

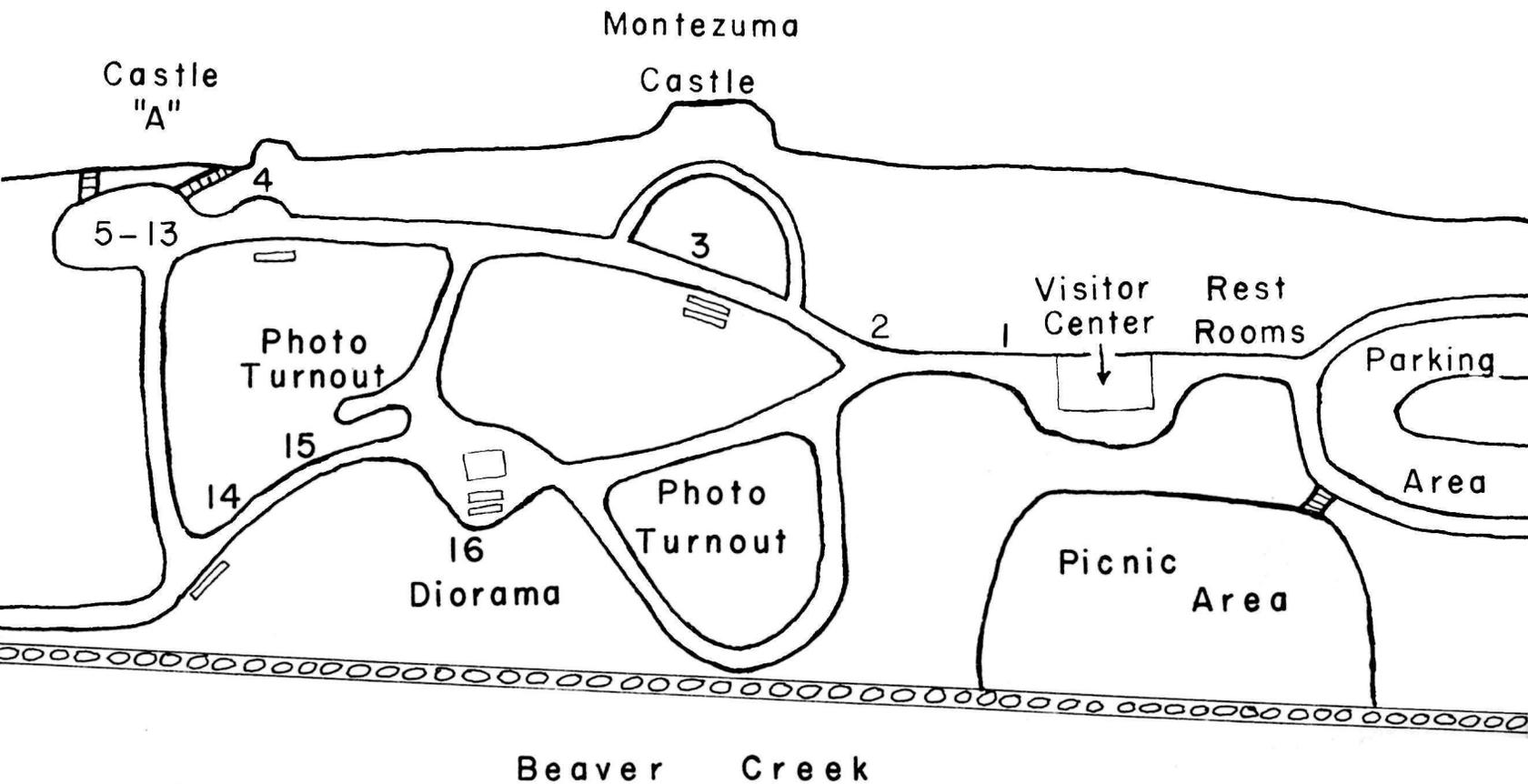
# Sycamore Trail



MONTEZUMA CASTLE NATIONAL MONUMENT  
ARIZONA

25c

IF YOU TAKE THIS BOOKLET HOME



Beaver Creek

# Sycamore Trail

## **HOW TO USE THIS BOOKLET**

This is your guide for use on the trail. Numbered markers along the route refer to numbered paragraphs in this booklet. If you wish to keep a copy *you may purchase one for 25 cents*, or you may use it free, returning it to the box at the end of the trail.

## **FOR YOUR COMFORT AND SAFETY, AND THE PRESERVATION OF THE MONUMENT, PLEASE:**

**Stay on the paved trail.** Climbing on these chalky limestone cliffs is dangerous. During warm months rattlesnakes are present.

**Use the trash containers and cigarette receptacles.**

**Leave all natural features and wildlife undisturbed.**

Removing or disturbing anything in the Monument is prohibited.

**Be sure cigarettes are out.**

## **WHAT IS THERE TO SEE?**

Montezuma Castle is one of the best preserved cliff ruins in the Southwest. Built by Pueblo Indians between A. D. 1100 and 1400, it has been abandoned for 600 years.

## **WHY IS IT CALLED MONTEZUMA CASTLE?**

Pioneers of the Verde Valley and soldiers at old Fort Verde are given credit for naming the dwelling. Perhaps half in fun and partly in tribute to its castle-like appearance, they called it *Montezuma's Castle*. The Aztec emperor, Montezuma II, lived in the Valley of Mexico and was never in the United States.

## **THE TRAIL**

### **1. What was it like when the Indians lived here?**

As you walk along this trail, perhaps one used by the Indians over 600 years ago, try to imagine the area as it looked to them.

To your left, and across the creek, were small farming plots where the men tended fields of corn, beans, squash, and cotton. In the distance the cries of playing children might be heard. In winter weather you might glimpse a man or woman gathering firewood or collecting material for basket weaving.

**2. The "Castle."** As you look up, the windows are empty, but at one time women watched anxiously through them, awaiting the return of their men from the fields, and hoping the children, in carefree play, would not fall from the ladders.

A hundred feet above the valley floor the Indians fitted this 19-room apartment house into a cliff recess, and so securely that it has lasted over 600 years. The skill and labor required, using only stone and wooden tools, was enormous. Rooms had to be supported on narrow rock ledges or the ceilings of lower rooms. Timber, building stones, and mud mortar had to be carried up ladders or raised with ropes.

**3. How much of the dwelling is original?** About 90% of what you see is original. The only recent additions are the columns below the lowest floor, built by the National Park Service to strengthen the crumbling ledge which supports the lower portion of the dwelling.

All visible walls are original, although a few holes have been patched in the last 40 years. The upper section of the building, protected by the overhanging cliff, is still covered with the original mud plaster used by the inhabitants. The lower, reddish section is plaster that was replaced by the National Park Service to protect original walls and mortar from further erosion by wind and rain.

The timbers you see projecting from the outer wall are 10- to 12-inch sycamore logs cut with stone axes. They support ceilings of smaller sycamore limbs, willow twigs, reeds, and grass and mud. Roofs of the lower rooms served as floors for the upper rooms.

---

**Right:** Montezuma Castle as it appeared in 1896 before stabilization.





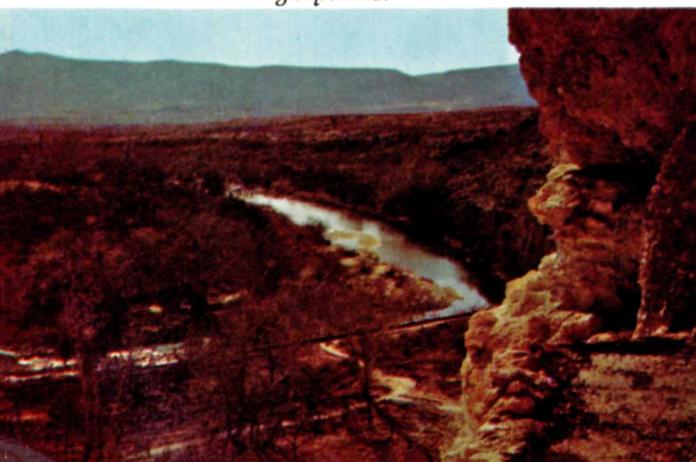
### INSIDE MONTEZUMA CASTLE

**Upper left:** *Detail of ceiling.*

**Middle left:** *Detail of plaster wall showing fingerprints.*

**Upper right:** *Detail of roof support.*

**Middle right:** *Doorway. "T"-door and original smoke-blackened plaster.*



**Lower left:**  
*View of Beaver Creek and Black Hills to the West, from "Castle" balcony.*

## **WHY THE "CASTLE" IS NO LONGER OPEN TO VISITORS**

Weathering of the supporting limestone ledge, and the great age of the ceiling timbers, make the dwelling unsafe for present heavy traffic. The Indians built Montezuma Castle to withstand the use of 40 or 50 people. They certainly did not anticipate the 200,000 people who viewed their fragile home in 1961! For the safety of visitors, and for preservation of the dwelling, the ladders were removed in the fall of 1951. Pictures on page 4 show some details of the interior.

***If you wish to end your trip here, take the trail to the left, where you will see the cut-away model of the "Castle," and return to the visitor center from there. The trail ahead leads you to another ruin, Castle "A," where you may climb into some of the caves.***

**4. Was this cave used by the Indians?** This cave was probably part of Castle "A," the cliff pueblo which you are now approaching. We do not know whether it was used for living, storage, or as a burial chamber. The question cannot be answered, as the cave was disturbed by vandals, leaving no clues to aid archeologists. Thoughtless individuals often destroy important archeological evidence. Such vandalism is prohibited by state and federal laws.

**5. Castle "A."** Extending along the base of the cliff in front of you was once a 5-story pueblo. Only the caves which served as back rooms of the structure, and lower walls remain. There were about 45 rooms with perhaps as many as 100 people living in them.

This pueblo was abandoned about the same time as Montezuma Castle. Near the end of its occupation, a fire started in the building and burned the wooden ceilings. The structure was so weakened by the fire that it eventually peeled away from the cliff, collapsing into a pile of rubble.

The mud nests, 150 feet above you and near the top of the cliffs, were made by cliff swallows. These birds are common in this area from April through August.



*Section of Castle "A," showing access ladders*

**6. What was life like in these rooms?** We can imagine that it was dark, cramped, and at times uncomfortable. Most of the "living" was probably done outside on rooftops or in the wooded area between the village and Beaver Creek. This would have included preparing and eating meals, grinding corn, preparing food for storage, making baskets and tools, and countless other chores. Rooms were probably used only for sleeping and working during cold weather.

A stone-lined pit near the center of the room served as a fireplace for cooking and heating. With no chimney to remove smoke, these people probably built inside fires only when absolutely necessary.

They had little leisure time to spend indoors anyway, as there were crops to be grown, building materials to be cut and gathered, and cotton and yucca fibers to be spun and

woven for clothing. Before they could feed and clothe themselves they had to make digging sticks and stone hoes for planting, weaving equipment, pottery bowls and jars, and bows and arrows for hunting deer, beaver, rabbits, squirrels, and birds.

**7. Was the building occupied at the time it burned?**

The remains of a possible ancient tragedy tell us that a few people might still have been living here when the fire occurred. The bones of an old man were found lying between layers of burned roofing material. Perhaps he had fallen asleep on the second floor and was smothered by smoke before anyone could reach him.

**8. Walled terrace.** Here was an area which may have been used as a walled terrace by families living nearby.

The rooms at the top of the first ladder were roofed. You can still see the holes in the cliff into which the roof beams, or *vigas*, fitted. Some holes still contain the mud which was used to anchor the timbers.

**9. Charred roof beams and upper cave.** The charred roof beams above your head show the size of timbers used for this room. They also show that the fire which caused the building to fall away from the cliff reached this third-story level.

When you go through the doorway at the right, you will notice one advantage of cave living. Caves are cooler in summer, and easier to heat in winter. Ventilation was bad, but smokeholes helped.

**10. Walled cave.** The small cave at the back of this room was walled, probably for storage of corn, beans, and dried fruit. Note how cool it is.

**WATCH YOUR HEAD**

**SUGGESTED READING**

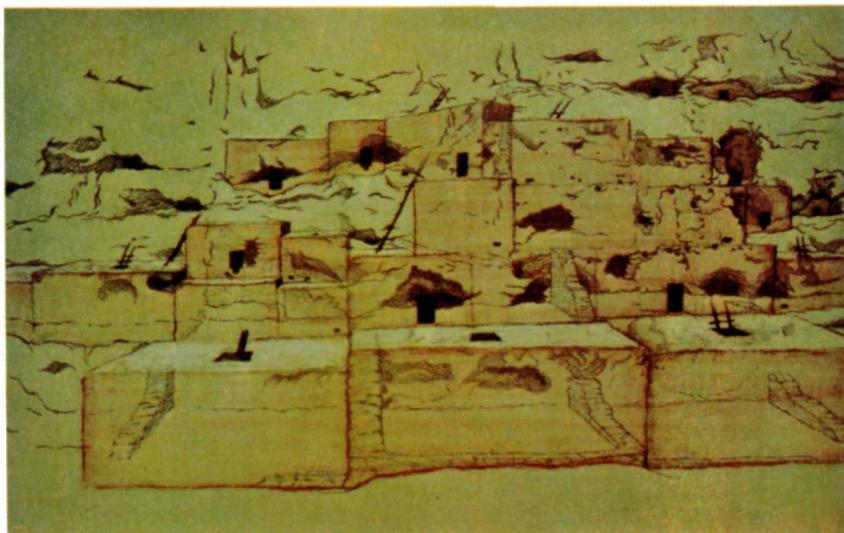
If you are interested in more detailed information on the excavation of Castle "A," may we suggest: *Montezuma Castle Archeology, Part I: Excavations, and Montezuma*

*Castle Archeology, Part II: Textiles.* The former is out of print, but available in libraries; the latter is on sale at the visitor center.

**11. Burials.** Two babies wrapped in woven matting were buried beneath the floor at the west end of this room, in one grave. The grave pit was neatly covered with a limestone slab set into the floor. Perhaps they were buried here because their mother(s) believed, as the modern Hopi Indians of Northern Arizona do, that an infant should be buried close to its family.

The eastern cave at the back of the room was also used for burials, but contained an odd assortment. There were: bones of two adult men, one woman, and one child, all without a single skull. We do not know why the heads were missing, although the jaw bones were present. These dead might originally have been buried where space was later needed, and when moved here the skulls were taken to another burial place.

*If we could have been here 600 years ago, Castle "A" would have looked something like this.*





*Turquoise and pink shell ornaments taken from the woman's grave.*

**12. Cemetery.** Under the ledge to the west of this marker, 21 burials were found in 9 slab-lined graves. Some were undisturbed graves of individuals who were buried with their pottery and jewelry; some were reburials, like those in the cave at the last marker.

One woman, between 30 and 40 years of age, was buried here with what must have been her prize possessions—turquoise ear pendants, and a breast ornament of pink shell carved in the shape of a bird, and decorated with over 80 tiny pieces of cut turquoise. The breast ornament is now on display at the visitor center in the exhibit case labeled "Handicraft."

**The trail ahead leads to Beaver Creek and then returns to the cut-away model of Montezuma Castle and the visitor center.**

**13. Beaver Creek.** This stream was named in the early days when beavers were common along its banks; now

they are rarely seen. The creek is spring fed along its course and empties into the Verde River 3 miles downstream. During most of the year the stream is a small trickle with a series of dry areas and standing pools of water. At times, when the snow melts suddenly, or when there is a heavy rainstorm at its head along the Mogollon (MOE-GEE-OWN) Rim to the east, it goes on the rampage. The retaining wall in front of you was built in the 1930's to keep these flood waters out of the lower trail and ruins.

Native fishes occurring here are all of the minnow and sucker families. Carp, green sunfish, bullheads, and occasionally smallmouth bass, are introduced.

**14. View of the cliffs and dwellings as they may have looked 600 years ago.** If you were able to go back this far in time and stand at this spot, the cliffs and dwellings would have looked somewhat as in this sketch. Perhaps

*View down Beaver Creek to Montezuma Castle.*



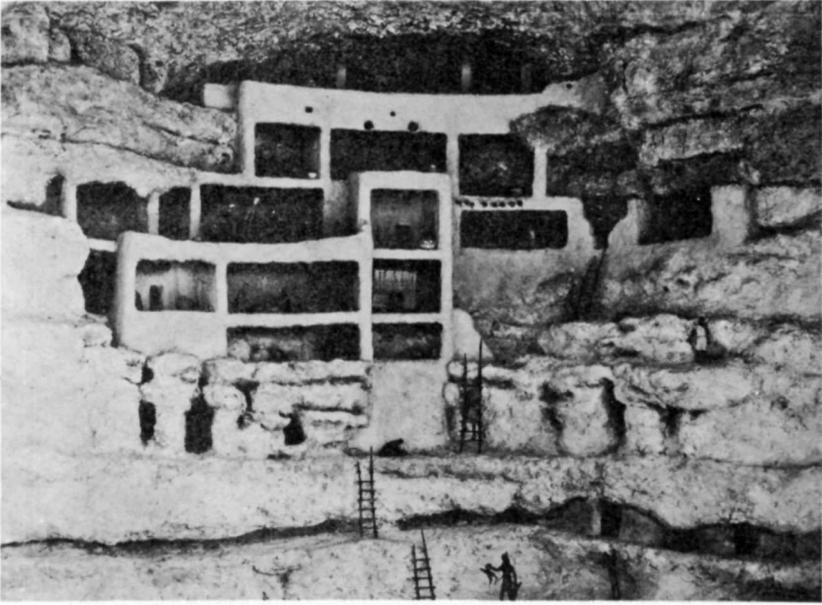


*Panoramic view: Part of Castle "A" at left, Montezuma Castle at right, and base of small cliff ruin at lower right center.*

200 to 250 people lived within this half mile stretch of the cliff.

**15. Geology.** The cliff in front of you is composed of limestone laid down about a million years ago when a lava flow from the Black Hills, a mountain range to the west, dammed the Verde River. This formed an inland lake at times as large as 40 miles long and 15 miles wide. The Verde River and its tributaries carried lime in solution from the plateau country and redeposited it on the lake bottom.

When the lake filled, water flowed over the lava dam, wearing a permanent channel that drained the lake and left the valley dry. Tributaries of the Verde River, including Beaver Creek, then began cutting into the limestone to form the present canyons and cliffs. Pockets of clay and silt, being softer than the limestone, eroded faster, leaving the irregular cavities and caves. In one such cave Indians built the homes we now call Montezuma Castle.



*Cut-away model of Montezuma Castle*

**16. Cut-away model.** This model will give you an idea of how the inside of the "Castle" looked when it was occupied. The figurines may help you imagine some of the activities of the people who built and lived in it.

### **SOMETHING TO THINK ABOUT**

Montezuma Castle was abandoned about 40 years before Columbus "discovered" America, and 90 years before Coronado came through Arizona and New Mexico in search of the "Seven Cities of Cibola."

The following will give you some information on the 2,000-year archeological history of the Indians of this region.

### **THE INDIANS**

The Indians who built these ruins are called the Sinagua—the same who lived at Walnut Canyon, Wupatki, and Tuzigoot National Monuments. Their own name, or what they called themselves, has been lost; "Sinagua" (Spanish for "without water") is a name given them by archeologists.

The Sinagua provide only one chapter in the long story of Indians in the Verde Valley, a story which had its beginnings nearly 4000 years ago.

Very little is known of the earliest Indians of the valley. About 2000 B. C. bands of people roamed the valley and the high country bordering it. The remains of their abandoned campsites tell us they were nomadic hunters and gatherers of wild vegetable foods. Unlike the later Indians, they didn't farm, make pottery, or build permanent homes.

The next chapter began about A. D. 700 when the first permanent settlers, called the Hohokam by archeologists, moved into the valley from the deserts to the south. The Hohokam were farmers. They used the waters of Beaver Creek to irrigate their fields of corn, beans, squash, and cotton. On nearby terraces they built crude homes of poles, sticks, brush, and mud. Their irrigation ditches and the remains of one their houses may be seen at Montezuma Well, a detached section of Montezuma Castle National Monument.

About 800 years ago, the Hohokam were joined by a group from the north. The newcomers were the Sinagua, the people who built Montezuma Castle.

The Sinagua were like the Hohokam in many ways. They farmed, although until moving into the valley they had depended on rain to raise their crops. The two people lived side by side, sharing the farmland for about 150 years.

Toward the end of the 1200's, a great drought caused important changes here in the Verde Valley. A quarter century of rainless summers and crop failures forced many Indian farmers to leave their homes to find land with a permanent water supply. Many people from the plateau land to the north of us sought homes in this area. As more refugees came into the valley, farmland probably became scarce. Competition for this land may have led to quarrels and fighting.

During this time the small, scattered settlements were abandoned. The people moved together into towns, or pueblos, of stone and mud. These new settlements were

built on the tops of steep-sided hills, or fitted into small caves in the cliffs, possibly for reasons of defense.

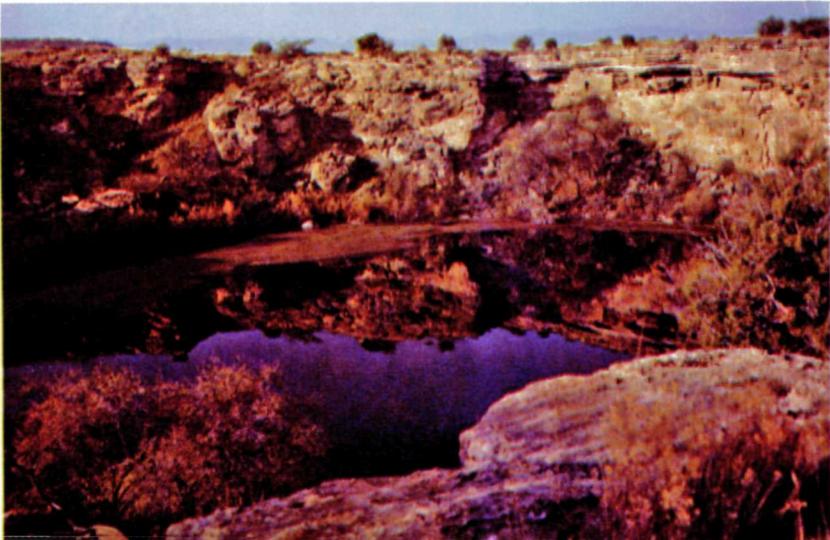
Shortly after A. D. 1400 the last of the Sinaguans began leaving their Verde Valley homes. This exodus was gradual, taking many years. We can only guess at the reasons: overpopulation and resultant scarcity of game and farmland; improving conditions in the north; other hostile Indians here; all may have been factors.

When the Sinagua left the valley, they probably scattered to all points of the compass. There is no one group of Indians today whom we can regard as their descendants. Some may have returned north and merged with ancestors of modern Hopis. The Hopi have legends that some of their people came from the south. They are excellent weavers of cotton, a trait they could have learned from the Sinagua. Perhaps a few remained in the valley and joined the Yavapai, who still live nearby. Whatever happened to them, only the Yavapai were found living in the valley when the first Europeans passed through in 1583.

If you are interested in learning more of Montezuma Castle, we suggest the *Archeological Handbook*, on sale at the visitor center, or you may query the ranger.

If time permits, a visit to Montezuma Well would be of interest. The "Well" is 7 miles from here. Ask at the desk for additional information.

### *Montezuma Well*



## **SOME OF THE PERENNIAL PLANTS ALONG THE TRAIL**

Most of the plants named below are used by modern Indians, and, undoubtedly, some were utilized by the builders of Montezuma Castle. For more detailed information ask the ranger at the visitor center.

**ASH, VELVET** (*Fraxinus velutina*). Ash trees are mainly restricted to canyons and streamsides in the Southwest. The wood was probably used for canes and crutches.

**BACCHARIS, SEEPWILLOW** (*Baccharis glutinosa*). Known also as "water willow" and "water-wally," the Indians used the straight, uniformly sized stems for ceiling or roof material and for "wattle-and-daub" (brush-and-mud) wall construction.

**CANOTIA** (*Canotia holacantha*). Locally called "false paloverde," it is one of three different plants commonly called "crucifixion-thorn." It has no known Indian use.

**CATCLAW**. There are two kinds growing in the area—catclaw acacia (*Acacia greggii*) and catclaw mimosa (*Mimosa biuncifera*). Indians made meal of the pods, using it as a mash or in a cake. The blooms are an important source of honey for desert bees.

**CONDALIA, SOUTHWEST** (*Condalia lycioides*). The bluish black berries of the "graythorn," as it is sometimes called, are relished by birds, especially the Gambel's quail. Indians treated sore eyes with a decoction of the roots, and it has been used as a substitute for soap.

**CREOSOTE BUSH** (*Larrea divaricata*). Often erroneously referred to as "greasewood," this plant, after a summer rain, gives off a creosotelike odor, hence the name.

Indians used the leaves for an emetic, as a poultice for sores, and, when brewed, as a deodorant and for soothing sore feet. In prehistoric times, lac, a secretion caused by insects, was collected from the plant. Lac was used as a cement in making turquoise mosaic ornaments, and as an item of trade to other Indians.

**DESERTWILLOW** (*Chilopsis linearis*). Not a true willow but related to the cultivated catalpa tree, its strong straight stems were used by Indians for roofing, and the small stems for basketry.

HACKBERRY, NUTLEAF (*Celtis reticulata*). The fruits were gathered for food by the Papagos, and probably by the earlier Indians of Montezuma Castle.

AGARITO (*Berberis trifoliolata*). Also known as "algerita," "desert holly," and "barberry," the fruits were used for food, and it is said that Indians used the roots as a tonic. The Navajos extracted a yellow dye from the bark and roots.

MESQUITE, COMMON (*Prosopis juliflora*, var. *velutina*). Another common name is honey mesquite. Indians depended a great deal on mesquite beans for food, especially when cultivated crops failed, as do today's Pimas during hard times. *Pinole*, a meal ground from the pods, was prepared in the form of cakes. The gum was used to make candy, mend pottery, and as a black dye. The inner bark was utilized in making baskets, and as a source of medicine.

SALTBUSH, FOURWING (*Atriplex canescens*). Commonly known in New Mexico as "chamiso," Indians used the seeds as a source of meal; the leaves and young shoots were used as greens, usually with meat. The ashes are used by the Hopis in making blue corn "paper-bread."

SOAPBERRY, WESTERN (*Sapindus saponaria*, var. *drummondii*). Soapberry fruits are poisonous. In parts of Mexico they are used in making soap, and as an aid in catching fish. No use among American Indians is known.

SYCAMORE, ARIZONA (*Platanus wrightii*). A relative of the European planetree, sycamores grow in several parts of the United States. The wood, when seasoned in a dry place and kept dry, remains strong for centuries. Sycamore logs have supported the roofs in Montezuma Castle for well over 500 years.

WALNUT, ARIZONA (*Juglans major*). The nuts, much smaller than eastern varieties, have the same distinctive flavor. The wood may have been used in construction and for household items. Do not confuse this with the western soapberry, which also grows along the trail.

## **NATIONAL PARKS AND MONUMENTS**

Montezuma Castle National Monument is one of over 250 areas administered for the American people by the National Park Service, a bureau of the United States Department of the Interior. In order to preserve the parks and monuments for the enjoyment of future generations, hunting, grazing, woodcutting and any other activities which would destroy the work of nature and man are prohibited.

### **CONSERVATION – YOU CAN HELP!**

If you are interested in the work of the National Park Service and in the cause of conservation in general, you can give active expression of this interest, and lend support by alining yourself with one of the numerous conservation organizations, which act as spokesmen for those who wish our scenic heritage to be kept unimpaired for the enjoyment of future generations.

Names and addresses of conservation organizations may be obtained from the ranger at the visitor center.

### **OTHER NATIONAL MONUMENTS IN THE VICINITY**

TUZIGOOT .....	Near Clarkdale
WALNUT CANYON .....	Near Flagstaff
WUPATKI .....	Near Flagstaff
CASA GRANDE .....	Near Coolidge
TONTO .....	Near Globe-Miami

This booklet is published in cooperation with the National Park Service  
by the  
**SOUTHWESTERN MONUMENTS ASSOCIATION**

*which is a non-profit distributing organization pledged to aid in the  
preservation and interpretation of Southwestern features  
of outstanding national interest.*

The Association lists for sale many interesting and excellent publications for adults and children and hundreds of color slides on Southwestern subjects.

May we recommend, for example, the following items which give additional information on the Southwest?

- FLOWERS OF THE SOUTHWEST DESERTS.** Dodge and Janish. More than 140 of the most interesting and common desert plants beautifully drawn in 100 plates, with descriptive text. 112 pp., color cover, paper.....\$1.00
- FLOWERS OF THE SOUTHWEST MESAS.** Patraw and Janish. Companion volume to the Desert flowers booklet, but covering the plants of the plateau country of the Southwest. 112 pp., color cover, paper.....\$1.00
- FLOWERS OF THE SOUTHWEST MOUNTAINS.** Arnberger and Janish. Descriptions and illustrations of plants and trees of the southern Rocky Mountains and other Southwestern ranges above 7,000 feet elevation. 112 pp., color cover, paper. ....\$1.00
- 100 DESERT WILDFLOWERS IN NATURAL COLOR.** Dodge. Descriptions and full-color portraits of 100 of the most interesting desert wildflowers. Photographic hints. 64 pp., full-color cover, paper.....\$1.50
- POISONOUS DWELLERS OF THE DESERT.** Dodge. Invaluable handbook for any person living in the desert. Tells the facts about dangerous insects, snakes, etc., giving treatment for bites and stings and dispels myths about harmless creatures mistakenly believed poisonous. 48 pp.....\$ .60
- MAMMALS OF THE SOUTHWEST DESERTS** (formerly Animals of the Southwest Deserts). Olin and Cannon. Handsome illustrations, full descriptions, and life habits of the 42 most interesting and common mammals, members of the strange animal population of the lower desert country of the Southwest below the 4,500-foot elevation. 112 pp., 60 illustrations, color cover, paper. ....\$1.00
- MAMMALS OF SOUTHWEST MOUNTAINS AND MESAS.** Olin and Bierly. Companion volume to Mammals of Southwest Deserts. Fully illustrated in exquisitely done line and scratchboard drawings, and written in Olin's masterfully lucid style. Gives description, ranges, and life habits of the better known Southwestern mammals of the uplands. Color cover, paper.....\$2.00  
Cloth .....\$3.25
- CORONADO ROUTE MAP.** Perceval. Beautiful, 4-color reproduction of Don Perceval's route map of the Coronado Expedition, 1540-42; the first major exploration of the American Southwest by Europeans. Printed on white parchment in a style reminiscent of 16th century cartographers; authentic down to the brands worn by the expedition's horses; and decorated with quarterings of Carlos V, the imperial arms, and Coronado's personal coat of arms. Large, 14" x 25", an unusual framing piece; accompanied by an authoritative text, with legend and keys (2-fold).....\$1.00



Write For Catalog

**SOUTHWESTERN  
MONUMENTS ASSOCIATION**

Box.1562 — Globe, Arizona, 85501



PABSCO—Globe, Arizona