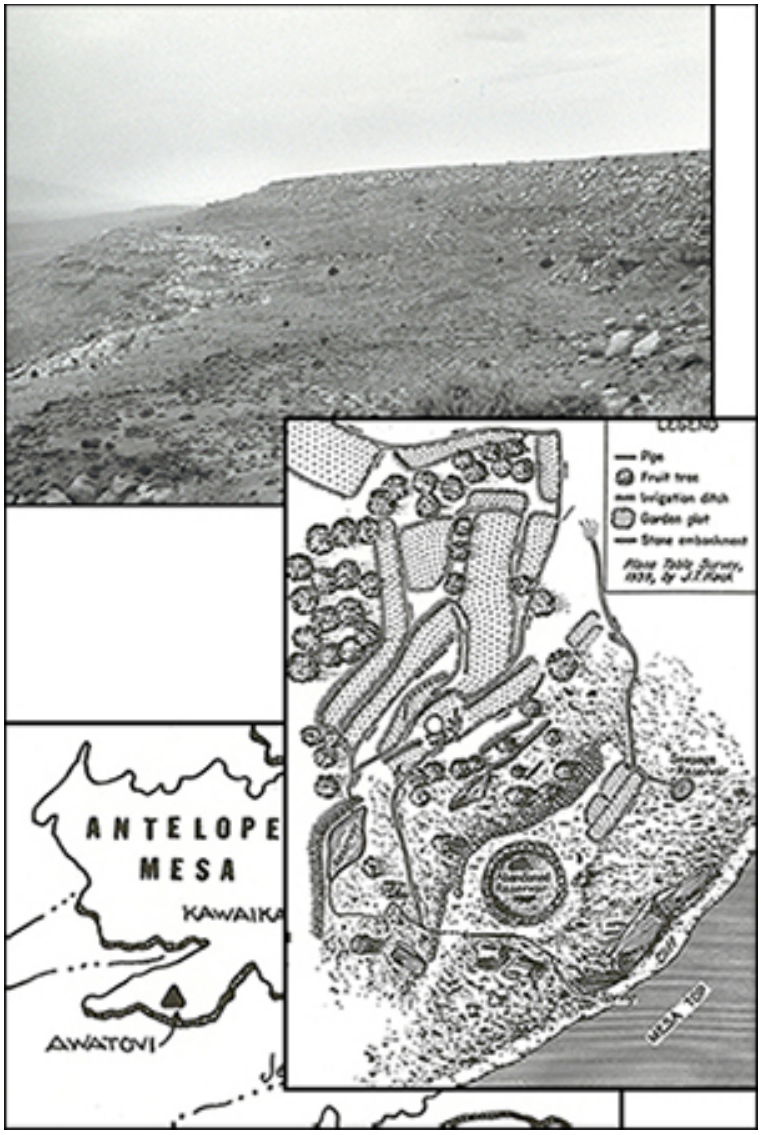
Enduring Awatovi: Uncovering Hopi Life and Work on the Mesa



(National Park Service)

In the silent pre-dawn hours, Sun-Watcher slipped from his bed and quietly left the Hopi pueblo. He went to the edge of the Arizona mesa and settled down to wait for sunrise. For many years, Sun-Watcher kept track of the seasonal movement of the sun on the horizon. As the sun rose that morning, he saw that it reached the farthest point on its southern journey: the winter solstice arrived. Sun-Watcher returned to the pueblo to announce that it was time for a

ceremony to summon spirits to bring rain to nourish the village's crops. At the Awatovi pueblo on Antelope Mesa, Hopis celebrated this ceremony for over 500 years.

Though Awatovi is no longer occupied, the ceremony continues to set the rhythm for Hopi agriculture. For the Hopis, the movements of the sun, the appearance of the rain, and the growth of crops still depend on the people's correct and active participation in the regular cycle of life. For students of the past, enduring Hopi traditions and American archeological research reveal much about this important place.

Document Contents

Where this lesson fits into the curriculum

Time Period: Pre-contact to the present

Topics: The lesson can be used for U.S. history lessons, multicultural studies, social studies, geography lessons, and agriculture and anthropology.

Relevant United States History Standards for Grades 5-12

This lesson relates to the following National Standards for History from the UCLA National Center for History in the Schools:

US History Era 1

- Standard 1A- The student understands the patterns of change in indigenous societies in the Americas up to the Columbian voyages.
- Standard 2B- The student understands the Spanish and Portuguese conquest of the Americas.

US History Era 4

- Standard 1B- The student understands federal and state Indian policy and the strategies for survival forged by Native Americans.

Relevant Curriculum Standards for Social Studies

This lesson relates to the following Curriculum Standards for Social Studies from the National Council for the Social Studies:

Theme I: Culture

- Standard A: The student compares similarities and differences in the ways groups, societies, and cultures meet human needs and concerns.
- Standard D: The student explains why individuals and groups respond differently to their physical and social environments and/or changes to them on the basis of shared assumptions, values, and beliefs.

Theme II: Time, Continuity, and Change

- Standard B: The student identifies and uses key concepts such as chronology, causality, change, conflict, and complexity to explain, analyze, and show connections among patterns of historical change and continuity.

Theme III: People, Places, and Environments

- Standard B: The student creates, interprets, uses, and distinguishes various representations of the earth, such as maps, globes, and photographs.
- Standard E: The student locates and describes varying land forms and geographic features, such as mountains, plateaus, islands, rain forests, deserts, and oceans, and explains their relationships within the ecosystem.
- Standard H: The student examines, interprets, and analyzes physical and cultural patterns and their interactions, such as land uses, settlement patterns, and cultural transmission of customs and ideas, and ecosystem changes.
- Standard J: observes and speculates about social and economic effects of environmental changes and crises resulting from phenomena such as floods, storms, and drought.

Relevant Common Core Standards

This lesson relates to the following Common Core English and Language Arts Standards for History and Social Studies for middle school and high school students:

Key Ideas and Details
- CCSS.ELA-LITERACY.RH.6-12.2

Craft and Structure
- CCSS.ELA-LITERACY.RH.6-12.6
- CCSS.ELA-LITERACY.RH.6-12.4

Integration of Knowledge and Ideas
- CCSS.ELA-LITERACY.RH.6-12.7

Range of Reading and Level of Text Complexity
- CCSS.ELA-LITERACY.RH.6-12.10

About This Lesson

This lesson is based on the National Register of Historic Places registration file for "Awatovi" [http://pdfhost.focus.nps.gov/docs/NHLS/Text/66000187.pdf]. It was published in 2014. This lesson was written by Rita G. Koman, an educational consultant. It was edited by Fay Metcalf, Marilyn Harper, Katie Orr, and Teaching with Historic Places staff. This lesson is one in a series that brings the important stories of historic places into classrooms across the country.

Objectives

1. To explain elements of Hopi culture practiced at Awatovi many centuries ago and those that remain important today;
2. To illustrate the four methods by which Awatovi Hopis and Hopis today farm an apparently unproductive land with such success;
3. To describe how archeology can illuminate the lives of people whose past has not been preserved in written records;
4. To document evidence of historic farming techniques in the students' own state or region.

Materials for students

The materials listed below can either be used directly on the computer or can be printed out, photocopied, and distributed to students.

1. Two maps showing the location the Hopi Reservation and its features;
2. Three readings about corn and its importance to Hopi life, Awatovi, and Hopi farming methods;
3. Four photos and one drawing of the Awatovi archeological excavations of the 1930s, and traditional terraced dwellings, and an agricultural area.

Visiting the site

Awatovi is closed to visitors because of the fragile condition of the site and the desire of the Hopi people to preserve their privacy. There are several villages on First, Second, and Third Mesa where visitors are welcome. Each village has its own restrictions, so visitors should check with the Cultural Preservation Office of the Hopi Tribe by calling 928-734-3612 or visiting the HCPO website.

Getting Started

(National Park Service)

What is this place?

Photo Analysis Worksheet

Step 1:
Examine the photograph for 10 seconds. How would you describe the photograph?

Step 2:
Divide the photograph into quadrants and study each section individually. What details--such as people, objects, activities--do you notice?

Step 3:
What other information--such as time period, location, season, reason photo was taken--can you gather from the photo?

Step 4:
How would you revise your first description of the photo using the information noted in Steps 2 and 3?

Step 5:
What questions do you have about the photograph? How might you find answers to these questions?

Setting the Stage

The United States encompasses land that was long-settled by the time Europeans arrived in the 17th century and began to colonize it. Despite centuries of colonization by those Europeans' descendants, many American Indians endured and preserved their culture. Some still live on their ancestral lands. Today, there are over 565 Federally-recognized, self-governing American Indian Tribes located in the United States.

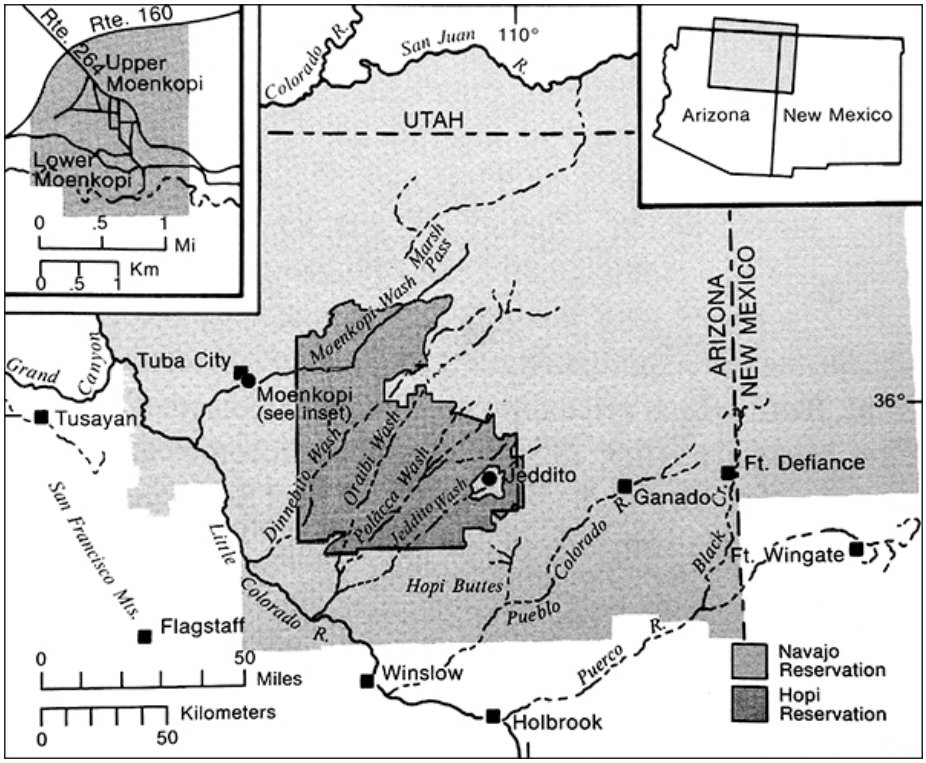
The region where the states of Utah, Colorado, Arizona, and New Mexico come together is part of the Colorado Plateau, once the homeland of ancient peoples called “Hisatsenom” (hee-SAT-se-nom) by the Hopis, which means “our ancestors.” Most archeologists know them as the Ancestral Puebloans. These early farmers lived in pueblos (apartment-like adobe or stone dwellings with many rooms and courtyards). Scholars and archeologists once believed that all of the Ancestral Puebloans left this region about 1300 A.D. because of a great drought, but new research in the 1990s confirmed that the Hopi mesas have been continuously occupied for at least a thousand years. A *mesa* is a large hill with a flat top and at least one steep, cliff-like side.

Consequently, Hopi culture is one of the oldest and most stable in North America. Besieged by outsiders-- Spanish explorers and missionaries, Navajo Indians, and European Americans-- from the 16th century on, the people continue to maintain their strong sense of what it means to be "Hopi." They have successfully combined important aspects of the past with the changing conditions of the present. Like other Americans today, the Hopis are attracted to urban jobs, shopping malls, and Monday night football, and some-- teenagers especially-- are forgetting the Hopi language. Even so, many who leave the reservation return, at least for visits, and some find that, as they get older, they become more interested in their Hopi traditions.

On their reservation in northeastern Arizona, the Hopis maintain their cultural identity even as they engage in such modern pursuits as running a motel and restaurant and supporting a large training center where young people learn centuries-old techniques for making jewelry, textiles, pottery, katsina dolls, and baskets. Some of these artisans continue to work in the traditional manner using centuries-old motifs. Others are part of a growing movement among American Indian artists from many tribes who are creating new forms of Indian art-- works that are thoroughly modern in design and execution, but still reflect an Indian perspective. Age-old agricultural techniques still yield larger crops than anyone would think possible in this beautiful, yet arid and seemingly barren landscape.

Locating the Site

Map 1: Hopi and Navajo Reservations in the Southwest



(Map by Judith Crawley Wojcik and courtesy of the Smithsonian Institution)

The Hopi Tribe is a sovereign, self-governing nation with over 1.5 million acres. The Hopi Reservation is located in an arid climate and most of the Hopi landscape is desert. Hopis today are descended from people who have lived in this region for over 1,000 years.

Questions for Map 1

1) Locate the Hopi Reservation. What other Reservation surrounds it? In what state is the Hopi Reservation?

2) A “wash” is a stream bed that is usually dry above-ground, but still contains moisture underground. What "washes" can you find in Map 1?

3) How might a wash be important to a Hopi community? Why?

Determining the Facts

Reading 1: Corn is Hopi

In Hopi culture, all aspects of daily life are sacred and there is no separation between work and prayer. Ancient ritual can be found in work. Prayer is seen as blessing a person's work. Corn is the food that nourishes and sustains both the Hopi people and the *katsina* spirits who protect them from storm and drought. Corn is the thread that knits everything together. Corn represents the traditional Hopi way of life: humility, cooperation, respect, and care of the earth.

According to Hopi tradition, when people first emerged into this world from underground "in the ancient time ago," Màasaw, the guardian of the Earth, allowed each tribe to choose an ear of corn and, with it, a way of life. The other tribes quickly took the large ears that brought short, yet easy lives. The Hopis took longer to choose and were left only with a short ear of blue corn. The blue corn brought with it a long and difficult life, but it also meant that the Hopi would survive all hard times.

Farming in Hopi lands is indeed difficult. The growing season is short and rainfall averages only 10 to 12 inches a year. Strong winds and high temperatures quickly dry up what moisture there is. When storms do come, the rain falls so heavily that it can overwhelm the soil and destroy the crops. For the Hopis, survival requires the aid of the katsinas, the spirits of the earth who come to live with them for about half the year. The katsinas' most important gift is life-giving rain and the assurance of good crops, but they also help the Hopis in their daily tasks, enforce social and religious laws, and carry the people's prayers to the gods. They also bring entertainment, laughter, and beauty to a hard life.

At the winter solstice in late December, the katsinas leave their homes in the San Francisco peaks and come to the Hopi villages. In the winter *Soyal* ceremony, they are welcomed with traditional prayers and rituals that date back centuries. The katsinas stay in the villages until July, soon after the summer solstice. If all goes well, their presence and the people's prayers will have ensured the safe planting, germination, and early growth of the precious corn and they can return to tend their own crops at home. Their departure is marked by another traditional festival of ceremonies and dancing. Before the katsinas leave, they give small gifts tied to cattails and corn stalks to all the village children.

Ritual is also a part of the planting and harvesting of the corn. According to tradition, the Hopis learned agriculture from Màasaw when they first emerged from the underworld. By continuing to follow these ages-old traditions, the Hopis not only practice successful dry-land farming, they also honor the gods and remember the "ancient time" before they became fully human. The Hopis grow 17 varieties of corn in many colors--yellow, blue, red, white, black and speckled. Hopi women use white, blue, and sweet yellow corn to make more than 30 different dishes. Some are eaten every day, others only for ceremonial meals or other special occasions. Most recipes are handed down from generations past. One recipe is for *Piiki*, a wafer bread that accompanies every ceremonial meal and is made from a gruel of finely ground blue cornmeal, water, and ash. The Piiki is cooked on a special stone that is often a carefully tended family heirloom. Peeling the paper-thin Piiki off the hot stone takes skill. Traditionally, a Hopi girl is not considered ready for marriage until she masters it.

Hopis are born, live, and die with the blessings of cornmeal in their ceremonies. It is often ground in commercial mills nowadays, but sometimes still prepared on ancient grinding stones.

Like the kernels that germinate underground, a Hopi baby traditionally is kept in the dark for the first few weeks of his or her life. On the twentieth day, his or her female relatives come to name the child, blessing him or her by passing perfect ears of corn over the child's body four times. The baby's father's mother (paternal grandmother) carries the child to the edge of the mesa, following a path of sacred cornmeal. More cornmeal is sprinkled as the new life is introduced to the sun. Unmarried girls propose marriage by giving their young men loaves made from sweet cornmeal. Special corn dishes are served at weddings and the ritual hair dressing ceremonies that accompany them. When a Hopi dies, his spirit follows another cornmeal path leading westward.

Questions for Reading 1

1) What does the choice of the smallest ear of corn represent to the Hopis? What do you think this story reveals about how Hopis view their way of life?

2) What challenges do the Hopis face in trying to farm their land? How do they respond to these challenges?

3) What are some of the ways that corn and cornmeal are connected to Hopi spiritual life? How is corn part of social life?

4) What kinds of places does this reading describe or refer to? How is place important in Hopi tradition and life? How do place and corn come together in Hopi tradition?

Determining the Facts

Reading 2: Enduring Awatovi

Bright blue skies make yellow and red desert mesas look dramatic in the Hopi Reservation. A *mesa* is a large hill with a flat top and at least one steep, cliff-like side. Between the mesas, valleys separate the homes of present-day Hopis living on First, Second, and Third Mesas from Antelope Mesa. Antelope Mesa is where the ancient village of Awatovi existed until about 1700 A.D. The Hopis still graze their cattle and collect clay for their famous ceramics on Antelope Mesa, but Awatovi today is a few stone walls rising above the sand and many more remains of the village buried beneath it.

The Awatovi site is one of several unoccupied villages on the mesas. Over the centuries, the Hopis have moved from older villages to newer ones for a variety of reasons. Usually, they moved because they could no longer grow enough food to feed the people living in the old village. At Awatovi, Hopis moved away from the pueblo after conflict related to the Spanish invasion of North America. No one has lived at Awatovi for more than 300 years, but it is still a very important place to the Hopis. Today, only members of the Hopi tribe and the people who they permit to visit can enter Awatovi. This has not always been the case.

The first Europeans to visit Awatovi were Spanish explorers. The Spaniards found Awatovi when it was a successful village in the 1600s. White Americans visited Awatovi in the late 1800s, long after the Hopis left it. The Americans took photographs of Hopi pueblos and kept notes on what they saw. Two American explorers, brothers Victor and Cosmos Mindeleff, visited Awatovi in 1886-87 and studied what was left of the village. They wrote, "Over most of [the] area no standing wall is seen, and the outlines of the houses . . . are indicated mainly by low ridges and masses of broken-down masonry, partly covered by drifting sands."[1]

After the Mindeleffs, more archeologists came to study Awatovi in the 20th century. The biggest study of Awatovi happened from 1935 to 1939. This study is called the “Awatovi Expedition.” During this expedition, archeologists from Harvard University traveled to the Hopi Reservation in Arizona and excavated the historic pueblo. An excavation is the removal of dirt, rocks, and even manmade materials to uncover something. In this case, archeologists excavated the unoccupied villages to uncover evidence of the Hopis and how they lived.

The evidence archeologists uncovered at Awatovi includes buried houses, traces of ancient fields, and beautiful painted murals that lined the walls of sacred spaces. The excavation uncovered evidence that, as the Hopis themselves tell us, corn has always been at the center of the Hopi way of life. It also tells us that the farming methods used there today have changed little over the past thousand years.

These excavations revealed that people lived in several places on Antelope Mesa as early as the 500s. Awatovi was the longest occupied of these, being home to Hopis from 1150 to 1700. The village is the best-studied of the unoccupied Hopi pueblos. The village covered nearly 30 acres and the people who lived there farmed a much larger area. No more than one-third of those 30 acres was occupied at the same time. The oldest building found there is a stone pueblo complex. That building was abandoned, but the people built another pueblo building nearby. Eventually, the building to the east contained as many as 2,500 to 3,000 rooms. These rooms were separated by streets and plazas. Spanish explorers visited this part of the village in 1540. This also is where European priests built a Christian mission in 1630.

Traditional Pueblo communities like Awatovi include kivas. Kivas are underground chambers used by men for religious ceremonies or other community activities. The remains of the kivas found at Awatovi are rectangular in shape. They average from 13 to 20 feet long, 8 to 13 feet wide, and 8 feet high. Floors are paved with sandstone slabs and the roofs are supported by log beams called *lestavis* by Hopis and *vigas* [VEE-gahs] by Spaniards. Smaller wood poles are laid over the beams, and then covered with branches from specific kinds of shrubs and adobe. Adobe is a mixture of mud and plant fiber. It is a common building material among Southwestern Pueblo cultures. The entrance is through the roof via a wooden ladder. The stone walls found inside some of the kivas were covered with more than 20 layers of plaster. Some of these layers have ceremonial murals painted between 1400 and 1700.

Archeologists do not know the purpose of the murals. However, they think the murals may have served as a substitute for an altar, as background for an altar, as a focus for religious ceremonies during the period before altars were used, or for other important ceremonies. Some murals were removed from Awatovi and are now at the Museum of Northern Arizona in Flagstaff. Here, they can be studied with the permission of the Hopi Tribe.

Questions for Reading 2

1) What do you think Awatovi looked like before the Hopis moved away? Write a sentence or two describing it.

2) What are kivas and how were they built? What might this reveal about Hopi spirituality and how they view the ground?

3) Why do you think the archeologists removed the murals they found? Do you think they should have left them where they found them? Why or why not?

4) What is an excavation? In addition to what's described in this Reading, what else do you think the Harvard archeologists may have discovered when they excavated Awatovi? Why?

Determining the Facts

Reading 3: Hopi Farming

Antelope Mesa rises to an elevation of 5,600 feet at Awatovi. Like most mesas, Antelope Mesa has a flat top of hard sandstone that resists erosion. The layer of soft shale under the sandstone erodes easily. As it decomposes it creates the silt and sand dunes critical to the successful practice of agriculture in the region. Natural vegetation consists mainly of grasses, small shrubs, and juniper and piñon trees.

In a desert society like the Hopis', water is precious. Rainfall at the reservation averages 8 to 12 inches per year. The heaviest rain or snow falls during the summer and winter. There are usually several moderate snowfalls during the winters. A number of springs provide some water for both crops and people. Breezy in the summer, the winds can be strong in the spring. Average temperatures range from 87 degrees in the summer to 32 degrees in the winter.

To someone from another climate, this place may not seem like a reliable region to grow the crops needed to feed a nation, but the Hopis at Awatovi were productive farmers and some of their descendants still are today. Long ago, Hopis developed techniques to use rainfall efficiently and they still practice these methods today. The Hopis also developed special varieties of corn, beans, squash, and other crops suited to their climate and geography. For example, Hopis plant their corn 10 to 15 inches deep. Its roots burrow underground as far as 15 to 20 feet to reach and use moisture stored deep in the soil. Corn plants grow only about 3 to 4 feet tall, but each plant bears many ears. The very small leaves of the plants reduce the amount of water that evaporates from the surface of the leaves. The Hopis also developed a unique species of cotton that was used for everyday garments, ceremonial dress, and for trade with other Indian groups.

The Hopis of Awatovi used four methods to overcome the low rainfall and desert climate. These were the (1) flood plain method, the (2) *akchin* method, (3) sand dune farming, and (4) irrigation. These methods are explained below. Both the flood plain method and *akchin* technique used flood water. Many American Indian farmers of the past relied on rainfall and irrigation to provide water for their crops, but only the Hopis used the flood water and sand dune techniques.

Farming with flood water was the most important method, used for nearly three-fourths of the area farmed. Crops were planted in the flood plains of small streams, where seasonal flooding would supplement direct rainfall. The flood plains were rich in silt and the underground water table was higher near the stream beds. On the other hand, flash floods could destroy whole crops. In the *akchin* system crops were planted at the mouths of arroyos (small streams) at the point where the water slowed and spread, dropping the soil it carried. The akchin technique was especially useful for corn and bean crops and is still used in the washes near Awatovi. The Hopis also created fields in the shallow arroyos, using stone walls to create terraces that retained both soil and water.

Sand dune farming used the special quality of sand dunes to trap and hold rainwater that ran down the sides of the mesas. This water seeped through the sand until it reached a hard layer of rock that it could not escape. It stopped there, where it could be reached by the roots of cultivated crops. The sand cover kept the water from evaporating. Although sand dune farming areas often look like dry fields, Hopis use them to produce good crops of corn, beans, peaches, apricots, and apples.

The Hopis used irrigation only for delicate fruits and vegetables planted in areas around dependable springs. In these fields, spring water flowed through stone-lined ditches to terraced plots filled with soil. Hopis generally preferred dry-land farming to irrigation, in part because it was less vulnerable to drought.

A complex social organization was necessary to support and manage a settled population in such a harsh environment. According to ancient Hopi tradition matrilineal clans controlled the land. In a matrilineal society like the Hopi's, children trace their descent through their mothers only. The farming was done by the women's brothers and sons. Every Hopi clan held land in areas where each of the four basic agricultural techniques could be used. Using all four methods during one growing season prevented a total crop failure. In addition, the clans planted crops in both upland and lowland areas so that some crops would benefit from either an unusually cold, wet season or a hot and dry one. Hopis living on First and Second Mesas today still use this ancient system on their lands near Awatovi.

Questions for Reading 3

1) What natural features of Antelope Mesa helped make it possible to grow crops there? What were some of the features of Hopi corn that allowed it to be grown successfully in spite of the arid climate?

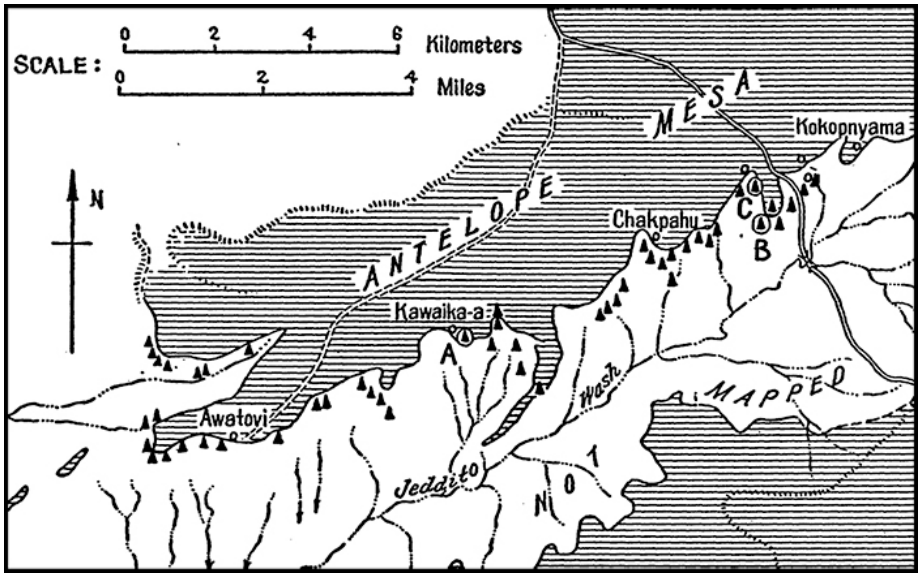
2) Describe sand dune farming. How do you think the ancient Hopis might have discovered such a technique?

3) What did the Hopi build to grow crops? How did they alter the land for farming?

4) What do you think an archeologist might discover at an abandoned Hopi field near Awatovi?

Visual Evidence

Map 2: Sites at Antelope Mesa and Jeddito Wash



(National Historic Landmark registration file)

Each triangle on the map represents a site where archeologists found human-made lines of stone. Archeologists think Hopi farmers used these stone lines to secure rows of branches that protected the dunes from the wind.

Questions for Map 2

1) What manmade and natural features of the Hopi Reservation can you identify on this map? List them.

2) Locate Antelope Mesa and the four unoccupied Hopi villages: Awatovi, Kawaika-a, Chakpahu, and Kokopnyama. Where are they on the mesa? Why do you think the Hopi chose those places in particular to settle? (Refer to Reading 3 if necessary)

3) Use the scale in the map to find the distance between Awatovi and Jeddito Wash. If you walked at a speed of 3.0 mph, how long would it take for you to walk from Awatovi to Jeddito Wash and back?

4) How do you think archeologists and historians decided that the stone lines are evidence of ancient sand dune farming? What other evidence do you think they considered?

Visual Evidence

Photo 1: Awatovi, Antelope Mesa

(National Historic Landmark registration file)

Questions for Photo 1

1) Describe the landscape. How can you tell this place is a desert?

2) What evidence of modern people can you find in this photograph? What evidence of 17th century Hopi?

3) Describe the plants you see in this photo. How do you think they are able to grow here? (Refer to Reading 3 if necessary)

4) Are you surprised that many people once lived at this place? Why or why not?

Visual Evidence

Photo 2: Archeological Site at Awatovi

(National Historic Landmark registration file)

Questions for Photo 2

1) Immovable remains, like a buried wall or a fire pit, are called "features" by archeologists. What Hopi features can you find in this photograph?

2) What do you think this place used to look like? How do you know?

3) What do you think are the dangers of an excavation here? What precautions might archeologists take to preserve a site that they excavate? (Refer to Reading 2 if necessary)

4) If you were an archeologist excavating Awatovi, what mysteries about the past would you want to try to solve with your investigation? Write two questions that you believe evidence from Awatovi might be able to answer.

Visual Evidence

Photo 3: Terraced dwellings in an occupied Hopi town, ca. 1880

(Photo by John K. Hillers, courtesy of the National Archives and Records Administration)

Questions for Photo 3

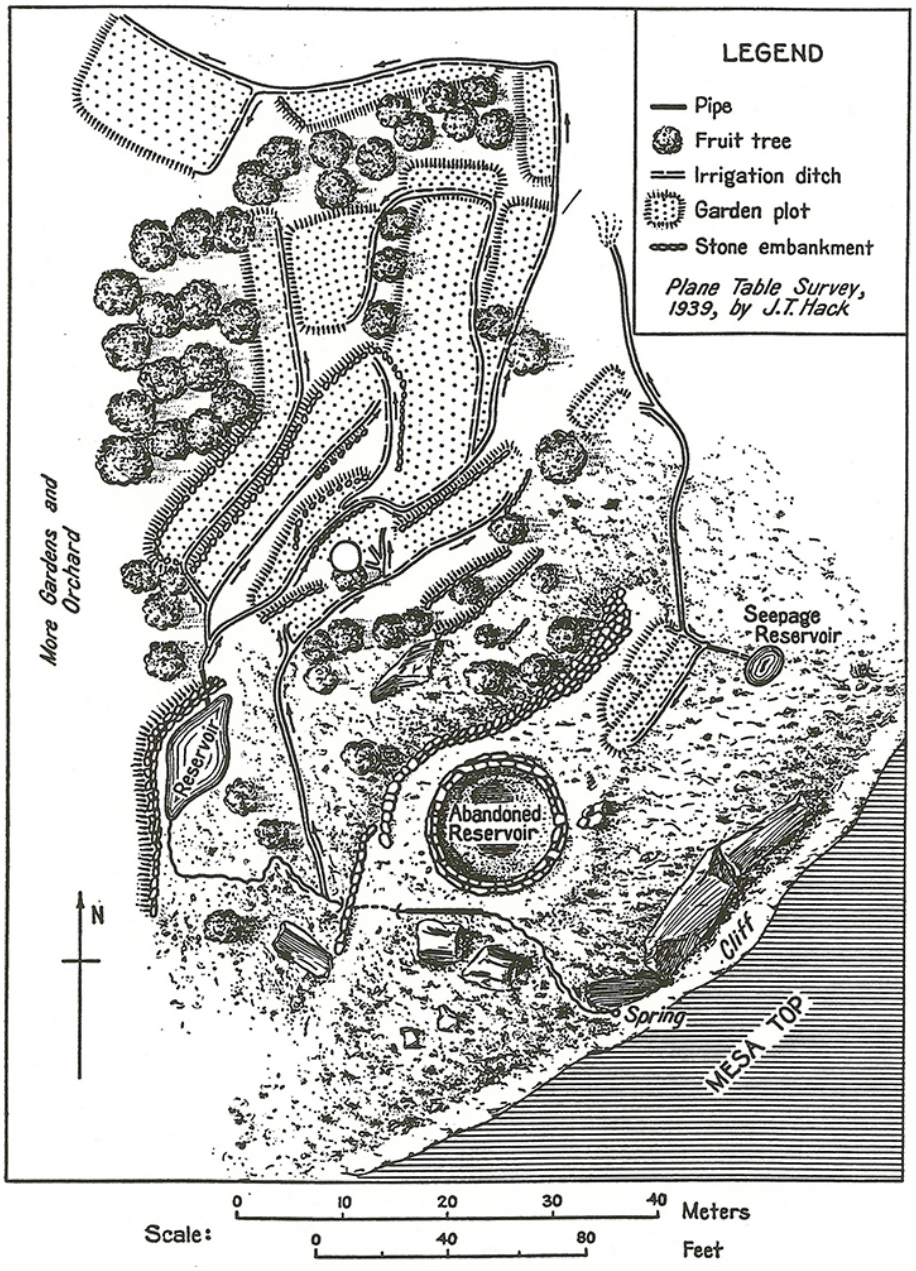
1) Compare Photo 2 with Photo 3. How are these two places similar? In what ways? How are these places different?

2) How might a photo of an occupied village like the one shown in Photo 3 help archeologists explain what they found during an excavation of Awatovi?

3) What problems do you think there might be with using a 19th century photograph of a Hopi village to study 17th century Hopi culture and society?

Visual Evidence

Drawing 1: Irrigation Method at Awatovi



(National Historic Landmark registration file)

Questions for Drawing 1

1) Identify the manmade and natural features of this place. What was this place to Hopis of Awatovi? What did they grow here?

2) Where does water come from for the Hopis irrigation method? How did the Hopis move it to their crops?

3) How did the Hopi alter the landscape here? What steps do you think they had to take to build the man-made features? Why did Hopis do this?

4) This map was created after an archeological study of an abandoned field. What do you think the archeologists found here that helped them imagine this drawing? What would have survived over 300 years? How else might archeologists have "filled in the gaps" of their knowledge of the historic site?

Putting It All Together

In this lesson, students considered multiple sources of evidence to study Awatovi and learn about Hopi life at that place. The following activities will help the students understand how evidence of the past provides us with multiple perspectives on the past to help us determine *who*, *where*, *what*, and *how* of the *when*. Students can use the following activities to learn about.

Activity 1: Two Views on Awatovi

Archeology is the study of past human life through evidence found in the ground. It seeks to understand the things it finds in the course of excavation by identifying the processes and human activities that created them. However, sometimes the conclusions and perspectives archeologists can be different from the ways the descendants of the group or place being studied understand their own past and the meaning of the place.

Have your students develop a list of questions they would ask about Hopi culture, society, and history to learn more about those topics. Have half of the students in the class make a list of questions they would ask a Hopi tribal representative. Have the other half of students develop a list of questions they would ask an archeologist who studied Awatovi. Are the two sets of questions different? Ask students to discuss why different questions might be appropriate for different people. What questions about the archeology of the site may be inappropriate to ask a member of the Hopi tribe? What sincere questions about Hopi belief would be inappropriate to ask a non-Hopi archeologist?

After the discussion, have your students polish their lists and then email the most-succinct questions to real archeologists of the Southwest and Hopi tribal representatives for answers. Once they respond, have the students with the archeologist questions put together a group presentation on Hopi culture and history based on the answers they garnered. Have the students with questions for the Hopi perspective do the same. After the two groups present and each student has a chance to speak about his or her findings, have another group discussion about how the two presentations were different.

Activity 2: Illustrating Hopi Methods of Farming.

The illustrated map of irrigation at Awatovi in Drawing 1 is based on findings by the Awatovi Expedition in the 1930s. Have your students do their own drawing, diorama, painting, sculpture, or miniature model, etc. to illustrate the four methods by which Hopi overcome the arid climate of northeastern Arizona to produce the corn and other crops that sustain them. Assign each student one of the methods of agriculture used at Awatovi: flood plain method, *akchin* method, sand dune farming, or irrigation. Have them each do additional online research about that historic method of farming and complete an art project that depicts what they believe a Hopi field, farmed with their assigned method at the base of Antelope Mesa, would have looked like in 1600. They can search the online collections hosted by the Peabody Museum website to find additional photographs taken during the Awatovi Expedition and perform a general web search to look for images of Hopi farms today. Have each student submit their product to you along with a written paragraph about what each major feature within their artwork represents, and what evidence they looked at to base their depiction. If there is space, have your students display their artwork as an exhibit in the classroom or in your school.

Activity 3: Documenting Historic Agriculture in Your Community.

Have your students document historic agriculture in your state or region, and then ask them to present their findings for the class. First ask your students to look at the online National Register of Historic Places database to find out what is listed in the National Register in your community or area.

There are two options for the investigative part. The first option is to identify a nearby historic farming site that's open to the general public or one that the owner will allow the school group to visit. Consult a local historic preservationist, historical society, or agricultural organization to find one. During the field trip, have your students work in small groups to take notes on what they observe and have them photograph physical evidence of historic farming such as irrigation canals, artifacts, stone walls, and buildings and structures. Assign the roles of note-takers and photographers within each group. If there is no interpreter at the historic site to speak with your students about the farming methods used there, invite a local historian or agricultural agent with knowledge of the site to talk to them about the history of agricultural techniques in your state or region after their field trip to the site.

The second option is to have your students research historic agriculture in your region at a community historical society, library, university, and online. Divide your students into groups and have each group gather evidence (documents, images, primary-source descriptions) of historic agriculture. Once they report back to you about their research, invite a local historian or agricultural agent to talk to them about the history of agricultural techniques in your state or region.

After your class completes the information-gathering portion of this activity, have each group use its images, notes, and observations to design a poster or computer slide-show presentation about what farming was once like in your community. Have each group present their findings to another classroom, at a school assembly, local historical society meeting, parents night, or other interested group. The presentations should describe how the information from their investigations contributed to their knowledge of local historic agriculture.

If your students documented a historic site with photographs, have them use their photos and notes to create a class website or blog about their investigation of the historic site.

References and Endnotes

Reading 1

Reading 1 is based on information from the Hopi Cultural Preservation Office website (http://www8.nau.edu/hcpo-p/); on John T. Loftin, *Religion and Hopi Life in the Twentieth Century* (Bloomington and Indianapolis: Indiana University Press, 1991);on Alph H. Secakuku, *Following the Sun and Moon: Hopi Kachina Tradition* (Phoenix, AZ: The Heard Museum, 1995); on Frederick J. Dockstader, *The Kachina and the White Man: The Influences of White Culture on the Hopi Kachina Religion* (rev. ed, Albuquerque: University of New Mexico Press, 1985); and on a video, *Hopi: Corn Is Life* (Flagstaff, AZ: Tellens, Inc., 1982), produced for the Museum of Northern Arizona.

Reading 2

Reading 2 was adapted from Sally Ann Dean and Helene Dunbar, "Awatovi" National Historic Landmark registration file, Washington, D.C.: U. S. Department of the Interior, National Park Service, 1990.

[1]Victor Mindeleff, "A Study of Pueblo Architecture in Tusayan and Cibola," in 8th Annual Report of the Bureau of American Ethnology for the Years 1886-1887 (Washington, D.C.: Bureau of American Ethnology, 1891), n.p.; cited in Sally Ann Dean and Helene Dunbar, "Awatovi," National Historic Landmark registration file, Washington, D.C.: U. S. Department of the Interior, National Park Service, 1990, Section 7, p. 3.

Reading 3

Reading 3 was adapted from Sally Ann Dean and Helene Dunbar, “Awatovi" National Historic Landmark registration file, Washington, D.C.: U. S. Department of the Interior, National Park Service, 1990.

References and Endnotes

By studying *Enduring Awatovi: Uncovering Hopi Life and Work on the Mesa*, students will understand how this tribe has been able to maintain its traditional culture, its religious life, and its agricultural practices in spite of a hostile physical setting and pressures from the surrounding non-Hopi world. Those interested in learning more will find much useful information online.

The Hopi Tribe
The official website of the sovereign, federally-recognized Hopi Tribe is a rich source of information on traditional and present-day Hopi life and culture.

Hopi Cultural Preservation Office
This official website offers resources for Hopi and non-Hopi alike who are interested in Hopi culture, history, and archeology. More information related to topics covered in this lesson plan can be found on this page: "Students & Teachers."

The Museum of Northern Arizona
The Museum's website includes images and descriptions of a Modern Hopi Mural, created in the Museum's Kiva Gallery by two Hopi artists as a reinterpretation of ancient stories of emergence and traditional life from the Hopi point of view.

Salinas Pueblo Missions National Monument
Salinas Pueblo Missions National Monument is a unit of the National Park System that includes several Spanish missions. The park's web pages also provide detailed information on the thriving Pueblo Indian trade communities that existed in this remote frontier area of central New Mexico before the coming of the Spanish.

American Indians of the Southwest
The Logan Museum of Anthropology at Beloit College in Beloit, Wisconsin, possesses a vast collection of artifacts from the ancient Southwest. The majority were collected during excavations undertaken by the Museum in the 1930s. Visit the college's online exhibit, Ancient Cultures of the Southwest, for information about the ancient Puebloan culture.

Digital History--Native American Voices
This online digital history, developed through a partnership among the University of Houston, the National Park Service, the Gilder Lehrman Institute, the Museum of Fine Artsâ€“Houston, the Chicago Historical Society, and TAH (Teaching American History), includes an in-depth overview of American Indian history from its prehistoric beginnings to its thriving culture today.

The NPS Tribal Preservation Program
This National Park Service program works with Indian Tribes, Alaska Native Groups, and Native Hawaiians to preserve and protect their important resources and traditions. Its main purpose is to help Indian tribes strengthen their own community preservation programs. For more information, visit the program web page.

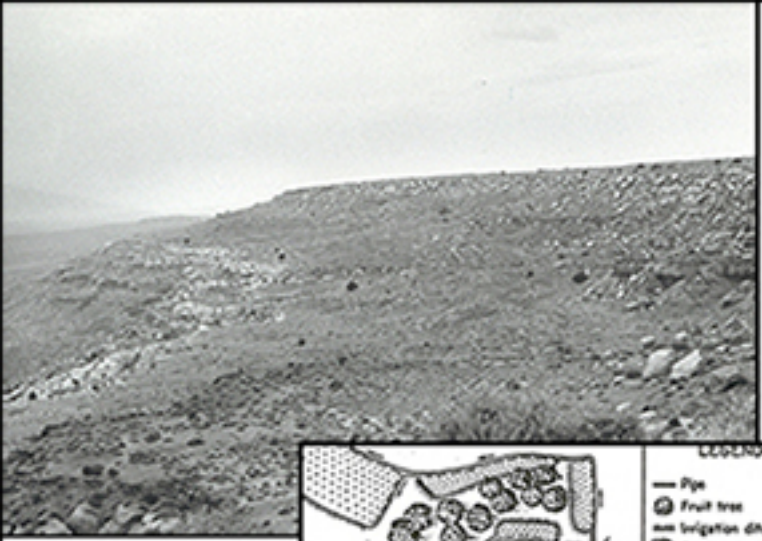
NPS *Discover Our Shared Heritage* travel itinerary
In the NPS *Places Reflecting America's Diverse Cultures* travel itinerary, information about Hopi history and culture appears in entries on sites including Navajo National Monument, Walnut

Canyon National Monument, Canyon de Chelly National Monument, and Wupatki National Monument.

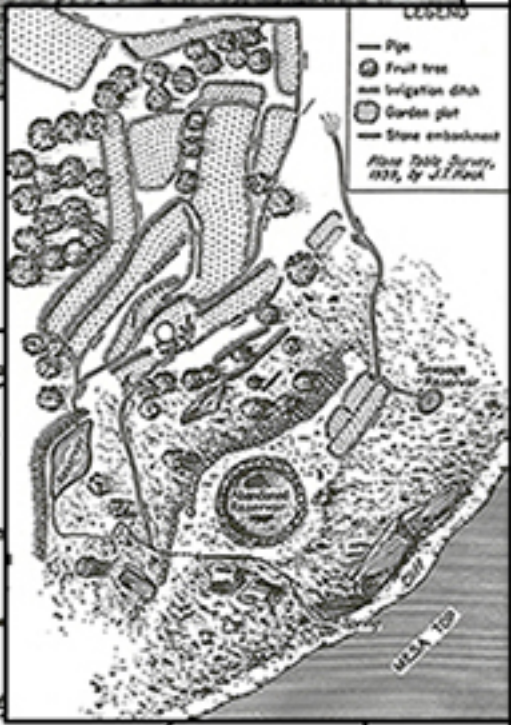
Awatovi National Historic Landmark is featured here in the *American Latino Heritage* travel itinerary.

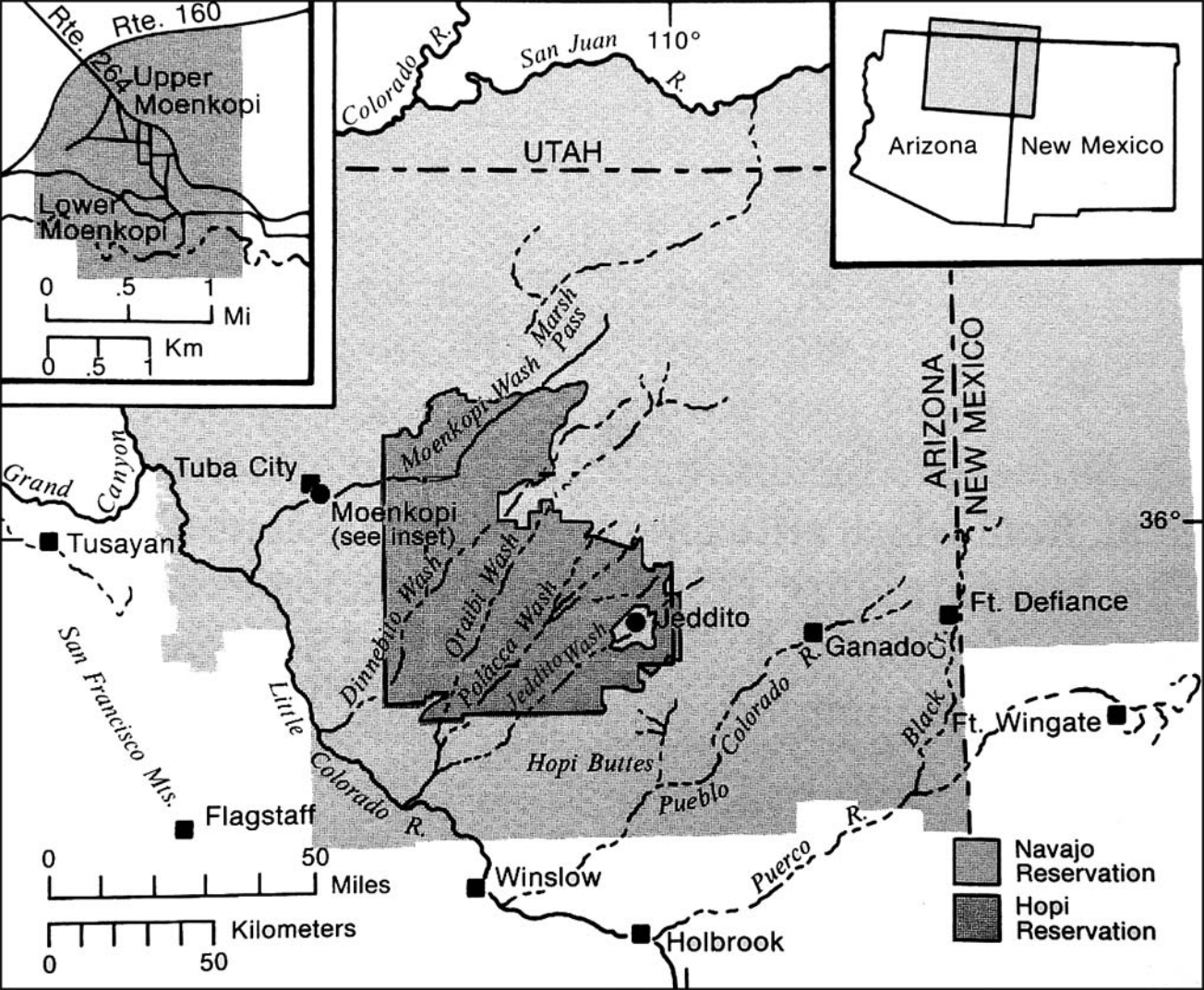
For Further Reading

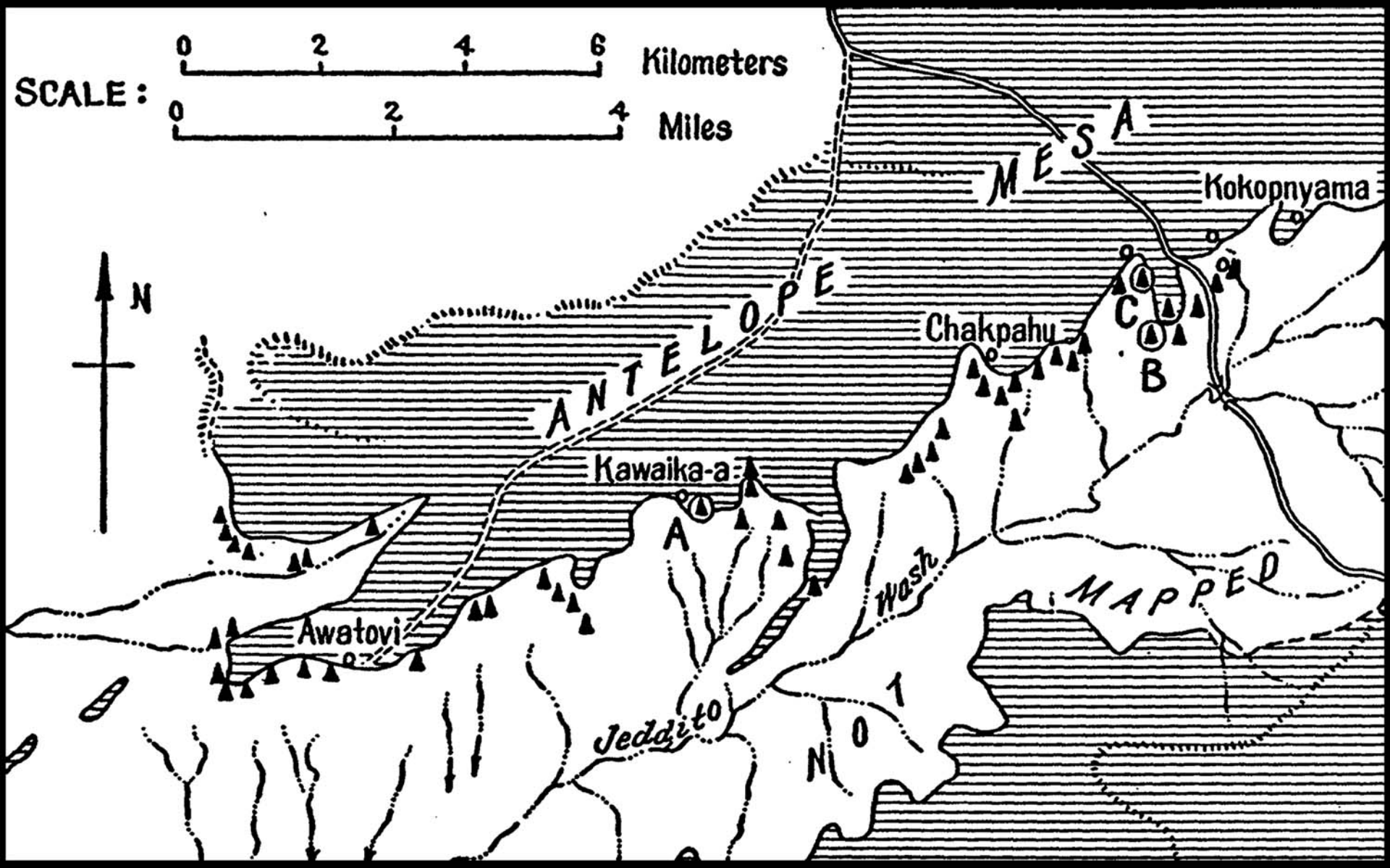
To learn more about the life of an archeologist, read Ann Axtell Morris's *Digging in the Southwest* (Santa Barbara, CA: Peregrine Smith, 1978).

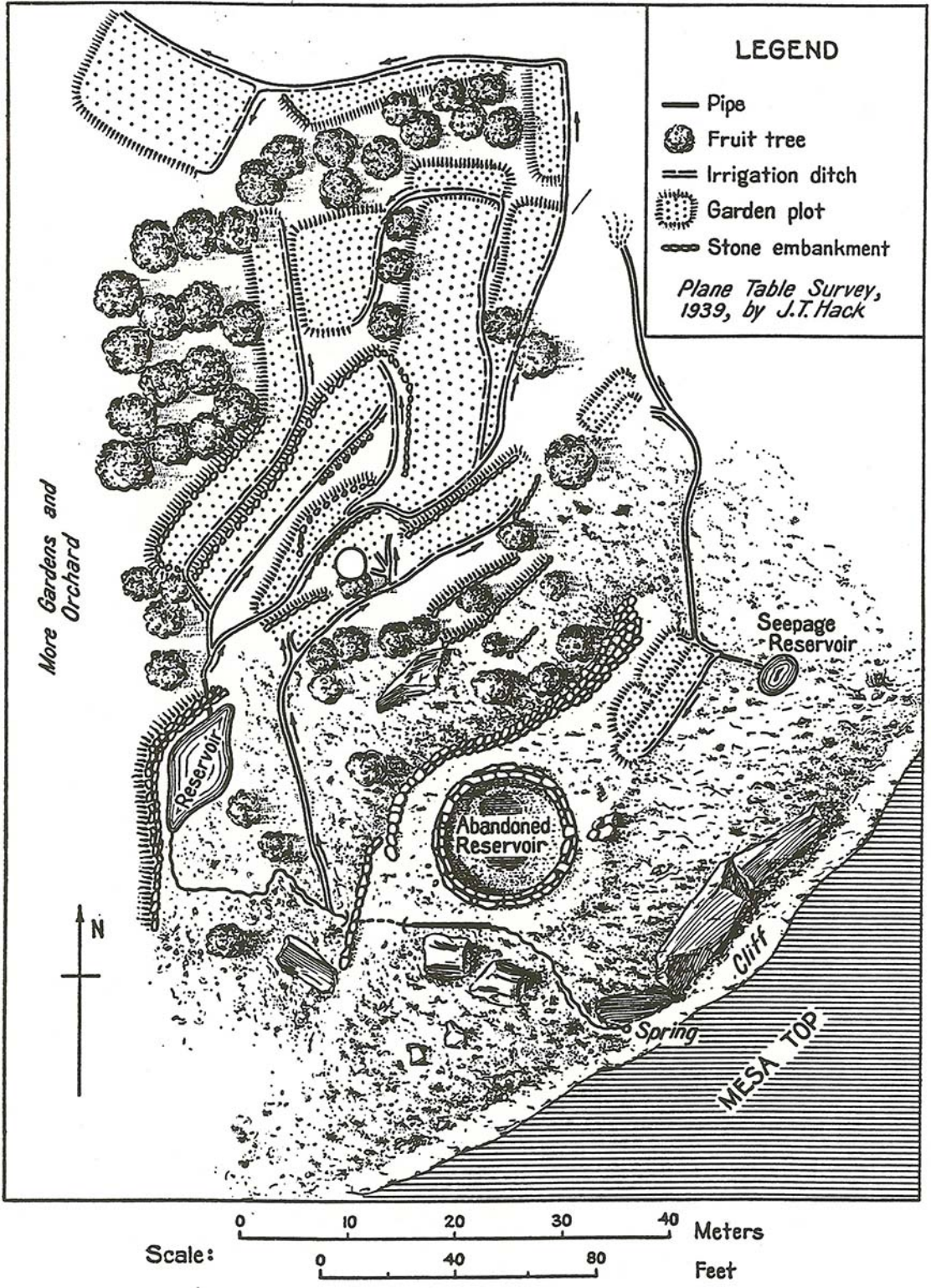



ANTELOPE
MESA
KAWAIKA
AWATOVI


LEGEND
Pipe
Fruit tree
Irrigation ditch
Garden plot
Stone embankment
Plane Table Survey,
1918, by J.T.Hack
MESA TOP


Rte. 160
Rte. 264
Upper Moenkopi
Lower Moenkopi
0 .5 1 Mi
0 .5 1 Km
Colorado R.
San Juan R.
110°
UTAH
Arizona
New Mexico
Marsh Pass
Moenkopi Wash
Grand Canyon
Tuba City
Moenkopi (see inset)
Tusayan
Dinnebito Wash
Oraibi Wash
Polacca Wash
Jeddito Wash
Jeddito
ARIZONA
NEW MEXICO
36°
Ft. Defiance
Ganado
Ft. Wingate
Black Ct.
Colorado R.
Pueblo
Hopi Buttes
Little Colorado R.
San Francisco Mts.
Flagstaff
0 50 Miles
0 50 Kilometers
Winslow
Puerco R.
Holbrook
Navajo Reservation
Hopi Reservation


SCALE:
0 2 4 6 Kilometers
0 2 4 Miles
N
MESA
Kokopnyama
ANTELOPE
Chakpahu
C
B
Kawaika-a
A
Awatovi
Wash
MAPPED
Jeddito
NO 1


LEGEND
Pipe
Fruit tree
Irrigation ditch
Garden plot
Stone embankment
Plane Table Survey, 1939, by J.T. Hack
More Gardens and Orchard
Seepage Reservoir
Reservoir
Abandoned Reservoir
N
Cliff
Spring
MESA TOP
0 10 20 30 40 Meters
Scale:
0 40 80 Feet