UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME
HISTORIC Resources
Pacolet Soapstone Quarries Thematic Group
AND/OR COMMON

2 LOCATION
STREET & NUMBER
CITY, TOWN X VICINITY OF 4/5
STATE South Carolina CODE County CODE
45 Spartanburg/Cherokee 083/021

3 CLASSIFICATION
CATEGORY
DISTRICT _
BUILDING(S) __
STRUCTURE _
SITE _
OBJECT X Thematic group
OWNERSHIP PUBLIC _
PRIVATE X
BOTH _
PUBLIC ACQUISITION IN PROCESS _
BEING CONSIDERED _
STATUS OCCUPIED _
UNOCCUPIED _
WORK IN PROGRESS _
ACCESSIBLE YES: RESTRICTED X
YES: UNRESTRICTED _
NO _
PRESENT USE AGRICULTURE _
COMMERCIAL _
EDUCATIONAL _
ENTERTAINMENT _
GOVERNMENT _
INDUSTRIAL _
MILITARY _
MUSEUM _
PARK _
PRIVATE RESIDENCE _
RELIGIOUS _
SCIENTIFIC _
TRANSPORTATION _
OTHER: Wooded _

4 OWNER OF PROPERTY
NAME Multiple ownership (List attached)
STREET & NUMBER
CITY, TOWN _ VICINITY OF
STATE _

5 LOCATION OF LEGAL DESCRIPTION
COURTHOUSE, REGISTRY OF DEEDS, ETC.
Spartanburg County Courthouse and Cherokee County Courthouse
STREET & NUMBER
CITY, TOWN Spartanburg and Gaffney STATE South Carolina

6 REPRESENTATION IN EXISTING SURVEYS
TITLE Final Report: Spartanburg Soapstone Archeological Study
DATE Manuscript on file S.C. Department
n.d. of Archives and History
FEDERAL STATE COUNTY LOCAL
DEPOSITORY FOR SURVEY RECORDS Institute of Archeology and Anthropology; University of South Carolina
CITY, TOWN Columbia STATE South Carolina
Statement of Theme

In Spartanburg and Cherokee counties, South Carolina, there occurs an extensive zone of soapstone deposits from which, primarily during the prehistoric, Late Archaic Period (3000 B.C. - 500 B.C.), soapstone was procured (Figure 1). The narrow zone of lenticular soapstone deposits, approximately

Within this zone are located 18 soapstone quarry localities (Figure 2) exhibiting evidence of prehistoric utilization, specifically vessel production. These quarries are valuable archeological resources offering a wealth of technological and economic information about prehistoric peoples in an area which archeologically is terra incognita.

Project Overview

The existence of prehistoric soapstone quarries near the city of South Carolina was first reported by Overton (1969). Later, investigations by Loman and Wheatley (1970), Edens (1971) and Ferguson (1976) yielded further knowledge concerning the presence of several well preserved quarry sites requiring further investigation and preservation. Accordingly, during 1978 the Spartanburg Soapstone Archeological Study was undertaken. The primary objectives of the study were:

1. To determine the nature and extent of archeological resources relating to the full range of soapstone procurement activities in quarry localities near South Carolina.

2. To determine the significance and consequent eligibility of archeological resources associated with soapstone procurement activities for inclusion on the National Register of Historic Places. The evaluation of significance shall be made in accordance with the Advisory Council's Procedures for the Protection of Historic and Cultural Properties (36 CFR 800), also (36 CFR 60) and (36 CFR 64).

The study was conducted by Terry A. Ferguson, a graduate student at the University of Tennessee, with the assistance of students from the University of Tennessee and Wofford College. Technical assistance was supplied by two geologists, Dr. John Harrington of Wofford College and Dr. Stephen Yurkovich of Western Carolina University. Dr. Gerald Schroedl, assistant professor of Archeology at the University of
Tennessee, also supplied technical assistance.

The study consisted of both field reconnaissance and archival research. The field reconnaissance was conducted in two parts. An archeological field school in conjunction with the 1978 Wofford College Interim Program was conducted in January 1978. Additional investigations were subsequently conducted between June 1978 and January 1979.

The field investigations involved four major phases of research:

Phase 1. Local information search. This phase involved a search for collectors and local informants with knowledge of site locations and other information relative to prehistoric and historic quarry utilization.

Phase 2. Systematic Survey. This phase involved the relocation and re-evaluation of previously recorded quarry sites and a search for new quarries and non-quarry sites. During this phase pedestrian reconnaissance was employed.

Originally a statistical sampling procedure was considered, but due to the size, topography, and vegetation of the study area and to limited funding and resources, a non-statistical approach was employed to maximize information recovery. It had been noted during previous research that the soapstone quarries were oriented linearly in a northeast-southwest fashion along the strike of the area's metamorphic rocks. Therefore, during the relocation of the previously recorded sites, the areas between and beyond these quarries along a northeast-southwest line were investigated.

To test for bias in the methods employed in the quarry location procedure and to provide non-quarry site and geologic data, a systematic transect survey was implemented. At one time it was proposed, due to the heavily vegetated conditions in the project area, that transects be walked and cleared at a set interval and in areas of low angle slope, but this method is extremely laborious and time-consuming. Therefore, when a power line clearing project and gas pipeline installation project were carried out in the project area, the opportunity was taken to alter the proposed research design. It was felt that a pedestrian reconnaissance of these cleared areas fulfilled all the desired conditions. First of all the clearing allowed for one hundred percent visibility of a much greater
area than the proposed method. This visibility allowed for greater accuracy in identification of rock and soil exposures and artifact recovery. It was acknowledged that artifact context would be disturbed, but from previous experience it was felt that such disturbance would be no greater than the existing widespread disturbance due to agricultural practices and erosion. The powerline perpendicularly crosscut the strike of the soapstone deposits which had been followed previously to predict quarry locations and therefore offered the desired check for bias.

Therefore, a one hundred percent visual reconnaissance was made of an approximately 62500 m² area. The reconnaissance revealed the presence of two parallel occurrences of soapstone approximately five hundred meters apart. The northern occurrence has a greater concentration of chlorite than the southern, therefore it is slightly harder. A similar parallel occurrence has been noted elsewhere in the area and is possibly a fold. The geology will be discussed in more detail in another section.

Low density artifact scatters were recorded at six distinct loci along the powerline cut. (Figures 4 & 5) The contexts as expected were disturbed.

The degree of disturbance along the gas pipeline was much greater than that of the powerline due to subsurface excavation. Accordingly no artifacts were observed. No soapstone was observed either along the surveyed section. Its absence may be due to a change in strike or due to a discontinuity in the soapstone bearing gneiss.

In addition to the six non-quarry sites located during the powerline transect, eleven additional loci were located during this phase of the study (Figures 3, 4, 5, & 6). All of these sites were from disturbed surface contexts and deemed unsuitable for further investigation or eligibility for inclusion with the nominated quarry sites. The 17 non-quarry sites are summarized in Tables 2, 3, and 4 and Plates 23 and 24.
All quarry and non-quarry sites encountered during this phase were plotted on aerial photographs (Scale 1"=400') and U.S.G.S. quadrangles. Sketch maps were drawn and S.C. survey forms were completed. Where possible, surface collections were made to determine cultural affiliation and the range of raw material utilized. Finally, an evaluation was made of the quarries current condition and importance.

Phase 3. Controlled surface collection and testing of quarry locality 38SP54. This phase involved the implementation of a controlled random sampling procedure on a well-preserved quarry locality. The purpose of this phase was to determine: 1. The nature of types of surface materials; 2. The existence of any patterning in the surface remains; and 3. To delineate areas for subsurface testing to determine the presence or absence of vertical integrity.

From a datum point located along a fence row at the southeast corner of the site, a rectangular grid of 10 X 10 meter collection squares was established over the site area. Thirteen random collection squares of 1300 m² representing a thirty percent random sample of a 3200 m² strata located across the approximate center of the site 38SP54 and containing most of the prominent quarry features and densest artifact concentrations. (Figure 7). Approximately 400 plus artifacts, consisting of bowl preforms, bowl blanks, bowl fragments and quarry tools were recovered and the point provenance recorded. Based on this collection an estimate of 2000 plus artifacts was made for the total surface scatter.

Based on the controlled surface collection and feature locations, two small test pits were excavated. The test pits, 1X3 meters and 1X1.5 meters respectively, were placed so as to yield information concerning the two most prominent quarry features—large depressions and worked outcrops. Accordingly, Test Pit 1 was excavated across the edge and into the center of a major depression. Test Pit 2 was excavated adjacent to the base of a large outcropping boulder exhibiting partially buried bowl working attributes.

Test Pit 1 was excavated to an average depth of 40 cm below ground surface. Four definite strata were delineated: a humus zone, an unconsolidated tan clay zone, a tan orange clay zone and an orange clay
zone. The amount of soapstone, both worked and unworked, contained in the zones decreased with depth, whereas the amount of quartzite increased with depth. It was assumed that the orange clay zone was sterile C horizon soil or saprolite, therefore excavation ceased. Artifacts and soapstone detritus were recovered from the humus and tan clay zones which had a combined average depth of approximately 25 cm below ground surface.

Test Pit 2 (Figures 8 through 12, and Plates 20 and 21) was excavated to a maximum depth of approximately 90 cm below ground surface. Unconsolidated tan fill extended to a maximum depth of 80 cm below ground surface and contained artifacts and detritus throughout. Elsewhere in Test Pit 2 at an approximate depth of 30 cm below ground surface a pegmatite was encountered. Of greatest importance, Test Pit 2 produced artifacts from a depth of 80 cm below ground surface (Plate 20).

Phase 4. Geologic investigations. This phase involved an attempt to determine the variability and extent of individual quarry deposits and the areal occurrence of soapstone deposits in general and their relationships with the local metamorphic rocks. It was felt that such information would be essential for understanding quarry context and predicting other quarry locations in the area and elsewhere in the southeastern Piedmont.

To determine the nature and extent of the apparent lenticular deposits of soapstone in which the outcrops exhibiting quarrying activity occur, a procedure was developed in which shovel testing of soil was employed in an attempt to determine the boundary at which soapstone derived soils turned to gneissic soils. The area chosen for this testing was between [redacted]. This area included 4 quarry localities, 38 SP 12, 38 SP 13, 38 SP 21, 38 SP 23. A base line approximately 950 m. in length was established extending from [redacted]. From this base line, testing transects were run due north and south at 100 meter intervals along the base line with tests being made approximately every 25 meters. The results of this testing indicate a width for the lenticular deposit from 90 to 350 meters perpendicular to a ENE/WSW axis. The results of the shovel testing should be viewed with caution since saprolite testing has a wide margin for error and a few anomalous figures for width were obtained during the testing. But in spite of the high probability for error, a few important factors are indicated. First, a gross estimate for width now exists to aid in distributional and structural analysis of the overall occurrence where no such information previously existed.
Secondly, there does appear to be some degree of continuity between visible outcrops. Finally, the overall deposit does appear to conform to the general NE/SW structural trends of the other rocks in the area.

Also during this phase outcropping boulders were inspected with the assistance of Dr. Stephen Yurkovich of Western Carolina University and Dr. John Harrington of Wofford College. Within a single quarry deposit there can occur a great deal of variation in the rock due to differing degrees of alteration during the formation process. There are variations in hardness as well as chemical composition. There are also varying degrees of homogeneity. All of these factors were apparently involved in the prehistoric decision making process as to whether or not a particular boulder was suitable for vessel production. Generally the most heavily exploited areas were the most massive, homogeneous, and possessing the most talc, therefore being the softest and most manageable. During this phase it was noted that the joint surfaces found with the massive boulders played an important part in the vessel manufacturing. These joints acted as guides for the removal of material, but also when hidden during the early stages of production were the most common cause of breakage and subsequent discard of the unfinished vessels.

It was also noted during this phase that the pegmatite encountered in Test Pit 2 at 38 SP 54 supports a current theory of soapstone formation based on hydro-thermal alteration (Yurkovich 1976).

Finally, the parallel outcrops of soapstone noted in the transect survey indicate a possible structural association with deposits of similar but unsuitable rock for vessel production located over a broader area. These rocks were generally harder and less homogeneous due probably to a lower degree of hydro-thermal alteration.

**Context and Description**

The natural occurrence of soapstone in eastern North America is geographically restricted to the Piedmont and Eastern Appalachian Mountains from Newfoundland to Alabama. Geologically these two areas are composed primarily of low to high rank metamorphic rocks. These rocks generally exhibit great deformation resulting from regional tectonic activity. Evidence of this deformation can be seen in the northeast-southwest orientation of the structural trends exhibited by these rocks and the Appalachian Mountains themselves.
Soapstone, a hydrous magnesium silicate, can occur geologically by the alteration of certain ultramafic igneous intrusives that occur within the metamorphic rocks. The lenticular soapstone deposits of the northwestern Piedmont of South Carolina are of this type. These lenses apparently occur primarily along the northwestern margin of a zone of interrelated facies of hornblende gneiss and schist (Figure 1). During the course of study it has become evident that the lenses are also closely aligned with the aforementioned northeast-southwest structural trends of the region.

Topographically, the quarry deposits occur along ridges (Plate 1). These ridges blend in as characteristic features with the rolling hills of the Piedmont. The 18 quarry sites identified are located within the The study area is now covered in pine-mixed hardwood forest, although the climax forest of prehistoric times was oak-hickory. The faunal and floral carrying capacity of such forests coupled with aquatic resources provided a presumably broad and abundant subsistence base for the prehistoric inhabitants.

The most prominent features of the quarry sites are large outcropping boulders of soapstone. (Plate 2) In most cases the boulders show extensive evidence of aboriginal quarrying activity, primarily for the procurement of soapstone vessels. (Plates 3 through 7). Around the boulders there occur depressions and concentrations of soapstone debris. Smaller boulders are scattered around the larger boulders and elsewhere throughout the quarry site areas. Occurring intermittently among the smaller boulders are fragments of soapstone vessels in various stages of production (Plates 8-12). In several cases quarry tools occur along with the soapstone vessel fragments. (Plates 15 & 16).

Most of the quarries are relatively undisturbed and well preserved. Many quarries have large quantities of soapstone debitage lying on the ground surface as well as buried up to 80 cm. below ground surface. A few of the quarries on the other hand have recently been disturbed, and almost destroyed. Others are being greatly threatened by the growth and expansion of the city of Spartanburg.

Historic disturbance of the quarries until recently has been relatively mild. The areas of primary activity due to the abundance of rock have been untouched by agricultural activities, though evidence of historic cultivation can be seen along the edges of the quarry areas in the form
of furrow remnants. Additional evidence for this lack of disturbance of the quarries can be seen in the differences in vegetation. Most quarry sites are in mixed hardwood stands, while surrounding areas are primarily conifers. There are two types of historic features present in several quarries which also indicate agricultural land use around the quarries. The first type are numerous large piles of rock which are probably the result of field clearing. The second type of historic features are rock walls similar to these at the first in that they indicate land clearing and erosion prevention.

Historic exploitation of the boulders themselves is also indicated. This exploitation takes two forms. The first is the procurement of soapstone slabs. These slabs were apparently used primarily for the production of tombstones. Numerous examples of such tombstones have been noted in the area. The other form of historic exploitation was in the production of soapstone vessels. These vessels differ from the aboriginal vessels in that they are usually rectangular or extremely irregular, have a fresher appearance, and exhibit definite metal tool marks. Some of these historic vessels can be seen in use even today in the project area in the form of feeding troughs. Evidence of historic exploitation though present in several quarries is not extensive and has seldom disturbed the prehistoric remains.
SIGNIFICANCE

PERIOD AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW

PREHISTORIC

PREHISTORIC

COMMUNITY PLANNING

LANDSCAPE ARCHITECTURE

RELIGION

ARCHAEOLOGY-HISTORIC

CONSERVATION

LAW

SCIENCE

AGRICULTURE

ECONOMICS

LITERATURE

SCULPTURE

ARCHITECTURE

EDUCATION

MILITARY

SOCIAL/HUMANITARIAN

ARCHITECTURE

ENGINEERING

MUSIC

THEATER

ARCHITECTURE

COMMUNICATIONS

INDUSTRY

PHILOSOPHY

TRANSPORTATION

ARCHITECTURE

INVENTION

POLITICS/GOVERNMENT

OTHER (SPECIFY)

SPECFIC DATES Late Archaic:

3000 B.C. - 500 B.C.

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

The soapstone quarries located in Spartanburg and Cherokee counties are distinct, well preserved examples of a once numerous, but now rapidly vanishing, specialized procurement site. These quarries are important archeological resources, which due to their location, preservation and intact context offer data amenable to research problems in five major areas: I. The delineation of regional patterns of cultural development; II. The reconstruction of lithic technological subsystems of cultural systems; III. The interpretation of economic and subsistence subsystems of cultural systems; IV. The study of site formation processes; V. Interdisciplinary studies.

I. Delineation of Regional Patterns of Cultural Development

The quarries and associated non-quarry sites produced cultural materials indicating exploitation by primarily Late Archaic groups. This fact along with the quarries' location in the southeastern Piedmont is consistent with major theoretical trends and, as shall be indicated, is an ideal data base directly related to research problems dealing with current hypotheses relating to the spread of specific technological traditions and lifeways.

Aboriginal utilization of soapstone began during the Archaic Stage of development as defined by Willey and Phillips (1958). The most extensive exploitation of soapstone appears to have taken place during the Late and Terminal Archaic Periods (approx. 2000 B.C. - 500 B.C.). Ford (1974) proposes that the fluorescence of soapstone utilization in eastern North America occurred by 1000 B.C. In the eastern United States the occurrence of soapstone is generally cited in conjunction with certain broad-stemmed projectile points. These points make up what has become known as the broad-stemmed or broad-point technological tradition.

Specifically in the southeastern United States, the earliest manifestation of the broad-point technological tradition appears to be in the Savannah River Phase found in North Carolina, South Carolina, and Georgia. The Savannah River Phase was originally defined by Clafin (1931). Since that time Fairbanks (1942), Coe (1964), and others have developed and expanded the application of the term. Coe (1964) considers Savannah River the final phase of the Archaic in North Carolina.
sees the Savannah River as a continuation and elaboration of the Middle Archaic Stanley Phase. In general the Savannah River Phase is characterized by ground and polished stone artifacts, soapstone vessels, and broad-stemmed points. Fiber-tempered ceramics are also associated in some contexts with the Savannah River Phase.

The Savannah River stemmed projectile points are by far the primary diagnostic artifacts of the Savannah River Phase. Distinct similarities between this point type, and others throughout the Eastern United States, as well as similarities in cultural traits and material culture in general, including soapstone artifacts has been noted. Due to these similarities, a well developed, relatively homogeneous and interrelated lifeway has been proposed for most of the eastern United States (Dragoo: 1970); (Ford: 1974); (Ritchie: 1959, 1969); (Turnbaugh: 1975); (Witthoff: 1953). This lifeway is manifest in the aforementioned broad-point technological tradition. In the Southeast, Keel (1976) points out that the Savannah River stemmed point type is synonymous with such regional names as Appalachian Stemmed (Harwood: 1959), Benton Stemmed (Kneberg: 1956), and Kays Stemmed (Kneberg: 1956). In the northeast, Ritchie (1969) indicates that such northeastern point types as Long, Lehigh, Snook Hill, Parkloma, and Susquehannan points, are genetically related to Savannah River points.

According to Dragoo (1976) and Ford (1974), the broad-point technological tradition apparently developed in the southeast and spread northward. Soapstone thus spread accordingly with the spread of the broad-point technological tradition. This idea is supported by the fact that the earliest dated contexts for soapstone consistently occurred within the Southeast. Coe (1964) reports finding soapstone vessels at the Gaston Site (31 Hx 17). This material is associated with dates of 2050±250 years B.C. (Coe: 1964). Keel (1976) reports finding soapstone vessels in the Warren Wilson Site (31 Bn 29). Two dates are associated with this material, one of 2915±280 years B.C., the other of 1505±140 years B.C. Georgia, Claflin (1931) records the recovery of over 2500 flat perforated soapstone net sinkers. These net sinkers are probably made of vessel fragments. Bullen and Green (1970) have subsequently reported associated dates of 2750±150 years B.C. and 1780±150 years B.C.

Dated occurrences outside the Piedmont and Appalachian Highlands of the Southeast are consistently later. Simmons (1970), at the West Ferry Site...
in Rhode Island, reports soapstone vessels associated with a date of 1284 B.C. Bullen in (1971) reports the occurrence of soapstone in Florida around 1380 B.C., apparently after the introduction of fiber-tempered ceramics. In eastern Tennessee, Chapman (1977) reports dates of 1705 B.C. and 1255 B.C. for contexts associated with soapstone vessels at the Iddins Site (40 LD 38). In central Tennessee, soapstone has been associated with the Wade phase which has been dated at 755+155 years at the Westmoreland-Barber Site (40 Mi 11) (Paulkner and Graham 1966). Finally, Webb (1944) and Ford and Webb (1956) report finding soapstone vessels in a Late Archaic context at the enigmatic Poverty Point Site, with associated dates of 3300 to 2200 years B.P.

From the preceding discussion, certain testable hypotheses can be drawn concerning the utilization of soapstone and about general trends and interaction spheres of the Late-Transitional Archaic of the Southeast. These hypotheses can be summarized as follows:

1) Soapstone was apparently utilized as early as the Middle Archaic Period, but the florescence of soapstone utilization occurred during the Late-Terminal Archaic.
2) Widespread soapstone use apparently developed along with the broad-point tradition in the southeastern United States.
3) Current radiocarbon dates indicate the earliest development of soapstone vessel utilization occurred with the Savannah River Phase in North Carolina, South Carolina, and Georgia.
4) Soapstone vessel utilization probably spread from a hearth area in North Carolina, South Carolina, and Georgia along with the spread of the broad-point technological tradition.

II. Reconstruction of Lithic Technological Subsystems of Cultural Systems.

As indicated by House (1975:81), the reconstruction of lithic technological subsystems from information concerning the resources utilized out of these available and the processes of extraction and distribution, when combined with other information from the cultural systems, can be valuable in gaining insights into prehistoric social organization and other aspects of past societies.

The soapstone quarries in Spartanburg and Cherokee counties offer an excellent data for testing of existing models and developing new models.
of reduction sequences utilized in the extraction and production procedures such as those described by Holmes (1896, 1919), Kengla (1883), Bushnell (1939), and Dickens and Carnes (1976). Similar research has been conducted employing chipped stone tools (Collins 1975). Such research produces not only information concerning soapstone quarrying behavior, but can also produce direct and indirect information concerning prehistoric technology in general. Del Bene and Shelley (1979) point out another area of research for which the South Carolina quarries are aptly suited. Through the controlled comparison of actual artifact characteristics and experimentally reproduced artifacts, it is possible to delineate specific types of wear patterns on tools indicative of soapstone modification. This information is valuable not only for delineating the function of certain tools, but also in that it can supply hypothetical information for blank areas in reduction sequence data.

Finally, these quarries offer data for testing hypotheses concerning patterning in lithic resource procurement. For example, differential utilization of soapstone or why some deposits were selected for intensive procurement activities while others were virtually untouched might be examined.

III. The Interpretation of Economic and Subsistence Subsystems.

Soapstone is geologically restricted to the eastern North American Piedmont and Appalachian Highlands, yet it occurs archeologically over a much broader geographic area. Recently, studies undertaken by Luckenbach (1974 a,b), Allen, Holland and Luckenbach (1974, 1975 a,b,c), Bohanon (1975), and Becker (1976) have attempted to correlate soapstone artifacts found on prehistoric habitation sites with source areas by means of physical and chemical examination, such as instrumental neutron-activation, petrographic and spectrographic analysis. The goal of these studies is to produce models of local and regional distribution and exchange systems. Some research of this type has been carried out with material from the Spartanburg county quarries. Samples of soapstone from quarry localities have been analyzed by Allen, Holland, and Luckenbach at the University of Virginia by means of instrumental neutron-activation. Although substantive information concerning the distribution of these materials has yet to be forthcoming, the data is available for comparative study. Bohanon (1975) performed a petrographic and spectrographic analysis on two quarries in the study area, 38 SP 13, and 38 SP 20, along with several soapstone outcrops in North Carolina, in an attempt to determine source areas for soapstone artifacts in Tennessee. Bohanon found no correlation between these two quarries and the Tennessee material, but his analytical methodology and discussions offer an excellent base from which to undertake
a similar study with a better sampling universe, such as sites in North and South Carolina.

The Late Archaic appears to have been a major period of transition. Population densities apparently increased over most of the Southeast. There was a shift in patterns of environmental exploitation to the intensive utilization of local resources. Of primary importance is the fact that there appears to have occurred a culmination of horticultural trends which had developed during the Early and Middle Archaic Periods. With the Late Archaic you also had the introduction of Meso-American Domesticates. For example, Chapman (1978) has found at the Bacon Bend Site, a Late Archaic Period (2440 B.C.-1630 B.C.) site hickory nuts, walnuts, acorns, carary grass, chenopod, sumac, poke, grape, as well as squash and/or pumpkin.

At the Iddins Site (1705 B.C.-1255 B.C.), Chapman (1978) found hickory nuts, walnuts, acorns, butternuts, chestnuts, grape seeds, and chenodium, as well as squash, gourd, and sunflower.

In this context, soapstone utilization appears to have developed as a response to the changing patterns in the subsistence economy. Several research questions can be generated in this problem area. How were soapstone vessels actually utilized? Were the vessels applied directly to an open flame or were they, due to their excellent heat retention properties, employed in slow-cooking with heated rocks? Were soapstone vessels functionally different from ceramic vessels which developed subsequent to the florescence of soapstone vessel utilization?

IV. Site Formation Processes.

The soapstone quarries South Carolina, appear to have been utilized only for quarrying activities. No evidence has been found which indicates that habitation, hunting, or plant collecting activities were taking place in the quarries. This fact, combined with the lack of agricultural disturbance and fine preservation, make these quarries valuable information sources relative to the delineation of natural and cultural site formation processes as discussed by Schiffer (1976). By utilizing the "behavioral" methodology of Schiffer (1976), an understanding can be obtained about the conditions and utilization of the site prior to and during prehistoric occupation. Consequently, by studying the effects of natural processes and modification by man since it was occupied, a clearer understanding of the site's current condition can be made.
V. Interdisciplinary Studies.

Several research problems can be generated from the soapstone quarry data which, if properly planned and implemented, could be mutually beneficial to both archeologists and geologists. For example, the distribution of soapstone deposits below a broad regional scale is virtually unknown. A detailed mapping study of the area around the soapstone deposits could be useful to the geologist in developing structural and temporal models for the major geologic processes. The archeologist, on the other hand, would benefit from knowing the structural relationships and distributions in the generation of models of regional resources exploitation and settlement patterns. From such research a predictive model might be possible which could aid both the geologist and the archeologist in delineating areas where other exploitable soapstone deposits might be located.

As indicated previously, the observation of pegmatite in Test Pit 2 at 38 SP 54 offered supporting evidence to a current theory for the formation process of soapstone (Yurkovich 1976). Many other similar opportunities exist where information beneficial to both the geologist and archeologist can be gained. For example, a detailed study of the weathering and erosion of soapstone by a geologist could aid the archeologist by providing a better understanding of archeological context and site formation processes. The chemical characterization studies employing such techniques, instrumental in neutron activation as previously discussed, offer excellent opportunities for producing and sharing mutually beneficial information.

Finally, other areas such as botany and soil science could also be integrated into joint research utilizing the soapstone quarries as a database. The need for this type of study is great and a necessity for scientific advancement.
Allen, R. O., Jr., C. G. Holland, and R. O. Luckenbach


Becker, M. F.


Bohanon, E. R., Jr.


Bullen, R. P.


Bullen, R. P. and H. B. Green

Bushnell, D. I., Jr.


Chapman, Jefferson


Chapman, Jefferson and Andrea Brewer Shea.

1978 "Paleoecological and Cultural Interpretations of Plant Remains Recovered From Archaic Period Sites in the Lower Little Tennessee River Valley." Paper presented at the 34th Annual Meeting of the SEAC.

Claflin, W. H., Jr.


Coe, J. L.


Collins, Michael B.


Del Bene, Terry A. and Phillip H. Shelley

Dickens, Roy S. and Linda F. Carnes

1976 "An Archeological Survey of the Proposed Alternate Routes for I-675." Manuscript on File at Laboratory of Archeology of Georgia State University, Atlanta.

Dragoo, Don


Edens, Rick

1971 "A further report on archaic soapstone quarries in upper South Carolina." Institute of Archeology and Anthropology, University of South Carolina, The Notebook IV (4).

Fairbanks, C. H.


Faulkner, C. H. and J. B. Graham

1966 Westmoreland-Barber Site (40Mill) Nickajack Reservoir Season II. Report of Investigations No. 3. Department of Anthropology, University of Tennessee, Knoxville.

Ferguson, Terry A.


Ford, J. A. and C. H. Webb

Ford, R. I.


Harwood, C. R.

1959 "Quartzite Points and Tools from the Appalachian Highland." Tennessee Archaeologist. 15:89-95.

Holmes, W. H.


House, John H.


Keel, B. C.


Kengla, L. A.


Kneberg, M. D.

Loman, D. W. and S. L. Wheatley

1970 "Archaic Soapstone Quarries in Upper South Carolina." Notebook of the Institute of Archaeology and Anthropology, University of South Carolina, Columbia 2 (6/7), 6-12.

Luckenbach, A. H.


Overton, James M.


Ritchie, W. A.


Schiffer, Michael B.


Simmons, W. S.


Turnbaugh, W. A.

Webb, W. S.

Willey, G. R. and Philip Phillips

Yurkovich, S. P.
Figures 1-7 contain restricted information and are not included in this document.
Figure 8. 385P54 Test Pit 2 North Profile.
Figure 9. 38SP54 Test Pit 2 East Profile.
Figure 10. 38SP54 Test Pit 2 South Profile.
Figure 11. 38SP54 Test Pit 2 West Profile.
Figure 12. 38SP54 Test Pit 2 Top View.
<table>
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.4ha Good yes
.8ha Good yes
1.5ha Good yes
.9ha Good yes
.5ha Good yes
1.5ha Good yes
1.5ha Fair-Good yes
1ha Good yes
2.2ha Good yes
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1.5ha Excellent yes
.6ha Poor-Good yes
.75ha Fair yes
5.6ha Good-Excellent yes
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Table 2
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<th>Bifacial Thinning Flakes</th>
<th>Unidentifiable Flakes and Angular Fragments</th>
<th>Chunks</th>
<th>Hammerstones and Pitted Cobble</th>
<th>Soapstone Artifacts</th>
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Table 4
MAJOR BIBLIOGRAPHICAL REFERENCES

See continuation sheets

GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY: See Figures 3 - 6 (attached) for boundaries and dimensions.

UTM REFERENCES: For Individual site UTM references are included with owners' list. Area surveyed for thematic group.

VERBAL BOUNDARY DESCRIPTION:

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

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FORM PREPARED BY

NAME / TITLE: Terry A. Ferguson

ORGANIZATION: Department of Anthropology, S. Stadium Hall, University of Tennessee

STREET & NUMBER:

TELEPHONE: (615) 974-4403

CITY OR TOWN: Knoxville

STATE: TN

HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL X STATE ___ LOCAL ___

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE: [Signature]

TITLE: SC 5000

DATE: 6/24/80

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

SITES: 38 SP 11, 12, 21, 23, 47, 54, 57: 38CK149, 45: DATE 12-10-80

DIRECTOR/OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION

ATTEST: Carol A. Cricht

KEEPER OF THE NATIONAL REGISTER

DATE: 12-10-80