

Chaco

Chaco Culture
National Historical Park
National Park Service

Back Country Trails

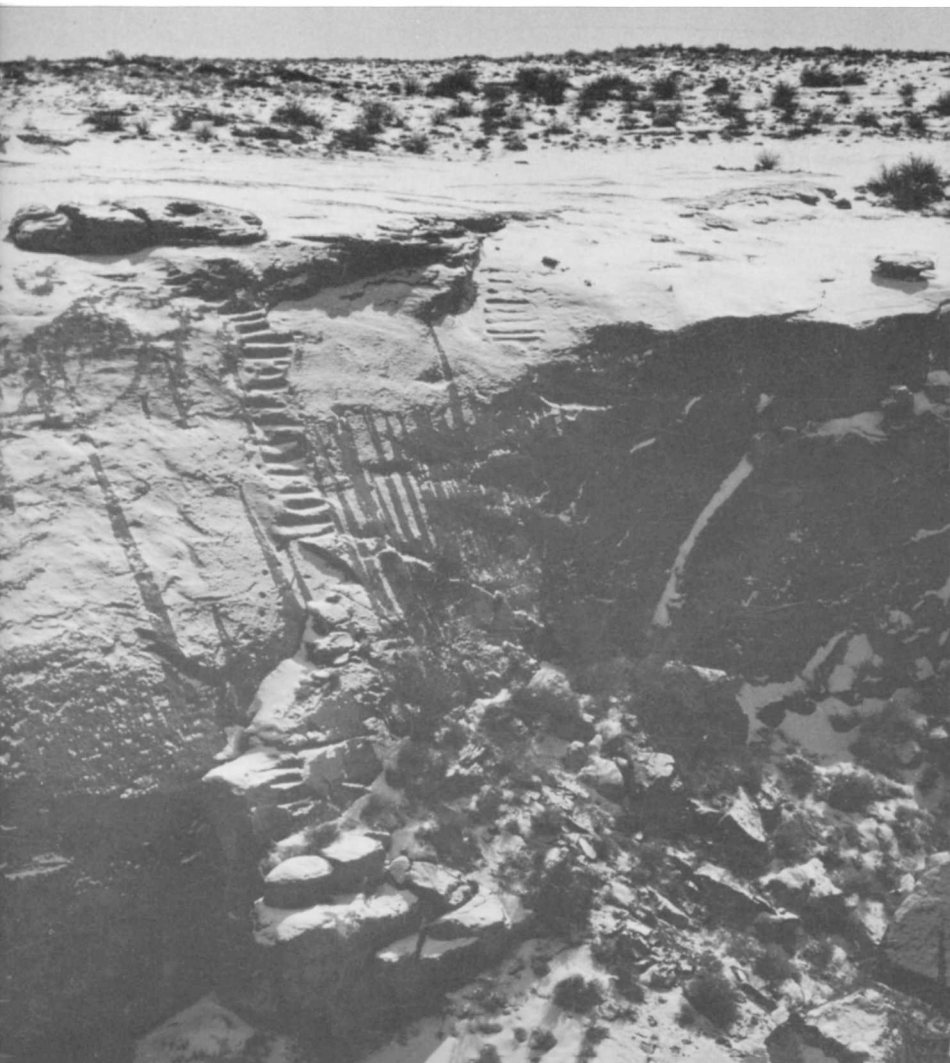
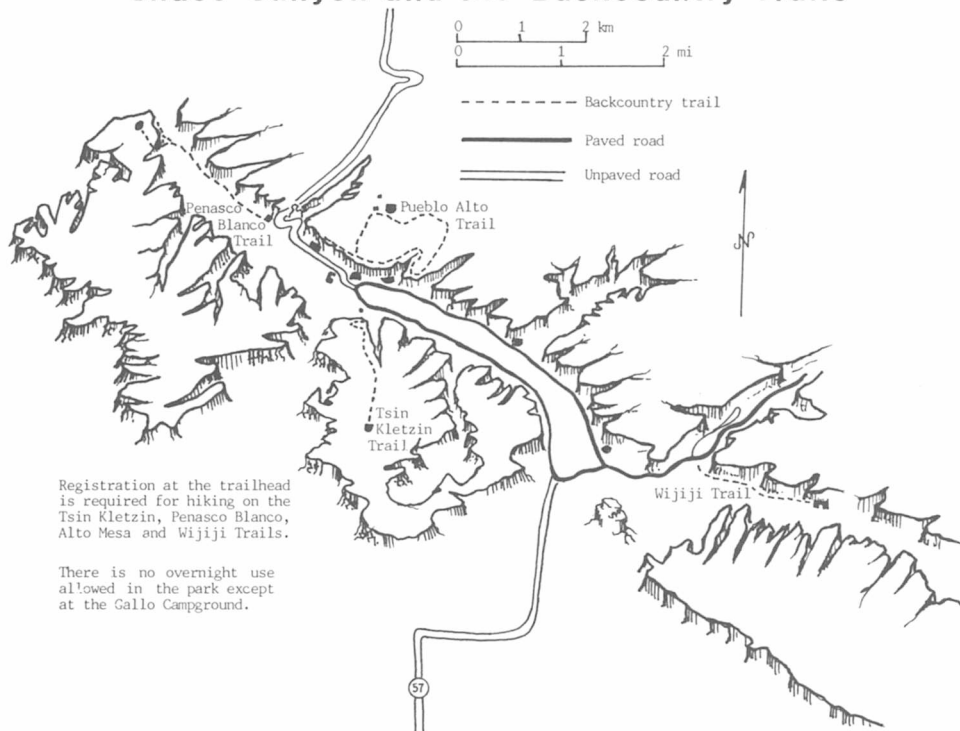


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Chaco Canyon and the Backcountry Trails



Introduction

Four backcountry trails lead to large, mostly unexcavated great houses. Rangers have more information if you need it.

Note: Underlined words are in the Glossary at the back of this guide.

Trails lead to **Wijiji** (3 miles or 5 kilometers), **Pueblo Alto** (4.8 miles or 7.7 kilometers), **Peñasco Blanco** (4.4 miles or 7 kilometers) and **Tsin Kletzin** (3 miles or 5 kilometers). The trails are marked by piles of rocks called cairns. If you lose the trail, go back to the previous cairn and look again for the next one. Wherever possible, walk on slickrock to avoid damaging the fragile plant cover and soft soils. Tennis shoes are fine for these trails, but lightweight hiking boots may be better.

There's advice below about water and the sun, but it's worth mentioning twice. Summer days in Chaco Canyon can be hot, making hiking enjoyable and safe only if you are prepared. Do not underestimate the sun. Although the temperature seldom reaches 100 degrees, the high altitude (6200 to 6600 feet) guarantees intense solar radiation. Drink plenty of water before, during, and after hiking to prevent dehydration and heat exhaustion.

ADVICE and RULES:

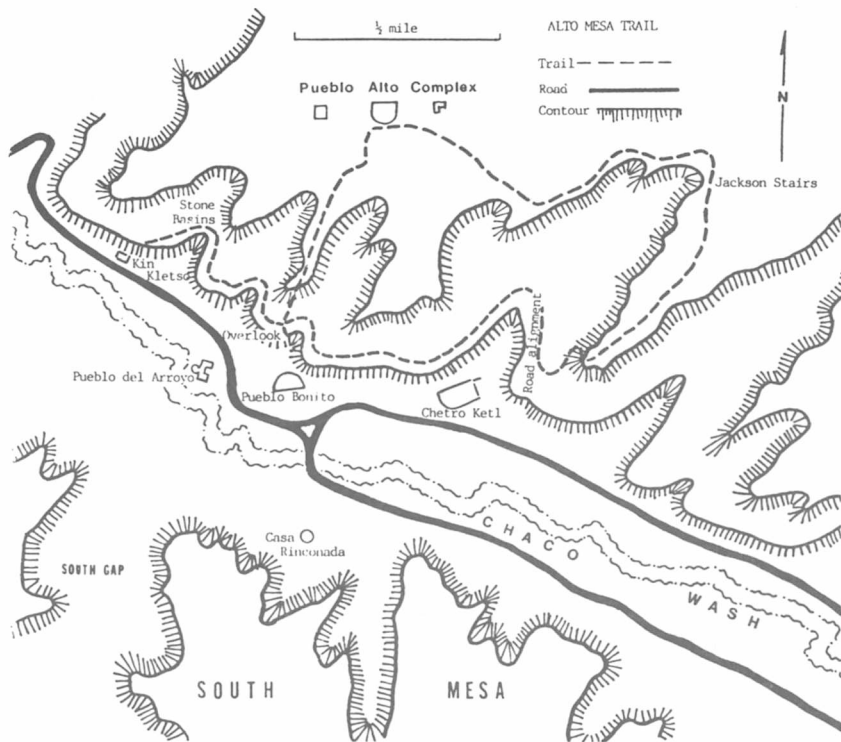
1. You must register for all backcountry hiking at each trailhead. It's free - it's for your safety.
2. Collecting artifacts - including potsherds - is illegal. Besides getting you in trouble, it hampers scientific

research. You may examine artifacts in place, but leave them where you find them. Archeological research is accurate only when artifacts have not been disturbed. Take a photograph or make a sketch of things that interest you. Plants, animals, and rocks are also protected in all national parks.

3. Bubonic plague exists in northern New Mexico; flea-bearing rodents are the most common carriers. You may take pets on the trails but they must be on a leash at all times. Keep your pet away from animals, and don't let it dig. This keeps it from getting fleas and giving you the plague.
4. The prairie rattler is the only poisonous snake in this area, and may be found from April to October. They are not aggressive, so you'll be safe by staying away from them.
5. Carry plenty of water -- During hot summer days Rangers take one quart per person for every two hours of hiking.
6. At this altitude you'll sunburn easily. Remember sunscreen if you need it, and a hat. (Incidentally, believe your light meter! In this strong sun many people overexpose their pictures.)
7. Watch your footing. The sandstone is crumbly.
8. Keep children and pets away from cliff edges. There are no railings.
9. Backcountry trails are closed at sunset.
10. You may not gather wood or build ground fires anywhere in the park.
11. Please do not litter. This also includes organic material.

If you smoke, pocket your butts.

12. Please stay off ruin walls. They are centuries old and fragile. You can hurt them . . . and they can hurt you.
13. Bicycles are allowed on the Wijiji Trail ONLY.



ALTO MESA TRAIL

Trailhead:	Kin Kletso ("Yellow House" in Navajo)
Distance:	Alto Mesa Loop: 4.8 miles (7.7 km) To Pueblo Alto Complex: 2.6 miles (4.3 km) round trip.
Elevation gain:	350 feet or 116 meters
Time:	3 to 4 hours for the Alto Mesa loop
Note:	Much of this trail follows the cliff edge and there are no handrails. Be especially cautious if you have children. Keep them away from the edge.

The trail begins directly behind **Kin Kletso** at the Alto Mesa sign. It ascends the rocky slope to a break in the cliff face, where a natural passageway leads to the cliff top. Notice the grooves in the passageway wall where the Anasazi sharpened tools. Once on top, the trail is marked by stone cairns, following the cliff top 1/2 mile east where it meets the loop trail.

A short way along the cliff top, along the trail, are two round basins carved into bedrock. The Anasazi carved many such basins along cliff edges throughout Chaco Canyon. Most are round, but a few are rectangular. Often they are circled by a masonry wall 25 to 100 feet in diameter, sometimes simple masonry but sometimes like the masonry used to build the great houses. Generally the stone circles are visible from other stone circles, great kivas and from great houses. That's the evidence - now you may speculate as much as archeologists do! The basins remain a mystery.

Further east along the trail, look for the Wetherill cemetery down at the base of the cliff, before Pueblo Bonito. In the 1890s Richard Wetherill excavated about one hundred rooms

of Pueblo Bonito with the Hyde Exploring Expedition. Later he had a ranch and trading post just west of Pueblo Bonito. Richard was shot to death near Casa Chiquita in 1910 and is buried in the cemetery.

His wife Marietta died in 1954 and her ashes were placed alongside her husband. Other members of the Wetherill family are buried here, as well as a number of unmarked Navajo and Euro-American burials. There may be Anasazi buried here as well, as the cemetery is on an Anasazi site now called "Cemetery Ruin."

At the beginning of the loop trail, a sign directs you a short distance south to the Pueblo Bonito overlook at the cliff edge. Pueblo Bonito is directly below, Pueblo del Arroyo is nearby on the near side of the wash.

If you are hiking directly to Pueblo Alto by following the loop trail to the north (left on the loop trail), skip ahead to the discussion of the Alto complex.

Eastward (**straight ahead**) the Loop Trail passes directly above and behind Chetro Ketl. The dark red iron oxide concretions in the sandstone, resembling bumpy pipes embedded in the rock, are fossilized molds and casts of tunnels made in the sandy bottom of a shallow sea by a crustacean or snail called Ophiomorpha major. This sea covered much of western America during the Cretaceous Period, seventy to eighty million years ago.

Look for an area where all of the loose rocks have been cleared to one side of the slickrock bench. These rocks are the remains of a masonry berm along both sides of a prehistoric road connecting Chetro Ketl and Pueblo Alto.

Jackson Stairs

Where the trail heads up toward the top of Alto Mesa it passes above Jackson Stairs, the most impressive of many Anasazi stairways in Chaco Canyon. The Anasazi carved the wide steps up a sheer cliff at the head of this rincon to get from the bench level up to the Pueblo Alto complex. The stairs are named for William Henry Jackson, the early photographer who accompanied the Hayden Survey of 1877. Jackson also named and mapped Pueblo Alto during that expedition.

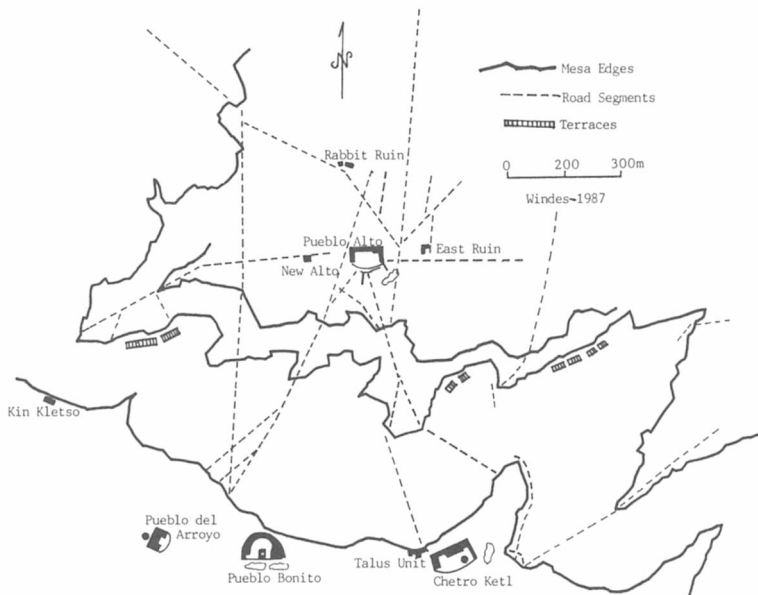
DO NOT ATTEMPT TO DESCEND JACKSON STAIRS. THE STAIRS ARE FRAGILE AS WELL AS DANGEROUS.

Following the rim toward Pueblo Alto, you can overlook a series of terraces built by the Anasazi. Some researchers believe the masonry wall twenty-five feet from the base of the cliff trapped soil and water which poured over the cliff during thundershowers. Other researchers think the terraces may be features of the road system, like the stairways and ramps.

Three-quarters mile (1.2 kilometers) ahead is the Pueblo Alto Complex

Pueblo Alto Complex

The Pueblo Alto Complex has six buildings, of which four are visible: Pueblo Alto, New Alto, East Ruin and Rabbit Ruin. The great house of Pueblo Alto is the largest structure in the complex; and the only one that has been excavated. Between 1976 and 1979 National Park Service archeologists tested sections of the plaza and excavated fourteen rooms.



Alto Mesa Complex With Roads

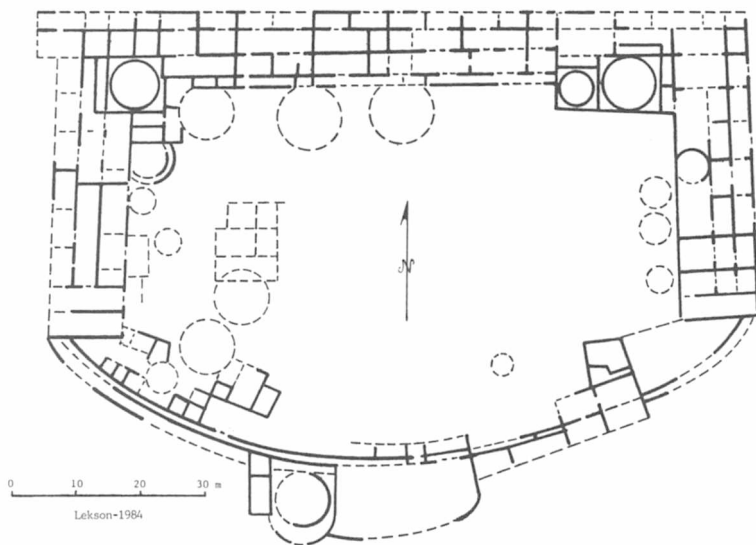
At least four roads from the north converge at Pueblo Alto, including the Great North Road. This road is aligned within one degree of true (celestial) north, apparently terminating at Kutz Canyon just west of Angel Peak, about forty miles (sixty-four kilometers) away. There are hints that from Kutz Canyon, other road segments continued north to the great houses of Aztec and Salmon, Chacoan outliers in the La Plata River valley, and perhaps to Anasazi communities in Colorado. Roads from Chetro Ketl, Pueblo Bonito, and Peñasco Blanco also converge at Pueblo Alto.

Most road segments were discovered by studying low-angle aerial photographs, then verified by ground surveys. Plant differences along pre-historic roads are clues, as are ramps, stairs, and unusually straight swales. Occasionally researchers find artifacts along roads, but generally there is surprisingly little Anasazi debris found. To date, more than 400 miles (640 kilometers) of Chacoan roads have been identified in the San Juan Basin . . . remarkable for a people who did not have the wheel, nor beasts of burden!

The first construction phase of the Pueblo Alto great house paralleled the beginning of Chetro Ketl, AD 1020 to 1050. The three rows of rooms in the northern section were built first, where the core and veneer construction using Type II facing is still visible. Later building stages added the east and west wings, as well as several blocked-in kivas (round ceremonial rooms built within square rooms). As with other great houses, the last major addition was an arc of rooms to enclose a south-facing plaza.

Because Pueblo Alto has the size and architectural plan typical of other great houses in Chaco Canyon, it had been assumed it was a multistory structure. The archeologists were surprised to discover that Pueblo Alto was one story throughout . . . but some of the ceilings were 14 feet or 4.60 meters high! Trenching the plaza failed to locate a great kiva; in fact, it appears the entire complex did not have a great kiva.

Pueblo Alto's 6440 foot (2136 meter) elevation provides views of Tsin Kletzin on South Mesa, Hosta Butte and Mount Taylor to the south, the Jemez Mountains to the east, Huerfano Mesa, the San Juan and La Plata Mountains to the north, and the Chuska Mountains to the west. Shrines atop Huerfano, Hosta Butte, Mount Taylor and other high places easily seen from Pueblo Alto may have been parts of a Chacoan communication system.



Pueblo Alto

Most fireplaces found in Pueblo Alto were shallow heating pits which showed temporary use, not the substantial stone-lined hearths Anasazi typically used in winter. Some fireplaces were in the fill of abandoned rooms, well above the original floor level. It might be that Pueblo Alto was lived in repeatedly, but seasonally, rather than year-round. There is interesting evidence on this in the trash midden, one of the largest in Chaco.

Normally, a large trash deposit indicates long term year-round occupation, but the stratigraphy of this one shows intermittent rather than continuous deposition. There are large amounts of animal bone, and enormous quantities of potsherds, especially

imported wares. The quantities are so remarkable that some archeologists suggest Pueblo Alto was not so much lived in as used periodically by large groups of Anasazi for ceremonies, which included feasting and ritual breaking of pottery (both of which are known in pueblo societies).

New Alto

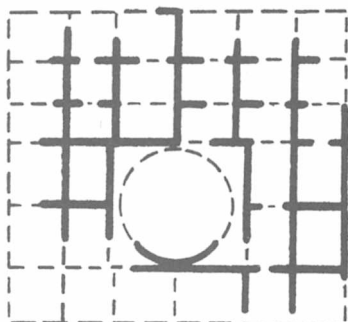
New Alto was a two story "McElmo" style building, probably built about AD 1100. It is contemporary with the later times of Pueblo Alto, but quite different in architecture. Smaller than Pueblo Alto, New Alto has fifty-eight first and second story rooms arranged symmetrically and compactly around a kiva. It has been stabilized but not excavated. We can only speculate on the relationship that existed between New Alto and Pueblo Alto, but there is a pattern. Elsewhere "McElmo" style structures are also associated with earlier great houses. Peñasco Blanco and Chetro Ketl both have nearby "McElmo" buildings built after AD 1100.

From Pueblo Alto the trail descends south toward the canyon, completing the loop above Pueblo Bonito. The break in the other side of Chaco Canyon, where the valley leads out south, is "South Gap." Today it appears natural, nearly lacking in man-made structures, but once it was a busy place. Erosion, deposition and vegetation mask the many house mounds, trails, irrigation ditches and farming fields from Anasazi days.

At least one road, the South Road that led to the Anasazi communities now called Bee Burrow and Kin Ya'a, came through the gap. While the great houses of Chaco remain prominent, the majority of Chacoans lived in smaller houses, most of them along

the margins of mesas. If you look carefully, you can see several mounds along the talus at the base of the cliff on the other side of the canyon, the remains of village sites.

New Alto



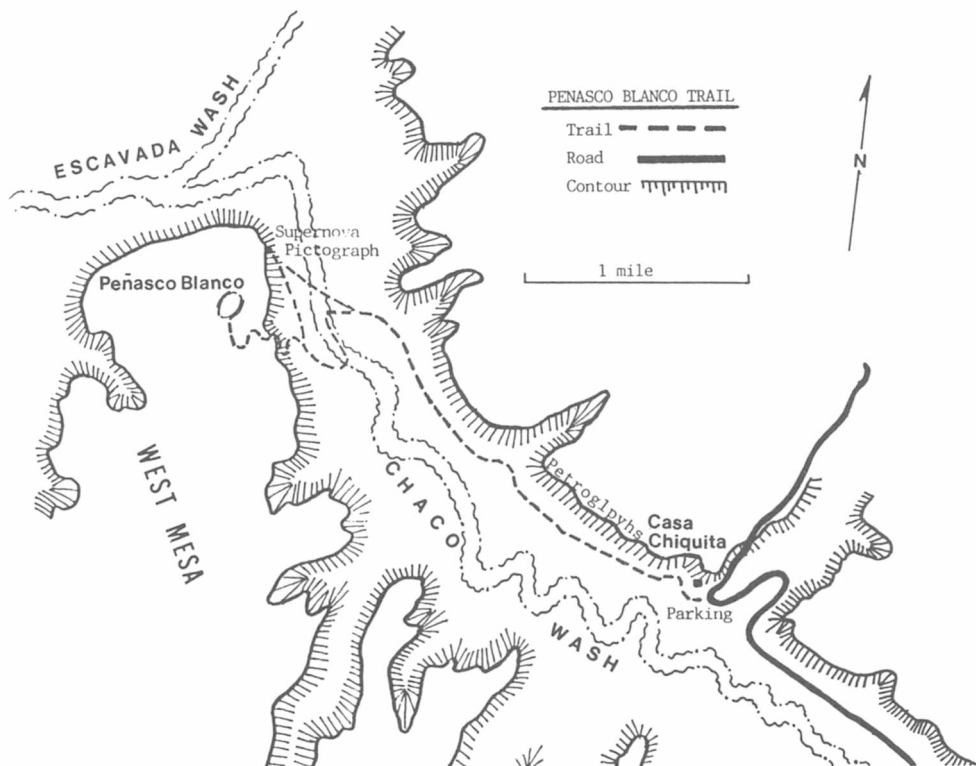
Lekson-1984



Photograph of prehistoric stairway near Pueblo Alto taken in the 1920's.
Photo taken by Neil Judd © National Geographic Society.



Photograph of same stairway taken in 1989. The stairway shows signs of erosion after 60 years of use by people with hard soled shoes walking over them. Photo by National Park Service.



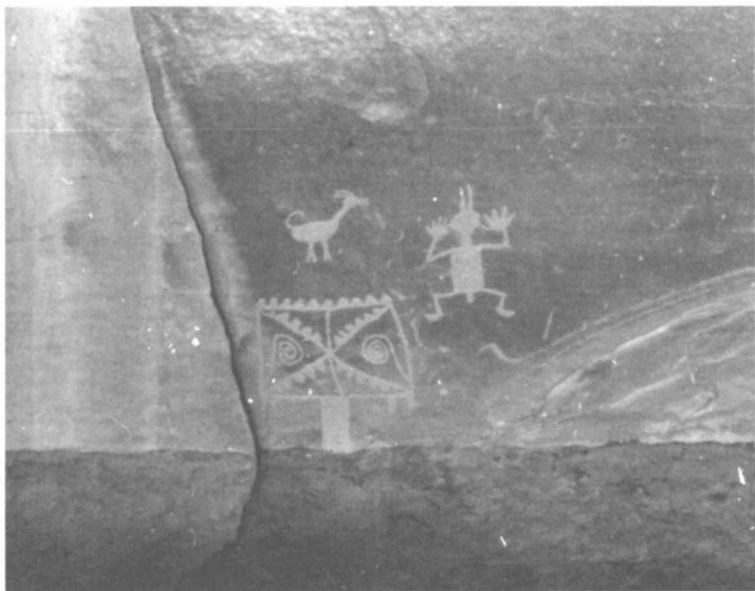
PEÑASCO BLANCO TRAIL (Spanish "White Rock Point")

Trailhead:	Casa Chiquita (Spanish "Very Tiny House")
Distance:	4.4 miles (7.0 km.) round trip
Elevation gain:	150 feet or 49 meters
Time:	3-4 hours round trip
Note:	Do not attempt to cross Chaco Wash when the water is up. Stream flow after or during a thundershower is surprisingly cold and swift and deceptively deep. The wash may be slippery from mud and full of quicksand.

The trail follows an old wagon road down Chaco Wash. Please stay on the trail and do not go up side canyons. Not far along, there is rock art on the cliff face to your right. There are panels of Anasazi petroglyphs, as well as later Navajo figures and Mexican inscriptions. Do not touch the petroglyphs. Touching dislodges sand grains and damages the art.

Most of the plants in the floodplain are grease-wood and four-wing saltbush. Saltbush is tolerant of alkaline soils. Anasazi used it for firewood, and ate its seeds. Today, Navajo weavers make bright yellow dye from saltbush leaves and twigs.

About 3/4 mile (1.2 kilometers) down the trail is a particularly fine Anasazi panel, thirty feet (ten meters) high on the cliff face. It includes a human figure, a bighorn sheep and a rectangular geometric design. Look carefully to find a finely-pecked larger panel, below and to the right. It has a mountain sheep, two connected spiral designs, and a series of pecked rectangles. We wonder where the artist stood to do them! Comparing the weathering, the lower one looks older.



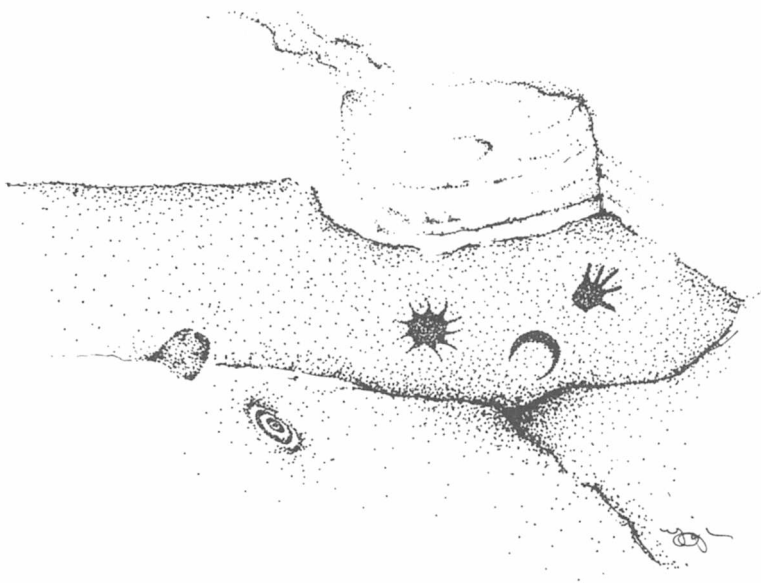
Petroglyphs along the Penasco Blanco trail. Photo by National Park Service. David Six.

From the petroglyphs Peñasco Blanco is in sight directly ahead on West Mesa.

Near Chaco Wash the tamarisk take over. This salt-tolerant shrub is common along drainages throughout the Southwest, but actually comes from the Near East. In the 1930s tamarisk was spread deliberately; for instance, here in the Chaco it was planted along Chaco Wash to control erosion brought on by fifty years of overgrazing. While it is true tamarisk has helped stabilize drainages, it has also crowded out native species and soaks up huge quantities of water. It is now considered a pest on western waterways.

Anasazi used the willows along the wash -- they used almost everything. They slept on woven willow mats, and often were buried on them. Cottonwood trees grow near the channel, where they find enough water, and Anasazi carved cottonwood root, and used the trunk and limbs in house construction.

To go directly to Peñasco Blanco, continue across the wash. **To visit the "supernova" pictograph, take the trail to the right before crossing the wash.** (It will loop back to the main Peñasco Blanco trail.) Follow the cairns about half a mile until you reach a rock barrier, and a shallow overhang pecked with faint petroglyphs. Directly above these petroglyphs is a concentric circle design painted in red and yellow, along with a sunburst, a crescent moon and a human hand. In AD 1054 Chinese astronomers recorded a supernova, or exploding star, the remains of which we call the Crab Nebula. Chaco Canyon was a busy place then, and the nova would have been visible here. Some researchers believe this pictograph depicts that event.



Pictographs easily erode when exposed to the environment and human impact. This well-preserved panel may represent a supernova occurring in AD 1054. Drawing by Lyle Yazzie.

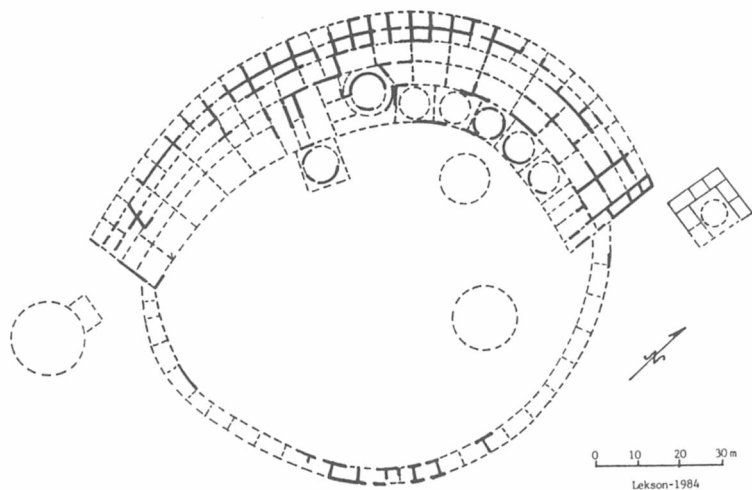
Follow the cliff east to rejoin the main trail that climbs West Mesa to Peñasco Blanco. The dramatic change in vegetation as you leave the floodplain is due to the change in soil type, sunlight and water availability. Now juniper and cliffrose dominate the rocky landscape. Juniper is good fuel and building material, for Anasazi then and for Navajo now. Anasazi used cliffrose bark to make mats, rope and sandals.

Peñasco Blanco

Peñasco Blanco, an unexcavated great house, is on the northernmost point of West Mesa, with a commanding view of Escavada Wash running into Chaco Wash. The oval shape is unusual for a Bonito Phase great house. The back was three stories high, so there were at least 160 rooms.

Tree-ring dates of AD 913 and 916 from the southeast facing roomblock, three rooms deep and two stories high (see map) indicate it was built first. The architectural plan of room suites fronted by kivas, and the Type I masonry style match the earliest construction stages of Pueblo Bonito and Una Vida, also built AD 900 to 940.

Somewhere about AD 1050 to 1065, the Chacoans added massive roomblocks to each end of the old roomblock at Peñasco Blanco. This time they used the new masonry technique that was also coming into vogue at other Bonito Phase great houses, the core and veneer which has become the trademark of Chacoan architecture.



Peñasco Blanco

Later additions at Peñasco Blanco continued to parallel building stages at other great houses, sharing planning and building trends. Major construction from about 1075 to 1095 included compact, symmetrical roomblocks with enclosed kivas, seen in the rear row of three story rooms and the four enclosed kivas fronting the plaza on the west wing. The final addition to many Bonito Phase great houses, including Peñasco Blanco, was an arc of single story rooms to enclose the plaza.

Frank H. H. Roberts dug test trenches in the Peñasco Blanco trash mound in 1926. Some archeologists think these "trash mounds" may have been formal landscaping structures associated

with roads approaching buildings. Certainly the mounds, largely construction debris and trash, represent a great amount of labor. These landscaping mounds like prehistoric roads are common features at many of the Chacoan great houses.

There are two great kivas in the plaza of Peñasco Blanco, and two more outside, to the south and northwest. The large, circular depression beyond the fence is the northwestern kiva. Great kivas appear very early in Chaco Canyon. They probably served as centers for social and religious rituals for the community at large. Early Chacoan great kivas are found at Basketmaker villages dating between AD 500 and 600: Shabik'eschee, and Site 29SJ 423, not far from Peñasco Blanco.

Archeologists excavating the great kiva at 29SJ 423 in 1973 found it had burned three times, and been rebuilt twice. The kiva was about thirty feet across, of slab-lined construction similar to nearby pithouses. Tree-ring dates place its building and rebuilding between AD 516 and 557. That is an important time period. Great kivas probably were centers for social and religious rituals, and some archeologists believe their appearance (in the 500s, long before the Chacoan great houses of the 900s) is the first strong evidence of community-wide organization.

A few yards northeast of Peñasco Blanco is a "McElmo" style structure, one small kiva enclosed by eight rooms. The "McElmo" style, which includes small, compact rooms arranged around kivas, shows up in the Chaco about AD 1100; you can see it at Casa Chiquita, Kin Kletso and New Alto. There are various ideas about what it means. Some archeologists think it shows immigration from the north, where the style had been used; others think just the idea came down, not actual immigrants; still others argue the Chacoans may have evolved the style themselves.

The "McElmo" ruin here at Peñasco Blanco is built on a large platform mound, two enormous retaining walls filled in to make an elevated, flat surface for the building.

Several Chacoan roads connect with Peñasco Blanco. One, the Ah-shi-sle-pah Road, heads northwest from the great house, crosses Escavada Wash and ascends the mesa on the other side via masonry and rock-cut steps. Across the mesa it descends a probable ramp and another stairway into Ah-shi-sle-pah Canyon. Unlike other Chacoan roads, this one does not seem to link with any other community, nor to another road. It ends at Black Lake, a seasonal playa 3 1/4 miles (2 1/4 kilometers) from Peñasco Blanco.

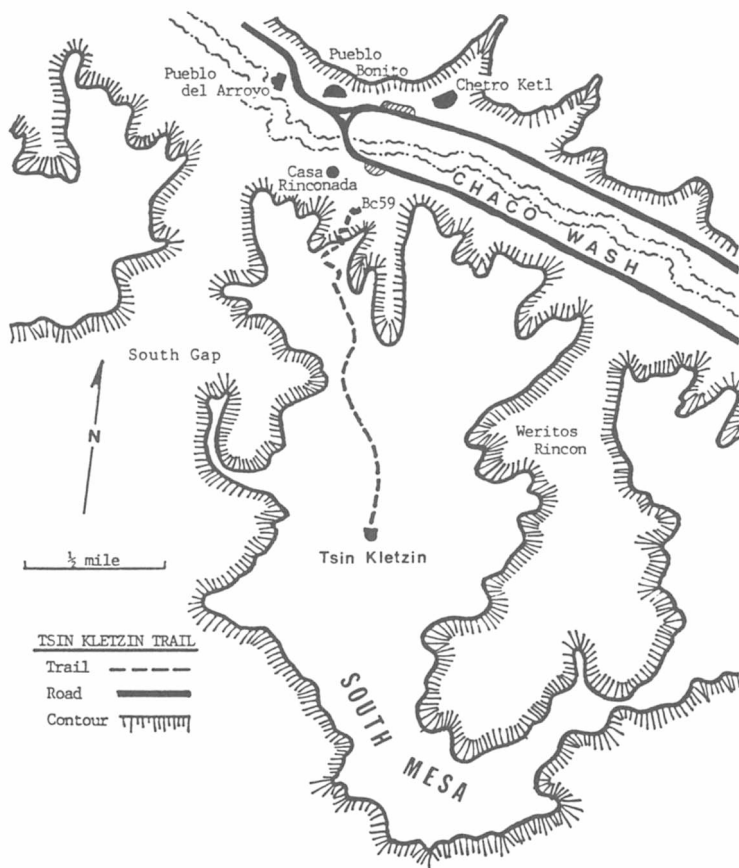
The remains of a water control system have been found across from Peñasco Blanco in the floodplain on the north side of the canyon, including canals, ditches, masonry headgates, and recently discovered storage ponds. These slowed runoff and distributed the water to fields along the Chaco wash.

How does the great house of Peñasco Blanco fit into the Chaco phenomenon? At simplest description, the Chaco phenomenon involved great houses of distinctive Chacoan architecture, connected by roads, each surrounded by a cluster of small house sites forming an agricultural community. Peñasco Blanco is exactly this, its small house sites scattered along the canyon below.

Peñasco Blanco was among the first three great houses to be initiated in Chaco Canyon, and its construction through seven generations of Anasazi was coordinated with that of other great houses within the canyon and beyond. It is a pristine Chacoan

site, held "in the bank" while better archeological techniques are developed. One day excavation here will teach us more of what Chaco was all about.

Walking back to Casa Chiquita, look up-canyon (ahead) to see Kin Kletso and Pueblo del Arroyo. Add the sounds and bustle of the 1100s and you'll know: We are not the first to walk in Chaco Canyon.



TSIN KLETZIN TRAIL (Navajo for "charcoal place")

Trailhead: Casa Rinconada (Spanish, "House in a Corner") Stop #9
Distance: 3.0 miles (5.0 km.) round trip
Elevation gain: 500 feet or 166 meters
Time: 2 to 3 hours round trip
Note: This trail is especially beautiful in late afternoon or when spring wildflowers are in bloom.

The trail branches off at marker 9 on the Casa Rinconada Trail, and heads south up the rocky slope to the mesa top. On the way up, a little above you to your right, is a storage room. You'll see a masonry wall built across a natural hole. Anasazi and, later, Navajos built similar storage areas, so we are not sure which group built this one.

On the way up there are great views of the canyon. Directly below is Casa Rinconada, and across Chaco Wash to the west, Pueblo del Arroyo. You can also see Pueblo Bonito and Chetro Ketl on the north side of the canyon. From anywhere along the trail you can see the high walls of New Alto silhouetted on the mesa top across the canyon, and just beside it the long, low mound of Pueblo Alto.

Juniper and cliffrose grow along the slope to the top, where it changes to mostly grasses. Juniper provided firewood and building material for the Anasazi. They used cliffrose bark to make baskets. Still, vegetation here is sparse and the soil lies thinly upon bedrock. It wasn't very good for farming on top, so not surprisingly there are few house sites and pueblos up here. However, scores of farming sites are scattered along the northern



Cliffrose, one of early summer's most fragrant flowers, was used for making baskets by the Anasazi. Photo by National Park Service. David Six.

base of South Mesa. Apparently dry farming at the base of the talus was successful. A similar situation is found in Werito's Rincon, the next major rincon (box canyon) to the east.

Werito's Rincon, one of the larger canyons in the park, had good places for dry farming. In 1977-79 researchers grew Hopi blue corn at various places in Chaco Canyon with a variety of techniques. An unirrigated plot at the base of a sand dune in Werito's Rincon was the best place tested. Apparently both massive sand dunes and talus slopes will absorb and keep enough moisture for dry farming.

Water was a continual problem for the Anasazi. This mesa top certainly did not hold much, so the Chacoans built a massive masonry dam just above Werito's Rincon not far from Tsin Kletzin. The dam was 130 feet or 43 meters long, and stored enough runoff to supply domestic water to Tsin Kletzin and those who lived near Werito's Rincon.

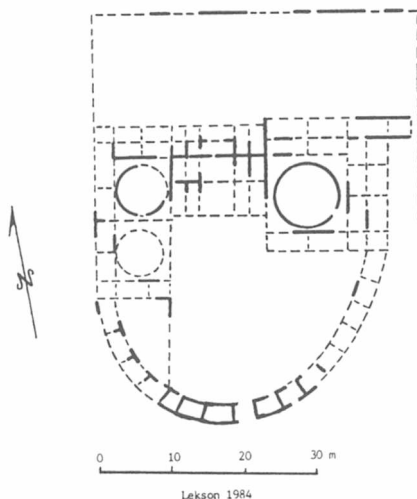
Near Tsin Kletzin the view broadens to include much of the San Juan Basin, and if you know where to look, several major Chacoan communities. Likely this great house was built here because it is an intersection of several lines-of-sight.

Tsin Kletzin

Archeologist can tell that the two kivas in the northern section were two stories. If the ruins were put back together, from atop the highest kiva one could have seen Kin Klizhin to the west, Bis'sa'ani to the northeast, and Peñasco Blanco, Kin Kletso, Casa Chiquita and the Pueblo Alto complex. If Tsin Kletzin were shifted thirty feet (ten meters) in any direction, not all of these great houses would have been visible.

D-shaped Tsin Kletzin contained more than seventy rooms. Three roof beams gave tree cutting dates near AD 1112. The architectural plan, with its enclosed plaza and row of long, rectangular back rooms, is like previous construction in the late 1000s. But those buildings were built with core and veneer. Here the old plan was built with a new rock-working style we call "McElmo", which used readily available, light-colored sandstone blocks, after considerable preparation. Notice the peck marks, the shaping and sanding. Other structures using this new masonry include New Alto, Kin Kletso and Casa Chiquita.

Tsin Kletzin

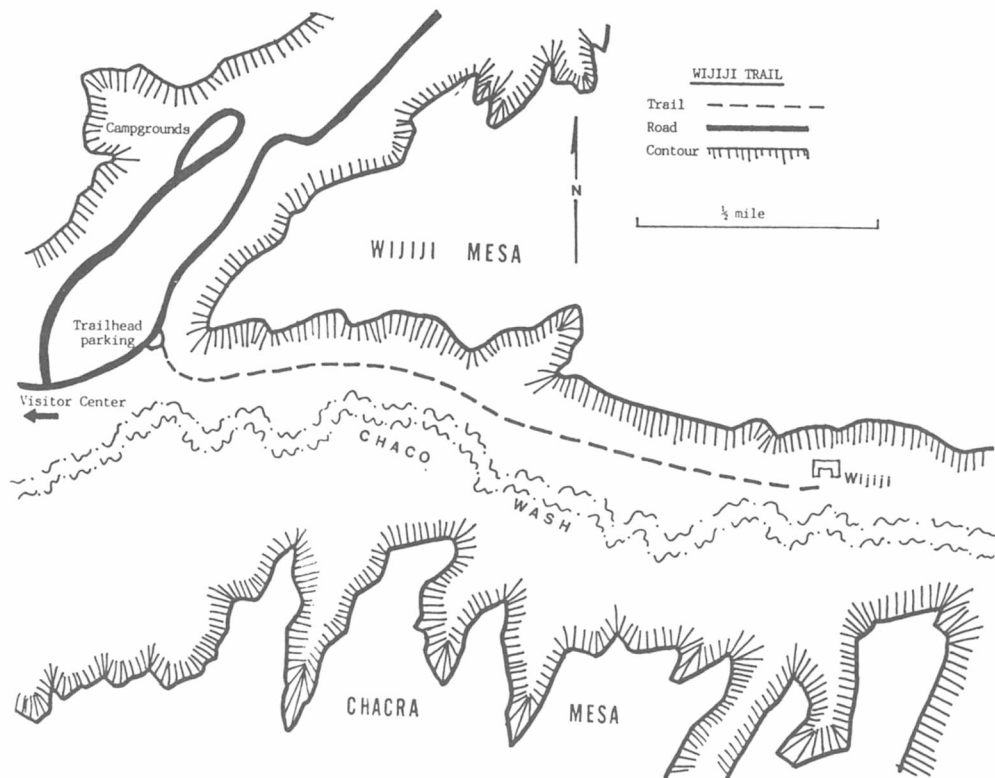


Early archeologists suggested "McElmo" great houses were based on styles popular north of the San Juan River, perhaps built by immigrants from there. Others suggest increasing influence from

the north (instead of an influx of immigrants), or Chacoans may have evolved the style themselves. We certainly see such trend-copying in our own towns and cities. Besides a floorplan from earlier times, Tsin Kletzin has a characteristic of great houses constructed later: a trash midden, south of the building, although quite small compared to other great house middens. However, you will notice few pottery sherds (broken pieces). Tsin Kletzin was probably not a permanent daily residence.

On the way back, notice the northern horizon. The white peaks of the San Juan and La Plata mountains are clearly visible to the north. The mesa to the northeast capped by three buttes is Huerfano (Spanish for "orphan") Mesa, which may have been sacred to the Anasazi, as there are several shrines on it. These shrines all have spectacular lines-of-sight, which strengthens the idea mentioned earlier about a Chacoan communication system. For example, there is a direct line-of-sight between Tsin Kletzin and Huerfano, and another from Huerfano to Mesa Verde.

Today Huerfano Mesa is sacred to the Navajo, who call it Dzilth-na-o-dith-hle, "mountain shaped like lightning." Several prehistoric roads connect Tsin Kletzin to the core canyon area. One appears to lead to a stairway just east of Casa Rinconada, which you may see after your hike by turning into the pull-off signed "Stairway," shortly after you leave the Rinconada parking lot. Besides building straight roads, the Chacoan Anasazi apparently positioned some buildings in straight lines. For example, Casa Rinconada, Pueblo Alto and Tsin Kletzin all fall on a true north-south alignment. You are welcome to speculate, as archeologists do, on what this could mean.



WIJII TRAIL (Wijiji may come from the Navajo word for greasewood, "tuwizhizhin")

Trailhead: 100 yards or 100 meters east of Gallo
campground turn-off
Distance: 3 miles (5.0 km) round trip
Elevation gain: None
Time: 2 to 3 hours round trip
Notes: After a rain shower, this is the muddiest trail
in the park! This is the only trail in
Chaco Canyon open to non-motorized
bicycles.

You will follow the old Sargent Ranch road up the north side of Chaco Wash to Wijiji. Wijiji Mesa is on your left while Chacra Mesa borders the floodplain on the other side of Chaco Wash on your right (south). Chacra Mesa extends southeast to the continental divide. It reaches up to 6800 feet (2256 meters), and has the only substantial stands of pinyon and juniper in the park.

The floodplain soil on this side of Chaco Canyon has a large proportion of clay which is eroding from the shale in the Menefee Formation exposed along Wijiji Mesa. This high clay content reduces water saturation in the soil, so this side of the canyon is not as good for farming. Most Chacoan and later Navajo fields are along the base of Chacra Mesa where soil and moisture conditions are better.

Although the centuries-old ruins are the main feature of Chaco Canyon, much has happened in more recent times too, much of it along this old wagon road. Although the Pueblo Revolt of 1680 drove the Spanish from New Mexico, they returned twelve years

later to reestablish the colony. Many Pueblo Indians, fearing reprisal, sought refuge with their Navajo neighbors. During this time, the Navajos lived in the canyons of the upper San Juan drainage to the north of Chaco in what the Navajo call "Dinetah," "Among the People."

A generation later, about 1720, some of the mixed Navajo and Pueblo descendants migrated south to Chacra Mesa to herd sheep and farm along Chaco Wash. Intermittent raiding mostly by Utes during the 1700s led these descendants to build "pueblitos." In this area pueblitos were typically two to three room fortified stone dwellings, on defensible sites along the northern side of Chacra Mesa.

Spanish expansion during the 1770s led to conflict with Navajos throughout the Dinetah. Competition for grazing and farming land caused hostilities for nearly two centuries among the Navajo, Utes, Apache, Hispanics, and finally, Anglos. Hostilities between Americans and Navajos in the mid-1800s led to defeat of the Navajo by the United States Army led by Colonel Kit Carson in 1863, and exile in Fort Sumner, New Mexico for five years. They were released by treaty in 1868 and a number returned to live in Chaco Canyon.

Among those who returned to the canyon was "Navajo George," the head of a large family which settled in the Wijiji area in 1869. The George family prospered grazing sheep on Chacra Mesa and farming along the north side of the canyon. Recent research has identified hogans, stone houses, and summer farming camps in this area built by the George family.

The few years of peace for Navajos in Chaco Canyon ended in the late 1880s. White and Hispanic sheepmen northeast in the Chama Valley had long overgrazed that region and began wintering their flocks on public lands to the south, Chaco Canyon included. The Georges and other Navajo families soon came into

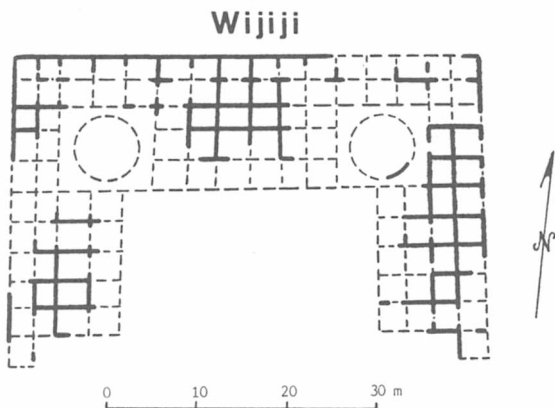
direct competition with sheepherders from outside the Chaco.

Conflict got worse after 1898 when a wealthy Chama sheepman, Edward Sargent, brought enormous herds to Chaco to winter, eventually controlling the entire canyon area. (This trail began as a road for the ranch Sargent built in 1934.) During the winter of 1919-20, Neil Judd, an archeologist excavating Pueblo Bonito, complained that Sargent was grazing sixty thousand sheep in the Chaco region. It is hard to believe this area could support that many sheep.

Whether Judd's estimate was right or not, it is apparent that Sargent far exceeded the carrying capacity of the Chaco, increasing erosion. Sargent also owned several trading posts in the area. By the early 1900s, the canyon entirely overgrazed, hostilities between Navajos and Ed Sargent and his Hispanic sheepherders increased. The records of the time reveal intrigue, violence, litigation, rustling and murder. Edward Sargent lost his grazing lease in the park, and in 1946 fencing on the boundary eliminated all livestock from the canyon. The last Navajo family living within the park was relocated in 1948.

Wijiji

Wijiji is within the former home territory of the Chaco Navajos, and their legends include this great house. One legend maintains that a Pueblo woman living near Wijiji taught the Navajo to weave. This story could hold truth, in that Pueblo refugees did teach their Navajo hosts to weave.



Lekson 1984

Of all the great houses in Chaco Canyon, Wijiji exhibits the most symmetry and uniformity in both masonry style (which is all Type IV) and architectural planning. But in one way it is curious. Its masonry - the actual rockwork - is the Type IV style which came in about 1075; but it's architectural plan is the more compact "McElmo" style of the early 1100s -- which usually used a different masonry. Examples of "McElmo" style include Casa Chiquita, New Alto, and Kin Kletso, each having small, uniform sized rooms arranged compactly around kivas. Because Wijiji is unexcavated, only one tree-ring date (AD 1110) has been recovered. The uniformity of this great house suggests it was built in a single, brief construction surge.

Wijiji has about 100 ground floor rooms. The north row of rooms was three stories high, then two stories, then one story facing the plaza, bringing the room total to about 225. This terracing down from north to south provided excellent solar reception similar to that at Pueblo Bonito and Chetro Ketl. Only two kivas were built in Wijiji, one in each of the two wings. No great kiva has been found at this site. Curiously, Wijiji lacks a trash midden. Another oddity is that while many other great

houses have a row of rooms enclosing the plaza, Wijiji does not. Some archeologists suggest the Anasazi did not complete Wijiji, explaining both the lack of trash and the failure to enclose the plaza.

Wijiji was built on a layer of clay four foot (one and one-third meters) thick, a poor foundation. As well, the builders did not effectively tie together many of the walls, and some have separated at the corners, threatening collapse. The earth dikes around the ruin are modern, built to divert runoff.

Petroglyphs and pictographs are scattered along the cliff behind Wijiji. One interesting panel is under an overhang just east of the great house. Follow the path near the cliff northeast of Wijiji for about 100 yards (100 meters). This panel shows two red, two-legged animals surrounded by "negative" hands. (Negative hands are made by blowing pigment from the mouth or through a reed directly around a hand placed against the rock.)

About twelve miles (seven kilometers) upcanyon from Wijiji is another Chacoan great house, Pueblo Pintado ("painted town" in Spanish). Like Wijiji, Pueblo Pintado was stabilized but remains unexcavated. It was discovered by American soldiers in 1849 who were exploring and mapping the Chaco region as part of the campaign against the Navajo people. Lt. James Simpson, a topographer, documented the ruins and recorded their local names. Pueblo Pintado was the first one he encountered as he followed Chaco Canyon. If you wish to visit Pueblo Pintado, ask for information at the Visitor Center.

Walking back, keep alert for animal tracks and scat. Coyote are common throughout the canyon, and other animals you might see include bobcat, porcupine, badger, cottontail rabbit, and an occasional deer. Please report wildlife to a Ranger, as we keep

wildlife observation records. From excavations, we know that deer, cottontail rabbit, and coyote lived here when the Anasazi did. Although meat was not the Chacoans' primary food, it did supplement their diet of beans, corn, and squash. They also used the skins and bones for clothing and tools.



Coyotes are a common site in the park today. The Anasazi would have competed with them for rabbits and other small animals. Drawing by Lyle Yazzie.

GLOSSARY

Cairn Pile of rocks indicating location of path.



Core and Veneer Masonry A method of constructing walls with a thick interior of masonry or mortared rubble, with a veneer (facing) of shaped stones on both sides.

Core thickness can vary depending on how many stories it supports. The facing stones are also load-bearing, depending mostly on stone-on-stone contact rather than mortar joints.

Midden Deposits of trash such as floor sweepings, broken pottery, food remains, and building rubble accumulated throughout the occupation of a site.

Petroglyph Image pecked or incised into stone.

Pictograph Image painted on stone, using pigments from minerals or plants.

Stabilized Preservation treatment such as replacing eroding mortar and deteriorating stone to insure upkeep of original walls.

Tree-Ring Dating (Dendro-chronology)
Most trees, particularly conifers, add a concentric growth ring every year. In a wet year the ring is wide, in a dry year it's narrow.

Southwest researchers have built a master chart of this narrow-wide pattern stretching back over two thousand years, based on thousands of modern and prehistoric samples. (Other regions have their own charts, as weather patterns differ.)

The ring pattern from an Anasazi timber can be matched with the master chart, and a date assigned to it. The outer ring generally indicates the year the tree was cut. By analyzing numerous samples we can date the construction of a specific roof, room, or entire building.

Type I Masonry - 800s to 900s. A stage of Chacoan masonry. Wall construction one stone wide (no core & veneer). The stones are long, thin slabs of hard, dark sandstone, each stone exposed on both sides of the wall. There are no regular layers.

Mortar joints are wide and chinked with small sandstone spalls. Wall thickness is limited to the width of the stones. Strength depends much upon the mortar.



Type I

Type II Masonry - early 1000s A stage of Chacoan masonry. The wall has a core, with a facing of long, tabular stones, set in horizontal bands. Generally hard, dark sandstone. Small sandstone spalls, both vertical and horizontal, set into the mortar joints.



Type II

Type III and IV Masonry - mid to late 1000s Stages of Chacoan masonry.

Core and veneer construction faced with rectangular stones (generally hard, dark sandstone), set in patterned rows. Mortar joints are thin, with few spalls. Type III alternates bands of large brick-shaped stones with courses of thin stones. Type IV is mostly the thin stones alone.



Type III



Type IV

McElmo - early 1100s A construction style. The plan involves small rooms compactly built around kivas. The masonry is core and veneer, faced with evenly layered rectangular block-like stones. These are generally soft, light yellow sandstone, and the exposed surface is pecked, creating a dimpled texture. Mortar joints are fairly thin, with one or several rows of sandstone spalls.



"McElmo"

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This publication was produced with
funds provided by Southwest Parks
and Monuments Association

SPMA 4/90-7.5M-1st Printing