

Russell Cave

Russell Cave
National Monument
Alabama

National Park Service
U.S. Department of the Interior

Official Map and Guide



Cover illustration by Louis Glanzman

It met their first need—a refuge from the elements. The cave mouth faced east, away from the cold north wind but letting in the morning sun. It would be cool in the summer. Nearby were an excellent water source, abundant game, and a good supply of rock for shaping into weapon points. For the group of travelers making their way through the small valley some 9,000 years ago, the cave was tailor-made. Indians had probably already lived in the area for at least 2,000 years, but it was not until roof falls raised part of the floor above the stream flowing through the cave that it had become permanently inhabitable.

For hundreds of generations to follow, the cave continued to draw Indians. Over so long a time, it is difficult to generalize about how it was used. Since the first excavation here in 1953, it has been thought that the cave was used in winter by people who in warmer months moved to villages along the Tennessee

River. But the evidence is not conclusive, and it seems likely that some groups used it as a permanent home, perhaps for years at a time. Others did use it as winter quarters, while for year-round nomads it was simply a convenient stopover. The archeological evidence does indicate that in the 1,000 years before European contact in the 16th century, the cave was used primarily as a hunting camp.

Most groups inhabiting the cave would probably have numbered no more than 15 to 30—their size limited by the need for mobility and by how many people the land could sustain. They were likely extended families or several related families. Certainly some groups would have used the cave year after year, but varying styles of spear and arrow points tell us that it was inhabited by different bands. Nine burials have been found in the cave, ranging from an infant to a 40-50-year-old woman.

From the remains it appears that these people were short and muscular. In appearance they probably resembled the peoples Europeans first encountered in the 16th century.

The artifacts they left behind tell the story of the cave: the ebb and flow of habitation, whether the users were family groups or hunting parties, what they wore, what they ate, the tools they used. As archeologists dug down to the deepest artifacts more than 30 feet below the cave's present floor, they traced the emergence of pottery before the time of Christ, the introduction of the bow and arrow, the increasing sophistication of tools and weapons. There was also evidence of growing trade with other peoples for tools and ceremonial goods.

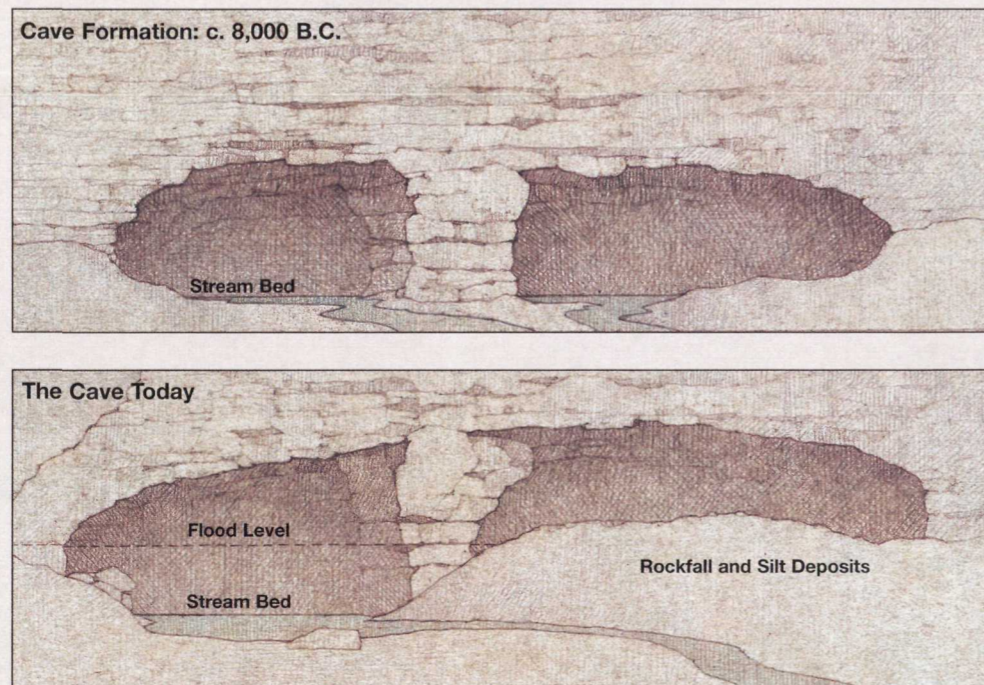
The inhabitants of Russell Cave practiced what anthropologists call "forest efficiency," using all the resources of the land. The

wildlife they hunted—except for the porcupine and the peccary—are still found in the area: deer, turkey, black bear, turtle, raccoon, squirrel, and other small animals. They took fish from the Tennessee River, and probably stored supplies of shellfish from the river in nearby streams. Nuts, acorns, roots, wild fruits, and seeds were staples, as were seeds from goosefoot, a small flowering plant they raised in gardens.

Although times could be hard, especially during the winter, we should not think of these people as constantly struggling, living on the margin of existence. This was a good time for Native Americans in the Southeast. In small family groups they harvested rich food sources according to the season, fully exploiting their environment without destroying what sustained them.

Geology of the Cave

The rock out of which Russell Cave was carved was formed over 300 million years ago at the bottom of the inland sea then covering the region. A layer of carbonaceous deposits (skeletons and shells) was transformed into limestone by the pressure of overlying water, sand, and mud. After the sea retreated, water dripped through fissures in the limestone. The drips became rivulets and then underground streams that cut thousands of tunnels and caverns. About 9,000 or 11,000 years ago, the collapse of a cavern roof beneath a hillside in Doran's Cove created a sinkhole and exposed a tunnel carrying water deeper beneath the ground—Russell Cave. Part of the tunnel entrance was raised above water level by continuing rockfalls, and it was here that humans sought shelter as early as 7,000 B.C. It grew higher with silt deposited by flooding of the creek that still drains into the cave. The combined processes—deposits and ceiling rockfalls—caused the cave mouth to migrate up the hillside. Although the deposits eventually raised the floor above flood level, human debris and a steady rain of fine material from the roof raised it another 7 or 8 feet. Today the floor of the upper entrance is some 30 feet above the original rockfall.



Illustrations by Greg Harlin

The Archeological Record

Russell Cave offers one of the longest and most complete archeological records in the eastern United States. The artifacts found here indicate intermittent human habitation for almost 9,000 years. Using carbon-14 dating techniques, researchers have dated to within 300 years the charcoal remains from fires uncovered at various depths. They could then date objects found at the same depth as a fire, gradually building up a continuous record. The initial excavation by the Tennessee Archeological Society in 1953 unearthed a great number of bone tools, jewelry, and pottery fragments to a depth of 6 feet. The Smithsonian Institution, with financial support from the National Geographic Society, undertook another dig from 1956 to 1958. These excavations reached a depth of more than 32 feet. A third and final 10.5-foot excavation was done by the National Park Service in 1962, both to fill out the archeological record and establish an on-site exhibit.

Do not remove or disturb any item in this park. The Archeological Resources Protection Act specifies serious felony and misdemeanor charges for the removal or disturbance of archeological or historical artifacts on Federal lands.

About Your Visit

Russell Cave National Monument was established on May 11, 1961 when 310 acres donated by the National Geographic Society to the American people were set aside to protect the site and its surroundings.

Some of the artifacts found in the cave are displayed at the visitor center museum. On request and depending on park staff availability, demonstrations are given on weapons and tools from the Archaic period and on food preparation and cooking methods. During the growing season an Indian garden features plants likely grown by cave inhabitants. The park's Indian Day Festival is held annually.

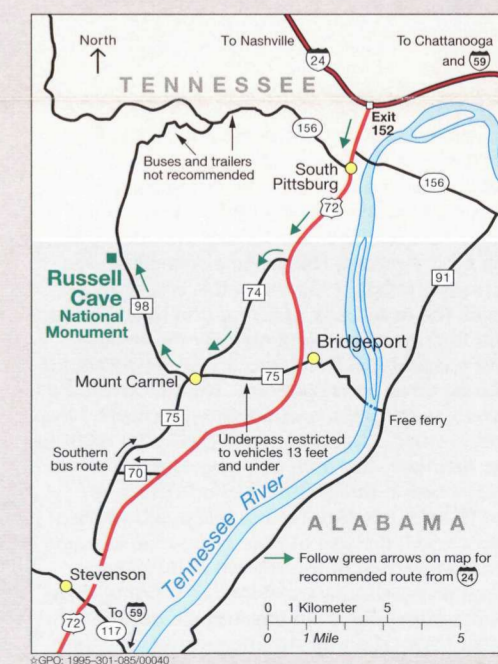
Entrance into cave passages, except on the walkways around the archeological exhibit, is allowed only with written permission of the superintendent. Near the cave are a .6-mile trail featuring plants used by the cave's inhabitants and a 1.2-mile

hiking trail. Visitors can picnic in a designated area, but no fires, cooking, or camping are allowed.

The cave is open 8 a.m. to 5 p.m. central time year-round except on Christmas Day. Organized groups may arrange for guided tours. Russell Cave is 8 miles west of Bridgeport, Ala. From U.S. 72, follow County Road 75 west to Mount Carmel. Turn right on County Road 98 and follow to park entrance on left.

For more information write to the Superintendent, Russell Cave National Monument, Bridgeport, AL, 35740. Call (205) 495-2672.

For Your Safety: Please do not run on the trails. Stay on them and do not take shortcuts. The hiking trail is steep and arduous. There are hidden dropoffs, sinkholes, and other natural hazards.

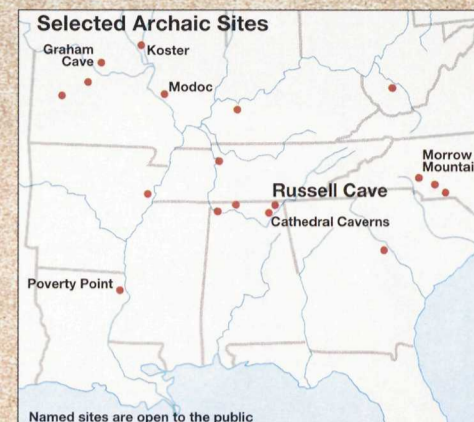


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To characterize the evolving stages of civilization in southeastern America before European contact, archeologists have established a general cultural sequence: Paleo, Archaic, Woodland, Mississippian. While there is a general correlation between stages and the dates shown below, these characterizations are not precise for every region in a given period. Thus some peoples continued to thrive in the Woodland stage while others not far away built great cities. For most of Russell Cave's 9,000 years of human use, its inhabitants were in the Archaic stage. The cave was one of thousands of southeastern Archaic sites, a few of which are shown on the map at right. Recent evidence indicates that the earliest users of the cave were actually at the transitional stage between Paleo and Archaic. During the Paleo period they still depended to a great extent on hunting large animals rather than exploiting a wider range of resources.



Thousands of Archaic sites have been uncovered throughout the southeastern United States, ranging from permanent cave dwellings to campfire remains. As with Russell Cave, most are located along major river valleys. During the Woodland period in this region, the inhabitants began constructing burial mounds, often conical in shape. This one near Russell Cave, built around A.D. 400, is a low mound 20 feet across. An undetermined number of people are buried here. After an exploratory excavation their remains have been left in place.



(A.D. 1000 to 1600)

Mississippian

The Woodland period civilizations that took root in the Mississippi and Tennessee River Valleys flourished in the Mississippian period. Large towns and ceremonial complexes with huge temple mounds were made possible by the refinement of corn agriculture. Because of the establishment of these permanent settlements, places like Russell Cave were used only sporadically as stopovers for hunting and trading parties. The Cherokee Indians of the historic period rarely used the cave. Only one artifact from the historic period has been found in the cave.



Many of the artifacts dating from this period are jewelry similar to that found in permanent towns in the area. Left to right: incised bone pendant (or atlatl handle); shell bead; mollusk shell necklace.

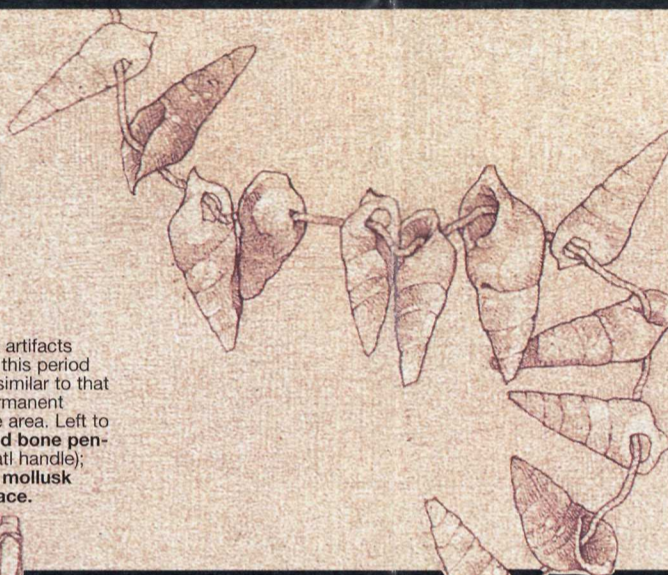


Illustration of pot is based on fragments found at Russell Cave. The incised design is common in Mississippian pottery.

Mississippian Period:

- 1540 DeSoto expedition passes within 100 miles of Russell Cave
- 1519 Cortes begins conquest of Aztecs
- 1492 Columbus reaches America
- 1455 Gutenberg produces first printed book in Europe
- 1453 Constantinople falls to Ottoman Turks
- 1300 Benin (Nigeria) empire emerges; 1325: rise of Aztecs in Mexico; 1347: Black Death reaches Europe
- 1000 Vikings reach America; 1066: Normans invade England; 1096: First Crusade

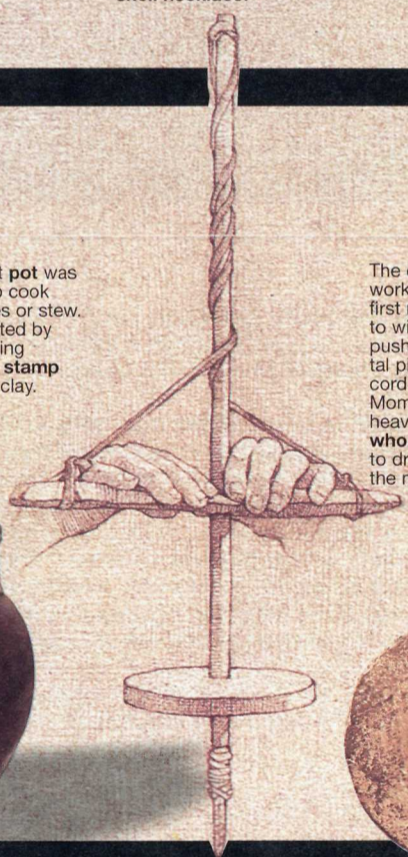
(500 B.C. to A.D. 1000)

Woodland

In Woodland times in the Southeast, settled village life grew more important as agriculture and trade with people to the north allowed more time for refinement of political and ceremonial life. The inhabitants of Russell Cave, while retaining many of the characteristics of Archaic life, were influenced by the region's religious and political developments. Significant material changes included the introduction of pottery and the bow and arrow. Trade contacts undoubtedly accounted for much of the change, but some archeologists believe that these technologies indicate the arrival of new people in the area. Domestic artifacts from the early Woodland, including the first evidence of gardening, suggest renewed use of the cave as at least a semi-permanent domicile. Later in the period the cave was used mostly as a winter hunting camp when river villages dispersed into more efficient smaller groups at the onset of cold weather.



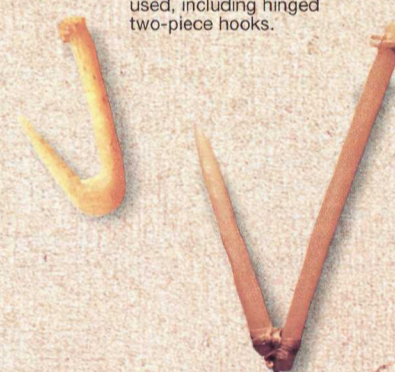
This nearly intact pot was probably used to cook seeds and berries or stew. Design was created by repeatedly pressing carved wooden stamp into the still-wet clay.



The cave's inhabitants worked the pump drill by first rotating vertical shaft to wind up cord, then pushing down on horizontal piece to unwind the cord and rotate the drill. Momentum created by the heavy stone spindle whorl (disc pictured next to drill) rewound cord for the next push down.

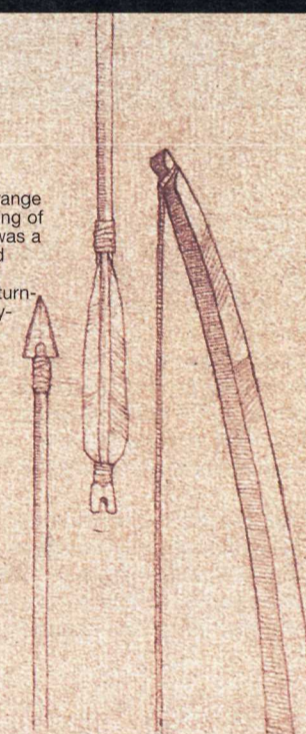


This stone gorget is thought to have been hung around the neck as a throat ornament.



Fishing expeditions to the Tennessee River, only 6 miles away, were common. A variety of bone fishhooks were used, including hinged two-piece hooks.

The bow and arrow improved a hunter's range and accuracy. Fletching of shafts with feathers was a crucial skill that could make the difference between a kill and returning to the cave empty-handed.



Illustrations by Greg Harlin

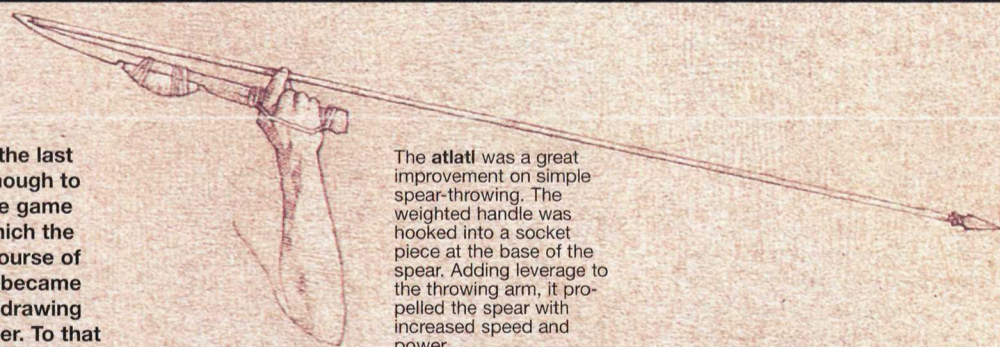
Woodland Period:

- 900 Rise of Mississippian mound cities
- 800 Charlemagne crowned first Holy Roman Emperor; 853: first printed book in China
- 600 Height of Mayan civilization; 632: beginning of Arab expansion and spread of Islam
- A.D. 160 Height of Roman Empire
- 300 B.C. Rise of Hopewell chiefdoms and cities in North America; 202: China united under Han dynasty; Great Wall underway
- 400 B.C. Founding of city of Teotihuacan in Mexico; 334: Alexander begins march of conquest
- 500 B.C. China develops cross-bow and iron casting process; multi-tiered galleys in use; development of waterwheel; 477-429: flowering of Athenian civilization

(7000 B.C. to 500 B.C.)

Archaic

By about 8000 B.C., at the tail end of the last ice age, the weather had warmed enough to help cause the extinction of the large game (overhunting also contributed) on which the Paleo hunters had relied. Over the course of the early Archaic, Native Americans became versatile, efficient hunter-gatherers, drawing on all the resources of forest and river. To that end their tools became steadily more varied and specialized. Bone and antler were shaped into an array of implements. Stone tools, long in use, were being ground and polished by the late Archaic. The mortar and pestle for milling, the fishhook, the drill, woodworking tools—all were used in the Archaic period. There is some evidence that for the last 3,000 years of this period, the use of river resources became more important in the region, and Russell Cave was probably used less as a home than as a hunting camp. In the Archaic era the basic foundation for American Indian culture was laid, persisting in some areas until European contact.



The atlatl was a great improvement on simple spear-throwing. The weighted handle was hooked into a socket piece at the base of the spear. Adding leverage to the throwing arm, it propelled the spear with increased speed and power.

Russell Cave inhabitants wove simple cane baskets used to gather nuts, seeds, etc. Stone mortar and pestle were used for grinding these into meal.



Deer hides were prepared for use as clothing and bedding by defleshing them with a scraper and softening them with the brains. Bone awls were used to punch holes along the edges before the pieces were sewn together with bone needles and rawhide or sinew strips.



Inhabitants used bone pins to keep their hair out of the way.

Cooking by boiling was an early development. A pit lined with hide was filled with water and pieces of meat. Heated stones were then placed in the water to bring it to a boil.



Archaic Period:

- 900 B.C. Foundation of Kush kingdom in Africa
- 2000 B.C. Advances in astronomy and mathematics; 2000-1500: Stonehenge built; 1500: Hittites perfect iron smelting; Syrians devise early alphabet; 1150: Olmec civilization in Mexico
- 3000 B.C. Alloying of copper and tin to produce bronze; pottery wheel, plow, and cart wheel; 2800: Old Kingdom founded in Egypt—first pyramids; 2500: domestication of horse in Asia
- 6000 B.C. Coiled pottery and weaving in Near East; beginnings of agriculture in Europe and Mexico; 5000: smelting of copper
- 8000 B.C. Agricultural revolution underway; domestication of animals and cultivation of wheat and barley; bow and arrow in general use; transition to settled villages
- 10,000 B.C. Hunting and gathering cultures; atlatl in general use; Americas settled since at least 25,000 B.C.