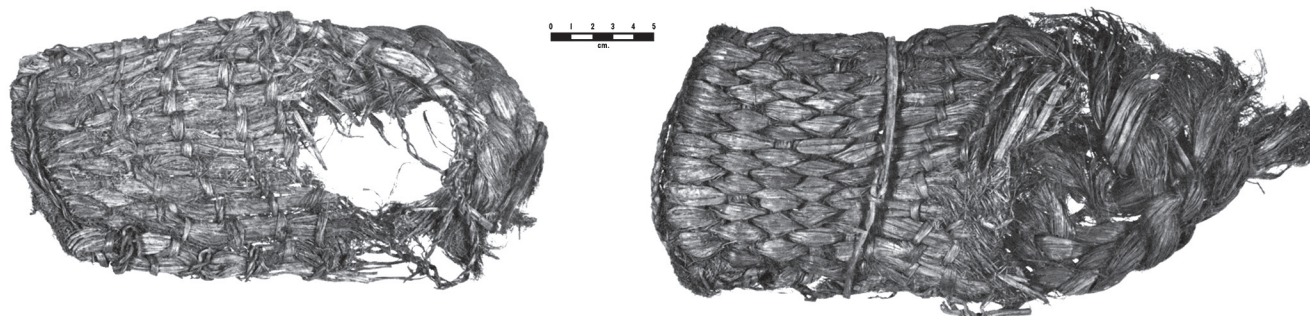


A Walk in Time

Prehistoric Shoes of the Southeastern United States

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Sandals from Benton County, Arkansas bluff shelter

Some of the earliest evidence for wearing shoes comes from ancient cave paintings in Spain and the South of France made at the end of the last Ice Age around 10,000 years ago. These include depictions of people wearing shoes. Some researchers, like Erik Trinkhaus, have argued that anatomical changes seen in the toe bones of early modern humans are related to the development of footwear. Trinkhaus argues that the narrow and smaller (more gracile) toe bones seen occasionally in Neanderthal and early modern humans in the Middle Paleolithic period indicate early adaptation to wearing shoes. The compression of the feet inside a shoe changes how we grip when we walk and the mechanical force our feet endure and exert. Trinkhaus also notes that by the middle Upper Paleolithic period, the toe bones of our early ancestors indicate a permanent and consistent shift to the wearing of shoes. Other examples of indirect evidence for shoe wearing by early modern humans include a footprint with the appearance of having a moccasin like cover on it in the Upper Paleolithic layers of the cave site of Grotte de Fontanet in France and skeletal remains from the Sunghir Upper Paleolithic sites in Russia (ca. 27,500 BP) that appear to have had foot protection—this interpretation is based on the recovery of ivory beads found near the ankle and foot of a burial.

Preservation of perishable plant fibers and animal hides that make up footwear is rare and depends upon local environmental conditions—usually waterlogged or dessicated—that allow archeologists to recover artifacts constructed from these organic materials. So while we have a significant number of examples of footwear from regions that are very dry such as Peru, Egypt, and the American Southwest, regions that are more humid with seasonal variation, such as western Europe and the American Southeast, have a more limited archeological record of such perishable artifacts.

The oldest shoes recovered to date are sandals found at a few Paleoindian (ca. 9000–12,000 BP) sites in the American Southwest. These include woven plant fiber sandals from dry, high altitude sites in the Southwest and Great Basin, such as those from Catlow Caves, Oregon, which are dated at 10,500–9200 BP. Early Archaic shoes and sandals have also been recovered and include those from the Fort Rock site in Oregon (ca. 7500 BP) and the Chevelon Canyon sandal (8300 BP). Moving forward in time, examples of shoes in the archeological record increase with dozens of Early Archaic period sandals and shoes having been recovered from (ca. 6500–9000 BP) sites in both the Southwest and, amazingly, from caves and bluffshelters in the Southeast.



Although a humid region, the southeastern United States has several significant karst regions that boast large dry caves and numerous bluff shelters whose conditions are just right for the preservation of organic materials. In these perpetually dry areas, normally perishable artifacts such as baskets, footwear, bags, and blankets, all made from plant fibers, escaped destruction by the physical elements. These karst regions include the Mammoth Cave area of Kentucky, select caves in southern and central Missouri, such as Arnold Research Cave, and bluff shelters in the Ozark Plateau. While most of these caves and bluff shelters, including those in the Ozark Plateau, have experienced extraordinarily high levels of damage due to looting, archeological research carried out in the early and mid-1900s has provided modern researchers with substantial museum collections to study.

The footwear specimens from Arnold Research Cave provide a record of nearly 7500 years of shoe and sandal production and use and include the oldest dated specimen recovered in North America east of the Rocky Mountains. There are 18 complete to partially complete examples of footwear, and with two exceptions, all were made from plant materials. The two leather shoes were constructed from flat pieces of leather with fiber cordage used to draw them around the foot (Kuttruff et al. 1998). A similar record of diverse styles of both slip-on shoes and sandals have been recovered from the Ozark bluff shelters, but because these collections were made at different dates by different research teams they have been split between the University of Arkansas Museum and the National Museum of the American Indian and we do not know exactly how many fragments of footwear there are (Horton 2010).

The Mammoth Cave and Salts Cave “slippers” (slip-on shoes), unlike those from either Arnold Research Cave or the Ozark Plateau, most likely all come from the Middle to Late Archaic period and are not as

diverse in both construction and material. All of them are twined from the leaves of a plant known as “Rattlesnake Master” (*Eryngium yuccifolium*); there are no sewn leather styles found in either cave system. In addition, other archeological evidence indicates that these caves were not used as frequently after about 3000 years ago (Carstens and Watson 1996).

One of the remarkable aspects of the shoes from Arnold Research Cave, the Mammoth Cave region, and the Ozark Plateau is that there have been enough of them recovered, whole or at least partially intact, to describe changes in shoe styles over time (Horton 2010; Kuttruff et al. 1998). Thus, we know that although there may have been some sewn leather shoes in the Woodland period, and perhaps even the Archaic, the majority of the shoes from these earlier time periods were made using plant fiber, specifically Rattlesnake Master leaves. This plant was critical in the production of many types of perishable artifacts, from bags to blankets to shoes, for at least 8000 years in the southeastern United States (Horton 2010).

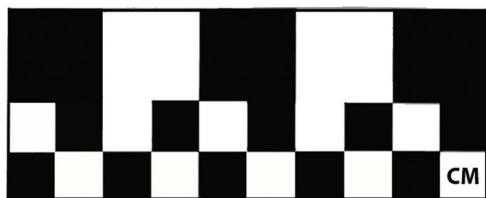
Carefully tailored “moccasins” of well-tanned deer hide seem to be a late prehistoric shoe style, based on both the radiocarbon date from the Arnold Research Cave example, the associated artifacts from shelters in the Ozark Plateau where this style is found, and iconographic images of people on engraved shell and embossed copper artifacts. However, it is likely that people continued to make and wear woven plant fiber sandals and shoes, at least occasionally, well into the late prehistoric period.

The well-preserved record of footwear from bluff shelters in the Ozark Plateau is the only direct evidence we have for Arkansas. These artifacts give an indication of the likely footwear styles and methods of construction that were used much more widely by Arkansas Indians in the past. Woven vegetal fiber shoes and sandals no doubt were made and used by many cultural groups through time all across Arkansas.





Rattlesnake Master, twined slip-on shoe. Ozark Plateau Bluffshelter (Benton Co.); no direct date (likely Late Archaic-Middle Woodland).



Rattlesnake Master, twined slip-on shoe. Ozark Plateau bluff shelter (Newton Co.); no direct date (likely Late Archaic-Middle Woodland).



Suggested Readings

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