

# The Protection and Management of Prehistoric Cave Art in the Southeast

*Jan F. Simek  
Department of Anthropology  
The University of Tennessee  
Knoxville, Tennessee*

*Jay D. Franklin  
Department of Anthropology  
The University of Tennessee  
Knoxville, Tennessee*

*Alan Cressler  
U.S. Geological Survey  
Atlanta, Georgia*

## Abstract

Knowledge of the existence of dark-zone cave art in the southeastern United States is relatively recent. Documentation and systematic study of this prehistoric medium is even more recent, stemming from the discovery and subsequent research in Mud Glyph Cave, Tennessee. It has now been 20 years since that discovery. There are currently over 30 documented such sites in the Southeast, and several new sites are discovered each year. Many of these dark-zone cave art sites are in imminent danger of destruction by vandals, looters, and graffiti artists. Even cavers can unintentionally damage this ancient art simply by their activities in caves. In this paper we discuss efforts at protecting and managing these fragile sites. Specifically, we focus on recent work in 1st Unnamed and 5<sup>th</sup> Unnamed Caves and Mud Glyph Cave, Tennessee and 18<sup>th</sup> Unnamed Cave, Alabama.

## Introduction

Ancient art work from the southeast of North America found far below the surface of the earth, in the "dark zone" of caves beyond the reach of external light, is now known in nearly 30 caves. These works suggest what may be several newly recognized but widespread prehistoric art traditions. While the nature and scale of the Southeast's cave art is only now being fully assessed, these traditions are clearly more intensive and expansive than examples of dark zone prehistoric art sporadically recorded in other parts of North America (e.g. Bilbao 1997; Greer and Greer 1997). Spanning more than 3,500 years, southeastern cave art has great time depth and originated among Archaic period hunter-gatherers some 4,000 years ago (Simek *et al.* 1998). The fluorescence of this tradition, though, was during the late prehistoric Mississippian Period from AD1000 to AD1600, when complex chiefdoms based on maize agriculture characterized socio-political organizations in the region (Simek and Cressler n.d.).

The use of caves by prehistoric southeastern peoples has been recognized since the 19<sup>th</sup> century, when early archaeologists entered and explored Mammoth and Salts Caves in Kentucky (Watson 1969, 1974). Prehistoric art, while possibly present in these caverns, was not observed at that time. Archaeological attention was first drawn to the aesthetic use of caves with the discovery of Mud Glyph Cave, Tennessee, in the late 1970s (Faulkner *et al.* 1984; Faulkner 1986). Charles Faulkner of the University of Tennessee undertook the first archaeological study of a southeastern cave art site at Mud Glyph Cave. Over the next decade, more cave art sites were found through informal surveys stimulated by that discovery. Systematic regional surveys were initiated and the rate of discovery accelerated. Over the past two years, ten new cave art sites have been authenticated, bringing the present number to 31. A complex cave art tradition is now evident, one with great time depth and variation in content.

Unfortunately, these prehistoric wonders are in jeopardy. Looters, graffiti artists, and

even cavers are taking a toll on this precious ancient art. Over the past five years, we have begun to try to protect this ancient and sacred artwork. Because of the costs often involved in protection, our efforts have been halting—sometimes successful, sometimes less so. Resources, legal issues, and caver cooperation have all contributed to our successes and failures. In this paper we describe and, in some senses, justify our recent efforts at protecting southeastern prehistoric cave art. We discuss some of the problems we face and some of the solutions we have applied. We touch on preservation efforts at several important sites, and we explain why we have taken the approaches we have taken in specific cases. Before we talk about what we have done to manage these cultural resources, however, a few examples of what can happen to these sites when they are unprotected are in order. Hopefully these will show why we have a rather immediate interest in the problem of art cave protection.

### A Worst Case Scenario

In June of 1999, we visited 22<sup>nd</sup> Unnamed Cave in middle Tennessee, not far from 3<sup>rd</sup> Unnamed Cave where we have conducted extensive archaeological investigations over the past three years and which was the subject of an *American Antiquity* publication (Simek *et al.* 1998). Members of the Tennessee Cave Survey had alerted us to the fact the cave contained “more charcoal than they had ever seen in a cave,” a characteristic often indicative of prehistoric dark-zone cave activity. Long known by local inhabitants as an archaeological site, 22<sup>nd</sup> Unnamed Cave’s vestibule at one time contained extensive evidence of prehistoric human occupation. Given this, we decided to conduct a survey of both the vestibule and the dark zone. Before undertaking our study we determined Champion International, Inc. owned the property and we requested and were graciously granted a formal permit from Champion allowing us to work in the cave.

It was immediately apparent that pothunters have heavily looted the cave (Figure 1). Pits and trenches were evident everywhere and artifacts taken from the sediments were lying about on rock surfaces next to looters’ holes. During our first visit, we made a general surface collection of cultural materials left behind by the looters. We also explored the cave’s dark zone and discovered and identified two charcoal pictographs. Numerous cane torch stoke marks were also noted on the passage walls. Single pieces of cane charcoal were collected from the sediment surfaces just below the panels where

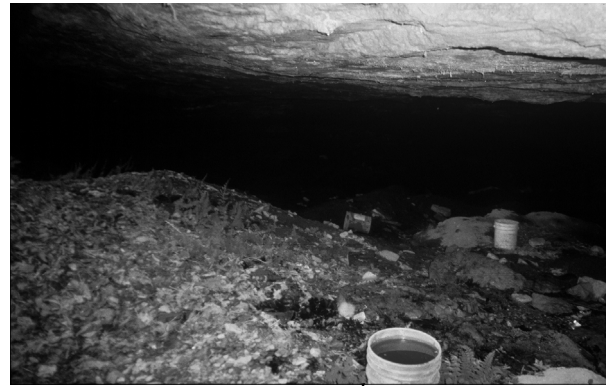


Figure 1. Interior of 22<sup>nd</sup> Unnamed Cave (Tennessee) showing extensive excavation by looters. The sediment has been reworked by artifact hunters, destroying the context of any archaeological materials.

the pictographs are located. Those samples yielded radiocarbon age determinations of  $890 \pm 50$  BP (AD 1130) and  $860 \pm 50$  BP (AD 1160). These ages are statistically indistinguishable from each other and both are well within the prehistoric Mississippian Period in this area. Pottery sherds recovered from the vestibule indicate an Early to Middle Woodland Period presence about 2,500 to 1,500 years ago.

Although 22<sup>nd</sup> Unnamed Cave was badly looted and vandalized, we decided to conduct more intensive archaeological investigations there in September of 1999. We wanted to thoroughly document the pictographs and stoke marks. We also hoped to excavate several shovel test pits and clean previously exposed looters’ pits to elucidate the stratigraphy in the cave vestibule. By extension, we hoped to get some understanding of the cave’s occupational history. Unfortunately, absolutely no intact deposits could be found. We were unable to delineate any stratigraphy anywhere in the vestibule other than loose fill from reworked looters’ pits. Two shovel test pits near the drip line of the cave yielded some cultural materials that appear to have come from undisturbed sediments. These materials were not, however, indicative of any prehistoric cultural period. Other artifacts collected were recovered from surface contexts where looters apparently left behind artifacts they did not consider valuable. In short, the occupational history of the prehistoric inhabitants of the cave has been completely destroyed by looting.

The dark zone of 22<sup>nd</sup> Unnamed Cave fared better than the vestibule. Prehistoric peoples traversed every dark zone passage, no matter how small or tight. Cane torch stoke marks and charcoal fragments remain intact and in place

as evidence of their passing. In fact, in some crawl passages, the sediment floor is so heavily sooted with charcoal that it appears black. In addition to the pictographs and stoke marks on the walls, there are two distinct panels of human hand prints, smears really, produced by charcoal-sooted hands. Upon exiting some of the sooted belly crawl passages, our hands were covered with charcoal; when we tried to wipe them off on breakdown surfaces, the charcoal smears did not transfer to the rocks. Thus, the handprints must have been made when the charcoal was fresh, and they must be very old.

In sum, prehistoric peoples used and explored 22<sup>nd</sup> Unnamed Cave very extensively over a period of perhaps 2,000 years. The archaeology of this cave was surely rich and quite important at one time. Unfortunately, we can say very little today about prehistoric activities due to the extent of destruction by looting. This cave is one of the worst examples of looting we have seen, and it highlights the ongoing battle we fight to protect archaeological resources from destruction.

### Danger to the Resource

There are numerous examples of unknowing damage to prehistoric art sites in the Southeast. In 1<sup>st</sup> Unnamed Cave, one of the first mud-glyph cave sites discovered in the ridge and valley of east Tennessee, graffiti artists had plied their craft since early in the 19<sup>th</sup> century (Simek *et al.* 1997). A fine mud veneer on the cave walls and ceilings made an excellent surface for historical dates, profanity, and signatures. The mud veneer is continually damp as a condition of its survival, and as pliable as the surface is, it saw frequent use even into the modern era. Unfortunately, underlying the historical and modern graffiti was a vast number of prehistoric mud glyphs, some quite elaborate and reflecting the religious symbolism of Mississippian "Southern Cult" iconography (Figure 2).

Cavers, too, can inadvertently endanger prehistoric art in caves they visit. An example of this comes from 5<sup>th</sup> Unnamed Cave in middle Tennessee. Identified as a prehistoric burial cave in the 1980s and hidden with rocks and branches at that time, the cave was rediscovered by ridgewalkers in the early 1990s, who opened and began to explore it. Petroglyphs on the walls of the cave, relatively fresh when first observed, were rubbed by persons moving through the cave passages until they began to wear off of the walls. Once open, the cave was easy prey to looters, who dug out the human interments searching for associated ar-



Figure 2. Mud glyph from 1<sup>st</sup> Unnamed Cave (Tennessee) defaced by recent graffiti.

tifacts. When we revisited the cave in 1997 to check on its condition, we found fragments of human bone scattered about the mouth of the pit with no remaining intact burial deposits to be found. Many remains, of little interest to artifact hunters, had been tossed into various areas of the cave.

In consultation with the local sheriff's office, the Tennessee State Archaeologist and the Tennessee Indian Commission, we recovered all the human remains we could find from 5<sup>th</sup> Unnamed Cave for reburial under Tennessee State Law TCA11-6. To be certain that the remains were those of prehistoric people, we radiocarbon dated a small fragment, obtaining a Woodland Period determination of  $2,030 \pm 50$  BP (55 BC). We re-interred the human remains in a remote part of the cave, afterwards sealing the cave with large boulders winched down from above the site using heavy equipment. We were greatly aided in this effort by members of the Spencer Mountain Grotto of middle Tennessee.

### Protecting Art Caves

Protecting cave sites is, therefore, of paramount concern to us in our present work of locating, surveying, and documenting prehistoric southeastern cave art. Our approach to protection has several facets. One is that we never use the common or registry name of a cave, even though nearly all the caves containing cave art have common or local names. Instead, we refer to cave art sites by numbers as Unnamed Caves; this nomenclature was developed in consultation with the Tennessee Cave Survey, who asked that we not rename caves (something that can and has created more confusion than discretion) but simply disguise the names. We never give cave locations. And we never confirm or deny the guesses made by archaeologists and cavers

based on our publications and public presentations. On the other hand, we are always willing to address the subject of southeastern cave art to lay groups, professionals, and cave organizations. While discrete as to location, we believe that education is the best form of protection. Cavers have become our eyes and ears, discovering many of the known art caves and aiding us in our formal surveys.

Another aspect of our protection program is landowner relations. Most of the sites we are examining lie on private land, and there is no recourse to protection other than what landowners will allow. In nearly every case, landowners appreciate what their land holds and do their utmost to help protect them. The owners of 11<sup>th</sup> Unnamed Cave, for example, allowed the Nature Conservancy and The Archaeological Conservancy to gate a cave, which contains prehistoric artwork, on their property. The owners of 3<sup>rd</sup> Unnamed Cave actively protect their caves themselves, monitoring the cave openings and bringing authorities into situations where trespassing occurs. To date, none of the landowners we have encountered have even asked about exploitation or commercialization of the archaeological sites their land contains. Instead, they share our concern with preservation and protection.

In a few cases, especially those where art caves are greatly exposed or on public lands, we have had to close sites by constructing gates. The Tennessee Valley Authority (TVA) and The Tennessee Nature Conservancy have taken leads in this regard. So far, we have helped TVA construct two gates in art caves within their management areas. One of these was 1<sup>st</sup> Unnamed Cave, where a gate compatible with gray bat habitation was necessary. TVA personnel themselves built the structure and it has not been breached in over two years. A second TVA site was gated in 1999. 18<sup>th</sup> Unnamed Cave had no biological import, so a simple, but heavy, gate was placed into its opening. In all cases where TVA has authority over land containing art caves, TVA police monitor the sites even after gating has been completed. Attempting to breach a TVA gate or to loot a site on TVA-managed property is a felony violation of the Federal Archaeological Resources Protection Act and penalties are severe. Thus, caves gated on TVA property are well-protected.

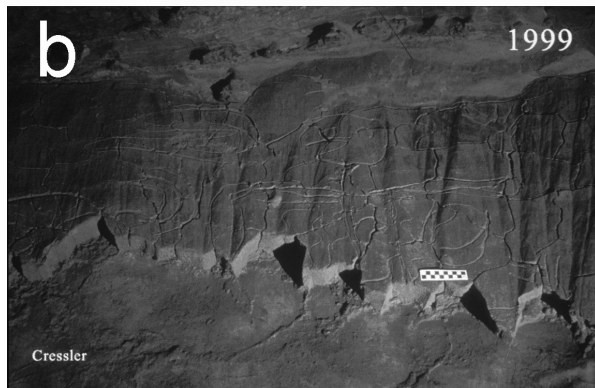
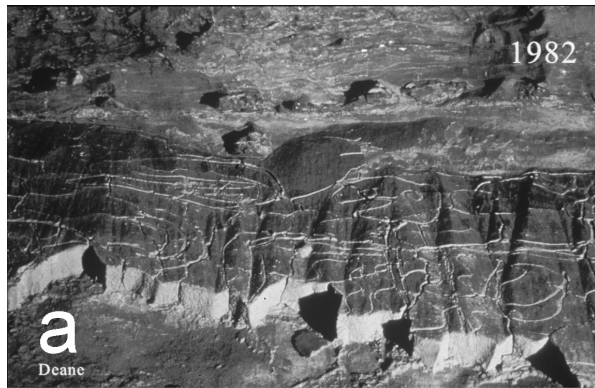
Gating art caves on private land has proved to be a more difficult problem because there is rarely the monitoring program in place that public lands enjoy. This is nowhere more evident than at Mud Glyph Cave. The first prehis-

toric art cave to be systematically studied, Mud Glyph Cave has been the most difficult to protect. Landowners were willing to have the cave protected but unable to contribute much in the way of resources or effort. When studies were finished in the cave in 1982, a series of gates, each one more substantial than its predecessor, was placed into the cave opening. Each one was breached easily by looters and curiosity seekers. During this time, the grid system used by Faulkner and his colleagues was damaged, and artifact hunters dug several small holes into the cave floor sediments. Fortunately, no damage was done to the prehistoric glyphs. Finally, a six-foot-long section of conduit pipe was driven into the cave opening and filled with concrete and rubble, effectively plugging the cave mouth permanently. There was no weak point, no access for anyone including archaeologists. Thus it remained for nearly 20 years.

There had always been questions concerning the effects of sealing Mud Glyph Cave. Were airflow or moisture regimes altered in such a way as to cause the mud banks bearing the glyphs to dry out? Had the protection itself damaged the art? Had catastrophic rainfall events led to flooding in the sealed cave and destruction of the glyph panels by erosion? The answers to these questions remained unknown as long as Mud Glyph Cave was closed.

In the past year, curiosity seekers dug around the plug into Mud Glyph Cave. While an unfortunate breach of cave security, we have had an opportunity to enter and observe the glyphs. This has allowed us to compare the state of the glyphs in 1999 with their condition in 1982. We present a few examples of these comparisons here. We note that the mud glyphs in Mud Glyph Cave were drawn with tools on hard-packed mud banks deposited by fluvial action (Faulkner 1986). This situation contrasts with some other mud glyph cave art sites we have reported in recent years (Cressler *et al.* 1999; Simek *et al.* 1997).

Figure 3 shows the largest mud glyph panel in the cave; it is also, perhaps, the most vulnerable to erosion, as witnessed by the columnar spalling of clay at the lower edge of the mud bank. Close comparison of the recent photograph (Figure 3b) with Bill Deane's 1982 photo (Figure 3a), however, shows that there has been virtually no change in the erosion front for 19 years. This lack of change characterizes all the panels we examined (Figure 4). Even on a very fine scale, such as for the small owl glyph shown in Figure 5, no new drying cracks have formed and no cracks have widened due to changing interior environmental conditions. Thus, despite 17 years of closure, the glyphs in



**Figure 3.** Mud glyph panel from Mud Glyph Cave (Tennessee). 3a: the panel in 1982; 3b: the same panel in 1999. Note the mud erosion front at the base of the bank; there is no change in the panel over 17 years. (Photos: a: Bill Deane, b: Alan Cressler)



**Figure 4.** Individual mud glyph from Mud Glyph Cave (Tennessee) showing a warrior/ball player. 4a: the panel in 1982; 4b: the same panel in 1999. Again, note the erosion front at the left of the pictures and cracks that are present in the surface of the mud bank containing the glyph. No change in condition is evident over the 17 year period represented in these photographs.

Mud Glyph Cave seem to have suffered little due to drying, flooding, or microclimatic variation. This is good news indeed. We have already closed the entrance that compromised the plug, and have already built a very small gate in that new passage. In this way, we believe Mud Glyph Cave will remain secure yet be accessible for study. We hope to initiate long-term longitudinal studies of air flow, humidity variation, and biological activity in order to monitor the condition and assess the preservation of the ancient art. We are obviously quite excited about this prospect.

### Summary and Conclusion

In sum, cave and karst managers, especially in the Southeast, should be aware of the potential for prehistoric artwork in the caves they oversee. This rare and precious archaeological record is only now coming to light, and it is more beautiful, and more enigmatic, than we previously realized. Spanning more than 3,500 years of prehistory, these artworks are quite varied in form and content. And they are vul-



**Figure 5.** Small mud glyph from Mud Glyph Cave (Tennessee) showing an owl. 5a: the panel in 1982; 5b: the same panel in 1999. Details of the glyph, including line margins and fine cracks in the mud, have not changed since 1982. (Photos: a: Bill Deane,

nerable to damage both incidental and intentional. They therefore deserve our immediate and persistent consideration in all karst management planning.

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