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Notebook - February-March 1970

South Carolina Institute of Archaeology and Anthropology--University of South Carolina
A monthly report of news and activities of mutual interest to the individuals and organizations within the framework of the Institute of Archeology and Anthropology at the University of South Carolina and for the information of friends and associates of the Institute.

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The Institute continues to move forward with vigor in its research program both in the field and in the laboratory. The winter months provide little deterrent to field work in this climate. In fact the summer months, when digging is at its peak elsewhere, are the least desirable months for field work in South Carolina. It is a mixed blessing, though, to be able to do field work all year. The best months are the spring and fall but these are also the months when field labor is most difficult to find and full-time student labor is nearly impossible to find. For example Stanley South plans to be excavating in May and again in October and November at the 18th century sites at Ninety Six and the source of a field crew is going to be a real problem. Anyone available at those times should write to us as soon as possible.

Field work at Trotter's Shoals Reservoir has been under way this winter and laboratory work has continued. The latter has been largely devoted to bringing the old collections into an orderly arrangement and in working on reports of the past year's excavations.

Meetings, talks to various groups, and other incidental activities have also been parts of the on-going work. I spoke to the Greenville Sertoma Club on February 2 on the subject of "South Carolina's Ancient Heritage" and to the Newberry County Historical Society on "A Backward Glance". Stanley South attended a meeting at Ninety Six to discuss plans for work on the Star Fort and other sites there, on February 17. I attended a meeting of the National Historic Preservation Review Board on February 21. On March 10, I spent a day visiting the Adamson and McDowell Mounds near Camden to record them officially for the National Historic Preservation Register.

We had a most welcome visit on February 27 from Mr. George Stuart of the National Geographic Society. Mr. Stuart, a native of Camden, is working on his M.A. in anthropology at George Washington University and is using the sites in the Camden area as his thesis subject. He is providing the Institute with copies of his notes and site records for which we are most grateful. Mr. Stuart is the author of a recent National Geographic book "Discovering Man's Past in the Americas." It is an excellent book and we recommend it highly.

We are still in need of manuscripts for the NOTEBOOK. How about digging out those old site notes and bringing them together for a short article. Send them to me for consideration at:

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The Institute of Archeology and Anthropology takes pleasure in announcing the appointment by the University of South Carolina of Mr. James L. Michie of Columbia as a Research Affiliate of the Institute. Mr. Michie is a native of Marion, S. C., and a graduate of Carlyle Military School in 1959. He served two years in the Navy following which he took special courses in drafting at the University of South Carolina in 1962 and 1963. He is now employed as an architectural draftsman and designer by Harmon and Keenan, architects in Columbia.

Mr. Michie has been an enthusiastic amateur collector of artifacts for more than a dozen years and has developed a sincere, scientific attitude toward archeology. This sense of responsibility to the past has grown from simple collecting to well executed, amateur excavation and reporting. He has published articles in "The Chesopiean" and his most recent effort was the article published in the Institute's NOTEBOOK in October 1969.

He was the founding President of the Archeological Society of South Carolina and is now serving his second term as President. It was he who provided the strongest initiative to develop such a society when the Institute began its efforts to bring the collectors and the archeologists together.

His interests lie mainly in the area of Early Man materials in South Carolina and he is now assisting Dr. Hemmings of the Institute's staff in a survey of Early Man projectile points in the State. He has also provided extensive assistance to the Institute in locating and recording sites for the Statewide Site Inventory. We look forward to a long and pleasant association with Jim and welcome him to the staff.

The February and March meetings of the Society were both well attended. The meeting of March 20 was held at the Columbia Science Museum and we are all deeply grateful to the Museum and Mr. Chris Craft, the curator, for the opportunity to meet here each month. Mr. Craft kindly holds the building open for us and puts up with our seeming inability to end the meetings on time. We usually stay for discussions and arguments until well past 11:00 or 11:30 when we are scheduled for 8:30 to 10:30. Mr. Floyd Painter of "The Chesopiean" in Norfolk, Virginia, was the February speaker.

The March meeting was a week later than usual and the Museum was not available so the meeting was held at the Columbia YWCA building. Dr. William M. Bass, III, distinguished professor of physical anthropology, from the University of Kansas spoke to the Society on the relationships and coordination of the data from physical anthropology and from archeology. Dr. Bass' long experience in excavation of burials in the field coupled with his specialized competence in physical anthropology made this a most interesting meeting.
Almost a decade ago John Griffin reported at the Southeastern Archaeological Conference on a method of removing soil profiles. This method required the use of a General Electric product RTV-60, a silicone rubber spray utilizing a separate spray catalyst to produce a room temperature vulcanized rubber film. Once this material was sprayed on the profile to be lifted, a backing of fiberglass cloth impregnated with polyester resin was used to impart strength and rigidity to the profile.

In 1963, D. E. Dumond reported on "A Practical Field Method for the Preservation of Soil Profiles from Archeological Cuts" (Dumond 1963: 116). This approach utilized liquid casein glue as the bonding agent for the profile, which was lifted onto narrow plywood strips, and was particularly useful when a long, narrow, strictly stratigraphic, profile section was desired. This article mentioned papers written as early as 1945, dealing with the general removal of soil profiles for study purposes. The concept is clearly not a new one to archaeology, yet there has been a relatively minor utilization of the technique by archaeologists. Since the results of removal of soil profiles and plan sections of archeological pits, posthole patterns, and profiles are so dramatic, and since they allow the archeologist to excavate his features and stratigraphic layers, yet also be able to carry the impressions he saw back to the laboratory for future reference, it is surprising that more archaeologists have not used the technique. This paper presents a simple method for plan and profile removal of archeological features which allows the archeologist to dig his site and have it too.

The technique described here was used at the excavation of the 1670 Charles Towne Site in the summer of 1969. The fortification ditches dug in 1670 as a defense against possible Indian and Spanish attack were located and excavated. The landward fortification ditch was five feet wide and two to four feet deep below the present plowed soil zone. The soil from this ditch was originally thrown into an embankment paralleling the ditch. In the center of the embankment was a palisade, represented by a small ditch in which the palisade had once stood. During the excavation of the ditch drawings and photographs were routinely made, but these are secondary to the visible texture and color of the ditch itself, and so a desire to remove various profiles of the ditch intact arose. The method of accomplishing this is presented here.

The profile as cleaned for photography was water laid sand in the ditch fill itself, against a red subsoil background. For removal of the profile the original red subsoil clay ditch walls were cut into so as to provide a contrasting background against which the ditch profile could be seen. Once this background matrix had been cleaned beyond the limits of the ditch itself, the surface of the profile was sprayed with polyurethane liquid plastic with the brand name of Xpert, a Glidden product (Glidden Coatings and Resins, SCM Corporation, Cleveland, Ohio). Similar products are Superthane Rez (Pittsburgh Plate Glass Industries, Rex Company, Springdale, Pennsylvania), and
Narvethane (Sherwin-Williams Company, Cleveland, Ohio). The theory of applying this plastic by spraying from cans or painting with brushes to the damp profile, was to provide a good bonding agent for the sand and clay profile, and to allow a dry surface for the application of the fiberglass. The plastic coating will be dry within two hours, and a layer of fiberglass of the proper size to cover the desired profile can be cut to fit. The catalyst is added to the polyester resin (which can best be obtained from a surf shop or fiberglass boat supply shop), and this resin is painted on the surface of the polyurethane plastic coated profile. This must be done as quickly as possible, and the fiber material added over this painted surface, and another coat of resin applied over this fiber to insure its becoming thoroughly saturated with the resin. At this point, still within the thirty minute time available before the resin begins to cure, strips of plywood, wooden stakes or other firming background support for the fiberglass profile can be added using strips of fiberglass soaked with resin to bond these to the profile. When this is done and the curing is complete, usually within four hours, the profile can be removed from the ground by carefully pulling the fiberglass from the earthen profile. As it pulls away it will take with it a sixteenth of an inch or so of the clay and sand, complete with worm holes, roots, pebbles, etc. After coating the surface with plastic spray, the profile is ready to be taken to the laboratory for study or exhibit purposes, providing an exact reference for the photographs, notes and drawings made in the field. Although it was not done at Charles Towne, plan lifting of posthole patterns can be accomplished in the same manner, and theoretically, by using a series of overlapping or joining fiberglass lifts, an entire Indian house floor pattern could be removed as it is revealed on the shovel schnitted surface in the field, and re-assembled in the exhibit hall or laboratory.

Five ditch profiles were lifted in one afternoon through the above method. It was found that the use of the plastic was not absolutely necessary when a batch of polyester resin was left over from applying to one profile. In order to save the resin it was quickly slapped against a nonplastic coated profile and the results were not noticeably different from those profiles treated with the polyurethane plastic. With this discovery the process was seen as a very simple process, outlined as follows.

1. Clean profile to be lifted with trowel, cutting beyond the feature to be revealed so as to have a subsoil background for features (as in the case of sectioning ditches and pits).

2. Spray or paint on with a brush a polyurethane coating, RTV-60 (General Electric Silicone Products Department, Waterford, New York), Elmer's Glue-All (The Borden Chemical Company, New York, N. Y.), or liquid casein glue. This step apparently is optional, and can be eliminated if tests reveal it is not necessary in certain soils.

3. Apply a coating of polyester resin, then a layer of fiberglass, then a second coat of resin. Place supporting backing against fiberglass with strips, and allow to cure.
4. When the fiberglass profile is removed the surface can be sprayed with a polyurethane resin spray to secure the loose sand particles. The profile is then ready for exhibit or study in the laboratory, and can be conveniently stored by suspending from the wall, like paintings.

This method of lifting soil profiles is a simple one, and has many possibilities not yet tried. The advantages over other methods is in the simplicity, and large areas can be lifted successfully.

A charcoal corncob pit was also lifted successfully using the polyurethane resin spray and liquid. The cobs near the surface of the pit were exposed, photographed; the pit was vertically bisected and half of the cobs were removed. At this point it was thought that the removal of the remaining half pit for exhibit purposes might be undertaken. The area around the pit was excavated to a depth below the level of the bottom of the pit, leaving the pit in a circular block on a pedestal. Excavation of the surrounding clay subsoil around the pit was facilitated by using a back-hoe that was on hand for another purpose. At this point the cobs were sprayed with polyurethane resin, and to insure adequate penetration it was flowed onto the cobs and surface of the pit with a brush. The entire pedestal was also quickly coated with the resin. Once this was set up, a metal plate was slipped beneath the pedestal, which was undercut with the trowel, and the pedestal was laid on its side on the metal sheet. This was then loaded onto a station wagon for transporting back to the laboratory, where it arrived in undamaged condition with no cracks. The polyurethane coating acts as a membrane similar to an eggshell, providing considerable strength and support for fragile corncobs, preventing their spilling out of the pit even when transported on their side, a position which would normally not be considered when dealing with the delicate charcoal cobs.

There are no doubt many instances where the use of polyurethane liquids and sprays will be found to be effectively used by the archeologist as more experiments are tried on removing archeological features, profiles and other data from the field to the laboratory. The steps described here are only a beginning toward more complete data recording and recovery from archeological sites, allowing the archeologist to have his cake and eat it too.

**BIBLIOGRAPHY**

Dumond, D. E.

Fig. 1. Profile of the West Fortification Ditch at Charles Towne Before application of Fiberglass Resin

Fig. 2. Fiberglass Resin Applied to a Profile with Stakes Used as Supports

Fig. 3. Lifted Profile for Use as Data, Teaching Aid, or Exhibit Purposes
Fig. 4. Sectioned Corncob Pit Before Treatment with Polyurethane Resin for Removal

Fig. 5. Corncob Pit in Laboratory Awaiting Use in Exhibit
The promotion of competent research scientists to major administrative positions is usually the end of their research and, in effect, the start of a new kind of career. Administrative obligations so often deprive them of any opportunity to pursue their professional abilities that brought them to the administrative position in the first place. Occasionally an individual has the competence to overcome such a handicap by so organizing his time and efforts as to be able to do both. We are fortunate, at the University of South Carolina, to have just such people in our top administration.

Dr. Thomas F. Jones, President of the University, was elected, about a year ago, to membership in the National Academy of Engineers, the highest professional distinction that can be conferred upon an American engineer. The Academy thus honored persons who have made especial contributions to engineering theory and practice and who have demonstrated unusual accomplishments in the pioneering of new developments in technology. Dr. Jones was specifically cited for his recent design of harbor defense systems. This honor was earned despite his having been President of the University of South Carolina since 1962. His Ph.D. is from Massachusetts Institute of Technology and came to the University of South Carolina from Purdue University.

Dr. H. Willard Davis, Vice President for Advanced Studies and Research and Dean of the Graduate School has been elected president of the research-oriented Oak Ridge Associated Universities (ORAU). He succeeds Dr. Paul M. Gross of Duke University and is the third president in the 24 year history of the organization. ORAU is a nonprofit corporation of 41 leading colleges and universities conducting programs of education, research, and human resource development for the U.S. Atomic Energy Commission and other federal agencies. Dr. Davis has been associated with ORAU since 1950, serving on its Board of Directors since 1964. He is a native of Pelzer, S.C., a graduate of the University of South Carolina and a long time member of the University of South Carolina faculty. He was Head of the Department of Chemistry and became Dean of Arts and Sciences in 1960, Vice President for Academic Affairs in 1966, and elevated to his present position in 1968.

To those of us in research at the University of South Carolina, it is rewarding and encouraging to know that our administrative leaders are also people with not only research interests but are the leaders in their fields of research. We all gain some reflected stature by their achievements.
VISIT TO ASHLEY HALL PLANTATION

On March 8 we met with Mr. Elias Bull of Charleston to visit the Ashley Hall Plantation with a view to appraising the archeological potential there. Mr. Bull, whose family founded the plantation and owned it until early in this century, had been concerned about an Indian mound on the property. We had a delightful visit with the present owner, Mrs. W. C. Kennerty, looked over the mound site and surrounding area and discussed with Mrs. Kennerty the possibility of future excavation here. It is most rewarding to find such congenial landowners to work with us.

After our visit to Ashley Hall, we stopped by what may be an historic Westo village site. Mr. Bull has done extensive documentary research on these historic sites and has provided the Institute with a great wealth of useful data. We will be hearing more of our cooperative work with this very knowledgeable gentleman.

DARLINGTON - FLORENCE VISIT

On March 1 and 2 I visited the Darlington-Florence area to look at several sites. The primary objective was a visit to the old Townsite of Long Bluff (38DA5) at the invitation of Mr. Horace Rudisill. It is located on the Pee Dee in the north tip of Darlington County near Society Hill and was a town of some prominence in the period of 1770-1817. Nothing is now left of it but some brick rubble and traces of the main street.

Other sites visited include several Indian campsites and/or villages along the Darlington-Florence County border near the Pee Dee River and one historic site. The latter is an interesting, rectangular breastworks that may be of the Revolutionary War period.

On Monday evening, March 2, I attended the monthly Florence Symposium and had a chance to talk with many of the people of that area about their archeological discoveries. This monthly symposium organized by Mr. Gene Waddell of the Florence Museum and Mr. Tom Edwards of the Florence-Darlington Technical Education Center is a most useful and worthwhile opportunity for people to discuss their mutual interest in archeology. About 40 or 50 people attend each monthly meeting held in the Florence Museum on the first Monday evening of the month at 7:30.
This excellent symposium was sponsored by the South Carolina Tricentennial Commission and the University of South Carolina on March 19-21, 1970. Sessions were held at the Sheraton-Columbia Inn and on the University Campus with Dr. George C. Rogers, Jr., of the U.S.C. History Department as chairman. The general theme of the symposium was "The Place of the Southern Colonies in the Atlantic World." Invited participants attended from more than two dozen states and England, Canada, Jamaica, and Brazil. All aspects of the theme were discussed in over three dozen excellent papers primarily by historians but one full session was devoted to archeology. The only serious shortcoming of the symposium was that no provision was made for the publication of the papers.

The main focus for us was the evening session on Thursday, March 19, "Recent Archeological Work: South Carolina and Jamaica." Colonel Charles L. Anger, chairman of the history department at the Citadel, was chairman. Stanley South presented a one hour illustrated talk on South Carolina's Charles Towne Project. Mr. Philip Mayes, of the University of Leeds, England, (Technical Assistant to the Jamaican Government for the Port Royal Project) presented a one hour illustrated talk on "Jamaica's Port Royal Project." Mr. Ivor Noel Hume, Department of Archeology of Colonial Williamsburg, Virginia, summed up the session and commented on the general philosophy of research exemplified by these projects. It was a most worthwhile session and all who attended (over 300) were well rewarded. Perhaps, in a later issue, we may be able to publish Ivor Noel Hume's summary remarks.

Dr. and Mrs. William M. Bass, III, and family visited the Institute on March 25-28. Dr. Bass is an internationally known scholar and professor of physical anthropology at the University of Kansas. He was here at the invitation of the Institute and expressed real interest in the research program underway here. He lectured for two hours on Thursday morning to students and laboratory staff members in the Institute quarters, spoke to the Archeological Society of South Carolina on Friday evening, made a cursory examination of the skeletal material in the laboratory of the Institute on Saturday. On Friday we took Dr. Bass to Charleston to visit the excavations and reconstructions at the Charles Towne Site.

It was a real pleasure having the Bass family with us for these few days and to have a chance to reminisce about our years together in the Missouri Basin. We look forward to having the Bass' visit with us again in the near future.
DR. HEMMINGS TO STUDY HORNER SITE

Dr. E. Thomas Hemmings has recently negotiated, for the Institute, an arrangement by which he will be working with Dr. Waldo R. Wedel of the Smithsonian Institution and Dr. Glenn L. Jepsen of Princeton University on the collections from the Horner Site near Cody, Wyoming. Excavations were begun at this Early Man site by Dr. Glenn L. Jepsen for Princeton University in 1949 and 1950. In 1952 Dr. Jepsen and Dr. Wedel, of the Smithsonian Institution cooperated on excavations. Only brief, summary accounts of the work have been published. The site was a bison butchering locality with the possibility of a habitation area in conjunction. Here the distinctly shaped stone tools used by man and known as "Cody Knives", as well as other artifacts, were found in clear association with the remains of more than a hundred bison. Scottsbluff and Eden points are among the type of artifacts recovered. Carbon-14 dates from this site are on the order of 6,876 ± 250 and 6,920 ± 500 years ago. Dr. Hemmings will be working with Dr. Wedel and Dr. Jepsen on the preparation of a detailed report of the materials recovered. To this end, he visited the Smithsonian on March 23 to April 6 to begin the work.

TRACKS OF "BEST FRIEND OF CHARLESTON"

The "Best Friend of Charleston" was the first steam locomotive to pull a train of cars in regular passenger service in America. It ran from Charleston a few miles on its first scheduled run on Christmas day 1830. By 1833 the track extended to the now extinct town of Hamburg, S. C. (across the Savannah River from present Augusta, Georgia) and was then the longest railroad in the world. This line is now owned by the Southern Railway System and they have, as their part of the South Carolina Tricentennial, built an exact and operative replica of the "Best Friend".

On February 26 Stanley South and I were asked by Mr. W. D. Shults of the Southern Railway and Mr. Cameron Burn of Charleston to look at what appeared to be a section of the original 1830 track. Mr. Burn, who operates a lumber yard in Charleston, has found sections of timbers beneath one of his lumber sheds in the area where the original track was located. This land is leased by Mr. Burn from the Southern Railway. We spent the day there and saw what in all probability is a portion of the "sleeper" construction for support of the track. The rail itself was not in evidence but the "sleepers" and "truss work" timbers appear to be present.

We suggested a brief excavation there and the Southern Railway System agreed to support the work if we wait until next year which we are pleased to do. This should be an interesting small project to excavate and we are much indebted to Mr. Cameron Burn for bringing it to our attention. It will be remembered that Mr. Burn was the patient gentleman who held up construction on the basement of his house in Mount Pleasant for so many months while Dr. Edwards excavated an 18th century building foundation there.
Dr. E. Thomas Hemmings spent the period of January 20 to February 28 in a survey of the area to be flooded, on the South Carolina side of the Savannah River, by the Trotter's Shoals Reservoir. This reservoir is planned for construction by the Corps of Engineers, U. S. Army between the present Hartwell and Clark Hill Reservoirs. The work is being carried out by the Institute through a cooperative agreement with the National Park Service.

The month of field investigations resulted in the locating of 35 archeological sites despite the heavy ground cover of vegetation that limited the possibility of intensive search of the ground in most areas. Most of the lithic sites were Old Quartz Morrow Mountain camps on elevated locations along the valley slopes with some evidence of Palmer, Guilford, and Savannah River Archaic occupations. Ceramic sites included both camps on the valley slopes and agricultural villages on the alluvial flood plain. Multicomponent (ceramic and non-ceramic) were campsites on the valley slopes. Three fish traps, probably of prehistoric origin, were located within the Savannah River channel and may be related to prehistoric fishing camps on nearby bluffs. Historic sites include a mill site and a farm and ferry crossing of the 19th century.

Due to the heavy ground cover, additional survey is recommended for the time when land cleaning for the reservoir begins and some trenching of the alluvial flood plain is urged to locate sites silted over within the flood plain. There are 12 of the recorded sites that are recommended for excavation. It is anticipated that three or four years remain before this area may be expected to be flooded.

The Institute increases its space facilities

At the end of March 1970, the Institute added approximately 1,600 square feet of additional space to its laboratory and office facility. This makes a total of approximately 9,000 square feet available; 5,800 square feet of which is located in the remodeled basement of Maxcy College and 3,200 square feet in the basement of Coker College, adjacent to Maxcy. In Maxcy College, there are 1,400 square feet devoted to office space, 400 square feet to specimen files, 600 square feet to drafting and photography, and 3,400 square feet to laboratory space. In Coker College, there are 2,000 square feet devoted to equipment storage and 1,300 square feet to rough laboratory space.

The University has indeed been kind to the Institute and provided well designed space for the efficient and effective performance of its work. The growth of the Institute has been rapid in the past year and a half and promises to continue to be. Space acquisition so far has kept up well with this growth and it is deeply appreciated.