

Peeled Trees

San Juan National Forest



VISIT WITH RESPECT...

- **Preserve & Protect Peeled Trees** – Peeled trees are protected under federal laws. These living artifacts continue to be important to indigenous peoples. Don't destroy them and the experience for future visitors.
- **Leave all Artifacts** - Artifacts help interpret the past and show who has been here before. It is illegal to remove any artifact, including historic trash, from public lands.
- **Geotagging Reveals Too Much** - GPS points often lead uneducated visitors to sensitive sites. When posting online, remove all references to location.
- **Leave No Trace** - Pack out all your waste, including food scraps and pet waste.

For additional information, please contact:

**USDA Forest Service
San Juan National Forest**

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(970) 247-4874

<https://www.fs.usda.gov/sanjuan/>

Columbine Ranger District

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P.O. Box 439
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(970) 884-2512

Dolores Ranger District

29211 Highway 184
Dolores, CO 81323
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Pagosa Ranger District

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PEELED TREES IN SOUTHWEST COLORADO

Peeled trees (also known as culturally modified trees) are usually ponderosa pine trees traditionally harvested by indigenous peoples for their soft phloem. Phloem is a thin layer just under the bark where sugars produced by photosynthesis are found. It is often called the "inner bark" and includes the cambium, or growth tissue for the tree. Recognized by their oval to rectangular-shaped scars, culturally peeled trees are found in forests across Colorado and western North America. On the San Juan National Forest, they are especially abundant in the upland forests and southern foothills of the San Juan Mountains.

Oral histories, traditional use practices, and early historical accounts, tell us that Apache, Navajo, and Ute peoples harvested pine phloem from lands that are now part of the San Juan National Forest. Indigenous peoples harvested phloem for food and medicine and used the remaining outer bark "peels" for other traditional purposes. Although the ancestral Puebloan homelands overlap with portions of the forest, it is unlikely that peeled trees found today were made by them. Puebloan people migrated out of the region in the 14th century C.E. and few, if any trees, remain from that period.

HARVESTING PHLOEM

Indigenous peoples harvested phloem for food, medicine and other traditional purposes. Harvested phloem could be eaten fresh, used to preserve meat, made into medicine to treat infections or for tea and compresses for healing, or stored for later use.

The phloem of pine trees is very nutritious. This sweet tasting, edible layer is a good source of carbohydrates, calcium, vitamin C and other minerals.



The cambium is a thin, almost invisible, layer of cells that enables trees to grow thick in diameter. The cambium grows sapwood cells on the inside and phloem cells on the outside.

The phloem is only about 2 to 10 mm thick in pine trees, and transports carbohydrates and rich nutrients from the needles to the rest of the tree.

Fun Fact: On the San Juan National Forest, some peeled scars date back to the early 1800s and as late as the mid-1930s.

During peeling, the inner wood is usually exposed. Overtime as the tree continues to grow, “lobes” will form around the stripped area. Some trees grew for 150 years or more after the original peels were taken!



Fun Fact: Tool markings within scars help to distinguish cultural scarring from natural disturbances such as lightning and animal scratching.

A FRAGILE RESOURCE

While pine trees can live for centuries, peeled trees are vulnerable to natural and human impacts. Disease, insect infestations, and drought weaken trees making them more susceptible to wildland fires. Since the late 1800s, many peeled trees in mature forests were likely logged and some have been damaged by vandals. More recently, federal land managers have realized the significance of peeled trees to indigenous peoples and the need to preserve them. Today, the San Juan National Forest works with tribal partners to preserve peeled trees while managing for resilient and healthy forests.

Protected By Federal Laws: It is illegal to deface, damage, or remove peeled trees and archaeological resources from public lands.

Eventually peeled trees will succumb to natural processes. Until then, these living artifacts show the early presence of the Ute, Apache, and Navajo peoples on this land and their close relationship to this environment and to the landscape.



All photos are courtesy of M. Roper

PEELED SCARS ARE NOT...

- Lightning scars which are usually longer, narrower, and may twist towards the treetop.
- Fire scars which are blackened and often extend to the ground where many fires begin. Some peeled scars have been altered by a later fire and may be difficult to identify.
- Trail blazes which are often small, at about eye level, and have thinner scar lobes.
- Vehicle damage which may be lower on the tree and not uniform in shape.
- On young trees because their phloem was likely too small to result in a useful harvest.