

# ADVANCES IN SOUTHEASTERN ARCHEOLOGY 1966—1986 CONTRIBUTIONS OF THE FEDERAL ARCHEOLOGICAL PROGRAM

Edited by  
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**Advances in Southeastern Archeology 1966 - 1986**  
**Contributions of the Federal Archeological Program**  
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## PREFACE

In that this symposium celebrates the twentieth anniversary of the National Historic Preservation Act of 1966, as amended (NHPA), comments regarding it are in order. By 1966 Congress and the Administration were convinced that to safeguard the national historic patrimony adequately additional legislation was needed and enacted NHPA. This legislation focused on all types of historic properties, not only those of national significance but of state and local importance as well. In 1974 Public Law 93-291, the Archeological and Historic Preservation Act (AHPA) was passed. The interaction that has developed between these laws affecting archeological resources may seem complex to those who do not deal with them every day, but in fact they are understandable and workable.

NHPA requires to Federal agencies to identify, evaluate, and nominate significant historic properties to the National Register of Historic Places and to take into account the effect that their programs have on such properties. Among other things NHPA established a State-Federal partnership and provides funding to the state on a matching basis for carrying out the program, which is essentially one of reviewing Federal undertak-

ings and consulting with Federal agencies, conducting or having conducted inventories of historic properties (including prehistoric resources), and comprehensive planning. NHPA under section 106 requires Federal agencies to provide the President's Advisory Council on Historic Preservation with the opportunity to comment on Federal undertakings which have an effect on properties listed on or eligible for listing on the National Register of Historic Places. Traditionally, among some agencies there is the belief that NHPA does not provide a direct legislative sanction for them to spend construction monies to do historic preservation (only in the 1980 amendments to NHPA is the legislative authority provided to permit agencies to include survey and other initial activities as planning costs). The provisions in section 7(a) of AHPA provide the authority for these kinds of expenditures. Consequently, the funding authority contained in AHPA is generally used to carry out archeological work.

Bennie C. Keel  
Washington, D. C.  
January, 1988

## DEDICATION

This publication is dedicated to the memory of Dr. Victor A. Carbone and Dr. Roy Selman Dickens, Jr., who through their involvement with the Federal Archeological Program made our knowledge of southeastern archeology more complete.

## HIGHLIGHTS OF THE FEDERAL ARCHEOLOGICAL PROGRAM IN ALABAMA, 1966-1986

Vernon James Knight, Jr.

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*The Federal Archeological Program has, without question, changed the general character of Alabama archeology over the past twenty years. Most of the obvious changes are matters of increased scale, both in knowledge and in the organization of research. More subtle substantive contributions to method and theory can be traced in a brief review of four of the program's most ambitious projects carried out in Alabama between 1966 and 1986.*

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A proper history of the past twenty years of Federal archeology in Alabama would have to summarize all those Cultural Resource Management projects, small and large, good, bad, and mediocre, which bring us to our present commemoration of the National Historic Preservation Act of 1966. I am no proper historian, and it may be a bit too soon to place these events within just the right perspective. Excusing myself from that kind of survey, I have tried to find some other responsible way of conveying the true importance of the Federal program to the furtherance of archeology in Alabama.

The presence and influence of that program, in a quantitative sense, has been a mystery to no one. I will not quote figures, nor will I preach to the already converted. One could, of course, graph quantum increases in such domains as total funds disbursed, the numbers of institutions involved (public and private), or the number of archeologists and students employed. It would not be difficult to correlate these with the growth and well being of academic anthropology on Alabama campuses. Similar effects could be shown within various domains of archeology per se. One could easily quantify large increases in basic survey coverage or growth in the extent and documentation of curated collections. One could demonstrate these effects by tracking progress in the refinement of regional chronologies in the state, or by showing the frequency of citation and use of CRM-generated data in

published research. Surely it is no exaggeration to say that the southeastern United States is getting to be archeologically one of the best known areas of the world, and this is due in no small measure to the public funds generated by Federal preservation law. One could say all these things, though, without really getting at the issue I would like to address here. Namely, has this kind of archeology been any good?

I suspect that most of our professional community can recall hearing, or even thinking ourselves, that salvage archeology (as we all called it) had never contributed anything to archeological theory and probably never would. Today, though, there are fewer academic purists who have not yet soiled their hands with at least one government contract. There are few who would deny that contract archeology is currently providing many of the answers to the basic what, where and when questions of prehistory. And yet, what I see as the fundamental indictment of federally contracted archeology during the late 1960s and early 1970s is the same now as it was then. The charge has been pervasive mediocrity.

I happen to believe that the real pulse of any discipline is taken not by its average, but by its best work. And so I am concerned here with those occasions where Federal contract archeology of the past twenty years has clearly risen above that level. Among these are projects where the best of what happened to American archeology during the 1960s has come through at the root level. Where, for example, research designs were not just explicit but thoughtful; where close attention was paid to data requirements; where creative problem-solving was welded to good and experienced fieldwork; where report writing was guided by a true depth of knowledge and a spark of inspiration; where synthesis was considered a virtue.

At great risk of taking liberties with history, I want to briefly mention four CRM projects in Alabama. I will discuss four for reasons of space only. The real list is many times longer. I have no sampling design other than my own sense of what is important. Some of these projects are among the most ambitious of the government projects carried out during this period, but others are more modest. Each stands out in my

memory as having taught us some lessons about what is possible within the contract framework.

### **Salvage Excavations at the West Jefferson Steam Plant**

Year: 1973

Primary Agency: Alabama Power Company, operating under Federal Energy Regulatory Commission regulations.

Principal Investigator: David L. DeJarnette

Assistant Project Director: Jerry J. Nielsen

Field Supervisor: Ned J. Jenkins

To someone without at least one ear tuned to Moundville phase research, here is a truly obscure little project. Among many possibilities, this is my only example of the pre-Moss-Bennett, ten-foot-square days of an Alabama archeology dominated by David DeJarnette. Twenty-five copies of the report were produced, many of which quickly vanished among the ranks of non-archeologists and rather transient Mound State Monument employees.

Three sites were excavated. All of them proved to be small settlements of the terminal Woodland West Jefferson phase, as it was subsequently named (Jenkins and Nielsen 1974). The project's most obvious importance was the discovery, and still the best documentation, of the immediate background to Mississippian culture in the Moundville area. In the context of the time, it required an exceptionally keen awareness on the part of the investigators to have recognized and interpreted the pivotal nature of the evidence as they did.

A point concerning the West Jefferson project that needs some historical emphasis, however, is perhaps less apparent. It is that this was the first occasion in Alabama archeology where extensive mechanical site stripping was incorporated as a research strategy. One might rightly question whether this can be counted as a real innovation or not, especially by those who are familiar with mechanical stripping as employed in Plains archeology during the 1950s and 1960s. In fact, it also was used in Alabama as a strategy to locate pits and structures during the *Chattahoochee Valley* work of the same period (DeJarnette 1975).

But West Jefferson, I would argue, was different. Perhaps a little inadvertently, and perhaps using an inadvisable kind of heavy equipment for the purpose, here, nonetheless, was total site stripping to expose

entire settlements, allowing them to be analysed as *settlements*, in terms of the interrelationship of site features (O'Hear 1975). A settlement oriented research strategy is vastly different from the test pit and midden sampling strategy used almost exclusively in Alabama prior to West Jefferson. Later, the strategy was extensively used and refined in the Tennessee-Tombigbee Waterway excavations of the late 1970s. Most recently, we have seen it again bear fruit in the American Bottom Interstate-270 excavations (Barcis and Porter 1984). Future historians of this period of eastern United States archeology may wish to note that these various events are not unconnected.

### **Gainesville Lake Area Investigations, Tennessee-Tombigbee Waterway**

Years: 1976-1980

Primary Agency: U. S. Army Corps of Engineers

Principal Investigator: Carey B. Oakley

Field Director: Ned J. Jenkins

The Federal Government invested an unprecedented sum of money on archeology for the Tennessee-Tombigbee Waterway, contracting with so many institutions for so many different things that it is hard for at least one interested bystander to keep them all straight. But now that the last of the Waterway archeology reports are trickling in, we can gather the fruits together in one place and ponder the season's harvest.

The Gainesville Lake Area mitigation project was not by any means the most lavishly funded of the Tennessee-Tombigbee projects, but it must certainly be counted as one of the very best. Its product, a five volume series, is still the single most useful published contribution to southeastern archeology to come from the Waterway programs, and has resulted in a spin-off book published by the University of Alabama Press (Jenkins and Krause 1986).

The project found Mr. Jenkins at the helm of a nicely balanced multidisciplinary effort. The centerpiece of the field strategy was the mechanical stripping of large site areas, particularly of two large Woodland villages (Jenkins 1982). Perhaps the most significant outcome was the generation of a truly massive data set concerning prehistoric human ecology. This is simply one of the finest continuous biocultural records for one region yet to be produced in the eastern United States.

### Murphy Hill Site Excavations

Years: 1974-1975  
Primary Agency: Tennessee Valley Authority (TVA)  
Principal Investigator: Carey B. Oakley  
Field Director: J. B. Graham  
Archeologist in Charge of Report: Gloria G. Cole

The Murphy Hill project in the Tennessee Valley of Alabama entailed the only modern excavation of a Copena burial mound site. It is important for that reason alone but, to this observer, it stands out in three other ways.

First, the excavations were directed by an individual who clearly took pride in excellent fieldwork. The excavation photographs are a pleasure just to look at. They convey a sense of control over data recovery in a complex archeological deposit that enhances one's confidence in the reporting and interpretations.

Second, the project did *not* culminate in merely a site report. I suppose that all of the elements that go into a standard site report are to be found in the published product (Cole 1981), but it is much more than that. It has two emphases. One is a thorough and thoughtful reevaluation of the concept of Copena, a concept which the archeologist chooses to revise. It is also a socio-cultural reconstruction of Copena society as reflected in its mortuary practices. I emphasize that these are not superficial observations tacked on to an excavation report. To the contrary, these emphases structure the monograph.

Third, and this applies as well to other TVA projects, the Murphy Hill contract report is published. TVA's *Publications in Anthropology* series combines consistency, availability, appropriateness of format, and printing in sensible quantities. Other agencies ought to emulate this model.

### Excavations at the Lubbub Creek Archeological Locality

Years: 1978-1979  
Primary Agency: U. S. Army Corps of Engineers  
Principal Investigator: Christopher S. Peebles

In thinking of Lubbub in retrospect as a distant observer, I confess a slightly uneasy sensation. I sense that, somehow, there are many eastern United States archeologists, and some even who would claim

expertise in Mississippian culture, who have never even heard of it or, at least, do not know much about it.

Whether or not that is correct, the Lubbub project of the Tennessee-Tombigbee Waterway was truly ambitious in its conception, to the point that the Corps of Engineers were rather daring to buy into it. Ambitious, with a capital A, seems just the right word. Lubbub was a fortified Mississippian mound and village site with a long occupation span and a highly complex succession of features, structures and site contexts (Peebles 1983). The village area was systematically sampled, the mound and its structures excavated, and successive palisades worked out. If any comparably systematic and complete data set exists anywhere for the chronological development of a mature Mississippian town, it has escaped my notice.

### Conclusions

Now to return to my initial question: Has the Federal archeology of the past two decades in Alabama been any good? Has it contributed anything beyond an accumulation of the mere facts of regional prehistory? By the measure of these and other projects, I think so. Some better than just competent work has been done, and still is being done out there. The research projects mentioned in this brief "Hit Parade" reveal something else that is interesting. What they have in common is that their true results, their real eventual contribution, is not yet known. Like all things provocative, we shall be discussing their merits and their imperfections for some years to come. And this, it seems to me, is one mark of progress.



## DOUBLE THE WORK, DOUBLE THE TREASURE: FEDERAL ARCHEOLOGY IN ARKANSAS, 1966-1986

Hester A. Davis

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*The reservoir salvage program was winding to a close in Arkansas in 1966. The National Park Service, first under John Corbett and then Rex Wilson, did not slow down its involvement in Arkansas archeology just because all the reservoirs were built. Between 1966 and 1972, two major overviews were funded, one of the Lower Mississippi Valley and one of the Red River Valley. In addition the first contract was funded to investigate non-reservoir site destruction due to Federal projects. This look at Soil Conservation Service (SCS) sponsored land leveling in Arkansas and Missouri led directly to the enactment of the Archeological and Historic Preservation Act in 1974. Since that time, archeology under contract with Federal agencies, or as a result of Federal law, has been a major source of field archeology in Arkansas. It also has resulted in some of the major publications that have been published on the prehistoric and historic archeology of the State.*

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The 1967 SEAC meeting in Macon, Georgia was invaded by many people from Arkansas with the big news, to us, of the creation of the Arkansas Archeological Survey by the State's General Assembly. To have heard us speak, one would have thought that the State was now going to take over archeological work, and we didn't have to worry about any other source of funding. Now, after almost 20 years, that is obviously not what happened, but a review of the State Government's and the Federal Government's roles in supporting archeology in Arkansas is an illuminating one.

As was the case in most southeastern States, Federal support for archeology began in Arkansas in the late 1930s with WPA projects. There was a break during the war, and then, in 1948, the reservoir salvage work began with National Park Service support at a project at Bull Shoals Lake. There were then two reservoir

surveys with River Basin funds and personnel, one from the Texas office in 1954, and one from the Nebraska office in 1957. In 1958, McGimsey began reservoir salvage work under contracts to the University Museum. Projects continued, usually one project a summer, until 1964. By that time there were several reservoir projects needing to be covered at the same time, and the University Museum and the National Park Service fielded several crews. When the Arkansas Archeological Survey was created in 1967, this kind of research was transferred to the Survey. The University Museum continued to sponsor the University's Field School until 1985, when the Department of Anthropology took over, but it otherwise has not done any contract or other archeological field work since 1967. The Department's Bioarcheology Lab, under the leadership of Jerry Rose, now also does specialized bioarcheology projects, generally as a subcontractor for Federal projects.

As another historical comment, I would like to point out that it was the innovative views of the National Park Service and the willingness of John Corbett to recognize a potential problem and to put money where his philosophy was that funded "pilot" projects in 1966 in eastern Arkansas and southeastern Missouri on the problems caused by the SCS's technical assistance land leveling projects. This was not reservoir salvage prior to Corps or Reclamation projects, but this was Federal activity destroying sites. These two projects, plus major overviews of the Lower Mississippi Valley, the Red River Valley and the White River Valley were funded by the National Park Service between 1969 and 1972, before these kind of projects were really an accepted part of Federal responsibility. In addition, this concern with the effects of agricultural activities on prehistoric sites in the Mississippi Valley led directly to the drafting, in 1969, of what became known as the Moss-Bennett bill, with eventual passage in 1974. In my opinion and experience, however, it was the passage of the National Environmental Policy Act in 1969 and the Archeological and Historic Preservation Act of 1974 which truly had an effect on the amount and kinds of archeology being done under Federal auspices, rather than the National Historic Preservation Act in 1966.

There is one other pre-1966 activity that should be mentioned and that is the funding of surveys of the Interstate system by what was then called the Bureau of Public Roads, and the salvage of sites directly in the right of way. This work was authorized by the Federal Aid Highway Act of 1956 and, although it did not allow any work to be done outside of the right of way, and did not allow the Federal Government to pay for anything but digging the site, it did get the mind set into the Arkansas Highway Department, and some highway survey and salvage was funded in 1965 and 1966.

To get back to the topic at hand, and to have some idea of what has happened relative to State and Federal support for archeology since 1966, we can refer to the Survey's computerized Project File. We have standardized and recorded information about all projects in Arkansas, dating back to 1879. This information can be sorted many ways. The Survey is the State's repository for all archeological information, so we have records on all projects, no matter who did them or who funded them. For purposes of this paper, I asked for a printout by year and by funding agency. This revealed that, rather than 1966 being a "watershed" year, 1972 or 1973 should be considered as the period in which the historic preservation legislation began to have some real influence on the kinds and numbers of archeological projects in Arkansas.

In 1971, the National Park Service was still funding reservoir work. However, in 1972, the Corps of Engineers, Memphis District, began to fund surveys directly under the authority of the National Environmental Policy Act. The Cache River survey, which may be familiar to some of you, was such a project, initiated in 1973. There were actually 9 surveys initiated in 1973, 17 in 1974, and 36 in 1975. Surveys were now being done for waste water and sewer projects, for transmission lines, for Corps permits, and for highways. In 1975, the first mitigation excavations took place under Moss-Bennett authority. By 1976, the number was up to 54 survey projects, the U. S. Forest Service having also gotten the word. This is the approximate number of survey projects conducted in the State per year since that time.

So what has this meant to the accumulation of information on history and prehistory in Arkansas? To have some idea of the impact of the Federal programs, one must also have a short history of the State funded program, and of its philosophy.

When the Survey was created in 1967, only two of the archeologists it employed had ever worked in Arkansas. Thus, for a few years, the staff were all spending

their time learning the archeology of the State. At about the same time that the Federal Government started to gear up for getting archeology done, the Survey's archeologists were ready to stop surveying and start some serious excavation. It was and has been the Survey's approach that our archeologists will do research that we feel the State needs. The federally supported research is chosen for us, both where it will be and what will be done. The Survey will work with State funds in areas not covered by Federal projects, and generally on topics not covered by federally sponsored research.

For a few heady years in the mid 1970s, each Survey research station had a full-time M.A.-level assistant who continued with survey work while the Survey's archeologist concentrated on larger projects. In most cases, half of the assistants' salary was funded by a grant from the Arkansas Historic Preservation Program. All that disappeared by 1980. Since then, State funding for the Survey has not kept pace with inflation and salary increases, so that funds available for field research have eroded considerably since that date.

The University Museum and now the Department of Anthropology at the University of Arkansas in Fayetteville have continued to support a Field School each summer. There are currently five private firms located in Arkansas, plus several more from out of state, who do contract work in the State. For the past five years, the only planned field excavation projects supported by the Survey have been those associated with the annual Training Program for Amateurs. Other field projects have been done largely on an emergency basis and always with volunteers. However, the philosophy remains the same, and the research supported by the Survey is normally not connected with Federal projects.

It is instructive to look at publication as a criterion for assessing the impact of federally supported archeological work in Arkansas. Since 1967, the Survey has published 27 numbers in its Research Series and 25 numbers in its Research Reports. Of these 52 publications, 35 (67%) are the result of federally sponsored projects, although only perhaps 5 of the reports themselves were published with Federal funds. Three (5%) of the publications were sponsored by private business as a result of Federal requirements. Ten (19%) reports are solely on Survey sponsored projects, and 4 (7%) are a combination. One of those which is a combination is *The State Plan for the Conservation of Archeological Resources in Arkansas* (Davis 1981). The Survey received a grant of \$9,995 from the National Park Service to begin work on the archeological portion of the State plan. However, by the time it

was published, the Survey had invested about \$50,000 in that report. Its effectiveness and usefulness cannot be measured, but certainly more than warrant the investment.

On the other hand, since the reservoir projects have been completed, there have been very few area wide projects in the State supported through Federal funds. The Cache River sample survey, the Village Creek sample survey, the Sparta Mine predictive model (a project supported by business), and some Planning Unit sample surveys in our two National Forests have been the only projects which have not been linear in nature. Archeologists have crisscrossed the State in narrow transects (highway corridors, transmission lines, gas pipelines, channelization bank lines, existing reservoir shorelines, and miles of sewer lines), but we have yet to evaluate the usefulness of the information gained in adding to our knowledge of past human occupation in Arkansas. Since 1966, we have added 15,000 dots on maps. Probably half of those were as a result of federally funded surveys.

If we look, for a moment, at major excavation projects conducted during the last 20 years, we find that those funded by the Federal Government and by the State Government are just about equal, about 15 each (the count for the State includes some of the Field Schools and Amateur Training Programs, where there have been multiple years spent working at a single site). The record of the State in publishing results of its excavations is considerably behind that of the Federal agencies. Nine of the 15 Federal mitigation projects have been published in the Survey's Research publications while only two of the State's projects have been fully published. Another is in final preparation for publishing and three more have had progress or preliminary reports published. The State has, however, published some background and review reports that could not have been supported as part of a Federal project, but which are vital to the contributions which the federally supported projects are able to make. I am thinking, for example, of Martha Rolingson's publication on the Plum Bayou Culture (Rolingson 1982), which provides the results of very preliminary research at the Toltec site, and Frank Schambach's chapter in

*Arkansas Archeology in Review* on Fourche Maline culture (Schambach 1982).

It is my feeling that this kind of balance, or partnership if you will, pays off best in the long run for archeology. The Federal program largely must be project-specific in what they are able to fund, although in our experience they can be innovative when an imaginative and innovative Federal archeologist is in the right place at the right time. A State funded program or a university program can often take a broader view, can fill in the gaps made by the nature of Federal projects within a State, and, of course, can also be innovative when imaginative people have the interest and incentive. We are beginning to lament all the descriptive project-specific reports piling up. Who is going to draw some of this information together, so that we can see if, for example, the hundreds of sites tested have added anything to our knowledge of the past?

If the money is drying up for field work and, as has been our experience, the Federal Government is avoiding significant sites, there is certainly still a wealth of information available to be worked on. It should now be this partnership, between the Federal agencies that have invested in all this information and the State and/or university archeologists who need the synthetic data, that gets to work on innovatively funding this essential research. In actuality, the Southwest Division of the Corps of Engineers is doing just that in its overview of the prehistory and history of the Division's whole geographic area of responsibility. In this case, management and archeology are going to be well served because of imagination and innovation within the Corps. The National Park Service's National Archeological Data Base project has meant that Arkansas now has 3,500 citations computerized, with key words for sorting. This will be a tremendous boon to both those doing Federal projects and to those doing non-Federal research.

There is still a great deal that must be done because of Federal law and regulation. There is a great deal more that can be done with some imagination on the part of all archeologists, and it has been this history of a 20-year partnership that will make the future productive.

## TWENTY YEARS OF FEDERAL ARCHEOLOGY IN FLORIDA

**James J. Miller**

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*The influence of Federal archeology in Florida since 1966 has been extensive rather than intensive. There have been no major river basin or dam construction projects requiring impact assessment surveys or massive salvage excavations. Federal land managing agencies with large holdings in the State include the National Park Service, Forest Service, Department of Defense and Fish and Wildlife Service. Altogether, Federal lands constitute 9.4% of the state or roughly 3.5 million acres. Records kept by the Florida Division of Historical Resources show that Federal agencies have reported 35% of all archeological surveys and excavations in Florida conducted since 1973. Overall, the Federal Government has instituted the programs necessary to manage its properties in accordance with historic preservation mandates. This paper will summarize the more than 350 Federal archeological projects in Florida, many of which are small in scale, and focus more directly on the major accomplishments of the agencies in large scale survey and site management.*

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The last two decades of Federal archeology in Florida have witnessed no major mitigation projects of the type that have sometimes dominated Federal programs in other states. In other words, there has been no Tennessee Tombigbee Waterway, no Walter F. George Reservoir, no major dam or flood control construction like Tellico, and no new military installations the size of King's Bay. Instead, Federal agencies have directed their efforts in Florida to the types of projects upon which the broad scale and long term success of archeological conservation will ultimately depend.

Since the early 1970s, the Florida Division of Historical Resources (formerly known as the Division of Archives, History and Records Management) has maintained a comprehensive database of archeological projects in the State that agencies have reported to it. Many projects conducted before 1970 are not included

in the computerized file, and some small number of recent projects has probably not been reported to the Division. However, because all project reports received or reviewed by the State Historic Preservation Office are included, it is not likely that more than a few Federal projects are omitted.

At the present time, the database contains information on approximately 1,622 projects, mostly cultural resource surveys (Table 1). Of this number, 506 have been designated as "Federal projects." That is, they were conducted by or for Federal agencies on Federal properties, or were required by Federal law and reported by the responsible agency. The following analysis of the Florida Federal projects is useful in showing the general nature of Federal archeology. It will characterize the Federal program as a body of work spanning two decades, and will illustrate as well the development and changes in archeological practice during that time, at least in Florida, and perhaps for the Southeastern United States.

### Federal Lands

The relative importance of Federal archeology in Florida is indicated by the fact that Federal land totaling 3.5 million acres accounts for 9.4% of Florida's land. This represents an area slightly larger than the state of Connecticut. The National Park Service, whose largest property is Everglades National Park, owns 1.5 million acres of Florida land, which comprises 42% of the Federal land total. The United States Forest Service controls three National Forests in Florida, the Apalachicola, the Osceola, and the Ocala. Together these cover 1 million acres, or about 31% of the Federal total. The two largest holdings of the Department of Defense are Tyndall Air Force Base and Eglin Air Force Base in the panhandle. Total military holdings are about .75 million acres or about 20% of the Federal total. Four percent of Federal land in Florida makes up the National Wildlife Refuge System, and the holdings of National Aeronautics and Space Administration comprise 2%. All other Federal agencies combined own less than 1% of the Federal land in Florida.

The pattern of Federal presence in Florida appears fairly representative of southeastern States, although

Florida's 9.4 % Federal ownership is slightly more than double the average of the other southeastern States. In addition, Florida is the second largest of the southeastern States, so its 3.5 million acres is nearly three times the average Federal land area in the other nine southeastern States. These differences are minor in comparison to Federal ownership patterns in the western States where the Bureau of Land Management controls significant proportions of many States. For example, in the Rocky Mountain region Federal ownership accounts for half of all land. In the Pacific region, including Alaska, the Federal Government owns 70% of the land. The average Federal ownership for the United States is 32%, or five times the southeastern average and more than triple the Florida proportion. Patterns in the Federal archeology program in Florida may well represent trends and conditions in other southeastern States, and it is hoped that interpretations of the Florida data can be tested in other States.

**National Park Service**

The next step in assessing the Federal archeology program in Florida is to characterize the efforts of the

various agencies in meeting their survey and inventory responsibilities. Because archeology, history, and, more recently, cultural resource management have been largely the domain of the National Park Service at the Federal level, it is not surprising to find that much archeological attention has been devoted to Everglades National Park over the last 20 years. Yet, accomplishing even the most basic level of survey coverage is a major archeological undertaking. National Park Service ownership in Florida alone represents an area larger than the State of Delaware, and the attention of the National Park Service archeological program in the Southeast must be divided among 55 properties totaling more than 3.3 million acres. During the late 1960s, south Florida and the Everglades, in particular, were clearly the least understood areas of Florida. The late 1940s and early 1950s witnessed the publication of the three area syntheses upon which modern Florida archeology rests: Willey's Gulf Coast, Goggin's St. Johns, and Rouse's Indian River studies. Conspicuously lacking was a comparable study of south Florida. Goggin's elusive unpublished manuscript received only very restricted distribution and limited use. Even the most basic absolute chronology

Table 1. Measures of Federal Archeology in Florida by Agency

Agency	Number of Reports	Number of Acres Surveyed	Number of Miles Surveyed
BLM	3	184	0
COE	34	38,757	110
EPA	4	10,859	0
FAA	1	1	0
FHWA	1	0	40
FWS	19	3869	108
GSA	2	14	0
HUD	2	85	0
NASA	6	91,264	0
NPS	28	831,256	110
SCS	7	960	149
TVA	1	400	0
USAF	6	10,059	0
USCG	3	609	0
USFS	379	132,475	432
USN	4	1659	1
USPS	3	3	0
VA	3	2676	0
<b>TOTAL</b>	<b>506</b>	<b>1,125,130</b>	<b>949</b>

remained to be constructed for the Everglades when John Griffin conducted excavations at Bear Lake Mound in the National Park in 1968. The ceramic sequence and supporting radiocarbon dates were soon fit into the adjacent chronologies of the east and west coasts, but the Bear Lake Mound was not reported in detail. In 1971, Griffin again tackled the south Florida region, this time as part of the South Florida Ecological Study. An opportunity was provided to consider broader scale questions like regional site distribution, paleo-environmental reconstruction, subsistence and seasonal activities, and to address chronology in more detail.

Beginning in the early 1980s, the National Park Service began a long-term and large scale program to meet its obligations for survey and inventory by concentrating on the Everglades National Park. Three consecutive field seasons resulted in a reconnaissance level survey of approximately 40% of the non-marine portion of the Park, representing 300,000 surveyed acres. Because the survey was partially judgmental, and because settlement pattern models proved to be quite reliable, it is conservatively estimated that more than 80% of the upland sites were recorded and assessed. The existence of prehistoric sites in submerged locales remains an open question, particularly as construction dredging has revealed at least one such occurrence.

Following the Everglades field survey, attention has been focused more recently on Big Cypress National Preserve. Its 518,000 acres received approximately 90% reconnaissance level survey coverage during five field seasons. The survey focused on suspected high probability areas such as hardwood hammocks, dry uplands, and cypress strand islands, but did not provide coverage of pine lands or submerged locales. To date 598 sites have been recorded in Big Cypress and the Everglades. The mass of data from the Everglades project is now being analyzed by John Griffin. During the 1980s, excavations at the Granada site in Miami by the Florida Division of Historical Resources and an ecologically oriented synthesis of the adjacent Gulf coast by Randolph Widmer have provided comparative data as well as interesting new research perspectives relevant to Big Cypress and Everglades interior areas. Griffin's Everglades report, being prepared under contract for the National Park Service, should fill the gap in south Florida archeology that has existed since the middle 1950s.

#### Forest Service

The next largest Federal landowner in Florida is the U. S. Forest Service, which controls an area slightly

smaller than the State of Delaware. Its three National Forests are located in the northwest, north central, and central parts of the state. Along with the Everglades and Big Cypress, these major holdings provide a surprisingly evenly distributed coverage of the State. The Forest Service has approached its management responsibilities differently from the National Park Service. In contrast to National Parks and Preserves, the National Forests are managed for purposes that frequently involve land modification and that require thorough survey as well as occasional avoidance or mitigation. The Forest Service in Florida has responded to this need by establishing a staffed and funded program in cultural resource management that routinely assesses every potentially disturbing activity on National Forest lands. This program has not intended to conduct surveys or excavations based on sampling schemes, even coverage, or interesting research questions. Rather, it has effectively devoted its resources to ensuring that routine Forest Service activities have no adverse impact on cultural resources. It is becoming apparent that the work of the Forest Service's archeological staff will eventually result in almost complete survey coverage of the agency's 1 million acres. Long before that time, sufficient data will have been generated to accurately characterize prehistoric and historic occupations of the National Forests, all three of which are in areas that are poorly known archeologically. The thorough coverage of the National Forests and the eventual syntheses of the resulting data not only will result in a well managed and well known inventory of sites, it will contribute to a more complete regional understanding of Florida prehistory.

#### Department of Defense

The Department of Defense, owning about 20% of Florida's Federal land (an area about the size of Rhode Island), has focused its cultural resource activities primarily on Eglin and Tyndall Air Force Bases, both of which are in the western panhandle. Again, these areas serve to extend the Federal coverage of Florida archeology far into the panhandle and provide an opportunity for a complete synthesis of results of Federal archeological programs to represent the entire State. Rather than developing its own archeological staff, the U. S. Air Force has contracted with the Interagency Archaeological Services Division of the National Park Service's Southeast Regional Office to meet its survey and inventory responsibilities. This work is still in progress, but interim reports and papers presented at conferences illustrate that survey and inventory coverage is comprehensive and that results are being used to develop predictive site locational

models that may be applied to unsurveyed portions of the Federal properties as well as other parts of the Florida panhandle. The most important advances to date resulting from this work have been in improved understanding of the inland settlement patterns. As in other parts of the State, coastal areas are better known archeologically than inland areas because the sites are more prominent, easier to recognize, and they formed the basis for the early archeological work of Moore, as well as that of the 1930s and 1940s. The Eglin archeological program has served to focus attention away from the coast and to correct, to some extent, the long standing coastal bias of archeological interpretations in Florida.

#### **Fish and Wildlife Service**

The U. S. Fish and Wildlife Service is responsible for some 24 National Wildlife Refuges in Florida, the largest of which are the St. Marks on the coast below Tallahassee, the Merritt Island at Cape Canaveral, and the Loxahatchee in the Okeechobee basin. Several refuges in the Keys account for significant acreage, but they are primarily marine rather than upland tracts. The Fish and Wildlife Service approached its cultural resource management obligations by contracting with the National Park Service's Interagency Archaeological Services Division, Southeast Regional Office. The Division prepared requests for proposals, contracted for archeological and historical surveys of refuges, and monitored and reviewed the resulting work. Although the refuge projects were primarily project-specific, that is, designed to ensure that proposed construction had no adverse effect on cultural resources, they included archeological and historical summaries, paleo-environmental reviews, reassessment of known sites, and recommendations for further work. Although the refuge reports received limited distribution, many of them provide useful and new regional syntheses of existing knowledge.

#### **Other Federal Agencies**

A number of other Federal agencies have conducted work that can be included in the Federal archeological program. For the most part, however, these projects have been related to proposed construction, and usually have been small in scope. It is safe to say that long-term and broad scale advances in Federal cultural resource management in Florida will depend primarily upon the activities of the National Park Service, the U. S. Forest Service, the Department of Defense, and the Fish and Wildlife Service.

During the past two decades, the other Federal agency that has made significant contributions to the Federal archeology program has been the Federal Highway Administration. Although the Federal Highway Administration's cultural resource management obligations resulting from Federal highway construction have been carried out by the Florida Department of Transportation (and are not in the Federal database) such work largely has been funded by the Federal Government. Since 1966, the most important Federal highway projects in Florida have been the construction of Interstate-10 across north Florida from Jacksonville to Pensacola and the extension of Interstate-75 beyond and around Tampa. The Interstate-10 construction was preceded by a number of salvage excavations, but Federal archeological funding during that period did not support laboratory analysis or report preparation. The resulting backlog of excavated collections is slowly being studied and reported.

Between 1978 and 1981, the Florida Division of Historical Resources conducted excavations at thirteen lithic sites in Hillsborough County along the route of the Interstate-75 bypass. This major salvage program investigated Early and Middle Archaic as well as Paleo-Indian components. All site reports have been completed and submitted to the Federal Highway Administration. Approximately half of the reports have been published and distributed. In addition, the Florida Bureau of Archaeological Research has just completed, under contract with the Florida Department of Transportation, a popular summary of the Interstate-75 work entitled "300' x 35Mi.," along with a traveling museum exhibit and slide show to share results of that major project with the public.

#### **Assessment of the Federal Program**

Clearly, Federal archeology in Florida has comprised a significant proportion of all archeological research in the state. One simple measure of its importance is the comparison of Federal and non-Federal projects. Although Federal properties account for 9.1% of Florida's land area, the number of Federal archeological projects in the state accounts for 41% of the total reported to the Florida Division of Historical Resources. Of the 3.5 million acres of Federal land in Florida, approximately 1.1 million acres or 25% percent have received a reconnaissance or greater level of survey and inventory.

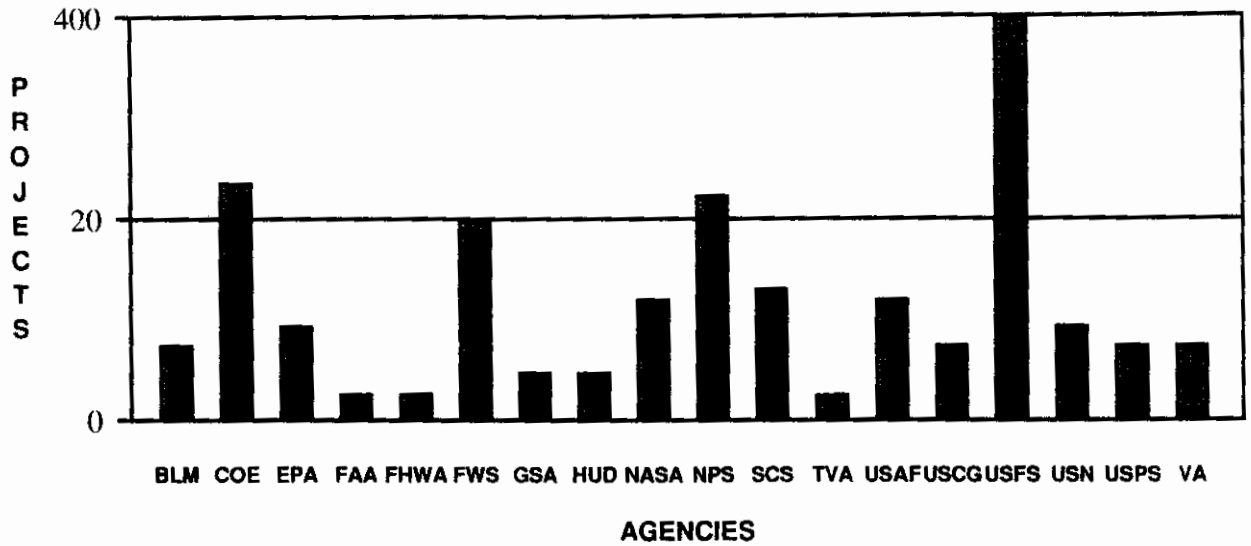


Figure 1. Number of Federal archeological projects in Florida by agency (logarithmic scale).

The relative importance of the different Federal agencies' archeological efforts can be measured by the number of reports submitted, the number of acres surveyed or investigated, and the number of linear miles surveyed (Table 1). Not surprisingly, the greatest values of these measures are for the major land owning agencies: National Park Service, U. S. Forest Service, and U. S. Fish and Wildlife Service. In addition, the figures suggest that the U. S. Army Corps of Engineers, the Soil Conservation Service, and the National Aeronautics and Space Administration have made important contributions to the Federal archeology program in Florida.

Figure 1 shows the number of reports submitted by the 18 Federal agencies represented in the database. The nature of the Forest Service's program is indicated by its having submitted over 75% of all Federal archeological reports. It conducts small surveys on a very regular basis related to routine forest management activities and reports them promptly. The average acreage represented by a Forest Service report is only 350 acres. The Corps has submitted 34 archeological reports since the early 1970s. These reports are divided between magnetometer surveys of submerged lands and linear or areal surveys conducted in connection with land modification projects. The National Park Service has reported 28 individual archeological projects. Many of these represent very large scale inventories, as indicated by the fact that the average area covered by a single National Park Service report is 30,000 acres. Because there is comparatively little disturbance of National Park Service land, survey and inventory efforts can be large in scope and may last a number of

years before reaching the reporting stage. The U. S. Fish and Wildlife Service has reported 3% of the Federal archeological projects, and has gone far in meeting its basic survey and inventory responsibilities on all of its properties. The remaining 14 Federal agencies represented in the database all have submitted fewer than 10 reports each in the past 15 or so years and account for the remaining 9% of known Federal archeological projects.

A slightly different picture of the Federal archeological program results from a simple analysis of the number of acres investigated, as shown in Figure 2. This figure includes all land receiving at least a reconnaissance level of survey. The total for all Federal agencies is about 1.1 million acres or 25% of the total Federal land in Florida. Three quarters of this total is contributed by National Park Service projects, and at the present time the Park Service has inventoried about 830,000 acres, or 55% of its property. The Forest Service's archeological program has covered approximately 130,000 acres representing 13% of its total land. The National Aeronautics and Space Administration accounts for about 8% of the total Federal acreage investigated, although its survey of the Kennedy Space Center was conducted twenty years ago at a time when archeological survey techniques were less comprehensive than they now are. These three Federal agencies account for 94% of the Federal land investigated in Florida. Although the remaining 15 Federal agencies have reported archeological projects totaling more than 70,000 acres, their relative importance is masked by the major efforts instituted by the large land owning agencies.



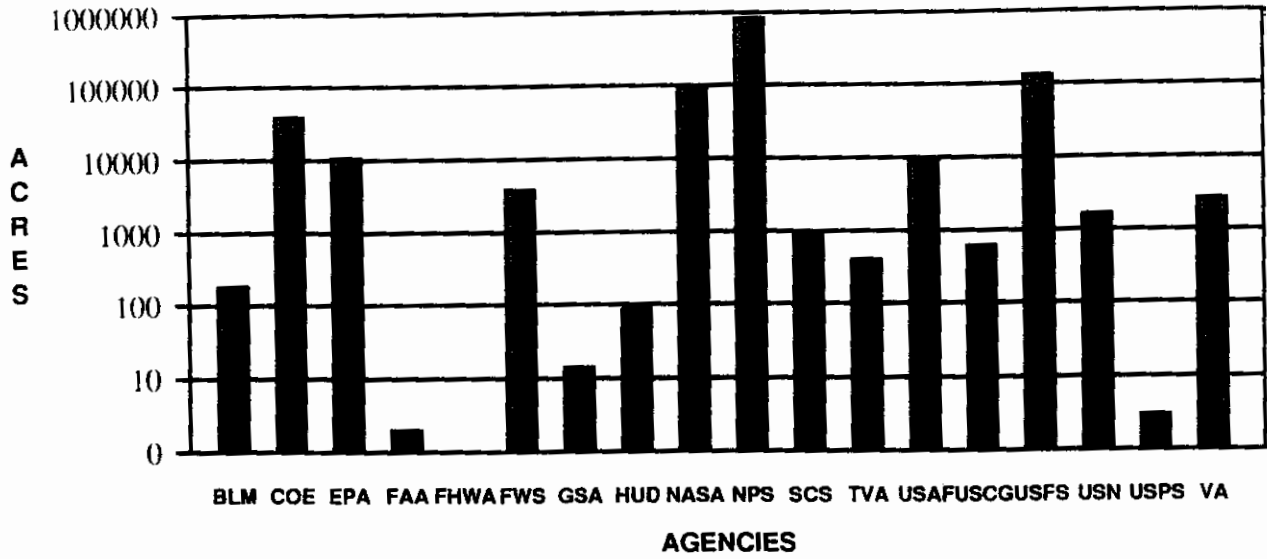


Figure 2. Number of acres surveyed in Florida by Federal agency (logarithmic scale).

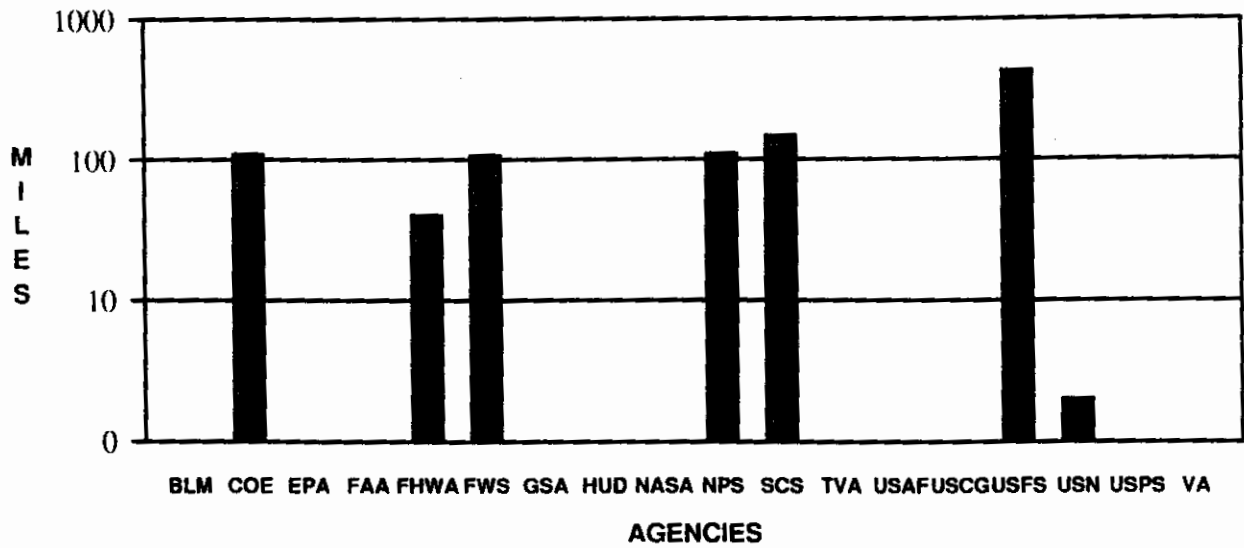


Figure 3. Number of linear miles surveyed in Florida by Federal agency (logarithmic scale).

One last measure of archeological coverage is shown in Figure 3. All Federal agencies combined have reported about 950 linear miles of survey in Florida. Survey in the National Forests accounts for about 45% of this total. The Corps of Engineers, the Fish and Wildlife Service, the National Park Service and the Soil Conservation Service have reported between 100 and 150 linear miles of survey each. If it is assumed that the average coverage represented by linear survey is about 50 feet, this total is less than 6,000 acres, a very

small proportion of Federal land, but significant in terms of protecting archeological sites from construction disturbance.

So far, all Federal archeological projects have been considered simply as having accomplished at least a reconnaissance survey level of effort. A more detailed picture of the Federal program is provided by two other categories recorded in the database: type of survey and method of survey. It should be pointed out that these

characterizations are less precise than the measures previously discussed, as there is a fair amount of guessing involved in deciding which descriptive terms are most appropriate for many projects. About 4% of the projects are underwater surveys, mostly magnetometer surveys conducted for or by the Corps of Engineers in connection with dredging activities. However, the National Park Service has conducted more intensive underwater surveys at Fort Jefferson National Monument. Slightly more than half of the Federal projects have been categorized as pedestrian surveys, and about one quarter also involved shovel testing. About 5% of the projects involved coring, test excavations or soil probing, and around 3% of the projects included remote sensing techniques. On the whole, it is safe to say that the Federal archeology program has involved very little intensive excavation, and has focused primarily on survey and inventory. Much of the work, if the data are accurately recorded, has not included subsurface testing, but has relied on surface indications of sites.

The most interesting, and perhaps the most troubling, result of this analysis has been the recognition of the apparent rise and fall of the Federal archeology program over the past twenty years. Figure 4 illustrates the

number of Federal archeological reports received by our agency since 1964. It is necessary to caution against a strict interpretation of the data, as there may be some number of Federal projects not represented in the database, mainly for the period before 1975. As the graph shows, however, the number of projects reported between 1964 and 1976 is less than 10 per year, and it is unlikely that a significant number of projects were consistently missed throughout this 12 year period. For the last 10 years, a few reports may be unrepresented. However, for this period the annual number of reports is so large that many reports would have to be absent to skew the distribution significantly.

During the middle 1970s, as we may fondly remember, cultural resource management was in its infancy. This was a period of learning and developing ways to comply with the new requirements of Executive Order 11593 and the National Environmental Policy Act. The National Historic Preservation Act had been in place for a decade, but Federal agencies other than the National Park Service were either not directly affected or not prepared to carry out their responsibilities. Between 1966 and 1974, six Federal agencies had submitted a total of ten archeological reports accounting for less than 100,000 acres.

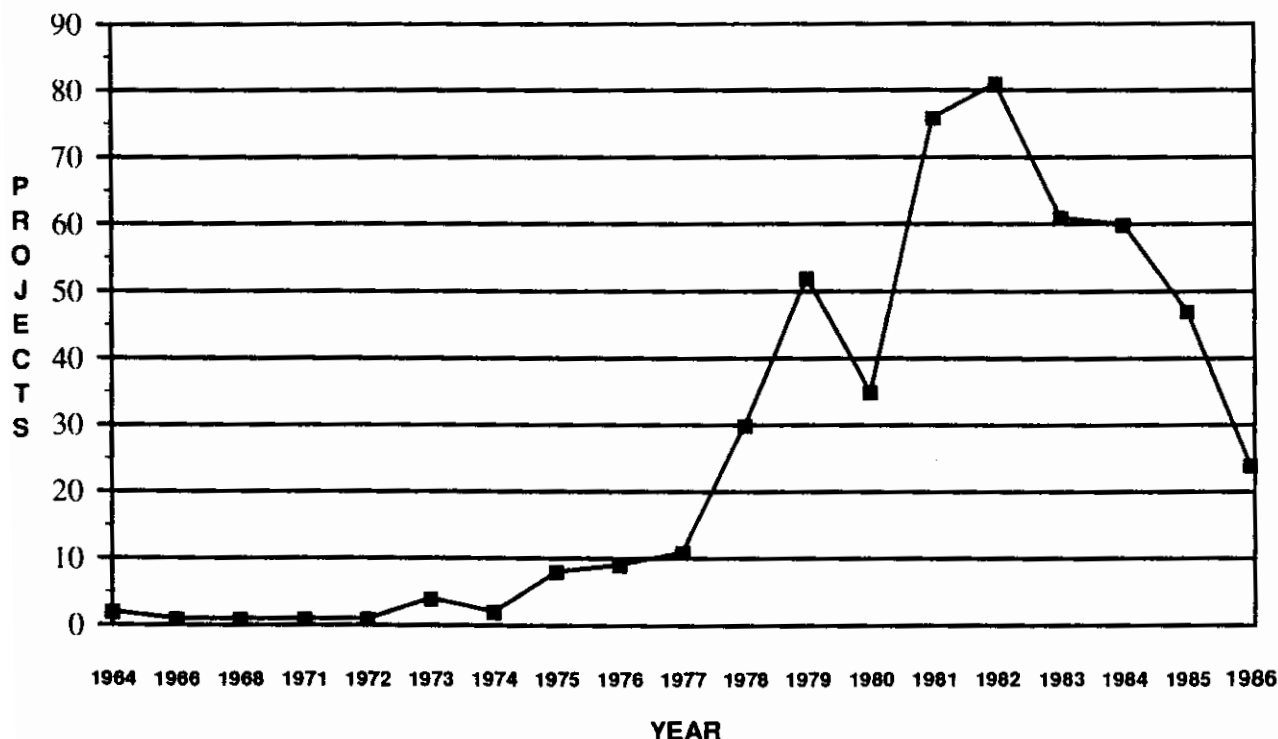


Figure 4. Archeological projects in Florida by year.

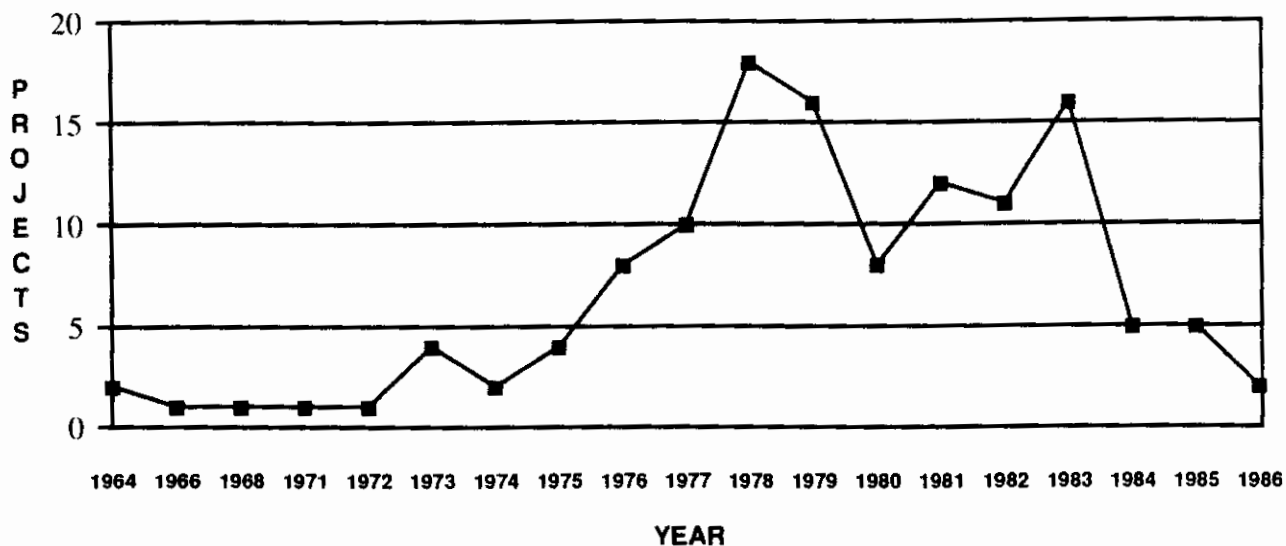


Figure 5. Number of non-Forest Service Federal archeological projects in Florida by year.

After 1974, the level of archeological activity, as measured by the number of reports, increased by a factor of 10 in seven years. Comparable growth is represented by the number of acres and number of linear miles investigated. During this period of rapid growth, 17 of the 18 Federal agencies represented in the database had conducted archeological projects. The level of archeological activity in Florida had increased sufficiently to support several private consulting firms in the State, and at least seven Federal agencies had developed in-house archeological programs. Several other agencies met their archeological responsibilities through programs organized by the National Park Service's Interagency Archeological Services Division.

In 1982, the number of archeological projects reported began to decline about as rapidly as it had grown in the preceding five years. It is clear that the fast growth could not have continued, yet there is no clear reason for the persistent decline after 1982. The data may reflect the fact that many agencies had accomplished what was viewed as a satisfactory level of compliance with Federal archeological mandates. This is very likely true for the major land owning agencies like the National Park Service, the National Aeronautics and Space Administration, and the Fish and Wildlife Service. This would seem to imply that once some agencies had conducted reconnaissance level archeological studies of their properties, they were less likely to conduct full-scale intensive surveys. It is also likely that in times of scarce Federal money, the quantity and quality of archeological work on Federal properties will approach the minimum that is required by law, however that may be interpreted. It could also

be true that the nature of Federal archeology has changed as a result of the work done during the late 1970s and early 1980s. As more land is surveyed, more sites are found, and more money is required for site assessment, site protection, mitigative excavation, preparation of reports, and curation of collections. Given a finite sum of Federal money that can be devoted to archeology, it is reasonable to assume that funds will be distributed to meet critical needs, rather than spent on more intensive survey of properties that have already received a minimally acceptable level of archeological attention.

One final graph (Figure 5) will be useful in illustrating this trend more accurately. Because the Forest Service reports its archeological activities frequently, accounting for 75% of all archeological reports, it is useful to look at the activities of the other 17 agencies separately. Excluding the Forest Service, the decline in Federal reports is even more evident. Between 1978 and 1983, during the period of greatest Federal activity, agencies other than the Forest Service submitted an average of 13 reports per year. Since 1983, the average has been three reports per year. The comparable numbers of acres surveyed for these two years are dominated by the National Park Service's Big Cypress and Everglades surveys. However, the number of linear miles surveyed is striking in their difference. Between 1978 and 1983, the 17 Federal agencies reported an average of 34 miles per year. Since 1983, no linear survey has been reported. It could be suggested on the basis of the past three years that the Federal archeological program may have reached a stable level. It would be gratifying to know that acceptable levels of survey

and inventory have been reached on Federal property and that adequate archeological programs are in place to manage the routine assessment and mitigation activities that Federal activities require. Whether or not that is the case is best decided by archeologists and cultural resource managers who have a more thorough under-

standing of Federal agencies than I have. I have been able to do little more than suggest that a significant change may have taken place in the Federal archeology program since 1982. It remains to be learned whether this is a desirable change and, if not, how it may be reversed.

## FEDERAL ARCHEOLOGY IN GEORGIA: AN OVERVIEW

**Bennie C. Keel**

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*Federally supported or required archeological studies began in Georgia during the 19th century. Early investigations such as those conducted by the Division of Mound Exploration, Smithsonian Institution, projects from the first half of the twentieth century, such as Wauchope's North Georgia survey and Kelly's Macon work, the River Basin Salvage program efforts of the 1950s and 1960s, and the activities brought about by the National Historic Preservation Act of 1966 and the Archeological and Historic Preservation Act of 1974, are major contributors to our understanding of Georgia archeology.*

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The Federal government has been involved in southeast and particularly Georgia archeology since the middle of the 19th century - well before the passage of the National Historic Preservation Act of 1966 and the creation of the regulations under which the act is carried out. The earliest involvement related to Georgia was no more than publication of the results of investigations carried out by others. The Smithsonian Institution, through the Bureau of Ethnology's Division of Mound Exploration, conducted major excavations at the Hollywood Mound, the Rembert Mound group, at Etowah, as well as at other sites from 1882-1886 and 1889-1894. This work has been described in Waring's "History of Georgia Archaeology Until World War II" (Williams 1968:288-299) and Bruce Smith's (1985c:5-19) "Introduction" to the 1985 edition of the *Report on the Mound Explorations of the Bureau of Ethnology*. I have previously discussed Cyrus Thomas' contributions in *Southern Indian Studies* (Keel 1973). Once the work of the Division of Mound Exploration was finished (shortly after 1896), little Federal archeological work was conducted except in the Southwest until the national economic disaster of 1929.

The Great Depression brought on more Federal archeological activity in the form of public relief work projects undertaken by the Civil Works Administration

(1933-1936) and the Works Progress Administration (WPA) after 1936. Under these programs the unemployed were engaged in archeological field and laboratory work under the supervision of small cadres of "trained professionals." In Georgia WPA investigations took place in the coastal provinces around Savannah, on the Macon Plateau, and in much of north Georgia. The WPA programs came to an end with the outbreak of World War II. Ocmulgee National Monument was created during this period (1936); in fact the majority of excavations at Ocmulgee was accomplished by WPA labor under A. R. Kelly's overall direction.

Immediately after the war the single major Federal activity to affect the nation's archeological resources was the development of national water resource management. As major water development projects, especially those on the Missouri River, began to take shape a small but influential group of archeologists lobbied for and brought into being the Interagency Archaeological Salvage Program. The program was coordinated by the National Park Service which was the recipient of congressional funding. The majority of the funds were passed on to the Smithsonian Institution, whose River Basin Surveys (RBS) program carried out most of the salvage work. With the demise of the RBS in the late 1960s the National Park Service took over the responsibility for all rescue archeology in the country. Although the RBS focused its attention on projects along the Missouri River, it also conducted work in Georgia and elsewhere. Most of the Georgia RBS efforts were led by Harold Huscher in the Walter F. George Reservoir or contracted with the University of Georgia. As the RBS dissolved, the National Park Service's Interagency Archaeological Salvage program took a more noticeable presence in Georgia, sponsoring the completion of projects underway and initiating new ones. The precise roles of the Smithsonian and NPS on specific projects in Georgia are hard to delimit. Nonetheless, available records indicate that beginning as early as 1959 NPS directly funded contracts for survey, salvage and analysis work, primarily with the University of Georgia, for archeological investigations in the Allatoona, Walter F. George, Carters Dam, Hartwell, Oliver, West Point, South River Watershed, Trotters Shoals (Richard B. Russell), Laurens Shoals, and Spewell Bluff projects. Indeed, between 1959 and 1977 the NPS entered into 41 contracts worth some

\$225,177.66 for this work. By 1979, through its Interagency Archeological Services (IAS) program, NPS contracted for an additional 4 projects totaling some \$39,000 to complete analysis and reporting efforts related to the Carter's Dam salvage work.

John Otis Brew (1968:1-11) has provided a historical sketch of the River Basin Survey program and Jerome Petsche (1968) has provided a bibliography of the results of salvage investigations, as of 1968. Petsche's check list includes exactly 2,600 titles related to salvage archeology for the Nation.<sup>1</sup>

The contributions of these pre-NHPA projects to the understanding of Georgia prehistory and that of the Southeast is inestimable. These studies provided future generations of archeologists with the basic ingredients of culture content, i.e., the components, foci, phases, complexes, etc. were defined and outlined and a broad chronological framework developed. Although some of the work undertaken during the WPA period was not published for several years because of World War II, much of the results of work were communicated to that small band of "young Turks" through the Southeastern Archeological Conference which began in 1938.

I would be remiss if I did not point out that through the years the State of Georgia funded work at Etowah, Fort King George, Fort Hill, New Echota, Kolomoki, and other sites. Nonetheless, from the eighth decade of the 19th century up to the passage of the Archeological Recovery Act in 1974 archeological research conducted or sponsored by the Smithsonian Institution and the National Park Service was the primary contributor to the growth of archeological knowledge in Georgia.

Several procedures could be used to quantify the contributions of the Federal Archeological Program (FAP)<sup>2</sup> to the archeology of Georgia, but perhaps the most effective and efficient one is to examine the literary record. Fortunately, two excellent sources were available which provide a starting point for creating a computerized database for this sort of evaluation: first, *Georgia Archaeological Reports*, (Archeological Laboratory 1984) a bibliography prepared by the Archeological Laboratory, West Georgia College (partially funded, I might add, through a National Historic Preservation grant) and; second, the National Archeological Data Base (another Federal endeavor). In addition to these sources, I used a bibliography compiled several years ago when I was actively involved in teaching and southeastern archeological research. No doubt there are gaps, but by and large it accurately reflects the publication and report writing

productivity through the years. This database covers the period between 1776 (observations by the Bartrams were included) and 1986, and contains 1,576 entries.<sup>3</sup> Table 1 illustrates the composition of the database. Twenty-eight "agencies" have contributed to the database. Three of the categories used here need explanation. The "Academic Institution" grouping was to be composed of reports and papers prepared by "pure researchers" and were not contractually required products of federally sponsored or federally required efforts. Publications such as *The Stallings Island Mound* (Claffin 1931), "Creek and Pre-Creek" (Fairbanks 1952), *Trend and Tradition* (Caldwell 1958), "The Mississippian Period" (Hally 1975), or "A Statistical Application for Determining Ceramic Assemblages at Disturbed Archaeological Sites" (Crook 1983), are included there.

The "Private" category represents the output of "pure research" by the private archeological sector or private sector non-Federal compliance supported research.

Of the 1,576 records in the database 1,303 are clearly the direct result of federally supported or conducted archeological investigations, investigations required to fulfill Federal statutes, or are the results of archeological research that has been published by the Federal government. Two hundred and seventy-nine titles are the results of state, private sector and educational institutions' contributions which we have labeled "academic" contributions. These are professional papers that are for the most part syntheses of archeological data from several sources. Even though they may be based almost exclusively on data from Federal undertakings if they were not prepared by Federal employees or as direct contractual obligations, they were counted as "academic" contributions. The database demonstrates that the vast majority of archeological knowledge regarding Georgia is the result of the FAP.

An examination of our data shows that at least 24 Federal agencies have contributed to Georgia archeology. In terms of numbers of reports the Corps of Engineers leads the way, followed by the Environmental Protection Agency, the U. S. Forest Service, and the Federal Highway Administration. When we examine the data according to type of work we find that the leaders reporting survey, assessment, or overview efforts were the Environmental Protection Agency (178), the U. S. Forest Service (145), the Federal Highway Administration (130) and the Corps of Engineers (121).

Table 1. Agency Representation in Consolidated Database

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<u>FEDERAL</u>	
DEPARTMENT OF AGRICULTURE	
Farmers Home Administration	3
Forest Service	150
Soil Conservation Service	41
DEPARTMENT OF COMMERCE	
Interstate Commerce Commission	3
Economic Development Administration	21
DEPARTMENT OF DEFENSE	
Corps of Engineers	219
Air Force	2
Army	26
Marine Corps	1
Navy	16
DEPARTMENT OF ENERGY	
Federal Energy Regulatory Commission	88
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	
	17
DEPARTMENT OF THE INTERIOR	
Fish and Wildlife Service	16
National Park Service	81
Office of Surface Mining	2
DEPARTMENT OF TRANSPORTATION	
Federal Aviation Administration	8
Federal Highway Administration	141
Urban Mass Transportation Administration	11
SMITHSONIAN INSTITUTION	43
ENVIRONMENTAL PROTECTION AGENCY	196
GENERAL SERVICES ADMINISTRATION	3
NUCLEAR REGULATORY COMMISSION	1
WORKS PROGRESS ADMINISTRATION	27
U S POSTAL SERVICE	
"FEDERAL COMPLIANCE" - State and Local Governments	184
<u>NON-FEDERAL</u>	
ACADEMIC INSTITUTION	230
PRIVATE FIRMS	3
STATE, COUNTY, LOCAL GOVERNMENT	40
TOTAL	1,576

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It is not surprising to learn that the Corps of Engineers (89 reports), National Park Service (43 reports), Smithsonian Institution (24 reports) and WPA (13 reports) have been responsible for the majority of data recovery reports. The explanation for this is simple; these agencies are the major Federal landholders in the state and their projects are constrained by their real estate boundaries; or, in the case of the Smithsonian Institution it provided the pre-1900 reports and was active in the RBS program in Georgia; and of course

the WPA activities of the Depression era were constrained by other factors. The U. S. Forest Service policy of site avoidance in its timber sales program produces few data recovery reports, but most certainly makes significant deposits to the State's savings account of archeological assets.

Few data recovery projects have been generated from the undertakings of non-Federal construction projects because they affected small land areas. Realignment or

redesign of such projects is often possible, thereby avoiding an adverse impact which would require data recovery. A noticeable exception to this observation is Georgia Power Company's Wallace Reservoir. To date 25 reports have been produced by the University of Georgia describing its research efforts in the Wallace project.

### Federal Agency Contributions to Georgia Archeology

#### *Smithsonian Institution*

As we have noted earlier the Smithsonian Institution was the first Federal agency to enter the archeological field in Georgia. Its efforts were centered on the Division of Mound Exploration activities in the last two decades of the 19th century and during the days of the RBS after World War II. The data and to some degree the intellectual and methodological rigor of Cyrus Thomas, though not necessarily recognized and appreciated today, is an important part of our discipline's heritage (Keel 1973). The contributions of the RBS program are discussed below with the National Park Service.

#### *Works Progress Administration*

Under no circumstance should the economic aspects of the WPA program go without notice. Without the Federal dollars paid to the unemployed in these archeological relief projects literally thousands of individuals would have starved, crimes against people and property would have been great, and perhaps the national character would have been damaged to the extent that the country could not have faced the trauma of World War II as effectively as it did. The database identifies some 27 reports, articles, papers or notes that have been assigned to the efforts of the WPA. On the archeological side, without this effort we would lack archeological classics such as the *Irene Mound* (Caldwell and McCann 1941), *A Preliminary Report on Archeological Explorations at Macon, Georgia* (Kelly 1938), or *An Archaeological Survey of North Georgia* (Wauchope 1966).

#### *Department of the Interior.*

*Fish and Wildlife Service.* Through the Atlanta IAS program the FWS completed overview and inventory level work on all of its refuges and hatcheries

in Georgia. The database references 16 entries to this work.

*National Park Service.* It is difficult to concisely describe the role of the National Park Service in the archeology of Georgia because of the very complexity of that role as the Nation's premier historic preservation agency. Nonetheless, NPS came on the scene of Georgia archeology after the passage of the Historic Sites Act of 1935 and the advent of the WPA program at Macon Plateau. In fact, NPS's first Chief Archeologist, Arthur R. Kelly, directed the work at Ocmulgee and the surrounding environs. As additional units such as Fort Frederica, Andersonville, Chickamauga - Chattanooga National Military Park, Kennesaw National Battlefield Park and other properties became units of the system, the Service initiated various levels of archeological research to them. Since 1947 the Park Service has spent more than \$497,000, conducting 55 projects that produced 47 reports. Table 2 provides details of the archeological activities in National Park Service units within the state of Georgia.

I have also touched upon the NPS role in the RBS days and indicated that not only did the Service "bankroll" the Smithsonian's activities, it spent directly with contractors \$378,414.66 to complete reservoir salvage and site stabilization activities initiated in the RBS days. In the post NHPA - AHPA period the IAS program has contracted on behalf of other agencies using transferred funds for some \$3,760,538.49 for archeological work in Georgia. This work includes the Richard B. Russell project on behalf of the Savannah District Corps of Engineers (\$3,275,528.65), the U. S. Army for surveys at Fort Benning, Fort Gordon, Fort Stewart, and Hunter Army Air Base (\$228,007.76); the General Services Administration Savannah Federal Building (\$106,085); and Fish and Wildlife Service surveys and overviews at Millen National Fish Hatchery and Okfefenoke, Piedmont, Eufaula, Harris Neck, Wassaw, Cape Romain and Blackbeard National Wildlife Refuges (\$57,680.08).

The impact of the reports of the data recovery work in the Russell project is yet to be fully appreciated but like *Cemochechobee* it will no doubt be substantial. It is already being felt as evidenced by synoptic articles such as "The Mississippian Occupations of the Savannah River Valley" (Anderson et al. 1986). Currently it is difficult, if not impossible, to identify how much of the \$7,972,534 in Historic Preservation Fund grants provided the state under NHPA has been spent in archeological activities. Nonetheless, several county surveys, comprehensive state historic preservation planning including the Georgia Archeological



Table 2. Archeological Studies in National Park Units, Georgia, 1947-1986

UNIT	YEAR	PROJECT	COST	SOURCE*	PRODUCT
Andersonville National Historic Site	1973	Testing to locate stockade	7,000	WGC	Larson (1974)
	1977	Archeological survey	19,000	NPS	Ehrenhard, E. (1978 and 1986)
	1981	Survey of Section P and Gunboat Street	2,000	NPS	Ehrenhard, E. (1981) and Marrinan (1985)
	1983	Surplus property	2,200	NPS	Paglione (1984)
Chattahoochee River National Recreation Area	1979	Inventory and assessment	15,800	NPS	O'Grady and Poe (1980)
	1984	Island Ford Road	4,500	NPS	Komara (1984)
	1985	Island Ford Road Excess property	1,000 3,500	NPS NPS	
Chattanooga - Chickamauga National Military Park	1979	Waterline monitoring and mitigation	2,489	UT-C	Brown and Evans (1977)
	1982	Highway 27 relocation	4,000	UT-C	Honerkamp, Evans, and Will (1982)
	1984	Visitor Center and other parking lot	unknown	NPS	Johnson (1984)
Cumberland Island National Seashore	1973	Reconnaissance	2,337	NPS	Crusoe (1973)
	1978	Slave cabin excavation	8,000	NPS	Bullard and J. Ehrenhard (1978)
	1980	Site mitigation	31,000	NPS	Ehrenhard, J. (1981)
	1982	Shoreline erosion	26,000	NPS	Marrinan (1984)
Fort Frederica National Monument	1947- 1953	NPS excavations in the town and fort	unknown	NPS	Fairbanks (1953)
	1958	NPS excavations in the park	unknown	NPS	Moore (1958a, 1958b, and 1959a) and Shiner (1958a, 1958b, 1958c, 1958d, and n.d.)
	1972	Analysis of settlement	421	UF	Deagan (1972)
	1974	Excavation of town lots	8,200	UF	Honerkamp (1975)
	1975	Assessment of archeological data	2,100	FSU	Deagan (1975)
	1978	Excavation of Lot 21	19,381	UF	Honerkamp (1980)
	1980	Monitoring nitrification trenches	450	UF	Saffer (1980)
	1981	Underwater survey	840	FSU	Parker (1981)
	1983	River bank erosion Southwest Bastion investigations	31,877	UT-C	Honerkamp (1985)
	1985	Underground utilities	4,000 1,700	NPS NPS	Walker (1984).
	Kennesaw Mountain National Battlefield Park	1975	Archeological survey	7,600	UGA
1985		24-Gun Battery	1,000	NPS	
		Kolb Farm testing	2,400	NPS	
Ocmulgee National Monument	1962	Ocmulgee River Bottoms	150,000	NPS	Griffin (1962) and Cosner (1973)
	1964-	Analysis of data from			
	1965	various excavations	unknown	NPS	Ingmanson (1964a, 1964b, and 1965)

1967	Study of records and specimens	7,000	NPS	
	Limited research on the Great Temple Mound to determine original size and shape	6,000	NPS	
1968	Great Temple Mound: Complete archeological testing	10,000	NPS	
1969	Completion of report Great Temple Mound	unknown	NPS	Walker (1969)
1970	Completion of report Great Temple Mound	unknown	NPS	Stoutamire (1983)
1973	Lamar analysis	5,596	FSU	Smith (1973a)
	Middle Plateau analysis	9,299	FSU	Smith (1973b)
1973	Analysis of Ocmulgee Bottoms	2,900	FSU	Nelson, et al. (1974)
1974	Analysis of North Plateau	5,255	FSU	Williams and Henderson (1974)
	Analysis of Cornfield Mound and Earthlodge	3,121	FSU	Nelson (1974)
	Analysis of Swift Creek data	5,094	UGA	Kelly and Smith (1974)
1977	Analysis of data from Mounds A and B	13,064	FSU	Stoutamire, et al. (1983)
1978	Design concept and plan assessment	40,000	NPS	
1984	Water and sewer line installations	1,600	NPS	

\*Abbreviations: FSU = Florida State University  
 NPS = National Park Service  
 UF = University of Florida

UGA = University of Georgia  
 UT-C = University of Tennessee-Chattanooga  
 WGC = West Georgia College

Research Design, work at Etowah, excavation at the Major Ridge House, and the Robert Toombs House have been funded from HPF dollars.

*Office of Surface Mining.* The Office of Surface Mining, an agency well represented in our western states and coal producing states of the East, is responsible for two small survey projects, one each in Bibb and Dade counties.

*Department of Defense*

*Corps of Engineers.* The major Defense Department contributor to the expansion of archeological knowledge has been the U. S. Army Corps of Engineers, either carrying out its own projects with in-house archeologists, through contracts, or with the assistance of the National Park Service. As I have indicated previously it is difficult to sort out Smithsonian Institution RBS, NPS and Corps activities prior to about 1976 and to always acknowledge proper credit (or blame).

Along with the Park Service and the Forest Service, the Corps of Engineers was one of the first Federal agencies to establish an in-house capability to deal with its responsibilities under NHPA and AHPA. The Mobile District which is responsible for the river basins of western Georgia hired Jerry J. Nielsen in 1975 and by 1984 had increased its professional staff to a total of five. Except for cooperative efforts at the Roods Mounds and Cemochechobee the Mobile District has conducted its program independently of the NPS in Georgia. Notable products of this program have been the surveys of George W. Andrews Lake (Belovich et. al. 1982) and Lake Seminole (White et al. 1981).

The Savannah District has also carried out an important archeological program. The Richard B. Russell cultural resources program was, as I have noted, a cooperative effort between the Savannah District and the NPS IAS (Archeological Assistance Division). The Savannah District has also conducted underwater assessments of the *USS Savannah* and the *Still-Deloach* wreck in Savannah harbor as well as several surveys to

clear small permit applications or improvements at existing installations.

*Army.* The Army has conducted projects at all of its major installations in the state. Most of them have been conducted through the NPS Archeological Assistance Division of the Southeast Region. Some 21 survey reports and five data recovery reports have been produced.

*Air Force.* The Air Force has conducted inventory and survey work at Warner Robbins Air Force Base which has produced two reports.

*Marine Corps.* In 1973 Betty A. Smith investigated an Archaic site at the Marine Supply Center at Albany, Georgia.

*Navy.* The Kings Bay Naval Base cultural resource program produced 15 reports between 1978 and 1986. All work was contracted by the Navy with the University of Florida. Like that in the Wallace and Russell projects, it is too early to assay the impact and contributions of the efforts of the Navy's program in Kings Bay. Notably, Bill Adams (1985) and his colleagues have received kudos from one reviewer (Trinkley 1986) for their *Aboriginal Subsistence and Settlement Archaeology of the Kings Bay Locality*.

#### *U. S. Department of Agriculture*

*Soil Conservation Service.* Between 1974 and 1976 our database lists 37 surveys, cultural resource assessments, and reconnaissances, and four data recovery projects conducted by SCS under contract with a variety of vendors. The abrupt halt of SCS reports after 1976 is a matter that needs clarification.

*U. S. Forest Service.* One hundred forty-eight reports in the database are attributable to the U. S. Forest Service. All of these except three are survey, cultural resource appraisals, or inventory reports. Drs. Kent Schneider and Jack Wynn (personal communication) reported that between 1976 and 1982 the Forest Service conducted 118 projects and contracted for 39 surveys, and for the period 1982-1985 the Service conducted 94 projects and contracted for 8 projects in the Chattahoochee - Oconee National Forest. For 1986 Wynn projected an additional 12 - 13 projects. By the end of 1986 there will have been a total of 272 projects completed and 272 reports

prepared. Existing Forest Service data suggests that about 10 % of Forest lands have been surveyed to date. These surveys have identified 389 prehistoric sites and 178 historic properties. It is interesting to note that no more than 3 of these 567 properties have been nominated to the National Register of Historic Places. The Forest Service's policy of avoidance is one that increases our general fund of identified and conserved resources.

*Farmers Home Administration.* The database credits the Farmers Home Administration with 3 archeological survey reports.

#### *Department of Commerce*

*Economic Development Administration.* EDA required grant applicants to conduct a total of 19 survey or assessment projects which were reported between 1976 and 1986. Two data recovery projects are reported.

*Interstate Commerce Commission.* The ICC is responsible for the regulation of the railroad transportation industry and although not a land manager occasionally becomes involved in undertakings which require NHPA compliance. The ICC had archeological investigations conducted in conjunction with three projects.

#### *Environmental Protection Agency*

According to our data EPA had 186 compliance studies conducted by grant applicants; the majority of these were water facilities improvement projects. Seventeen of the projects conducted under EPA required data recovery or mitigation.

#### *Department of Energy*

*Federal Energy Regulatory Commission.* Eighty-eight survey, assessment or inventory level projects were carried out between 1973 and 1985 to satisfy FERC's NHPA Section 106 responsibilities. The database indicates that one data recovery project was conducted. I should clarify that Georgia Power Company's Wallace Reservoir has for convenience been allotted to the Corps of Engineers because of the Corps Section 10 Rivers and Harbors Act responsibility.

*Department of Transportation*

*Federal Highway Administration.* The FHWA, through the Georgia Department of Transportation, has produced some 141 reports. The majority of these are surveyor "clearance" type documents but a few, such as Bowen's "The History and Archaeology of a Civil War Soldier" (1981), *Archeological Investigations at 9 CK(DOT)7* (1982), and Crook's "Cagle Site Report" (1984) cover data recovery projects. The Georgia Department of Transportation's program has probably provided as much negative evidence as positive information about the distribution of sites. This information is not to be dismissed lightly.

*Urban Mass Transit Administration.* The major activity of the Urban Mass Transit Administration is related to the development of the Metropolitan Atlanta Regional Transportation system (MARTA). The majority of the work conducted by MARTA was with Georgia State University in the late 1970s and early 1980s with subsequent work carried out by the private sector. The MARTA project has had a major impact on urban archeology because Roy Dickens and his colleagues prepared thoughtful and articulate publications (Dickens 1982; Dickens and Bowen 1980; Dickens and Crimmins 1982).

*Federal Aviation Administration.* The Federal Aviation Administration or their grant applicants had 8 archeological surveys related to airport expansion or improvements conducted between 1974 and 1982.

*General Services Administration*

GSA is the Federal government's largest landlord, either owning or leasing the majority of buildings occupied by Federal agencies. As a "developer and construction company" GSA conforms to the same set of historic preservation statutes as other Federal agencies. This responsibility, according to our data, has led to GSA conducting archeological and historic research in one project, the Savannah Federal Building. The results of this work is Nick Honerkamp's (1983) *The Reality of the City*. This \$106,000 effort (including NPS overhead) was carried out for GSA by the National Park Service, Southeast Region, Archeological Assistance Services program.

*Department of Housing and Urban Development*

Our database indicates that grant recipients from the Department of Housing and Urban Development conducted 16 survey or assessment level projects between 1977 and 1982.

*Nuclear Regulatory Commission*

According to the database NRC is responsible for a *Report of Archeological Resource Testing on Cultural Property 9HK33 (GP-HK-08)* (Blanton 1984).

*U. S. Postal Service*

In 1979, 1980, and 1981 construction of postal facilities required surveys at Midway, Georgia, and at the Atlanta Downtown Post Office. Test excavations were reported for the latter project in 1981.

**Conclusions**

This paper provides an overview of Federal Archeology Program contributions to Georgia archeology.

In summary, without the work of Cyrus Thomas and his field assistants, we would know much less than we do about some of the major mound sites. Much of the data collected from these explorations was used by W. H. Holmes (1903) in his *Aboriginal Pottery of the Eastern United States*. Of more recent vintage, the influence of Joseph R. Caldwell's (1958) *Trend and Tradition in the Prehistory of the Eastern United States* has been tremendous and widespread. Much of the data on which he based this synthesis comes from FAP investigations. It would be unfair to criticize these efforts using today's knowledge, techniques, methods, and theoretical sophistication as the standard. I think the majority of southeastern archeologists would agree that archeology is better off because the Smithsonian Institution did the early exploratory work than it would be if C. B. Moore had done it. Likewise we should not use today's more rigorous approaches to archeology to castigate the efforts of the WPA archeologists. I am satisfied that should we objectively compare the products of these workers with that of their contemporary non-FAP colleagues we would find that the products of the former group were at least equivalent. There does not seem to be much difference in research quality in *Rediscovering Illinois* (Cole and Deuel 1937), *Kincaid* (Cole et al. 1951), or Ritchie's (1944) *The Pre-Iroquoian Occupations of New York State*, and

reports from Federal work of the period such as *An Archeological Survey of the Pickwick Basin in the Adjacent Portions of the States of Alabama, Mississippi, and Tennessee* (Webb and DeJarnette 1942), or Kelly's (1938) *A Preliminary Report on Archeological Explorations at Macon, Georgia*, or Lewis and Knebergs' (1946) *Hiwassee Island*. Similar comparisons could be drawn and debated for the products of the River Basin Survey days. More recently the series of reports prepared for the Russell Dam project, the Navy's Kings Bay project and Georgia Power Company's Wallace project could be compared favorably with the results from non-Federal projects such as Milanich's (1971, 1972) Deptford studies and David Hurst Thomas and his associates' St. Catherines Island investigations (Thomas et al. 1978; Thomas and Larsen 1979). I want to close with the observation that the Federal government has supported archeology in very direct ways during the last century. Overall, the reports of federally sponsored or executed research of the past two decades compares in quality, both good and bad, with the output of most "pure research." The Federal Archeology Program both before and since the passage of the National Historic

Preservation Act has provided the statutory basis and most of the dollars for what we know about archeology in Georgia.

#### Notes

1. Petsche lists 62 titles. However, numbers 433 and 440 are the same, and number 443 should be listed with Virginia. Thus the correct total is 60. Of these, 24 are published and 36 are manuscripts (several of which were subsequently published).
2. I have defined the Federal Archeological Program (FAP) as archeological research sponsored under, conducted under or required under Federal statute.
3. This database was assembled by Debra Katz, Staff Archeologist, Archeological Assistance Division, NPS, Washington. I appreciate the assistance of "Dottie" Aiken, Georgia Department of Natural Resources; John Ehrenhard and Jean Godbec, Archeological Assistance Branch, Southeast Region, NPS; Richard Faust and George Fisher, Southeast Archeological Center, NPS; Dr. Bernard Murphy, U. S. Navy; Dr. Kent Schneider, Southeast Region, U. S. Forest Service; and Dr. Paul Rubenstein and Marc Rucker, Corps of Engineers, for providing data; and also especially Brooks Vaughn, Information and Data Systems Division, NPS, Washington, who made it run.

## TWENTY YEARS OF PRESERVATION ARCHEOLOGY IN KENTUCKY

R. Berle Clay

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*The past 20 years of archeology stemming from the National Historic Preservation Act have seen a data explosion in Kentucky archeology. This has not been matched by publication nor has "preservation archeology" led to spin-off studies, continuing interests developed through the preservation process. These factors are related to the history of archeology in the State, specifically to the health of the discipline.*

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Let me preface my paper with a disclaimer and several "theses." This is not a summary of the results of the past 20 years of government sponsored archeology. These have been tremendous. Along with this, note the following definition: when I speak of "preservation archeology" I am referring to archeology done primary in response to section 106 of the National Historic Preservation Act.

The points I want to make stem from two personal incidents. First, Bennie Keel and I both took jobs outside academia at about the same time and met in Kentucky, early in our management careers. In the course of a grueling day of negotiation a section 106 Memorandum of Agreement was developed involving the excavation of a series of Archaic, Woodland, and historic components. As I remember, the total project, which involved some managerial surprises for Bennie, cost over \$253,000.

As a result of this work, highly significant archeological materials were recovered from a series of sites which established an Archaic to Woodland sequence for the Falls of the Ohio. To the best of my knowledge, however, no journal article has been produced from that project although the descriptive report is available through the National Technical Information Service and the archeological contractor. It also did not result in any further spin-off studies although the materials are presently well curated at the Universities of Kentucky and Louisville. My point here is that "preservation archeology" costs have been high and the returns have been meager measured in a traditional product, or in the ability of a phase of research to lead into others.

Second, I was recently discussing the histories of our respective states with a fellow state archeologist. We tried to generalize state histories into similar periods and concluded that it was hard to do. We agreed that specific histories of archeology must be written for the different states, and that these will reflect closely the histories of the discipline of archeology in those states, and even personalities of individuals in those states.

Thus, for Kentucky, I will be addressing what I perceive as a problem. First, twenty years of "preservation archeology" have been expensive and the payoff has not been what has been expected and, second, that this is a product of the history of archeology in the State. These comments are made in the context of praise for a Federal preservation program which has worked extremely well. Threatened archeological data *are* being preserved. Archeologists, however, have yet to adjust fully to the implications of this state of affairs or, perhaps more fairly, have not been able to adjust to these conditions.

### Before 1966

Kentucky is distinctive in that it really did not participate in the river basin salvage period, typified in the South by the Tennessee Valley effort. Still, archeology was done during the period 1934-1966 which established a professional basis for understanding State prehistory. We look back in 1986 with awe at the record of William S. Webb and his workers.

Webb's work was a product of his selection of area problems explicitly summarized by him in the early 1930s (Funkhouser and Webb 1932). The productivity of the period is, really, a product of the fact that he had a research design, *a la* 1932, primitive as it may seem in hindsight (Funkhouser and Webb 1932). This design was responsible for the character, success and the limitations of his contributions.

However, what did not emerge from his Kentucky research was a chronological framework. Chronology was implicit in it (Schwartz 1967), but this is our hindsight, not Webb's. Nowhere in the State did Webb even try to grapple with the fact that, for example, Archaic preceded Woodland, which preceded Mississippian or Fort Ancient. It is a well kept secret that

Webb simply chose not to write up those sites excavated by his Depression-era supervisors that did not fit his research problems (for example, a series of Fort Ancient sites in central and eastern Kentucky, Mississippian sites along the Green River, and Paleo-Indian and Archaic sites along the Tennessee River). This was only partly because he predated radiocarbon based chronology building. His work during the 1930s took place in the midst of a time and space revolution, in which absolute dating was only a later embellishment. More so, it reflects his early 20th century interests, scarcely evolved beyond a local version of the Thomas mound survey program of the late 19th century.

Webb's Tennessee Valley Authority program provided the model for later government effort. But in Kentucky, the river basin period had little impact. Beginning with the survey and excavation of sites in the Wolf Creek Reservoir in southern Kentucky in 1948, carrying through the salvage efforts in a series of smaller reservoirs in the late 1950s and early 1960s, river basin salvage was done. However, these projects produced meager results.

Kentucky archeology did not really participate in that period of American archeology as characterized as by Willey and Phillips in *Method and Theory in American Archaeology* (1958). Today, many see the regional sequence building of the time as methodology trapped in a particular paradigm. Today, one can recognize that normative culture history building by itself is a limiting goal. However, that framework and the interpretive contradictions that it generates is needed and is a necessary step to what Taylor (1948) called the study of culture and what Willey and Phillips (1958) called processual archeology. This level of abstraction regarding archeology was never addressed by Webb.

In 1986, we in Kentucky still approach local prehistory with terms that are borrowed (Schwartz 1967) and have not been rethought (such as Adena, Fort Ancient, Green River Archaic, and Newtown) or we add new terms, from wherever, as they become fashionable (such as Emergent Mississippian). Contemporary Kentucky archeology is behind in its chronology building and that effort is essential to, in Taylor's terms, its historiography. To give an example of what this means today, a recently suggested "research topic" for the Woodland period in Kentucky is "are the Yankcetown Phase sites in Kentucky really Emergent Mississippian?"

I suggest that this is not a valid research question, at least as posed in this fashion. More importantly, it represents a framing of culture historical enquiry in

terms entirely borrowed from elsewhere, what I would jokingly call "carpetbag archeology." To make a Taylorian critique of such a process, what has been lost in the haste to paste fashionable terms on a pastiche of archeological fact is the archeological context itself. This occurs, surprisingly, in the framework of a discipline that pays lip service through others to Walter W. Taylor.

What is lacking and did not develop in the 1940s and 1950s in Kentucky, despite Webb's accomplishments, was a tradition of comparative analysis. Such an approach, stemming from the necessity in the 1930s of fitting classificatory systems such as the McKern System to developing regional chronologies, was essentially alien to Webb's brand of archeology.

In the 1940s and 1950s, Kentucky lacked the institutional base for doing archeology. Webb did not or could not create one. We have had a hard time developing one in the State because of the continuing weakness of the larger discipline of anthropology.

Despite their obvious limitations, Webb's published monographs remain outstanding achievements. His success was due to the fact that he focused on "problems" that he defined. Thus, his work was characterized by an economy of means versus ends. He had the services in Kentucky of a gifted set of field archeologists. After World War II he was unable, despite his personal success, to translate the experience into State Government support for academic anthropology.

Here, finally, one must deal with Webb's background. At least part of his failure to build a base for Kentucky archeology is surely a product of his parochial collector's background. He was never a "mainstream" archeologist. Instead, he seems to have worked quite independently from the generation which was building the essential outlines of eastern United States prehistory around him. I doubt if Webb saw the need to expand his growing department, had that been possible. He certainly was not able to keep the archeologists who passed through Lexington. In sum, his contributions to Kentucky prehistory were very much an individual effort. He hardly viewed the practice of Kentucky prehistory as an ongoing effort.

#### Since 1966

In 1932, some 313 archeological sites were professionally "known" in Kentucky as the result of Funkhouser's and Webb's statewide survey in the late 1920s. As of the summer of 1986, some 12,155 sites

are listed in statewide survey, maintained by the Office of the State Archaeologist. About 10,515 sites, or 86.5% of those listed have been discovered since 1966, largely but not entirely in response to the National Historic Preservation Act of 1966.

This newest phase of Federal archeology has created a data explosion. For the first time we are getting a generous, dispersed sample of statewide archeological data. It is difficult to estimate its cost but it is safe to say that the last 20 years have cost far more than the first 30 years.

It is also difficult, and perhaps too soon, to measure the benefits of this effort, but this work has not resulted in accessible publications. Descriptive technical reports have been consistently produced, as required. But those reports fail to push analysis of data and uniformly fail to integrate their findings into a developing consensus. Also, there is a dearth of theoretical or methodological spin-off papers generated from opportunities provided in "preservation archeology."

This last point is particularly unfortunate. In the final analysis, I feel that it will be "preservation archeology," forcing the archeologist to confront novel problems in new areas, that will be acknowledged to have been the most significant source of change in the practice of archeology in the United States at a number of different levels. By contrast, the influences of more traditional "research archeology" have tended to be conservative.

In summary, in Kentucky there is a lack of fit between the amount of work done and the professional product. This is not apparent to the archeologist normally absorbed with his or her particular interests, but it is evident to one who reads the end product. The increase in site knowledge suggests several factors. First, with relatively limited exceptions federally sponsored archeology prior to 1966 exceptions, was not survey and inventory in nature but, rather, focused on excavation of sites following Webb's limited research interests.

Second, 20 years of "preservation archeology" have drastically altered both the dimensions of Kentucky prehistory and the conduct of field archeology in the State. Having sampled Kentucky archeology around 1960, I can attest that the problems then were versed in terms of Webb's intellectual legacy. This led, I remember, to a particular question such as, what was the relationship between Green River Archaic and Kentucky Adena, a predictable product of what I would call the "law of the geography of prior research." Humorously, of course, this law states: "Archaeological facts expand in time and space until

they run into other archaeological facts to which they are then linked by developmental schemes."

If it has done anything, recent "preservation archeology" has demonstrated that there is a general similarity in problems of cultural evolution across the State, tempered by the certain knowledge that the process of change varied, reflecting regional diversity. Realistically, however, this realization is as much a product of archeological work done outside Kentucky, as it is one part of "preservation archeology" within Kentucky. At the same time, extended data recovery on all too few widely scattered sites has produced concentrated, high quality data that has not been widely distributed beyond technical reports. In addition, it has been all too difficult to fit these data into a coherent prehistory for any part of the State. Rarely has the mitigative effort been either part of an intensive, regional research effort or the basis for initiating one later.

It is not fair to charge the lack of a professional product in "preservation archeology" to the moral lassitude of the archeologist involved. "Preservation archeology" has had its own agenda that has worked its important effect. Inventory has dramatically changed our understanding of the distribution of prehistoric cultures and produced some of the most important data we now possess. But it also has demonstrated that all too many sites have little research payoff. Because of this, there have been both good and bad effects. They have modified our perception of prehistory, which is good, and have both created and intensified an ideological split between those who do "preservation archeology" and those who do not (or wish they did not), which is bad.

In 1986, some 62% of all reported project surveys were of small areas that produced no finds. These figures indicate the success of compliance without scrutinizing individual agencies. However, they also indicate that considerable effort is going into the archeological evaluation of projects with no resources. To this reality must be added the additional observation that the majority of sites that are located by inventory have very little research value. Some one third of the State's site total cannot be placed in any time period. As high as 60% of those sites have only the most general of diagnostic specimens. Few can realistically design or execute non-trivial research with such sites and no one in Kentucky does.

Not to slight the role of negative findings, there is an ennui with compliance archeology that is a direct product of our value system where it stresses a research paradigm as embracing "preservation archeology" without modification. I find few archeologists willing



to admit that many of the preservation dollars they spend have no research value. But the record of what they do with the results suggest that such is the case. At many levels the archeologist is, frankly, merely providing a service with very little professional payoff depending upon one's overall view of the discipline. William S. Webb careers will never be made in "preservation archeology."

However, the lines are drawn between shifting groups. There are those who maintain that whenever the archeologist enters the field, he or she is doing research. There are others who express total lack of interest in inventory in general; who recognize, in other words, that many sites have no research value (sometimes the only sites that have such value are those with which they are immediately concerned). The former group tends to be the frustrated "preservation archeologists," those for whom the involvement in section 106 compliance work has not satisfied their scientific ideals and, therefore, their career goals. The latter group tends to be the archeologists, largely, but not entirely, based in academic institutions who are not actually engaged in "preservation archeology." Between these extremes, and I sense often frustrated by their position, is a third group that is trying to conduct the business of "preservation archeology."

Perhaps this is a picture recognizable elsewhere. It indicates, I repeat, flaws in the profession of archeology, not in the preservation programs. However, the Kentucky example may reflect mainly upon the continuing weakness of anthropology in the State. It has not meshed with a vigorous tradition of local archeology. It is a sobering reality that the strength of academic programs has steadily eroded during the past 20 years.

Advances in Kentucky archeology of the 1980s remain very much dependent upon programs based outside the State: beginning with Patty Jo Watson's (Washington University) work in Mammoth Cave and later in the Green River Valley, followed by the University of Michigan's work in the Knobs region, then by the multi-year involvement of Simon Frazer University in the Lower Cumberland, and now with the University of Illinois' intensive involvement in the archeology of the Jackson Purchase and Columbia University's effort in the archeology of central Kentucky. Those are the projects which have made, and will probably continue to add to the body of published contributions to Kentucky archeology.

Those programs are not the work generated by "preservation archeology." With the exception of some

State and Federal survey and planning money provided to the University of Illinois and a small amount to Simon Frazer University, those programs have not been supported by preservation dollars. In fact, they represent the work of quite a different set of archeologists and it is surprising how little communication there is between the two.

If one looks at those programs, one is impressed by the diversity. Where successful, they have been designed research in which data collecting is not an end in itself, but is closely tied to explicit problems. This is nothing more than the agenda of "research archeology" and the very thing which, in practice at least, sets it off from "preservation archeology." Webb would applaud their successes despite his provincialism. Those programs demonstrate that "preservation archeology" in Kentucky cannot stand alone, at least not now. Simply, it does not give the archeologist the freedom to follow his or her research interests in an economical and productive fashion. It was fashionable in the early 1970s to see "preservation archeology" as essentially the restructuring of the strategy of doing field research, in effect replacing traditional grants oriented research. The Kentucky experience suggests that this is possible only where there is an established institutional base for prehistory. In Kentucky we have not developed it. Central to such a base is the presence of a tradition of archeological research firmly based in the fertile, post-World War II era of American archeology. With these two factors, I suggest, the history of Kentucky work might have been quite different.

Perhaps the most productive short-term use of Federal preservation dollars in Kentucky has been through the survey and planning program directed by the Kentucky Heritage Council, the agency of the State Historic Preservation Officer. For the past three years, that agency has used Federal survey and planning funds, supplemented by more limited State funds, to stimulate just the sort of tightly focused research needed in Kentucky. Stemming from the 1966 Act the scale of projects initiated by this program is hardly that of the sums used in what I have called "preservation archeology." But where those funds have been distributed to institutions that have the ability to carry research to completion and publication, the results have been rewarding. Those projects are, however, "band-aids" to the larger problem. Clearly, the success of those preservation efforts depends upon the strength of the local institutions doing the archeology. The survey and planning program cannot, and was not intended to, provide the institutional stability and strength that is needed in the long run.

**After 1986**

I sense that we are heading for a new period in "preservation archeology" dictated by external factors. In it, evaluation will be followed, where possible, by mitigation of adverse impact by avoidance. Dictated by economy and the realization that "preservation archeology" does not substitute for "research archeology," this will be true "preservation archeology" and will mark, if it is successful, the embedding of a preservation sophistication in Federal planning.

If things are moving in this direction, where does this leave the practice of "preservation archeology?" Inventory, evaluation and, where unavoidable, mitigation of adverse impact remain with us as elements of the Federal preservation program. I suggest that they will become even more central than at present. Here in Kentucky, for example, we potentially face a tremendous explosion in inventory and evaluation of coal mine permits, provided that the State decides to require them.

Given this thrust, one aspect of the Federal program is spotlighted as needing immediate attention and is underscored by the Kentucky experience. In the preservation process in the past no consistent thought has been given to the ultimate curation of recovered archeological materials. It is clear that the payoffs in research done with those materials will come down the road and will be, in a large measure, dependent upon how well they have been maintained in the interim.

Despite the declining role that Kentucky academic institutions have played in "research archeology," they have been asked to assume virtually the entire task of curating the results of "preservation archeology." I make this warning to the Federal Government. It is

possible that one day you may discover that those institutions have disappeared, and with them the data harvest of the preservation program.

In addition, there will be two predictable results. First, with a resource avoidance ethic "preservation archeology" will be even less productive in research payoffs than today. Second, even more so than now, major advances, for a while at least, will come through parallel and related work done in a research, not preservation frame of reference. This is not the best state of affairs as we seek to consolidate the gains made in the past 20 years of the Federal programs. For the short term in Kentucky, we are left with what amounts to a fiscal paradox that is difficult to explain to the layman: the most productive work from the scientific standpoint of the profession is also the least costly. Furthermore, the scale of the difference in costs between one and the other is considerable.

In time, I suppose, we will see a more efficient use of "preservation archeology" dollars, and I mean more of a payoff than now in terms of publication and spin-off studies. This will depend upon building the regional framework which we need, which expresses the significance of the Kentucky context, and which is the obvious springboard for bringing the products of "preservation archeology" more closely in line with those of "research archeology." In this process the continuing involvement of the Federal preservation program with State archeology will proceed with its own agenda. It remains to be seen if that agenda will be adequately addressed by "research archeology" or if, in Kentucky, like those orphan sites Webb dug and never analysed, the data windfall of "preservation archeology" will have to wait a few years to be digested in a more leisurely manner. Still, we may thank the Federal program that these data will have had a chance to exist.

## ARCHEOLOGICAL DATA RECOVERY IN TRANSITION: SOME OBSERVATIONS FROM MISSISSIPPI

Robert M. Thorne

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*The State of Mississippi is divided into twelve physiographic regions characterized by a diversity of naturally occurring resources and archeologically defined cultures which were responsive to those resources. Federal agency responsibility for archeological resource consideration is as diverse as the physiography with five Corps of Engineers districts being represented, one National Forest Service Region, the Soil Conservation Service, and until recently, the Bureau of Land Management. Each has made available considerable funding during the last decade and the background archeological data that has been produced has increased logarithmically. While the development of archeological knowledge has benefited directly, academic institutions have received considerable direct and indirect support from survey and excavation projects. Site conservation and stabilization projects have been initiated and successful efforts in this area will help to insure that archeological resources are available for future scholars and the interested public.*

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When Bennie Keel asked me to participate in this symposium and to assess the advances in Mississippi's archeological knowledge over the last 20 years, I agreed but with some reservations. For those of us who regularly work in the State, the rate of accumulation of data during the last two decades is obvious. Given the scale of federally funded activity in the State over the last 20 years, the rate of data recovery is not surprising. While all of us tend to agree that positive steps have been taken, the extent of advancement is a highly subjective judgment that each of us makes on the basis of our individual research interests. Discussions with various colleagues in the State quickly led me to the conclusion that there is no common yardstick that can be used to measure our level of advancement in archeological knowledge.

It may be helpful to put the extent of Federal support for archeological data recovery in Mississippi into perspective by briefly listing the Federal agencies that have carried out archeological projects in the State and commenting on their level of involvement. Major fiscal support for resource consideration has come from four Corps of Engineers Districts, the Tennessee Valley Authority, the National Park Service, and the Soil Conservation Service. Other agencies that have provided lesser fiscal support include the U. S. Forest Service, the Department of Transportation, the Bureau of Land Management, the Environmental Protection Agency, and through administrative action, the Farmer's Home Administration and the Department of Housing and Urban Development's Community Development Block Grant program. The greatest support has come from two Corps of Engineers Districts, the Tennessee Valley Authority and the Soil Conservation Service. Other agencies that have provided funding have done so on a lesser scale because their projects have been of lesser magnitude. I had originally hoped to frame this paper on the basis of dollars spent over the last 20 years so that I could better understand how we had benefited from the Federal archeology program in fiscal terms. This turned out to be less than adequate and more difficult to accomplish.

While each participating agency has a record of expenditures, the systems of keeping them vary and for some agencies, a complete accounting is virtually impossible without considerable effort. Even though dollar amounts are difficult to identify, we can view the level of funding from the perspective of where the money has been spent. By where I am referring to a geographic or physiographic division of the State and not to the individuals or institutions that have had access to the available funds.

During the last 20 years, the overwhelming majority of Federal dollars spent on archeology in Mississippi has been in the eastern and northeastern parts of the State. These are the areas of the Tennessee-Tombigbee Waterway and the Yellow Creek Power Plant. Funds spent in this region have come from the National Park Service, the Corps of Engineers (Mobile and Nashville Districts), the Tennessee Valley Authority and the Soil Conservation Service. Other Corps funds have been

made available for survey and excavation in the western portion of the State, principally in the Mississippi alluvial valley section of the Yazoo River drainage. The source of those funds is the Vicksburg District. Some of this funded data recovery has been completed in the north-central portion of the Yazoo River drainage. National Park Service funds have been spent along the right-of-way for the Natchez Trace Parkway and at the Grand Village of the Natchez as well as on a variety of smaller projects in various parts of the State.

Soil Conservation Service expenditures have not been confined to a particular geographical area, but like the majority of the work previously noted, Soil Conservation Service activities involving archeological resources have been north of Interstate-20. In fact, with the exception of work in the Natchez - Grand Village area, one military installation, and several small Bureau of Land Management projects, the majority of the federally funded archeology programs have been carried out north of Interstate-20. In some ways, this is not a fortuitous circumstance since Interstate-20 divides the State into two almost equal portions and virtually all of the State south of Interstate-20 lies within the relatively flat coastal plain where there is less need for water management through impoundment and channelization.

As I indicated earlier, there seems to be no common denominator that can be used to determine the extent of our advancement, although everyone in the State seems to agree that we have made some progress. Since a purely fiscal approach did not prove to be an adequate way to begin, another alternative to the assessment of progress would be to look at the number of reports that have been produced. Letter reports must be excluded in such an approach to keep the assessment manageable. Obviously, the number of available reports is a reflection of the amount of money that has been spent. Numbers of reports by agency does not address the kind of work done or the productivity of that research.

The Tennessee-Tombigbee Waterway project, with funds provided by the National Park Service and the Mobile and Nashville Corps Districts, led to the preparation of almost 60 reports on properties in the eastern part of the State. The Corps' Vicksburg District has produced 7 published reports and 60 purchase order reports, many being more than letter reports. Four reports have been issued by the State Highway Department and about 12 from the Soil Conservation Service. A similar number has been produced from work funded by the Tennessee Valley Authority. The National Park Service lists 32 reported projects, excluding several that they funded through the

Atlanta office (when it was the Heritage Conservation and Recreation Service) rather than through the Tallahassee office. Including the Corps' Vicksburg District's purchase orders, approximately 175 reports are available, and for further emphasis, these deal largely with the northern one-half of the State. Letter reports on small-scale surveys contain a large quantity of negative evidence regarding site locations and are useful in that they can help to exclude certain topographic features as likely places to find expressions of prehistoric or historic period activity.

In so far as I can determine, no single individual has even tried to read, consider, and assimilate this huge volume of data. Preparation of a state historic preservation plan dictates that at least a portion of this assembled data be considered. That plan is progressing at an appropriate rate and most of the data that are being used have been derived through the Federal archeology program. The completion of the State Plan may well represent the first attempt at synthesis of the data collected over the last 20 years.

With this information at hand, we are back to the question of how one assesses this database and makes some reasonable determination regarding the rate of progression in development of our state of knowledge. After consultations with various colleagues, I can only reach the conclusion that at this time we cannot fully assess our level of advancement. It seems that we are still too close to the period of productivity to know what major advances we have made.

I can note the more obvious advances in our knowledge of the State's prehistory. Among them are the following: chronological sequences in the eastern part of the State have been refined as a result of work along the Tennessee-Tombigbee Waterway. By extrapolation from nearby cultural sequences, we thought early on that Mississippian settlement patterns in eastern Mississippi would emulate those from other regions. Tennessee-Tombigbee research has suggested that at least in that part of Mississippi, Mississippian period settlements were dispersed rather than concentrated. Additional data collection is necessary to show that this is indeed the case, however.

Management of the various cultural resources along the Tennessee-Tombigbee Waterway provided the opportunity to develop a management plan for resources that were spread over a large geographical area. In brief, a National Register of Historic Places District cross-cutting several physiographic proveniences was developed for the length of the Waterway route. A flow chart system for site selection for intensive management was devised and all sites to

be impacted by Waterway development were fed into the chart. Use of the chart would eventually lead to a decision as to how a particular site would be treated, with management options ranging from no action to full-scale excavation. On the basis of the success of the management approach, this procedure has been adapted for use on other large Federal projects such as the Richard B. Russell Reservoir, the New Melones Reservoir and, most recently, the developing Central Arizona Project.

Jay Johnson completed a survey and testing program in the western portion of the prairie section of the eastern part of the State and developed a settlement model that could be used to predict site locations in nearby drainages. A reapplication of the model has suggested that while the model is generally accurate, some further refinements are necessary.

As a result of the preparation of Hurricane Mound prior to stabilization, we have been able to show that the construction of carefully planned substructural mounds extended further into the central portion of Mississippi than we had thought earlier. These are associated with relatively broad flood plains and smaller streams. We also have been able to show that early historic Choctaw settlement had occurred in an area traditionally defined as Chickasaw.

Work completed in the very northeastern corner of Mississippi has allowed us to trace Middle and Late Archaic stone tool production from the quarry to the finished product, and to define a settlement pattern with tool production as its focus. We also have been able to chronicle the use of spatially restricted and very poor quality raw materials in two instances (one was not directly funded by Federal monies).

The collection of pollen samples and associated materials for dating has allowed us to begin to better understand the geomorphological fill sequences in the Mississippi alluvial valley and to support the paleo-environmental model proposed for the Holocene. We also have been able to generate the beginnings of a paleo-environmental subsistence model for the Mississippi River alluvial valley and to suggest what types of land surfaces would have been most actively utilized during various parts of the year.

While not directly affecting archeological sites in the State, the Tennessee Valley Authority has initiated a program of archeological site stabilization on properties it owns within its reservoir system. This was followed in time by a similar program for the Corps of Engineers. In both cases, the majority of the test stabilization efforts are not in Mississippi but the basic

synthesis and site protection encouragement has come from Mississippi institutions. Within the State, a stabilization effort has been completed by the Vicksburg District of the Corps of Engineers and has protected a Mississippian mound from further loss by reservoir inundation. Work by the Soil Conservation Service has helped to keep St. Catherine's Creek from eroding into the Grand Village of the Natchez.

I think a significant change has finally come about in the way that federally contracted archeology programs are perceived. It took many of us several years to fully understand the jurisdictional limitations of contracted programs and to learn how to operate our own archeology programs as sound business ventures. I think that we have begun to learn how to apply contracted archeology program funds in a manner that will both satisfy the needs of the funding agency and to structure problem oriented research at the same time. While we may not want to admit it, some of us have become archeological businessmen whose functional roles have diverged from the traditional views of the profession.

While we have no quantitative means of judging what our state of affairs would be without the Federal program, some suggestions can be made. We would likely not have developed a better state-level management organization even though we tend to fuss about it regularly. University anthropology and archeology programs would not have benefited from shared overhead funds that could be applied to resources away from areas of federally funded development. We would not have been able to locate nearly the number of sites that have been recorded nor would we have been likely to fill a number of interpretive gaps left by earlier research. Mississippi would probably have fewer archeologists on both the university staffs and at Archives and History, and private enterprise would certainly not exist. There would be no Corps of Engineers or Forest Service archeologists and there would not be a Soil Conservation Service coordinator in charge of archeology programs. Graduate students would not have received the level of financial support that they have, nor would they likely have been exposed to some of the more advanced analytical techniques that we now employ. Both undergraduate and graduate students would have received their field training at field schools. They would have paid for field experience rather than being paid for it. The Corps of Engineers would never have considered funding regional repositories to house collections, let alone put them in place, nor would they be developing regulations to manage cultural resources on their various properties.

Generally speaking, archeologists working in Mississippi during the last twenty years probably have not encountered many problems that were not faced by our counterparts during the days of WPA archeology. In reality, their problem may have been more difficult to solve than those of more recent years. Contemporary archeologists have enjoyed the advantages of virtually instant communication, rapid and reliable transportation, adequate funding, and the technical expertise to handle huge volumes of data. We also generally have had adequate funds to call on a broader range of expertise in allied disciplines.

The shortcomings of the last two decades of the Federal archeology program in Mississippi are probably similar to those of our neighboring states. Our Department of Archives and History has experienced a considerably increased work load without benefit of an adequately increased staff. Frequently those of us removed from Archives and History's daily activities forget and fail to appreciate the paperwork load that they handle in our behalf.

Additional problem areas that I think I perceive include the difficulty of access to published reports and an even

greater lack of accessibility of interim and preliminary drafts. We still lack a completely functional system that would keep us apprised of what our colleagues are doing. There is an apparent deficiency of articles dealing with cultural resource management projects in regional and national journals and, as a consequence, fewer and fewer cultural resource management projects are used as reference material in contemporary method and theory texts. If these deficiencies are as real as I perceive them to be, lack of post-project fiscal support and the time to prepare articles may be the culprit. Another view is that we may still be too busy moving from project to project to give much thought to previous work.

I think that from the proceeding, I have shown that we are making some advances in our archeological knowledge of the State of Mississippi. The accuracy and sufficiency of the database that has been accumulated still remains to be tested and we will continue to build on the past and structure our future research in such a manner that we will continually use the Federal archeology program as a means of increasing and enhancing our level of knowledge.

## NORTH CAROLINA ARCHEOLOGY SINCE 1966: TWO DECADES OF FEDS OVER THE SHOULDERS

Mark A. Mathis

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*A review of the last 20 years reveals that the role of the Federal Government in North Carolina archeology has been generally beneficial, not only for the knowledge gained but for the positive impact on the public and private sectors regarding the protection and preservation of cultural resources. The Federal role is most apparent in the numbers and types of investigations conducted in response to the regulatory compliance requirements embodied in the National Historic Preservation Act of 1966 and attendant legislation. Some of these investigations represent the highest of research standards and have contributed substantial new information about the State's past. Other tangible effects can be defined in terms of State program development, overall professional employment and public awareness. It is within this context that this paper examines some major research advances and program developments in North Carolina archeology over the last two decades.*

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When asked to prepare this paper, I thought "no problem." As a member of the State Historic Preservation Office staff for nearly 10 years, I figured I had a reasonable vantage from which to view most of the significant advances and developments in North Carolina archeology, at least for the last decade. And, in fact, the view has been pretty good from that position. In the course of the average month, the Office of State Archaeology (formerly the Archaeology Branch) will come into contact with virtually every professional archeologist working in North Carolina and, in the process, manage to acquire a basic idea of what's going on where, who's doing what, and what sorts of new and interesting things are turning up.

Through the environmental review process, we work with most Federal and State Government agencies, as well as many local agencies and private individuals, principally developers. But to identify and summarize

the highlights of North Carolina archeology since 1966 was far more difficult than I had imagined. The first 10 years is not really the problem. It is the last 10 years that gets hairy. In this paper, however, I do not intend to provide a summary of the major projects or research conducted in North Carolina over the last 20 years; excellent reviews exist elsewhere (e.g., Mathis and Crow 1983; Claggett and Cable 1982). Rather, this paper provides a brief look at the face and figure of North Carolina archeology as it has grown and changed since 1966. In doing so, only a fraction of the persons, places and events which constitute the recent history of the State's archeology is mentioned. Further, unlike some of my colleagues in this symposium, I will not attempt to discuss the individual roles or significance of the multitude of Federal agencies that have funded, conducted or caused archeological studies to occur over the last 20 years. I think it is abundantly clear that the Federal Government, particularly through the programs and guidance of the National Park Service, has contributed immensely to the growth and development of southeastern archeology. And like its neighbors to the south and west, the archeological community of North Carolina has responded to the Federal program in its own diverse fashions, developing its own programs of research, planning and management, many of which can be directly linked to the guidelines and program directions of the Federal program. Like it or not, the feds are always looking over our collective shoulder!

To say that a lot has gone on in archeology over the last two decades is an obvious understatement. With the development and evolution of the legislative and regulatory systems for protecting archeological sites (or their information), the profession has expanded dramatically in numbers, composition and orientation. This has not always been easy, and there have certainly been a few casualties along the way. Yet, the practical or dirt level impact of the Federal archeology program has not been evenly or consistently distributed across state lines. Some states have seen more Federal program funds and more and larger projects than others, with corresponding differences in the amounts and types of data collection and analysis. This is not necessarily a fault in or of the Federal program. It is a factor of the limitations imposed on the program by the

regulatory processes and, to a great extent, the maturation of the State Historic Preservation programs. Projects occur where the laws apply, where they can or have been enforced by the appropriate Federal or State agency, and where there is a legitimate need for their application.

Nevertheless, the differential distribution of projects and funding has obvious implications for local, State and regional research, and by extension, the advancement and growth of the science of archeology. It also has implications for the more subtle yet significant concerns of professional interaction, cooperation and research integration. While it is undeniable that quantity rarely equates with quality, and bigger does not always result in better, there is a general relationship between the size of an archeological project and the potential impact of that project on our knowledge and understanding of archeological things. Since 1966, large-scale survey and data recovery projects have dominated much of the archeological scene of the Southeast. The names are familiar to us all by now, including the likes of Santee-Cooper, Russell, Tellico, Normandy, Truman, and Tennessee-Tombigbee, to name but a few. Substantive research reports will continue to appear long into the future as students and professionals analyze and re-analyze the masses of data produced by those projects.

In the shadows of those archeological monsters are the thousands of smaller projects, most of which go without public or professional fanfare. That they can nonetheless contribute to archeological research has been a point of debate from the outset. Most of us now agree that, given the proper context and application, even the smallest of projects has something to offer to the broader scheme of research, as well as to the more mundane concerns of planning and management. The task ahead of us is to fit these projects into the broader scheme.

In evaluating the last 20 years of southeastern archeology, with or without specific emphasis on the Federal role, we cannot overlook the importance of academic and professional tradition and, dare I say it, the importance of the "significant person." For instance, during the first half of this century, a relatively small group of archeologists, many of whom were weaned on the great projects of the Civil Works era, established the first archeology programs at universities, colleges and museums across the Southeast. In tandem with a few non-southeastern programs, such as Harvard and Michigan, they would dominate much of the archeological teaching and research in the Southeast. The directions those programs established, the types of research they conducted (and continue to conduct), and

their professional offspring, actively influence the directions and applications of the Federal archeology program. The theoretical and methodological orientations deriving from those programs have fueled many discussions and debates over the processes of identifying, interpreting and evaluating the significance of archeological sites (*vis-a-vis* the National Register of Historic Places). On the positive side of this, most of the initial large-scale Federal mitigation projects were logically conducted through those institutions, where the expertise, labor force and facilities were readily available, and where the academic climate existed as the proving grounds for new methods and techniques. On the negative side, many sites were undoubtedly "written off" as insignificant because they did not "fit" into some long-standing research design, or were simply overlooked altogether because of traditional approaches to field survey.

In addition, as the Federal program developed, many of us were thrust into positions of designing, executing or managing archeological projects and programs involving huge sums of public funds. The results were sometimes excellent, sometimes professionally and publicly embarrassing. However, as the Federal program and its many offshoots at the State level have developed and matured, and as the profession has learned the ways of bureaucracy and business, the occasion for embarrassment has been reduced substantially, albeit not eliminated. The regular use of technical advisory and review committees, special consultants, and systems of peer review is a reflection of the maturation process.

The point here is simply that the last two decades has seen both good and bad archeology, and a lot of trial and error. Like the Civil Works era, we have ventured into a new realm and paid for an education, often at a steep price to the resources we seek to study. The programs now operating across the country are in many ways products of the first decade or so of development in the Federal program.

#### North Carolina: 20 years of Change

Prior to 1966, the only academic institution devoted to research in North Carolina was the Research Laboratories of Anthropology (RLA) at the University of North Carolina at Chapel Hill. Under the direction of Joffre L. Coe, the RLA conducted surveys and excavations throughout the State, including the seminal work at the Hardaway, Doerschuk and Gaston sites (Coe 1964), as well as Town Creek, Keyauwee, and many lesser known sites. Through the 1960s Coe and the RLA dominated the archeological scene from Chapel Hill.



In the mid-1950s, however, the State Department of Archives and History hired its first archeologist, Stanley South. Until his departure from the State in 1969, his work focused on several of the major historic archeological sites in the State, principally Brunswick Town, Fort Fisher and Bethabara. That work would form at least some of the basis for his future significant volume on historical archeology (South 1977). Although he also conducted a survey of prehistoric sites along portions of the southern coast in 1960 (South 1976), the role of the State in North Carolina archeology was almost exclusively oriented toward historic sites. The prehistory of the State remained the domain of Coe and the RLA.

The National Historic Preservation Act of 1966 had little immediate effect on the State's archeological condition. Coe remained the central figure in prehistoric research, while South and his successors with the State pecked away at the historic archeological problems. In 1965, the RLA began its Cherokee Project in the mountains of southwestern North Carolina, research that would continue to some extent into the 1980s. Over that period, the RLA would also continue excavations at the Town Creek site, Hardaway and Sauratown, among others.

For the first few years following the 1966 Act, as Federal and State agencies began to understand and accept their compliance responsibilities, Coe and the RLA provided the bulk of the compliance field work, usually at little or no expense to the project sponsor. Much of the Federal support at that time came from the National Park Service.

Between 1968 and 1972, a proverbial population explosion occurred. The number of institutions with full-time archeologists rose from two to 12. By 1976, there were 14 agencies and institutions with archeologists in residence. The exact cause of the explosion is debatable. There was certainly a temporal association with the legal developments of the 1960s. However, the true impacts of the laws, and the contract funding that would follow, did not come into serious play until the mid-1970s, near the end of the main institutional growth phase in the State. I suspect that, to a great extent, the growth was a response to the expansion of the college programs as a whole to meet the demands of an increasing "baby boomer" student population, as well as the increased emphases on the liberal arts during the 1960s and early 1970s.

In 1972, the North Carolina Archacological Council was formed to provide a forum for interaction between the State's growing professional community. Fourteen years later, the Council is still trying to make the forum

work! In 1973, an appropriation to the State Archives and History led to the creation of an Archacology Section (now the Office of State Archaeology), whose mandated responsibilities included the conduct of a statewide survey program, coordination with State and Federal agencies on matters archeological, and the conduct of research into North Carolina's historic and prehistoric past. As an arm of the State Historic Preservation Office, formalized under the law of 1966, the Archaeology Section also was to serve as the compliance review office for Federal and State agency undertakings, a function it continues to serve today. During the same period the responsibility for the State-owned historic site archeology was transferred to a separate section in the Division.

By 1974-75, compliance archeology, contract archeology, or, as it is best known today, cultural resource management archeology, was taking full form. Most of the major academic institutions were staffed with archeologists, all of whom were doing contract work with some regularity. The bulk of the work consisted of small-scale surveys of highways, sewer and water lines, and small watershed impoundments.

A graphic measure of the impact of the compliance process, and of the period in which it became most influential in North Carolina archeology, is in the annual production of research reports and papers (Figure 1). Since 1978, the Office of State Archeology has compiled a comprehensive library of papers, reports, theses and dissertations dealing with North Carolina archeology and closely related subjects. Granted, many of the reports in the library contain little substantive information. They are nonetheless reasonable indicators of archeological activity. The library currently contains slightly over 2,000 references, the earliest dating to the late 1800s (cf. Hargrove 1980, 1981; Bollinger 1982; Myers 1984; 1985). Of these, over 1,700 (82%) have been produced since 1975 alone! From 1966 through 1974, an average of 19 reports were produced each year. From 1975 to 1985, an average of over 150 reports were produced annually.

By the late 1970s, over 100 compliance projects were being conducted annually. Discussion and debate abounded over the problems of significance evaluations, survey techniques, predictive modeling, research designs, data comparability, reporting guidelines, professional qualifications, comprehensive planning, etc., ad nauseam. The discussions were often heated, and lines were generally drawn between the academic, private contracting, and "Government" archeologists. In many ways, this was perhaps the most difficult period in the evolution of the Federal (and State)

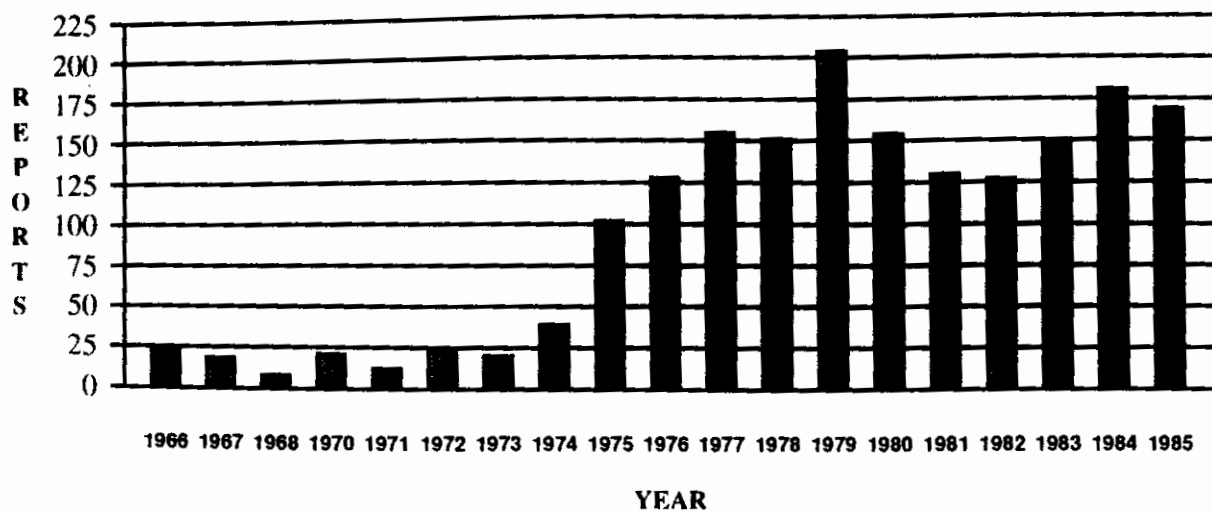


Figure 1. Reports of archeological investigations and related subjects submitted to the Office of State Archaeology, N. C. Division of Archives and History.

program, at least in terms of the understanding and implementation of the compliance process. Slowly but surely, however, the basic elements of the Federal program were defined, along with the responsibilities of the State program and professional community as a whole.

In 1980, a set of expanded survey reporting guidelines were issued by the State. The guidelines were what some have referred to as a "necessary evil." As the number of projects being conducted increased and a growing number of different institutions, firms and individuals became active in the compliance process, the need for some form of standards was clearly evident, if not to the profession as a whole, to the Federal and State reviewers. It is interesting to note in retrospect, but without malice, that a common thread in the debate surrounding the implementation of the guidelines was that "yes, there should be guidelines, but not for the REAL archeologists, just for those out-of-state and money-grubbing contractors." In spite of the initial hostile response from much of the professional community, the guidelines issued by the State (and based on the Secretary of the Interior's guidelines), have resulted in a significant increase in the quality and utility of reports produced during the compliance process, not only for purposes of planning and management, but pure research as well.

In 1981, two new laws were passed by the State: the Archaeological Resources Protection Act, modeled after the Federal law of the same name and the Unmarked Human Burials and Human Skeletal

Remains Act, which provides specific protection for unmarked Native American burials (cf. Burke 1986). This was but one of many instances where the Federal program provided the model for State-level actions.

In 1982, the Office of State Archeology assumed the responsibility for maintaining the centralized site files for the State, thus ending over a decade of mutually exclusive, but often redundant, filing systems scattered across the State.

In the last few years, the Office of State Archeology with all its bureaucratic demands, continues to plug away at the problems of planning and management, although only the future will tell how well we handle it. The Corps of Engineers, U. S. Forest Service and State Department of Transportation now have full-time staff archeologists. Some of the academic institutions have ceased doing contract work altogether or only on rare occasions, choosing instead to focus on grants and the pure research they preferred to be doing all along. The remaining private contracting firms are now generally accepted as human by most of the academics and, in most instances, the two groups even have developed good working relationships.

In reviewing the history of North Carolina archeology, a few points immediately catch the eye. One of these is that the vast majority of North Carolina archeology prior to the late 1960s was conducted by Coe and RLA. This contrasts markedly with many of our southeastern brethren, where a number of different institutions or programs conducted work across their state and across

state lines. For the most part, Coe and his RLA students worked alone, with only occasional outside "intrusions," on a massive state with a complex archeological record. Their research, nonetheless, set standards for data collection and interpretation, including, of course, the cultural sequence for the Carolina Piedmont (Coe 1964), which is still applicable to much of the Southeast and Eastern United States.

Prior to the 1970s, however, Coe and RLA focused their attention on the Mountains and Piedmont regions, only rarely venturing into the Coastal Plain. Thus, with the exception of limited surveys by Haag in the 1950s (Haag 1958) and South (1976) in 1960, relatively little was actually known about the prehistoric coastal cultures or sequences. Similar data "holes," in terms of basic cultural, historical and typological information, existed for several areas of the State.

In general, we now have many of those "holes" filled, at least to the extent that we can speak more or less intelligently about ceramic types, projectile point and tool types, chronological sequences, and gross settlement patterning. Much of our information derives from survey, testing and excavation projects mandated by the Federal and State laws.

Another important point about the last 20 years is that there have been no projects conducted under the Federal program that approach the size or complexity of a Tellico, Richard B. Russell or any of the many large-scale projects so common throughout the Southeast. Within the last decade, a few Corps of Engineers reservoir projects came close but, for various reasons, never attained the level of significance or research impact equal to their potential. The data from those projects will, nonetheless, contribute to our understanding of Archaic period technology (Claggett and Cable 1982) and the functions and structure of upland Piedmont, surface disturbed sites (Hargrove et al. 1986), among many other problems.

The reason there have not been more big projects up to now is actually pretty simple: there have not been many reservoirs or other large scale developments in recent years; at least which have occurred in areas of high site density or significance. Many reservoirs were constructed prior to effective application of the laws and, if any survey was done at all, it was usually done by Coe and the RLA (e.g., Coe 1967; Keel 1963) with relatively little funding from sources beyond the university.

Much of the major research in the State, in fact, has been done outside of direct Federal program involvement. The Cherokee project, for instance, begun by the

RLA in 1965, was funded primarily by a grant from the National Science Foundation. That project established the basic ceramic and cultural sequence for the southwestern mountains region and provided data for a number of theses and dissertations, including the major published volumes on Cherokee archeology by Keel (1976) and Dickens (1976). More recently the RLA, under the direction of the late Roy Dickens, received grants from several sources to undertake a major program of research into late prehistoric and Contact period Siouan culture.

In like manner, the research of Ned Woodall at the Donnaha site (Woodall 1984), which has provided significant information about Middle to Late Woodland settlement and subsistence in the northwestern Piedmont, was conducted as a field school, without Federal funding. The work of Purrington, Ayers and Loucks at the Ward site, a stockaded Pisgah-like site in the northwest mountains, also was a field school program (Purrington 1983; Ayers et al. 1980).

On the other hand, an excellent example of how the Federal program has directly contributed to the archeology of the State is in the work of David Phelps (1983) in the northeastern Coastal Plain. Data derived principally from relatively small compliance related survey and excavation projects has provided the basis for the definition of the ceramic and cultural sequence for the region. In addition, those data have been employed in the development of models of Algonkian settlement and subsistence patterns, as well as initial definitions of the potential territorial boundaries of both Tuscarora and Algonkian populations during the Late Prehistoric and Early Historic periods.

Other examples of how the small projects have been employed include the work by Bass (1975) in the Great Smoky Mountains, where site and lithic raw material distributions provided the basis for testable models of settlement patterning. Loucks (1981) and Purrington (1983) used similar approaches to refine our understanding of distributional and functional relationships in the northern mountains. More recently, a Federal Highway Administration mitigation project has provided substantial new information about Late Archaic use of the upper reaches of the Blue Ridge Mountains (Mitchum 1986).

Back on the southern coast, Tom Loftfield has begun piecing together Middle and Late Woodland settlement and subsistence data, primarily from a series of shell midden sites (Loftfield 1979, 1984). It is important to note here that with few exceptions (e.g., Loftfield 1979), the shell midden research by Loftfield, and many other surveys and excavations conducted along

the coast since 1980, have been funded by private developers under the permit regulations of the North Carolina Coastal Area Management Act. That this and other State laws exist, and that much of the protection and management of cultural resources in North Carolina now derives directly from the State, rather than the Federal program, is significant. The North Carolina Coastal Area Management Act, however, is connected to the Federal program by virtue of a common denominator, the National Register of Historic Places, and certainly would not exist were it not for the Federal laws. The application and enforcement of the law, nonetheless, falls directly upon the shoulders of the State Historic Preservation Office and the State Office of Coastal Management.

As noted above, direct Federal agency involvement in the archeology of North Carolina has been somewhat unremarkable, at least in comparison to much of the Southeast. Most Federal involvement has occurred indirectly. That is, most of the Federal program work of recent years has been conducted under the procedures and permit requirements, but not the direct auspices of Federal agencies. The Environmental Protection Agency and Federal Housing Authority, for example, are not usually directly involved in the contracting or oversight of the compliance projects required under their permitting and funding procedures. This is generally left up to the State Historic Preservation Office and permittee or grantee to work out.

On the other hand, the Corps of Engineers recently has taken a leading role in the development of regional plans for cultural resource management (e.g., Green 1986; U. S. Army Corps of Engineers 1985). It has also contributed to the enforcement of the State North Carolina Coastal Area Management Act, and has undertaken a number of small and mid-sized testing and excavation projects in the Coastal and Piedmont regions (e.g., Cable 1981; Claggett and Cable 1982; Hargrove et al. 1986). The information from these projects has added and will continue to add to our knowledge of the archeological and historical past.

The U. S. Forest Service is also conducting surveys of proposed timber sales, land exchanges and road construction projects. The data produced by these projects, in time, will be synthesized into regional forest overviews which, when meshed with the plans of the Corps of Engineers and the State Historic Preservation Office, should begin to provide a better look at the overall nature and structure of North Carolina prehistory and history. Of particular note is the survey work underway in the Uwharrie National Forest, which encompasses much of the extensive rhyolite and other metavolcanic lithologies of the Uwharrie Mountains.

The aboriginal quarries and workshops contained within the Forest are some of the most extensive anywhere in the eastern United States.

Unfortunately, even ball park figures on the amount of land covered and sites recorded as a result of direct Federal program actions are difficult to calculate. However, some general comments on recent and current Federal agency activities are in order. Referring back to Figure 1, the rapid increase in reporting from 1974 to 1975 can be largely attributed to the fact that the State Historic Preservation Office compliance review program was more or less formalized in 1974. Initially, the bulk of the projects "flagged" for archeological survey were water and sewer lines, industrial parks, and small Soil Conservation Service watershed projects. By the late 1970s, few Soil Conservation Service projects were being reviewed and the funds for new water and sewer lines were drying up. The reach of the review program expanded, however, to include a variety of other agency programs, including the Federal Housing Authority, Veterans Administration, and the Department of Housing and Urban Development. In addition, the Federal Highway Administration and State Department of Transportation began more conscientious programs of survey and evaluation. The State Department of Transportation hired a full-time archeologist in the late 1970s. The Corps of Engineers hired its first district archeologist in the mid 1970s.

Between 1978 and 1980, the U. S. Forest Service conducted nearly 100 small surveys of proposed timber sales and land exchanges. Almost 25% (50) of the reports produced in 1979 resulted from Forest Service surveys. The decline in overall reporting between 1979 and 1983 can partially be attributed to the fact that Forest Service surveys were no longer conducted, or were conducted only for land exchanges. This trend actually continued until 1985, when full-time staff archeologists were employed. The decline in reporting after 1979 is also due to a reduction in Federal and State water and sewer (clean water) funds and the overall decline in Federal funding in general for construction programs.

The rise in reporting after 1982 is largely due to the surveys by the State Department of Transportation for bridge replacements and minor road improvements, the coastal surveys and excavation projects instigated under the State's Coastal Area Management Act, and a number of other State agency compliance activities (e.g., state parks, mining and borrow pits). Federal program-related projects, with the exception of the Forest Service, are generally decreasing in frequency. This is undoubtedly related to reduced program

funding but, to a certain extent, also to shifting interpretations of the compliance responsibilities (e.g., the Corps of Engineers). Only the future will tell how far the decline will go.

By mid-year 1986, however, slightly over 80 reports had been received by the Office of State Archeology, keeping pace with the previous year. A number of those reports were prepared under National Park Service Survey and Planning Grants, administered by the Office of State Archeology, and grants deriving from the 400th anniversary commemoration of the first English colonization efforts on the North Carolina coast.

### **Parting Thoughts**

The last two decades have seen much change in archeology, in the types and directions of research, and

in the personalities of the profession. We have fought over survey techniques, significance, research designs, "new" vs. "traditional" archeology, and a plethora of other issues. Many of the problems and issues still face us today, though we do seem to have weathered at least the initial growth pains of the development of the Federal and State programs. As an infernal and eternal optimist, I see the past two decades as nothing more than that, a process of growing into and around a program which I believe we all generally agree is essential to the protection and preservation of the resources we seek to study. Besides, it is the only Federal program we have, and if we cannot make it work as a professional collective, I sincerely doubt that the Washington, D.C. bureaucrats will do so.

There are, of course, many other individual and collective projects that warrant mention, and that have carried us further into a comprehensive understanding of North Carolina archeology. I apologize to all whose contributions have not been noted.

## SOUTH CAROLINA'S FEDERAL ARCHEOLOGY THE ANNUAL SCORE SINCE 1966

**Steven D. Smith,  
Bruce E. Rippeteau,  
and  
Keith M. Derting**

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*The considerable advances of the last 20 years in doing (or supervising) archeology in South Carolina have been largely made by governmental action. In the State guise and driven by goals enunciated in State law, since 1969 the South Carolina Institute of Archeology and Anthropology (and with important efforts by the University of South Carolina's Anthropology Department and the Charleston Museum) has been the predominant factor. In the separate Federal guise, and driven rather by licensing like requirements attendant to Federal agency actions (with some oversight at the State level by the State Historic Preservation Officer and other Department of Interior support), considerable exploration and management (including excavation) has occurred. The National Park Service, the Forest Service, the Corps of Engineers, and other Department of Defense agencies such as the Army, Navy, and Air Force, the Department of Energy and the Department of Transportation have greatly expanded archeological knowledge.*

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While only future archeologists will tally the final score of advances in modern scientific archeology, it is clearly evident today that the quantity of archeological research has greatly increased as a result of the Federal Government's role in cultural resource management since 1966. In South Carolina, we feel that these advances have been both quantitative and qualitative, and that the score, when counted, will be high. This paper reviews contributions the Federal Government has made toward an understanding of South Carolina prehistory and history. We take issue with those who would see only the negative side of Federal participation in archeology, and offer concrete examples of positive progress being made in our knowledge of South Carolina's past.

Enumerating the annual score of modern archeological research in South Carolina might be likened to a narrative history of a college football program. The comparison may be a bit flippant. Still, South Carolina's archeologists would like to think of themselves as a research team. Over the years since 1966, we can certainly say that we have had both winning and losing seasons when it came to research contributions. Overall though, archeology in South Carolina has had a winning record and, without resorting to tailgate party bravado, we believe that the Federal Government's contribution on our team has been, as the sportscasters say, awesome!

### **South Carolina's State Program**

Admittedly, South Carolina's team had some early advantages. The greatest advantage was, and is, strong fan support of archeology by both the private sector and State Government. Three years before the National Historic Preservation Act created the modern Federal archeology league, our State General Assembly created the South Carolina Department of Archeology. The goal of this State agency was to conduct archeological research on behalf of the State. Thus, the structure for and an interest in archeology was already evident in South Carolina when the Federal Government kicked off our modern national preservation policy.

By starting on the 20 yard line when the Act was first established, the early preservation years were winning seasons for South Carolina. For example, in 1967, the original Department of Archeology was reorganized as the South Carolina Institute of Archeology and Anthropology, and the Institute was transferred to the University of South Carolina. Dr. Robert Stephenson replaced Dr. William Edwards as Director and State Archaeologist in 1968 (Institute of Archeology and Anthropology 1977). Under coach Stephenson, the Institute drafted its first All-American from North Carolina, Stanley South, and the Institute became a contender.

Fan support continued to grow. Dr. Stephenson and South Carolina archeology's greatest fan, James

Michie, created a strong alumni association in 1969, called the Archeological Society of South Carolina. Since then, this joint avocational and professional group has continued to provide a strong team of experienced archeologists, while providing an additional outlet for the publication of archeological research through its high-quality journal called *South Carolina Antiquities*.

The Institute's first memorable victory was Stanley South's joint prehistoric and historic excavation at Charles Towne Landing, sponsored by the State's 1970 Tricentennial Commission (South 1971). Charles Towne Landing, in Charleston, is the site of South Carolina's first continuous historic settlement, which began in 1670. This 600 acre park is now under the protection of the South Carolina Department of Parks, Recreation and Tourism.

The Institute's latest development has been a major team reorganization. After 17 exciting seasons, Coach Stephenson retired and was replaced by one of the authors, Bruce Rippeteau. As a result of his Federal archeology experience as Colorado's State Archacologist, and as a major private consultant in the fiercely competitive western oil and gas league, the Institute switched to a new offense, providing a greater flexibility to meet research and compliance needs. Rippeteau also developed new facilities including a new headquarters (stadium), new labs and a curatorial building. Further, a new identity was immediately developed. In addition to being a University of South Carolina research organization, we also began to function as a full-status State agency.

With great support at the State and private level, South Carolina's archeological ground game was well established by the early 1970s. But it has taken the Federal Government to provide big yardage passing, balancing our research offense. In fact, the total Federal involvement and influence in South Carolina archeology cannot be told in this short paper. Below we can only highlight a few of the greatest games and name a few of the players who have come along since and as a result of the National Historic Preservation Act.

#### **United States Department of the Interior**

One of the most well-known players has been the Department of the Interior. Through Historic Preservation funding, archeologists and the South Carolina Department of Archives and History have continually improved their basic playing skills. For example, one fundamental benefit has been to simply identify and

increase our research base. Over 10,600 sites have been recorded, largely as a result of Federal policies. But it is the matching grants program that has made the greatest contribution.

One of those grants provided funds to conserve a rare 18th century river vessel recovered at Brown's Ferry, South Carolina. In order to complete this incredible project, a 6700 cubic foot, 50,000 gallon conservation tank was constructed in 1981. After the vessel is removed in 1989, we plan to make the tank available for conservation of a multitude of vessels and objects of antiquity, and perhaps hold the world's largest hot tub party.

Another contribution the Department of the Interior has made is to make us aware of the need for long-term preservation planning. South Carolina's most notable example of archeological resource planning is Zierdan and Calhoun's urban archeological plan for Charleston (Zierdan and Calhoun 1984), funded by the City of Charleston and the South Carolina Department of Archives and History. This work also investigated urban adaptation during the historic period.

Besides funding for State Historic Preservation Offices, the National Park Service has widely contributed to archeological research in South Carolina. Important conference victories have included sponsoring several excavations at Ninety Six, a Revolutionary War fort. The fort's study began around 1970 under the Institute and the Ninety Six Historical Commission. But the National Park Service continued support until well after the site became a National Park in 1976. Early research centered around the discovery of the main fortifications of this back country settlement. The work has been pivotal in the interpretation of the site for the public (Holschlag et al. 1978).

In 1973, the National Park Service funded Stanley South's work at Fort Moultrie, another Revolutionary War fort. As research archeologists know, the work at Fort Moultrie was one of South's first serious attempts to examine methodology in historical archeology, leading to the development of his behavioral pattern studies (South 1974). Furthermore, the report resulting from this work has been used as a textbook in classes on historical archeology throughout the nation.

The following year the National Park Service funded Kenneth Lewis's investigations at the Kershaw House in Camden (Lewis 1976). Lewis examined Camden's role on the Carolina frontier through a stratified random sample, testing hypotheses concerning cultural change. Ultimately, this lead to his highly regarded frontier model.

**Department of Defense**

**Federal Highway Administration**

Nationwide, Federal archeology was a whole new ball game after Executive Order 11593 was issued and the Archeological and Historic Preservation Act was passed. Since then, under the leadership of the Federal Highway Administration and the South Carolina Department of Highways and Public Transportation, research archeology in South Carolina has made great progress.

At the Institute, concern for archeological resources impacted by highway construction prompted the formation of a Highway Archeology Program in 1974 (Marquardt and Goodyear 1982). A new backfield was lead by veteran quarterback Albert C. Goodyear whose general research design for highway archeology continues to guide research today (Goodyear et al. 1978). An excellent example of this was the excavation conducted at Windy Ridge, a multi-component site spanning 8,000 years of occupation (House and Wogaman 1978). Here research focused on examining brief occupations of specialized extractive sites. Windy Ridge was also a test of hypotheses posed by an excellent synthetic study of some 165 sites along 31.5 miles of Interstate-77 in the South Carolina Piedmont (Goodyear et al. 1979). In that work, Goodyear and others looked in detail at those ubiquitous lithic scatters found on the ridge slopes throughout the Southeast and on the South Carolina Piedmont. Canouts and Goodyear later reported on the structural variability in the assemblages of those sites (Canouts and Goodyear 1985:180).

Incidentally, Canouts and Goodyear pointed out that cultural resource management work (read Federal archeology) forced archeologists to develop a comprehensive research framework in their research pursuits (Canouts and Goodyear 1985:182).

But the Highway Administration's greatest contribution has been to provide the major funding for the development of a training camp in the form of a Masters of Arts degree program in Public Archeology. This joint University of South Carolina - Institute of Archeology and Anthropology program began in 1980 under the direction of Leland Ferguson. Since then, young players have been coached by such pros as William Marquardt, Stan South, Albert Goodyear and Glen Hanson.

Everyone is aware of the tremendous alumni contributions provided nationwide by the Department of Defense via the U. S. Army Corps of Engineers. The Corps' Savannah and Charleston Districts have been no less generous in their scholarships to South Carolina. For example, although the Corps' Charleston District has had some intractable attitudes towards compliance, their initiation of the Castle Pinckney restoration project and their repeated loan of underwater survey equipment to the South Carolina Institute of Archeology and Anthropology must be happily noted.

Two of the Army Corps' greatest contributions in South Carolina are seen in the Cooper River Rediversion Canal project and the Richard B. Russell Reservoir project. While we cannot mention all the players in these two massive bowl games of archeology, we must note a few.

Along the Cooper River, archeologists from Commonwealth Associates, Inc., Soil Systems, Inc., and a local team from the Institute all conducted salvage excavations. Commonwealth's research focused on documentation of a prehistoric assemblage that when analyzed with 15 radiocarbon assays, provided a sequence for local projectile points and ceramics along the lower Santee and the lower South Carolina coastal plain (Anderson et al. 1982). Meanwhile, Soil Systems' study of Yaughan and Curriboo Plantations made significant contributions to our knowledge of Afro-American slave acculturation and to Colono-ware studies (Wheaton et al. 1983).

Finally, Mark Brooks and Veletta Canouts of the South Carolina Institute of Archeology and Anthropology identified different subsistent strategies between Middle and Late Woodland and Mississippian Period peoples at two sites within the Cooper River Project area (Brooks and Canouts 1984).

Even larger in scope than the Cooper River project, some 59,260 acres of Georgia and South Carolina became the gridiron scene of many archeological projects as part of an ongoing multidisciplinary endeavor known as the Richard B. Russell Reservoir Multiple Resource Area. Work has continued there since 1969 and though the field work is about complete, the results of this massive undertaking are still forthcoming. One of the completed projects is Anderson and Schuldenrein's study of prehistoric human ecology (Anderson and Schuldenrein 1985). This study provided a view of human occupation from the Early Archaic to the Mississippian period.



Another memorable victory by the Institute was an away game played by V. Ann Tippitt and William H. Marquardt at two Georgia sites, called Gregg Shoals and Clyde Gulley (Tippitt and Marquardt 1984). A preliminary model of depositional processes on the Savannah River was developed when they examined some 10,000 years of human occupation at those sites.

Historical archeology made equally big gains as a result of the Army Corps' reservoir and dam project on the Savannah River. Drucker, Meiszner and Legg's study of Bannister Allen Plantation and Clinkscales Farm is a notable example (Drucker et al. 1983). These archeologists used oral history and archeology to compare different historic agricultural systems present on the Carolina Piedmont. A model for a Piedmont Refuse Disposal Pattern was proposed for future research.

While plantation archeologists absorb Orser's two-volume study of Millwood Plantation (Orser et al. 1987) they should also peruse Worthy's excellent overview of traditional architecture and historic engineering in the Richard B. Russell Reservoir Multiple Resource Area (Worthy 1983). This work inventoried standing structures, considering them in light of cultural geographer's concepts of the Upland South. They also might spend some time studying the history group's historical survey of the area (History Group 1981). This interesting study is quite a worthwhile addition to the more traditional works by archeologists.

#### **Department of Agriculture**

A discussion of the contributions to archeology made through funding by the U. S. Army Corps could be a topic in itself. However, other Federal agencies also need mentioning. The Department of Agriculture, through the Soil Conservation Service, has supported archeological work at Cane Creek and Little Lynchies Creek Watersheds (Scurry and Lees 1978; Jackson 1975).

On a larger scale, since 1976, the U. S. Forest Service has contributed over 1,400 sites to the South Carolina files through their continuing land surveys. In South Carolina, only 15 percent of the 660,000 acres of forest lands have been surveyed, which means that the Forest Service's contribution to archeologists' basic data bank will continue. Furthermore, the Forest Service's basic strategy for preservation is to set aside areas which contain sites. In a sense, the Forest Service has red-shirted a number of archeological sites for future seasons.

#### **Department of Energy**

Without a doubt the best example of the benefits of Federal participation in the identification and preservation of archeological sites in South Carolina and, we feel, in the Southeast, has been the Savannah River Plant Archeological Research Program with the Department of Energy (Hanson et al. 1981). To date, up to 40% of this 300 square mile National Environmental Research Park has been surveyed and some 825 sites have been identified. The Department of Energy's sensitivity and awareness of archeological preservation is unequalled. They fully recognized from the beginning that identification and preservation cannot be properly done except within a research context. Thus, in all cultural resource management decisions at the Savannah River Plant, the Department of Energy has consistently sided with research interests and has gone beyond mere compliance, fulfilling the spirit of the law rather than just the letter.

#### **National Science Foundation and National Endowment for the Humanities**

Let us not forget that the Federal Government also sponsors basic research archeology. In South Carolina, the National Science Foundation and the National Endowment for the Humanities have contributed immensely to archeological scholarship. The most recent example of this kind of aid is the Santa Elena Project, where a \$166,000 scholarship was received by the Institute's Senior All-American Stan South. Santa Elena, the capitol of Spanish Florida in the 1560s and now part of a golf course on the U. S. Marine Corps base at Parris Island, is also a good example of how several government agencies have cooperated to provide for archeological preservation and research. Besides National Science Foundation and National Endowment for the Humanities funds, the project was sponsored by the U. S. Marine Corps, the National Geographic Society, the University of South Carolina and the Spanish Government (South and Hunt 1986).

#### **Other Federal Contributions**

While we can continue to list the many big games funded as a result of Federal policy, it would be remiss not to discuss the bone crunching secondary impacts, as a football oriented compliance archeologist might say, that the Federal program has had on the discipline of archeology.

For example, using an idea from the Federal program, in 1976 South Carolina developed its own trust for natural and cultural resources. The South Carolina Heritage Trust program serves as a trustee to purchase, protect and manage land for State agencies, educational institutions, and public and private groups. Sites are managed for research in a wide variety of disciplines including archeology, agriculture, conservation, forestry, history and geology. One of the authors of this paper, Bruce Rippeteau, in his role as State Archeologist and head of a State agency, was elected vice chairman of the Trust in 1984. Under this program, important archeological sites like the Allendale Chert Quarry (on property owned by Sandoz Chemical Corporation) and the Nipper Creek Site (on property owned by Trinity Episcopal Church) have been preserved for future archeological teams. We proudly note that at least one site has been saved for the Nipper.

One of the most important secondary impacts nationally has been, as noted by Canouts and Goodyear, that the Federal program has coerced archeologists to become better at their research. Today archeologists must organize their thoughts through research designs and site specific goal oriented archeology. Though we

still have a long way to go, the quality of scientific archeology, and the game, has improved. As part of this improvement, we have had to develop standards for our work and, increasingly, we are being forced to live up to those standards. For better or worse, archeologists have been driven from the shelter of the locker room and out onto the field where we have been exposed to both fans and rivals. Working in the real world with real people probably has been healthy for us, especially if we ever come to realize how much we owe the citizens of the United States for providing annual scholarships.

### **Conclusions**

We conclude with a halftime pep talk. Remember, it is the archeologist who carries the research ball behind the blocking of the Federal program. In this regard, we warn all archeologists that when the game is over, win or lose, it is the ball carriers that are remembered, not the pulling guards. Thus, the final responsibility for quality in archeology lies with all of us as archeologists, not the Federal Government as government.

## THE FEDERAL ARCHEOLOGY PROGRAM IN TENNESSEE, 1966-1986: AN ARCHEOLOGICAL SECOND COMING

Jefferson Chapman

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*The past 20 years have seen a resurgence in federally sponsored archeological activities in Tennessee. Construction impacts of reservoirs, energy plants, roads, municipal improvements, and urban expansion have yielded a plethora of projects mandated by the National Historic Preservation Act of 1966. Building on the techniques and database of the earlier federally funded CWA/WPA era, a new generation of archeologists has added greatly to our knowledge of the past and to the techniques by which one might extract that knowledge. This paper reviews the scope of many of those projects and their research foci, their impacts on academic institutions and private enterprises, and their contributions to the body of archeological knowledge.*

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Tennessee has long been a focus of archeological interest. As a prolific source of Native American antiquities, the region attracted numerous collectors. Some, such as Jones (1876), Putnam (1878) and Thruston (1890) even sought to interpret the sites and artifacts in light of Native American cultures. The first large infusion of Federal dollars into archeological research in the area occurred in 1881. In establishing the Division of Mound Exploration, Congress directed Cyrus Thomas to initiate field work in 12 counties in Tennessee and along the Tennessee River in Alabama. The results of those efforts were published in the 12th Annual Report of the Bureau of Ethnology (Thomas 1894). The recovered materials are curated at the U. S. National Museum.

For almost the next 50 years, Federal involvement in archeology in Tennessee was minimal. Things changed in May of 1933 when President Franklin Roosevelt signed the congressional act creating the Tennessee Valley Authority. The stage was thus set for the union of the Federal Government and archeology that continues to this day in the Middle South. Public and agency concern for the resources to be inundated

by Tennessee Valley Authority reservoirs was almost immediate. The creation of the Civil Works Administration in the same year made a labor force available. In December, representatives of the Tennessee Valley Authority, the University of Tennessee, the University of Alabama, and the U. S. National Museum met to formulate plans for archeological investigations in the Wheeler and Norris basins. Thus was launched a nine year effort that would bring archeology of age and lay the foundations for all subsequent research in the Middle South.

Between 1934 and 1942, ten reservoirs were constructed on the Tennessee River and its tributaries; archeological work was conducted in nine. Hundreds of sites were recorded from surveys and excavations, often extensive, were conducted at 147 of them. Support initially came from CWA and the Federal Relief Administration. With the creation of the WPA in 1935 and the infusion of money from the National Research Council, the tempo of work expanded. Crew sizes were large, often averaging 150 men. In six years, University of Tennessee crews excavated 1,577,920 ft<sup>2</sup> on 62 sites. The conduct of massive excavations and the supervisory responsibilities trained a whole generation of archeologists. William S. Webb, T. M. N. Lewis, William Haag, Robert Goslin, Charles Fairbanks, Jesse Jennings, Charles Nash, Stu Neitzel, George Neumann, Douglas Osborne, and David DeJarnette were a few of the excavators in the Middle South that cut their teeth and steered a course through essentially uncharted waters.

The problem domains of the CWA/WPA era in the Middle South evolved rapidly as increasing amounts of comparative data were generated. The bottom line, however, was to obtain a record of the prehistoric occupations before they were lost to inundation. Under such salvage parameters, the focus was predominantly on the mounds and more conspicuous sites. To effectively carry out this task and to cope with vast volumes of rapidly generated data, procedures quickly became systematized. Standardized field and laboratory forms, excavation and analytical formats, and organizational charts of personnel made work in the different reservoirs comparable (cf. Lewis and Kneberg n.d.).

The cultural/historical focus of the research, under the influence of the emerging archeological theory of the time, generated numerous trait lists in attempts at component recognition. Phases and foci generated from the research are for the most part in use today. The ethnography of the region documented by Swanton and other ethnohistoric accounts gave a focus to the quest for ethnic identity of archeological components. Replacement hypotheses to explain apparent culture change were promulgated for some areas; forty years later, some of these are still research topics (e.g. Late Mississippian/historic Cherokee interface).

The CWA/WPA era was impressive. The involvement of the Federal Government in archeology was not initiated by mandate but by a concern for the resources. T. L. Howard (1938) of the Tennessee Valley Authority reflected, "The board of directors was concerned with this problem of conservation and expressed a desire to conserve to future generations the wealth of archeological material and information available in the Tennessee Valley area." Fiscal obstacles to this magnanimity were removed by the Federal relief programs. However, strong, committed archeologists and responsive agency support made it happen.

A rejuvenation of reservoir construction in the early 1960s brought a concomitant resurgence of federally funded archeological efforts. Viewed as "salvage archeology," the magnitude of the work was considerably less than that of the WPA era. Crew sizes were ten or less and the extent of effort was more or less directed by available funds from the National Park Service, ranging from \$8,000 to \$10,000 per season.

A new era in the archeology of Tennessee, however, began with the passage of the National Historic Preservation Act in 1966. This legislation and subsequent laws and directives became stimuli for an enormous volume of work in the State over the past 20 years. Although implementation was not immediate, by the early 1970s projects and participants had begun to proliferate.

In terms of dollars and data generated, the 1970s were dominated by the Tellico and Normandy reservoir projects of the Tennessee Valley Authority. Not since the WPA period had such intense archeological work occurred in the State. The Tellico Project spanned much of the period of the evolution of preservation laws (i.e., 1967-1981). Consequently the volume and focus of the archeology grew and changed, and its results were diverse and substantive. The contributions of this project will be discussed later. However, Federal expenditure of over \$2.5 million for Tellico

archeology is over twice that spent on all previous Tennessee Valley Authority reservoirs since 1934.

In addition to Normandy and Tellico, there have been a number of other substantial archeological efforts generated by Federal legislation. Tennessee Valley Authority's proposed Columbia Reservoir on the upper Duck River involved considerable field work and innovative research until the project was stopped this year. Of lesser magnitude, but of significance, include the mitigation efforts at Phipps Bend (Lafferty 1981), Hartsville, and Watts Bar (Calabrese 1976; Schroedl 1978a) nuclear plants, the Clinch River Breeder Reactor Project (Cole 1975), the Natchez Trace Parkway (Amick et al. 1986), the Big South Fork National River and Recreation Area (Ferguson et al. 1982, 1984), the Union Rail yards in Chattanooga (Council and Honerkamp 1984), and the Averbuch (Klippel and Bass 1984), Higgs, and Doughty sites (McCollough and Faulkner 1973). Hundreds of smaller scale mitigation efforts have also taken place.

The intensity of activity in the State is reflected in over 1,400 survey reports on projects in all 95 Tennessee counties that have been submitted to the Tennessee Division of Archeology. State Archaeologist Nick Fielder reports (personal communication) that the Division reviews an average of 2,000 Federal projects per year. Of these, 20% to 25% are deemed to have potential effects and ultimately 15% get surveyed.

Who are the participants in these archeological activities? Some of the work has been performed by the staff archeologists of the affected agencies (e.g., Tennessee Valley Authority, Corps of Engineers, Forest Service, Department of Transportation, and the Tennessee Division of Archeology). Much, however, has been performed through contracts with academic institutions and private companies. Over the past 20 years, approximately \$8 million have been spent in federally funded contracts within the State. The University of Tennessee, Knoxville, has performed the majority of the work under contracts totaling almost \$6.5 million. As early as 1962, the University of Tennessee, Knoxville, established an Office of Research. That office has grown rapidly to handle the increased sponsored research of which archeology has been an integral part. The University of Tennessee at Chattanooga, Memphis State University and Middle Tennessee State University also have established archeological programs that rely in part on contracts. As demand rose for archeological services, consulting firms such as Garrow and Associates, Gilbert Commonwealth, Tanasi and others joined academic institutions in the Federal pie.

What then have been the contributions of federally sponsored archeology in the State over the last 20 years? Have those expenditures and concomitant research added to our knowledge of the past? Speaking for the State of Tennessee, I must reply with a resounding yes.

The Tellico, Normandy and Columbia reservoir projects have, by their size and scope, made the greatest contributions. Each has fostered or improved new field techniques (e.g., mechanical stripping, deep testing, water screens, flotation); refined chronology (phase definitions, radiocarbon sequences); added to regional knowledge; addressed resource exploitation (lithic resource studies, faunal and paleobotanical studies), developed settlement models; and promoted ecological, paleontological, paleoenvironmental, and geomorphological studies.

The Tellico reservoir project has generated 20 published site reports (Baden 1983; Chapman 1973, 1975b, 1977, 1978, 1979, 1980, and 1981; Cridlebaugh 1981; Davis et al. 1982; Gleeson 1970 and 1971; Guthe and Bistline 1981; Kimball 1985; Polhemus 1977 and 1987; Russ and Chapman 1983; Salo 1969; Schroedl 1975a, 1978b and 1986; and Schroedl et al. 1985), a Project synthesis (Chapman 1985), numerous papers and articles (Riggs and Chapman 1983), 14 Masters theses, three Ph.D. dissertations, and a permanent museum exhibit on the shores of Tellico Lake. Eight volumes on the Normandy reservoir investigations have been published (Faulkner and McCollough 1973, 1974, 1977a, 1977b, 1977c, 1982a, and 1982b; McCollough and Faulkner 1976 and Riedl et al. 1976) along with numerous articles. Eleven Masters theses and three Ph.D. dissertations address aspects of the project. Although the Columbia reservoir project has been canceled and its future uncertain, to date eight Masters theses, one Ph.D. dissertation and a number of articles and papers have been generated from the research (Amick and Crothers 1984). Contained within this literature is a vast amount of information that has and continues to be used by researchers throughout the east.

Archeological survey, testing, and assessment of areas across the State have increased regional knowledge and provided data for area overviews and settlement models. Notable are Gerald Smith's (1975) work in the Obion-Forked Deer and Reelfoot-Indian Creek area, the survey of the Memphis metropolitan area (Gilbert Commonwealth 1981a, 1981b), Cross Creeks and Tennessee Wildlife refuges (Autry and Hinshaw 1979,

Boyd 1985) and Watts Bar (Cannon 1985) reservoirs, and the Great Smoky Mountains National Park (Bass 1977). While most area surveys address historic as well as prehistoric sites, there also have been a number of surveys focusing on traditional architecture and folk culture patterns. These include Normandy Reservoir (Riedl et al. 1976), Big South Fork (Howell 1981), the Oak Ridge Reservation (Fielder et al. 1977), and the Clinch River Breeder Reactor Area (Schroedl 1975) (see S. Smith 1981).

One important objective of the preservation laws is the development of comprehensive management plans for the cultural resources contained on certain properties. While most area surveys are designed to establish a framework for making management decisions, two stand out in their specificity. One (Ferguson and Pace 1981) is a study to aid in the assessment of adverse impact due to federally permitted coal mining activities on the Cumberland Plateau of Tennessee. The primary objective of the research was to generate a settlement pattern model which would be an aid in the development of both management and anthropological research plans. The ultimate objective was to develop a general research design and orientation for the Cumberland Plateau as a whole. This effort to operationalize a regional research approach to management is significant and reflects a concern by the Tennessee Historical Commission and others that traditional compliance procedures are often piecemeal projects yielding varied results in pursuit of often incompatible research goals.

A second example is that generated for the 22,000 acres of Tennessee Valley Authority land adjacent to Tellico Reservoir (Davis et al. 1982). The survey was based upon a stratified random sampling design employing 300 x 300 ft plowed quadrats as sampling units. Settlement analysis was based upon unit assemblage content and the definition of functional assemblage types. From this, three assemblage types were recognized: residential base, field camp, and location. Spatial observations permitted the generation of a probabilistic model of site location that was converted into probability contours for each site type for the project area. Management recommendations were predicated upon the belief that a representative sample of archeological sites should be preserved for future scientific research. The plan then designated 25 known significant site areas for protection along with 10 archeological resource protection areas. These areas comprise 10% of the non-inundated Tennessee Valley Authority owned lands and collectively contain representative samples of sites within all major topographic and physiographic zones. The plan, which



of unprotected areas, thus expediting potential development.

While I think the contributions of federally sponsored archeology have been tremendous, a few shortcomings should be noted. With few exceptions, Federal projects impose artificial boundaries to the research universe. That is, a researcher is given a specific area and then must decide what to do with it. Many projects are preservation and assessment oriented, thereby discouraging any further research. The bottom line of many projects is compliance achieved in the most expeditious manner. Agencies want sites defined and to be the focus of research, not the inter-site space necessary for generating some concepts of settlement. Too often, red tape and compliance procedures detract from the research. Projects are often rushed, inadequately researched with insufficient time and funds for analysis. The burgeoning of projects has resulted in archeologists directing and supervising projects with limited field experience themselves. The salvage mentality has persisted and many projects have tended to be overly parochial in their scopes and views. Lacking regional research designs, the question of redundancy arises. How many lithic scatters in rights-of-ways do we need to record and collect?

Finally, the inaccessibility of many contract reports and their variations in quality hinder use of the potential database. In this area I think the Tennessee Valley Authority is to be commended for the publication of most of their major projects.

In conclusion, archeology in Tennessee essentially has been Federal archeology. Modern archeology in the State was born and nurtured in the federally sponsored reservoir salvage work of the 1930s and the early 1940s. Federal legislation over the last 20 years has stimulated an unprecedented revival in archeological activity, an archeological second coming, if you will. The result has been the generation of enormous amounts of data pertaining to the Native American occupation of the region. The scale of work has been beyond that which could ever have been performed by the private sector. The early and continued use of academic institutions in the performance of most of the contract work has permitted the integration of the methodologies and interpretations into an intellectual milieu, and insured continued input to the discipline. In the end we must acknowledge that there has been both good and bad work done; but, considering the losses if there had been no work, one must conclude that the impact of Federal archeology has been positive and its contributions enormous.

# THE CONTRIBUTIONS OF THE FEDERAL ARCHEOLOGY PROGRAM TO SOUTHEASTERN PREHISTORY: A PROBLEM-ORIENTED PERSPECTIVE

Bruce D. Smith

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*The contribution of Federal archeology to southeastern prehistory is considered in terms of three specific research questions, these being the shift to increased sedentism, the initial shift to food producing economies, and the emergence of Mississippian ranked societies. For each of these major periods of cultural change, Federal archeology programs are found to have provided an overwhelming amount of the available relevant data, and to be making a critically important contribution to the discipline.*

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The contributions of Federal archeology programs to our growing understanding of southeastern prehistory can be viewed and measured in a variety of ways. Other chapters in this volume have impressively detailed the changing level of Federal involvement in southeastern archeology over the past two decades in terms of funding levels, number of submitted reports, and the quality and contribution of specific Federal projects.

In this chapter I would like to briefly consider Federal archeology and its impact on our knowledge of southeastern prehistory in yet another way: within the context of specific research questions or problem areas. A wide variety of such specific and narrowly focused research questions crosscut the three dimensional framework of geographical and cultural-temporal categories of research interest in southeastern archeology. Forming a broad front of inquiry, this rich and complex array of specific research questions shapes and focuses the discipline. Year by year the relative degree of progress or success that is attained within each of those research problem domains defines the rate and direction of advancement of southeastern archeology. If progress in illuminating the archeological record of the Southeast is considered from

this problem orientation perspective, as differential advancement within specific research question segments of an overall front of archeological inquiry, then the contributions of the Federal archeology program in the region can be reasonably assessed within the context of those different research questions.

Rather than attempting to assess the impact of Federal archeological programs within every one of those research problem areas, I will instead focus on only three research question segments of the broad front of southeastern archeology. Those three research problems comprise an appropriate case study or test case for establishing the contribution of Federal archeology in the Southeast in two important respects. First, because of their importance in southeastern prehistory: they each involve periods of major and dramatic cultural change or transition in the prehistoric Southeast. Second, because of their recent illumination: each has witnessed considerable and ever-increasing advancement in understanding over the past two decades. Each of those three research questions will be briefly considered, and the degree to which Federal archeology has contributed to their recent illumination will be measured.

## **The Initial Shift to Increased Sedentism (7000-5700 B.P.)**

Archeologically, the short-term camps of Early Holocene and initial Middle Holocene southeastern hunter-gatherer groups that followed a strategy of residential mobility appear as thin lenses of lithic debitage, short life span expedient tools, a limited number of longer life span tools, and few site features or items of "site furniture." Hearths and associated activity areas are often present, along with occasional pit features. Such short-term occupational episodes have been documented all across the Southeast. They contrast dramatically with the earliest archeological evidence of a reduction in residential mobility and the appearance of deep, organically rich localized midden deposits. This indicates that the occupying group was

spending more time in a single location and investing more energy in the site location in the form of pits, clay floors, site furniture and structures. Reflecting an adjustment by human populations to changing river valley environments and the localized resource enrichment of riverine corridors, this initial shift to increased sedentism occurs during the Middle Holocene from around 7000 to 5700 B.P. across a broad geographical region of the eastern United States (Smith 1986).

Evidence for this 7000 to 5700 B.P. formation of intensive midden deposits in interior river valley settings west of the Appalachian Wall and north of the Gulf Coastal Plain was first recovered along the middle Tennessee River during WPA excavation of the Mulberry Creek site in the Pickwick Basin (Webb and DeJarnette 1942). Subsequent excavation of the Eva site further downstream provided a solid radiocarbon age determination of 7150 B.P. for the lowest stratum of midden (Lewis and Lewis 1961). More recently, excavations at the Koster Site (Brown and Vierra 1983) and the Carrier Mills Site (Jefferies and Butler 1982) in Illinois and other sites along the middle Duck River in Tennessee (Hofman 1983; Turner 1982) and the upper Tombigbee River in Mississippi (Ensor and Studer 1983; Galm 1983; Atkinson et al. 1980; Atkinson 1974; Blakeman 1975) have shown a consistent temporal pattern of midden formation between 7000 and 5700 B.P.

Looking at the available archeological database, those sites that have yielded evidence for this initial shift to increased sedentism (i.e., Carrier Mills, Mulberry Creek, Ervin, Hayes, Walnut, Ilx, Kellogg Village, Kellogg Mound, and Vaughn Site) were all Federal archeology projects. Only Eva and the Koster Site do not fall under the general label of Federal archeology. Thus, archeological evidence for this initial transition to a more sedentary way of life along the interior river valleys of the Southeast and Midwest is almost exclusively the result of Federal archeology programs. Without the information obtained through the excavation of those sites, this major phase of cultural transformation would be largely undocumented.

#### **Initial Shift to Food Production Economies (2500-1700 B.P.)**

As a result of cultural resource protection legislation and the development of flotation recovery methods, the magnitude and quality of the archeological database of the prehistoric Eastern Woodlands of North America has increased dramatically over the past decade.

One of the most interesting and most important broad scale developmental patterns to emerge from this rapidly expanding database involves the dramatic increase in the representation of the seeds of a variety of indigenous cultivated plants in archacobotanical assemblages across the Midwest and Southeast between 2500 and 1700 B.P. (Smith 1985a). Reflecting an initial transition to economies having a far greater reliance on food production, this increasingly important role for cultivated plants has been documented in west-central Alabama in the Gainesville Lake area (Caddell 1981); northeast Alabama at Russell Cave (Smith 1985a); eastern Tennessee at Tellico (Chapman and Shea 1981); central Tennessee at Normandy (Crites 1985); central Kentucky at Salts Cave (Gardner 1987); eastern Kentucky at the Cloudsplitter site (Cowan 1984); central Ohio at Ash Cave (Smith 1985b), Murphy, and Newark (Wymer 1986); southwestern Illinois at the American Bottom (Johannessen 1984); west-central Illinois in the Lower Illinois Valley (Asch and Asch 1983); northeastern Missouri at Old Monroe (Pulliam 1986); and northwestern Arkansas at the Bluff Dweller sites (Fritz 1986).

Of those major data sources that have illuminated the timing and the nature of this initial intensification of prehistoric food production in the East, the following fall under the general label of Federal archeology: Gainesville, Tellico, Normandy, American Bottom, Lower Illinois Valley, and Old Monroe. In addition, Salts Cave and Russell Cave are located on Federal land. The recent re-analysis of the Ash Cave materials also was carried out with Federal funds, leaving only the Ozark Bluff Dweller sites and the Cloudsplitter site in eastern Kentucky without a close and strong tie with Federal archeology programs. As is the case with the initial shift to increased sedentism, Federal archeology programs have provided almost all of the data currently available regarding the initial shift to a greater reliance on seed crops and food production. Without Federal archeology programs and the excavation of sites on Federal land this significant cultural transition in the prehistoric Eastern Woodlands would be barely represented in the archacobotanical record.

#### **The Mississippian Emergence**

During a three century span from A.D. 800 to 1100, a remarkable and rapid retooling of cultural systems occurred over a broad area of the Midwest and Southeast, representing the initial emergence of centralized, ranked societies based on maize-centered field agriculture. Although many aspects of this Mississippian emergence are still inadequately



understood, considerable new information has recently become available as a result of the excavation of a substantial number of settlements dating from A.D. 800 to 1100.

In Mississippi and Arkansas, the Lake George (Williams and Brain 1983), Toltec (Rolinson 1982) and Zebree (Morse and Morse 1980) sites date to this period of Mississippian emergence. In Missouri and Illinois, the Hoccake (Williams 1974), Shell Lake (Price and Price 1984) and the American Bottom (Kelly et al. 1984) sites dated to this period. Other sites dating to this period including the Banks III (Faulkner and McCollough 1974) and Martin Farm (Schroedl et al. 1985) sites in Tennessee, Ocmulgee (Fairbanks 1956) and Cemochechobee (Schnell et al. 1981) in Georgia, and other sites in west-central Alabama (Welch in press).

Of the sites listed above, which constitute almost the entire available database for approaching an understanding of the Mississippian emergence, the following qualify for inclusion under the Federal archeology banner: Zebree, Hoccake, Shell Lake, Range, Banks III, Martin Farm, Ocmulgee and Cemochechobee. Of the remaining sites, the Toltec project is State funded. Much of the west-central Alabama research of sites of this time period has been federally funded, leaving only the Lake George site in Mississippi without a public archeology connection. Once again, without the

information resulting from Federal archeology programs, this period of major cultural change in the East would be literally undocumented and unknown.

### **Conclusions**

In order to assess, from a problem-oriented perspective, the contributions of Federal archeology programs to our understanding of southeastern prehistory, three research question segments of the overall front of archeological inquiry were briefly considered, and the Federal role was scrutinized. Each of these three research questions addresses major transition points in the trajectory of cultural evolution in the Southeast, and each has witnessed considerable recent advances in understanding.

In all three research question case studies or test cases, Federal archeology programs were found to have provided an overwhelming amount of the available relevant data. Thus, if archeological progress in the Southeast is viewed from the perspective of those three research questions that are important and have witnessed considerable recent illumination, it is impossible to avoid the conclusion that the Federal archeology program is making a massive and critically important contribution to the advancing front of archeological inquiry in the Southeast.

## FEDERAL ARCHEOLOGY IN THE SOUTHEAST: PRACTICE, PRODUCT, AND PROMISE

Christopher S. Peebles

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*Federal funds which flowed into the Southeast after 1966, in response to the provisions of the National Historic Preservation Act, have been deployed by agencies, universities, and archeologists in the several states in very different ways. The roots of these differences can be traced for the most part to organizations and archeological research traditions that were constituted during the first period of major Federal involvement in the region, in the Great Depression of the 1930s. It would seem that not only the remote, prehistoric past but the more recent, bureaucratic past exerts a strong influence on contemporary archeological problems and practices throughout the Southeast.*

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Both astronomers and historians collect ancient signals into compelling theories about distance and composition. The astronomer's position is the historian's date; his velocity is our sequence; orbits are like durations; perturbations are analogous to causality. The astronomer and the historian both deal with past events perceived in the present. Here the parallels diverge, for the astronomer's future events are physical and recurrent ones, while the historian's are human and unpredictable ones (Kubler 1962:20).

There are two sets of signals reverberating within the confines of this symposium. One comprises the history of archeology in the Southeast, especially the activities of the last fifty and the last twenty years. It focuses on the role of the Federal Government in the region, but it does so in the context of archeological research and conservation. The other encompasses the evidence for the past in the Southeast, the "real" past that extends backward from today to a point some twelve thousand

years ago. It is the combination of the two, the reasoning archeologist and the contemporary evidence for the past, that produce the ever changing prehistory of the Southeast.

A major theme of several of the papers in this symposium, and a major premise of this paper, is that much of the style and substance of southeastern archeology can be understood in terms of the common factors that define southeastern archeologists as a group. When viewed from afar, they may seem to be fragmented into a series of overlapping schools, but underneath the surface rancor there is a common ethos and a common set of values that bind southeastern archeologists together. Furthermore, it is apparent that many of these factors have been present for almost 50 years, since the beginning of major Federal involvement in the archeology of the region. A secondary but equally important theme is that the differences among institutions and state programs, as well as differing archeological research priorities, can be explained by some of these same considerations. A major causative role can be assigned to individuals and events that were part of archeology in the 1930s and that are with us today in the 1980s.

In part, this diversity is a direct result of the underlying prehistory: the archeological record of the Carolina Coastal Plain is very different from that of the Green River Valley of Kentucky. Yet even when prehistoric space-time systematics are taken into account, there remain major differences among the archeological programs in the several southeastern states. Much of this residual variability can be explained by sampling error (intellectual "drift") and state "politics": by reference to variation among state institutions, by consideration of activities of political elites, and in terms of the archeologists who practiced their craft and who held power over research in each state.

Federal support for archeology in the Southeast amplified both the common themes and the stately variations. The first epoch of major Federal support in the mid-1930s brought a score of archeologists to the region. Some, such as James Ford, Joffre Coe and David DeJarnette, were natives of the states in which they worked. Others, such as Charles Fairbanks,

Gordon Willey and A. R. Kelley, came from outside the Southeast. By and large all of these men received their archeological training in the North and West, and many of them learned field techniques from Fay-Cooper Cole and the University of Chicago field school. Through their acts, alliances, and antagonisms, and as a result of the fact that they began their careers in the midst of the Great Depression, they established the "shape" of the discipline in the region.

World War II halted most archeological work, and when the archeologists of the 1930s returned from the conflict they turned to the analysis and publication of the collections they had made a decade earlier. Major new research programs were instituted only in the late 1950s and early 1960s, after the publication of such volumes as *Archaeology of the Florida Gulf Coast* (Willey 1949), *Hiwassee Island* (Lewis and Kneberg 1946), *An Archaeological Survey of Northern Georgia* (Wauchope 1966), and above all *Archaeology of Eastern United States* (Griffin 1952).

Many of the archeological projects begun in the 1960s, such as those sponsored by the National Park Service and Tennessee Valley Authority in the Tellico Reservoir of eastern Tennessee, were tied directly to newly enacted environmental legislation; others, such as Coe's "Historic Cherokee Project" in western North Carolina, were funded by the recently established anthropological program in the National Science Foundation; yet others were supported by newly constituted state archeological surveys and divisions of historic preservation, notably those in Arkansas, Florida and South Carolina. Since the 1960s, State appropriations and Federal funds have combined to support more than ten times the original number of archeologists in the region. The current generation has amplified and enriched the basic themes laid down in the 1930s. They have established their own research priorities and programs and, through graduate programs established in the 1960s, they have trained some of the next generation of southeastern archeologists.

The archeologists of the 1930s left a three-fold, substantial legacy to the current generation. First, their concern with cultural-historical questions produced a broad temporal order for the prehistoric "cultures" of the Southeast. The notions of Archaic, Woodland and Mississippian, their temporal order, their material content, and their broad adaptive significance came directly from work of this era. Despite recent untutored assertions to the contrary, these archeologists began a tradition of "problem-directed" research in the region. Second, their explicit concerns with management of archeological fieldwork, laboratory analysis and, ultimately, curation of the collections were

responsible directly for the quality and quantity of archeological data available for study today. They realized that there was a strong connection between the organization of archeological research and the production of information about the past. Third, they and their federal sponsors placed great emphasis on the timely descriptive publication of the results of their fieldwork. The monthly reports, descriptive site reports, and catalogs of their collections have provided contemporary archeologists with relatively easy access to the substance of the research of the 1930s.

There is, in fact, a fourth, somewhat more ephemeral (but nonetheless important) legacy left to our generation by those southeastern archeologists of the Great Depression: a sense of community. They were generally a cooperative lot, despite their individual goals, personalities and animosities. With few exceptions--and here Dellinger and the Arkansas program come to mind immediately (see Lyon 1982: 251)--individuals and programs freely shared substantive data, cultural-historical insights, and innovations in the management of archeological research. From conferences in Birmingham, Alabama, and Indianapolis, Indiana, to the Ceramic Repository in Ann Arbor, Michigan, to the first meetings of the Southeastern Archeological Conference, archeologists traded information and knowledge, excavation techniques and management plans. Some individuals did attempt to protect their bureaucratic turf: Major Webb and his role as TVA consultant is one example (Lyon 1982: Chapter IV, VI, VIII). Others, such as A. R. Kelly and his Georgia archeological survey, held tight to their scholarly territory (Lyon 1982: Chapter VII). Nonetheless, DeJarnette, Coe, Webb, Lewis, Kneberg, Griffin, Ford, Willey, and others freely shared what they knew, both in meetings and through the mail. They were persons caught up in the Great Depression who, like much of the rest of the population:

. . . moved to community-oriented values simply because so many were in need. . . . People became much less willing to "go it alone" with no thought of the consequences for others. They became less selfish and more compassionate (McElvaine 1984: 338).

Americans in the 1930s may not have known much about ideology, but they knew what they liked--and what they did not like. Their rejection of greed, egoism, and the unfettered marketplace led them toward values through which they could "remoralize" the American

economy and society (McElvaine 1982:223).

It is perhaps remarkable the extent to which a cooperative atmosphere and a sense of community continues to be a major part of archeology in the Southeast.

When federally sponsored research during the period 1966 to 1986 is considered state by state, it is clear that much of the success of the several programs is predicated on three factors. First, the extent to which strong foundations were laid in a particular state in the 1930s enhances the probability that there are one or more productive programs in that state in the 1980s. Second, the extent to which research programs of the 1980s incorporate contemporary archeological problems, methods, and theories, enhances their ability to gain recognition, attract good students and colleagues, and obtain funds from a greater variety of sources. Third, regardless of their historic sources, the bureaucratic and regulatory structures built in the last 20 years are crucial factors to the success of preservation and research programs in each state today. In brief, institutions, individuals, systematic collections, and research traditions constitute the "assets" of the various archeological programs in the Southeast, and this intellectual "capital," to the extent that it is used productively, explains much of the success of archeological programs in the southeastern states today.

The deployment of these assets over the last two decades shows the intimate relationship between the magnitude of available information and the production of knowledge. If it is granted that the search for solutions to particular problems animates archeological research, then a direct association can be perceived between theory, method, and technique on the one hand, and quantity of archeological data available for study (either that newly excavated or that curated in museum collections) on the other. Furthermore, there is a necessary connection between access to archeological data and the production of knowledge. Analytical and narrative prehistory, in their explanatory and discursive roles, depend on the interplay of theory and data. The former gives meaning to the latter; the latter can demolish the former. Thus, there is immediate relevance to a major theme addressed by many of the papers in this symposium: How much information and how much knowledge has been bought with the Federal archeological dollar?

Berle Clay, who has a deep and intimate knowledge of Kentucky archeology, argues that funds spent for historic preservation in Kentucky have not produced major advances in the knowledge of the prehistory of that state. He points out that the failure to produce

even a rudimentary culture-history for the State can be attributed, at least in part, to traditions of archeological research that have their roots in the 1930s.

The largest component of this tradition is the legacy left by Major Webb, and it can be judged both albatross and asset. Webb established neither an enduring research tradition nor a cultural-historical framework for Kentucky prehistory. Although his excavations were masterpieces of organization, his conceptual organization was *ad hoc* at best. He and his site supervisors published detailed descriptions of many of the sites they excavated, but they limited their efforts to those sites that fitted Webb's research interests. His interests, in turn, seem limited by his training as an engineer. He liked sites with clear stratification in which unambiguously defined projectile point types lined up from top to bottom: i.e., an archeological record with a clear elemental and geometric structure.

On the positive side, Webb did leave a meticulously documented set of collections but, until recently (see Milner and Smith 1986), these have proved to be more of a liability than an asset to those who have conserved them. Despite a wealth of descriptive publications, a synthesis of Kentucky prehistory was not produced immediately after the War for *Archaeology of Eastern United States*. In fact, the first broad synthesis of Kentucky prehistory was not published until 1967 (Schwartz 1967). As a consequence, when the tempo of applied archeological work increased after the passage of the National Historic Preservation Act in 1966, there was neither an adequate organization nor a conceptual framework to deal with the challenge.

Instead, as Clay argues, tensions were created between applied and academic archeologists and programs. Additional information piled up, but additional knowledge was not created at a rate equal to the dollars spent and data collected. Only recently has there been some semblance of integration of the State archeological program with the teaching, research and curation programs of the universities in Kentucky. Perhaps the most tangible evidence of this change has been the State Historic Preservation Plan commissioned by the Kentucky Heritage Council in 1986. One of the major components of this state-wide plan is the identification of short-term and long-term research problems in Kentucky prehistory.

Alabama and Tennessee (states in which Major Webb played a substantial role in the 1930s) provide major contrasts to the course of research in Kentucky. In both states, there has been an unbroken, progressive and productive research tradition for more than 50 years. In part, this success can be attributed to the efforts of

individual archeologists who began as field supervisors in the 1930s, survived local politics and global conflict in the 1940s, and re-established university-based research programs in the 1950s. David DeJarnette in Alabama and Tom Lewis and Madeline Kneberg in Tennessee spent much of their early careers working with Major Webb and the Tennessee Valley Authority. Under their leadership, the programs and collections of the McClung Museum at the University of Tennessee and the Alabama Museum of Natural History at the University of Alabama served as the nucleus for research within their respective universities. They wrote major cultural-historical summaries for their states (DeJarnette 1952; Kneberg 1952; Whiteford 1952) and these provided the foundations for all subsequent research. As funding from the Tennessee Valley Authority and the U. S. Army Corps of Engineers increased in the 1970s, and as survey, mitigation, and preservation projects were begun in response to regulations that stemmed from the National Historic Preservation Act, both states had research organizations and personnel equal to the task.

These two states are perhaps the best examples of the equation between the deployment of resources, access to information, and the construction of knowledge about the prehistoric past. In both the McClung Museum and the Alabama Museum of Natural History (and associated Office of Archaeological Research and Mound State Monument), collections and their documentation have been conserved and are accessible today. A number of dissertations have been based on those collections (e.g., Walthall 1973, Peebles 1974, Sheldon 1974, Dyc 1980, Steponaitis 1983, and Powell 1985 in Alabama; Hatch 1976 in Tennessee); yet other dissertations have been based on current research that built upon the earlier research in those states (e.g., Bozeman 1982, Scarry 1986, and Welch 1986 in Alabama; Chapman 1975a, Bogan 1980, and Cridelbaugh 1984 in Tennessee). The University of Tennessee and the University of Alabama, with support from the Tennessee Valley Authority, the U. S. Army Corps of Engineers, and the National Park Service, among others, have produced detailed reports of their investigation: Chapman (this volume) gives a bibliography of these reports for work in the Tellico, Normandy, and other reservoirs in Tennessee. Knight (this volume) chooses projects from Alabama--from the Tennessee-Tombigbee Waterway project, among others--that also have produced major technical narratives and analytical reports.

In both Alabama and Tennessee, the success of the university programs has tended to overshadow the role of the State Historic Preservation Officer and the state-wide program of conservation. Survey and

planning grants for archeological site inventories have gone either toward regions where numerous archeological sites are under immediate threat or to areas that hold some promise for contemporary research problems. In effect, management at the state level has been subordinated to academic research programs. For the most part, this is not a vicious inversion of priorities, but it does have the potential for great conflict in the future. It also biases the kinds of information that are gathered, which may, in the future, affect the production of knowledge. Orphan cultural-historical periods, which in Alabama include the later Middle Woodland (whatsoever that might be), are neglected and thus ride with the tides of entropy.

In North Carolina, the radical separation of management from research programs assumed epic and potentially destructive proportions. Professor Joffre Coe both established and maintained a premier academic archeological research program in the Southeast. The University of North Carolina had the first and, for many years, the only doctoral program in anthropology in the region. The Research Laboratories of Anthropology at the University, established by Coe in the 1930s, was the repository of the State archeological tradition. It held the collections and the site files produced by Coe and his students from the 1930s onwards and it was the home for the Cherokee Project that began in 1965.

It took the wisdom of Solomon and the patience of Job to extract and integrate the information held by the Research Laboratories into the management and preservation planning process for the State of North Carolina. Mathis alludes to the problems that beset the establishment of the North Carolina preservation program: few large Federal projects, few funds for survey and planning, an unprecedented industrial and population growth, and no corporate archeological heritage and database. Yet the largest problem was to create *de novo* a management tradition that could coexist with a distinguished research tradition. One of the crucial factors in the final transformation and integration was provided by some of the students trained by Coe at North Carolina. They had mastered the elements of this exceptional research tradition, taken their training to work in other settings and states that emphasized applied as well as academic archeology, and then returned, either in body or in spirit, to work in North Carolina. In fact, it would be fair to observe that field and analytical skills learned from Coe were exported to Tennessee and honed on the Tellico Project, transferred to Washington State and tempered at Marmes, eventually diffused to several Regional Offices of the National Park Service and integrated into "scopes of work," and then re-imported

to North Carolina where they smoothed the way for acceptance of the programs of the North Carolina Division of Archives and History.

The course of the Florida programs was much like that of North Carolina. The archeological tradition was based at the University of Florida in the person of John Goggin and at Florida State University under Hale G. Smith. The Depression Era work in the State came early, under the CWA and Smithsonian (Lyon 1982: Chapter III), but did not continue after 1934. The work on the west coast was described after the war by Willey (1949), and John Goggin wrote a brilliant dissertation on the culture-history of the State: *Culture and Geography in Florida Prehistory* (Goggin 1948). Yet this dissertation was never published, and much of the knowledge of the prehistory of the State, plus the Florida site file, which Goggin had assembled over two decades, resided in his mind and in his Laboratory at the University of Florida.

Thus, in 1965, when the Internal Improvement Fund of the State of Florida hired an archeologist and began a program within the Division of Archives, History, and Records Management, the intellectual assets and archeological tradition were housed in two universities and two professors: Charles Fairbanks, who upon the death of John Goggin had replaced him at the University of Florida, and Hale Smith at Florida State. Gradually, the University of Florida Site File was transferred to the State to form the nucleus of their site management database.

Since that time, much of the effort of the Archives staff has been devoted to archeological survey and inventory projects. The greater part of this work has been on Federal lands, which comprise 4.5 million acres in the State, but a significant part has been on State lands and on private lands which required survey under various laws and regulations. Florida maintains one of the first and most comprehensive computerized site databases (equal to those at Arizona and Arkansas), and their management of preservation activities is firmly in hand. Unfortunately, almost all of their substantive projects are unpublished; consequently, the knowledge to information ratio falls heavily on the data rather than the knowledge side of the equation. Little of their work was included either in *Florida Archaeology* (Milanich and Fairbanks 1980), the published work in historic archeology by Kathleen Deagan (1983), or in a score of dissertations directed by Fairbanks, Deagan, Milanich, and William Sears. Given this impressive corpus of survey data, the time ought to be ripe for the production and publication of a state preservation plan. Yet one does not seem to be on the horizon. The knowledge provided by research, which sets the

conceptual context for preservation priorities, has not been deployed fully in Florida. This apparent dilemma perhaps can be resolved through a closer working relationship among the several academic institutions and the State program in Florida.

Programs in Arkansas and South Carolina effectively have integrated academic and management concerns from their inception. Each state had bits and pieces of an archeological tradition stretching back into the 19th century, but neither had to contend with the coercive (and creative) forces of a Depression Era tradition. The organizations that resulted were unique, at least in the Eastern United States. The Arkansas Archaeological Survey has been a leader in the construction of management tools for archeological research and historic preservation. They have survey offices and archeologists attached to universities throughout the State. They have constructed computerized database management systems that rival those of major corporations, and they support a fieldwork program that is balanced between pure and applied research. In South Carolina, the Institute of Archaeology and Anthropology is embedded firmly in the teaching and research program of the University of South Carolina as well as being an integral part of the state preservation bureaucracy. The Institute and the Department of Anthropology have combined to teach regional culture-history, archeological methods and the management of archeological research as part of a unified graduate curriculum.

Both the Survey in Arkansas and the Institute in South Carolina maintain active publication series. As Hester Davis points out in her article (this volume), one can use "publication as a criterion for assessing the impact of federally supported archaeological work." By this criterion, works like *The Cache River Survey* (Schiffer and House 1975) and the DELOS working papers (Limp and Parker 1983) from Arkansas and *Laurens-Anderson: An Archaeological Study of the Inter-Riverine Piedmont* (Goodyear et al. 1979), each of which has had nationwide impact, show the importance of this measure. In effect, both South Carolina and Arkansas are getting a fair return in knowledge and information for the funds they expend. Unfortunately, both organizations depend on university and state administrative budgets (as well as Federal appropriations) for funding, so the current deficit-reduction axes can cut twice as deep and twice as often.

Georgia is the enigma in this symposium. The State office furnished neither a representative nor a paper, so the Departmental Consulting Archeologist, Bennie Keel, had to provide coverage. His predominantly Federal perspective does include much recent research

in the State, but it does not encompass the management structures and preservation activities that are beyond direct Federal supervision. Like other southeastern states, Georgia has a rich archeological tradition but, like that in Kentucky, the research of the past has been a millstone for the present generation. In the 1930s, Wauchope was discouraged from writing up the northwest Georgia survey (Lyon 1982:188). Much to his credit, he stuck with it after the war, and it appeared in 1966. Analysis and publication of federally funded excavations of the 1950s and 1960s, begun under the direction of A. R. Kelly and Joseph Caldwell, have consumed much of the careers of younger scholars, especially David Hally at the University of Georgia. Whatever energy remained was expended in the Wallace Reservoir salvage projects. Yet Georgia archeologists have been playing a game of "catch-up" for almost four decades.

During Governor Jimmy Carter's administration, archeology was given a voice in historic preservation planning, but in large measure prehistoric sites still are submerged in the politics of the Battle of Atlanta, ante-bellum mansions, and Sherman's March to the Sea. Many major recent projects in Georgia--The Richard B. Russell Reservoir, (shared in part with South Carolina) and King's Bay Naval Base for example--were funded with Federal dollars and managed by Federal archeologists but involved out-of-state firms and institutions. Moreover, the superb publication series that came out of the Russell project was issued from the Southeastern Regional Office of the National Park Service under the editorship of the late Victor Carbone. Georgia thus still must gain full control over both their database and the production of knowledge about the prehistoric past.

From this synecdochical survey of the states, two final sets of distinctions can be made and used to illuminate the practice of archeology in the Southeast. The first paired opposition is due to the philosopher Gilbert Ryle. In his book *The Concept of Mind*, Ryle (1949) makes the distinction between "knowing how" and "knowing that." The second can be subsumed under the rubrics of "science" and "scientific truth" versus "engineering" and utilitarian or "pragmatic truth."

According to Ryle, an individual's grasp of particular bits of knowledge comprise "knowing that." For example, calling to mind that David Brubeck is a mid-20th century jazz musician is an example of "knowing that." Playing a saxophone like Jerry Mulligan, however, is definitely a case of "knowing how." Having at one's fingertips the fact that the Mississippian in the Southeast generally postdates A. D. 900 is a case of "knowing that." The research

skills that it took to produce that bit of knowledge, however--from directing the excavation to interpreting radiocarbon dates--comes under "knowing how." Among the archeologists of the 1930s, both facts and methods--the "that" and the "how"--were equally important.

Yet after the war, these two intellectual faculties were separated in practice. The profession came to be divided into field archeologists and academic archeologists (some of whom went into the field). Many institutions and employers looked for individuals who had the data firmly in hand but who themselves could not produce new categories of data. With the exception of one or two institutions, most notably North Carolina, advances in "knowing how" took place outside the Southeast and outside day-to-day archeological research. Conceptual and analytical innovations were made and taught at places like Michigan, Harvard, Chicago, and Arizona. Many of the archeologists whose skills in "knowing how" were responsible for "knowing that" did not participate directly in the training of the next generation of southeastern archeologists. In effect, there was a second era of "carpetbag archeology" which ran from roughly 1950 to 1970. There were cases where individuals who were trained outside the region were re-educated by one or more of the makers of modern southeastern archeology when they came south to do their field work. In the main, however, there was a major disjunction between two approaches and two generations of archeologists in the Southeast. Only now is there a rapprochement between those generations. It comes through a third generation trained, for the most part, in the Southeast by professors who themselves were trained elsewhere. Thus, at one level, theory and practice, "knowing how" and "knowing that" again are used and taught at the same place.

The second opposed pair--science versus engineering--again center on the notions of theory and practice. Among the archeologists of the 1930s, both practical and scientific knowledge were valued for the contributions they could make. To borrow an observation from Alan Simpson, President Emeritus of Vassar, these archeologists valued both philosophers and plumbers, because they knew "...that the products of both had to hold water." Yet, in the spatial and generational disjunction between the teaching of theory and actual practice, either the practical or the theoretical came to be devalued in the curriculum. In some places career advancement was predicated on how much and how many sites one dug; in other places theoretical formulations, even those without foundations in a world of data, were valued above excavation, curation, and clear, descriptive publications.

These distinctions which today have been translated into applied or "contract" archeology versus scientific or "theoretical" archeology, can be sharpened a bit and then dissolved, not with a direct discussion of archeological method and theory, but with the imagination of James Joyce. His message (and metaphor) is as relevant today as it was when written, in the early 20th century, and it applies to archeologists as well as to artists.

In *A Portrait of the Artist as a Young Man*, Stephen Dedalus, the artist, enters the office of the Dean of Studies of his college. The Jesuit crouches before the fireplace, lighting his morning fire. Stephen dutifully offers his help:

The priest looked up quickly and said:  
 -- One moment now, Mr. Dedalus, and you will see. There is an art in lighting a fire. We have the liberal arts and we have the useful arts. This is one of the useful arts. (Joyce 1964:185)

Then, as today, the products of the practical, useful arts were measured by their utility; and then, as today, the products of the liberal arts were measured by how close they came to the concepts of truth, beauty, and goodness. For present purposes, any consideration of aesthetics and ethics as well as transcendental truth must be set aside. Thus, pruned engineering and science remain.

Among many of the early southeastern archeologists--those of the 1930s--both engineering and science were valued, and both pragmatic utility and scientific truth were interwoven in their research. Sites were selected for excavation and sites were abandoned based on pragmatic judgments about how much information they would yield. A particular site might be chosen for investigation based on how many men might be employed in its excavation and because local politicians would react favorably to the call for workmen. Good field management methods were not chosen for their truth value but for their efficacy and their efficiency in producing data. There were no debates about the truth of these political and social realities but, instead, about how the next payroll would be met and whether or not individuals with a police record for petty theft should be employed in the laboratory to sort artifacts. The choices were entirely pragmatic. They were based on the methods that saved the greatest amount of information and at the same time embraced adequate scientific criteria for turning these data into knowledge.

These same archeologists did pay attention to the combinations of statements and concepts woven into arguments and narratives about the past and judged them to be "true" or "false" in the scientific sense. In sum, both the liberal and the useful arts were valued and employed, each in its proper place. If today some archeologists see pottery typology as either a mundane tool or an established set of more-or-less useful categories to be learned by rote, it does not mean that in the 1930s the construction of such categories were seen as devoid of historical and theoretical content. Conversely, because James Ford adopted a pragmatic approach to the sorting of sherds into similar piles, and thereby created categories (types) on the basis of shared similarities among the sherds in each pile, does not mean that the contemporary, set-theoretic approaches of Rouse, Dunnell, and Krause are devoid of practical application and pragmatic utility.

The separation of theory and practice in the recent history of southeastern archeology, is mirrored by a devaluation (or overvaluation) of the sciences or of engineering in the profession as a whole. Among some Americanist archeologists it is argued strongly that if a technique is not rooted firmly in theory it is useless; others say that schemes for maximizing site preservation in the absence of clear theoretical reason for doing so is stupid and foolish. Yet others say that the preoccupation with theory is ridiculous, because theories do not dig sites. Thus, there has been a radical separation not only between pragmatic and scientific judgment but between applied (engineering) and theoretical (scientific) archeology. In the Southeast, when all else fails, and there is need to vanquish verbally an opponent in a discussion, there is always "carpetbagger" versus "native archeology." Despite the differences among archeologists, the avowed goals of the profession are to conserve the evidence of the past: Collingwood's "past encapsulated in the present." To the extent that theories define what constitutes evidence for the past, and to the extent that they provide methods to assay this evidence, they are important. To the extent that management practices preserve these data, they too are important. The entire cycle then is a recursion among theories, data, and management of research and preservation activities. Without the presence of all three factors, any combination of two or any one alone is impotent.

Like the generation gap, the rift between applied and scientific approaches to archeology is mending. Both the liberal and the practical arts are important in the practice of prehistory. As the gap between theory and practice narrows, and as there is rapprochement among



the several lineages that comprise the clan, Southeastern archeologists can get about the business (with the aid of a few Federal dollars) of extending our knowledge of the region. Lest, however, it is forgotten that pragmatic judgments are as complex and more slippery than scientific judgments, I want to end by returning to Dublin in the early 20th century: to Stephen Dedalus and the Jesuit,

This fire before us, said the dean, will be pleasing to the eye. Will it therefore be beautiful?

Stephen replies:

In so far as it is apprehended by the sight, which I suppose means here esthetic intellection, it will be beautiful. But Aquinas also says *Bonum est in quod tendit appetitus*. In so far as it satisfies the animal craving for warmth fire is good. In hell however, it is an evil. (Joyce 1964:186)

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