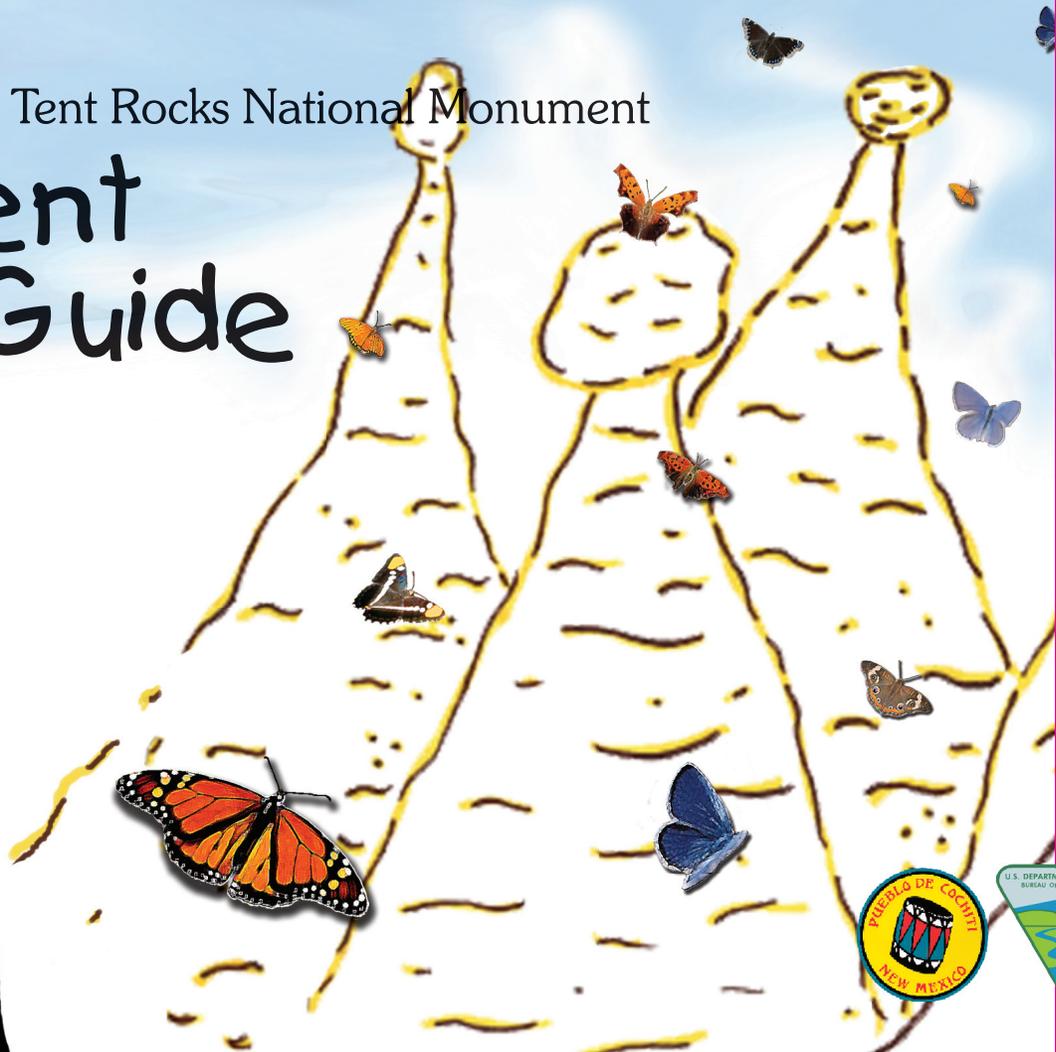


Kasha-Katuwe Tent Rocks National Monument

Student Trail Guide



Cave Loop



CL1. Animals/Reptiles – Which animals/reptiles are found and where?

Watch for coyotes, rabbits, lizards, and rattlesnakes along the trails. Coyotes and rabbits like one-seed juniper and sand sage and inhabit the arroyos. Lizards and rattlesnakes prefer rocky, warm areas, but may seek out shade during the heat of the day. Talking helps warn a rattlesnake that you're coming.



CL2. Baby tent rocks on wall (look up) – How are tents formed?

Tent looking formations are created when the softer volcanic ash or tuff wears away from the solid rock that forms the cap. If a tent rock loses its cap, the

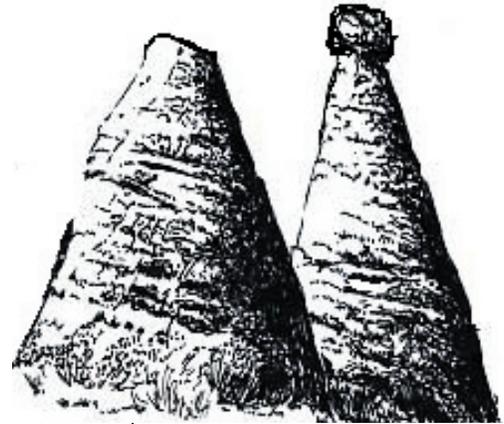
remaining formation will wear away quickly.

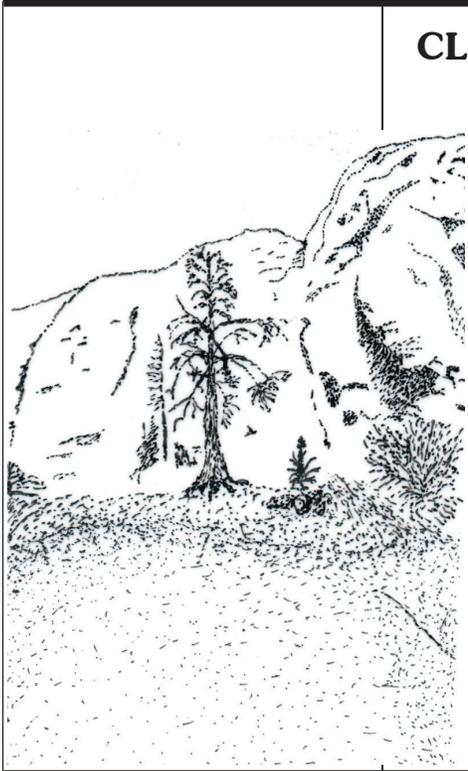
Notice that tents formed near the top of the cliffs are smaller in height than those formed near the base of the cliffs which may be as much as 90' tall.



CL3. Teepee garden – How are the teepees different from hoodoos?

Teepees are shorter and wider than hoodoos. Also unlike the tents on the canyon trail there are no boulders at their base or caps on top. The teepees were formed differently. Bursts of hot volcanic steam (fumaroles) escaped from below the ground and pushed through the surface material to form the teepee. You can identify a teepee by the blow hole near the top and the knife edge at the top.





CL4. Sand dune – How did the sand get here?

Prevailing winds from the northwest blow pumice from cliffs to this location forming the sand dune you see before you.

CL5. *Yucca baccata* or banana yucca – How was it used by Native Americans?

Look close! This yucca plant that has wider leaves had many uses by Native Americans such as fibers for making mats, sandals, and baskets, paint brushes for pottery, as a medicine to reduce swelling, as soap or shampoo, and as food.



Banana yucca



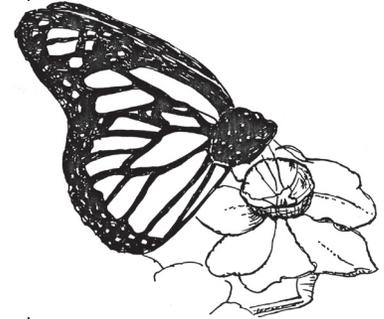
Sand sage

CL6. Sand Sage – Where are the trees?

Possibly the inhabitants of the cave used the trees around the cave for fire wood. With the trees gone, sand sage took over. As a shrub, sand sage is about 4' tall and has soft, light evergreen, fine textured leaves with a pleasant dusty aroma. Sand Sage branches can be cut, bundled into smudge sticks, and burned to create a pleasant smell. Sand Sage is an indicator of sandy soil. Deer love to browse it.

CL7. Butterfly location (seasonal) – Which type of butterfly is attracted to what plants?

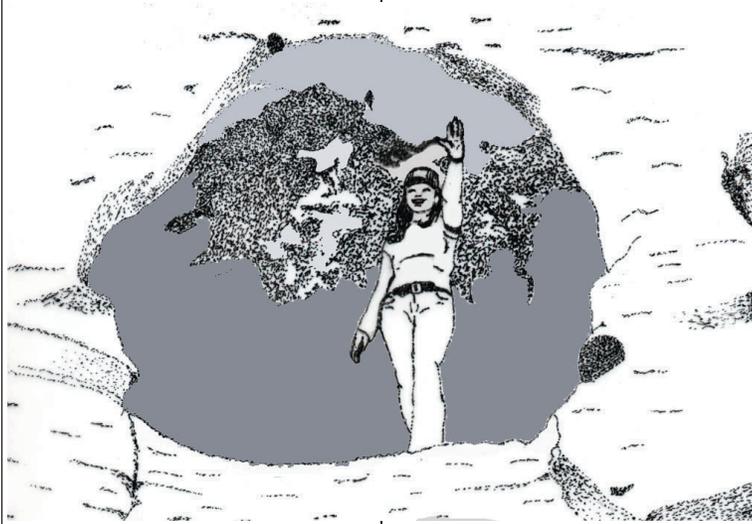
The wildflowers along the cave trail are perfect places to find butterflies like the white hairstreak, swallowtail, and monarchs. Look for butterflies on the desert marigolds, Indian paintbrush, senecio, and asters. Native grasses like Indian rice grass, blue grama, and sideoats grama are also places to watch. Butterflies are looking for nectar sources and places to lay eggs. Plants where butterflies lay eggs are ones that can be eaten by the caterpillar larva which come from the eggs.



CL8. Cave – Why is there a black stain on the ceiling?

Notice the smoke stains on the ceiling of the cave. This shows that the cave was used by prehistoric peoples.

They may have burned juniper wood, pinon, or manzanita.

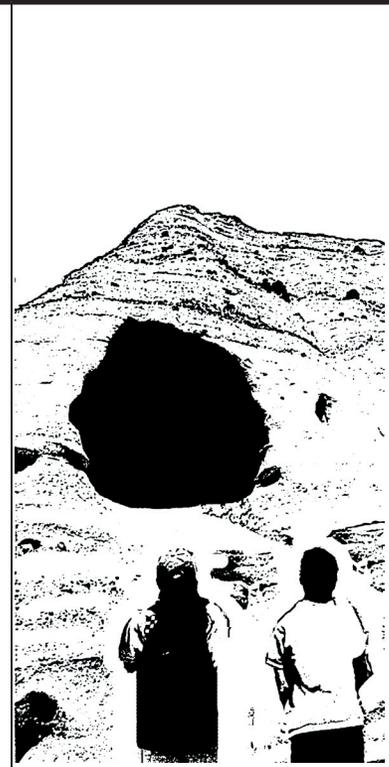


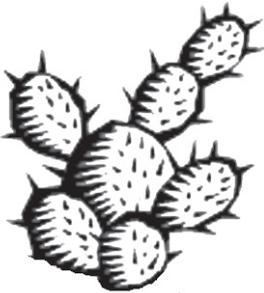
CL9. Cave – Why is it so high off the ground?

Early Native Americans preferred caves that were above ground level because they stayed dry during storms, were more difficult for animals to enter, and provided a view of the surrounding territory in case of enemy attack. Also, there has been erosion at the base of the cave so it is further from the ground than it once was.

Cave, small size of opening – How could native peoples use such a small opening?

Early Native American adults were shorter in height than today so the small size of the cave opening and the lower ceiling were not a problem for them.



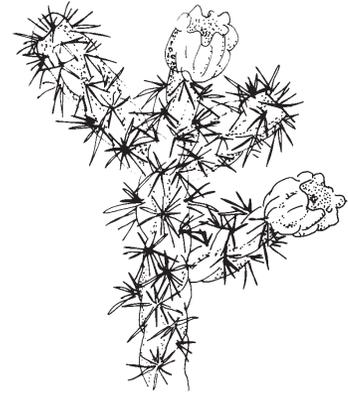


CL10. Climate zone and vegetation differences – What are the climate and vegetation differences between the canyon area and the cave loop?

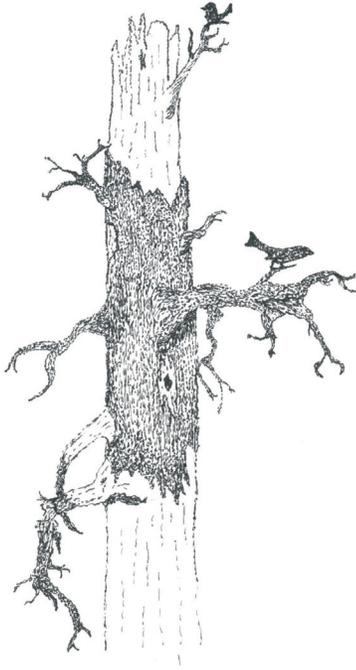
The slot canyon trail is generally protected from the hot midday sun and to some extent from wind. It has shade and runoff water. The cave trail includes western and southern exposures with less shade and water and more exposure to the wind. While most of the plants in the cave loop can also be found in the canyon area, many plants in the canyon area need more water than is available in the cave loop.

CL11. Cholla on your right and prickly pear on your left – What are cholla and prickly pear and how can they be used?

Cholla is the taller “stick-man” looking cactus with neon pink blooms followed by yellow fruit. Prickly pear, under the juniper, is the smaller ground-level cactus with lots of pads and purple fruit known as tunas. Prickly pear cactus blooms yellow in the spring. Tunas appear after the blooms fade and can be used to make a delicious jelly.



Cholla



CL12. Bird in Ponderosa snag – what is a snag and why are they useful?

The dead tree you see is called a snag. Dead trees perform an important function in nature. They are used by birds to scout the area for enemies, to nest in cavities or holes they made or other birds made, and by insects for shelter and food. The insects then attract the birds since insects are a source of food for birds.

Woodpeckers, ravens, hawks, and eagles love snags.

CL13. Vegetation in the canyon includes trees such as the narrowleaf cottonwood, ponderosa pine, and hops, shrubs like manzanita and mountain mahogany. These plants generally aren't found on the cave trail except in protected arroyos (e.g. manzanita). The cave loop contains more one seed juniper, pinon, chamisa, sand sage, apache plume, and three-leaf sumac – species adapted to drier conditions. It also has more cholla or “stick-man” cactus.



Narrowleaf Cottonwood

Can You Find These Animals and Plants Along the Trail?

- | | | |
|--|--|--|
| <input type="checkbox"/> Turkey Vulture | <input type="checkbox"/> House Finch | <input type="checkbox"/> Shrub Live Oak |
| <input type="checkbox"/> Red-tailed Hawk | <input type="checkbox"/> Hepatic Tanager (red) | <input type="checkbox"/> Apache Plume |
| <input type="checkbox"/> White-throated Swift | <input type="checkbox"/> Chipping Sparrow | <input type="checkbox"/> Manzanita |
| <input type="checkbox"/> Hairy Woodpecker | <input type="checkbox"/> Mule Deer | <input type="checkbox"/> Chamisa |
| <input type="checkbox"/> Gray Flycatcher | <input type="checkbox"/> Squirrle | <input type="checkbox"/> Cholla |
| <input type="checkbox"/> Western Scrub-Jay | <input type="checkbox"/> Coyote | <input type="checkbox"/> Banana Yucca |
| <input type="checkbox"/> Common Raven | <input type="checkbox"/> Turkey(in higher altitudes) | <input type="checkbox"/> Evening Primrose |
| <input type="checkbox"/> Violet-green S allow | <input type="checkbox"/> Elk | <input type="checkbox"/> Prickly Pear |
| <input type="checkbox"/> Canyon Wren | <input type="checkbox"/> Rabbit | <input type="checkbox"/> Perky Sue |
| <input type="checkbox"/> Blue-gray Gnatcatcher | <input type="checkbox"/> Chipmonks | (sunflower family) |
| <input type="checkbox"/> Wilson't Warbler | <input type="checkbox"/> Golden Eagle (rare siting) | <input type="checkbox"/> Indian Paintbrush |
| (bright yellow) | | <input type="checkbox"/> Pale Trumpets |