

Uncovering Precontact Native American Stone Structures in Virginia (90 min.)

Article: The Enigmatic Stone Structures of Western Virginia by Daniel Pezzoni (2020)

SOL's:

History - VUS.1a, VUS.1b, VUS.1c, VUS.1d

English - 9.5, 9.8, 10.1, 10.5, 11.5, 12.5

Objectives:

- Students will learn about the existence of precontact Native American stone structures in Virginia and their significance.
- Students will explore the architectural features and potential cultural meanings behind these structures.
- Students will engage in critical thinking and research skills to understand how these structures challenge traditional historical narratives.

Materials:

- Copies of the article "The Enigmatic Stone Structures of Western Virginia" by Daniel Pezzoni (2020)
- Access to the internet for research.
- Cornell style guided notes
- Research Guide

Lesson Plan:

1. Introduction (15 minutes):

Begin by asking students what they know about Native American history in Virginia before European contact. Encourage a brief discussion to assess prior knowledge.

2. Reading and Discussion (30 minutes):

Distribute copies of the article "The Enigmatic Stone Structures of Western Virginia" to students. Have students read the article individually or in pairs and fill out the guided notes as they read.

Facilitate a discussion based on the following questions:

- What were some of the key findings and observations mentioned in the article?
- What are the architectural features of the stone structures mentioned in the article?
- How does the article challenge conventional narratives about Native American history in Virginia?
- Why do you think these structures are significant?

3. Research Activity (30 minutes):

- Divide the class into small groups, assigning each group one of the stone structures mentioned in the article: Sinking Creek Mountain, Cole Mountain, Panther Falls.
- Research your assigned stone structure, using reliable sources such as reputable websites, books, and academic journals.
- Find additional information, images, and potential cultural meanings associated with your assigned structure.
- Students can gather their findings into an online document or slideshow for recording. Have students include works cited for their references.

4. Conclusion (15 minutes):

Conclude the lesson with a class discussion based on the following questions:

- What did you learn about the architectural features and cultural significance of these stone structures?
- How do these structures challenge traditional historical narratives?
- Why is it important to study and preserve such historical sites?

Assessment:

Notes, research activities, discussion participation

Options for Differentiation:

- For students who struggle with reading comprehension, provide a simplified version of the article with key information highlighted.
- Pair students with a partner who can provide additional support or guidance during the group activities.
- Offer graphic organizers or templates to help students organize their thoughts

Extension Activities:

1. Have students build a small-scale replica of a Native American stone structure using craft materials. They should consider the architectural features discussed earlier.
2. Research and write a short essay about the potential significance of one of the stone structures discussed in the article from the perspective of a Native American living in that era.
3. Write a research paper analyzing the historical documentation of Jamestown Church as the oldest standing building in Virginia. Include details about its construction, and architectural and historical significance.

Cornell-Style Guided Notes

Questions	Topic/Notes
What is significant about the Jamestown Church?	Introduction:
How did John White perceive the coastal architecture in the 1580s? What material(s) did Native Americans use in their architecture?	Precontact Native American Architecture:
Describe, in your own words, Sinking Creek Mountain and Appalachian Trail's stone structures. What are these structures compared to?	Stone Structures of Western Virginia:

<p>What type of modern techniques did the historians use to figure out the time period of the structures?</p>	<p>Historical Awareness:</p>
<p>Describe the construction, form, functional use and architectural features of: Sinking Creek Mountain, Cole Mountain and Panther Falls.</p>	<p>Architectural and Functional Characteristics:</p>
<p>What kind of impact, if any, does studying stone structures have on Virginia's prehistory?</p>	<p>Conclusion:</p>
<p>Summary</p>	

Structure Research

Research Questions	Notes/Answers	Source: Where did you find this information?
What geological processes led to the formation of your assigned stone structure?		
How does the physical appearance of your assigned stone structure contribute to its cultural significance?		
Are there any legends, myths, or folklore associated with your assigned stone structure? If so, how do they reflect the cultural beliefs or values of the community?		
What role does your assigned stone structure play in the local ecosystem or environment?		
How has the perception or understanding of your assigned stone structure changed over time?		

The Enigmatic Stone Structures of Western Virginia

By J. Daniel Pezzoni

What is the oldest standing building in Virginia? A lot of research has gone into answering that question. The current front-runner, based on historical documentation, is Jamestown Church, built in 1639 (actually, only the church's brick tower and foundations are original; the rest dates to 1906).

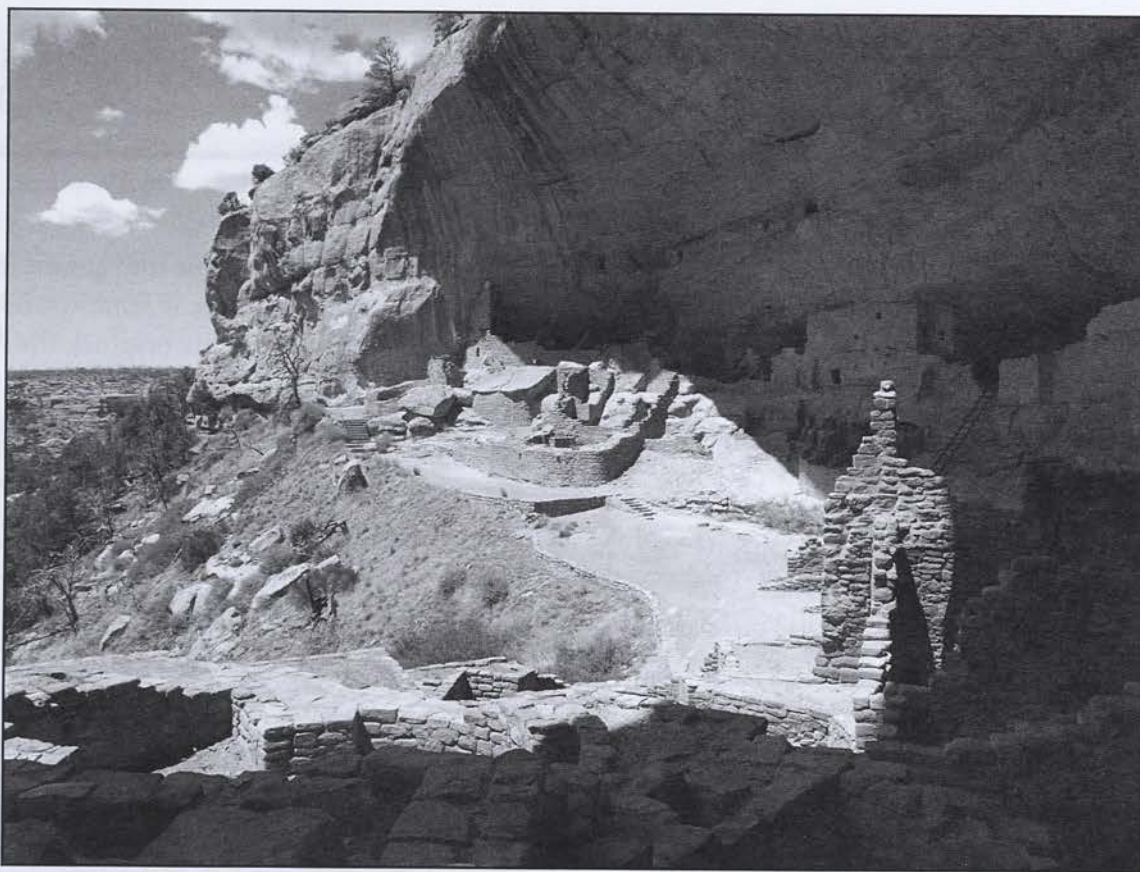
But Jamestown's buildings were not the first Virginia architecture. When the colonists arrived in 1607 they encountered thriving Native American communities, all with rich architectural traditions. A few decades before, in the 1580s, Roanoke Island governor and artist-in-residence John White painted meticulous renderings of the coastal region's architecture. The buildings depicted by White were wooden, which is not surprising given the lack of building stone on the coast, but even where stone was available inland the East's precontact Native Americans did not build their houses of it.¹ At village site after village site archaeologists find post molds, the vestiges of perishable wooden architecture, not evidence of stone construction.



*A bridge cairn at Cole Mountain, Amherst County, Virginia.
(This photo and others by the author unless otherwise noted.)*

The situation is dramatically different in the higher elevations of western Virginia, where mountains like Sinking Creek Mountain on the Craig/Montgomery border preserve precontact Native American architecture virtually intact. At 3,000 feet above sea level, Sinking Creek Mountain is high and wild and would be little visited were it not for the fact that a section of the Appalachian Trail runs along it. The trail passes through a complex of stone piles and cairns at a high point known as Bruisers Knob where hikers have photographed some of the structures and posted images online. A branch trail descends to a cluster of springs and a shelter in Sarver Hollow a few hundred feet below the knob where more stone constructions dot the woods. Considered holistically, taking into account form, construction, context, and function, the 200-plus structures in the two complexes are unlike the lime kilns, grave memorials, field clearing piles, and other stone structures built in Virginia during historic times. Instead, the evidence points to construction of the Sinking Creek Mountain complexes and others located throughout Virginia and the East by precontact Native American peoples. The most sophisticated structures in the complexes rival, albeit at smaller scale,

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Long House (ca. 1200 AD) at Colorado's Mesa Verde, the product of a well-documented Native American masonry architecture tradition.

the ancient Ancestral Pueblo stone architecture of the American Southwest, sites like Mesa Verde and Chaco Canyon.

Researchers have known about the East's enigmatic stone structures since at least the eighteenth century. In 1762 future Yale president Ezra Stiles sketched a "monument of stones" near Stockbridge, Massachusetts, and noted "Every time [an] Indian came along [he] cast a stone upon it." More recently, retired Princeton University art conservator and stone structure researcher Norman Muller teamed with James Feathers of the University of Washington Luminescence Dating Laboratory to date a stone construction in the Oley Hills complex in Berks County, Pennsylvania, using a technique known as optically stimulated luminescence (OSL). The date they obtained was approximately 500 BC. (As this article went to press, the New England Antiquities Research Association was launching its NEARA OSL Dating Project 2020 with the objective of dating stone complexes throughout New England.)

Radiocarbon dating of cremations found under a low oval-shaped stone mound at the Viney Branch Site in Boyd County, Kentucky, yielded a date of 520 AD (+/- 125 years), a thousand years later than the Oley Hills cairn but well within the precontact period. Closer to home, a painted pictograph

¹ Precontact means before contact with Europeans, which in the Southeast generally occurred from the 1500s to the 1700s, depending on region. The article uses the term pile (from the same Latin root that gives us the word "pillar") to describe stone constructions that do not have a markedly stacked appearance. The term is not meant to suggest these constructions are less important than others or were less meaningful to their builders. Pillar-like constructions with a more stacked appearance are typically referred to as cairns.



Front view and niche detail of the jagged niche structure on Sinking Creek Mountain.

depicting a bird (possibly a thunderbird) was recently discovered at a western Virginia stone construction broadly similar to the Sinking Creek Mountain cairns. The pictograph recalls similar Native American rock art of precontact date on Paint Lick Mountain in Tazewell County, the best known of Virginia's rock art sites.

To an architectural historian such as myself, the more deliberately constructed Sinking Creek Mountain structures signal their non-historic character through aspects of their construction, form, and detail. At the east end of Bruisers Knob, where the ridge descends to a small gap, a bulbous stone structure stands next to the trail. The angular stones of which the structure is built, most tabular or brick-like in shape with flat faces that facilitated stacking, were collected from the Rose Hill Formation. The formation is a Silurian sandstone of dull reddish-gray color that outcrops at Bruisers Knob and elsewhere on the mountain.

The structure has frontality, with a front facade that differs markedly from the back. The facade has a slight backward lean (the architectural term is "battered") and wraps around the structure's sides like form-fitting sunglasses or a mask. The back, in contrast, consists of a sloping pile of loose stones that trails off to about fifteen feet behind the facade. Structurally, the piled stones serve to buttress the facade and constitute the structure's core.

At the foot of the facade is a low niche spanned by a slender lintel stone about four feet in length. The stone has an irregular or jagged lower edge with a tooth-like protuberance that points down into the niche. The lintel stone's irregularity distinguishes it from the other stones of the structure, which were chosen for ease of stacking, and makes it clear it was selected for the purpose of making the opening of the niche appear jagged. The facade above the niche steps down to the left, but on the right it wraps around at a consistent height to form a parapet which rises over the sloping stones of the back.

Like the rest of the facade the parapet leans, giving it a precarious teetering look. The end of the parapet consists of a stack of small tabular stones capped by a larger block. In other words, the parapet is top heavy, which adds to the appearance of precariousness. In actuality, the parapet is not precarious at all since it has been leaning since it was built. Its precariousness is a carefully contrived architectural effect. Another one of these rounded structures with a facade, also beside the Appalachian Trail, looks from behind like a cracked egg with the yolk spilling out. The more pronounced of this second structure's parapets has the same precariously stacked and leaning form as the parapet in the first structure. Rounded structures constructed of reddish-gray Rose Hill stones are also numerous in the Sarver Hollow Complex, which includes later historic-period resources.

Erratum

“The Enigmatic Stone Structures of Western Virginia.”

by J. Daniel Pezzoni

Pages 14-15, “painted pictograph”: Additional study has determined the feature is not a painted pictograph. Its true nature remains uncertain.

It should already be evident that the Sinking Creek Mountain structures are not field clearing piles, but for the sake of putting that common misidentification to rest I'll list some of the arguments. The structures are not field clearing piles because they do not serve the essential function of a field clearing pile: they do not clear a field. Instead, they occupy the acreage they would ostensibly clear. Field clearing piles do not have architectural features like frontality, stacked stonework, niches, or parapets. It's hard to envision someone creating hundreds of separate field clearing piles when farmers in the nearby Sinking Creek and North Fork of the Roanoke valleys typically created just one or two piles next to their fields (I have documented field clearing piles in both valleys).

How could the Sinking Creek Mountain structures and others be missed by modern researchers for so long? The historiography of the lapse would be an article in itself, but I'll offer a few preliminary observations. One is the misidentification discussed above, the unexamined assumption that any stone feature is the result of historic-period activities. The complexes, many of them located on mountaintops and other high places, are not in the valleys where artifactually rich (and hence more readily datable and contextualized) village sites are found. Elevated siting undoubtedly had a ritualistic aspect, though not all stone structure complexes were located on high ground. The Rye Cove Complex in Scott County occupies a boulder-strewn slope on a valley floor near one of Virginia's most impressive landscape features, the Natural Tunnel (not to be confused with the Natural Bridge in Rockbridge County).

A deeper reason for the lapse has to do with a disconnect between the world views of the two groups of researchers who would be most likely to study the complexes, archaeologists and architectural historians. Archaeologists, the researchers who most often encounter the complexes in the field and should be on the front line of their analysis, rarely study above-ground resources, leaving them to architectural historians, and architectural historians assume archaeologists have anything from the pre-contact period covered. Fortunately, a few archaeologists active in the middle and southern Appalachians, people like Hannah Harvey, Harry Holstein and Charity Moore, have taken a special interest in the structures and their documentation.

The Sinking Creek Mountain complexes also include wall-like constructions. In Sarver Hollow these cluster near a concentration of springs and runnels where water bubbles out of the ground and ducks back under before coalescing to form Sarver Hollow Branch. One wall-like cairn tops a small natural cave feature where water can be heard running underground. Stone walls are the dominant feature of another important western Virginia stone structure complex, the Dutton Gap Complex on Pine Mountain on the border between Virginia's Dickenson County and Kentucky's Pike County (Pine Mountain is one of Kentucky's highest elevations with views said to reach as far as Ohio). One set of Dutton Gap stone walls forms a roughly rectangular enclosure containing about 3,000 square feet. The enclosure is similar to a class of such constructions in the region where Virginia, Kentucky, and West Virginia join. Some of the enclosures were massively built, like the lost "fort" near Beckley, West Virginia, described in an 1842 article and commemorated as the Big Beaver Creek Ancient Fortification on a recently dedicated West Virginia Division of Highways historical marker, though whether the enclosure was a fortification or not is debatable (see image on page 21).

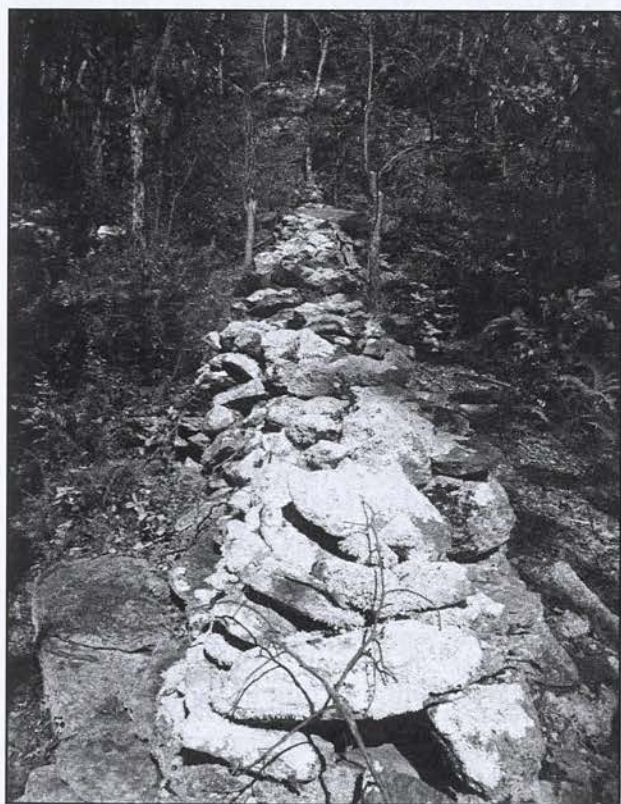
The Dutton Gap enclosure stands on a cliff with one of its four sides demarcated by the edge of the cliff instead of a wall. With the trees below the cliff removed, individuals standing in the enclosure would have had sweeping views of eastern Kentucky and the skies above. Possible functions include a celestial or landscape observatory or possibly apotropaic use (protection from evil influences). At the very least it seems the cliffside enclosure defined some sort of ritualistic/ceremonial space.



The cliffside enclosure at Dutton Gap.

The largest precontact stone complex yet identified in Virginia is the Cole Mountain Complex, a system of wall-like lines and other features extending for over two miles on the heights of Cole Mountain, a 4,022-foot peak in the Blue Ridge Mountains of Amherst County. The complex's longest line climbs to the top of the mountain twice, roughly encircling it, in the process stair-stepping up a series of outcrops at over 30-percent grade and connecting springs on the north and south mountainsides. Sections of the line have

more the appearance of connected rows of cairns, rather than the regular height of most historic-period walls, and in fact the line is so varied (and long) as to suggest piecemeal construction over decades or centuries. The line sprouts offshoots at some of the outcrops and boulders that punctuate its length, and it often steers toward outcrops and goes up and over them.



A lichen-covered wall on Cole Mountain ascends to the outcrop where the possible vision quest structure is located.

One of the most dramatic features is found at the top of a high outcrop on the line's western offshoot. The feature consists of a short wall segment wedged between upright slabs of rock and constructed of long pointed rocks with the points facing outward, creating a jagged or bristling appearance. A person has to rock-climb to reach the feature, which may be analogous to a vision quest structure or prayer seat, a type of stone structure built by the Klamath and Modoc peoples of southern Oregon in connection with vision quests. Also of interest are two bridge cairns consisting of lintel stones that span between rocks, in each case with small stones perched on the lintels. One of these bridge cairns is located deep inside a jumble of outcrop boulders; like the possible vision quest structure, a person has to look for it to find it.



A section of Cole Mountain wall with a five-foot-high peak, a possible snake effigy.

Historically, the gaps on the two ends of Cole Mountain, Cowcamp Gap and Hog Camp Gap, were used by drovers who herded cattle and hogs from western farms to eastern markets, but the wall-like lines on the mountain have nothing to do with these activities (for one, multiple breaks of a hundred feet or more would have rendered them useless as livestock enclosures). As at Sarver Hollow, springs—specifically springs that play hide-and-seek before forming fully above-ground branches—seem to have been important to the line builders of Cole Mountain, and intermittent watercourses (plus a river and waterfall) were also of interest to the builders of the Panther Falls Complex, located five miles southwest of Cole Mountain.

At Panther Falls, the constructions are mixed, with individual cairns and piles, wall segments, and elongated hybrid constructions, perhaps as many as a hundred constructions in all. The wall segments exhibit a range of behaviors: linking boulders, running perpendicular and parallel to watercourses, rising above the ground surface or built into it in embankment fashion. The complex also has several constructions that superficially resemble hearth rings, in one case with part of the circumference built up to form a crescent-shaped wall. The abundance of piles and cairns at Panther Falls and their virtual absence at Cole Mountain, even though the complexes are located so close together, must be telling us something about the circumstances and objectives of the peoples who built the complexes.

The jaggedness of the possible vision quest structure at Cole Mountain, which also appears at the end of a wall on top of a high outcrop on the mountain, is an architectural treatment, though the architectural meaning is obscure. The jaggedness of the niche in the cairn at Bruisers Knob is also architectural but here the meaning may be more comprehensible to a modern observer, for the opening resembles and may have been built to represent an animal's mouth or the mouth of a cave. The latter

interpretation seems more likely, considering the niche is built into a stone facade, just as a cave may exist on a rocky mountainside, though it is certainly possible caves were equated with mouths and stalactites with teeth, in which case both interpretations would be accurate.

Caves are known to have been sacred to Native Americans of the southern Appalachians, and they are not without precedent in Native American art, though one has to go far outside the region to Mesoamerica for the closest analogs, for example the circa 100 BC Mayan murals at San Bartolo in Guatemala, one of which depicts a cave with a fang-like stalactite at its mouth. If Bruisers Knob's jagged niche represents a cave then the lintel stone protuberance can be interpreted as a stalactite.



The ring structure with crescent wall at Panther Falls. The feature may be an example of a vision quest structure, also known as a prayer seat, a structure used to facilitate the vision quests that were a common practice among Native American peoples.

Niches are observed in precontact stone structures elsewhere in western Virginia and the East, though they are rarely as clearly expressed as at Bruisers Knob, where the naturally sharp-edged and stackable Rose Hill stone enabled the builders to create crisply defined architectural features. I noted above that the cultural affinities of the Virginia stone structures are unknown, but the lintel stones of the niche cairns at Bruisers Knob and the bridge cairns at Cole Mountain may hint at an affiliation. The lintels are architectural spanning elements, and as such they serve a function similar to the stone lids or "topstones" that span the stone-box graves of Tennessee and Kentucky, typically attributed to the Mississippian cultural period (800/1000-1600 AD). Mississippian influence extended into western Virginia.

Or the idea of spanning an opening with a stone may have been suggested by the natural rock formations of Sinking Creek Mountain, Cole Mountain, and other mountains in the region. Mimicry of natural forms may explain the precarious-looking parapets; the region abounds with rock formations that look as though they were purposefully stacked or balanced. Emulation may be a better term for the process than mimicry. Native American builders with a pre-scientific but intimate understanding of unusual rock formations may have thought they were built by supernatural forces and may have wished to emulate the forms in their own constructions.

Note that construction of the world by a deity is central to the Judeo-Christian tradition, and the southern Appalachian's European settlers invoked supernatural forces (probably with varying levels of seriousness) to explain puzzling natural features like Virginia's Devil's Marbleyard and West Virginia's Devil's Tea Table. Links between natural rock formations and prehistoric architecture have been proposed by British archaeologist Richard Bradley to explain megalithic stone construction in southwest England. Native American groups in the East interacted with the landscape just as later settlers did, but it was a different kind of interaction, one that ascribed ritual significance to the mountains, or at least selected mountain locations, as the stone complexes demonstrate.

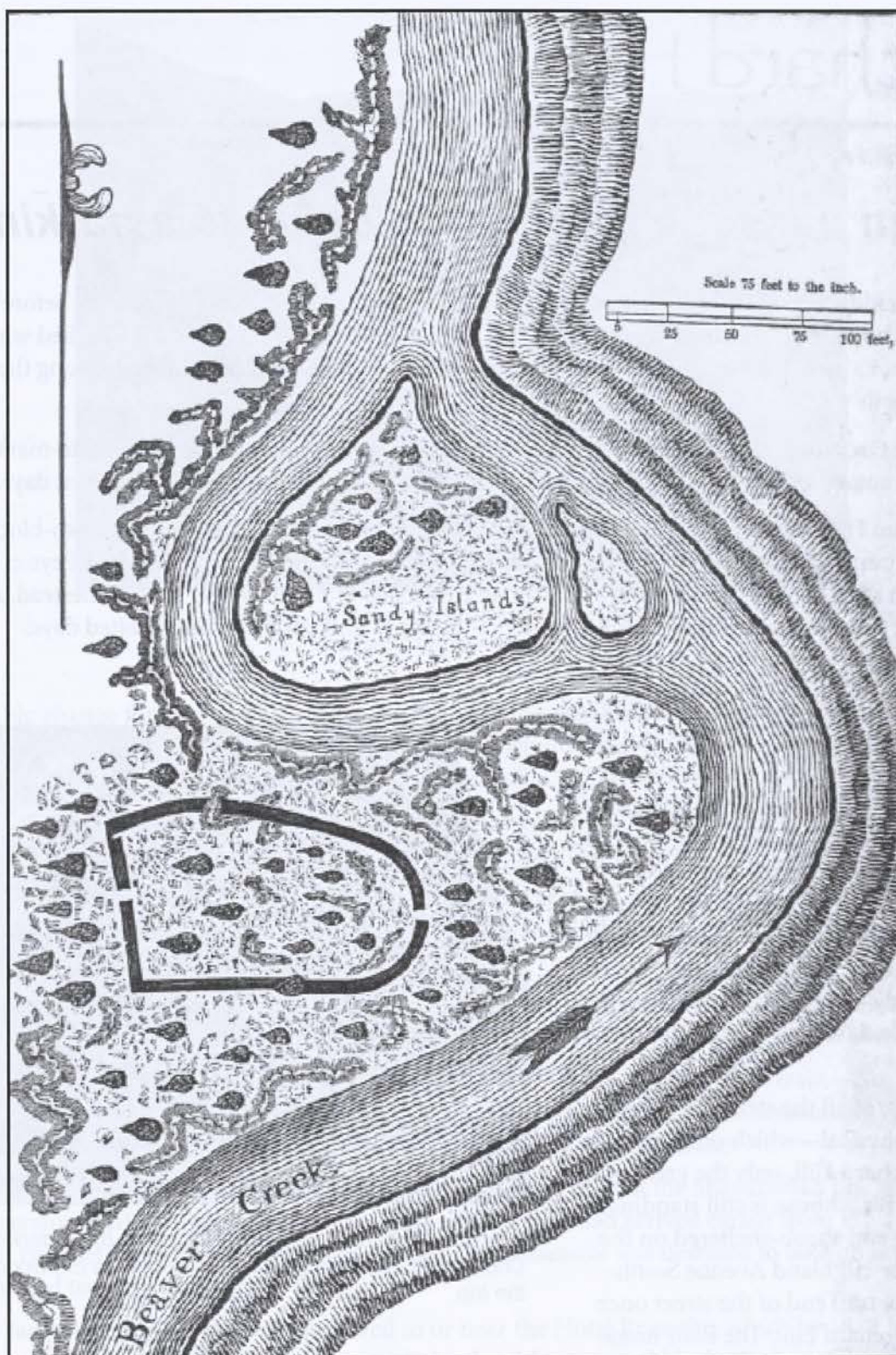


The image on the left shows a presumed precontact cairn at Ludlow Creek State Forest in Chenango County, New York. Its rounded form, also seen in certain cairns on Sinking Creek Mountain, is reminiscent of the form of a beaver lodge. As liminal creatures that pass between the above-and below-water worlds, beavers may have been important to the builder. The image on the right shows a pillar-like cairn on the North Carolina/Tennessee border near the top of Harmon Den Mountain in Haywood County, North Carolina. Similar pillar-like cairns in Virginia have been documented in Franklin, Scott, and Wise counties. (Ludlow Creek photo by Charity Moore. The Harmon Den Mountain cairn was brought to the author's attention by archaeologist Scott Shumate.)

When we think of precontact Native American architecture in the East we usually picture the earthen mound complexes of the Ohio Valley and the Southeast, places like Grave Creek Mound in West Virginia, Moundville in Alabama, and the Great Serpent Mound in Ohio. These are impressive Native American constructions, but their original appearance has been impacted by erosion, treefalls, plowing, and other forms of natural and cultural disturbance. We see only a semblance of the intended architectural effect. Contrast this with the stone architecture of the western Virginia complexes where the precontact appearance often survives virtually intact.

The state of preservation is comparable to the better-protected cliff dwellings of Mesa Verde, where the ancient inhabitants simply walked away and left their rooms and kivas to the blowing dust. Ancestral Pueblo architecture has generated insights into the lifeways and thought processes of the Southwestern peoples who built it. The East's precontact stone architecture likewise has the potential to provide important and even transformative information about American prehistory.

Researchers Hannah Harvey, Harry Holstein, and Charity Moore contributed to the review of this article.



"Plan of an Ancient Fortification on Big Beaver Creek, Fayette Co., Virginia. Surveyed by A. Beckley, Oct. 1837." The enclosure, which stood in what is now Raleigh County, West Virginia, was surveyed by Alfred Beckley and described in the September 1842 issue of the "American Pioneer" magazine (vol. 1 no. 9, pp. 298-299), which was published in Pittsburgh by Beckley's brother-in-law, Isaac Craig. Note that the image is a portion of the original.