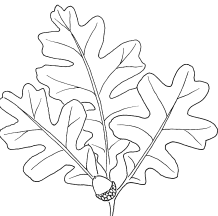


Along the rim

The first part of the nature trail follows the rim of the canyon to the east, passing through native grasses and trees typical of forests from 6,000 to 9,000 feet elevation.

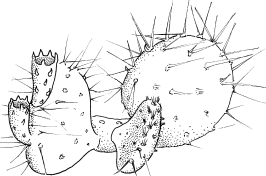
The tall evergreen trees are Ponderosa pine, which grow up to 150 feet tall.



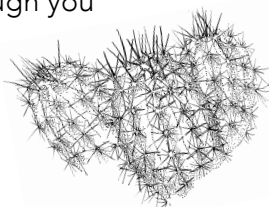
*Gambel Oak*  
The shorter trees are Gambel oak, which drop their leaves in the fall. Animals eat the acorns of the Gambel oaks. In pre-historic times, people also gathered acorns for food and oak wood for tools.

The blue gramma grass, recognized by its distinctive comma shaped seed heads that resemble eyelashes, is an important forage food. Two bushes along this path are also food sources because of their edible berries: the wax currant and three-leaf sumac.

A few cacti grow where they are sheltered and warmed by rocks. The prickly pear cactus and hedgehog cactus both have edible fruit and flesh, though you



*Prickly pear*



*Hedgehog*



*Ponderosa*



*Blue gramma*

Geology

The rock exposed in the canyon is basalt. Around 6 million years ago a shield volcano about 10 miles south of Flagstaff erupted, sending a lava flow north. The museum and canyon sit on this lava flow and the canyon is one of the places where the basalt is still exposed, since most of it was covered by later lava flows, including the lava flow that formed Observatory Mesa to the southwest. About 330,000 years ago the river now called the Rio de Flag began to flow from runoff in Fort Valley and the southside of the San Francisco Peaks. Arizona has been in a drought for the last 20 years and today the Rio de Flag only flows seasonally. The black color on some rock faces in the canyon is a coating formed by mineral oxides deposited by water over long periods of time. This kind of surface was often used as a place for petroglyphs. People would chip the varnish to leave a light-on-black design.

Lichen

Green, orange, and yellow lichens cling to some of the rock. Lichens are fungi, algae, and yeast living together in a mutually beneficial symbiotic relationship. The fungi protect and provide moisture for the algae, and the algae provide food for the fungi through photosynthesis. The differently colored lichens are each a different species.

Thanks to REI and American Conservation Experience for helping enhance this trail.



Rio de Flag Nature Trail

Length: Half mile  
Elevation change: 20-30 feet

**Terrain:** The upper portion of this trail has a gentle decline and connects to three looping portions of the trail. Directional arrows mark where the trail splits. A set of rugged rock steps descends into the canyon, leading to the Canyon Loop and Forest Loop. The rock steps and lower trails can be slippery, icy, and muddy, depending on the weather. If the steps look difficult, stick to the upper trail.

HIKE AT YOUR OWN RISK



Stay back from the edge



Keep dogs on a leash

Animals

Abundant water and plants for food as well as protection make the canyon an ideal home for many species, including:

Side-blotched lizard

Gray fox

Racoons

Skunks

Bobcats

Bears

Steller’s jay

Acorn woodpeckers

Pygmy nuthatches

Red-faced warblers

Flycatchers

Hummingbirds

Great-horned owl

Red-tailed hawk

Abert squirrels

These unique squirrels live in Ponderosa pine forests, eating pine seeds, male pinecones, buds, eggs, carrion, fungi, and sometimes the inner bark of pine twigs. If you see pine twigs on the ground with the outer bark removed, those are the remains of a squirrel meal. Abert squirrels are gray with tufted ears, pale belly, and a reddish patch on the back.



Canyon Loop

At the base of the rock steps, turn right and follow the path westward. Many plants grow in the moist middle of the canyon where the Rio de Flag flows.



Arroyo willow  
are used to make baskets.

Two other moisture-loving plants, the horsetail and scouring rush, are related to gigantic plants that formed forests 200 million years ago. A segment of one of the ancient horsetails is on display in the geology gallery. Today horsetail and scouring rush grow only a few feet tall and the hollow, jointed stems are no bigger around than a finger.



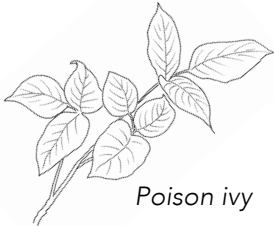
Horsetail

The basalt rock of the south-facing canyon wall warms in the sun, allowing plants to grow that would usually be found at lower elevations. Prickly pear and hedgehog cactus grow sheltered between rocks.

The woody vines with bright green, heart-shaped leaves are canyon grapes. Beware of other vines with three-part leaves,

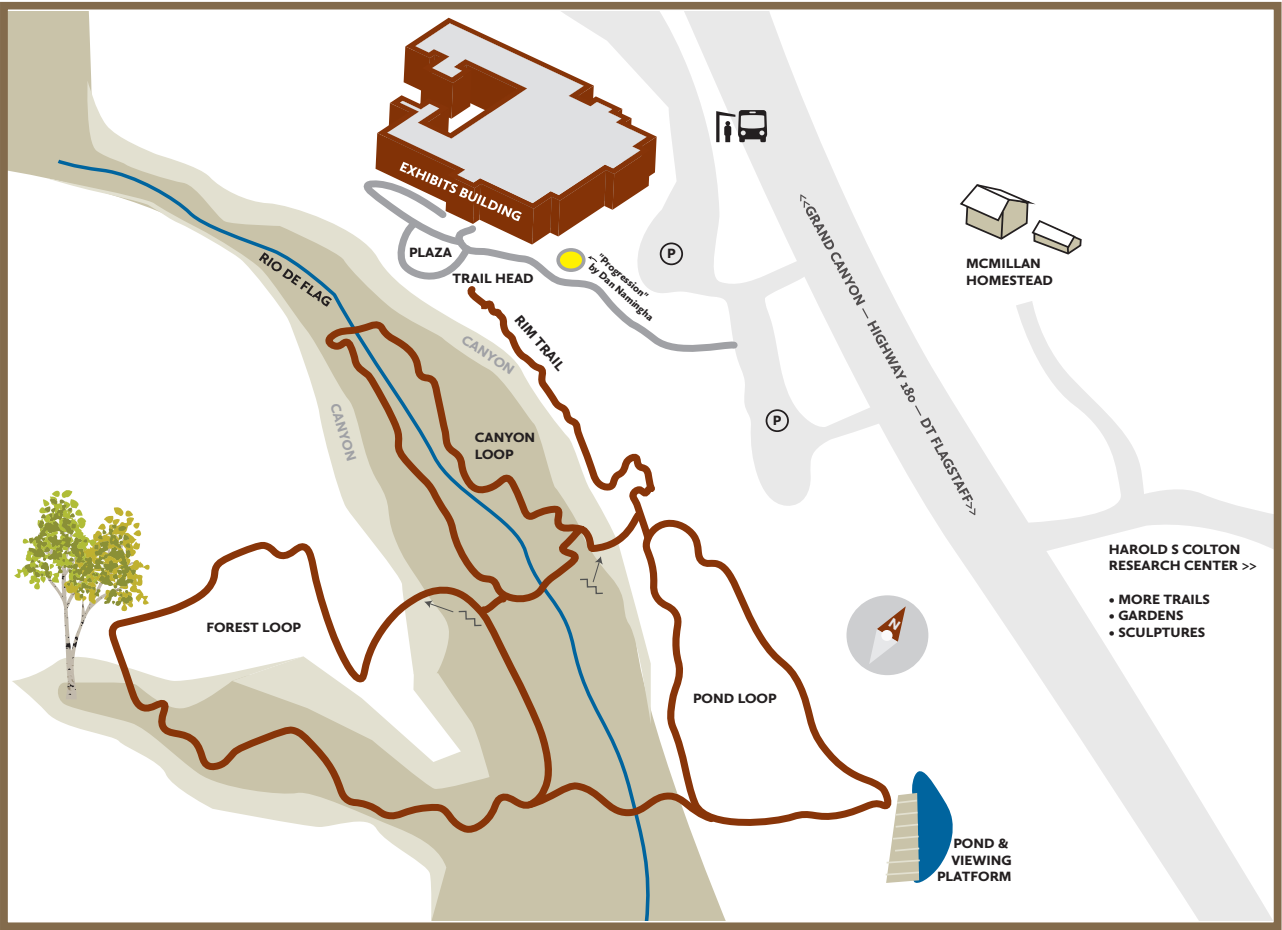


Canyon grape



Poison ivy

The roots of the Arroyo willow form underground networks that prevent erosion along the river. The willows' supple branches



KEY Lower Elevation Stairs Bus stop Parking

which turn red in autumn. This is poison ivy and will cause a rash if touched. Depending on the season, wildflowers bloom along the trail, including Rocky Mountain iris, goldenrod, Arizona rose, meadow rue, amaranth, and Carruth's sagebrush. Where the trail turns to cross the creek, a small spring provides water for a collection of wildflowers, including



Rocky Mountain iris

the Seep monkeyflower, New Mexico checker mallow, and common yarrow.

At the stream crossing, common hops vine grows through the willows. The pale green, papery fruits of this vine appear in late summer and turn amber in the fall. The fragrant wild hops are related to hops used to brew malt beverages.

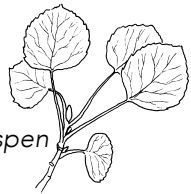


Hops

A sign gives directions to the Forest Loop, a trail that returns to the parking lot, and a trail down to the pond.

Forest Loop

The Forest Loop includes steep rock steps to the top of a hill with views of the San Francisco Peaks and a side canyon with a small stand of quaking aspen that is particularly stunning when the circular leaves turn yellow in the fall.



Aspen

Aspen trees grow in groups with a shared root system. Although individual aspens may live for only 100 to 200 years, the clone to which they belong might be hundreds or even thousands of years old. Aspen and Ponderosa pine are both fire-adapted species.

Ponderosa pine live 300 to 500 years. The bark thickens as the trees age, turning from black to an orange-red and protecting the older trees from low intensity, lightning caused fires that occurred frequently before settlers began suppressing fires in the late 19<sup>th</sup> century.

Pond Loop

Continuing along the rim trail will lead to a wooden platform over a small pond. This pond is fed by San Francisco Spring across the road. This prolific spring became a stop on the Beale's Wagon Road, established in 1857. In 1866 Thomas McMillan built his log homestead beside the spring. Now sheathed in white clapboard, the homestead still stands across the street from where you are standing. It is the oldest home in Flagstaff. Water from this pond spreads out to create a wetland