

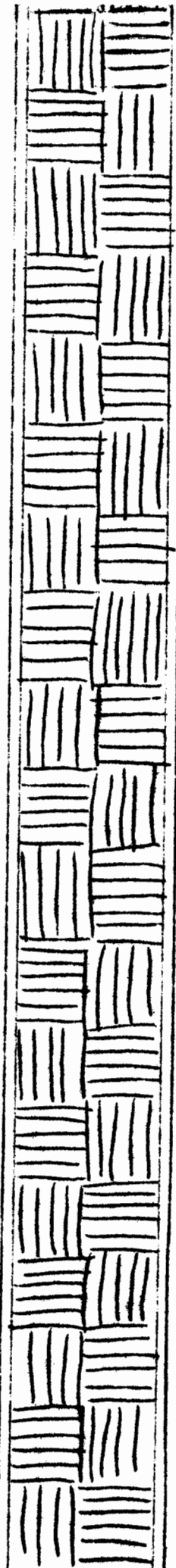
SOUTHEASTERN
ARCHAEOLOGICAL
CONFERENCE

1th
NEWSLETTER

Vol. VI

CHAPEL HILL

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FOREWARD

For the first time in its twenty-two year history the proceedings of the Southeastern Archaeological Conference were recorded on tape for the edification and, perhaps, the amusement of posterity. A complete transcript was made of the Friday sessions, and it has been faithfully reproduced in this Newsletter. Each speaker was given the opportunity of editing his contribution, with the request that he change only obvious errors made in transcribing rather than re-write for the sake of grammar and style. It was hoped that some of the spirit of these informal talks and discussions could be recorded for the benefit of all who are interested in this subject. In a few instances comments were deleted for the purpose of this publication at the request of some speakers. Most of those comments, however, referred to slides and had little value without them.

I would like to express my thanks to the various members of the conference for their cooperation in making this a successful program, and to Miss Carolyn Corbin and John Pierczynski for their assistance in recording, transcribing, and assembling this record of the proceedings.

Joffre L. Coe, Chairman
15th Southeastern Archaeological Conference

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THE 15th SOUTHEASTERN ARCHAEOLOGICAL CONFERENCE

University of North Carolina

Chapel Hill

Morning Session, December 5, 1958

COE: We are a few minutes late and there are a few announcements I should make, in case there is some confusion about lunch. The tickets are for the purpose of informing the chef the number of people to expect and what entre they desire. They also requested that we collect in advance. The lunch will be in the Rathskellar--some of you have been there before and those of you who haven't can follow those that are leading.

This is the 15th meeting of this conference which was organized 22 years ago, and I am very glad to see that there are still four of us here today who attended the first Southeastern Archaeological Conference in that most logical of places, Ann Arbor, Michigan.

Professor Godfrey, who is our distinguished Dean of Faculty, is here to say a few words of welcome. I might add that besides being Dean of the Faculty, he is also the most popular man on campus. A fact which certainly has not been diminished by virtue of his being chairman of the Administrative Committee on allocation of space. Dean Godfrey.

GODFREY: Professor Coe, Ladies and Gentlemen--Amidst the distractions of a fire which is still going on, or raging, about 300 or 400 yards from here, we are none the less quite happy to have you on this campus and present at this annual meeting of your association. All universities during the course of a year have many groups that come and stay for awhile. We have groups of all sorts, but we reserve our warmest welcome for a visit of persons like you because we feel a very close kinship with you and with the sort of work that you are doing. And the University is very proud to have you on this weekend. While you are here we hope that you will personally be quite comfortable and that your meetings will give you the pleasure and stimulation that I am certain you anticipate from them. It would be an infringement upon your good nature and your time for me to say more than this, but let me add one word. If there is any way, during your stay, in which the University can be of any service to you in making your stay a pleasanter one for you or in helping you in any way with any of the facilities that are our command, I hope that you will not have the slightest hesitancy in letting us know. It seems that we can promise you the beautiful weekend that all of you were justified in expecting. The University is most happy to have you. Now I imagine I had better go--I am intrigued by the symbols on the board but the business manager is busy calling Raleigh, insurance

companies, and one thing or another, so I had better be at hand. There's a bit of warmth on the other side of the campus also. Thank you.

COE: This morning's session is to be conducted by Mr. DeJarnette, who is well known to all of you. We seem to be missing at least one of the speakers, but I trust that others will be available to take his place.

DEJARNETTE: I am sorry the dean left. I wanted to make a comment about that fire because as we looked out the window this morning, we thought this was part of a homecoming celebration for us. I think you could have capitalized on that, Joffre, if you hadn't told us it was accidental. Well as I have figured it out, we have five papers this morning, and we now have about 100 minutes. So that means 20 minutes a paper, and would actually include the discussion. Some may be a little longer, some may be shorter, but I think that we should get into it now since we are about 20 minutes late. The first paper is:

Archaeology in the National Survey of Historic Sites and Buildings by John Griffin.

JOHN GRIFFIN: I'm going to try to make this a model of brevity this morning and maybe set a pattern for the rest. Actually, I want to just acquaint you, briefly, with one or two programs which are being undertaken; to ask your help; and then in conclusion, to point out one or two ways in which we could possibly help some of you. In 1935, Congress passed the Historic Sites Act. This is the second most important act relating to the Park Service after the actual founding, and one which has had important effects on archaeology in the Federal government. A portion of that act directs the Secretary of the Interior to "make a survey of historic and archaeological sites, buildings, and objects for the purpose of determining which possess exceptional value as commemorating or illustrating the history of the United States." That portion of the act is, incidentally, the authority under which all of the river basin funds are appropriated to the park service for the various salvage jobs. So, it does have important archaeological implications. Another program which was undertaken under the act is 1937 and which collapsed at the advent of World War II, was the Historic Sites Survey as it was called then, now called the National Survey of Historic Sites and Buildings. In 1957 Congress appropriated funds to re-activate that program, and it has been picking up momentum. The primary objective is to come up with a carefully evaluated list of sites and buildings of national significance, having exceptional value. To do this the whole range of American pre-history and history has been divided into 21 themes, of which five are anthropological. Now I will just briefly state those. Theme 1: Pre-Historic Hunters and Gatherers. This is roughly equivalent to Paleo-Indian and Archaic. Theme 2: Early Indian Farmers. In this area this would most closely equate with Early Woodland. Theme 3: Indian Villages and Communities, which obviously includes most of our well known lower southeastern sites, both Middle Woodland and Mississippian. And they skip into history

then and we come up again in theme 8 with, Contact with the Indians, covering the period between first contact and the first permanent or lasting settlement within the same area by non-Indian groups. And then way off in Theme 16, Indigenous People and Cultures, which are existing communities with, relatively speaking, little acculturation, and most examples of this would be in the southwest. These themes are broad and we could quibble technically on the lines separating them but it is a framework in which to operate. And it is not a complete archaeological survey, I should stress that immediately. It is very selective, only a few, a handful of sites deemed of outstanding importance would be finally listed. The sites, archaeological sites, should be ones which have produced information of major scientific importance by revealing new cultures or by shedding light upon periods of occupation over large areas of the United States. Such sites are those which have produced or which may reasonably be expected to produce data that have affected theories, concepts, and ideas to a major degree. Now to do this thing, first of all a narrative statement of a theme is written. A historian will take a theme like westward expansion. In archaeology, we are having to do it a little differently. We hope to contract some of the theme statements out to well qualified professionals outside the service. For others we will rough up regionally statements for the five regions of the park service and some poor sucker in Washington is going to have to try to pull them together. That will be Will Logan, I believe. The purpose of that statement is to be a guide to evaluate sites against each other. And then we inventory sites which we think are of outstanding significance. Those are screened and they go to the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments, which is the group outside the service which will pass on them. The archaeological profession is represented on that board at present by Dr. Edward B. Danson, Jr. He replaced Joe Brew just this past year. Now one thing, as we go around the country asking you people for aid, I think it can not be stressed too strongly, is that designation of a site as being of exceptional value does not mean that the Federal Government is going to seek ownership of it. We run into this all the time. We look at a site and immediately we start getting letters from congressmen coming in to Washington wanting to establish it as an area. We may already have sites representing that theme or sites may be taken care of by states or private institutions which represent it. But the list will serve as a sort of a check list which will also stimulate, we hope, state agencies to preserve some of the areas, and develop them. There is a special committee to advise us on this specific thing and the two archaeologists on that committee are Joe Brew and Fred Johnson. Now where those of you come into this is that obviously whoever is working up this listing and inventory is going to have to rely very heavily on the good judgment of the various professionals working in the areas. We cannot do it sitting in an office somewhere with meager literature. So that you will be hearing, as time passes, from us. We hope next fiscal year to have an archaeologist in each region specifically doing this job. Right now the regional archaeologists are taking it on as a sort of an extra duty and the monthly reports from all 5 regions are now reading, "nothing was accomplished on the archaeological portion of the survey this month". But we will be getting into it pretty soon. Now, I have another request. I wish that everyone in this room would consider himself a member of an informal committee of dam watchers. This is a complicated thing for us. There are 15 Corp of Engineers offices in this Region. I try to call

on every one of them at least once a year. But even then things sneak up and for some reason the Corp of Engineers in Washington either do not have, or prefer that we work through the district offices, any listing of what is going to be built. And what happens sometimes, it has happened twice in Kentucky in the last year, the dam is already under construction before we know about it. Now the stuff does appear in your local newspapers and if you see an item that they are getting ready to start building a dam, I might know about it, but still I would appreciate it if that got tucked in an envelope and sent in, so that we could check up on it and see if we are able to do anything about it. Then the private dams and reservoirs present even more of a problem. And there is one in which you can help particularly, and those are the power company dams. The Federal Power Commission is very cooperative these days and will write into licenses stipulation on the granting of the license, that archaeological survey and excavation be undertaken at the expense of the power company doing the work. Art Kelly has one in the Oliver Reservoir right now, which was written in. The problem is, just like highway salvage, we have to have some estimate of money to put into the Federal Power Commission at the very outset of the thing. They will pass over to the Secretary of the Interior a statement that such and such a power company is contemplating building such and such a dam--are there any objections for recreational and various reasons. If we are equipped to say, yes, there are a lot of sites in that reservoir, you should spend \$10,000 in archaeological research, they will write that right into the license and argue it out with the power companies so they will do it. But what it means is that someone more or less on the scene has to give us a spot judgment of whether there is anything in the area, and how much. And also these licenses generally stipulate that the power company will get in touch with the University or museum or whatever agency happens to be within the state involved to work out their arrangements. Too often that is the last we ever hear of it. We do not know whether they do. We do not know, unless we read it in the American Antiquity, whether any work has been done. So just a little note on that would help us out, because it also helps then to present it, to the Federal Power Commission and say, "see, this work has actually been done", and then they are happier about the squabbles that they have to go through to convince the power companies that they should spend money in this way. So the closer touch we can keep on that I think the better it will be for all of us. In some states we have no museum, university, or other agency which can undertake archaeological work. In those instances the power company licenses give the discretion to the Secretary of the Interior as to who will carry out the work. Sometimes this means the overburdened Smithsonian gets stuck with it, but it would also be a help to me if I knew whether some of your institutions were available for work outside their own states, because there is a very good possibility that an institution from a neighboring state could do the work. And those are some of the things that the Federal Government is participating in in archaeology right now, and the closer touch we can keep on it why the more we can get done in all this salvage work. Thank you.

DEJARNETTE: Thanks John. Do you dam-watchers have any questions? Well, we will move along to the next paper:
North Carolina's Historic Sites Program by William S. Tarlton.

TARLTON: Mr. Chairman, I am particularly glad to be here today. It is the first meeting of this conference that I have been able to attend, although I have wanted to for several years.

I am also glad to be out of Raleigh today. We have every year during the first week of December what we call "Culture Week" and I must say it takes a lot of stamina and endurance to go through it. Actually, it is a great outpouring of productive, fruitful energy in the general field of cultural and historical activity--a very fine thing. That name "Culture Week" was applied many years ago in derision but pretty soon the people in the movement embraced it and it is now the accepted and acceptable name for the annual gathering of historical and literary organizations in Raleigh.

Yesterday we had the Antiquities Society meeting. We had the announcement of a gift of \$8,000 for a small historical restoration project in which we are interested. Perhaps that will give you an indication of the practical benefits that sometimes come from these organizations.

I would like to go into a sort of general discussion of our North Carolina Historic Sites Program. The basic purpose of a good historic sites program for North Carolina, as we have conceived it, is the conservation and development of historic and archaeological properties for public use. This purpose is the same as that which underlies federal and state park programs, fish and wildlife protection, and most other conservation programs. Selected properties that have significant historical or archaeological importance are acquired by purchase or donation, then they are restored, protected, and improved for the educational and inspirational use and for the sheer enjoyment of the people in North Carolina and the visitors.

In developing these properties, we try to make full use of regular professional methods and scholarship. But the end achievement is designed primarily for the general public, not just the professionals. Constant efforts are made to avoid narrowly, antiquarian, and specialized viewpoints that have little meaning and are sometimes actually repugnant to the general run of intelligent people. Taking the authentic substance of history or of archaeology or of whatever other pertinent discipline we may need, insisting always on authenticity in every substantive matter, we apply to it the lessons of public interest and need, as well as old fashion showmanship, in an effort to create an effective means of introducing all the people in North Carolina to a consciousness and appreciation of their past.

In some instances we may have the opportunity to add to the store of knowledge through basic research and through collections of primary historical, archaeological, and other materials. When we have these opportunities we try to take advantage of them. This is not, however, our fundamental purpose, but it is an important incidental one. Now this may be something that you gentlemen would argue with us about.

Since we attempt in this way to orient our sites program to what we conceive to be in the best interest of the general public we need to select properties with this factor firmly in mind. We want, therefore, a

comprehensive and balanced program, not a narrow one. We do not want just one kind of site. We want mansions, small farmsteads, battlefields, town-sites, palaces, covered bridges, Indian villages, forts, and country schools--we could extend the list almost indefinitely. We also want the projects spread about geographically, not concentrated in one or two of the most acclaimed "old" and "historic" parts of the state. Among our ideal aims is that of having well done restorations or site developments within easy access of every part of the state. We want the projects also to represent more than one or two topical interests. We want them to illustrate economic, architectural, social, military, political, and other major fields.

We are not merely a society for the preservation of antiquities. We should be as much interested in preserving one of the last covered bridges of just 50 years ago as we are in preserving one of the last log cabins in Buncombe County, dating from the 1780's. Or, if we had to make a choice, we should be as ready to preserve an Indian village of the 1800's as one of the 1500's, which incidentally we are doing at Town Creek Indian Mound.

Much valuable work is done toward preserving our heritage, of course, by historical sentimentalists and romantics, those who will save the quaint little house in Perquimano County built in 1692 or 1703, just because it is old. But it is our business as planners and developers of a public historic sites program to avoid merely sentimental considerations and view our choices and selections with a coldly realistic eye. What we are after is not merely the old, the romantic, or the unique, but a realistic balanced and constructive state-wide program.

At the present time the North Carolina program consists of 10 projects administered directly by state agencies (six of them by the Department of Archives and History which I represent); two others which are state owned but which are operated by local organizations under contract with the department and under the department's general supervision; and six more which are locally owned and operated but which receive state grants in aid and technical advisory assistance. In other words a total of 16 projects. Besides these, there are many additional local undertakings which the department aids by means of advisory assistance of one sort or another.

The Department of Archives and History also acts as a clearing house of sorts for a great deal of local and private sites activity. This enables us to foster productive relations with local groups and these relations are sometimes lead to the very great advantage of the state program especially at times when we are asking for appropriations. And this relationship also enables us to influence much local restoration work toward better standards.

Money of course makes the mare go. In this respect we are not yet notably well off in our program. This is largely because the program is still new, in its present form, dating from 1955 when the commission for the re-organization of state government put through certain new measures which set up a different type of program organization. And the program does not yet have a strong and altogether accepted position among the regular enterprises of the state government. Year by year, however, our

appropriations are increasing. The people of North Carolina are getting excited about historical restorations. We have come a long way in public interest since Governor Cameron Morrison 25 years ago was able to say, apparently with a clear conscience, that North Carolina had not a single historic site worth preserving.

The inadequacy of appropriations has been primarily in the field of capital improvements. We have done a great deal better in getting funds for regular operating expenses--for personnel, maintenance, and upkeep. For the 1957-59 Biennial we have a total of about \$300,000 from state funds for the entire state effort. From private sources and from county and city appropriations, we have had a total of some \$65,000 in addition for several specified projects. From private funds there has been unlimited money for one restoration, the Tryon Palace restoration, which has cost \$3,000,000 and is just now being completed. The state has thus far put only about \$300,000 into this great project.

In the overall program the possibilities of state, local, and private cooperation and finance are very important. We really think that is an important point, and we are doing all we can to realize these possibilities.

Properties that are acquired for the state program must measure up to criteria that were explicitly defined some years ago and adopted to guide the program. Properties should possess state-wide or national significance, of course, not merely local. This is the most important criterion on all and it usually rules in acquisitions. This requirement means of course that sites should be connected with important segments of North Carolina history and that they should bear significant relationship to other projects in the overall program. In acquisitions preference is usually given where original structures or other physical remains are present. Properties should also conform to reasonable requirements of financing, maintenance, and accessibility. Preference is given where local or private financial assistance is offered and where accessibility and freedom from undesirable encroachment by industrial development are present. Properties should have adequate boundaries for protection of historical or archaeological values.

We, of course, took these statements pretty largely from a set of criteria got up years ago by National Park Service and by the National Trust for Historic Preservation. Application of these standards to selection of sites has resulted in a state-wide selection of historic sites and structures which we feel is representative of the entire span of our history and which is well distributed geographically. Our projects are scattered over the entire state from the sea coast to the mountains, they represent periods from early colonial history all the way down to the 20th century. They represent aboriginal Indians, military, political, educational, village, and agricultural aspects of North Carolina history. Several of them in addition, illustrate the importance of individual great men or events.

Through these acquisitions, and more to come, an ambitious program has been outlined. The chief need at present is to fill it out by the proper

development of the individual projects. This calls especially for capital improvements, the restoration of historic structures, the construction of museum buildings, and for other public use facilities. We need right now a half million dollars to make real progress. When these needs are met it is felt that North Carolina's historic sites program will emerge as one of the better state programs--from the standpoint of selectivity, scope, geographical distribution, and general appeal.

Following his talk Mr. Tarlton and Stanley A. South showed a number of color slides illustrating the North Carolina program.

DEJARNETTE: Want to thank both of you. Do we have any discussion on either or both parts of this paper? The third paper: Lithic Survivals and Innovations Pre-Ceramic to Ceramic Times, Robert Wauchope.

This paper and the discussion thereof is not being reproduced at the request of the author since it is in the process of being revised.

DEJARNETTE: We have about 25 minutes left before 12. Joffre suggested we take a break. I do not know, it is just up to you. Do you feel that you need a break now or....I think we could go on now. Number 4 is not here, Witthoft is not here, so we would skip that and we go down to the number 5 paper. This is: Transition on the Gulf Coast by Bill Sears.

SEARS: Thank you Dave....get green stamps with my potsherds....takes careful excavation techniques to find these things in an unstratified site.... I think I may tend toward the informal side too. My comments are mostly designed to indicate my utter fascination with a fact that I discovered recently which some wiser heads than mine have known for years. That is, it is very very difficult to tell the difference between a lot of Tchefuncte potsherds and a lot of St. Johns' potsherds. If it wasn't for the fact that one was called Tchefuncte and clay-tempered and the other was called St. Johns' and chalky and there was some space in between them, you could not tell them apart. To illustrate the point this is a box of potsherds. Ford does not know I have the Tchefuncte potsherds yet but they are genuine Ford potsherds...The real point is this indistinguishability in some ways between the plain and decorated ware in Florida, the Orange Series, which is fiber-tempered, the Tchefuncte material, excluding some decoration too, and the St. Johns' material, Orange (or Stallings,) in some cases, fiber-tempered with the fiber taken out. Well, this is all very nice,....would be very handy if they were all close together and in the right spot. The difficulty is that Tchefuncte is the first pottery out in its area as the fiber-tempered pottery is over to the east. This of course establishes a problem. The directions in which I have been thinking are these. We have along the gulf coast a Late Archaic level which is certainly characterized by a majority, at most sites, of a family of projectile point types. The Gary Stemmed, Savannah River Indented Stemmed which overlaps with it and other things. They are good size projectile points with stems

of one kind or another. They seem to show up in the majority....in the fiber-tempered ware at Stallings Island, and in the pre-pottery levels in Georgia. It is the majority sort of projectile point in Florida, pre and post fiber-tempered. As far as I could tell, from the appropriate battle-ship diagrams, they seem to be an important type at Poverty Point, Jaketown, and the Tchefuncte Site. This implies at least some possible continuity.... some degree of culture relationship across that whole area before any pottery comes in. Now, we know certainly in Georgia and in Florida that-- more or less contemporaneously--fiber-tempered pottery is added to this complex. I do not know either what else happens. It is just there. And it goes through a development with decoration added to it at a later time. Some fiber-tempered material is shown up at about, I presume, the level of introduction of the clay-tempered pottery in the Mississippi Valley sites including the Tchefuncte Site, Jaketown has it well down toward the bottom, Poverty Point site....

WILLIAMS: How is that again, Bill?

SEARS: That you get some fiber-tempered pottery in the Mississippi Valley. When it does show up, it is at or just before your clay-tempered pottery in that area. I am making these statements very general, if you wish to add or subtract a thousand years it would not bother me at all. This, of course, could indicate that the pottery in those areas was at the general fiber-tempered time level. I would prefer to think, and here you have to work backwards, that the reverse happened; that this fiber-tempered is getting there at the end of the fiber-tempered period in the Tennessee Valley, in the valley of the Savannah River, and in Florida. That is that your clay-tempered pottery, the Tchefuncte series, the clay-tempered pottery of the Tchula period comes in at about the same time that this chalky ware does over in Florida. You cannot establish that precisely any way I know now. The only way you can really do it is to work backwards. Assume that there is some general time level which can be called Hopewellian, which can be demonstrated at some spots and work backwards down into Deptford, back into Orange, down into Marksville and back to Tchefuncte. You come out that way, I think demonstrating that this is at least highly possible. The puzzling thing about Tchefuncte is that not only did it spring full grown out of the ground, apparently in that area, but that it did have decoration which in some considerable part could be drawn from the Orange Series, from the Stallings Series, and I think in some part from the Wheeler Series in the Tennessee Basin, some punctated ware. This is also complicated further by the fact, of course, that the decorated pottery that shows up up the Mississippi Valley is the Tennessee type of material, and not the Stallings or the Orange Series. It is further complicated by the fact that I cannot figure any real way to relate closely the Archaic of the Tennessee area, Tennessee Valley area, to that of the coast. There is some overlap but there is certainly more difference between the Tennessee Valley and the coast than there is between any particular 2 units along the coast that you might want to pick. However, some contemporaneity does seem possible, of this introduction of clay-tempered pottery with the very tag-end with fiber-tempered pottery. I would suggest then, that by some mechanism which I do not even pretend to understand....the statement of a problem perhaps rather

than anything else....that the Tchefuncte culture is drawing from styles and traditions that have been established in fiber-tempered times, earlier and elsewhere. That implies transmission of styles along the gulf coastal plain, certainly, and quite probably also down through the Tennessee Valley down the Mississippi. The major difficulty with this is not enough fiber-tempered pottery along the coastal plain to act as a transmitting agent. None-the-less, I find it very, very difficult to believe that this Tchefuncte incised pottery which is wandering around and the Orange Incised pottery, and the St. Johns' incised pottery are independent developments. There has to be relationship....I can see in a preceeding level some possibility of this. This is important, I think, because as you look at the gulf coastal plain now, this Tchefuncte culture which does not cover very much of an area, seems to be the center of development for most of our decoration traditions....pottery decoration traditions in the gulf. That also goes too for basic tradition of vessel shape along the coastal plain. And if Tchefuncte just sprang out of the ground and was sitting there all by itself, it seems like an awful little bit of culture to have been the center of origin of everybody else's decorated pottery all the way back over to the St. Johns' finally, and up the Mississippi River for some unknown distance. I would feel considerably easier about it if I just look at it as a center where things have been going on all along and then focalized for awhile. This culture stayed in contact with its relatives and things simply spread back through long, long established channels of communication, culture relationship, whatever you may wish to call them. Another puzzler is the fact that apparently at about the same time you get a vessel form, a fall jar, beaker tradition, little flaring rims with tetrapod bases which shows up in Tchefuncte and seems to have its origin there as far as the Mississippi Valley is concerned but also shows up as the Deptford vessel shape at the same time. I thought once I was quite sure that Deptford had a direct origin right out of Stallings Island. Since I still have not seen all these Refuge site potsherds I do not know about that anymore....but when Deptford is Deptford in any event, it has a different temper tradition from the Tchefuncte and certainly it is the starting point for the whole series of complicated stamp decorations. These two hit each other, these two traditions, at somewhere near the right time level, somewhere around Bruce Trickey's lower back yard. Deptford has a little trouble doing very well in the area but certainly early Swift Creek and the Marksville or early Troyville material collide rather violently at the mouth of the Mobile Bay. And it looks almost to me as if Deptford somehow--as it spread out from wherever Deptford spread--broke into this old continuity. That looks fine from decoration and temper but does not look fine for this vessel shape at all. Who thunk up the vessel shape....was it Tchefuncte and they gave it to Deptford and if so why, or the reverse, or both, or neither. I do not know. But you do begin to get then the development of the major coastal plain decorations coming back and impinging and mingling with the complicated stampers out of Deptford, certainly coming back from the west out of this Tchefuncte material and then on into Marksville, which seems to act as the source for immediate developments. As I pointed out, this is very largely a matter of problems, contact between Tchefuncte and these decorations which had their origin in the fiber-tempered ware. I do not know. Regarding Tchefuncte and Deptofrd relationships....there obviously is one....again, it is very difficult to assume that two cultures, separated now by a few miles, developed tetrapods and a rather similar vessel shape,

independently at about the same time level. I cannot quite swallow that one as is. One more problem, just to make Bruce happy, is what the devil the Bayou la Batre material, which shares some elements of both, is doing down in the Mobile Bay area, between the two of them. I do not know the answer to that either. I think it is probably important. It has some stylistic affinities with Deptford; it has some stylistic affinities with Tchefuncte. I think that it has something to do with the answers to these problems. Right now I do not know what the contribution is. I hope that leaves all of you as thoroughly confused as I am with the transition on the coastal plain. It is given you something to worry about; I welcome you to my club because that is all I have. Thank you.

DEJARNETTE: Thank you Bill. Steve, I saw you shaking your head violently over there. Do you have a comment?

WILLIAMS: Well, a couple of things....Say, one thing....Phillips has been looking over this....one thing that bothered me, you keep talking about Marksville as if it were a period really existed....this is three sites, do not forget that, don't forget that....three sites....

SEARS: Well, I know it really exists because I saw it in the marked boxes labeled by Jim Ford himself....they were all sitting there in a row....

WILLIAMS: Actually, the period is three sites, I think there is a lot of slippage in there after Tchefuncte and whatever we want to call this Issaquena stuff....

SEARS: You get that if you look at Fords diagrams actually, Tchefuncte sits down here and there is not anything to develop into Marksville.

GRIFFIN: That is right.

SEARS: But none-the-less the continuities and decorations and vessel shape are there.

GRIFFIN: What are the continuities in decoration, etc. between Marksville and Tchefuncte. This has always puzzled me.

SEARS: The tradition of incised decoration and the rocker stamping are about all I can point to plus the vessel shapes which I perhaps regard more highly than some other people do. I do not quite see how you can take an average plain Tchefuncte vessel and sort it from an average plain Marksville or even Troyville vessel except on some esoteric business of the feel.

GRIFFIN: Yea, there seems to be continuity in the plain ware but I am not so sure about the decorative ware.

SEARS: There is certainly no clear continuity in this stuff except that this is where the incised stuff comes in and the incised ware goes on after the Tchefuncte and Marksville is supposed to carry it on. You would have to assume a continuity out of Tchefuncte for this or have your incised ware come in some other way from somewhere else. It would not bother me at all.

GRIFFIN: At the moment I think that is the best explanation that the Marksville....stamped and zone decoration comes in from somewhere....

SEARS: Well, I expected that you would....

GRIFFIN: At the moment!

SEARS: Yea.

WILLIAMS: Well if you have only got three sites that are what we would really like to call strictly Marksville, I mean it looks very much like the situation of a small group coming in. I mean....when people talk about the Marksville period everybody automatically thinks it is a big cultural entity there....when it is not.

SEARS: Well is not it also possible that you only have three sites because it is such a short time interval, you do not have much more?

NEITZEL: Part of that is the function of some of those mounds being destroyed....the material, if it is to be recovered it has to be re-excavated at the National Museum or some place.

WILLIAMS: We got one or two more, Stew, from up in the Yazoo now that I would stick in the really Marksville rather than in this Issaquena material.

NEITZEL: We realize they are hard to find, if you try to separate them and the Marksville site it would be pretty hard to do.

GRIFFIN: What is your feeling about the mounds which appear as an integral part of Tchefuncte but do not appear on the Gulf.

SEARS: They do?

GRIFFIN: Why certainly.

SEARS: Where?

GRIFFIN: Are not there Tchefuncte mounds down there with Tchefuncte pottery being pulled out of?

SEARS: There is one burial mound, as far as I can tell is Plaquemine.

GRIFFIN: Are not there any mounds in Tchefuncte?

NEITZEL: Yea, it almost has to be, except for shell heaps.

SEARS: What mounds are those?

GRIFFIN: Burial mounds.

SEARS: There is one burial mound that was published. That is the name of it?

NEITZEL: Some of this pottery came from there. That was over at Lafayette.

SEARS: Lafayette Mound....Yea, well that is the one which....

NEITZEL: There is now one....

SEARS: I looked at that one time and either that was built as a little Tchefuncte mound and left alone and then 2,000 years later some Plaquemine people added a final mound....the whole thing is Plaquemine....This bothers me some.

NEITZEL: I would like to put a note of confusion in here that I do not understand. You get a well defined decorative type I say well defined; it has been defined as Chinchuva Brush and then you never see it again and it becomes one of the marker types for all late pottery. And it occurs in Tchefuncte and it never occurs again until Plaquemine or later.

SEARS: Well, if you want to stay confused....

WILLIAMS: Well, Solomon Brush comes in around there....and it is working out on some pretty good site.

NEITZEL: Yea, but is still a heck of a gap.

DEJARNETTE: Bruce, would you want to comment on the reference to the Bayou La Batre?

TRICKEY: Well, Bayou La Batre as I see it, seems rather close in vessel shape to Tchefuncte in that it has the circular rings, pot shaped, this was in Steve Wiverly's collections, and the flower pot shape and of course there is really a lot more clay-tempering occurring in Mobile Bay I think than others have been aware of until fairly recently. And....now Bayou La Batre itself is heavily grit-tempered....But still there are on that time level quite a few indications it came from clay-tempered.

SEARS: You can actually find sherds with both large amounts of clay and large amounts of sand or one or the other in them. I think some of them we picked up down there along the shore had both in them and some had just one or the other.

GRIFFIN: You do not have mounds going along the coast that are associated with fiber-tempered material and etc., do you? Are there any good mounds associated with Deptford or are they about as rare as they are with Tchefuncte?

SEARS: The only Deptford mound I know about is one that Fairbanks is working in now which is very late Deptford along with early Swift Creek pottery that he has found up near Tallahassee.

WILLIAMS: How about the St. Johns'?

SEARS: I do not know if mounds can be shown to be down on the Deptford level in the....area.

WILLIAMS: I mean in the St. Johns'.

SEARS: I do not know of burial mounds down on that level. Oh, I see.

WILLIAMS: Oh, I think it is an interesting idea....one thing....on the board here....

WAUCHOPE: You can erase that, Steve.

WILLIAMS: I think it ties in pretty nicely, Bill, because....as far as distribution goes, Bill, this business about fiber-tempered, I think it really works out quite nicely because, (drawing) the Mississippi River like that, and say the Ohio here, and you have got the Tennessee Archaic up here and you were worrying about this connection between Tchefuncte and your St. Johns'....further over; one interesting thing about Tchula-Tchefuncte is that it does not go up the Mississippi at all. I think Bob Rands, when he gives his talk tomorrow about this Pearl River situation, is that the whole fiber-tempered thing stays over out of the Mississippi Valley. And so when you said you wanted to look up this way for connections coming down from this Tennessee Archaic, that certainly does not come down through the valley....

GRIFFIN: Yes it does.

WILLIAMS: Where?

GRIFFIN: It comes down through northeastern Mississippi.

WILLIAMS: I am talking about the Mississippi valley as a geographic not.... but what I mean is it stays out of the alluvial valley pretty much. You would agree to that, would you not?

GRIFFIN: Yea, it is only over on the east side of the alluvial valley close to the hills.

TRICKEY: It comes through to the Memphis area, does it not....Memphis and Sunflower.

GRIFFIN: No, it does not get up as far as Memphis, it is down south of there. It comes down from those streams coming from the northeast into the Mississippi basin there and hugs on the east side of the Mississippi Basin.

WILLIAMS: And we have got for instance, in our whole lower Yazoo survey we have got a couple hundred sites there, I guess, and we have got just that one good Tchula occupation there at Jaketown....and we have never been able to find it again. We have got some other Poverty Point material but we have never been able to find any really good Tchula anywhere in that whole area.

SEARS: Well, I think the same thing is probably true along the northwest coast. The only concentration of fiber-tempered stuff is Willey's survey is right around Alligator Harbour. I think that is just an accident of the survey. There must be more of it scattered along in there.

GRIFFIN: There is one Tchefuncte type you have left out that I have always been fond of....Mandeville Stamped, which is the dentate stamp coming down from the north, I think....

NEITZEL: There is a new one, Jimmy. The one that C. B. Moore lost....that was found....a potleg up on the Washetaw, way up in the interior. And I found one or two Tchefuncte sherds there....C. B. lost it somewhere along there....and there is a mound and a shell heap.

SEARS: Well there is one pot that is probably relevant....one of Moore's pots from one of those Hopewell mounds along the coast by Alligator Harbour. It looks and sounds in the illustration like the Tchefuncte Stamped....a little tetrapod with a row of very heavy rocker stamping running down it....without seeing the pot I would not be sure, but it certainly sounds like it from the description.

GRIFFIN: There is a steatite Deptford pot in the Heye Museum.

SEARS: I do not like steatite.

GRIFFIN: Steatite tetrapod in the Heye Museum from South Carolina.

DEJARNETTE: You mean tempered?

GRIFFIN: No, steatite pot with tetra pods in the Heye Museum from South Carolina.

DEJARNETTE: I think that we might finish up some of this discussion a little bit later. It is now 12 o'clock and that is our job as a moderator....that is the only thing that I can see I am supposed to do....to give it back to you at 12 o'clock, Joffre.

COE: Just one word about luncheon. The money collected from you this morning covers your meal, the tax, the tip, and coffee, or tea or whatever drink of that nature you have. Beer, wine and other trimmings you may order and pay as served.

Afternoon Session, December 5, 1958

The Wills Site: Poverty Point-Woodland Remains on the Pearl River, Mississippi by Robert Rands.

RANDS: In the past summer, a brief archaeological survey was made of the proposed Pearl River Reservoir area, north and west of Jackson, Mississippi. The work was conducted by the University of Mississippi, in collaboration with the Mississippi Department of Archives and History and the National Park Service. One result of the survey--and by all odds, the one of greatest archaeological significance--was the location and sampling of a small site in Hinds County, slightly to the south of the Reservoir area proper and just outside the city limits of Jackson. This occupation zone, the Wills site, derives its special significance from the sequence of cultural

remains, commencing with a Poverty Point-like assemblage, which has been recovered. Because of the obvious importance of the site, limited additional excavations were conducted during the fall. I was joined by Dr. William T. Sanders, of the Department of Sociology and Anthropology, The University of Mississippi, in the latter investigations.

The Pearl River flows in a southwesterly course, paralleling the drainage pattern of such tributaries of the Mississippi as the Big Black, before it shifts to a more directly southern path and empties into the Gulf of Mexico. The Wills site is not far, in actual distance, from the alluvial valley of the Mississippi, lying approximately 35 miles to the west of the Delta and some 65 miles, in a straight line, southeast of the well-known Poverty Point site of Jaketown. However, the environmental break between the Mississippi alluvial valley and the "hill" country through which the Pearl flows is a sharp one. This ecological contrast was paralleled by a pronounced cultural shift, at least during Mississippian times. Large populations at that period seem to have been largely confined to the alluvial valley, the occupation of such regions as the Pearl River Reservoir area being extremely sparse and, perhaps, characterized by a retention of certain earlier ceramic patterns. This cultural divergence along environmental lines, demonstrable for at least the late period, must be borne in mind when considering the earlier archaeological horizons.

The Wills site lies on slightly elevated land, to the north and west of the back waters of the Pearl. The ridge of higher ground runs approximately 100 meters east and west by 30 meters north and south, at an elevation of 2 to 4 meters above the swampland. Portions of the ridge are dissected by swampy troughs. Sterile white sand underlies the culture-bearing deposits which are thin, ranging from some 10 to 70 centimeters in maximum depth, including occasional carbon-stained pits sunk into otherwise sterile sand. A complex series of lenses antedates the earliest occupation, indicative of the flooding to which the ridge was subjected as it was built up.

The general thinness of the deposits and far from abundant yield of materials lessens the reliability of any definite conclusions which might be presented at this time. Up to now, 5 test pits have been made. In one of these, an occupation level was found to be completely devoid of pottery, but it contained 8 scattered Poverty Point objects of sufficient size for classification, plus a number of Poverty Point fragments. The same trend, suggesting the general priority of Poverty Point objects over pottery, was indicated in other excavations. However one fire pit, of the sort normally containing Poverty Point objects at the Wills site, revealed an amorphous Poverty Point-like object and pottery, suggesting the partial contemporaneity of these two classes of cultural materials at the Wills site.

Aside from various amorphous forms, some fragmentary but others complete, the principal type of Poverty Point object is the biconical plain. These are usually somewhat smaller than their better known counterparts at Poverty Point or Jaketown. In addition, biconical punched, biconical grooved, and, probably, cylindrical grooved types are present. Some of the objects are poorly fired and extremely friable. All tend to be of slightly sandier paste than the Classic Poverty Point--Jaketown examples.

Stone points of the general Gray Stemmed group, an abundance of flint chips, and fire-cracked stones occur in the Poverty Point levels. However, "microliths" of the sort reported at Jaketown are absent.

Overlapping stratigraphically with the Poverty Point objects, but tending to be slightly later, is pottery of a generally Tchefuncte-like character plus--of unusual abundance for so westerly a location--fiber-tempered pottery. A word about the "Tchefuncte-like" pottery first. It might be almost as well to call it "Tchula," but my impression is that it has closer ties in the direction of the Gulf Coast than with the geographically closer alluvial valley of the Mississippi. An emphasis on solid podal supports, some short and conical but others of considerable height, suggests Bayou La Batre as described by Wimberly for the Mobile Bay area, Alabama, and the pottery tends to be of sandier texture than that along the Mississippi. Jaketown Simple Stamped, Lake Borgne Incised, Withers Fabric Impressed, and probably Tammany Pinched sherds are represented, along with fair quantities of checked stamping that may have affiliations with the Bayou La Batre materials. The fiber tempered pottery is classifiable as, or relates to, Wheeler Plain and Bluff Creek (or Wheeler) Punctated.

Fiber tempered pottery shows a marked tendency to concentrate in early stratigraphic levels at the Wills site. I wish it were possible to indicate with greater precision its chronological position relative to Poverty Point objects and the Tchefuncte-Tchula materials. Pending further excavation, about all that I can report is the stratigraphic suggestion that the main popularity of fiber tempered pottery overlapped with or was slightly later than the major incidence of Poverty Point objects and slightly preceded the greatest concentration of Tchula-Tchefuncte-Bayou La Batre sherds. To exemplify, in Pit 2, excavated by 10-centimeter levels, fiber tempered pottery showed a dwindling percentage of 44% of the sherd count in Level 3, 13% in Level 2, and 4% in Level 1, whereas a variety of plain and decorated sand and clay tempered types, not including cord-marked, constituted 56% of the sherds in Level 3, 77% in Level 2, and 58% in Level 1. To round off this gross seriation, Mulberry-Creek Cord-Marked, absent in Level 3, accounted for 13% of the pottery in Level 2 and 36% in Level 1. Poverty Point objects, mostly fragmentary, had their maximum occurrence in Level 3 but also appeared in Levels 4 and 2. To give some idea of the sampling involved here, the total sherd count from the combined levels was 194. The trends are internally consistent in regard to the decline of fiber tempered pottery and the rise of the cord-marked, and the polar temporal positions of the fiber tempered and cord-marked classes, early and late, are clear-cut.

A few remains (Hardy Incised pottery and Natchez type projectile point) indicate a scanty later occupation, into Plaquemine times.

To summarize, the Wills site, although small and generally shallow, was occupied over a considerable time span and is of added interest for its cultural affiliations. Poverty Point remains appear in part to have been pre-pottery but also to have overlapped with early pottery. Fiber tempered pottery is unusually abundant for a site in the state of Mississippi and, together with the Bayou La Batre-like ceramics, suggests that

affiliations may have been especially strong to the east, rather than with the closely adjacent alluvial valley of the Mississippi. If so, a comparable situation may have existed to that in late times, which found important cultural differences correlating with the environmental break between the Mississippi Valley and the Mississippi hills. The large quantity of fiber tempered pottery, plus the occurrence of early sand and clay tempered types, should prove helpful in working out problems of chronological priority, although nothing absolutely clear cut has so far been established along this line. An increased sampling--i.e. more digging--is necessary. Needless to say, the generally early stratigraphic position of fiber tempering and late position of cord-marking will come as no surprise to Southeastern archaeologists, although up to now fiber tempering has not been reported so far west in such abundance as at the Wills site.

BYERS: Thank you Bob. You heard Mr. Rand's paper. I have not heard any knives being whetted. Does anyone want to jab an ice-pick into him or shall we put off the discussion until later. If there is no discussion, we will go on to Arthur Kelly's paper:

Early Woodland Site Profiles in the Middle Chattahoochee. Arthur Kelly.

KELLY: This will be a rather reportorial job on current work in the region around Columbus, Georgia, which I am calling the Middle Chattahoochee to distinguish it from the earlier work done in the river basin surveys in Allatoona, in Beauford Basin, and north and northeast Georgia, and to distinguish it from the earlier work still, which has been done in the Lower Chattahoochee with its junction with the Flint on the Florida-Georgia line. This part of the Chattahoochee is going to be of increasing interest because we have the promise of rather extensive river basin salvage work, with both the Smithsonian Institution and the University of Georgia working under grants or contract with the National Park Service beginning sometime after the New Year, 1958. We are, at the present moment, operating a small river basin study of the Georgia Power Company in the area just immediately above the Columbus Falls in the suburbs of Columbus, about a 10 mile stretch, which Edward McMichael is doing for us. Ed is finding new sites everyday which had escaped the earlier survey made by the Smithsonian. The Smithsonian survey was in addition to their big program of reconnaissance in the 90 mile stretch of the Walter F. George reservoir. We are surprised to find so many sites coming out in the Oliver Basin of the Columbus Falls within a relatively small geographic span of about 10 miles.

I am also reporting on some prior work which had been done under an Antiquity Act permit to enable the University to assist Sgt. Chase and others, as part of Army personnel at Fort Benning, to do what they could to salvage a great deal of site data that was being lost, some of it due to unqualified digging by residents of Columbus and elsewhere, some of it incident to a large amount of construction work. Here in this part of the southeast, everytime they go out with a scraper or a bulldozer they uncover valuable sites and we are doing what we can to reclaim as much as possible of that material before it is lost. So I will summarize largely in terms of sites, beginning with the Archaic period.

The Columbus Museum of Arts and Crafts has in its basement a well developed Archaeological Museum which tells a great deal about the sub-regional picture. Any of you who go to Columbus should visit it if you have not discovered this new institution which is contributing so much to southeastern archaeology. They have very numerous collections, largely from private individuals, exhibiting a very extensive collection of Archaic materials all along the Chattahoochee, all the way to the Florida line. Most of these materials come in--barrels of them from private individuals--representing just surface collections and most of these sites are eroded hilltops where material comes from multiple site occupations picked up very easily in large quantities but of course out of context. We are still, for the most part, not fortunate enough to find good Archaic situations under original context as Joffre Coe discovered in the Yadkin River. From the site of Bull Creek, which was explored to some extent during WPA days when I was at Macon (I had Gordon Willey there and one of my engineers) two very nice Clovis type projectiles have come. The majority of that site is a heavy occupation of Late Lamar of Mississippian times and the Paleo-Indian or Early Archaic levels have not been precisely identified. This site will probably be bulldozed before too long as a site of a marina by Mr. Woodruff, an industrialist, and I hope to make plans to get it excavated before it is destroyed. Many of the specimens which Bob Wauchope showed us this morning are duplicated in these thousands of projectile collections, which are at the Columbus Museum, coming from anywhere around the Columbus Falls area on down to the junction of the Flint and the Chattahoochee. We did find in the site at Halloca Creek, done under an Antiquity Act permit, in the lowest portions of the sandy hammocks there, about 30 inches down, what appeared to be a thin occupation of Early Archaic. There were a number of projectiles that came from there and I think probably if one had time and money to move through that hammock they would have been able to get a representative Archaic collection. The survey indications are that the Archaic is very rich and is widely scattered over the whole Middle Chattahoochee Valley.

I will move on to some of these more recent surveys which relate to the Early Woodland and which have given us some new data and enriched our ideas of the chronological materials which apparently helped to fill in the Early and the Early to Middle Woodland picture. A fiber-tempered pottery occurs quite widely over this whole middle Chattahoochee region. We have not yet found any particular site which shows a high concentration of fiber-tempered pottery but it occurs on a number of stratified sites and apparently in definite stratified context. There is some fiber-tempered pottery which came out of the site at Halloca, immediately above the thin representations of what might have been an Archaic level. And this fiber-tempered is of the plain, rather orangy looking color which under general survey indications indicates it is the earliest Woodland Horizon in the Middle Chattahoochee area. This plain variety, more or less in the Stallings tradition is never found with shell--the shell, if present, has been absorbed. And there are some indications in a number of the sites which have been tested that we have a later phase of the fiber-tempered Horizon which is decorated, which appears to be thinner, and exhibits either punctate or incised motifs.

I am going to pass on to a new manifestation which David Chase is

responsible for, having uncovered and identified it, and which I think we have now in sufficient site representation to determine its position in the Early Woodland. And we brought some of this pottery here and those of you who are working in adjacent areas I would like very much for you to see it and see if you think it can have any possible relationship to the Tchefuncte tradition. This is apparently a new pottery type which belongs very early in the Woodland horizon. The pottery is a plain, granular tempered ware, a strong fabric indication of Early Woodland affinities, which comes out in seeming succession to fiber-tempered pottery. No tetrapods have been found. The vessels are large, from 12 to 13 inches across the top. No other pottery associations noted except the suggestion of following upon a terminal fiber-tempered occupation.

Sgt. David Chase has reported the apparent association of a triangular projectile point with this plain, granular tempered ware (Upatoi Plain) which looks generally like the "Mississippian points" of the southeast. Eight of these were found in direct association with Upatoi Plain. They are very symmetrical, almost equilateral, and the sides are slightly concave. About the only other definite items of stone complex in this context uncovered so far are pebble hammers.

As I say, this site--the Beard Site, 9Mel4, has only been tested tentatively and we have not really done any extensive trenching. We have as yet no data in regard to the pits or burials, or house sites; a great deal of charcoal, chips, and cracked stone, which do indicate a definite occupation, and we have as yet not enough charcoal for Carbon 14 analysis. Now the close association of this Upatoid material with Stallings fiber-tempered sherds has raised a suspicion that it is a very early unit in the succession of Early Woodland in the Middle Chattahoochee. David Chase, who is here, thinks he sees some resemblance of this Upatoid material to Perico Island pottery in northwest Florida reported by Gordon Willey! Along with the Upatoid material we get a certain amount of a bluish chert which resembles the blue chert which is found in north Georgia and which Joe Caldwell called his Stamp Creek pre-pottery. It is a metamorphosed sedimentary material; it is not a flint of the so-called marine nodular origin. It was coming down the Chattahoochee and on the way to Florida. We need, obviously, more data on the Upatoi culture, and I mention it as something which appears to be a new element in the Middle Chattahoochee, belonging to the Early Woodland and closely associated, apparently coming right after, the earlier part of the fiber-tempered.

We find some Kellogg Fabric-Imprinted but scattered--no pure sites or sites which show a great deal of Kellogg Fabric-Marked. Here again, as you know, we found rather strong Kellogg sites in the Upper Chattahoochee and we have a definite indication here of this tradition coming down stream and working its way toward the coast.

Then we move on to the Deptford. In this context the Chattahoochee Valley appears to have both an early and what you might call a later or mature phase. The first is characterized by either plain or check-stamped pottery, usually sand tempered; some grit is known. The linear check is more frequent than the bold; it is quite shallow; it shows some resemblance, and it is a rather poor definition to the type of check stamp which Joe

Caldwell called Cartersville in north Georgia and Upper Chattahoochee. A plain pottery, presumably it would be Deptford Plain, is more common in this early phase. Some of the vessels are quite large, larger than I would have thought Deptford to be. There are elongates, semi-conoidal and they are frequently adorned with tetrapods. The rims flare sharply in some specimens and the lips are usually rounded. Many examples are fine, sand-tempered, relatively thin, strong, Woodland ware. The exterior surfaces are frequently eroded in the decorated ware. There is a tendency for over-all stamping all the way from the rim to the base.

One site reported by David Chase is Snelling Pond, 9Ce20, which would probably be a good type site for this earlier type of Deptford. The later or material phase of Deptford in the Middle Chattahoochee is marked by the appearance of two different types of simple stamp. The earlier may be that which is applied by a flat stick with a great deal of over stamping and the next and more common is the line stamped, first designated as Mossy Oak at the type site in Macon, surveyed by Gordon R. Willey. Much of the Mossy Oak variety is associated with Early Swift Creek Horizon at the Halloca Creek Site--similar situation found at the type site of Early Swift Creek at Macon where I initially reported Mossy Oak Simple Stamped in association with early Swift Creek. In those early days this caused some comment which does not seem to be so difficult to understand 20 years later. Of course, at the type site of the Mossy Oak Simple Stamped, we had apparently a pure site manifestation with no Swift Creek. The nearest thing to a pure site of this simple stamp, which has been found so far in the Chattahoochee, was found accidentally when they were scraping beside one of the roads in the entrance to Fort Benning there, and exposed a whole hillside which is dominantly Simple Stamped. David Chase had picked up a little surface material there, but we had no idea that the site was so rich and important and that it gives apparently somewhere upwards around 80 percent of Simple Stamped collections. This is a roadside cut within the military reservation, Lawson Field Site, where over 80 percent of the decorated sherds initially yielded a Mossy Oak context.

I want to mention briefly here, since there has been some talk about corded ware, that occurring in this later Deptford situation there appears to be a small minority of corded sherds, of corded ware. It occurs definitely in late Deptford provenience and seems to persist to some extent into early Swift Creek levels at Halloca. This cord-marked pottery has not been recognized in Georgia. It probably does extend into west-central Georgia, and we have not had the survey data to know about it. We suspect that it probably reflects something coming from the south or south-central Alabama region. It is a recognizable interesting minority.

Then we go to Swift Creek. This Halloca Creek Site is very interesting, and we are very glad to have it because it was the second early Swift Creek site to be recognized in 20 years of survey work in Georgia. It was reported by David Chase, when some members of Army personnel and local residents went out to make collections. We were able to get a permit enabling us to make a partial excavation and to get sufficient material in context to see what is represented. Undoubtedly, it is probably the largest and most important of these Early Woodland sites, most of which tend to be small. (This was true in 1958, but in the summer of 1959, we surveyed

the Mandeville Site, 9Clal, near Fort Gaines, Georgia, some 70 miles south). These early Swift Creek sites tend to occur on small or minor drainage well up from the main river.

At Halloca we did one stratigraphic test block of 20 foot square and a part of another which yielded enough material, with what we already had from some preliminary tests, to indicate a multiple occupation. There was a very weak Archaic at the base, a recognizable fiber-tempered horizon, then Early Swift Creek with a little bit of this Cord-Marked. On other parts of this site you have what appears to be a pure Deptford pit where one Deptford Plain vessel with tetrapods was uncovered. A number of pits came out on the Halloca Site from the Early Swift Creek levels. Mossy Oak Simple Stamped is shown to persist and to be merged with the Early Swift Creek at Halloca, and there is evidence to this same effect at the Lawson Field Site. The early pottery in this Swift Creek tradition is thin, sand-tempered, exhibiting various characteristics--curved and some linear elements of complicated stamps. Note overall stamping from rim to base. There are some rudimentary tetrapods. The pots are conoidal, deep, relatively straight-sided, with slightly flaring rims. Associated rarely are complicated stamps resembling--this is a very small minority--what Gordon Willey calls the Crooked River and the St. Andrews Complicated Stamped in the northwest Florida coast.

I must say that the Early Swift Creek sites so far in this area, the Middle Chattahoochee, show no Marksville or other materials such as characterize the Santa Rosa Swift Creek in Florida. This may have some significance as this condition was also true at the type site in Macon. It may mean that, as Gordon Willey suspected and suggested, it is quite possible that we have a tradition which may have developed somewhere in the general area between middle Georgia and Florida, which subsequently moves out and joins with the Marksville Gulf Coast influences coming up along the coast.

The Middle Swift Creek is represented by a site which is called Avarett. Here we found, just on the edge of the reservation, a motor court situation on which they had been bulldozing resulting in a crash emergency salvage program, a number of pits, 10 or 12. One or two of these evidently had some calcined bones, human, which may have been burial pits or at least human calcined remains may have been dropped into them. The pottery shows a stylistic trend pick-up from where we would leave off in the Early Swift Creek. The scalloped rims and notched rims are undergoing some stylistic change. They still show the same shapes and design. We note a zoning of stamp and unstamped areas--a slightly modified picture of the earlier Swift Creek Complicated Stamped and the rim treatment.

Then on the lower parts of this Avarett Site we find other materials which here and elsewhere show Late Swift Creek joining with some Weeden Island materials. The Late Swift Creek in this region has some Weeden Island association. The first mingling of these two traditions appears in this middle Swift Creek interval. Late Swift Creek mixed with some transitional sherds has been found in pits at both the Box Springs and the Yuchi #3 site. The Yuchi #3 and #4 sites on Yuchi Creek in Alabama are within the military reservation. At Yuchi #4 on the Alabama side Weeden Island pottery was also present but no Middle Swift Creek pottery was seen.

Late Swift Creek pottery was found in the same pit with Weeden sherds for the first time.

The terminal Woodland is found in 9Ce42 known as the Quartermaster Site. This was found a few weeks ago. An accidental trench put through by the contractor disclosed about 5 or 6 pits. Here again, we have a Late Swift Creek with some Halloca affinities in association with a few types of Weeden Island ware just beginning to appear. These pits are still being cleared out but we have definite evidences of a Late Swift Creek which we might consider some sort of final or terminal Woodland, with some Early Weeden Island and a few sherds of what appear to be something related to Napier Complicated Stamped. We will pass around these sherds, particularly the Upatoi Plain, which I would like for you to see. I would like to know if there is possibly some relationship with the Alabama materials which have been mentioned this morning.

BYERS: You now have Dr. Kelly's paper before you. Are there any questions or discussion?

CHASE: I wonder if I may put these sherds out on the table. I think it would save time and people can see them at their leisure.

WAUCHOPE: This site where you get a horizontal difference. Is it a concentration of early Swift Creek and Mossey Oak Simple Stamped.

KELLY: Early Swift Creek and Deptford both. In other words, a suggestion of horizontal distribution and Mossy Oak with the early Swift Creek.

WAUCHOPE: And which do you consider came first?

KELLY: Well the Deptford, of course, it is early. The point I am trying to make is that you do not have the Santa Rosa situation in this part of west Georgia. As for middle Georgia, the Marksville and coastal type had to come up. It looks as if early Swift Creek must have gone down and mingled in northwest Florida with the coastal stuff to produce the Santa Rosa Swift Creek.

WAUCHOPE: This is a lot later than you would expect Mossey Oak.

KELLY: Yes, I think so too but then we have at least two separate stamp traditions.

WAUCHOPE: We have Mossy Oak associated stratigraphically with fabric-impressed.

KELLY: Well you do in middle Georgia too. I think it must be a late tradition. In Late Woodland.

BYERS: If that is all we'll have Dr. Lewis' paper, The Early Woodland Culture of East Tennessee. T. M. N. Lewis.

LEWIS: I have a lot of slides with me on this subject, and I think they will give it to you a whole lot better than I can in words. Just a few comments on it before we have the slides, however. This Early Woodland culture in eastern Tennessee was characterized by a great many small settlements each of which apparently consisted of only a few households, I would say from perhaps 10 to 15 at the most. And their evidence was present on almost every site that we excavated or surveyed in eastern Tennessee but this evidence was always greatly diluted by later occupations. For this reason, only two of the sites that have been excavated give a fairly adequate picture of this Early Woodland culture. One is the Candy Creek Site and the other is the Camp Creek Site. The Candy Creek Site is on the Hiwassee River which flows into the Tennessee River about 75 miles southwest of Knoxville. It was on the mainland adjacent to an island known as Ledford Island where a large proto-historic Yuchee site was located. This Yuchee site apparently accounted for a small late component that we found near the surface of this Candy Creek Site that messed things up a bit for us for awhile. But there was only one house site there, so, largely this Candy Creek Site could be called a pure Early Woodland site. Now the Camp Creek Site, on the other hand, is a pure unadulterated Early Woodland site. There was not a thing there but Early Woodland in a very ideal excavation situation with a deposit varying from 5 feet to 6 feet in depth. It is located on the Nolichucky River in upper east Tennessee, an area in which Mississippi Period sites are much less numerous than in the rest of the eastern and western Tennessee area. Many traits of this Early Woodland culture, I might mention, are similar to the Archaic in the Tennessee area. Now these slides that we will run here will illustrate material that is mainly from this Camp Creek Site. The paradoxical thing about this Camp Creek Site is that it was excavated by 4 or 5 amateurs and myself during the winters of 1955 and 1956, just on the weekends. I think we got more data out of that site than we got out of all the other Early Woodland sites back in those days when we were doing the mass archaeology.

(The description of the slides has been omitted at the author's request and the reader is referred to the Camp Creek Site report which appeared in Vol. XIII, No. 1 of the Tennessee Archaeologist.)

GRIFFIN: I am interested in those popeyed birdstones because I think that the survey of birdstones that Townsend has made shows that they are late. They did occur in one of these Adena mounds and also in the Hopewell mound. So that the date you got....where were your birds in relation to depth in this Camp Creek Site?

LEWIS: Oh, you mean the popeyed ones, I thought you meant some of the others. We found a lot of the elongated type too. They were scattered, but I think those popeyed, both of them, came from about the same level. We ran this thing in arbitrary levels. We could not see any natural stratigraphy in there at all. They were one foot levels. I believe, is this not right Madeline, they were in about the third level?

KNEBERG: That was the Level C burial. It would be about the time. They....

GRIFFIN: Yes, but if you have a Level C burial it must have been let down

from above....unless it was buried on the surface.

KNEBERG: No, that is the point of origin.

LEWIS: Now, wherever we could see the top of that pit which was not in every case....

KNEBERG: That burial was approximately 18 inches below level C.

LEWIS: What we actually did is....We were able to discern the tops of some of the burial pits and they were about two feet above the bottom of the pits, so where we could not see the top we simply used that as an arbitrary figure on the thing. I have a number of these reports on the Camp Creek Site here and everybody is welcome to them if they did not get one or if they wanted one.

GRIFFIN: What bothers me about this is the five foot deposit, which has apparently built up over a period of time, and having this regarded as a culture complex. You remember we have had for years this little discussion about Candy Creek, you know, and the argument being that this must have taken place over a long period of time.

KNEBERG: But Jimmy this site....the pottery is consistent on this site from top to bottom, but it is not on the Candy Creek Site. And the Candy Creek Site is considerably later than this.

KELLY: You have no carbon date for Candy Creek, I take it.

GRIFFIN: They have not sent up any material.

KNEBERG: We have some. We had not worried you too much with charity specimens on something like this when....

GRIFFIN: Well, with us it is faith, hope, and charity.

KNEBERG: Lots of charity.

GRIFFIN: Send it in faith, hope you get a date, and be charitable when you get it.

BYERS: Perhaps we can take that break now.

BYERS: The Transition Between Archaic and Woodland Cultures by John Witthoft.

WITTHOFT: We used to think of the Archaic as something quite homogenous both in technology and in economic base and often we thought of Woodland as being just an Archaic with ceramics grafted on to it, and perhaps some other economic traits grafted on. In recent years this whole problem of the Archaic has become very difficult because it has become so diverse regionally. And in many places we seem to be dealing with just about as unhomogenous an Archaic as one could imagine, in terms of the differences

between small culture areas and the differences between different time levels in what is a stratigraphic sequence. In the same way we still can see in the Archaic, some way or other, if we look for it, fore-runners for vast numbers of Woodland traits, and yet we cannot, in most areas, bridge the gap very cleanly and derive an Early Woodland from a late Archaic complex in any simple method. Now this doesn't mean that such a situation does not occur in many areas, but I am thinking mainly in terms of two regions where there is a much more complicated picture than this.

Actually, I am trying to suggest a stage-wise correlation between the north and the south, between the Poverty Point complex of the riverine valleys of the Gulf Coast and the Mississippi, and the transitional cultures as I have called them, the stage of the soapstone kettle in the northeastern United States. I am thinking in terms of a very tight stage-wise correlation between these, but not in terms of any genetic relationships at all between them. The two, if they have anything in common....Poverty Point and the northern transitional....if they have anything in common, it is that they are exceedingly eccentric as compared to anything that went before them, and quite eccentric as compared to anything that we see following them.

Poverty Point I know best through its lithic industries and, of course, since it is the lithic industries that we have always been most struck by, when we have compared Archaic with Woodland complexes, this is significant. But the Poverty Point lithic industries are based primarily on a blade, on a core and bladelet technique, that has no parallel that I can find in North America at so early a time, and yet is almost identical in mechanics and geometry with Ohio Hopewell blade making at a later date, and unlike other Hopewell blade techniques that we know. The projectile points of conventional form that occur in the Poverty Point series that I have studied are so sparse; there are so few of them; and they are so much like conventional late Archaic points that one wonders whether they represent trade pieces, chronological cross-ties between Poverty Point and back country cultures that were still of an Archaic cast. In the North the transitional period cultures that I have thought of as falling between Archaic and Woodland in certain areas (not in all areas, and in many regions we do not this culture stage) of Pennsylvania, eastern Ohio, and the adjacent region, are characterized by the manufacture and use of carved soapstone kettles. The fragments of these kettles occur in large numbers of sites of one particular group of varieties and occur sparsely elsewhere, so much so, that I think there is a 1 to 1 correlation, that they represent stage-wise a fairly short interval of use. Now the cultures that go with the lithic industries, more specifically, that go with the soapstone bowls in the northeastern area, we would characterize thus: In each area the projectile point form is a broad, heavy, thin type which is relatively broad and eccentric as compared to any of the Archaic points of the region, and almost always has strong basal smoothing of the tine. Along with this, most conventional Archaic flaked stone tool types are missing. All drills and all scrapers seem to be based on broken projectile points, and the scrapers are never beveled. They are what the collector would call bunts or blunts. Flaked tools of any other sort are completely missing, except that caches and cache blades, the blank forms for the spear points are very abundant. Spear thrower weights are rectangular, heavy gorgets very often cut from broken

soapstone kettles, and strings of large soapstone beads put on to a rod much like the shell-bead spear thrower weights of the Green River Archaic. These cultures generally show a strong preference for single lithic material, a single artifact type in each sub-area, an ecological preference for the alluvium the river valleys, and are found rarely anywhere else. As we go from one sub-area to another, we have a parallel series but a different projectile point shape, so that we have one shape that characterizes the whole Susquehanna Valley at this stage, but a somewhat different related shape characterizes the Schuylkill drainage system, the upper Delaware, and most of the Hudson Valley; a third type characterizes the region from the middle Delaware Valley over to New York City and into New England; a fourth type characterizes the finger lakes of New York region; a fifth type characterizes the Big Beaver drainage of the upper Ohio Valley. Beyond this we are not able to see anything because we have not yet made the correlations in other areas. These cultures apparently do not extend north of the Great Lakes.

Within these transitional cultures of the north we have, in most areas, the appearance of the very first pottery type of the region at a pre-Adena time level, and in each case, this pottery is the Seldon Island or the Marcey Creek type or one of the related forms. The pots are precise copies of a carved soapstone kettle with a flat bottom and lugs, and are generally made of clay mixed with crushed soapstone. In fact, temper is generally crushed sherds from broken soapstone kettles. In the south we note in Poverty Point, although most of the sites that we know of are distant from soapstone sources, the occurrence of at least some carved soapstone pots, the most notable representation being Clarence Webb's cache of killed kettles at Poverty Point itself, but the fragments occur elsewhere.

The big problem presented by these transitional period things is just where and how do they have their roots in an Archaic complex of their own area or of a neighboring region, or of some distant region; just why do they represent what appear to be such fast revolutions in technology; just how tightly are they ecologically niched; to what extent did they exist only in certain regions and certain ecologies, while areas around them may have still been formally in an Archaic technology and an Archaic way of life. We think this may have been the case.

On the basis of Carl Sauer's old thinking about the origins of agriculture, and particularly the origins of non-cereals, especially cultivated plants that were first used for greens, stems or root foods, the sort of agriculture that would come into existence on a shell midden....we would look very much at something like Poverty Point or the shell mound Archaic as the likeliest sort of context for the ideas of plant origin, the botanical process that Sauer suggested. In the restricted northern region, the transitional is in turn succeeded by things that seem to have no relationship to it at all, and which are more broadcast over the landscape. In many cases these cultures which succeed it seem to represent the coming back, the revival, of a late Archaic technology. For example, in the middle Susquehanna Valley the transitional comes in on top of a late Archaic which has primarily rough fish-tail shaped rhyolite spear points. It is succeeded by an Early Woodland with Vinette One pottery and Adena trade objects, which has almost the same form of rough rhyolite fish-tail spear point as occurred in the late Archaic. This is in turn succeeded by an

early Middle Woodland with a very Archaic lithic industry. The most recently discovered is this one I spoke of of the Beaver Valley in the upper Ohio. So that I think within the whole realm where soapstone is widely distributed, including much more of the Ohio Valley, we must keep on trying to extend this picture. Personally, I am probably most curious about the whole region that lies between the northern transitional, ending now in the upper Ohio Valley and in the region of Poverty Point because this whole central region where we know nothing about such problems but where we have rock shelter stuff of Adena age which is not Adena, where we have lithic industries that people are beginning to think of as something they call proto-Adena, we may be involved in very similarly tight and treacherous problems about the origin of some of these Woodland cultures that impinge upon and may even have been involved in the whole Adena-Hopewell problem.

BYERS: Any discussion about Mr. Witthoft's paper?

GRIFFIN: Are we pressed for time?

BYERS: No.

GRIFFIN: John, you spoke about Ohio Hopewell being closely connected to the Poverty Point type of micro-flint....

WITTHOFT: In this one detail, yes.

GRIFFIN: There are some very small blades from the Ohio Hopewell, but are not the majority of them about ya/(two inches?) long?

WITTHOFT: Well, now there is another distinction. The Ohio Hopewell people seem never, or almost never, to have done any chipping on these blades.

GRIFFIN: That is right.

WITTHOFT: They used them as razors, whereas the Poverty Point people took these blades and they worked them very highly, down to the strangest routing and planing forms. They are awfully basic things. Now in Poverty Point most sites do not have cores. Most sites were not at places where there were good flint sources, but at Belzoni on the Alabama River they were mining pebbles out of ancient gravel bars of the Alabama River. And here from Belzoni we have these big core samples of Soday's and Ford's. These compare favorably with the Ohio Hopewell core. The flake size on the Poverty Point core are smaller, but they are not, I would say, significantly smaller. Generally, they were restricted to small pebbles and generally they could not take as many blades off a pebble as the Ohio Hopewell workman could off one of these blocks of already brochiated flint from Flint Ridge. Nevertheless, the two are much more like one another than they are like other American core industries I know of.

GRIFFIN: We are having a young woman who is studying European French pre-history and north African pre-history working on our Illinois Valley Hopewell flint industry, and it is certainly a very striking thing that in the

great series of sites that we have in the Illinois Valley those blades are not worked like the ones at Poverty Point.

WITTHOFT: No, and not like Ohio Hopewell. Now there are overlaps, there may be merging of edges in these technologies, but the Ohio Hopewell-Jaketown core is like the core of the Aleutian Islands. It is like the Mesolithic cores of Europe and of Japan.

WAUCHOPE: Now does it have a prepared platform from which these things are struck?

WITTHOFT: Yes, and often this platform is scooped out by resolved flaking, but it is always acute edged.

GRIFFIN: Well, some of the Illinois Valley cores are done the same way, but there is a great variety of core types in the Illinois area.

WITTHOFT: Yea, but Jim, in terms of their geometry they contrast with a pattern of shape and mechanics which you might think of as a triangular distribution of shape for the Jaketown forms. They have a parallel range of forms, and Illinois involves a much more elaborate and interesting thing.

KELLY: Do these occur generally in caches....a large number of these cores?

WITTHOFT: No, they are exhausted cores discarded on....underfoot on the site, and they are tremendously abundant at Belzoni. They are not abundant at many sites where flint was not nearby even though the tools made from them may be.

WILLIAMS: Are you trying to put Belzoni on the Alabama River?

WITTHOFT: Wait a minute, this is not Alabama, Williams....It is on the Mississippi. It is the Jaketown Site.

GRIFFIN: The other thing which disturbed me very much about your presentation was this idea of a sort of a culture complex which comes in from God knows where, into this northeastern area.

WITTHOFT: I do not think it comes from far away. I think we have to look for its roots somewhere in the immediate area and think of it more as a diffusing way of life than a migration pattern.

GRIFFIN: Yea.

WITTHOFT: But we have not found the relevant spot, yet, where its antecedents would most....where its antecedents might be. We suspect that this is in the Virginia tidewater. We suspect a center of diffusion for this may be in the Virginia tidewater.

GRIFFIN: The broad bladed projectile point complex associated with the steatite bowls that you were talking about. That seems to have a New England to Alabama distribution down the Appalachians.

WITTHOFT: Well, it is very diffuse in New England in these contexts and in the south the steatite is generally with Savannah River spearpoints. Butler got them at a Groton, Connecticut, site, in the sand underneath the site with the soapstone. They are square stemmed there. As we get down into the Potomac area we do not know the associations, we do not know the context for the soapstone, that is one of our....

GRIFFIN: We got them at Accokeet, there were the stone bowls, a great lot of them, and the steatite-tempered pottery with the lugs. What I am wondering about is, how do you know that this material is earlier, say, than Fayette Thick in the Ohio Valley? How do you know this?

WITTHOFT: I do not know that it is earlier than Fayette Thick, I know that it is earlier than most occurrences of Fayette Thick because the sites in which we get Adena cross-ties are those with the Vinette One pottery, not those with soapstone.

BULLEN: What is the evidence for the Marcey Creek steatite-tempered pot appearing earlier than Vinette One.

WITTHOFT: I do not know that there is any....I mean the Marcey type is what we are dealing with but not in that area.

GRIFFIN: Oh, in that area, yes.

WITTHOFT: And you are dealing with that type in the Pennsylvania and southern New York region.

WILLIAMS: Well does it strike out the evidence for the priority of a steatite-tempered before Vinette One?

WITTHOFT: No. We cannot show the priority in the most formal way, not in the way that would completely tie it up but there is a distinction of sites and indirect stratigraphic evidence that bears upon this as well as the pattern of chronological cross-ties that bears upon it. These are the chronological cross-ties to Adena, Point Peninsula, etc.

BULLEN: I should think with a thing like that you have to get a little more....or some carbon-14 dates if they are any good.

GRIFFIN: Where does the Point Peninsula I, or .05 come in your transitional? How do you associate these and that stuff that is up to the north and northwest of the area that you have been talking about?

WITTHOFT: Point Peninsula, of course, is not at home in our area. It comes into it only by thrusts and trade pieces. But once in a while in a site there is a whole clutch of Point Peninsula stuff that probably represents a grave. And the part of this that would conform to Richie's most classic Point Peninsula, his Point Peninsula I, occurs with the long bird stones with popeyes, the long fan tails....they come 8, 9, 10 inches long.... and occurs with pottery that is very like Vinette One but does not have complete interior cordmarking.

GRIFFIN: The cache blades are one of the markers of this, I think, transition between Archaic and Woodland.

WITTHOFT: These are broad cache blades, lobate, somewhat five sided cache blades.

GRIFFIN: Oh, I was thinking of a more leaf shaped....

WITTHOFT: No, they are very broad and they tend to be pentagonal. They are formed by great broad flat chipping. The flaking on these sites is almost an index fossil of what the site is for this group of culture.... And these blades were used for many things and, of course, to make spear points out of them.

KELLY: In terms of quarrying activities....sites where you have quarry and workshop operations closely associated or where your quarry sites are sought over a considerable area and people took your cores....A large number of these blades off to another site and all subsequent industrial activities took place there. In other words, we find sites where the quarry, workshops, and the whole business took place, practically in the same general area. And you find other places where, apparently, they are bringing in large numbers of cores and that is apparently true of....

WITTHOFT: Well, now in Ohio Hopewell I have never seen a core found further away than Serpent Mound from Flint Ridge. Most of the Ohio Hopewell sites have never produced a core. They normally, in Ohio Hopewell, made all their bladelets in the workshops on Flint Ridge, threw the nuclei aside and carried the cores off with them as far as the Georgia coast and as far as New England, but the cores....I have never seen a Hopewell core found in Pennsylvania; they have never been found at most Hopewell sites in Ohio; they are all at the workshops. Now in the South....many sites seem to have a poverty of cores as compared to the tools made from them, and it looks like a very similar pattern, not as marked, of course, because the Ohio Hopewell one is extreme.

NEITZEL: There is an awfully lot of rough stone at Poverty Point and at.... but more so at Poverty Point....that may have been inadequate for this thingit does not go into the way that the stone material in the village.... the ground is strewn with it.

WITTHOFT: But does it have these quite refined hemi-polyhedral cores or pebbles in large quantities?

NEITZEL: No, they are scarce.

WITTHOFT: They are scarce?

NEITZEL: Yes.

WITTHOFT: You see, they are abundant at Jaketown.

NEITZEL: Is there not something similar to....more pressure from that territory than anywhere apparently? Is there not something about the

slender blades turning up in eastern Mexico or Yucatan?

WITTHOFT: Possibly, I have not seen them anywhere else. It is very possible.

NEITZEL: I vaguely remember reading about it.

KELLY: What do you think of the practicability of making mineralogical studies of those quarries that we have got: A large number of them....

WITTHOFT: I think that it should be, but I do not think it has ever been done. I do not think most mineralogists would be too hopeful of getting clean cut solutions.

KELLY: I think they want a thin section....

WITTHOFT: Yes, but even with the thin sections....I mean the archaeologists would probably be more hopeful solving the problem than mineralogists would. It is like this little argument about whether you can tell Flint Ridge stone when you see it. The archaeologist believes he can, and the mineralogist says he cannot.

WAUCHOPE: You spoke of this very drastic technical revolution with the Early Woodland; leaving out pottery what....Would you outline those.... briefly, what makes the revolution....

WITTHOFT: I am thinking primarily of the flint technology of the lithic materials. And that would be....

WAUCHOPE: Some of us have just spent the morning demonstrating that 98 per cent of lithic material continues.

WITTHOFT: Yes, but over the whole region it does not. Just as in so-called Hopewellian of the Allegheny Valley the lithic technology is the closest relative of Brewerton that one could imagine. The Hopewellian lithic stuff of the Allegany is more closely related to late Archaic than it is to anything else, so there is a big time span between them.

GRIFFIN: Are you sure?

WITTHOFT: I can not think of anything else that looks more like it in the local....

GRIFFIN: But, I mean are you sure the long time span between them?

WITTHOFT: Not awfully, no. But the time span between has got to be taken care of by a stage that includes Adena trade objects, that we know very little about, and the resemblances would be to a type of Laurentian--that Richie's figures would suggest as 3000 to 5000 years old and would cover quite a bit of that time. Now, in the Susquahanna Valley the projectile point types and scrapers, etc. that go with the early part of the Middle Woodland are not as strikingly Archaic as that stuff from the Hopewellian; but they are very archaic-like; and yet they come in way above this broad

spear transitional, with its highly distinctive spear points.

WAUCHOPE: Your entrance....your implication there is that Early Woodland is an intrusive foreign culture.

WITTHOFT: My inclination is not to look for its origin very far away, however, but to think of the Archaic as being tremendously and terribly variable, and that some of the weirdest kinds of Archaic, perhaps, giving rise to these transitional cultures without necessarily having to travel a great distance....a heterogeneous picture, geographically.

WAUCHOPE: But then you have your Middle Woodland harking back to your Archaic.

WITTHOFT: As though there were Archaic relict cultures in other ecological niches or regions that had survived throughout.

WAUCHOPE: What usually happens in other archaeological areas where you get....like Toltec domination of Maya Yucatan you get a Mayan resurgence later or in Mississippian, in the south, you get a kind of Woodland resurgence there.

WITTHOFT: The striking thing about the northern transitional, and I think the striking thing about Poverty Point, is that it involves pretty big geographic regions. And it may have its roots in one county someplace in that region....one single horde or hunting area in Australian terms.

GRIFFIN: I not only think of the Archaic as being a sort of confused and heterogeneous picture, but also the Early Woodland and you cannot look for the origins of Early Woodland at any particular place because you have to look in many places and the picture you come out with is a synthesis of new ideas which have cropped up through diverse origins over wide areas.... because it does not come in as a movement of people carrying a new culture complex from outside, I do not think.

WITTHOFT: Yet it is a stage-wise phenomena not to be called a migration but a cultural process....stage.

WILLIAMS: You keep using the term stage....you mean period.

WITTHOFT: I do not mean period, I mean something that implies more than period, I think.

WILLIAMS: Well a stage is usually thought of as an evolutionary....

WITTHOFT: Well what we have, as I see it, in the trend from Archaic to Woodland is an evolution from a highly diversified, highly regionalized, hunting-gathering economy on Australian ethnographic models to a transitional in which we have the close correlation of wide-spread culture types with one type of ecology, Stallings for example. In the succeeding woodland we see that same type of ecological niching as a condition of production of agriculture.

WILLIAMS: Is Woodland a stage?

WITTHOFT: A stage, or several stages, depending upon what criteria one might want to use. But it is a stage of productivity, I would say, in agriculture context. Now we have no idea at all whether we should be thinking of agriculture in the transitional context or not.

KELLY: Other than the presence of pottery then, do you see any clear distinct criteria which in your mind would give a different picture of Early Woodland from what you call Archaic?

WITTHOFT: Not without making tremendous assumptions about economy, and they would be awful assumptions right now. There is this business of the appearance of smoking pipes of some sort of another spread over a wide area marking an Early Woodland stage; there is primitive ceramic forms of many types along with the number of culture areas; there is in some areas, at least, evidence of moderately intensive sunflower agriculture.

KELLY: And perhaps some beginning ceremonialism?

WITTHOFT: Yes, though again you can see fore-runners of that in earlier Archaic contexts.

KNEBERG: Yes, but is it not possible that what you have is....I mean if there is any validity to the origin of the Woodland pottery in Asia.... that do you not have the affect, stimulus diffusion upon a lot of different, differently orientated perhaps Archaic groups which would undergo separate development?

WITTHOFT: Yea, if the pottery technique is introduced from Asia, we are dealing with stimulus diffusion among all of these forms. If the pottery is of local genesis we have a matter of independent invention which is very possible. Now if we do not know whether there is any link between ceramic hollow-ware and agriculture in this whole picture, there very well could be, because apparently the plant involved is the sunflower, and the sunflower is the only plant of modern commerce that had to have its botanical origin within this region. The sunflower is one plant of commerce, great agriculture plant that would have had its wild ancestor in the Mississippi drainage system. So that we are probably dealing here with an independent invention of agriculture, an independent invention of pottery, or else with a very complex stimulus diffusion picture for both, coming from two directions.

KNEBERG: Well, it would seem to me that your stimulus diffusion would account for this complexity better than a whole series of independent inventions.

WITTHOFT: Well, the stimulus diffusion would take place within the region whether from within or from without, but the great force in all of this, the really revolutionary force might have been the cultivated plant rather than the concepts of ceramics.

KELLY: Do you think the sunflower was cultivated?

WITTHOFT: Well, it was in Adena.

GRIFFIN: Are you sure?

WITTHOFT: Moderately so. The carbon-14 dates on the dry sites in Kentucky fall about 800 B.C. The association of sunflower with Adena-like things in the dry caves, in the ash caves of Kentucky, seems relatively tight if you look at the over-all picture where you have an overwhelming amount of sunflower, an overwhelming amount of Adena-like stuff, very little maize, etc.

GRIFFIN: Well there is not any maize.

WITTHOFT: There really is not any, no.

GRIFFIN: Well, what I am wondering is why is the sunflower cultivated if it is growing in this area naturally, and how can you....

WITTHOFT: Because the ones from Adena are not the wild sunflower. They are not the wild ancestor that would be postulated for the sunflowers of commerce or the weed sunflower in the big plains which are all hybrids, apparently, to some degree or other between wild sunflowers and old cultivated sunflowers.

GRIFFIN: What is this fellow's name in Indiana?

WITTHOFT: Heiser?

GRIFFIN: Heiser? Is he the one that has worked on sunflowers? Has this been published?

WITTHOFT: Most of this has been published to some extent or other. Quite a bit has been published by Anderson as a matter of fact.

KNEBERG: Are you talking about the other plants in the ash cave like Amaranthus and the squash...?

WITTHOFT: No, no they are equally significant. They may not be of the same nutritional significance, they may not represent as great an energy resource as the sunflower.

KNEBERG: You mean the squash?

WITTHOFT: Squash? The gourd yes, but the squash I am not sure of in that context.

WAUCHOPE: That is what I would question, whether the introduction of, saycultivating the sunflower, would bring about a great economic revolution and way of life different from what already existed with a very stable food supply in Archaic with....

WITTHOFT: Well, the Green River picture we get is not of a stable food supply, from what the skeletons tell us and in terms of pathological....

WAUCHOPE: But it is a tremendous concentration of culture material....

WITTHOFT: Yea, but the pathological picture of the human remains is not that of good nutritional health. Now the sunflower is a very major potential source of oils and proteins; it is anything but a trivial food plant.

KELLY: You would not place it with maize would you?

WITTHOFT: By no means, yet the productivity in terms of weight of food per square foot is probably at least equivalent to the primitive maizes of the northern flint corn types, and the oil....the caloric value of the product probably more because of the high oil content.

WAUCHOPE: Would not the revolution be a population explosion there?

WITTHOFT: Population explosion and all the other things that would be happening to a primitive culture that suddenly became productive rather than dependent upon the bounty of nature.

KELLY: You care to imagine that in these huge hardwood forests that stretch all the way down to intercede in northern Georgia in which you have very largely a downward thrust of your fabric's pots....as one of your earliest types....in the Kellogg, for example, here in north Georgia you can find hundreds of these pits....and remember that the one area in North America which supported the largest density of population....what was it? 110 per square mile....was in California where they had no means of cultivation whatsoever, in other words there is what Joe Caldwell called....this nut gathering economy can be carried on very successfully....and can give you caloric content and caloric value that will enable you to sustain sedentary population. You have all this before you ever get any sort of agriculture and it is possible that this can be so efficient that your beginning and simpler stages of agriculture cannot compete with it.

WITTHOFT: Yet, we do not, in the eastern United States, often see such a picture. We see it at Lamoka Lake. We see it in one or two places in the Southeast but by and large the sites do not show this. Now, I do not know enough about the food value of the acorn but this is primarily a carbohydrate food source and would be a relatively poor thing to base a well-rounded diet on. The great virtue of the sunflower lies in its oil and protein content.

BULLITT: How did the sunflower grow in the dense forests?

WITTHOFT: Well, it did not. It is a plant of the prairies and of openings and Sauer suggested that people living....Sauer suggested that perhaps the earliest form of agriculture arose in southeastern Asia, and in our Gulf Coast where people living along the sea coast and the river banks in a fairly lush sub-tropical environment made great clearings in getting firewood, dumped their shellfish shells, and the rotting remains of their food and their manure all over these openings, and in these places where they were bringing in gathered food plants and losing seeds there were new ecological niches created and that these were the type of niches where plants that normally would grow in different prairie environments or different environments (thus different sunflower species, etc.) would for the

first time in nature be able to grow side by side and hybridize. And that this would provide a new type of environment on which some of the details of these hybrids would be botanically forward-looking, and in this way some of these diploid and tetraploid and other genetically-based revolutions in the plant stock could take place very quickly. And that in these environments people would find themselves growing strange weeds that had come about through complex ecological and genetic factors, and that some of these weeds might very quickly then come into cultivation when their virtue was recognized....when it was realized that they were creatures of the dung heap.

BULLITT: Than is very true, but how did the sunflower come from the prairies to the East coast?

WITTHOFT: Well, the sunflower would not be a plant that could have come into cultivation on the East coast, I would think it would be the interior basin, the parklands of Ohio, the openings to the west and east of the Mississippi, etc. Remember at Ash Hollow Cave we have a picture of a much more open ecology than exists in Kentucky at the present time. The picture of grasses from Adena times, from the Rock Shelters of Kentucky suggests more parkland and less forests than you would expect too.

KELLY: The prairies were actually intruding then upon what is now forests.

WITTHOFT: Yes, or else a forest had long been gradually encroaching upon the prairies.

GRIFFIN: Well, John do you get enough sunflower seeds in those Kentucky caves and shelters, or in Ohio, to justify the assumption that probably these people were extensively using these things, God knows you do not get them in the open sites.

WITTHOFT: I do not know these Kentucky sites well at first hand but shall I try to compare them with the Susquehanna dry site that we have? With the Susquehanna site we have only scattered sunflower shells but the whole dry site is like a sod because it is loaded with corn fodder and we were getting as much as a bushel of corn cobs out of a 5 foot square, 9 inch deep level, and in this we have so far no amrants or anything of this sort. This site is around 1570. Now in these Kentucky sites there are lenses and piles of sunflower heads and of sunflower seeds and windrows of shells from the broken open sunflowers. And way up in the cliffs where people did not live, not places like Ash Hollow Cave, but dry niches where they could conceal things, they put in these great woven bags filled with sunflower heads, Webb says some of those held two or three bushels.

GRIFFIN: Yea, now let me ask you another question and that is how do you know what the cultural level is of these sunflowers in these Kentucky caves which were dug under such deplorable conditions?

WITTHOFT: We have two reasons for making a guess as to what their age and culture context are. One is the over-all picture of the total collections from these sites, which is primarily that of the Early Woodland cultures rather than something later and, in some cases, even looks sort of Archaic

as compared to Adena. Now the fabrics from these Kentucky sites are twined fabrics just like our Susquehanna ones, they are coarse twine fabrics. I have seen fabrics preserved by copper in Adena that are woven the same way but they are refined things. We may have an everyday version of Adena, or a country cousin version of Adena in some of these. It may be earlier or later. Now one of the dates....the Carbon 14 dates I am inclined to place great reliance on are the dates that are run on uncharred material that has come from permanently dry environments. Because here the chances of contamination have been cut down twofold. One, by not having a charcoal sponge or wet cellulose column to permit contamination and two, by not having any moisture present as a solvent to carry things, and the....there are I think, two dates for materials, at least, from these Kentucky dry sites, and one of them a date based on bedding, is 2600 years ago.

BYERS: I think that this discussion is very interesting and we are probably all waiting to get a crack at it but I think in all fairness, we still have Bruce Trickey's paper. We can go on with the discussion later on.
Time Correlation for North and South Alabama by Bruce Trickey.

TRICKEY: I want to present today a time correlation for north and south Alabama and this correlation is based on pottery's seriation diagrams from five different areas. The areas are the Pickwick Basin (Webb and DeJarnette 1942) on the Tennessee River, the Gunterville Basin (Webb and Wilder 1951) on the Tennessee River, the Sunflower area (Phillips, Ford and Griffin 1951) graph from the lower Mississippi Valley report by Ford, Griffin, and others, the Memphis area graph from the same report and the Seriation graph from Mobile Bay (Trickey 1958). In addition, we will use the absolute time scale published by Ford in the Poverty Point report (Ford and Webb 1956). In our work in Mobile Bay it became obvious that many of the answers to our problems would probably be found inland rather than east or west across the Gulf Coast. For this reason we turned our attention to the information available from the interior of Alabama. And of course the large amount of material published in the Tennessee Valley basin report was of the greatest interest.

To make our problem clear I should like to refer to the first slide, please....which is a map taken from one of Ford's papers, showing a large part of the Southeast. In this slide we see Alabama, Mobile Bay down here near the bottom, and the Tennessee River running into the state across the top. Now, it is necessary to mention here that the tongue of the Appalachian Mountains comes down here just about to this point where this river takes a turn here, and it is on both sides of this and there is another tongue that comes down in here. Now this has had a definite effect on the archaeology of this region, here, as we will see in the graphs from the two areas. Now, we have here the five seriation diagrams. We want to compare the one for Sunflower, Memphis, one derived for the Pickwick Basin, one derived for the Gunterville Basin, and one for Mobile Bay. We lack one for out here, but very soon we are to have one from this area. Now, using this graph for these different areas, it is our intention to show progress which has been made so far, in correlating the time periods of Alabama from north to south....from the northern part of the state to the southern part.

In correlating these areas we made use of both the lower valley arbitrary time scale, based on the letter time periods: A, B, C, D, E, F, and G; and on the absolute time scale established by Ford in the Poverty Point report. You will see this in slide two, now, which is Ford's time scale. Now the diagonal line I have drawn to show how the radio-carbon dates also date the main culture periods. Now this line is the best fit for the radio-carbon dates which are recorded in this paper....The best fit I could makeeveryone else would have his own opinion, of course. Now, Ford....his best guess for Poverty Point was about 600 to 800 B. C., and I have begun this time at 1000 B. C. to give Poverty Point a little time to develop. Now over here we can see up at the top, Plaquemine, Coles Creek, Troyville, Marksville, Techefuncte, and Poverty Point and by reading down here and across we can see what these mean in terms of absolute time on the A, B, C, D, E, F, G, H arbitrary scale. Now there is one thing that is rather out of line here and that is Marksville; it looks very much like Troyville as far as time is concerned. This is going to have to wait on further research, I assume, to find out why this comes out like this. These, then, give the absolute dates for the former arbitrary A to G time scale.

Now we can refer to slide 3, the slide for the Sunflower area, and here we see the arbitrary time scale for which we now have an estimate of the absolute time also. The pointer is gone out but you can see A, B, C, D, E, F, G down here. Now I have tried to show in slightly larger letters here what these types are. This is Mulberry Creek....could we make that just a little bit sharper? Good. OK, the ones I want to point out here are Mulberry Creek Cordmark, and Withers Fabricmark, especially, and, of course, the shell-tempered types here, Bell Polished Plain show up here. Can you read these? Mulberry, etc....OK, now let us see. Here I should like you to note especially the occurrence of Withers Fabricmark in times F to G and of Mulberry Creek Cordmark over a rather long time period from F to C and finally at the time B the introduction of the shell-tempered types. We shall make use of the time position of Withers Fabricmark, which is related to Longbranch Fabricmark, when we consider the Tennessee Valley graphs. Also the Mulberry Creek Cordmark.

Now, in slide 4, for the Memphis area, we notice a somewhat similar situation with some changes. For example, we see Withers Fabricmark again in times after G, followed by Mulberry Creek Cordmark, and also we now see some Wheeler Check Stamped showing up which is followed in time by the shell-tempered types again. Now the Memphis area, of course, is the closest area on the Mississippi River to the Pickwick Basin. Now in this one too, Bell Polished Plain is not much more in evidence.

Our next slide shows the graph we have derived for the Pickwick Basin. The types plotted here are taken from the information in the Pickwick Basin report. On the right hand of the slide is shown both the arbitrary and absolute time scale derived as shown previously. The arrangement of the sites on this scale was done by moving those showing large amounts of plain shell to the top, and those with large amounts of fiber-tempered to the bottom. Mulberry Creek Cordmark and Wheeler Check Stamped were arranged about the time D and E to conform to the Memphis area graph, but the maximum for Mulberry Creek Cordmark is about mid-way in time between C and D. You can see Mulberry Creek Cordmark over, here, associated with Wheeler Check

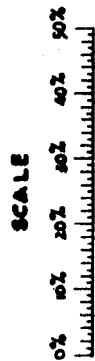
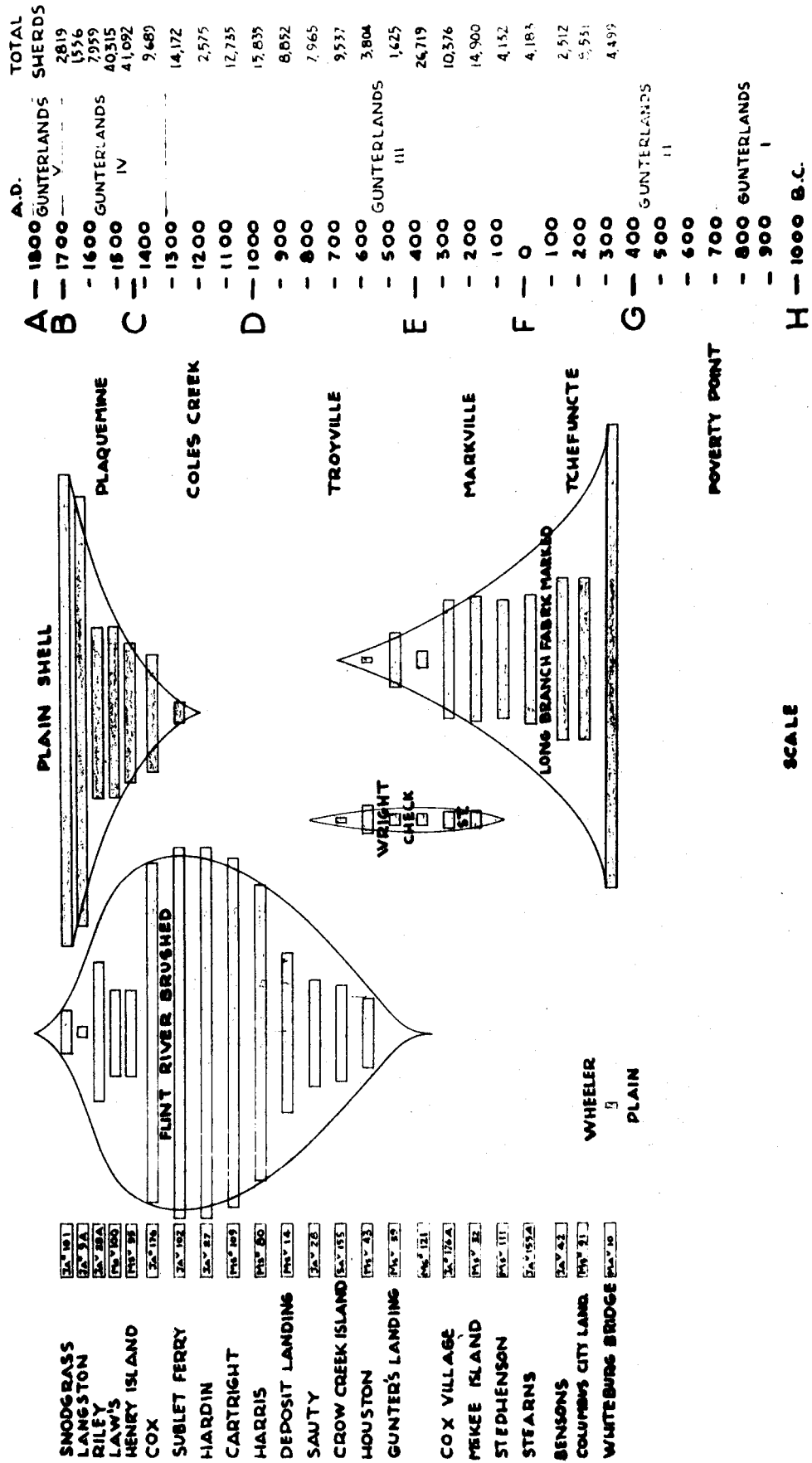
Stamped. The Kirby incised and Benson Punctate are the only ones that are not to scale. And the maximum for Wheeler Check Stamped is slightly later than that from Mulberry Creek Cordmark. The maximum for Longbranch fabricmark was placed to match that for Withers Fabricmark. The position of the fiber-tempering about time G to H seems reasonable based on the occurrence at Poverty Point which is dated about 600 to 800 B. C.

The same process was gone through for the Guntersville Basin which we will see on the next slide. Now in this case the influence of the Appalachian Mountains has made a big difference in the types percentages. Although Longbranch Fabricmark is very much in evidence, Wright Checked Stamped is much smaller, Mulberry Creek Cordmark was small enough to leave out, and the amount of fiber-tempering you have in Wheeler Plain is very small. I think only 22 sherds of fiber-tempered were found in the Guntersville Basin. Minor types have been omitted to make way for the key types, and to keep the slides readable. Here, using the same process, we end up with a graph showing much greater predominance of fabric marking, much less of both fiber-tempering and of check stamping, and a new, very prominent type, Flint River Brushed. We have also included on this slide, the arbitrary time or culture periods given in the Guntersville Basin Report....let us have that one back, and we will look at Gunters lines 1, 2, 3, 4 and 5 which were given in the Guntersville report. At that time they had no way of knowing how long each period was. Also included in this slide are the arbitrary time or culture periods, given in the Guntersville report as Gunner lines 1 to 5, and these show how they now work out when we have a way of estimating their length.

Finally, we have our next slide from Mobile Bay. The calendar dates given here for the arbitrary time periods are now wrong based on Ford's radio-carbon dates for the lower valley, but the arbitrary scale is still approximately correct and can be used for comparison. In other words these dates here, 500, 700, 800, etc. are about....well this G for instance, should be around several hundred years earlier than that, but we can ignore that and refer back to the other slide when it is necessary. But the arbitrary scale we can still use for comparison. Now in this graph, at the time we made it, we did not have any fiber-tempering in Mobile Bay. Now we do have some small occurrence of fiber-tempering and also one site with considerable numbers of Poverty Point objects and almost a complete collection is on the back table, if some of you would like to look at them later. Poverty Point-like objects have also been found and some of the samples are available for viewing. You will notice in the lower part of the graph continued influence from the lower Mississippi Valley which persists up to time D....had some influence from Georgia and the complicated stamping is also seen. Then a sand-tempered, check stamped without tetrapods comes in which is finally superceded by the shell-tempered types on the top. Finally, then we have to consider what relations we can discover between north and south Alabama and here we should like to refer back to our map of the area, slide one.

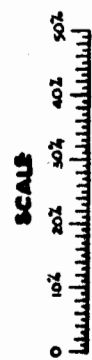
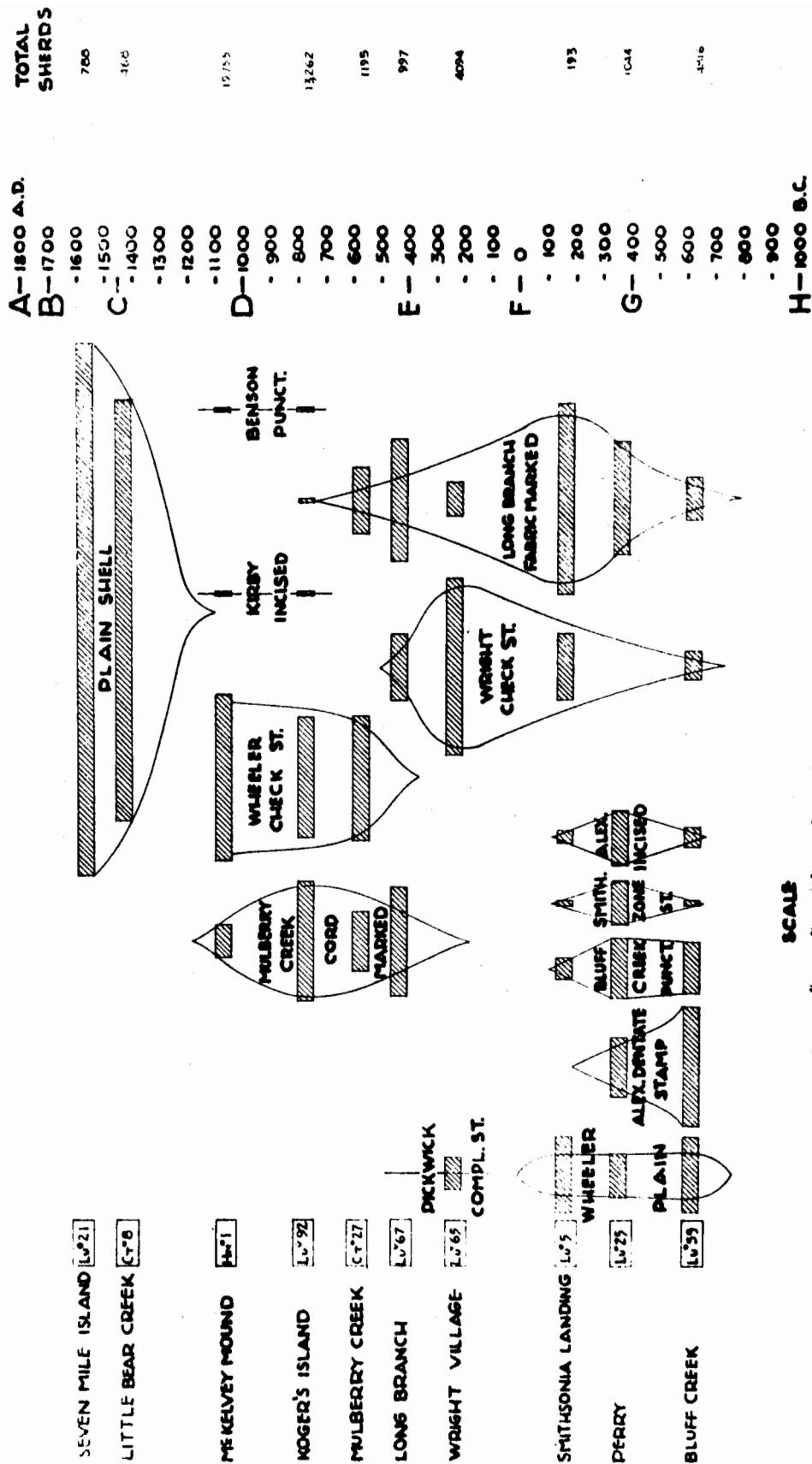
Now, tentatively, we can assume that fiber-tempering spread from Florida where it is dated at 3700 years old, to Macon and the Pickwick Basin. In other words they came through probably in this direction, but they came to these places in strength but came only weakly to the Mobile Bay,

GUNTERSVILLE BASIN



D. SCHOFF

PICKWICK BASIN



Poverty Point, and the Guntersville Basin. Now, I rather imagine that maybe because of the reflecting effect that the Appalachians coming in on that corner of the state....the reflecting effect of the Appalachians possibly had some effect on its spread up the Tennessee River. Next we see the northern Hopewell influence of the Pickwick Basin in Smithsonia zone stamped and Alexander Incised followed by a widespread of fabricmarking down the river and across the Mississippian, Sunflower, and Memphis areas. In the south of Alabama during this time, Poverty Point and the succeeding Tchefuncte cultures were spreading eastward, followed by lower valley Hopewell and clay-tempered Marksville, which eventually evolved, we think, into Troyville and the equivalent, Weeden Island I in the eastern Gulf Coast plain. Now to return to the Pickwick Basin, we have an early check stamping, Wright Check Stamped, on the Deptford time level possibly following the same paths as fiber-tempering which evolved into a Wheeler Check Stamped, which is a clay-tempered type, that spread to the Memphis area where it was in turn influenced, as shown by the Mulberry Creek Cordmark. In the Guntersville Basin we have little correspondence here and instead a new type, Flint River Brushed, which held its own against the innovation from the west. The Mobile Bay check stamping finally reached the coast as Wakulla Check Stamp on the same time level as Wheeler Check Stamp. Finally, in all three areas the former types are overlane by the spread of the shell-tempered, pottery types. That is as far as we have worked it out at this time for Alabama.

BYERS: Any discussion?

GRIFFIN: I would like to say that those pottery graphs of Ford's are very poor tools for fine time relationships between areas. Very poor tools, Bruce. They give a nice broad outline of the ceramic sequence in an area, but they cannot be used for fine area cross-checking. You just cannot do it!

TRICKEY: What we had in mind was to try and bring some idea in broad termsof sequence between north and south. And this, I think, is what we.... we would not want to argue about 100 years or a small change from one area to another.

GRIFFIN: Yes, in broad terms you could do it. I was particularly amused in Rands paper there, when he had check stamped there, you see, because at the Lake Cormorant Site, which I dug, which was a two level site with a marked Troyville Tchina occupation with fabric-impressed and some check stamped in there. This was down in the site, in the levels. And then we had a Mississippi occupation that was intrusive into it with pits and burials, etc., you see, and this is what the notes said. But when it came out in the graphs you get a beautiful seriation of these things, with Wheeler Check Stamped up where Ford thought it should be, and this was all nonsense.

WAUCHOPE: I have been against the battleship seriations for a good many years for two reasons. First, it is alright for demonstrating graphically to place classes, maybe, a general picture with general ideas....it is absolutely useless, so far as professional use is concerned, because.... take Tolstoy's new book on, The Surface Survey of Northern Mexico....you

simply cannot get any frequencies out of it without making innumerable round trips and changing your scale each time you do it and then you are not accurate. And then third, I think we tend to draw lines on some of these charts around fluctuating frequencies but make the lines act like a trend when there is no trend.

TRICKEY: For instance, the graphs on Pickwick and Guntersville are very subject to this criticism, and....really, the way I look at these graphs, it is a logical arrangement of the material we have now, entirely. And, by the use of it, you have a conception of what happened. It gives you a better picture than just a flat plateau effect when you are looking at a bunch of pottery.

WAUCHOPE: I do not know.

NEITZEL: It is invalid? Well, all it does is to repeat the list of figures, which are totally incomprehensible to me, and if I do comprehend them I cannot remember them for 15 minutes. A simpler type mind is more visual. It is more like the funny papers are, too.

KNEBERG: I like it too. I found it useful and you are going to get another dose of it tomorrow.

NEITZEL: Well, I think it is entirely valid at a particular site where you have been careful to separate out your material, taking into account intrusions, and anything else, and to present it in that form. And I might add it is done....it is hard work, it is tedious, but it does show exactly what came out.

TRICKEY: It gives you what you mean too.

NEITZEL: It does to me.

TRICKEY: In words....you can mean so many things in words.

NEITZEL: I have to defend old poor Ford; he is in South America drinking 89¢ a quart rum, and I have to stand up for him....

SEARS: He cannot stand up?

KELLY: Your objection is not so much to the statistics or the graphical form as it is to the battleships. They are....

NEITZEL: I am disgusted how cheap rum is there and how high it is here.

SOUTH: I think that whenever you have stratigraphic evidence that backs up your work, that helps a lot. And also, like you say, if you separate the intrusive things....one site I dug had over 100 pits. By the time I got through weeding out and eliminating the over-lapping pits and just picking pits that had a clear circular outline and no visible intrusion at all against the sub soil, I only had 30 some pits. And then when I got through selecting all of those that had a reasonable number of sherds....of 70 or so sherds....70 or more which is just an arbitrary figure I took....I had,

I think, after all of that elimination, I had about 30. Well, when I seriated those, it made a very nice picture. And that was also verified by sites; I had all of these sites that were also verified by surface, made the same curves and then the carbon 14 dates on different pottery types verified it again.

NEITZEL: Well, that was your world that day.

SOUTH: So, if you can hit the information from several different points, you have more of something to work with than you do if you just take a surface survey and run seriations. You still do not know which ones up or what you have got.

NEITZEL: Ideally, if you could get your material by natural levels that can really be cut off and defined....

BYERS: Well, if that is all the discussion, Coe has a few words to say at this stage.

Morning Session, December 6, 1958

Movies From Russell Cave, Alabama by Carl Miller.

Mr. Miller showed a film and commented about the excavation of Russell Cave in Alabama. For further information refer to National Geographic Magazine, Vol. 110, 1956, "Life 8,000 Years Ago" and also Vol. 113, March 1958, pp. 426-37, "Russell Cave: New Light On Stone Age Life."

The Transitional Archaic in Tennessee by Madeline Kneberg.

This paper has been omitted because it is being prepared for publication elsewhere.

The Transitional Period of Florida by Ripley P. Bullen.*

In referring to the "Transitional Period" in Florida I mean that period of time which occurred between the close of the Archaic and the beginning of the Woodland periods. This Transitional period was a dynamic one during which many new traits appeared and a way of life was revolutionized over a very large area. This time period is believed to have lasted from approximately 1000 B. C. to 500 B. C.

*Editor's Note: We are indebted to Ripley P. Bullen for making this paper available to us although it was not presented at the Southeastern Archaeological Conference. In lieu of the papers by Kneberg and Williams we have substituted Bullen's paper which is very much in keeping with the theme of the 1958 conference.

As there are various concepts current among archaeologists as to what marks the close of the Archaic--indeed some see no close--I must explain what I mean by these terms. In order to develop my thesis it is also necessary to review briefly culture changes during the very late Archaic which, in Florida, is known as the Orange period.

I would terminate the Archaic Tradition in Florida at the close of the Orange period, that is when the natives ceased making Orange Incised and Orange Plain pottery and started making other than fiber-tempered pottery. The Transitional period is hence recognized with the first appearance of non-fiber-tempered ceramics including semi-fiber-tempered pottery. It ends, in northern Florida at least, with the development of a clearly recognizable Deptford ceramic horizon. In the middle and upper St. Johns River region the beginning of the St. Johns I period of plain, chalky pottery would mark the close of the Transitional. Likewise the development of the Glades and Belle Glade pottery traditions are post-Transitional in time.

This arrangement differs in various details from presentations by other archaeologists. Goggin (1949, p. 22), for example, has in the past suggested Deptford as part of the Archaic Tradition. His Orange Late, characterized by St. Johns Incised sherds, I would consider as belonging in the Transitional period. Similarly, Rouse's (1951, p. 70) Malabar I would be Transitional while his Malabar I' would be post-Transitional.

It has seemed to me best to abstract these evidences of new ideas and put them into a Transitional period, thus emphasizing the dynamics of the situation. This I did first in a paper presented at the 1951 Annual Meeting of the Florida Historical Society. Subsequently, the idea has been developed (Bullen and Bullen, 1953, 1956; Bullen 1955b, 1958a, b, c) but this is the first time I have treated it at all completely.

The importance of the new ideas, however, was emphasized some years ago by Goggin (1952, p. 68) when he wrote "At the end of the Orange Period the first important change since the introduction of pottery took place. This was the shift from fiber-tempered to a chalky ware with the same designs being carried on." and (1952, p. 76) "Much desired information could be obtained if a site with a sequence from Orange through the St. Johns I periods could be located since all excavated have a gap between Orange and St. Johns II or a mixed picture at that time." The transitional period was also suggested by Griffin in 1949 when he used the term "transitional occupation" in referring to semi-fiber-tempered sherds found at Useppa Island near Charlotte Harbor.

A "good" continuous site has not been found (or at least not excavated and published) but we have, in the years since Goggin wrote, been able to close the gap from both ends. The point is that with more data I see a period of unrest, a period of great change, which at the time Goggin wrote was only represented by one or two pottery types.

I agree heartily with Miller who, in his rather complete discussion of early cultural horizons in the southeast, found a definite break in cultural continuity at the time which I would call Transitional in Florida.

He wrote (1950, p. 286) "This break occurs at the beginning of the Tchefuncte period in Louisiana and lower Mississippi and it precedes Deptford, Santa Rosa-Swift Creek, Perico Island, Glades I, the early phases of Malabar I (I'), and St. John's Ia in Florida; the Alexander Series in Alabama; and Watts Bar in Tennessee." Sears (1954) in his article on the late Archaic of the Atlantic coastal plain, although from a different viewpoint, raises some of the questions discussed here. They are also implicit in John Griffin's 1952 review of Florida archaeology.

In order that the reader may follow my argumentation, it seems desirable to list artifact types which I feel belong in the Florida Transitional. These consist of three groups of things; diagnostic traits, which might be called period markers; linked traits, those which are present in both the Transitional and either an older or a later period; and continuous traits, those found before, during, and after the Transitional.

The Transitional period in Florida is diagnostically marked by the presence of semi-fiber-tempered pottery, usually simple-stamped, sometimes incised; St. Johns Incised, chalky pottery bearing Orange Incised designs; Pasco Incised, limestone-tempered pottery with Orange Incised designs; a similar sand-tempered incised having a Deptford-like paste; Perico Incised; and Perico Linear Punctated. Imprints of woven matting on the flat bottoms of St. Johns, rarely Orange Plain, vessels are only found during the Transitional. Only two stone forms, at the time of writing, seem to be diagnostic. One is an unnamed, basally-notched point (Bullen and Bullen, 1953, Fig. 1, H-K), similar to Eva Basally Notched points, and the other a heavy, adze-like tool such as were found in abundance at Johns Island (Bullen and Bullen, 1950, Fig. 16, p. 37). Among bone tools, a dagger may be diagnostic (Bullen and Bullen, 1950, Fig. 20, a-c, p. 40).

Excepting semi-fiber-tempered plain, linked traits include plain sherds of pottery types listed above. They, of course, are also found in later horizons. As the inception of the Transitional period occurs with the appearance of other than fiber-tempered pottery, Orange Incised and Plain sherds are to be found in deposits exhibiting the in situ change from the Orange to the Transitional period and hence might be considered linked traits in such cases.

Continuous traits include shell gouges, hammers, and picks, bone pins and awls, and sherds of steatite vessels. Large, stemmed points--so typical of the eastern Archaic (east and south of the Appalachian Mountains)--are found in post-Transitional deposits but their relative quantity is greatly reduced.

The Transitional began during the closing phase of the Orange or fiber-tempered period. That period begins, possibly around 2000 B. C. (Bullen, 1956), with a plain or undecorated phase during which vessels had relatively thin walls, rectangular shapes, flat bottoms, and, sometimes, "ears" extending outward from rounded or only slightly flattened lips (Bullen, 1955a). Circular, flat-bottomed vessels are also known.

During the early part of the succeeding decorated phase, Orange Incised and Tick Island Incised vessels are found. As before most vessels are

rectangular in shape and have flat bottoms but some exhibit round mouths. Vessel walls average a little thicker than during the plain phase but rims are still simple rounded or slightly flattened affairs (Bullen, 1955). During the later part of the decorated phase, several traits occur which are of particular interest and which are not found earlier in Florida. Vessels walls become very thick on the average, some shapes are even closer to those of steatite vessels than previously, and wide, decorated rims are found. Some vessels have punctated, horizontal lugs a short distance below the lip (Bullen, n.d.). At about this time, i.e. relatively late during the decorated fiber-tempered continuum, fragments of steatite vessels are found for the first time. This is not an isolated phenomenon as it has occurred in four excavated sites in Florida (Ferguson, 1951, p. 43; Griffin and Smith, 1954, p. 44; Bullen, 1954, p. 46; Bullen, n.d.).

Apparently the earliest stratigraphic indication of the Transitional period is the appearance of St. Johns Incised sherds in the fiber-tempered deposits at South Indian Field. There they first appear at the point where the quantity of fiber-tempered pottery begins to rapidly decrease (Ferguson, 1951, pp. 34-35).

Recently, Carl A. Benson of Orlando made two small stratigraphic tests in the Paw Paw midden on the St. Johns River. He clearly delineated St. Johns I (St. Johns Plain pottery) period deposits lying on top of a decorated fiber-tempered horizon (Benson, 1956). In one test at the point of "transition" was a St. Johns Incised sherd. One sherd hardly makes a period but the stratigraphic relationships are excellent. A slightly different location of Benson's 5-foot square test might have indicated more time for the Transitional period.

Another place where traces of the Transitional were found in a "continuous" stratigraphic column was at the Bolen Bulff site near Gainesville. There 18 inches of pottery producing deposits overlay 18 inches of pre-ceramic Archaic deposits. Of ceramic materials, Orange Incised had the deepest average provenience followed by semi-fiber-tempered plain and incised and Deptford Check Stamped sherds (Bullen, 1958, pp. 22-24).

In Zone 9 at Site J-5 on the banks of the Chattahoochee River, fiber-tempered sherds, St. Johns Incised and Plain sherds, fragments of three steatite vessels, a bone awl, and many chipped stone tools were found together in a narrow occupation zone separated by sterile deposits from both a lower pre-ceramic zone and an upper Deptford period zone (Bullen, 1958c, pp. 337-41). For future reference it should be noted that a heavy adze-like tool was included in the assemblage and that one of the thick, fiber-tempered vessels was basally marked with woven matting and another exhibited a pronounced "heel". This zone has a radiocarbon date of 1200 B. C. (Bullen, 1956). (This date seems about 200 years too early for St. Johns Incised pottery but certainly is of the correct order of magnitude (Bullen, 1958b)).

The above data clearly place the Transitional period as following immediately on the heels of the Orange period. For the other end of this time period, the following is presented as evidence of relationships working upwards in time.

The first site to be mentioned is that of Johns Island on the Gulf Coast where the lowest zones produced St. Johns Incised and Plain, Pasco Incised and Plain pottery in association with heavy, adze-like tools, bone daggers, and some "odd" projectile points (Bullen and Bullen, 1950). Higher levels produced pottery of the Deptford, Weeden Island, and Safety Harbor complexes. The lowest zones at Johns Island should represent people of the Transitional period whose material culture was developing into that of the Early Woodland or Gulf Traditions.

Another Transitional site on the Gulf coast is at Battery Point, Bayport, where material was pumped from just off shore as fill for a park. This pumping cut a trench through part of an underground-submerged site. From the pumped-up material large numbers of basally-notched arrow points (to which type the "odd" ones from Johns Island are related), heavy adze-like tools, St. Johns Incised and Plain, Pasco Incised and Plain, Perico Incised, Punctated, and Linear Punctated, simple-stamped semi-fiber-tempered pottery, and fragments of steatite vessels were collected (Bullen and Bullen, 1953; 1954). All of this material I have assigned to the Transitional. Included in collections from Battery Point were a few sherds, very few, pertaining to the Deptford and Weeden Island periods and a few stemmed points and scrapers which may belong to the Transitional or to the Archaic periods.

In an attempt to delineate this matter further, Gordon C. Coates of St. Petersburg dug many tests at this site. He found, between depths of 18 and 30 inches in tests made in the beach between the high and low tide marks, what appeared to be two zones or layers (Coates, 1955). The upper layer produced basally-notched points; heavy adze-like tools, St. Johns Incised and Plain, Perico Punctated and Plain, and Franklin Plain sherds. The lower layer produced Pasco and Perico Plain, sand-tempered plain, and semi-fiber-tempered plain and simple-stamped sherds. It will be noted that semi-fiber-tempered sherds appear here to antedate St. Johns Incised sherds. That would be a logical sequence but there may be regional variations in such matters. In any case Coates, working under great handicap, has given as our only glimpse of changes during the Transitional period.

Having, I trust, presented enough data to indicate that there was a Transitional period in Florida and having indicated its stratigraphic position and cultural content (at least to some extent) it seems proper to trace some of its distribution in Florida before discussing wider implications.

Simple-stamped semi-fiber-tempered pottery was found above fiber-tempered pottery and below a St. Johns II midden at Amelia Island in extreme northeastern Florida (Bullen and Griffin, 1952) and in collections from the Charlotte Harbor region nearly 300 miles to the southsouthwest (Griffin, 1949; Goggin, 1954; Bullen and Bullen, 1956). Goggin (1954) has, I believe, found semi-fiber-tempered pottery over fiber-tempered pottery in the Angers shell heap in Englewood. Finds of semi-fiber-tempered sherds in north central Florida at Bolen Bluff and on the central Gulf coast at Bayport have been mentioned. St. Johns Incised sherds have been found from Malabar (Rouse, 1951, p. 245) northwesternly some 325 miles to the Georgia line in the Chattahoochee area (Bullen, 1948c) and from Perico Island south of

Tampa Bay (Willey, 1949, pp. 178-79) northeasterly to the Georgia line at Amelia Island (Bullen and Griffin, 1952). Pasco Incised sherds center around Levy and Hernando Counties on the Gulf coast while Perico Incised is found both north and south of Tampa Bay (Willey, 1949, p. 179; Bullen and Bullen, 1953; 1954). Plotting these distributions indicates that while St. Johns Incised is by no means limited to the St. Johns River valley and the land to the east of that valley, it is the only one of these pottery types found in any quantity in that area.

Fragments of steatite vessels occur over the same area as St. Johns Incised pottery and are frequently associated with it although also found earlier in deposits of Orange Incised pottery as well as later (Bullen, 1950, p. 109). Heavy adze-like tools have been found with St. Johns Incised pottery at Bayport, Johns Island, and on the Chattahoochee River. Near Gainesville at two sites they have been found in an ambiguous stratigraphic position in what appear to be very, very late Archaic deposits which probably equate with a time when semi-fiber-tempered pottery was made.

One trait, mentioned earlier as belonging to the Florida Transitional has not been commented on. This is the occurrence of imprints of woven matting on the flat bottoms of some chalky vessels. While Goggin (1952, p. 98) lists this trait for fiber-tempered pottery and illustrates two sherds (Goggin, 1952, Pl. i, B, D) it was not found on fiber-tempered vessels from the South Indian Field, Cotten, or Summer Haven sites and, hence, is not a common trait of the Orange period. Nor was it found in extensive St. Johns I (plain chalky period) deposits recently excavated by Bullen and Sleight near Daytona Beach nor in those tested by Benson at the Paw Paw midden.

In Zone 9 at Site J-5 on the Chattahoochee one flat-bottomed fiber-tempered vessel was so imprinted. Due to the presence of St. Johns Incised sherds, Zone 9 can be clearly dated as terminal fiber-tempered if not Transitional. Recently, the famous Tick Island site was demolished by dragline operations. Benson salvaged 15 mat-imprinted, basal sherds (Benson, 1959, Fig. 1-2) from that site (F. S. M. Cat. Nos. 94798-812). All are of St. Johns paste while one was from a St. Johns Incised vessel. There can be little doubt but that these mat-imprinted bases belong to the Transitional period as here defined.

Interestingly, Griffin and Smith (1955, p. 33) report the finding of a flat, mat-imprinted, basal St. Johns sherd at the Cotten site. They list this sherd as from Level 6 of their Test 3 with a footnote that it and an accompanying St. Johns Plain sherd (in Level 7) are probably intrusive. However, there were no other St. Johns sherds for three levels above while in the fourth level above St. Johns Check Stamped sherds abounded. I am inclined to think the mat-imprinted sherd was in situ and that it recorded the first (and nearly only) evidence of the Transitional period at the Cotton site. The steatite sherd in Level 5 of the same test would not argue otherwise. Unfortunately for this interpretation, Griffin and Smith have listed a Halifax Check Stamped sherd from Level 8! If this last sherd should prove to be Deptford Check Stamped, a not unlikely possibility, the

situation would not appear too strange albeit remarkably deep for a check-stamped sherd.

At the Southeastern Archaeological Conference at Chapel Hill in 1958, Sears pointed out the similarity in some early St. Johns Plain pottery to that called Tchefuncte Plain in Louisiana. Subsequently, we have seen sherds from sites a short distance west of Gainesville which were closer to Tchefuncte Plain than to St. Johns Plain. Sears, if I understood him correctly, suggested that this St. Johns-Tchefuncte Plain might be considered as a horizon style and probably represented the beginnings of the Gulf Tradition. Close similarities between St. Johns Incised and Tchefuncte Incised would support this view.

We thus have in the transitional Period of Florida, which started as the Orange period was drawing to a close, a collection of traits many of which are of local Florida importance but some of which--steatite vessels, imprints of woven mats on flat-bottomed vessels, and the similarities in Tchefuncte and early St. Johns ceramics--may be traced over extremely wide areas.

During the Transitional period the way of life of Floridians was drastically modified. In many cases the large shell heaps were abandoned only to be reoccupied, sometimes, many centuries later. At the beginning only one kind of pottery was made--fiber-tempered. By the close there were at least five, if not six, ceramic centers in Florida. In the north Deptford ceramics were well entrenched but not for long. In the east the St. Johns I period of plain chalky pottery had started. On the western part of the peninsula the long tradition of Pasco limestone-tempered pottery had started. Further south, near Lake Okeechobee, unique Belle Glades ceramics were made. Still further south we have the beginnings of the Glade culture with a hard, sand-tempered paste.

Clearly this was a dynamic period which must have reflected intense cultural changes elsewhere. I feel that what we see in the Florida Transitional are the reactions or responses of the inhabitants of Florida, expressed in pottery, tools, and art forms, to kaleidoscopic influences from the north and west. Influences which in those areas congealed into what we call Early Woodland.

Implicit in this theory is the proposition that the fiber-tempered pottery of the southeast is the earliest pottery in the United States and also that all the influences were not unidirectional. Present C-14 data indicate that the beginning of the fiber-tempered period in Florida was around 2000 B. C. (based on a 1750 B. C. date for the middle of a plain fiber-tempered deposit on the Georgia coast) and ended in Florida around 1000 B. C. (Bullen, 1958b). In other words the close of the Orange period occurred at approximately the same date as that suggested in the north for the beginnings of pottery (one New York State date to the contrary).

There are several lines of reasoning--special pleading if you prefer--which suggest the above correlation to be reasonable. We have mentioned the similarities in early St. Johns sherds and those of the early Tchefuncte period in Louisiana. If this is correct and if the rest of the pottery of

the lower Mississippi valley is post-Tchefuncte a priority of fiber-tempered pottery would seem evident.

This is not an entirely new idea as J. B. Griffin wrote in 1945 (p. 237) "Another point of comparison between Tchefuncte and Adena pottery is the Montgomery Incised pottery which also appears in late Adena. This not only has an analog in Tchefuncte Incised but also in Orange Incised from the St. John's area. This later type I personally believe is the prototype of many of the designs of Tchefuncte Incised." Spread of designs to the west from Orange Incised via St. Johns Incised during the Transitional period would seem a possibility.

Another trait which may have chronological import is the imprinting of matting, found on the flat bases of some vessels made during the Transitional period in Florida. This is in no sense a decoration but probably indicated the bases of these vessels were formed on an old piece of matting. However, it is evidence of a technique of manufacture and hence cultural parallels might be expected to belong to the same period of time even if separated by hundred of miles.

I understand some Baumer, and maybe Fayette Thick, vessels have flat bottoms which are small but sometimes marked with imprints of mats (Cole, 1951, p. 195). Similar imprints are found on the bottoms of Marcey Creek steatite-tempered vessels (Manson, 1946), on pottery of the Fourche Maline sites in Oklahoma (Bell and Baerreis, 1951, p. 24 and Pl. 3), and on pottery from the Ozark Bluff dweller deposits (Dellinger and Dickinson, 1942). All of these represent the earliest or nearly the earliest pottery in their respective areas while this trait is post-Orange in Florida.

One more trait, steatite vessels, remains to be discussed. This is difficult, probably because of the lack of data with which to put steatite vessels into their proper temporal span. There are two arguments involved. One is that steatite vessels have a clear priority over ceramic containers in the north (Manson, 1946). That is they are late Archaic in date although some will admit their use and manufacture may have lasted over into Early Woodland ceramic times. As the fiber-tempered period of Florida is also late Archaic in date, the presence of steatite vessel fragments in some quantities in the latter part of the Orange period should cause no trouble if the priority of fiber-tempered pottery over that of the rest of eastern United States is granted.

However, the problem is complicated by obvious similarities in the shapes of many of the vessels of both kinds which has, in the past, led people to believe fiber-tempered vessels were made as copies of steatite vessels. I would hazard the opposite view.

In the brief survey of the ceramics of the Orange period presented earlier I tried to show that as we progressed later in time fiber-tempered vessels more nearly approached steatite vessel characteristics. Here I wish to point out that some of the steatite vessels from Poverty Point (Webb, 1944, p. 31) have wide rims with incised decoration which can be duplicated on wide Orange Incised rims. Also, it is not until such wide rims occur in the history of fiber-tempered ceramics that steatite sherds

are found in Orange period deposits.

If steatite vessels preceded fiber-tempered containers in the southeast it is extremely strange fragments of them were not found by either Claflin (1931) or Fairbanks (1942) at Stallings Island or by Miller (1949) at Lake Spring. Steatite net sinkers are apparently common and possibly preceramic (Miller, 1949, p. 40) but not fragments of steatite vessels.

Reports of work done in the Pickwick, Norris, and Wheeler Basins do not present convincing data of such a priority. In the Pickwick Basin a steatite vessel was found with Burial 90 at a depth of three feet at the Perry site but pottery seems to have been found as deep (Webb and DeJarnette, 1942, pp. 66, 78). For the O'Neal site a sandstone sherd is listed (Webb and DeJarnette, 1942, p. 141) but no provenience given. For a third site for which stone bowl fragments are listed, the Bluff Creek site, this trait is shown on a chronological diagram as above the "No Pottery" line (Webb and DeJarnette, 1942, p. 131).

In the Norris Basin steatite sherds are listed for two sites: Saltpeter Cave which also produced cord-marked, gravel-tempered pottery (Webb, 1938, p. 30) and Bullock Cave again with cord-marked, gravel-tempered pottery (Webb, 1938, p. 129). In the Wheeler Basin, Webb (1939, p. 83) lists a steatite vessel fragment for the general diggings at site MgV2. Non-fiber-tempered pottery also came from this site.

We have to go further upstream to the Gunterville Basin for any stratigraphic evidence. At the Stephenson site, two culture levels separated by a sterile zone were found. In the upper level were limestone-, shell-, and some sandstone-tempered sherds. In the "sterile" zone were a Long Branch Fabric Marked sherd and 9 projectile points while in the very top of the underlying lower zone ("top of clay loam") were steatite bowl fragments, fire-cracked river pebbles, flint workshop debris, and 12 projectile points (Webb and Wilder, 1951, pp. 161-64). These projectile points were identical as to type and reasonably so as to relative quantity to those from the "sterile" zone and from the higher midden. Hence, it would seem very little time was indicated by the "sterile" zone.

In part of the Benson site two cultural zones were present. The lower one produced a restorable steatite vessel, a bone awl, and a limestone hoe while the upper zone supplied the usual limestone-, sand-, and shell-tempered pottery (Webb and Wilder, 1951, p. 192).

The above has been pointed out as evidence of the priority of steatite bowls over those made of clay and it does indicate a priority of steatite over wares other than fiber-tempered ones. As fiber-tempered pottery is believed to be older than sand- and limestone-tempered pottery in the Gunterville Basin (Heimlich, 1952, pp. 41-42) and would be expected to be found immediately below such pottery, where steatite vessels fragments were found, a correlation of steatite vessels with a time equal to that of the late fiber-tempered pottery period is likely.

At the Flint River site many steatite and sandstone bowls were found with burials and as fragments in midden debris. Examination of the

published data indicates the midden fragments concentrated in Zone C which was considered "definitely a pre-pottery horizon". In the pottery summary, however, 1032 sherds are shown for Zone C and 95 for Zone D (Webb and DeJarnette, 1948, pp. 45, 35, 80)! Dunlevy wrote "Very few fiber-tempered sherds occurred at the site and these were widely scattered vertically and horizontally" (Webb and DeJarnette, 1948, p. 71). This site does not even indicate steatite vessels to be older than sand- and limestone-tempered pottery but that they were in use at the same time if sherds in Zones C and D are accepted as evidence.

A similar picture emerges from data presented for the Whitesburg Bridge site where steatite and sandstone bowls were also abundant. There bowl fragments concentrated in Zones D and D&E (Webb and DeJarnette, 1948, p. 31). Again only a small amount of fiber-tempered pottery was present. In Test Block 3 Wheeler Plain dominated the ceramics of Zone C with 20 sherds but Long Branch Fabric Marked was also represented by 6 sherds. Also, in Test Blocks 1 and 2, where Zone C was not represented, Long Branch Fabric Marked accounted for 15 of the 21 sherds reported for Zone D (Webb and DeJarnette, 1948, p. 38). As sherds are indicated for Zone D in one Test Block I cannot see any great antiquity for steatite fragments reported for the same zone.

At the Columbus City Landing site, 6 steatite vessel fragments are listed for Unit I and 13 for Unit II, both from "general digging" from which limestone-, sand-, and shell-tempered pottery are also listed (Webb and Wilder, 1951, pp. 116, 130). The quantity of fragments is noteworthy and the data suggests the use of stone containers after the introduction of sand- and limestone-tempered vessels.

It should be remembered that steatite was used for bannerstones (Bullen, 1955a, Table 1, p. 4) and probably for net-sinkers (Miller, 1949, p. 40) before the manufacture of fiber-tempered vessels started in the southeast. All that was needed was the idea of using this material for cooking vessels. Knowledge of cooking vessels of clay may have worked northward during the Orange period to stimulate the manufacture of steatite vessels by Indians already familiar with steatite quarries and the working of that material.

Of course, this manufacture may have originated in the north and have gradually worked southward to appear in Georgia and Alabama (the nearest sources to Florida) in late Orange times. This is entirely possible but it is not supported by radiocarbon dates for steatite vessels found in the Orient complex on Long Island which has been dated as around 1000 B. C. (Ritchie, 1959, p. 95). This date does not entirely close the door on a northern origin, however, as Orient may have been a relatively late "steatite vessel culture."

I am forced to correlate the manufacture of steatite vessels with the late Orange period of Florida. As such manufacture must have started before the close of that period around 1000 B. C., the Florida evidence suggests steatite vessel manufacture was a going concern around 1250 B. C., a date which, I believe, will not offend my northern friends. Data from the Tennessee River valley suggests steatite vessels were still being

used in early Woodland times. Some data from the northeast would argue similarly. If this reasoning is acceptable, steatite vessels are another trait whose distribution in time and space indicates fiber-tempered pottery is the earliest in the United States.

My reconstruction of the dynamics of the Florida Transitional period would be something like this. We start with a fiber-tempered pottery period which covered most of the State but which was heavily concentrated in the St. Johns River valley. Communication with the north was active as evidenced by the finding of steatite vessel fragments. Influences from the north, probably from Georgia to the northeast but undoubtedly originating many, many miles away, brought the ideas of sand-tempering and paddled, simple-stamped surfaces. These new techniques did not make a great impression in the St. Johns River valley but they were more successful in central and southeastern Florida where the population was less dense and, apparently, less conservative. Next to appear were those influences which resulted in the St. Johns tradition of chalky pottery. We have always considered this an indigenous development in the St. Johns River valley (Goddin, 1949, p. 24) but the similarity recently pointed out by Sears between this pottery and Tchefuncte Plain (and Incised) suggests the possibility it may be a response to influences across the Gulf coastal plain. In either case fiber-tempered pottery ceased to be made throughout the State and the Transitional period held full sway.

Without a series of radiocarbon dates it is futile to try to trace directions of influences but one thing is certain. The way of life of the inhabitants changed radically after the introduction of this pottery. The transferal of incised designs from fiber-tempered to chalky and other pastes does not indicate an invasion and elimination of earlier inhabitants. People moved about more, they left many of their old sites but they carried their designs with them. The finding in a very restricted area of a narrow zone on the banks of the Chattahoochee River of fragments from at least nine containers--representing origin in three different locations--indicates much movement of people, at least of traders.

The introduction of heavy, adze-like tools at this time makes one wonder. Could these possibly be primitive agricultural implements? Could influences, which later became what we call Early Woodland, have introduced horticulture? Or was it the trait of digging roots that was introduced during the Transitional?

In any event, material culture changed rapidly between 1000 and 500 B. C. When things settled down the old Archaic culture had been greatly modified, Early Woodland forms and the Gulf Tradition had begun, and regionalism, best exemplified by the Glades culture, started in Florida.

There are many ideas in this article which will, I'm sure, bother many of my colleagues. As new data is presented, I will revise my ideas about the Transitional period of Florida as I have every year for the past six years.

Middle Woodland Manifestations in North Georgia by Lewis Larsen.

In the past it has been the practice to generalize the Woodland ceramics in Georgia as belonging either in the Deptford or the Swift Creek and Napier series, depending upon the predominate stamp design utilized. Checked stamping has been equated with Deptford, and complicated stamping has been categorized as either Swift Creek or Napier, depending upon whether a curvilinear or angular stamp motif was used. Almost without exception, this generalization has carried with it temporal implications. The Deptford ceramics are assigned to the Early Woodland Period, while the Swift Creek-Napier ceramics are placed in the Middle Woodland Period.

I have not the slightest intention of getting involved in the confusion which surrounds the clarification of the terms Deptford, Swift Creek, or Napier. With the possible exception of Swift Creek, these have become equivocal designations awaiting a definition that will reconcile the multiplicity of local interpretations.

In this paper, I wish only to comment briefly on something concerning the Woodland Period in north Georgia and adjacent areas, something which has occurred to me over the last few years while examining the literature and surface collections from this region.

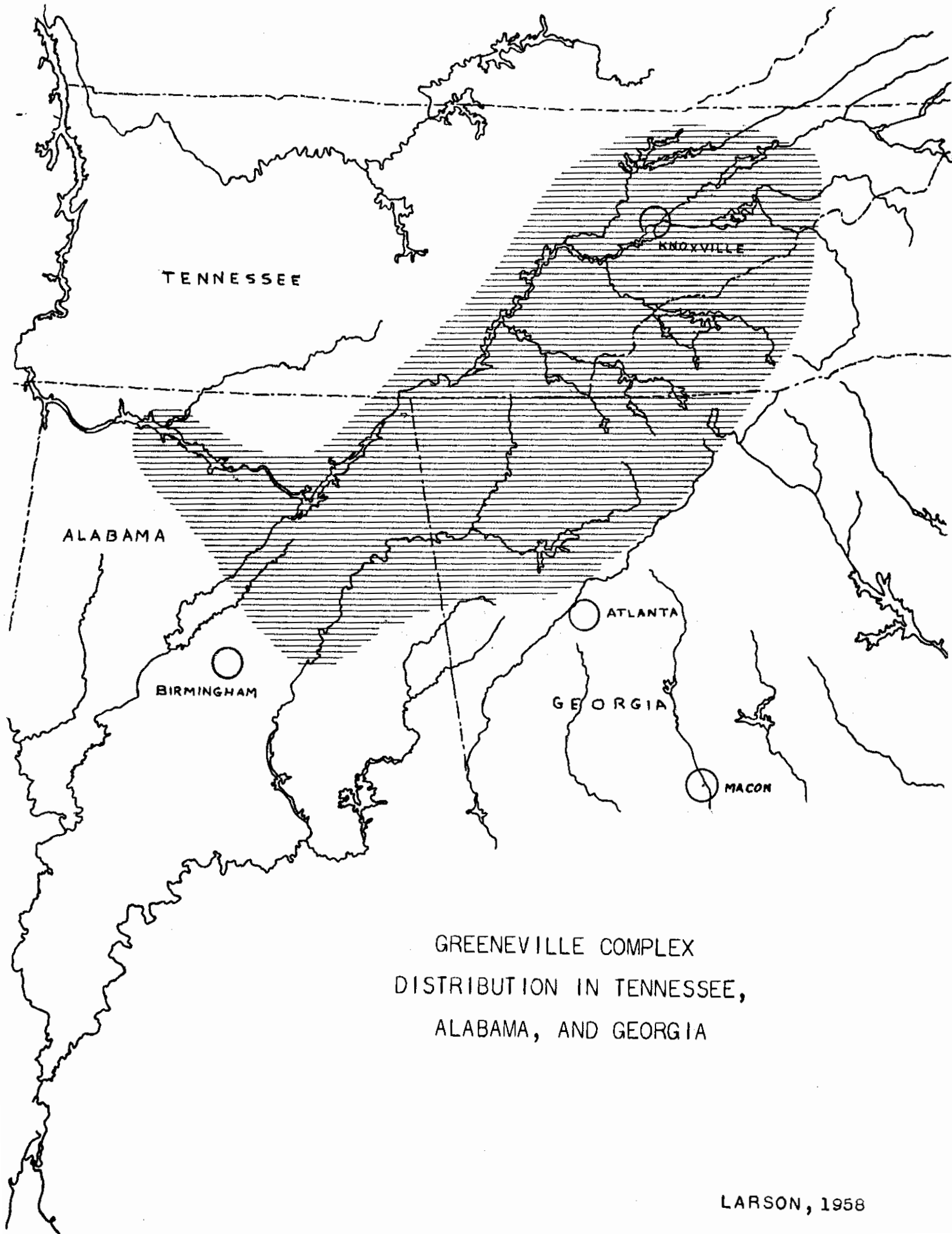
I would like to suggest that there is a fairly uniform cultural complex occupying a wide area in north Georgia along the Etowah River Drainage, extending west to central Alabama, and north to the eastern reaches of the Tennessee River. (Fig. 1) This cultural complex can be tentatively defined in terms of its artifactual content. It includes limestone or sand-tempered conoidal jars with slightly flaring rims, often with a small rim fold, and/or flat bases with mamiform feet. The vessels are, for the most part, a plain ware; but checked stamped and fabric impressed treatment are common, while other decorative techniques occur rarely.

A specific projectile point type is found with this ceramic assemblage. It is a medium sized triangular point averaging 60-70 mm. in length and 20-25mm. in width, with a straight to concave base. Many of the points exhibit parallel sides for approximately seven tenths of their total length. This point has been called the Greeneville Point by Kneberg (1957, p. 64) and that name has been retained in this paper.

Ground stone artifacts are represented by carefully ground and polished greenstone celts. These celts are circular in cross section, and have a tapering poll. In some specimens the poll terminates in a blunt point. Along with the celts are found roughly chipped stone implements that can best be described as digging tools or hoes. They have been worked from tabular pieces of stone, commonly greenstone, chipped into rectangular shapes. They often exhibit a slight polish on the bit end.

This list of artifacts types could no doubt be expanded, if we had data available from more excavated sites. Presently, this information is so limited that it is impossible to offer a more comprehensive list.

The sites of this complex (I will refer to it as the complex throughout



GREENEVILLE COMPLEX
DISTRIBUTION IN TENNESSEE,
ALABAMA, AND GEORGIA

| | | | |
|--|----------------------------------|---------------------------------------|---------------------------------|
| | NORTHEAST AND CENTRAL ALABAMA | NORTH GEORGIA | EASTERN TENNESSEE |
| EARLY MISSISSIPPI | | ETOWAH WOODSTOCK NAPIER | HIWASSEE ISLAND HAMILTON |
| MIDDLE WOODLAND | WRIGHT | CARTERSVILLE | CANDY CREEK |
| EARLY WOODLAND | LONG BRANCH | KELLOG | WATTS BAR |
| | S I M P L E S T A M P I N G | | |
| | A R | C H A | I C |
| THE POSITION OF THE GREENVILLE COMPLEX WITH RESPECT TO THE ESTABLISHED LOCAL SEQUENCES. THE POSITION OF THE COMPLEX IS INDICATED BY SHADED AREA. | | | |
| | | | LARSON, 1958 |

the paper) from which we have surface collections give us some information on the settlement pattern. They are, for the most part, located on the alluvial terraces of large streams or the smaller river systems. The sites are not extensive when compared to later Mississippian sites; the largest one observed covered some ten to twelve acres. For the most part, there is a midden concentration which indicates a lengthy occupation and/or a sedentary one. The sites are fairly numerous within each area surveyed; and seemingly would indicate a population of some density, if all the sites prove to be more or less contemporary.

The cultural complex I have just described had, of course, not gone unnoticed by others. It has been, however, defined only in terms of local sequences and can be identified only by a profusion of names within these sequences. The variations in some elements of the complex, such as ceramic tempering or the popularity of one or another pottery type, permit its segregation in the several localities where it is found.

There are a number of the local manifestations of the complex which we can examine briefly. The first is centered in Talladega County, Alabama, along Talladega and Tallaseehatchee Creeks. One site (1-Ta-9) from which we have an excellent surface collection is also a single component site. Here we have two limestone tempered pottery types comprising over 98 percent of the total sherd count. They are Mulberry Creek Plain (74 percent) and Wright Check Stamped (25 percent). Associated with these sherds were 49 projectile points of which 40, or 82 percent, of the total can be classified as the Greeneville Point type. Other artifacts included the Greenstone celt with a tapering poll and greenstone hoes.

A site reported by Webb and DeJarnette (1942, pp. 173-178) in Pickwick Basin parallels the Talladega County situation. The site is the Wright Village site (Lu^V65). Two pottery types make up 81 percent of the total sherds, Mulberry Creek Plain (50 percent) and Wright Check Stamped (34 percent) (Haag, 1942, pp. 555-556). Long Branch Fabric Marked, Pickwick Complicated Stamped, and Bluff Creek Simple Stamped, (all limestone tempered wares), each represent 5 percent of the total sherds. Of the projectile points, 55 percent can be recognized as the Greeneville type. (Webb and DeJarnette, 1942, p. 176, pl. 207). Greenstone hoes and celts were also present.

The excavated Camp Creek site in northeastern Tennessee (Lewis and Kneberg, 1957, pp. 1-48) presents a slightly different picture from the two Alabama sites. Here there is an almost complete absence of plain or checked stamped pottery. Instead, the predominate types are Long Branch Fabric Marked, a limestone tempered ware, and Watts Bar Fabric Marked, a coarse sand tempered ware. These two types, identical except in the matter of tempering, account for 85 percent of the total sherds.

Of all identified projectile points excavated at Camp Creek, 59 percent were classified as belonging to the Greeneville type. The tapered polled celt and chipped stone hoes occur also at the site.

The north Georgia sites repeat the situation which had been described for Alabama and Tennessee. Without detailing them, it can be said that on

the Georgia sites there is a higher percentage of fabric marked sherds than is found on the Alabama sites, and all of the pottery is coarse sand tempered. The Greeneville Point, the tapered polled celt, and the chipped hoes are the most common stone artifacts.

There are one or two factors which we must consider before it is possible to sharply delineate the complex. The first of these is the internal differences within the complex. The ceramic diversities are obvious. The supposition for the disparities in the pottery is that we are dealing with temporal changes and that the popularity of one type of surface treatment, i.e. plain, fabric impressed or check stamping, at a particular site is the result of its occupancy being before or after another site where a different surface treatment is in vogue. This supposition is, in fact, borne out by the stratigraphic data from the Gunterville Basin. (Heimlich, 1952, Pl. 9). At excavated sites in this area, there is a very high percentage of Long Branch Fabric Marked in the earlier occupations which decreases with the passage of time. Corresponding to the decline of Long Branch Fabric Marked is an increase in the popularity of Mulberry Creek Plain and Wright Checked Stamped. Stratigraphic data from other areas where the complex occurs is lacking, but there is no reason to suppose that the same pattern would not hold true.

The differences in the tempering which characterize the pottery of the areas embraced by the complex can, I think, be easily explained on the basis of conservative manufacturing techniques. In Alabama crushed limestone, in Georgia coarse sand, and in eastern Tennessee both tempering materials were utilized, reflecting the established manufacturing methods which were locally ingrained, the availability of raw materials, and in the case of eastern Tennessee, its position between the two tempering techniques.

As a whole the vessel shapes are pretty consistent. I suspect, however, that the simple, conoidal, open mouth jar is the earliest form, and it is succeeded, though not replaced, by jars with a small rim fold and flattened bases with mamiform legs.

Other aspects of the complex are fairly uniform and remain more or less unchanged in time. The projectile point type, the celt type, and the characteristic chipped stone digging implements remain ubiquitous and unmodified throughout the duration of the complex.

The second factor necessary to discuss before we complete our examination of the complex is its place in the Southeastern chronological scheme. It certainly can be assigned to the Woodland Period on the basis of its artifact typology and the stratigraphic position of the complex where it has been found in excavated sites. We should, nevertheless, be able to position it with greater exactness within this period and more easily relate the component cultural manifestations which it includes.

On many of the sites where the complex is encountered there are some sherds with Swift Creek-like stamping. They can be assigned to either the Swift Creek or Pickwick Complicated Stamped wares. These sherds are not present in large quantities. Where there is stratigraphic evidence such as Russell Cave, Alabama, it would seem that we have the appearance of

Swift Creek II or Pickwick Complicated Stamped pottery while checked stamping was still the primary surface decoration, but as we move up in time there is a tendency for the Swift Creek type to supersede the checked stamped (Broyles, 1958, p. 7). A similar situation exists in the Guntersville Basin (Heimlich, 1952, Pl. 9).

In eastern Tennessee we see the complex in its earlier fabric impressed stages manifest in the Watts Bar Focus and terminating in the Candy Creek Focus after the appearance of Swift Creek II pottery (Lewis and Kneberg, 1946, 5-8).

In north Georgia the complex appears in the Kellog and succeeding Cartersville Periods. (Caldwell, 1950, p. 17-18). Swift Creek II sherds appear in a number of surface collections from the area, so we may assume that, as in Alabama and Tennessee, the Swift Creek ceramics show up during the later part of the Cartersville Period.

The Copens burial manifestations along the Tennessee River in Alabama can probably be placed in the later part of the development of the complex.

It is somewhat more difficult to determine the earlier chronological boundaries of the complex. It seems to be superimposed on the sand tempered ceramics of northern and central Alabama. In north Georgia it appears to begin in the Kellog Period, while the data from eastern Tennessee suggests that it has its beginning in the Watts Bar Focus. In any event, I would suggest that it is recognizable as a cultural entity when simple stamping was on the decline.

The complex then apparently can be fitted into the Southeastern chronology during the Middle Woodland development, depending, of course, on whose chronological scheme one happens to be following at the moment (e.g. Sears, 1956, Chart IV). It may well be that the complex has its beginning during the final stages of the Early Woodland, but it reaches its climax with the intrusion of Swift Creek ceramics just before the rise of the Early Mississippian cultures.

It is my contention that there is enough uniformity in the complex, both in time and space, to permit its identification by a name which has meaning and application beyond the local situation. Such a name would link together the local variations, while at the same time take cognizance of the complex as a valid archaeological entity. I have chosen the name Greeneville for the complex because the name has been applied in the literature to the projectile point type which is a distinguishing element in the assemblage.

To summarize briefly, it can be stated that over a wide area, including north Georgia, eastern Tennessee, and north and central Alabama we have what I feel to be an archaeological unit which can be defined beyond the local situation. This unit, the Greeneville Complex, embraces limestone and coarse sand tempered conoidal jars with open mouths. In its earlier stages fabric impressed surface treatment of pottery is standard, but later check stamping assumes importance along with mamiform feet on flattened bases. Associated in the complex with these ceramics are the

Greeneville Point, tapered polished stone celts, and chipped stone digging tools. Chronologically the complex appears to belong in the Middle Woodland Period. Its beginnings are probably found in the simple stamped cultures of the Early Woodland, while it ends with the appearance of the Early Mississippian cultures.

"The Burial Mound Tradition." Stephen Williams.

A tape recording was not made of the Saturday morning session and a copy of Dr. Williams' paper, we regret, is not available. The conference was attended by the following people:

| | |
|-----------------------------------|-------------------------------------|
| Bettye Broyles | Illinois State Museum |
| Mr. and Mrs. Ripley Bullen | Florida State Museum |
| James B. Bullitt | University of North Carolina |
| Douglas Byers | Phillips Academy, Andover |
| Louis Caywood | Ocmulgee National Park |
| David Chase | University of Georgia |
| Mr. and Mrs. Joffre L. Coe | University of North Carolina |
| Cecil Cook | Georgia Historical Commission |
| Carolyn Corbin | University of North Carolina |
| Clemens DeBaillon | University of Georgia |
| David DeJarnette | University of Alabama |
| Bill Fisher | University of Alabama |
| James B. Griffin | University of Michigan |
| John W. Griffin | National Park Service |
| A. T. Hansen | University of Alabama |
| Harold Huscher | Smithsonian Institution |
| Fred Johnson | Phillips Academy, Andover |
| James Kellar | University of Georgia |
| Arthur Kelly | University of Georgia |
| Madeline Kneberg | University of Tennessee |
| Lewis Larson | Georgia Historical Commission |
| T. M. N. Lewis | University of Tennessee |
| Dick Marshall | Macon Youth Museum |
| William Massey | University of Florida |
| Edward V. McMichael | University of Georgia |
| Dr. and Mrs. James McMillan | Wilmington, North Carolina |
| Carl Miller | Smithsonian Institution |
| Jackson Moore, Jr. | Ft. Frederica, N. P. S. |
| Stuart Neitzel | University of Georgia |
| Roger Perkins | University of Tennessee |
| Mr. and Mrs. David Phelps | Town Creek Indian Mound |
| Mr. and Mrs. Robert Rands | University of Mississippi |
| Frank Schnell | Columbus Museum |
| William Sears | Florida State Museum |
| Mr. and Mrs. Stanley South | Brunswick Town Historic Site |
| William S. Tarlton | N. C. Dept. of Archives and History |
| Laura Thompson | University of North Carolina |
| Bruce Trickey | Geigy Chemical Corporation |
| John Walker | University of Kentucky |
| Robert Wauchope | Tulane University |
| Stephen Williams | Peabody Museum, Harvard |
| John Witthoft | Pennsylvania State Museum |

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