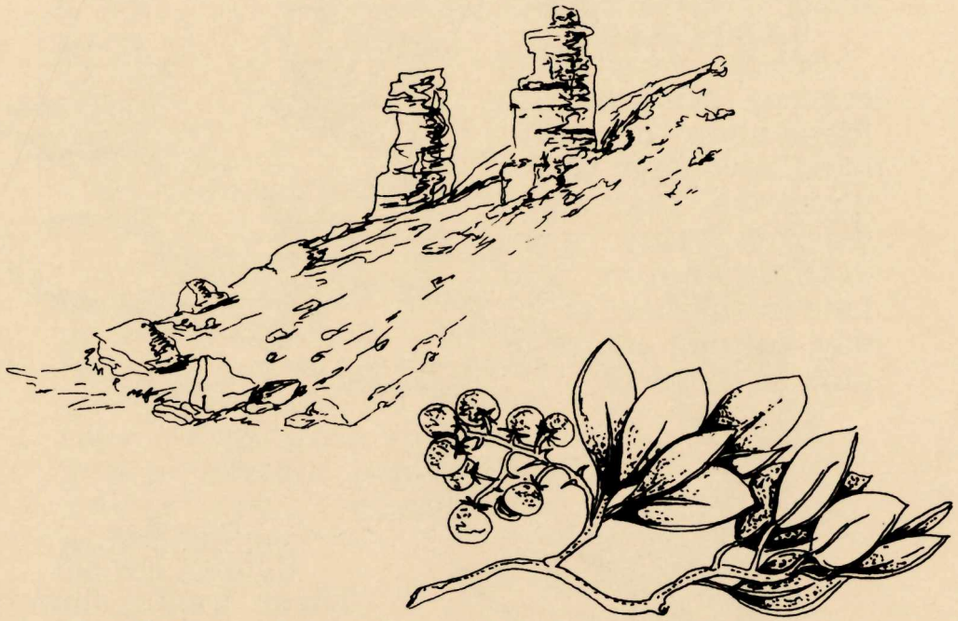

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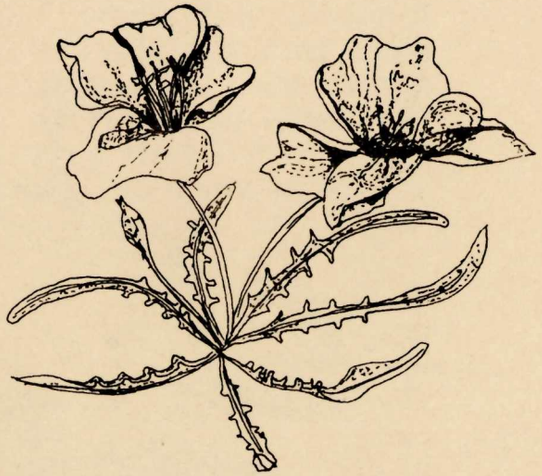
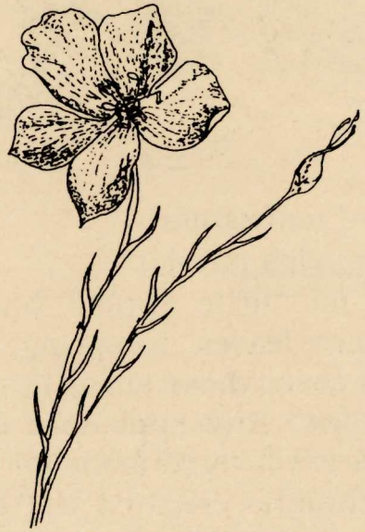
Wildflowers!

From snowmelt in April through the warm summer days, a variety of wildflowers bloom along the length of this trail. Some of the most common ones include:

Evening primrose
(Oenothera sp.)

Several varieties of evening primrose are found along this path. Most have large yellow blossoms that open during the cool evening hours and fade in the heat of the day, turning orange or pink as they wilt.





Blue flax
(Linum lewisii)

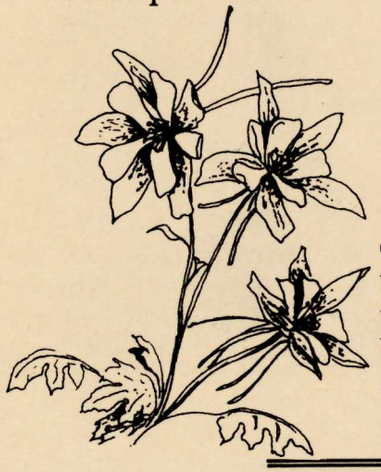
These fragile flowers are found at the end of a long, slender stem. Indians cooked the seeds, and used fibers from the plant for fish line. They stewed stems and leaves for controlling stomach disorders. Cultivated flax provides fibers and linseed oil.

Sego lily
(Calchortus nuttallii)

The state flower of Utah has three large, white waxy petals with colorful patterns inside, and grass-like leaves. Sego lilies thrive in dry conditions. The bulbs taste like potatoes, and were eaten by Indians and early pioneers.

Indian paintbrush
(Castilleja sp.)

Paintbrushes are easily recognized by their bright red or orange "blossoms." Actually, leafy bracts and not the flower, give paintbrush its brilliant color. Paintbrush roots often attach to other plants' roots and are considered semi-parasitic.



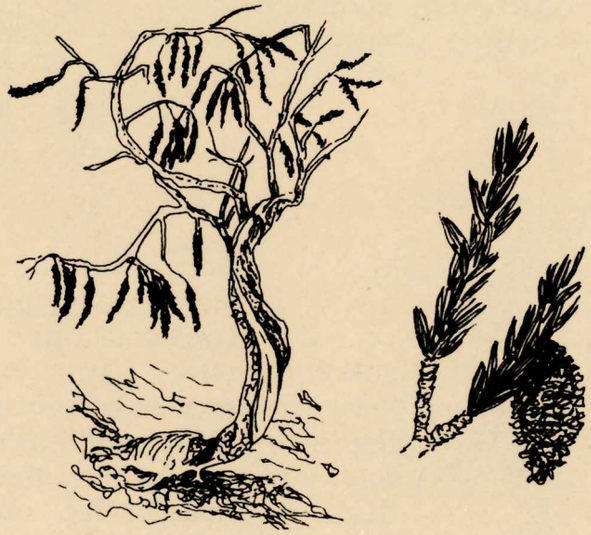
Blue columbine
(Aquilegia caerulea)

On rocky slopes in the canyon, the blue or white trumpet-shaped blossom catches the eye. A slender spur extends backward between the sepals, distinguishing the columbine from other flowers.

Old trees on barren slopes
Bristlecone pine
(Pinus longaeva)

Bristlecones are the world's longest-lived trees. Some of the oldest living in the White Mountains of California and in Great Basin National Park in Nevada are over 4000 years old. At Bryce, a bristlecone near Yovimpa Point is more than 1600 years old.

Bristlecones typically grow at high elevations, on exposed slopes and ridges, with poor alkaline soil. Bryce Canyon includes stands of bristlecones that thrive at the lower limits of their elevation range (7000')(2100m). By growing in such harsh places, they have little competition and little threat from fire. Often only parts of a bristlecone die. The rest of the tree that continues to live is capable of attaining the great age that makes it famous.



Photography

Most cameras accurately read the light available for photographs. However, the time of day and the weather can make a lot of difference in the quality of the photos you take. Light conditions also change with the seasons.

In the morning, spires and ridges appear to glow orange as they are lit by the rising sun.

By afternoon, the sun reaches into the narrowest gorges, reflecting even into the darkest corners.

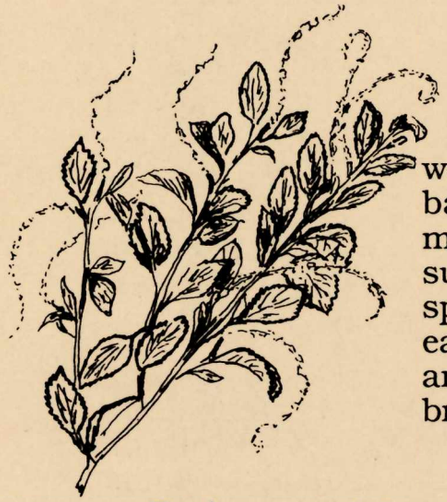
Near sunset, pinnacles take on more muted hues as the sun drops in the western sky.

During stormy weather, wet rock produces deeper shades of pink and orange, and the usual bright light is subdued.

In winter, snow provides spectacular contrast to the orange rock and the bright blue sky.

Oregon grape
(Berberis repens)

This low-growing plant with holly-like leaves is sometimes called creeping barberry. In spring, this plant produces bright yellow clusters of flowers. Green "grapes" develop by summer, ripening to purple by August. These edible berries are sour, but make excellent jelly. In the fall and winter, chlorophyll dies and recedes from the leaves, allowing red and purple pigments to show through.



Alder-leaf mountain mahogany
(Cercocarpus ledifolius)

This large shrub with stiff, wedge-shaped leaves and white-barked branches, is common in many areas of the park. In late summer, hundreds of seeds with spiraled, feathery tails spin to the earth and plant themselves. Indians made the strong, yet flexible branches into bows.

Rocky mountain maple
(Acer glabrum)

This shrub grows along streams and washes. The small, typical maple leaves with red petioles (stems) and the winged seeds or samaras make it easy to recognize.

Hoodoos

Hoodoo: Geological - a pillar of rock, usually of fantastic shape, left by the powers of erosion.

Pinnacles, when formed by erosion, are called hoodoos. Hoodoos are largely shaped by water and ice. Each winter, water freezes in cracks in the rock. Ice expands, widening the cracks, until gravity finally pulls the rock down. Rocks lying at the cliff bottom are mute evidence of this process. With the frequent freezing and thawing in late winter or spring, you can often hear and sometimes even see erosion occurring.

Colors--What colors do you see in the cliffs? Trace amounts of iron in the rock oxidize as they are exposed to oxygen in the air and in groundwater. Iron oxides range in color from yellow to red, and can be anything in between... as nature invents new shades of orange. Manganese also oxidizes here, causing purple hues.

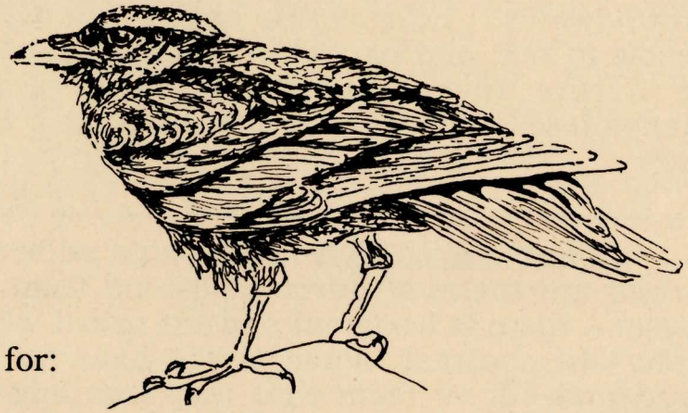
Differential erosion--Layers that stick out as ledges are made of purer limestone than other layers... there is less mud and silt mixed with the lime. In contrast, some layers have so much mud and silt in them that they are only limey siltstone. These layers erode fastest.

Dolomite--Look for gray or black layers commonly capping the rock spires. Dolomite is similar to limestone, but contains magnesium, making it less easy to dissolve.

Limestone

Examine a stone lying on the path at your feet. The rock is Claron (Wasatch) Formation limestone, although only a small proportion of the rock is actually "lime". It is this lime which cements the sands, silts, and clays together into solid rock. The lack of fossils in the rock make it difficult to date this layer exactly. Best estimates date this rock at about 60 million years old. For many years, the limestone was underground, buried by more recent deposits.

In this part of the cycle the rock has been exposed to the elements, carved away, and washed down into the valley below. Water erosion occurs so quickly at Bryce Canyon that evidence of the slower process of wind erosion is all but unnoticed.



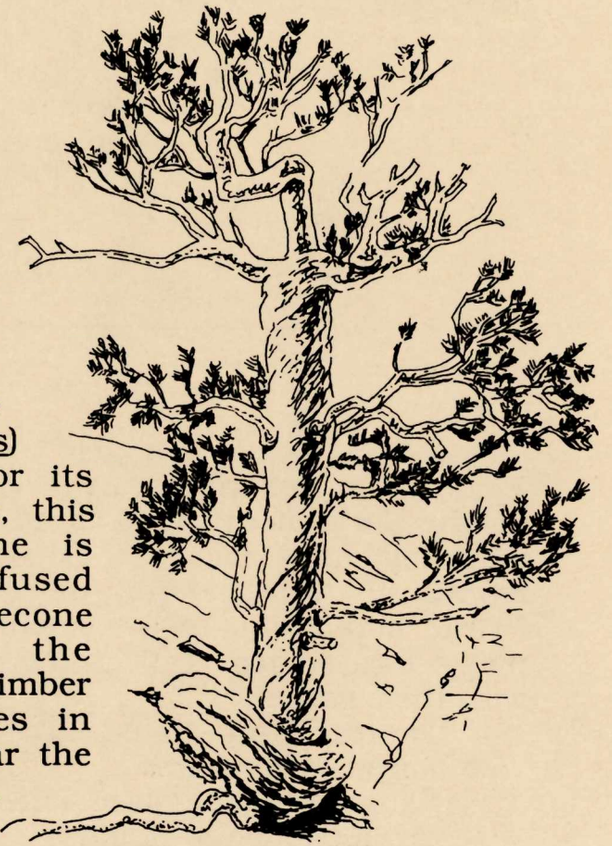
Look for:

Raven
(Corvus corax)

This large black bird soars on updrafts along the cliffs. Ravens fill the niche of scavenger, since no vultures are found.

Masters of Adaptation

This limber pine is hanging on as well as it can to a slope that is gradually sliding away, into the gully below. Trace the roots along the slopes--the roots are much more developed than the branches! Yet for all its efforts, harsh conditions for several years in a row caused this tree to die. Its contorted trunk and long twisting roots reaching long distances for every drop of water are testimony to the austere environment in which this tree survived.



Look for:

Limber pine
(Pinus flexilus)

Well-named for its flexible branches, this five-needled pine is sometimes confused with the bristlecone pine. Unlike the bristlecone, the limber pine has needles in clusters only near the end of the branch.

Legends

Before there were any Indians, the Legend People, To-When-An-Ung-Wa, lived in this place. There were many of them. They were of many kinds--birds, mammals, lizards and such things--but they looked like people...

For some reason the Legend People in this place were bad. Because they were, Coyote turned them all into rocks.

You can see them in that place now: all turned into rocks: some standing in rows, some sitting down, some with paint on them just as they were before they became rocks...

This is the story the
people tell.
Paiute Indian Legend-
as told by Indian Dick.

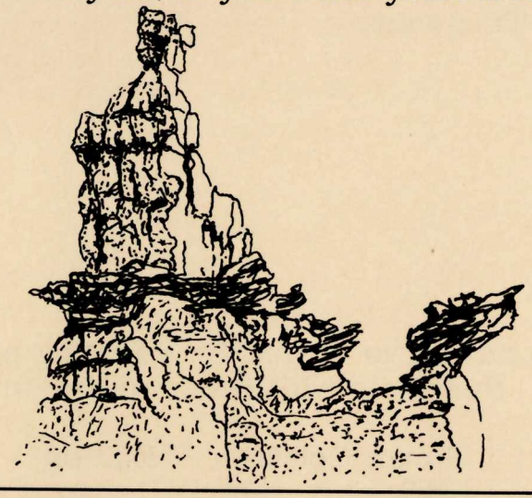
Paiutes

Paiute Indians began moving into the area in the 16th century. Three centuries later, stockmen and farmers took over Indian lands. Eventually hunger and disease reduced the Paiute population to five small families. Still, many local places reflect the Paiute presence with their names:

Paunsaugunt - home of the beaver
Paria - dirty water
Panguitch - the place where fish are
Yovimpa - point of pines

The Queen

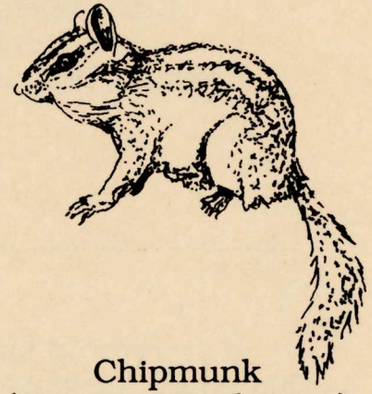
Now in the heart of the canyon, you are 320 feet (100 meters) below the rim. Queen Victoria, a hoodoo on the ridge above you, reigns over this garden of hoodoos. The Queen has changed little in the past 100 years. But when conditions are right a large slab may fall off causing a drastic change--and it could happen this year, next year, or years and years from now.



Look for:

Chipmunks and ground squirrels

Both are small rodents, but the smaller chipmunk has stripes on its face, where ground squirrels have none. Both may appear tame, but respect their wildness by not feeding them. Their natural foods, nuts, seeds, bird's eggs, and insects, are all abundant.



Chipmunk
(Eutamias Umbrinus)

The Return to the Rim

...can bring you to even more different worlds! A short walk out of the Queen's Garden takes you to a trail junction. Go back through the tunnel, and 3/4 mile (1.2 km) farther is Sunrise Point. Follow the other path, and you will reach the Navajo Trail, which climbs through a narrow gorge back to the rim at Sunset Point. It is 2 miles (3.2km) from here to Sunrise Point by the Navajo Trail route.

We would like to thank the following people for their help with this publication:

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Steve Thede - (Text)
Linda Lutz-Ryan - (Illustrations & Design)

If you would like to give us your thoughts on this guide, please jot them down and leave them with the park staff.