

## **Climate Change and Violence in the Ancient American Southwest**

**For thousands of years, climate changes in the American Southwest dramatically affected the lives of the Anasazi people. About 800 years ago, a series of droughts and overpopulation led to starvation and warfare that shattered their civilization.**

During the late 1800s, Americans began to stumble across ancient ruins of large buildings all over the Southwest. When the Americans asked the Navajos living in this region who made the old structures, they simply answered, "Anasazi." This is a Navajo word meaning "ancient ones" or "ancestors of our enemies." (Today, many people refer to the Anasazi as "Ancestral Puebloans.")

Around 1900, archaeologists began to dig up and study the remains of the prehistoric Anasazi civilization. They focused on an area called the [Four Corners](#), where the borders of New Mexico, Arizona, Utah, and Colorado join.

After 100 years of painstaking research, the archaeologists have pieced together much of the Anasazi story. They now know that this ancient people founded a flourishing civilization. The Anasazi cultivated crops in a desert environment with a long history of climate change.

### **The First People**

Originating in Asia, the first people came to what is now the American Southwest about 10,000 years ago. These hunters and gatherers were constantly on the move. The climate was cooler and wetter then, so big game like mammoths and buffalo could be hunted.

After 5000 B.C., the climate changed. It became warmer and drier. When the herds of animals migrated north, the people adapted by gathering more wild plants to eat. The climate changed again, and some animals, such as deer, returned. With meat adding to the great diversity of wild plant foods in their diet, the population began to grow slowly. By 2000 B.C., the nomadic people had become too numerous for the available plant and animal resources. They had to find some new source of food.

### **Farming in a Dry Land**

Sometime after 2000 B.C., traders from Mexico brought a primitive type of corn into the Southwest for the people to cultivate. Later, the people planted squash and beans that also originated from Mexico.

Thus, the Agricultural Revolution came to the Southwest. Families increasingly stayed in one place where they grew most of their food. These people became the Anasazi farmers, who would dominate the Southwest for the next 3,000 years.

The Anasazi built villages made up of pit houses. These were circular structures built partly or entirely underground. As the villages got bigger, the Anasazi built an additional

large pit house for community gatherings and religious ceremonies. The Anasazi believed that they had originated from underground beings who emerged at sacred openings in the earth. The large pit houses, later called [kivas](#), apparently symbolized these openings from the underworld.

By A.D. 900, the Anasazi had learned to make clay pots. This revolutionized their cooking, allowing them to more easily make stews and corn cakes.

The Anasazi started building aboveground square or rectangular houses made of sandstone blocks and wood. Each family constructed a house that adjoined that of another family in a row or arc. The Spanish would later call this group of connected homes a pueblo. Usually, each pueblo had one or more kivas.

The improved lives of the Anasazi drove up their population, especially in what is now the San Juan River Basin of northwest New Mexico. The growing population forced the Anasazi to build more pueblos further away from the few year-round rivers in the region. Increasing numbers of the Anasazi worked at "dry farming." This meant that they depended on summertime rains to water their crops. In the years with summer rain, the farmers prospered. But in times of drought, the crops failed and their families faced starvation.

### **"The Chaco Phenomenon"**

After A.D. 900, a new beneficial climate change took place, bringing predictable summer rains year after year. Crops grew in abundance. The population exploded throughout the Southwest. The number of Anasazi surged to about 100,000 people living in more than 10,000 pueblos.

A remarkable development started to take shape in what we now call Chaco Canyon in northwestern New Mexico. The Anasazis constructed large multi-story buildings with hundreds of rooms that archaeologists later called "Great Houses."

These were not just mud-brick structures. Anasazi masons carefully shaped and tightly fitted sandstone blocks to make the walls. Archaeologists estimate that the Anasazis cut down 215,000 trees from forests 30-40 miles away to make the floors and roofs of 12 Great Houses at Chaco Canyon.

[Pueblo Bonito](#), as archaeologists call it today, was the largest of the Chaco Canyon Great Houses. It included 700 rooms in five stories plus more than 30 kivas. The D-shaped building contained some living space. But the Anasazi used more than half the total rooms for storing food. One "[Great Kiva](#)" was over 50 feet in diameter and 12 feet deep. The Anasazi built about 100 more Great Houses throughout the countryside. They then constructed over 400 miles of straight 30-foot wide roads that connected most of the Great Houses to Chaco Canyon.

The roads are somewhat of a mystery. The Anasazi had no horses or wheeled vehicles. Archaeologists suspect the Anasazi may have used the roads to carry tree timbers, expand trading, and assist people on spiritual journeys.

During this period of a favorable climate, successful crops, increasing population, and great building projects, little warfare seems to have taken place. Archaeologists call this time in Anasazi history "The Chaco Phenomenon."

### **Who Were the Leaders?**

The Anasazi may have used Pueblo Bonito and the other Great Houses simply to store corn and seeds for farmers whose crops failed in dry years. Great House building continued for two centuries, and it required enormous amounts of human labor. Somebody had to organize, feed, and motivate thousands of masons, carpenters, tree cutters, road builders, and other workers.

Many archaeologists believe that the Anasazi farmers supported an elite religious class, who lived in the Great Houses and conducted ceremonies to assure rainfall and successful crops. The archaeologists know that the members of this elite class had a more nutritious diet, were healthier, and lived longer than the farmers did. Living in pueblos scattered over a vast area, the farmers had a hard life. Up to 45 percent of their young children died of poor nutrition and disease.

Something else very strange was going on in Anasazi society. Archaeologists Christy and Jacqueline Turner have examined many Anasazi skeletal remains. They discovered that nearly 300 individuals had been victims of cannibalism. The Turners found that the bones had butcher cuts and showed evidence of being cooked in a pot. In addition, some detached heads had been scalped and roasted over a fire.

The Turners have rejected the idea that the Anasazi were eating one another to avoid starvation. More likely, they "processed" their victims in some sort of ritual, which may or may not have involved actually consuming human flesh.

The Turners speculate that a group of warrior-priests from Mexico fled to Anasazi lands after the violent collapse of their own civilization. This group then took control of the peaceful Anasazi farmers and forced them to pay tribute of food and labor for building the Great Houses and road system.

According to this theory, the warrior-priests performed horrific rituals of human sacrifice and cannibalism to terrorize the Anasazi into accepting their rule. Then, year after year, the Anasazi farmers filled the storage rooms of the warrior-priests' Great Houses with food while their own children often died of malnutrition.

### **Drought and Disaster**

In 1090 and again in 1130 severe droughts brought disaster to the Anasazi civilization centered at Chaco Canyon. The lack of rain, depleted and eroded soils, deforested mountains, and over-hunted wildlife all contributed to widespread starvation.

The Anasazi built small dams, dug irrigation ditches, and farmed on terraced slopes to better capture water when the rains did come. But these efforts ultimately failed.

The Great House elite lost control of the people, who simply began to walk away from their pueblos toward the mesas and mountains of the north where more rain fell. By 1170, the Anasazi had abandoned all their Great Houses.

Moving into the uplands, the Anasazi fought over desirable farmland. Warlike tribes sometimes raided from the Great Plains. During the early 1200s, the Anasazi built fortified pueblos on flat mesa tops and engineered spectacular cliff dwellings. But the climate again betrayed them when temperatures cooled, shortening the growing season and thus reducing their food supply.

Around 1250, the Anasazi were again on the move. They abandoned their mesa-top pueblos and cliff dwellings. They headed back to the lands in the south that they had left a few generations before. This time, they built their pueblos near reliable sources of water like the Rio Grande River. What archaeologists call the "Great Drought," however, struck the Southwest in the late 1200s and persisted for more than a quarter century.

### **Extermination Warfare**

New archaeological evidence reveals that from the late 1200s until the 1500s, the Anasazi were continually at war with one another. They fought for control of watered farmlands, for access to wild-food resources, and perhaps even over competing religions. These were not just occasional raids, but brutal wars of extermination.

There is much evidence of massacres, pueblo burnings, and killings of men, women, and children everywhere in the Anasazi homeland. For example, in 1263, more than 30 infants and children were burned alive in a kiva of an old reoccupied Great House.

The Anasazi built their pueblos in clusters for mutual protection. As the warfare intensified, however, the Anasazi abandoned one pueblo cluster after another. The refugees moved on to other pueblos, greatly enlarging their populations. Some of these pueblos expanded to a thousand rooms or more.

By 1450, only three major pueblo clusters remained in the entire Anasazi homeland. Except for a line of pueblos along the Rio Grande River Valley, the land outside the surviving three clusters was empty of human life. Huge numbers of Anasazi had starved to death or died in the unrelenting violence.

### **Spanish Colonization**

In 1540, [Francisco Coronado](#) led the first Spanish expedition into Anasazi lands. Spanish colonization brought new diseases that further reduced the already devastated Anasazi population.

In one final spasm of violence, the Pueblo People, as the Spanish called them, revolted in 1680. They killed hundreds of Spanish men, women, and children and drove the surviving colonists out of the entire region.

When the Spanish returned in the early 1700s, the Pueblo People did not resist. Instead, they adopted a peaceful way of life to prevent the Spanish from having any excuse to seize their few remaining lands. In 1706, the Spanish took a census and counted 18 pueblos with a total population of fewer than 7,000 people.

In 1848, the United States acquired the Southwest from Mexico. Today, the land of the ancient Anasazi is once again undergoing a severe drought. The Pueblo People still live in their homeland, mainly in New Mexico and Arizona. Their population is growing, but is only about half of what it was 850 years ago during the "Chaco Phenomenon."

### **For Discussion and Writing**

1. How did climate change affect the development of the Anasazi civilization?
2. What was the "Chaco Phenomenon"? Why do you think it occurred?
3. Why do you think the Anasazi civilization collapsed after 1100?

### **For Further Information**

[History](#) | [Cannibalism](#) | [Downfall](#) | [Books](#) | [Lessons](#) | [Links](#)

### **History and Culture**

[Ancient Indian Ruins in the Four Corners Area](#) Pictures and captions.

[Ancient Pueblo Peoples](#) Article and links from Wikipedia.

Chaco Canyon, New Mexico. By John D. Grahame and Thomas D. Sisk, Northern Arizona University.

[Introduction](#)

[The Chaco Phenomenon](#)

[After the Anasazi](#)

[Anasazi](#) Logan Museum virtual exhibit.

[The Anasazi](#) History, pictures, and links to archaeological sites. From DesertUSA.

[Prehistoric Cultures of the American Southwest](#) A 40-page illustrated paper by Dalyce Russill and Corby Cooper. (PDF)

[Anasazi](#) A brief overview. From Chrystalinks.

[Sipapu: Chetro Ketl Great Kiva](#) A tour of a kiva.

[Chaco Culture](#) From the National Park Service.

## **Cannibalism**

[Did cannibalism kill Anasazi civilization?](#) Article by Julie Cart, Los Angeles Times.

[Dying for Dinner?](#) From *U.S. News*.

[Food for Thought](#) From *Billings Gazette*.

[Anasazi Cannibalism?](#) From *Archaeology*.

[Anasazi Practiced Cannibalism?](#) See links also.

## **Downfall of the Anasazi**

[Collapse—Chaco Canyon](#) From Annenberg/CPB.

[Social Strife May Have Exiled Ancient Indians](#) A 1996 article in *The New York Times* by George Johnson.

Mysteries of the Anasazi. From American West Travelogue.

[An Introductory Essay](#)  
[Unanswered Questions](#)

## **Books and Book Reviews**

[Chaco Bibliography](#) List of books and articles.

[Prehistoric Warfare in the American Southwest](#) by Steven A. LeBlanc.

Review of book: [Athena Review](#)

[Anasazi America](#) By David Stuart.

[Man Corn: Cannibalism and Violence in the Prehistoric American Southwest](#) by Christy G. Turner and Jacqueline A. Turner.

Reviews of book:

[Athena Review](#)  
[San Francisco Bay Guardian](#)  
[H-Net Reviews](#)

[Cedar Mesa Project](#)

[\*The Anasazi of Mesa Verde and the Four Corners\*](#) by William M. Ferguson.

### **Lessons**

[Anasazi Web Quest](#) From the History Department, Grossmont College.

[The Ancient Ones](#) A web quest. From Webster University.

[Anasazi Indians](#) Another web quest. By Mrs. Ganz and Miss Paguirian, Warren Township Schools.

[The Anasazi and the Secret of the Petroglyphs](#) Yet another web quest. By R.G. Meyer.

[Interpreting Rock Art of the Anasazi](#) From National Geographic.

### **Link Collections**

[The Anasazi Theme Page](#) Collection of links from Jim Cornish, Grade Five Teacher, Gander Academy, Gander, Newfoundland, Canada.

[Anasazi](#)

[Sites With Information About the Anasazi Tribe](#) By Phil Konstantin.

[Academic Info: Archaeology of the American Southwest](#)

[Google Directory: Anasazi](#)

[Open Directory Project: Anasazi](#)

[Yahoo Directory: Anasazi](#)

[Start.Be: Anasazi](#)

## **A C T I V I T Y**

### **Comparing and Contrasting Civilizations**

The Mayans of Central America, the Toltecs of Mexico, the Mound Builders of the American Midwest, and medieval Europeans all existed at the same time that the Anasazi did (generally, A.D. 1000 to 1400). In this activity, students research and report on these civilizations.

A. Form four research groups to each investigate one of the following civilizations: Maya, Toltec, Mound Builder, and medieval Europe.

B. Each group should use the school library and the Internet to gather information on its civilization, covering the following areas:

1. geography, natural environment, and climate
2. food resources and production methods
3. form of government
4. religious beliefs and practices
5. architectural styles and construction methods
6. evidence of violence and warfare

C. After completing its research, each group should compare its civilization with that of the Anasazi.

D. Each group should report how its civilization is similar to and different from the Anasazi.

E. Finally, the class should identify characteristics that seemed to have been common to all the civilizations.

### **Sources**

Christianson, Gale E. Greenhouse, [\*The 200-Year Story of Global Warming\*](#). New York: Penguin Books, 1999. • Ferguson, William M. [\*The Anasazi of Mesa Verde and the Four Corners\*](#). Niwot, Colo.: University Press of Colorado, 1996. • Gear, Kathleen O'Neal and Gear, W. Michael. "The Rise and Fall of the Anasazi: Why Should We Care What Happened to Them?" [\*The Summoning God\*](#). New York: Tom Doherty Associates, 2000. • Gummerman, George J., ed. [\*The Anasazi in a Changing Environment\*](#). Cambridge: Cambridge University Press, 1988. • Johnson, George. "[Social Strife May Have Exiled Ancient Indians](#)." *New York Times*. 20 Aug. 1996. • Le Blanc, Steven A. [\*Prehistoric Warfare in the American Southwest\*](#). Salt Lake City, Utah.: University of Utah Press, 1999. • Lekson, Stephen H. et al. "The Chaco Canyon Community." *Scientific American*. July 1988:2-11. • National Park Service. [Chaco Culture National Historic Park](#). • Redman, Charles L. [\*Human Impact on Ancient Environments\*](#). Tucson, Ariz.: University



of Arizona Press, 1999. • Stuart, David. [\*Anasazi America\*](#). Albuquerque, N.M.: University of New Mexico Press, 2000. • Turner, Christy G. and Turner, Jacqueline A. [\*Man Corn. Cannibalism and Violence in the Prehistoric American Southwest\*](#). Salt Lake City, Utah: University of Utah Press, 1999.