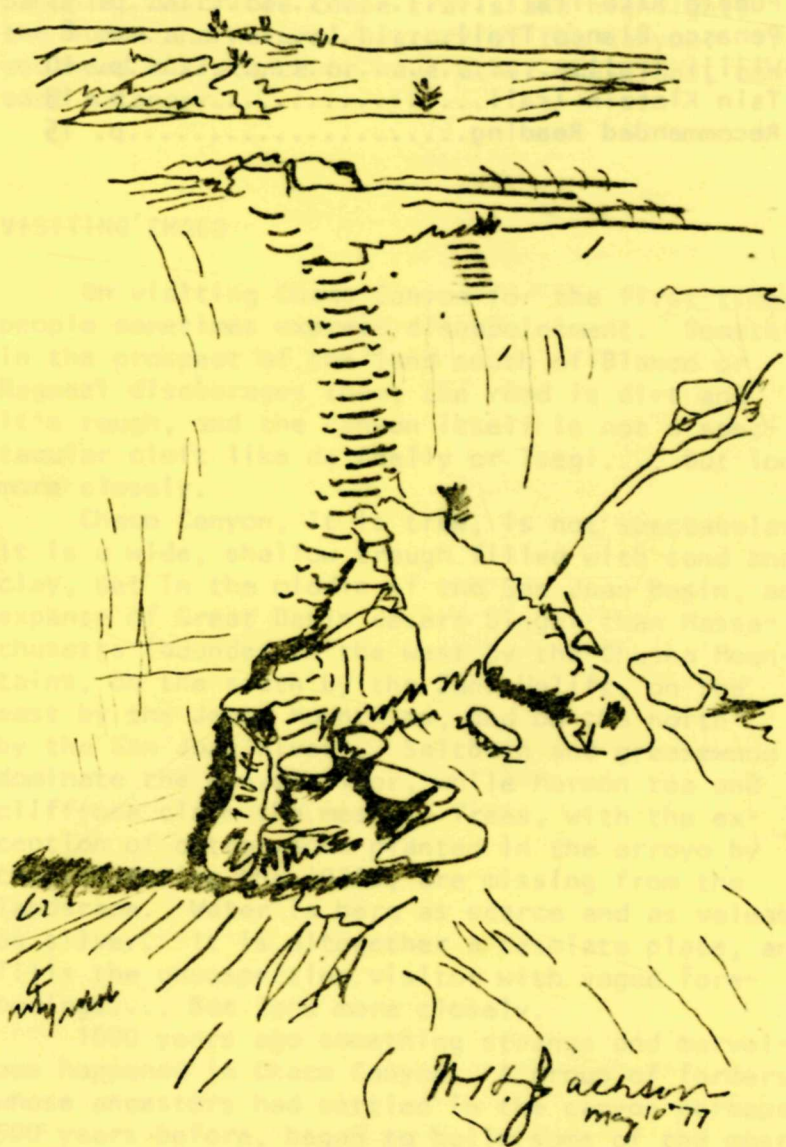


BACKCOUNTRY TRAIL GUIDE



Jackson Stairs
Pueblo Alto Trail

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HIKING GUIDE TO CHACO CANYON

Welcome to Chaco Canyon, the center of an Anasazi civilization. In addition to the large, excavated ruins along the loop road in the park, several large, mostly unexcavated sites are accessible by maintained backcountry trails. This pamphlet describes these trails and highlights the human and natural history of the canyon. If you need assistance or have other questions, contact a ranger.

VISITING CHACO

On visiting Chaco Canyon for the first time, people sometimes express disappointment. Something in the prospect of the land south of Blanco or Nageezi discourages them, the road is dirt and it's rough, and the canyon itself is not a spectacular cleft like de Chelly or Tsegi.... But look more closely.

Chaco Canyon, it is true, is not spectacular. It is a wide, shallow trough filled with sand and clay, set in the middle of the San Juan Basin, an expanse of Great Basin desert bigger than Massachusetts (bounded on the west by the Chuska Mountains, on the south by the Zuni Uplift, on the east by the Jemez Mountains, and on the north by the San Juan River). Saltbush and greasewood dominate the canyon floor, while Mormon tea and cliffrose claim the mesas. Trees, with the exception of cottonwoods planted in the arroyo by the CCC during the 1930s, are missing from the landscape. Water is here as scarce and as valuable as silver. It is altogether a desolate place, and fills the unsuspecting visitor with vague forebodings.... But look more closely.

1000 years ago something strange and marvelous happened in Chaco Canyon. A group of farmers, whose ancestors had settled in the canyon perhaps 500 years before, began to build some of the most impressive public architecture north of Mexico. They developed a regional political system that

encompassed, not just the canyon, but the entire San Juan Basin, and included some seventy-five large Chacoan sites in the surrounding area. Pre-historic roads radiating from the canyon tied the system together. The people marked the movement of the sun and the seasons. They planted their crops and prayed for rain. They fashioned turquoise jewelry and made finely painted pottery. They traded for macaws and ornamental copper bells from Mexico and other exotic items. They pecked cryptic designs onto the cliff walls.... All the while continuing to build.

Then, perhaps, their prayers failed. The earth turned against them. And, finally, they left, leaving behind only clues as to why they were here and where they went.

Today, Chaco is a place of mystery and silence, brooded over by the spirits of the Anasazi. It is a place that tantalizes the careful observer, and rewards him. Yes, it is a shallow, desolate canyon in the middle of nowhere.... But look more closely.

ABOUT THE TRAILS

The trails in Chaco Canyon are marked by piles of rocks called cairns. If you lose a trail, simply return to the last cairn and look around carefully for the next one. Wherever possible, walk on slickrock to avoid damaging the fragile plant cover. Tennis shoes are adequate for the trails, but lightweight hiking boots are better.

SUMMER HIKING

Ancient pueblo walls shimmering in the heat, mourning doves plaintively cooing, canyon walls bleaching in the midday sun ... Summer in Chaco Canyon is a time of stillness and heat, but hiking, even in the summer, can be enjoyable, IF YOU ARE WELL PREPARED. Don't underestimate the sun.

Although the temperature in the canyon seldom reaches 100°F, here at 6200' the sun is intense, and most afternoons are clear and hot. If you have sensitive skin, wear an effective sun screen and a hat. Furthermore, in this dry climate rapid evaporation of sweat cools the body even as the body is being seriously dehydrated. Don't risk heat exhaustion. If you are hiking a lot, eat salty foods and carry plenty of water (1 qt. of water/person/2 hours of walking is a reasonable amount.).

RULES

1. A free backcountry permit is required for all travel away from the roads.
2. Stay off ruin walls, even stabilized ones.
3. DO NOT COLLECT ARTIFACTS. Chaco Culture National Historical Park is a preserve. You may examine artifacts in place, but you must leave them where you find them. Archeological research is accurate only when artifacts have not been disturbed.
4. Camping is not allowed in the backcountry.
5. Wood gathering and open fires are not allowed in the park.
6. Pets are allowed on the backcountry trails, but they must be on a leash at all times.
7. If you smoke, please pocket your butts.

THE TRAILS

PUEBLO ALTO TRAIL ("High Village" in Spanish)

- Trailhead: Behind Kin Kletso ("Yellow House" in Navajo)
Distance: Straight to ruins--2.6 mi. (4.3 km.) round trip
Alto Mesa Loop--4.8 mi. (7.7 km.) round trip
Elevation gain: 350'
Time: 3-4 hours for the loop

Behind Kin Kletso, pick up the trail, which snakes up the talus (rubble slope) to a crack in the cliff. Follow this crack to the top. (About halfway up the crack look on the right for troughs in the sandstone where the Anasazi ground corn and grooves on the wall where they sharpened their bone tools. Even on the hottest summer day this crack is cool and breezy--You can understand why the Anasazi chose to work here.) The trail follows east along the bluff for $\frac{1}{2}$ mile to the beginning of the loop.

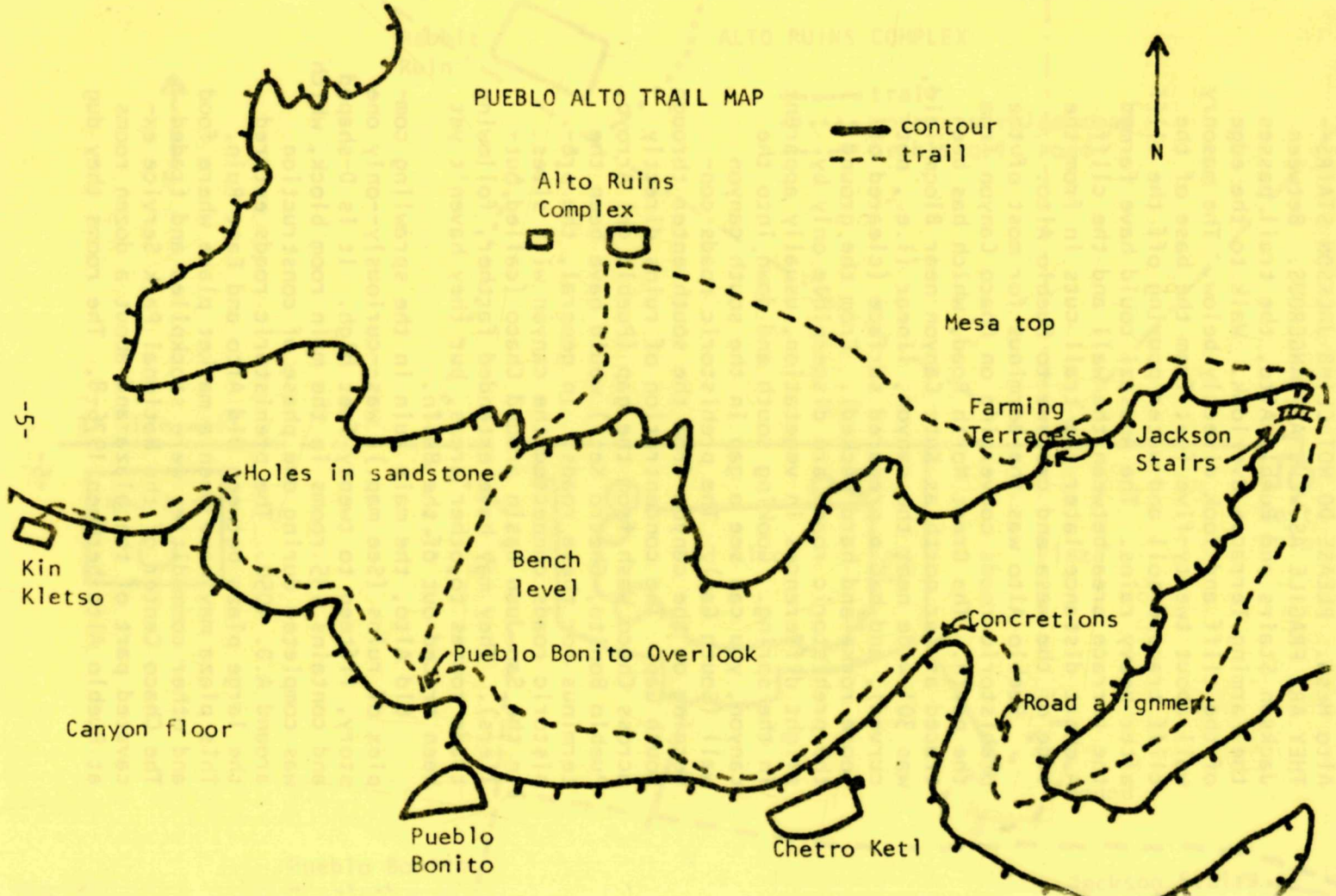
About 200 yards from the top of the crack the trail crosses a shallow drainage. In the sandstone on either side of this drainage are man-made holes about 4" deep and 10" in diameter. Presumably the Anasazi carved these holes out of the sandstone. We don't know why. One possibility is that the holes served as anchoring points for a small check dam across the drainage. Even when the Anasazi lived here, Chaco was a desert, and water was scarce. Prehistoric water control structures like check dams and irrigation canals and head-gates are common in the canyon.

At the beginning of the loop a sign directs you a short distance south to the Pueblo Bonito Overlook, or 0.6 mi. directly up to Pueblo Alto, or 3.5 mi. to Pueblo Alto via Jackson Stairs (See map.). On the loop you first pass above Chetro Ketl (no known translation). On the stretch of trail around the rincon (side canyon) behind Chetro Ketl, look for iron concretions in the sandstone. These concretions resemble iron pipes embedded in the sandstone. They formed when iron precipitated out of sea water into worm burrows in the sandy bottom of a shallow Cretaceous sea, 75-80 million years ago. The map also identifies what some archeologists believe is a prehistoric road alignment along this same stretch of trail. Look for a place where all of the loose rocks have been cleared to one side of the slickrock bench.

The trail then cuts up to the mesa top and eventually skirts around the top of Jackson Stairs, the most impressive Anasazi staircase in the canyon. The Anasazi chipped wide steps up a sheer cliff to provide access from the bench level to

PUEBLO ALTO TRAIL MAP

— contour
- - - trail



Alto Ruins
Complex

Mesa top

Farming
Terraces

Jackson
Stairs

Holes in sandstone

-5-
Kin
Kletso

Bench
level

Pueblo Bonito Overlook

Concretions

Road alignment

Canyon floor

Pueblo
Bonito

Chetro Ketl

Alto Mesa. PLEASE DO NOT CLIMB JACKSON STAIRS-- THEY ARE FRAGILE AS WELL AS DANGEROUS. Between Jackson Stairs and Pueblo Alto, the trail passes the Farming Terraces Overlook. Walk to the edge of the cliff and look directly below. The masonry wall about twenty-five feet from the base of the cliff trapped soil and water pouring off the cliff after heavy rains. The Anasazi could have farmed the terrace area between the wall and the cliff. A short distance later the trail cuts in from the edge of the mesa and crosses to Pueblo Alto.

Pueblo Alto was the terminus for most of the prehistoric roads converging on Chaco Canyon from the north. The Great North Road, which has been traced as far north as Kutz Canyon near Bloomfield, was 30' wide near the canyon, linear (i.e., not curved), and had a prepared surface (cleared of loose rocks and hard packed). From the ground the prehistoric roads are discernible only by slight differences in vegetation, usually apparent in the spring. Looking south and down into the canyon, you can see a gap in the south canyon wall (South Gap). The prehistoric roads converging on the canyon from the south enter through South Gap. The concentration of ruins directly across Chaco Wash from the gap (Pueblo del Arroyo, Pueblo Bonito, Chetro Ketl) would have been the terminus for these roads. In general, the prehistoric roads connected the canyon with sites in the San Juan Basin around Chaco (called outliers). They may have extended farther, following trade routes to other areas, but they haven't yet been traced out of the Basin.

Old Alto, the main ruin in the sprawling complex of ruins (See map.), was--curiously--only one story, fifteen to twenty feet high. It is D-shaped and contains 135 rooms in the main room block, which was completed during one phase of construction around A.D. 1050. The prehistoric roads entered the large plaza between Old Alto and East Ruin. This plaza may have been a market place where food and other commodities were stockpiled and traded. The Chaco Center of the National Park Service excavated part of the plaza and about a dozen rooms at Pueblo Alto between 1976-8. The rooms they dug



Rabbit
Ruin



ALTO RUINS COMPLEX

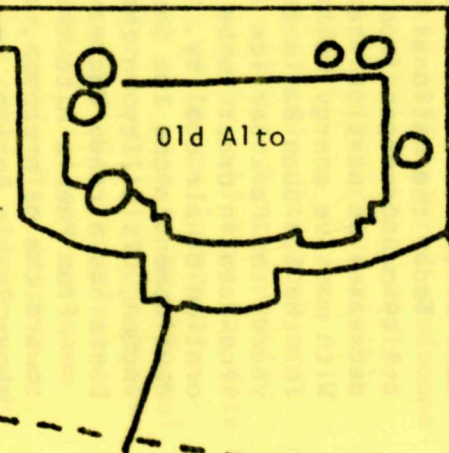
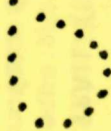
- trail
- modern service road
- .-.- prehistoric road

-7-

3' wide wall



New Alto



Old Alto

Plaza



East
Ruin



Mound

Pueblo Bonito
Overlook →

Jackson Stairs

45

were empty, raising more questions about this strange site.

While at Alto you might ponder where the Anasazi obtained their water. We have to assume that there were enough reliable springs in the canyon to supply drinking water for the people living here. Even if the arroyo were dry most of the time, they might have been able to dig down to the water table for utility water (for washing, mixing mortar, etc.). And, as you have seen, the Anasazi trapped and regulated pour-off to irrigate their crops. Even then, though, the mesa top would have been a dry place. If people were living at Pueblo Alto, they were hauling up most of the water they needed.

Today the National Park Service conducts visibility measurements from Pueblo Alto. Visibility decreases as particulate air pollution increases. With massive energy related development planned for the San Juan Basin during the next twenty five years, the Park Service is today obtaining baseline data in order to be able to measure deterioration of air quality. As a result of industrial development along the San Juan River around Farmington, visibility in the northern part of the Basin has already decreased dramatically.

From Pueblo Alto the trail heads directly back toward the main canyon, completing the loop just above Pueblo Bonito.

PENASCO BLANCO TRAIL ("White Rock Point" in Spanish)

Trailhead: Casa Chiquita ("Tiny House" in Spanish)

Distance: 4.4 mi. (7.0 km.) round trip

Elevation gain: 150'

Time: 3-4 hours round trip

The trail follows an old wagon road down canyon from Casa Chiquita. Starting about $\frac{1}{4}$ mile down the trail, look on the north (right) side of the canyon for petroglyphs, some Anasazi, some Navajo, some Anglo (some of the last--unfortunately--recent). Please do not touch the petroglyphs; touching them dislodges sand grains and hastens

their disintegration. The Anasazi were prolific rock artists, and Chaco Canyon's walls are covered with their petroglyphs (pecked into the sandstone) and pictographs (painted on the sandstone). About 3/4 mile from the trailhead, high on the north wall, is a very fine, small petroglyph panel pecked into dark desert varnish (rock stain), depicting a human figure, a bighorn sheep, and a quadrate geometric design.

After the trail crosses Chaco Wash and just before it begins climbing the south mesa to Peñasco Blanco, a small trail cuts west along the base of the south cliff. Follow this trail for 1/4 mile to a shallow overhang with some faint petroglyphs on the wall. Look directly overhead. The small pictograph painted in red on the buff-colored sandstone ceiling--a crescent moon, a bright star, and a human hand--probably depicts a supernova visible in Chaco Canyon in A.D. 1054.

We have no way to accurately date rock art; we simply assume that it was done by the people who lived in the pueblos nearby, which we can date accurately. Furthermore, we cannot interpret Anasazi rock art. It does not seem to be a formal written language. In other words, although a certain symbol may have had a definite, consistent meaning (unknown to us today), it does not seem that the symbols could be combined to express a complex thought, the way we combine written words to form sentences.

An example of the difficulty of dating and interpreting rock art is the supernova pictograph. Because the pueblos in the canyon were inhabited in A.D. 1054 and because we know from Chinese records that a supernova (bright star) would have been visible in the sky here in conjunction with a crescent moon in A.D. 1054 (July 5, 1054, to be exact), we conclude that the pictograph was painted then and that it depicts the supernova, but we have no "hard evidence" to support this conclusion. The evidence is all circumstantial. We don't know for certain how old the rock art in Chaco Canyon is, what it means, or even who did it.

After you have puzzled over the supernova pictograph, retrace your steps to the main trail

and start up the mesa. Peñasco Blanco is located on a promontory with a commanding view of Chaco Canyon, the Escavada Wash, and the Chaco River (which is what we call Chaco Wash after its confluence with the Escavada). The large depression beyond the grazing fence west of the pueblo is an unexcavated great kiva.

Peñasco Blanco is an oval-shaped pueblo containing 160 ground floor rooms. Sections of it were four stories high. Construction of Peñasco Blanco, like construction of Pueblo Bonito and Una Vida, started in the early 900s and continued for at least 200 years. For some reason, though, Peñasco Blanco does not exhibit the D-shaped floor plan that seems to have been favored by the Anasazi here. Like Pueblo Bonito, Peñasco Blanco does show the evolution of masonry styles in the canyon, from the early simple slab walls, through the chinked and banded compound walls, to the ultimate fine veneer, rubble core walls. Whether rubble core masonry was a local innovation or an imported idea--presumably from Mesoamerica--is a much disputed question.

At the head of one of the rincons across the main canyon from Peñasco Blanco is Atlatl Cave, an archaic site, the oldest yet dated in the canyon (3000 B.C.). Chaco Canyon was probably used continuously during Archaic times by semi-nomadic hunters and gatherers. We call these people the Anasazi after they settled in the canyon and began cultivating corn and other crops. For a discussion of the Anasazi development in the canyon, see the Wijiji Trail section.

WIJIFI TRAIL (Possibly from the Navajo word for greasewood--"tuwizhizhin")

Trailhead: Campground

Distance: 4.0 mi. (6.4 km.) round trip

Elevation gain: Insignificant

Time: 2-3 hours round trip

The trail follows the service road across from the campground dump station. 100 yards down the road, behind the main bathrooms in the

campground, take the right fork at the intersection. The elevation gain is insignificant, but in the summer the walk up canyon to Wijiji is hot and dusty, with very little shade. Early evening is the best time to do it.

The road heads up canyon beside Chaco Wash, with Wijiji Mesa on the left and Chacra Mesa on the right. Chacra Mesa is the highest elevation in the park and today supports our only substantial growth of pinyon and juniper. Some archeologists speculate that the Anasazi denuded the other mesas, cutting down the trees for firewood and construction.

Wijiji is a compact pueblo on the north side of the canyon containing about 100 ground floor rooms. It has uniformly fine rubble core masonry, on the basis of which we can surmise that it was built relatively late in the canyon's prehistory (early 12th c.). Its uniform masonry and precise floor plan suggest that it was conceived and built as a unit. Its trash mound has not been located. Behind Wijiji, up canyon and down canyon, the cliff walls are decorated with petroglyphs and pictographs. The earthen dikes around the ruin are modern erosion control structures to divert runoff away from the site. Erosion control to protect the ruins is one of the Park Service's primary responsibilities as caretaker of the canyon.

About a mile up canyon from Wijiji on the bench level of Chacra Mesa is Shabikeshchee, a pithouse village dating from the mid-6th c. It was excavated in 1927 by Frank H. H. Roberts, Jr. and never stabilized or backfilled. All that is visible now are shallow depressions in the ground. The Park Service has closed the site to prevent further damage. Chaco Canyon, like the entire Four Corners area, was inhabited continuously from the time of Christ to A.D. 1200 by a farming population. We call the early settlers in the area the Basketmakers, because they wove fine baskets from yucca leaves before they began making pottery. Shabikeshchee is a late Basketmaker site.

The Basketmakers lived in semi-subterranean, circular dwellings called pithouses. In back of

the pithouses were stick and brush ramadas, which later evolved into wattle and daub storage and work rooms. Individual pithouses gradually coalesced into villages like Shabikeshchee.

Around A.D. 700 we find the beginnings of the prehistoric pueblo culture in the canyon. In late Basketmaker times the people had begun making pottery. They now refined their craft, producing corrugated culinary ware and fine, painted ware. The pithouse villages solidified into puebloan structures. The people moved their residences from the circular rooms to the above-ground rectangular rooms, and the circular rooms became primarily ceremonial (called kivas). Stone masonry bonded with clay mortar replaced wattle and daub, and gradually became highly refined.

Around A.D. 900 we find the first construction on the major pueblos, or great houses, in the canyon. Pueblo Bonito, Peñasco Blanco, and Una Vida all have sections that date from A.D. 900. These early pueblos were not extraordinary. The number of rooms was relatively small, the walls simple, the masonry crude. Around A.D. 1000, however, both the quality and scale of construction increased. Within seventy-five years the original pueblos were expanded to their present dimensions, and Chetro Ketl, Hungo Pavi, and Pueblo Alto were built. These were followed a few years later by Casa Chiquita, Kin Kletso, and Pueblo del Arroyo. The masonry and floor plan of these last great houses resemble those of sites in the Mesa Verde area to the north. By A.D. 1100 the canyon's population may have reached 5000, and three distinct architectural styles (as exemplified by Pueblo Bonito, Kin Kletso, and the smaller pueblo sites near Casa Rinconada) were in use. By the early 1200s, due at least in part to a deteriorating environment, the canyon had been abandoned by most of the natives. Some emigrants from the Mesa Verde area, who reoccupied the canyon briefly in the early 1300s, were the last Anasazi to live in Chaco.

On a promontory near Wijiji are a number of small, one room ruins with simple walls. We call these the Refugee Sites; they date from the early

1700s. In 1692, when the Spanish reconquered New Mexico after the Pueblo Revolt of 1680, many Puebloans, fearing reprisals, fled the Rio Grande and took refuge among the Navajo then living in Chaco Canyon. During this period the Navajo began to practice Puebloan crafts like weaving and pottery making and to assimilate other Puebloan cultural traits that they have retained to this day.

TSIN KLETZIN TRAIL (Possibly from the Navajo word for an unidentified black bush that grows--or grew--in a rincon near the ruin)

Trailhead: Casa Rinconada ("House Without Corners" in Spanish)

Distance: 3.0 mi. (5.0 km.) round trip

Elevation gain: 500'

Time: 2-3 hours round trip

During the summer this is a hot, sandy walk, with little shade. Near Casa Rinconada, the great kiva, are three small pueblo sites. The trail leaves from behind the one closest to Casa Rinconada and climbs steadily up South Mesa to Tsin Kletzin. Tsin Kletzin is a D-shaped pueblo containing about 75 ground floor rooms, including the remains of two "tower kivas." On the north side of the main room block (the flat side of the "D") is an unusual rectangular plaza. The site was stabilized for the first time in 1981. Please do not walk on top of the mound. Any human activity hastens its deterioration.

The view from the bluffs south and southwest of the ruin are outstanding. From the ruin, look across the main canyon at Pueblo Alto on Alto Mesa. Tsin Kletzin is also line of sight with a three story "tower kiva" at Kin Klizhin ("Black House" in Navajo), an outlier seven miles southwest of here. Pueblo Alto is also line of sight with Casa Rinconada, which is in "downtown" Chaco Canyon. Peñasco Blanco, at the mouth of the canyon, is line of sight with both Pueblo Bonito and Pueblo Alto. In addition, many small, specialized sites are located on prominent vantage points in and

around the canyon. It therefore seems likely that these sites were deliberately positioned within line of sight of each other and that some sort of signalling system existed for communication between them. For example, if someone were approaching the canyon via Kin Klizhin, the people in the canyon could be notified immediately of his approach. Whether for defense or some other reason (say, to announce the arrival of traders to the canyon) is an unanswered question.

NOTES/QUESTIONS

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Front cover: Sketch by William Henry Jackson,
May 10, 1877. Original given to the Chaco
Canyon museum by Dr. Neil M. Judd, August 8, 1964.
Text and maps by Rob Eaton, 1982.
Printed by the National Park Service, Chaco Culture
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