Trail Maintenance

All work should be performed in a manner to protect the environment, natural resources, and the recreational experience of hikers.

In order of priority, the maintenance tasks are:

Trail Brushing– Clear limbs and brush to form a trail corridor four feet in width and eight feet in height . Prevent development of widened trails and multiple treadways bypassing wet areas and switchbacks.

Drainage - Clean all drainage structures of dirt and debris and reshape each spring and fall following monsoons.

Tread Maintenance - Tread is the actual travel surface of the trail.
Loss of outslope (where the tread slants downhill) is the first maintenance problem that develops on all trails. Reestablish the outslope. Doing so pays big dividends.

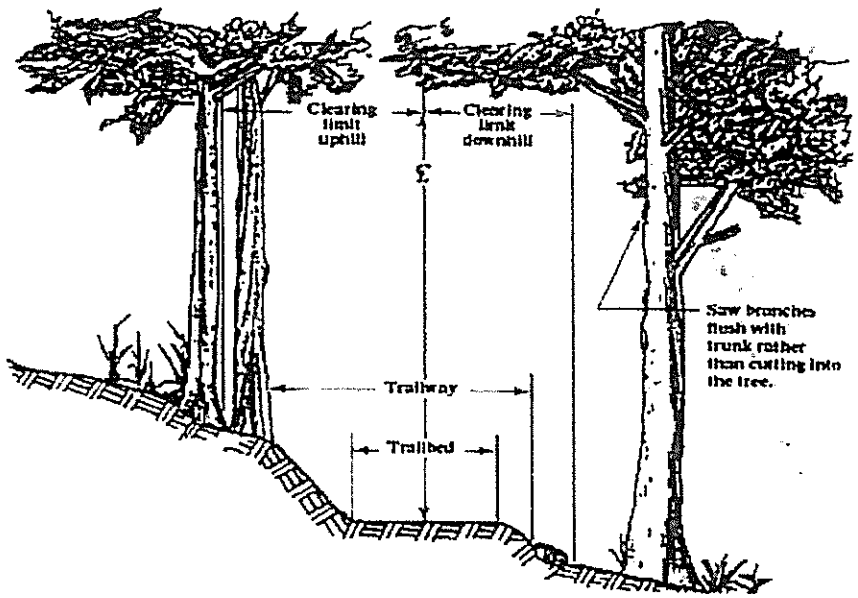
Trail Brushing

A trail is made up of a corridor, a trailway, and trail bed (tread). Plant material and other obstacles are removed from all three areas to give trail users unobstructed passage and clear viewing lines.

Basic Trail Brushing entails the following:

- Vegetation within the corridor is trimmed to eliminate obstructions to movement and a clear view of the trail ahead (in both directions).
- Shrubs are removed from the trailway, if they are likely to cause annoyance, or if it may become an obstruction before next brushing.

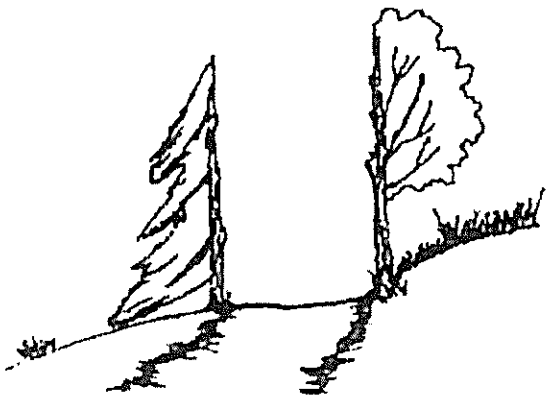
Trail Brushing Standards



- The clearing limit shall be six (6) feet in total width, and ten (10) feet in height.
- Cactus, brush, and small trees exceeding 1/2 inch in basal diameter or exceeding 12 inches in height growing or extending into the clearing limit shall be removed and disposed of by scattering off the travel way along the low side of the trail.
- Plants will be cut as close as possible flush to the ground with either saw or pruning shears.
- Logs and brush will not be cut to even lengths and stacked or decked adjacent to trail in a uniform or unnatural pattern.
- Where large trees occur near the edge of the clearing limit, many will be selected to be retained; if so, they will be specifically designated as such.

BRUSHING STANDARDS (cont.)...

- Debris will be disposed of out of sight of the trail where possible.
- Where not possible, all debris shall be placed flat so that no parts will protrude more than 8" above ground.
- Cut ends shall face away from the trail.
- Debris must be scattered over a large enough area so as not to be placed on other clearing debris or existing trees and brush.
- Encroaching limbs that are to be trimmed from standing live trees or brush shall be sawed or pruned flush with the tree trunk, leaving no stubs or "hat racks."
  Axes will not be permitted for this work.
- Pruning live trees shall be done in such a manner as to not cause tearing of the bark.
- Axes and grubbing hoes may be used for clearing cactus from the trail way.



If the trail looks like this, you have over pruned the vegetation, try to keep the trail looking as natural as possible.

BRUSHING SAFETY AND TIPS

- If time is tight, consider brushing only the uphill side of the trail. This approach keeps users off the trail's downhill edge and keeps the trail in place.
- Clear a movable corridor– don't measure six feet wide and ten feet tall exactly, just make sure users can walk or ride the trail.
- Throw cut limbs on the downhill slope with the cut ends facing away from the trail.

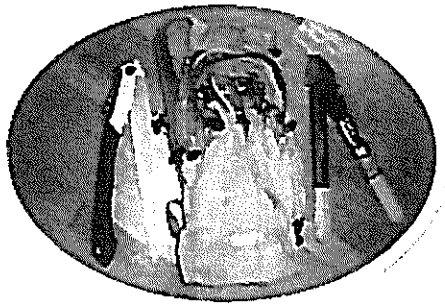


Photo credit: Singletracks Bike the Net

- Start work as early in the day as possible, and stop when it gets hot.
- Strong monsoon storms can come up quickly and are associated with lightning and flash floods. Never cross a flooded wash on foot or in a vehicle. Wait until the surge passes.
- Watch out for thorns, they have a way of getting you when you lease expect it.
- Watch out for poisonous desert creatures. Digging and moving rock or dead fall frequently uncovers scorpioins. Wear gloves and tip rocks and look underneath before lifting.
- Tarantulas might by scary looking, but are not generally dangerous.
- Carry only one tool in each hand at your side, not over your shoulder. Sharp and heavier tools should be carried on your downhill side.

Tread Maintenance

The tread is where the rubber meets the trail. It is the trail itself.

Outsloping

- An outsloped tread is one that is lower on the outside or downhill side of the trail than it is on the inside or bankside. Outsloping lets water sheet across the trail naturally. The tread should be outsloped at least 5 percent.

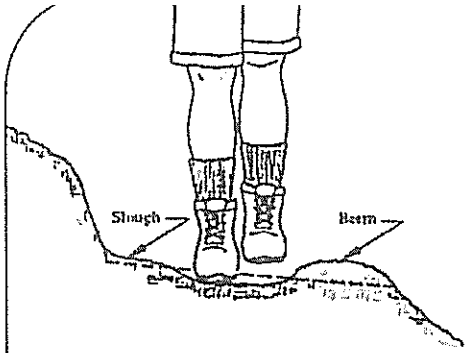
Slough and Berms

- On hillside trails, ***slough*** (pronounced *sluff*) is soil, rock, and debris that has moved downhill to the inside of the tread, narrowing the tread. Slough needs to be removed. Doing so is hard work. Slough that doesn't get removed is the main reason trails "creep" downhill.

- Loosen compacted slough with a Mattock or Pulaski, then remove the soil with a shovel or McLeod. Reshape the tread to restore its outslope. Avoid disturbing the entire backslope unless it is absolutely necessary. Chop off the toe of the slough and blend the slope back into the hillside. Remember to compact the tread thoroughly.

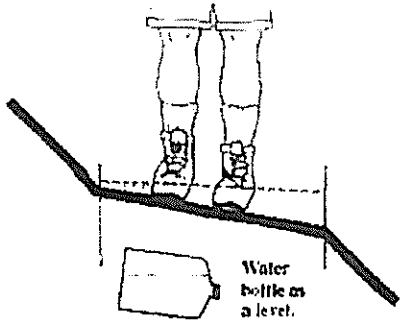
- ***Berms*** are made of soil that has built up on the outside of the tread, forming a barrier that prevents water from sheeting off. Berms form when water erodes trail tread that wasn't compacted during construction, depositing it on the edge of the trail. Water runs down the tread, gathering volume and soil as it goes. Berm formation is the single largest contributor to erosion of the tread. Removing berms is always the best practice.

- Berms may form a false edge, especially when berms are associated with tread creep. False edge is unconsolidated material, often including significant amounts of organic material, that can't bear weight. This is the least stable trail feature on most trails and a major contributor to step-throughs and wrecks.



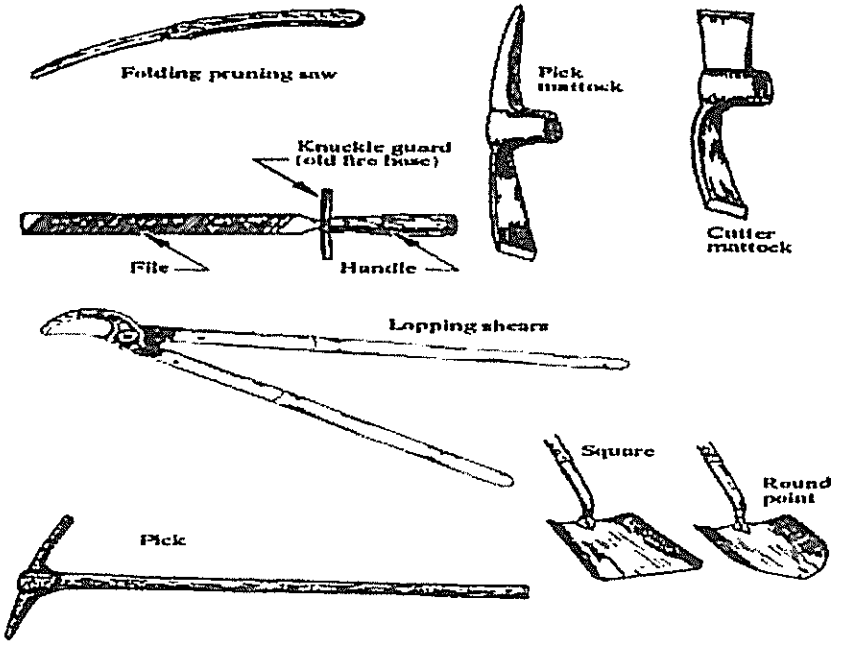
Remove the slough and berm, leaving the trail outsloped so water will run off.

If your ankles start to roll, the tread has too much outslope.



Tools of the Trade

Your most important tool is your brain. Others include:



Superstition Mountain History

The Superstition Mountain

Courtesy of Tom Kollenborn and the Superstition Mountain Historical Society.

Arizona's Superstition Mountain has long been the source of stories and tales about lost gold. Legends of the Dutchman's Lost Gold Mine, Jesuit treasure, Peralta gold and numerous other lost gold mine stories still attract men and women from far and near alike to this rugged mountain range east of Apache Junction.

Tales of Indian history add to the mountain's lore. These stories are centuries old. The Pima's called Superstition Mountain Ka-Katak-Tami meaning "The Crooked Top Mountain." From the towering summit of Superstition Mountain one can see the vastness of this rugged mountain range to the east . The mountain serves as a dividing line between rural and urban Arizona. As the population of the Salt River Valley grows the lights of Phoenix continue to advance on the realm of the Dutchman's Lost Gold Mine and the Apache Thunder God.

This giant monolith, Superstition Mountain, rises to the height of 3,000 feet above the surrounding desert floor and dominates the eastern fringe of the Salt River Valley. The Superstition Wilderness Area, of which Superstition Mountain is part, contains some 242 square miles or 159,780 acres of Arizona's rugged desert mountain terrain. Mountain peaks tower 6,000 feet above sea level and deep canyons dissect this vast wilderness region.

The region includes a wide-range of fauna and flora that are native to the Sonoran Desert life zone. Plants range from the giant Saguaro cactus to the stately Ponderosa pine. Mule deer, javelinas, mountain lions, bobcats, coyotes, a variety of birds, reptiles and amphibians live in this fragile desert eco-system. The diversity of living things in this region astonishes the visitor.

Old-timers will tell you everything that survives in this desert wilderness either sticks, stings, bites or eats meat. This is an age old description about survival in such a harsh environment. This is a land where life is totally dependent on the availability of water. The desert is a place where water will appear one day and vanish the next day. Temperatures on the desert floor can exceed 125 degrees F in the summer months and can drop well below freezing during the winter months. Snow is not uncommon to the high desert mountains during the winter months.

This land of towering spires and deep canyons was formed by volcanic upheaval some 29 million years ago during the tertiary period of geologic time. Superstition Mountain was formed during a tectonic maelstrom which resulted in a massive caldera. The caldera was almost seven miles in diameter. After the lava cooled, magma pushed the center of the caldera upward forming a mass of igneous rock. The mass was slowly eroded for millions of years by running water and wind forming the mountain we see today. Superstition Mountain in the distant past was a thousand feet higher than it is today. Uplift, subsidence, resurgence and erosion have all played a role in shaping Superstition Mountain. Yes, this mountain was born of fire.

What is the origin of the name Superstition Mountain? The best answer to this question centers around the early farmers of the Salt River Valley who grew and cut hay for the Army at Fort McDowell during the late 1860's. These farmers constantly heard stories from the Pima Indians how they feared this mountain. The farmers thought the Pimas were superstitious about the mountain hence the name Superstition Mountain.

Some authors and writers would lead you to believe the Spanish named Superstition Mountain. Sims Ely, author of The Lost Dutchman Mine, stated in the opening chapter of his classic book on the Lost Dutchman Mine that the Spanish named Superstition Mountain Sierra de espuma meaning a "mountain of foam." The origin of this name appears to be a forest service map drawn by L.P. Landon in 1918. Landon named a small butte southwest of Superstition Mountain Monte de Espuma.

It is true, the first European visitors to this area were Spanish. Fray Marcos de Niza was the first European to see Superstition Mountain in 1539. He observed the mountain from the Gila River during his visit to the region almost five hundred years ago. He did not explore the rugged mountain range or record it in his journal.

Sierra Supersticiones appeared on military field sketch maps of the region as early as May of 1866. This was during the Rancheria Campaign lead by Brevet Lt. John D. Walker's 1st Arizona Volunteers and U.S. Army Infantry from Fort McDowell under the command of Lt. Col. Clarence E. Bennett.. The first United States War Department maps of the region made reference to the Superstition Mountains as the Salt River Mountains. The first time Superstition Mountain appeared on official military maps was in 1870.