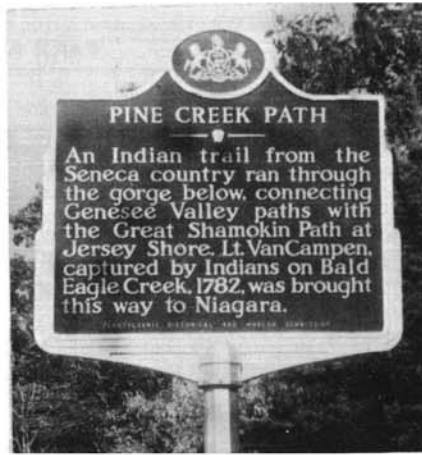


PENNSYLVANIA
TRAIL OF GEOLOGY



**THE GRAND CANYON
OF
PENNSYLVANIA**



The "Grand Canyon" of Pennsylvania, variously referred to as Pine Creek Gorge or the Leonard Harrison and Colton Point State Parks, is located in southern Tioga County.

The northern end of the gorge is just south of Ansonia, along U. S. Route 6 and continues in a serpentine, southern direction for approximately forty-seven miles. The maximum depth of the canyon is 1450 feet at Waterville near the southern end of the canyon. At Leonard Harrison and Colton Point State Parks the depth of the canyon is more than 800 feet and the distance rim to rim is approximately 4000 feet. The gorge becomes deeper and wider south of the park areas, but these park locations afford the most spectacular scenic overlooks and are the most accessible to visitors.

Although the rocks exposed here are estimated to be over 350 million years old, most of the important geologic processes which formed the canyon as it now exists occurred less than twenty thousand years ago during Pleistocene time.

Before glacial activity took place in the present "Grand Canyon" area, the headwaters of Pine Creek, near Ansonia, took a northeasterly drainage course. Then the glaciers bore down from the northeast and covered the area with ice. Later, as the glacier began to melt and retreat to the northeast, it deposited a blanket of gravel, sand and clay debris which had been picked up during its advancing movements. Geologists who have studied the area in detail

suggest that the glacial ice and the dumped debris "ponded" or blocked the northeasterly flow of Pine Creek slightly north of the present park areas. This natural dam forced Pine Creek to reverse its flow, drain to the south, overflow, and cut through the drainage divide near the present locations of Leonard Harrison and Colton Point State Parks. The deep erosion and formation of the present Pine Creek Gorge was then produced by the subsequent glacial and water action.



The attitude or inclination of the various rock layers is very gentle. The sequence of rocks consists of an alternation of different types; for example, sandstone (hard), siltstone (less hard), and mudstone and shale (relatively soft). These rocks are multi-colored in gray, red, brown, and green hues. Most of the precipitous cliffs at various positions in the gorge and along the trails are held up by the most resistant rock, sandstone.



Trails for Hikers, and Fishermen



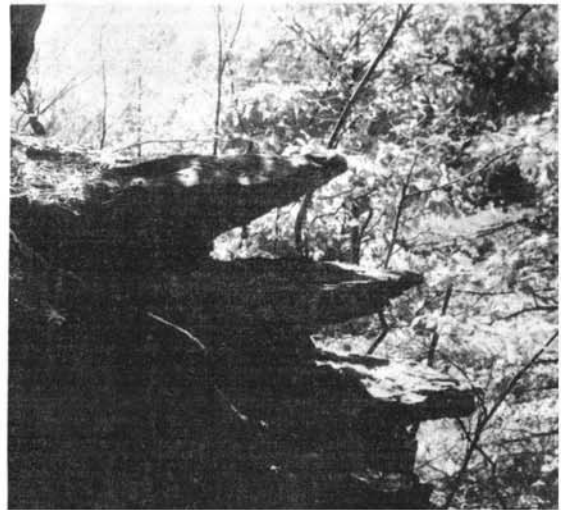
Trails are Wide and Not too Steep Near the Top

A prominent feature of the rocks which can be noted especially along the waterfall areas and at the base of the gorge is the pronounced system of joints. Geologists refer to joints as fractures or cracks in the bedrock of the earth's surface. A close look at the photo taken at the base of the gorge shows rock surfaces which are somewhat parallel to the plane of the photo. These surfaces are "joint planes."

DESCENDING THE GORGE

Turkey Path begins near the Tourist Center at Harrison Park and follows a circuitous route down the east face of the gorge along Little Fourmile Run. The trail is approximately 1 mile long. Near the central and lower portions of Turkey Path, resistant rocks form waterfalls and cascades along Little Fourmile Run.

Paths Steepen in the Sandstones



And the Swiftly Flowing Pine Creek



And We Finally Reach the Vertical Rock Cliffs at the Base of the Gorge





Entrance to Colton Point State Park



On the Rim at Leonard Harrison State Park

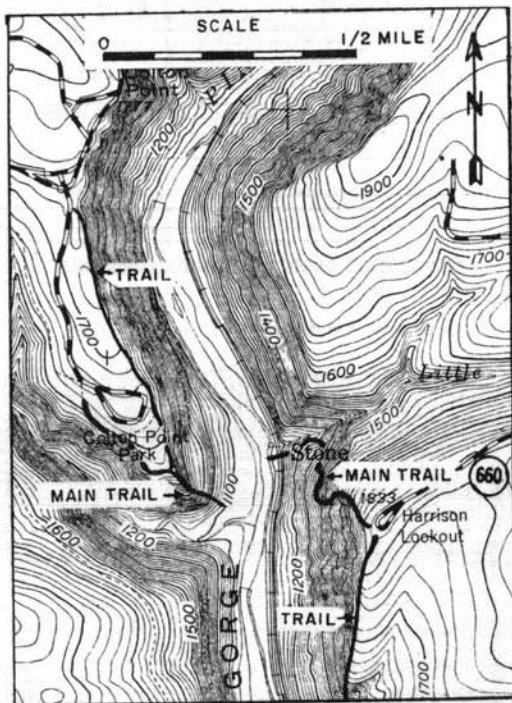
SCENIC TRAILS AND OVERLOOKS

Spectacular overlooks and a variety of trails are available on both the west rim (Colton Point State Park) and the east rim (Leonard Harrison State Park).

The east rim at Harrison State Park offers almost one-half mile of vantage points which afford beautiful views of the gorge.



Looking North toward Colton Point



Colton Point State Park on the west rim of the gorge has at least four good overlook locations which afford excellent upstream (northward) views of the canyon.

Turkey Park Trail in Colton Point State Park descends into Pine Creek Gorge via the north face of Fourmile Run where it empties into Pine Creek. This trail is more precipitous than the Turkey Path of the east rim in Leonard Harrison State Park. Vertical sandstone ledges are numerous and the trail narrows considerably at these locations.

William G. McGlade
Environmental Geologist

CAMPING

PICNICKING

HIKING

FISHING

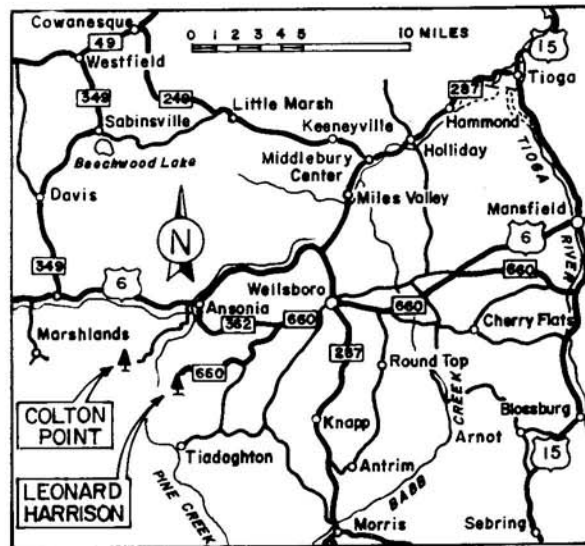
Visiting Hours

SUMMER SEASON

8:00 A.M. to 9:00 P.M.

OTHER TIMES

8:00 A.M. to sundown



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF CONSERVATION AND NATURAL
RESOURCES

Prepared by

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SURVEY