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The Allendale Paleoindian Expedition - The Search for South Carolina's Earliest Inhabitants

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INSIDE!

SCIAA Events at Arch Week
South Carolina Archaeology Week
Allendale Paleoindian Expedition
Director's Vista
ART Tour to Central America
The Pumpkin Site
Sassaman Honored By SEAC
Chairman Notes
The CSS Hunley
ART Donors



*1995 Excavation Team At The Big Pine Tree Site
Photo By Daryl P. Miller*

THE ALLENDALE PALEOINDIAN EXPEDITION THE SEARCH FOR SOUTH CAROLINA'S EARLIEST INHABITANTS By Albert C. Goodyear, III

It is hard to imagine such an event, but some 12,000 years ago, the ancestors of the American Indian walked from the present Siberian area of Russia to what is now called the United States. Furthermore, based on the presence of a distinctive fluted stone spear point archaeologists call Clovis, there is good reason to believe they arrived by 11,000 years ago in what is now South Carolina. These people, like many of their related kin groups throughout North America, would have seen the last of the now-extinct ice age megafauna such as mammoth, mastodon, camel, horse and bison. In places in the West, it is clear that they were not only contemporary with these large beasts but actually exploited them. The prehistoric archaeological culture associated with this terminal Pleistocene world is called Clovis after a site in New Mexico where the distinctive style of fluted stone spear was found with mammoth bones. Clovis culture along with several other distinctive archaeological manifestations which emphasized fluted lanceolate spear points and Old World Upper Paleolithic-type flake tools, are generally referred to as Paleoindian. Paleoindian simply means the oldest or most ancient of the prehistoric Indians. Based on radiocarbon dating, Paleoindian groups existed from about 11,500 to 10,000 years ago.

Because of a fluted point recording survey that has been going on in South Carolina since 1968, nearly 400 Paleoindian lanceolate points have been documented from throughout the state. A large percentage of these are of the Clovis fluted type. A favorite flint-like raw material for Paleoindian stone tools was a form of Coastal Plain chert known as Allendale. Large numbers of Paleoindian spear points made of chert including the Clovis type have been found in the southern part of the state in the vicinity of Allendale County indicating that this was a major source area. While isolated surface finds of these points have been found in virtually every county, finding a site with a concentration of artifacts sufficiently dense to warrant excavation has been very rare. In fact, Paleoindian studies in the South in general have lagged behind other regions of North America because of this problem. It seems that in the South at the end of the ice age, climatological and geological conditions were not generally conducive for burying these early sites on most land surfaces in ways that enhanced their contextual preservation. It has been established, however, throughout the southeast, that floodplains were the most geologically dynamic situations over the past 10,000 and thus a prime locality to be searched by archaeologists for buried sites.

DIRECTOR'S VISTA

By Bruce Rippeteau, Director and State Archaeologist

Greetings! I hope this issue of *PastWatch* finds you well and looking forward to a great summer.

Our *ART* has been busy as is apparent from the articles in this issue: Our new recurring *ART* Public Lecture Series is scheduled in 1995 for 03 October during the 4th Annual South Carolina Archaeology Week. Our second *ART* Field Trip to Belize, Southern Mexico, and Guatemala is scheduled for 11-25 February 1996. Our Board is currently reviewing other fund raising possibilities. Our next Board meeting is 13 July 1995 at SCIAA in Columbia, and we are considering the long-recommended conversion of *ART* to a yearly membership Trust.

If you are interested in serving on the *ART* Board, please let us know. We have three positions to fill for two year terms starting January of 1996: two are from the community

and are appointed by the Chairman, and one is from the Institute and is appointed by the Director. (One of the two Institute positions is eligible for re-appointment for one more two-year term and the member so desires to be reappointed. Thus we'll have two citizen and one Institute positions to fill.) Broadly the Board exerts oversight and direction on the Trust's activities and organization, with particular attention to the raising of endowment funds.

Let us welcome new Board Member Lynn Harris, whom I have appointed to fill the 1995 and 1996 remainder of Dave Crass' term. Dave cited work demands, but I thank him for his service to date, and we welcome Lynn.

We now have \$58,000 in our *ART* Endowment. Please consider contributing to our endowment to attain our \$100,000 goal by year-end.

PALEOINDIAN EXPEDITION (Cont.)

To remedy this situation I have been working with a soil scientist, Dr. John E. Foss of the University of Tennessee, on floodplain sites near the chert quarries of Allendale County in an effort to find sufficiently dense Paleoindian remains in a geologically meaningful context. These efforts have not gone unrewarded. At least three sites adjacent to the Savannah River or its tributaries have yielded buried Paleoindian stone tools in excess of a meter deep. At each of these sites, the chert material was located in the river or creek bottom adjacent to the site and was probably the main reason Paleoindians occupied the site. Thus, the two prime conditions for site formation have been met; the presence of a high-quality lithic raw material so valued by these early hunter-gatherers for their chipped stone technologies and alluvial deposition for site burial.

The Big Pine Tree Site (38AL143)

Our latest attempts to isolate Paleoindian remains have focused on a highly unusual site located on Sandoz Chemical Corporation land in Allendale County. This site has been known about since 1983, and in 1985 it was nominated along with several other chert quarries located on Sandoz property to the National Register of Historic Places as part of the Allendale Chert Quarries District. In 1992, Sandoz excavated a boat slip in the bank of the site which is situated along Smiths Lake Creek. This fortuitously revealed a nicely buried stratified prehistoric site with deeper deposits than previously had been known. Controlled backhoe trenching by our team subsequently revealed Paleoindian lithic



*Paleoindian Fluted Preform
Found At The Big Pine Tree Site
Photo By Tommy Charles*

technology in abundance. From 1992 through 1993, various two and three day trips were made to the site to collect geological and pedological (soils) information to assess the overall stratigraphic condition of the site. In the winter of 1994, a four week dig was conducted to evaluate the integrity of the archaeological remains and to correlate it with the sedimentological and pedological horizons. A total of 18 square meters was excavated which bottomed out on the

Pleistocene terrace. Several fluted bifacial preforms and blanks were recovered from the lowest levels along with well-made unifacial flake tools typical of Paleoindian tool kits elsewhere. Above this fluted preform layer was a zone containing the easily recognized Taylor side-notched points with their associated flake tools. Evidence of a preceramic Middle Archaic midden was also found, itself an unusually early sign of sedentism for the Savannah River Valley which is home for the earliest prehistoric pottery in North America. Based on the positive results of this work, plans were laid to return for another month in 1995.

The 1995 Expedition to Big Pine Tree Site

This year the goal was to expand the amount of area excavated in the Paleoindian and Early Archaic levels and to evaluate more closely what appears to be a Middle Archaic midden. This midden is dominated by a corner-notched point called MALA which is suspected to be around 5,000 years old. Over 40 square meters were opened up due to the increased size of our crew and the help of some good

PALEOINDIAN EXPEDITION (Cont.)

volunteers. Two graduate students helped supervise the excavation, Myles Bland, who is doing his masters thesis at the University of South Carolina on the archaeobotany of the site, and Tom McIntosh, who will be analyzing the Middle Archaic lithic debris as part of his MA thesis at the University of South Florida. Two undergraduates participated, Erin Foley from the College of Charleston and Kara Bridgman enrolled for field school credit at USC. Dr. Ken Sassaman of the Savannah River Archaeological Research Program brought his crew to the site for the first two weeks to help excavate and record the MALA midden. Tommy Charles of

SCIAA helped round out the professional staff. Dr. John E. Foss, Head of the Plant and Soil Science Department of the University of Tennessee visited again this year and conducted reconnaissance survey of other interesting pediaarchaeological sites along the river valley. Dr. Gail Wagner of USC's Department of Anthropology gave ex-

tended help by excavating and advising on soil sample collection for flotation analysis. Dr. Wagner is an ethnobotanist who is overseeing Myles Bland's thesis research and she is helping us examine the MALA midden for evidence of burned plant remains.

The following is a brief summary of the stratigraphy and archaeological cultures that have been detected thus far.

From the present ground surface to about 15 cm below surface, there exists a 20th century occupation overlying what are 19th and 20th century flood sediments characterized by a light

red hue. The red color comes from the disastrous flooding and subsequent erosion of the Georgia and South Carolina Piedmont due to poor agricultural practices over the past 150 years. Piedmont red clay even found its way down to the Middle Coastal Plain of the Savannah River!

From 15 to 60 cm below surface exists a slightly weathered soil (a Bw) which contains Woodland period potsherds and projectile points. The most common decorated sherd is Refuge Simple Stamped which dates from 3,000 years ago to AD 500. Woodland triangular arrowpoints and potsherds are found lightly distributed in this soil

organic matter and burned fragments of wood and nutshell. No bone has been seen in this midden or in any of the sediments of the site. Some features have been seen in the midden consisting of concentrations of burned rock which are probably Middle Archaic. It is known from radiocarbon dating burned nut shell from two pit features that a Late Archaic occupation existed at the top or above the MALA midden. These have dated approximately 3,700 and 3,400 years ago and intruded down into the midden. The features are somewhat enigmatic in that Late Archaic pottery and projectile points are relatively rare from the site thus far. Dr. Foss has

classified the MALA as a Bw/Apaleosol. Apparently, there was a long period of landscape stability where a B horizon began to form over a former A horizon surface. Much of the dark color of the horizon is attributable to quantities of wood charcoal and



Al Goodyear Pointing To Paleoindian At The Big Pine Tree Site
Photo By Nena Powell Rice

zone suggesting brief camping episodes. A cache of Woodland arrowpoints was found this year in the top of this zone. It consisted of six medium-sized triangulars and two small stemmed points. These points were all found in an area about the size of a hand. This cache would seem to indicate that both triangular and stemmed points were used together during the Woodland period.

Beginning at about 60 cm and continuing to 90 cm below surface, is a dark organic layer which has been referred to as the MALA midden. MALA because most of the diagnostic projectile points are a heat treated corner-notched point called MALA; midden because of the high concentrations of

charred hickory nut shell no doubt from native American fires. The midden is loaded with broken heat-treated biface blanks and the typical multicolored thinning flakes which result from their production. Based on the cortex type represented in the waste flakes, the Middle Archaic people were obtaining chert from the nearby hillsides rather than from the sources in Smith Lake Creek as was the case with the earliest inhabitants. Perhaps this indicates a change in the river or creek course.

The functional nature and radiocarbon age of the MALA midden are important research topics since the deposit is ceramic and presumably preceramic. By 4,500 years ago, Late

PALEOINDIAN EXPEDITION (Cont.)

Archaic peoples were making pottery and living on habitation sites such that middens full of shell, bone and organic debris were being created. What kinds of sites and activities were present immediately prior to that is essentially unknown. MALA is thought to be the culture just prior to the Late Archaic Stallings Island culture so famed for its early fiber-tempered pottery. To find a true midden associated with MALA stone artifacts would be a step toward understanding the cultural condition among Archaic peoples in the Savannah River valley prior to the Late Archaic period. Flotation samples were taken from the midden for archaeobotanical analysis and charcoal samples were taken for radiocarbon dating.

From about 90 to 100 cm below surface exists a transitional zone with diagnostic projectile points spanning about a 2,500 year period. These include Morrow Mountain stemmed, possible Kirk stemmed and Kirk Corner-Notched points. This is likely a time when the Savannah River was not flooding as energetically through Smiths Lake Creek and little soil was accumulating on the site. Dr. Foss has recognized a paleosol (BC) extending in part in this level which may also indicate a period of landscape stability.

An Early Archaic Taylor Side-Notched level is evident from 100 cm to 115 cm below surface. Five Taylor points, one Edgefield scraper, and two side-notched Waller flake knives have been found in this interval. The flake tools for the Early Archaic are in many respects like that of the preceding Paleoindian period. Side-notched points have been dated around 10,000 years

ago and earlier in other places in the Southeast indicating their origin out of a Paleoindian base. Prismatic flake blades, often a hallmark of fluted point sites in North America, have also been recovered with the Taylor occupation at the Big Pine Tree site. In the Taylor level, discrete feature-like lithic concentrations have been encountered, some indicating specific activities such as biface manufacture and scraper usage.

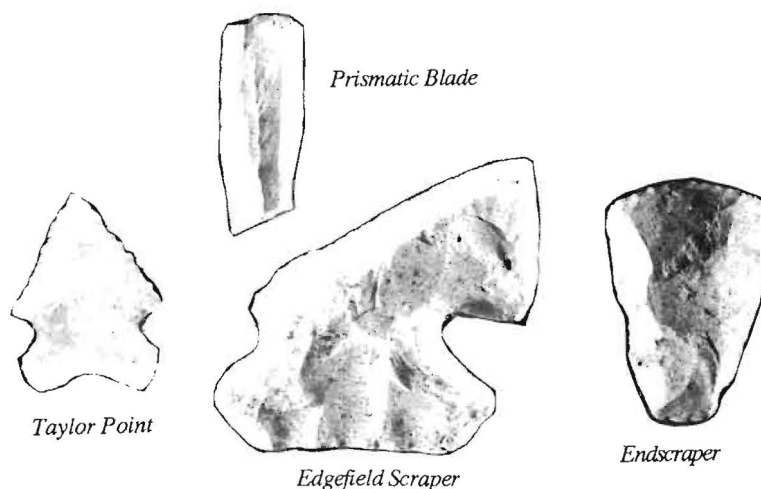
From 115 cm to 135 cm below surface exists the Paleoindian level, so called because of nearly a dozen well-fluted bifaces that have been excavated during the 1994 and 1995 seasons. No

microblades. Prismatic blade cores and their fragments have also been found indicating on-site production. Like the Taylor occupation immediately above, feature-like concentrations of artifacts occur, some bearing witness to behaviorally specific events such as biface manufacture, core reduction and scraper using. It is clear from the brown, water-smoothed cortex of the flakes, the Paleoindians and the Taylor folk were getting most of their chert from the quarry source in the bottom of Smith Lake Creek. No doubt they had first access to these high quality flint-like rocks.

The Paleoindian artifacts are situated essentially in the sands of the first floods of the Holocene or modern climatic period. In some places on the terrace, these artifacts are associated with pedogenically unmodified sands only 10 to 20 cm above the Pleistocene terrace. There is a bed of archaeologically sterile flood sand between the lowest artifact bearing zone and the Pleistocene

terrace indicating that at least one flood had occurred prior to human habitation. Small lumps of charcoal for radiocarbon dating have been recovered from strategic areas of the Paleoindian level and the sands above the Pleistocene terrace. Because of their small size, dating will have to be by the accelerator (AMS) method. The cost of such a date is \$560, and they need to be carefully selected according to context.

The 1995 season was supported by SCIAA, in-kind services from Sandoz Chemical Corporation (our gracious host), and \$1,765 in private donations by individual supporters through the Archaeological Research Trust.



Artifacts Found At The
Big Pine Tree Site
Photo By Tommy Charles

finished projectile points have yet been recovered, although some nearly finished preforms, some with flutes and some without, have been found. Many of the bifaces are fluted blanks with large (6 cm +) flutes or basal thinning flakes removed. It is clear that a major flute flake was not the last flake removed from some of the points as is conventionally thought. Other associated Paleoindian artifacts include numerous well-made unifacial flake tools such as endscrapers, sidescrapers, graters, laterally retouched flakes, and prismatic blades. These blades are relatively small (< 8 cm) and delicately thin, perhaps preparations for

PALEOINDIAN EXPEDITION (Cont.)

Without their financial contributions we would not have been able to fund this year's expedition. These individuals and organizations are:

Charleston Area Chapter of the Archaeological Society of South Carolina

Mrs. Elsie S. Goodyear
Mr. Ernest L. Helms III, MD
Mrs. Carol S. McCanless
Mr. Mark Permar
Mrs. Betty Stringfellow
Mr. John N. Walker
Mr. John S. Whatley, Jr.

Funds are currently needed to obtain radiocarbon dates for the Paleoindian level and the MALA midden, and for paleoethnobotanical analysis of the charred plant remains.



Crew Excavating At The Big Pine Tree Site
Photo By Daryl P. Miller

CHAIRMAN'S NOTES

By Roland C. Young

I would like to bring to your attention the fabulous people that we call donors whom are making it possible for us in the Archaeological Research Trust to continue our mission. Please make an effort to participate in activities offered during the 4th Annual South Carolina Archaeology Week, especially our very special **ART** sponsored dinner and lecture on October 3. Also travel with Nena to Central America in February 1996. It will help in preserving resources right here at home. Please do not forget our financial goals, and do the State a favor to protect our non-renewable resources, adopt your favorite archaeologist!

SCIAA EVENTS AT ARCH WEEK (Cont.)

insights and new interpretations of the tests based on the evidence that still lies on the ocean floor.

Please join us for these exciting programs during Archaeology Week and for further information contact Nena Powell Rice, SC Archaeology Week Coordinator at (803) 777-8170.

The 1996 Allendale Paleoindian Expedition

Plans are currently being made to return to the Big Pine Tree site for a four week excavation in May of 1996. The 1996 season will be funded by interested members of the public who wish to register for a five day experience. The registration fee will be \$275 for the five days. The dig begins Tuesday morning and is over Saturday afternoon each week. Participants will help out in all aspects of the excavation and laboratory analysis. Evening lectures on the archaeology of the Savannah River Valley and South Carolina will be provided by staff archaeologists and other visiting scientists. Some tours to nearby sites are also being planned. Free camping is available at the Sandoz Recreation Center, including hot showers and a full kitchen. Each person must supply their own tent and bedding. Lunch and supper will be provided as part of the registration fee and a cook will prepare the evening meal. Motels are available within 25 minutes of the site for those that do not wish to camp.

If you are interested in participating in the **1996 Allendale Paleoindian Expedition**, please contact Dr. Al Goodyear or Nena Powell Rice at SCIAA, 1321 Pendleton Street, University of South Carolina, Columbia, SC 29208 (803) 777-8170. There will only be 20 slots available, five people a week for four weeks. The first week begins Tuesday May 7, 1996 and is over Saturday afternoon May 11th. The last week begins May 28th and is over Saturday afternoon June 1st. Application materials will be sent upon request. All applications must include a \$35 nonrefundable application fee. The balance is due on or before March 1, 1996.

KEN SASSAMAN RECEIVES PRESTIGIOUS AWARD

In November 1994, Dr. Kenneth E. Sassaman, Archaeologist at the Savannah River Archaeological Research Program, SCIAA, was honored by receiving the highest award which is given to archaeologists working primarily in the Southeastern United States. Ken received the prestigious



C. B. Moore Award at the last Southeastern Archaeological Conference (SEAC) in Lexington, Kentucky. Ken's PhD dissertation from the University of Massachusetts, Amherst was published by the University of Alabama Press which is entitled, *Early Pottery of the Southeast*. The book is a comprehensive coverage of the earliest pottery of North America, that of fibered-tempered ware. He has also published a number of significant articles and reports and is the editor of three other books which are scheduled to be published in the near future.