

HOVENWEEP

NATIONAL MONUMENT



TRAIL GUIDE

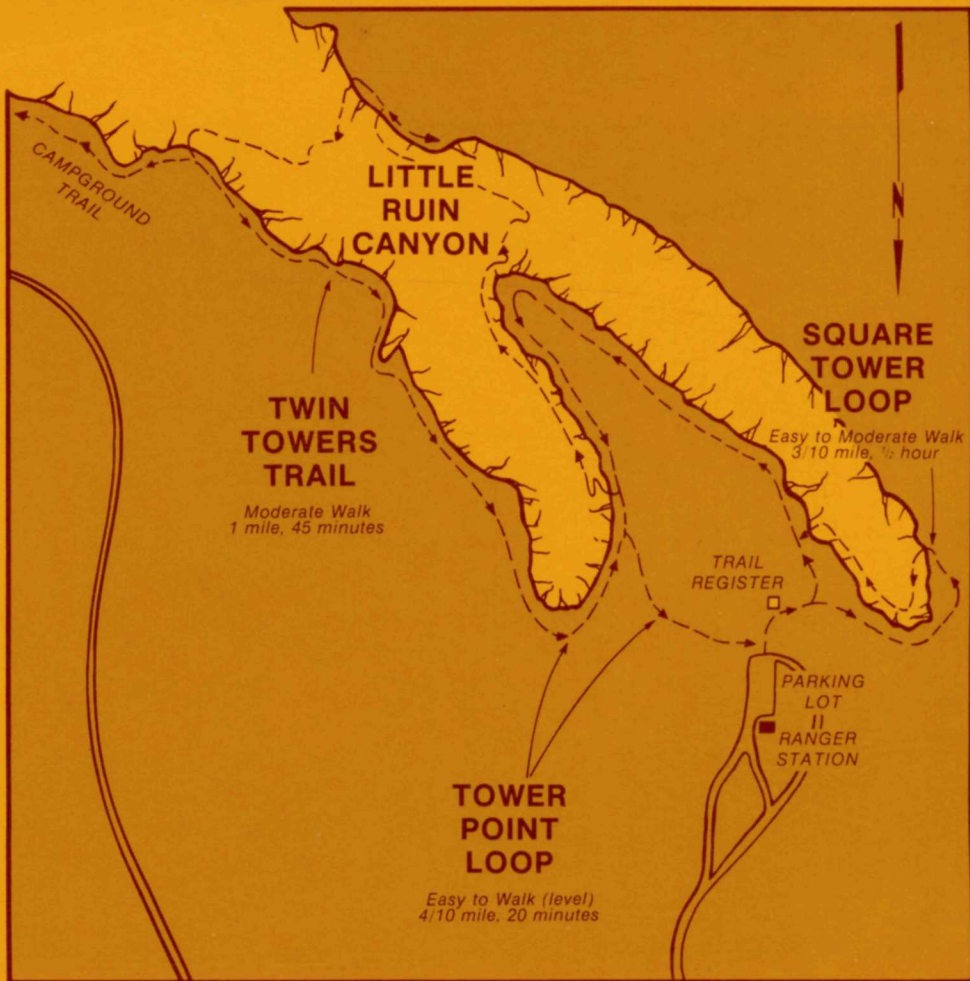
SQUARE TOWER
TOWER POINT and
TWIN TOWERS TRAILS

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SQUARE TOWER TOWER POINT and TWIN TOWERS TRAILS

When William H. Jackson came to this area in 1874 he found a harsh looking sagebrush desert. No one lived here and the homes the Anasazi (the Ancient Ones) left were only ruins. Jackson used the Ute Indian word "Hovenweep", meaning "Deserted Valley", to describe this mysterious place.

President Warren G. Harding set aside Hovenweep National Monument to protect the remains of the Anasazi who once lived here. The National Park Service and you, the visitor, are charged with the care and protection of the monument. Picking up pieces of pottery, arrowheads, rocks, firewood or flowers only aids in the destruction of the monument; and Federal law prohibits activities what would destroy or damage archaeological or natural features. Protect yourself also—be aware of loose rocks in the trail and of the 60-foot cliff at the canyon rim.





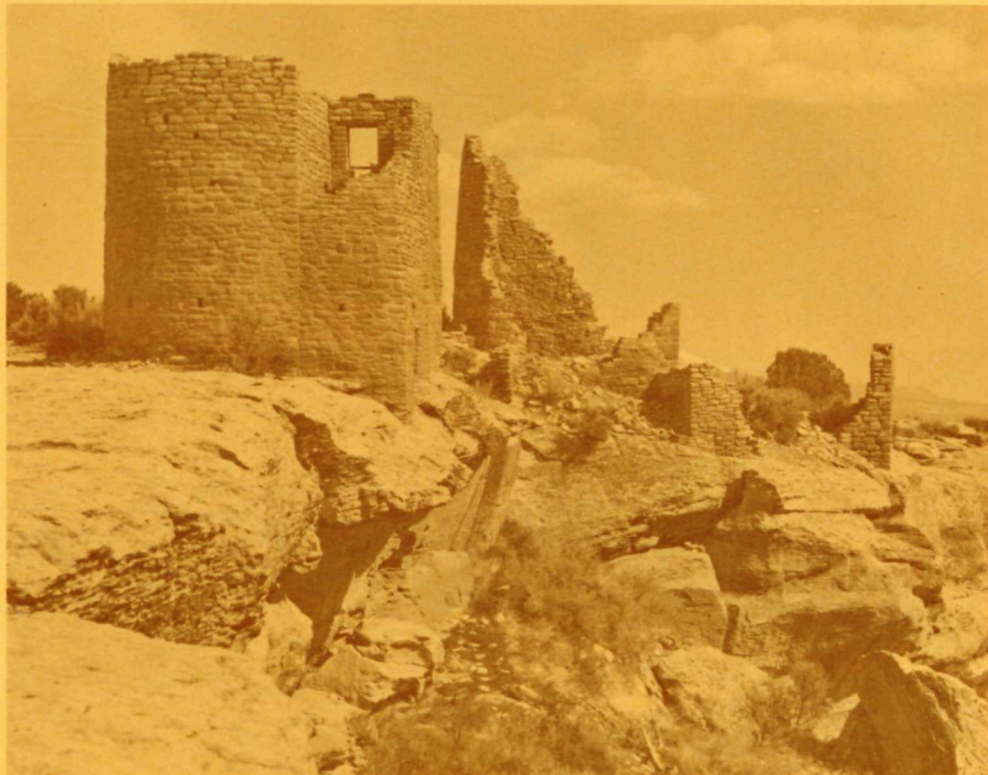
SQUARE TOWER LOOP

Imagine this area full of people 700 years ago. What might have happened to turn a once thriving community into a deserted valley?

1. HOVENWEEP CASTLE

Built about the same time as the European castles (about A.D.1200), Hovenweep Castle was home for several farming families. This ruin has two D-shaped towers; the best preserved one is to your right. The outer walls of Hovenweep Castle are very thick double and triple-coursed stone and the only ground level doorway opens into the canyon. Were these people worried about defending their home?

Some of the towers and room blocks were for astronomical observations. In a farming economy such as this one, the people needed to know when to plant and when to harvest, so they placed great emphasis on the passage of the seasons. Archaeologists have observed certain alignments of the setting sun through some of the small windows here at Hovenweep Castle, especially on the first day of summer and the first day of winter.



2. CHECK DAM

This check dam, rebuilt in 1974 by archaeologists, is on the site of an ancient dam. Dams like this one kept water from running too fast down the canyon, and collected valuable silty soil behind them. It was because of these dams that the Anasazi could farm in this area even though it received only ten inches of moisture a year. Building long series of check dams in these washes conserved valuable space, soil and water in this desert environment.



3. HOVENWEEP HOUSE

Hovenweep House once was one of the largest pueblos here in the Square Tower group. The part you see here is still standing because it was built on solid rock. You can see the rest of Hovenweep House to your left — those scattered stones were once high walls. The Anasazi were fine builders. Often they shaped the stones by pecking away at them with stone tools. They put small stones in the mud mortar to cut down on shrinkage as the mortar dried. Over the walls, the people put a smooth coat of mud plaster. Looking closely at the mortar, you can sometimes see the fingerprints of the people who built these homes.



4. 700 YEARS AGO

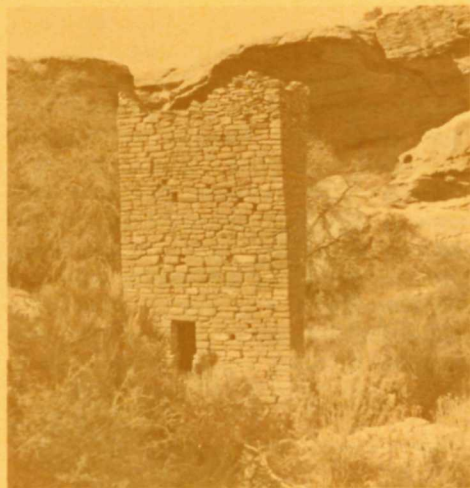
The sketch in the box was done by Don Ripley, the ranger at Hovenweep twenty years ago. As you can see, Hovenweep Castle was much bigger than you might have thought. And, like Hovenweep House, much of it has fallen away. Use your imagination and Mr. Ripley's drawing to see a farmer tending his fields, women grinding corn into meal, an especially talented woman painting her pottery, and a man returning from a successful deer hunt. In addition, there is everywhere the clamor of young children playing, dogs barking and domesticated turkeys eating stolen corn.

5. SQUARE TOWER

Hovenweep is best known for its towers. Some towers are square, like this one; others are D-shaped, circular or oval. Some are in the canyon bottoms near a spring, some are built into room blocks and others are connected to ceremonial chambers. No one is certain what their function was; archaeologists suggest that the towers were used for astronomical observations, for signaling, or for watching for enemies.

Before A.D.1200, the people had been living scattered out over much of the whole mesa top, but by A.D.1200 clusters of buildings, often with towers, were centered around the heads of canyons. By A.D.1300 everyone had left Hovenweep, just as they had left Mesa Verde, Chaco Canyon, and other Anasazi centers. If the towers were built to defend and protect a water supply, who were the enemies? Keep in mind the scarcity of water and of available farmland after centuries of intensive farming. Could the people of Square Tower Canyon have been defending their spring and farmlands

from people in the next canyon? Unfortunately, we have no definite answers. For now, each curious individual must make up his own mind.





6. SQUARE TOWER SPRING

This spring was the center of life for all the people living in this immediate area. Sit for awhile on the bench shaded by the large hackberry trees and enjoy this cool, green spot. Think what this water must have meant to people living in such an arid climate. This little spring supplied all the water for as many as 300 people 700 years ago. Good flowing springs are rare in this part of the country. Can you imagine how disastrous it would be if even these few springs dried out?

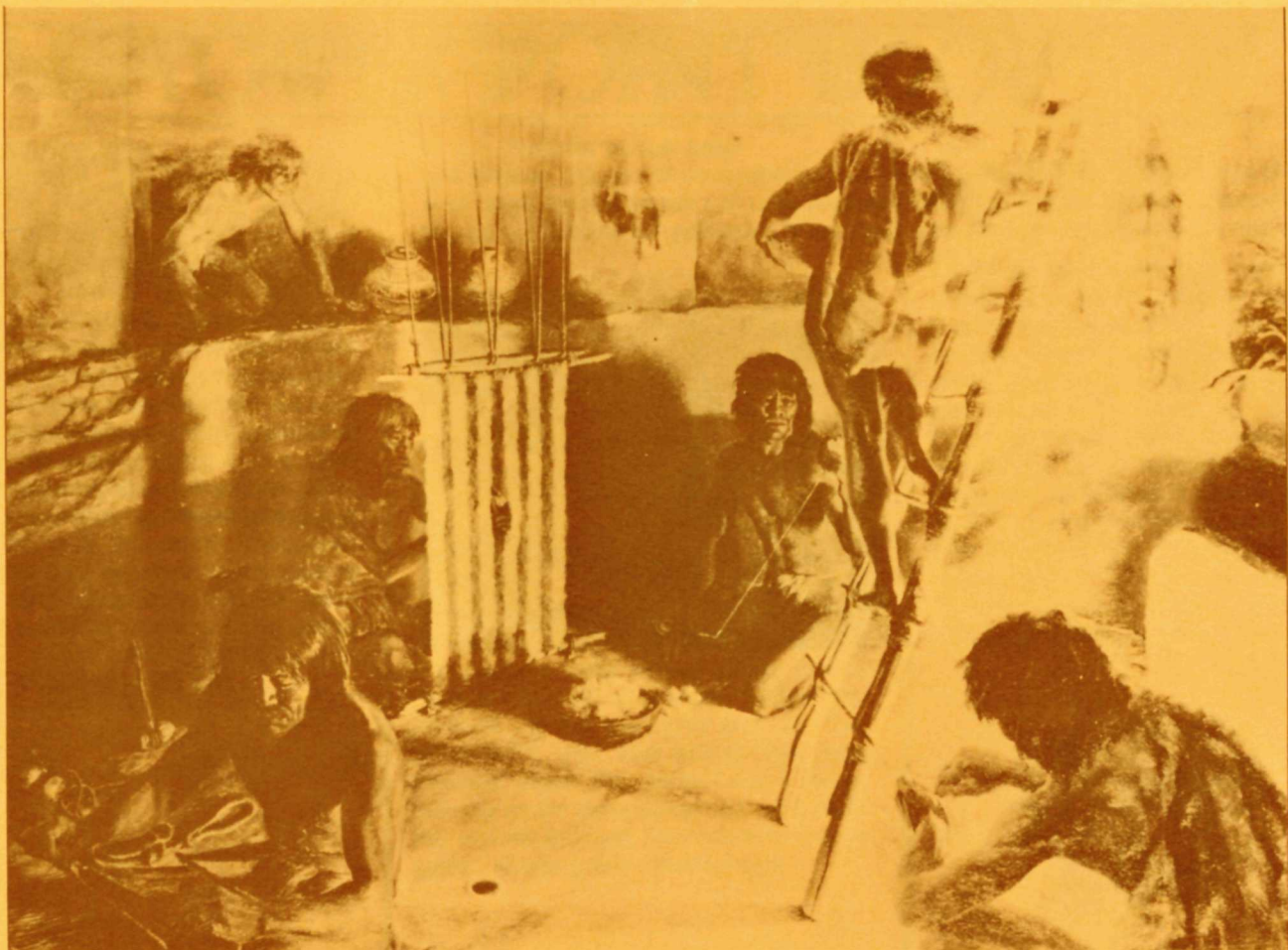
7. CLIFF DWELLING

Beginning about A.D.1200 , when the people here at Hovenweep were starting to concentrate their populations at or near canyon head springs, people elsewhere in the Southwest were starting to build the large and impressive cliff dwellings for which Mesa Verde is so famous. There are not many cliff dwellings at Hovenweep because the soft and easily broken sandstone does not tend to form huge overhangs like those at Mesa Verde. Occasionally, a few living rooms like you see here would be built, but more often at Hovenweep, the Anasazi used the overhangs to store corn, beans, squash, and other food.



8. KIVA

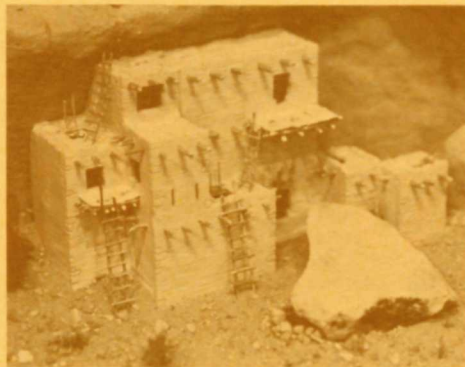
A depression in the ground like this one indicates to the archaeologist that there was once a kiva here. Kivas are common features in Anasazi ruins, and today are still used by modern Pueblo Indians as ceremonial rooms. Prehistoric kivas are usually round. To make a round roof, the logs were laid in an interlocking fashion until there was only a small hole in the center of the roof — the hole through which people climbed down into the kiva on a ladder. The final touch was a smooth coat of mud plaster over the roof and over the inside walls. The people took special care with their kivas, applying beautiful paintings to many, and reserving some of the most beautifully painted pottery for the ceremonies that took place there. Perhaps planting, harvesting, and healing ceremonies took place in this kiva over 700 years ago.



"KIVA LIFE" is by Peter Bianchi, Courtesy of National Geographic Society.

9. TALUS PUEBLO

Because it was built on the soft slope beneath the sandstone cliff (a talus slope), this part of Hovenweep Castle has fallen into complete disrepair. From the amount of debris scattered on the talus slope, archaeologists think the walls here reached up to the base of Hovenweep Castle. Notice the faint white horizontal and vertical lines on the cliff face just to the left and beneath Hovenweep Castle. This is part of an ancient wall painting. Often the Anasazi painted murals on the insides of their smoothly plastered walls. Please do not climb on the talus slope, for it has not yet been excavated, and still holds valuable information for the trained archaeologist.



NOTE: This ends the Square Tower loop. The trail follows under the cliff for a short way, then climbs to the rim near Hovenweep Castle. From there, you may return to the visitors' center, or continue on the Tower Point trail by walking east (your right) at the junction of the trails.





TOWER POINT LOOP

Even though Hovenweep is in a high desert, there is an abundance of plant life. Every plant has a niche to fill, and 700 years ago, the Anasazi put even the smallest and most unlikely plant to use.

Below are listed the various plants along the trail to and from Tower Point. Please stay on the trail so you do not trample the smallest plants, and please do not pick the leaves or twigs from the plants. All the plants listed below can easily be seen from the Tower Point trail, so good luck in identifying all of them!

1. CRYPTOGAMIC SOIL

The black color you see on the soil all around you is made up of thousands of tiny soil-dwelling moss plants — cryptogams. A cryptogam reproduces by spores instead of by flowers and seeds. Spores do not need to be fertilized; they are always ready to grow. These tiny mosses growing in such abundance hold the valuable desert soil together and keep it from washing away. By helping retain the soil, the cryptogams help other, larger plants gain a foothold and grow. When you venture off the trail and step on this black soil, you are killing the little mosses. Soon the soil will wash away, leaving more bare slickrock and then the whole process will have to begin again, starting with the lichens.

2. CLIFFROSE

(Cowania mexicana)

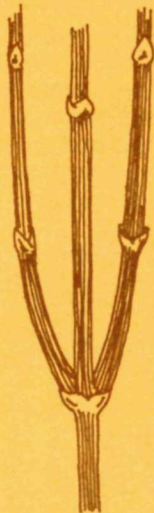
Cliffrose is a four foot high, woody shrub with small, closely set leaves. During early summer it is covered with creamy, sweet smelling flowers. In fall, three to five feathery, milk colored plumes emerge from the old flower. Hopi Indians use the bitter tasting leaves and twigs to induce vomiting in the event of stomach upsets, and also as a healing agent for sores or wounds. The Navajos use the wood to make arrow shafts and prayer sticks, the leaves to make a tan dye, and the bark as padding for cradle boards.



3. MORMON TEA

(*Ephedra viridis*)

This first cousin of the pines and junipers is sometimes called "joint-fir". Its clusters of green stems look like little upside down whisk brooms. Although the plant may spread out over quite a large area, it seldom grows over three feet high. The tea, derived from boiling the stems, is said to cure headaches, coughs, colds, blood impurities, and fever. This western variety has a high concentration of tannin in the plant, making the tea an effective diuretic and stains the teeth.



4. BIG SAGEBRUSH

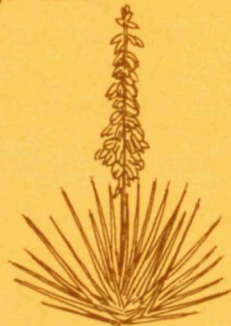
(*Artemisia tridentata*)

Sagebrush has wedge-shaped, gray-green, three tined leaves, and is the dominant shrub over all this area. Sagebrush wood makes an excellent fuel and the smoke from sagebrush fires is so aromatic that Navajos have been known to envelope themselves in the smoke to chase away skunk odors. The bark is shaggy, like juniper bark, and makes good padding and insulation, or can be woven into cordage or sandals. Sage tea is very bitter and can induce vomiting as a result of this bitterness.

5. NARROWLEAF YUCCA

(*Yucca angustissima*)

Like the juniper, the narrowleaf yucca was one of the most useful plants to the Anasazi. The plump greenish fruit of the yucca is sometimes eaten raw, roasted, dried or made into a sort of bread. The narrow, spine-like leaves provided the Anasazi with a good, sturdy fiber with which to make rope, sandals and baskets. Modern day Hopi potters use a small, frayed tip of yucca leaf as a brush to paint minute and detailed designs on their pottery. The sharp tip of the leaf made a good sewing needle. The yucca root, when pulverized, yeilds a good soap or shampoo. Even the stalk of the flower was used; it contains a high concentration of sugar, almost like a desert sugar cane!



6. SQUAWBUSH

(*Rhus trilobata*)

Squawbush grows from two to six feet high and can be easily identified by its leaves, which are three lobed and in groups of three. The dark red, slightly sticky berries which appear in summer make a delicious drink when mixed with sugar and water. Indians also use the berries as a major ingredient in pemmican, a combination of dried meat, dried fruit, and fat — a very good high energy food. The most important use of the stems was in making fine baskets. White settlers saw Indian women gathering the stems and gave the bush its name.



7. FOUR WING SALTBUUSH

(*Atriplex canescens*)

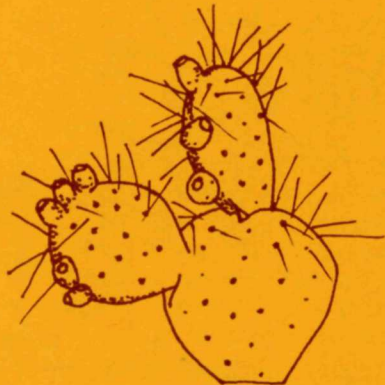
This two to five foot tall bush has gray-green, narrow leaves which grow singly but densely along the stems. What distinguishes the plant most, though, is the four lobed fruits which are dry, papery and almost white in color when they dry out. The whole bush may look like a mass of the four winged fruits. The leaves and young shoots can be used in soups or as greens, (cultivated spinach is related to the four wing saltbush). Pueblo Indians and Spanish-Americans grind the seeds, add water and sugar, and make a good drink called pinole. A powder made of the leaves and twigs yields a yellow dye highly prized by Navajos for use in weaving.

8. UTAH SERVICEBERRY

(*Amelanchier utahensis*)

Identified by its fragrant white flowers in spring, this smooth barked shrub can also be recognized by its leaves — roundish with small indentations along the edge. The berry is somewhat sweet and makes very good jellies, jams and pies. Indians and settlers used the berries in pemmican. Apaches used the slender, straight branches to make large carrying baskets.





9. PRICKLY PEAR CACTUS

(Opuntia hystricina)

The small, spiny pads look like little beaver tails. In fact, the prickly pear cactus is a cousin of the large beaver-tail cacti of the Southwest and Mexico. After a beautiful showing of flowers in mid-May to June, a purplish fruit forms on the prickly pear which makes a delicious jam or jelly.

10. ROCK LICHENS

These tiny plants appear as multi-colored splotches everywhere along the slickrock before you. Lichens are the only plant life that can grow on bare rock. A lichen consists of a fungus and an alga. The fungus provides a home for the alga and absorbs from the rock the minerals and water both plants need to grow. The alga, in turn, as a green plant, produces food for the fungus. The lichen secretes a weak acid which helps to break down the rock — the first step in soil formation. When the lichen dies, it disintegrates and adds a little organic matter to the soil it has begun to form. The different colored lichens, when scraped off the rock and ground into powder, make different colored dyes for paint and weaving material.



11. UTAH JUNIPER

(Juniperus osteosperma)

One of the most useful plants to the Anasazi was the juniper. It is the only tree which grows on the top of the mesa at Hovenweep. Quite bushy, with many branches, it has a rough, shaggy bark, small scale-like leaves (which look like green twigs), and marbled-sized blue berries.

The Anasazi used the wood for building houses and kivas and for firewood. They used the shaggy bark as insulation in their leggings and moccasins in winter, for bedding, for infants' diapers, and for tinder when building fires. The blue berries added flavor to their food. Juniper berries are still used today to flavor gin. The seeds within the berries make attractive necklaces and bracelets when strung together.



Tower at Tower Point

TOWER POINT

Commanding an excellent view up and down the canyon, this tower seems to support the theory that the Hovenweep towers were built for defense. Look through all the small peepholes in the wall and imagine yourself watching out for your neighbors. Were these neighbors friends or enemies? If the peepholes do not open onto a view of a dwelling, they provide a view of the hill-sides and alcoves where supplies might have been stored. We do not know if all the people living in this canyon were allied against a common enemy or whether they were fighting among themselves over the last good farmland or water. Keep in mind that people had lived and farmed here for over 700 years, and that most of their resources may have been almost gone.

Because these ruins have not been excavated, we do not know for certain if these towers were built for defense. Someday, archaeologists may find the answer buried beneath the rubble of the centuries.

NOTE: The return trail will take you back to the visitors' center. You may also want to take the Twin Towers trail which begins from this one near the visitors' center.



TWIN TOWERS TRAIL

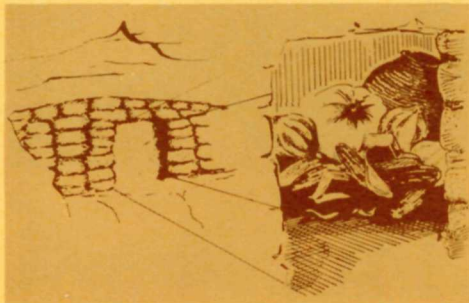


1. VANDALIZED ROCK SHELTER

In this shallow alcove you can see the remains of two or three storage rooms. The walls that did not fall naturally have been torn down by people hoping to find valuables inside; as a result, not much remains. The rooms may have yielded remains of Anasazi foodstuffs, storage jars, etc., which would have helped the archaeologist know how these people lived. Now all that remains is part of one wall inside the shelter and the stones by the side of the trail which once were walls. What was found here and what became of it is not known.

2. PUEBLO STOREHOUSES

Directly across the canyon are remains of Anasazi storehouses. You may have to look hard for them as they blend very well with the rock which shelters them. The Anasazi stored produce from their small farm plots in these storehouses, then sealed the entrance with stones and mud to keep out animals. During winter, they had to open the storehouses to get what they needed, but always took care to securely seal them back up.



3. NATURAL TUNNEL

This formation is a large slab of Dakota sandstone which peeled off the cliff face and settled over the years about three feet from the cliff face and two or three feet lower than the rim. We know this happened a long time ago because of the growth of lichens and the stain of desert varnish both on the cliff face and on the inside of the large slab. We cannot tell exactly when the slab fell, but because there is no evidence of Anasazi use here, perhaps it has fallen since the area was abandoned.

4. PETROGLYPHS

The petroglyphs (rock pictures) were made by striking the cliff face with a sharp stone chisel. There is no evidence they were ever painted. The petroglyphs you see here are some of the best at Hovenweep. Look for a spiral, a T-shaped doorway, three birds, and a serpent-like design.

Dr. Jesse W. Fewkes, an early archaeologist visiting this area, thought these pictures represented clan symbols.

The T-shaped doorway glyph is similar to a painting of one in Spruce Tree House at Mesa Verde and you may have noticed many large T-shaped doorways in the ruins here at Hovenweep. Perhaps the T-shaped doorways had a religious significance.

Do you have interpretations of your own? We do not know the real significance of these glyphs, so we would like to hear your ideas.

5. COTTONWOODS

In a desert, finding one or more cottonwoods is a sure sign that water is available in one form or another. They line the courses of permanent or intermittent streams and grow where the water table is close to the surface.

Sometimes there is a flowing stream here. It's cool and shady — a good place to take a rest. Cottonwoods are favorite places for birds to build their nests. Watch for the different kinds of birds who live here.

6. ROUND TOWER

Notice that this small tower is almost perfectly round. It is a typical Hovenweep tower although, as you have seen, some towers here are square or D-shaped as well. This tower was probably two stories tall, but it had no ground level doorways so the people probably entered through a ladder in the roof.

Walk to your right around the tower until you are standing below its highest point. The depression down the slope from the tower is probably the remains of a kiva. There are several simple towers with associated kivas similar to this one at Mesa Verde.

On the slope across the canyon, notice the rubble which stretches from Unit-Type House directly across from you to Stronghold House down the canyon to your right. This entire area was once heavily populated, as you may imagine if you try to mentally rebuild what this area must have looked like 700 years ago.





7. ERODED BOULDER HOUSE

Built inside the overhang of a large boulder, this dwelling used part of the boulder as walls and roof. You can see lots of rubble around the boulder from

what used to be exterior walls.

If you walk around the boulder and enter the dwelling from its canyon-facing side, you will see a double wall-

ed room, and in the north wall, a peep-hole through which you can see Tower Point. On top of the boulder are the remains of either a home or a tower — we cannot tell which.

8. TWIN TOWERS

The two structures we today call Twin Towers are not really towers at all. They are large two-story apartment houses containing a total of sixteen rooms.

The north tower still has its original wooden lintels over the first and second story doorways. The Anasazi used wood and stone interchangeably for doorway lintels.

In shape and architecture, the two towers are individual. Each tower conforms almost exactly to the shape of the boulder it was built upon. Thin slabs of sandstone mixed with larger blocks give a layered look to the walls of the north tower while the south tower is similar to all other Hovenweep masonry — with breadloaf shaped stones of uniform size throughout the building.

The large circular basin in the rock at your feet was not carved by the Anasazi. It is a tinajita (teena-hee-ta, Spanish for "little water pot"). They are formed by water in standing pools, left

after a rain, dissolving the calcite or limey cement that binds the sand grains together. After the water evaporates in the hot sun, wind removes the grains of sand, leaving behind a steep sided, circular, flat bottomed depression.

As you walk up the slope and then to your right toward Rimrock House, notice the small crudely built rooms where the people of Twin Towers stored their food.

9. RIMROCK HOUSE

Rimrock House is a two-story rectangular building with no apparent room divisions inside. It has an abundance of small peepholes going through the walls at unusual angles. Peer inside any of these peepholes and you can see that the people took great care to plaster the inside of each one. Do you see a pattern of placement of the peepholes in the walls? If you put your hand in front of them, you can feel a slight cool breeze. Perhaps they were arranged for optimum ventilation of the building, or perhaps they were portholes to scout the horizon.

NOTE: Return in the direction of Twin Towers to continue the trail. The trail will continue along the rim of the canyon and then crosses the canyon bottom to the opposite rim to Stronghold House. Notice the changes in vegetation during your descent into the canyon.



10. STRONGHOLD HOUSE and TOWER

Perched precariously atop its boulder foundation, Stronghold House seems to have been built as a fortress. Stronghold house is really only the top story of a huge pueblo built on the slope below; the rubble from this pueblo lies everywhere.

Entrance to Stronghold House was gained by climbing up the pecked hand and toe holds still visible in the rock below the door, or perhaps by climbing a short wooden ladder. Notice that the stone building blocks here are exceptionally well made. Notice also, the two distinct sections of the building — each section contains about two rooms.

Stronghold Tower, to your right a short distance, is interesting in that part of its floor was built over a crevice in the cliff. The Anasazi laid a large log as a bridge over the crevice and built part of the tower on this log. You can still see one hand pecked notch in the cliff where the end of the log rested. Sometime

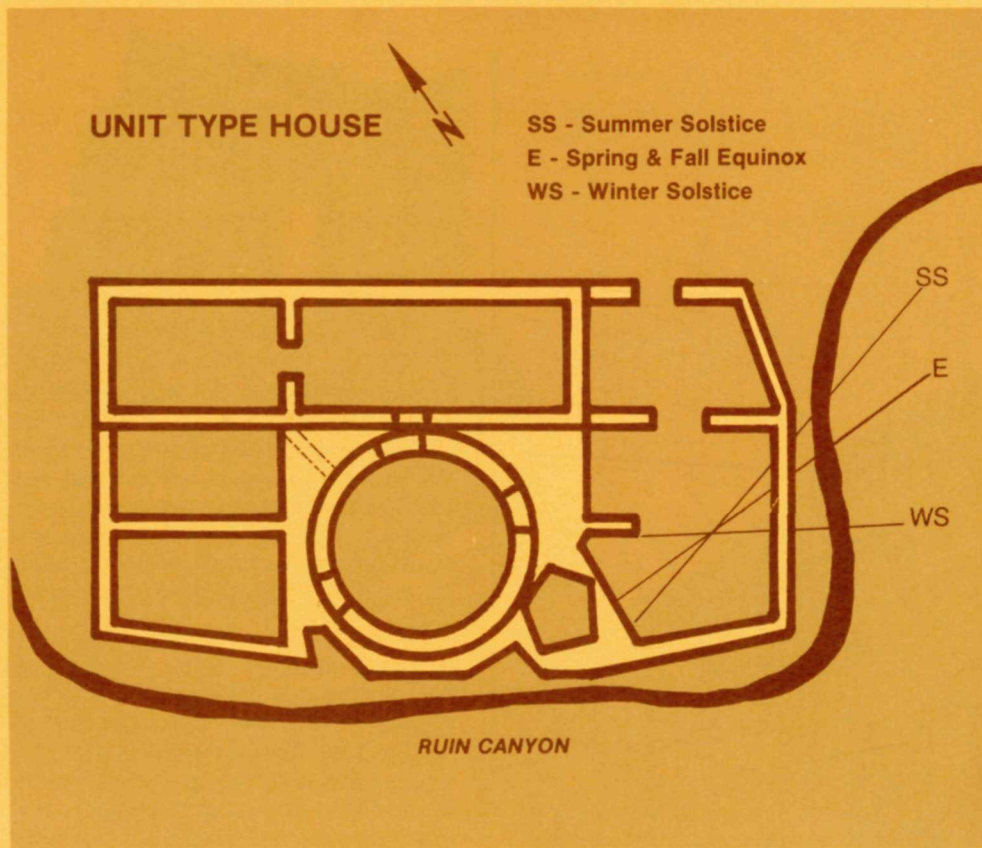
over the last 700 years, the log rotted and collapsed — taking most of the walls of the tower with it to the bottom of the canyon.

11. UNIT-TYPE HOUSE

While most of the major ruins at Hovenweep date from the Pueblo III period, (A.D. 1100-1300), Unit-Type House is older — dating from Pueblo II times (A.D. 900 - 1100). It was probably continually inhabited and modified until almost A.D. 1300. It is called Unit-Type House because early archaeologists felt that such small pueblos with one kiva and a few living and storage rooms made up a unit of one family group or clan. The larger pueblo villages were then made up of several of these family units.

Unit-Type House's single kiva has exceptionally fine masonry. It has the same features found in kivas in the Mesa Verde cliff dwellings, plus a side doorway which leads into what was probably a small storage room.

The room to the east of the kiva has four ports in its eastern wall. Two of them were used to indicate the dates of the summer and winter solstices.





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