

PALEOINDIAN/EARLY ARCHAIC PERIOD¹

Samuel O. McGahey²

Introduction

Over the past few years, a serious effort has been made to draw together all available early lithic data from Mississippi in order to form the basis for "historical contexts" for the state preservation plan. The archaeological contexts are defined by geographical and chronological dimensions. The chronological dimensions are those that are generally accepted by the archaeological community. Since, in the view of the writer, Paleoindian and Early Archaic are a continuum and the end of this continuum is recognized abruptly with the onset of the Middle Archaic, it has been decided to treat them as a unit. This unit is somewhat arbitrarily divided into five subperiods for the study of broad general trends in artifact if not people distribution. The geographical dimensions are the ten physiographic regions generally recognized by the natural scientists who study plant and animal communities. They are: the Yazoo Basin, the Loess Hills, the North Central Hills, the Flatwoods, the Pontotoc Ridge, the Black Prairies, the Tombigbee Hills, the Jackson Prairie, the Longleaf Pine Belt, and the Coastal Pine Meadows (fig. 1).

While the ideal is to discuss the contexts as a physiographic region within a given archaeological period, it has not been possible to attain this goal because of a lack of data in certain areas and the ten physiographic regions have been consolidated into four for the present. Nevertheless enough data has been accumulated that certain regional differences are obvious, and this is the primary reason for this paper.

The data is presented below in the form of histograms representing the five subperiods (fig. 2). The periods are defined based on projectile point morphology/typology as follows: Period one - fluted points, including Clovis, Cumberland, and Redstone; Period two - unfluted, but supposedly pre-Dalton forms including Quad, Beaver Lake, Coldwater, Hinds, and Arkabutla; Period three - Dalton including Lanceolate and

¹Cautionary Note: Numbers presented in the text and tables should be viewed with appropriate caution. Site counts, component counts, etc., are approximations at best. Numerical values are included only for the purpose of illustrating general trends. In that this project has been ongoing for over 5 years, they are also somewhat out of date. An accurate reporting will be produced from the recently computerized data base which is currently being reviewed and updated. Hopefully, a more workable inventory will be accessible in the near future. To be included within the Comprehensive State Planning document for the State of Mississippi and submitted to the National Park Service. Not for Citation.

²A form of this paper has been published under the title "Paleoindian and Early Archaic Data from Mississippi" pp. 354-384, in the 1996 book *The Paleoindian and Early Archaic Southeast*, edited by D.G. Anderson and K.S. Sassaman, University of Alabama Press.

Hardaway-like and San Patrice-like forms, some of which are side-notched; Period four - side notched forms such as Big Sandy I, Cache River and Greenbrier; Period five includes corner notched and certain corner removed forms, which like the points of preceding periods, are basally ground. Period five includes Jude, Decatur, Pine Tree, Lost Lake, Hardin, Plevna, Stilwell, and unnamed variants and similar forms (figs. 3 through 6 illustrate typical diagnostic specimens from the four regions). The counts in individual columns of the histograms represent numbers of recorded projectile points.

There are other diagnostics within the state that represent all or parts of the Paleoindian - Early Archaic period. For various reasons they are not included in this scheme. Scottsbluff and Bifurcate tradition points, for instance, are so poorly represented as to be insignificant for statistical purposes and represent traditions that are basically foreign to the state. Unifaces are generally indicative of an early lithic time level but cannot with any degree of certainty be divided into this chronological scheme. The "Dalton Adze" may very well not be restricted to the Dalton period in Mississippi and notched unifaces such as the Waller knife and Edgefield scraper have not been tied down specifically enough to be included as chronological indicators within the scheme of the subperiods presented here (see Lauro 1982 and Geiger and Brown 1983). Several examples are illustrated in fig. 7 for those interested in regional comparison, however.

The counts represent data accumulated over a period of ca. 25 years as private collections were encountered during fieldwork in various parts of the state, or as they were brought in by curious owners. As many Paleo - Early Archaic specimens were recorded in as much detail as was possible. As this part of the collections was usually a very minor part, it was possible to record all specimens in most cases, the usual techniques being careful outline drawings usually with a flake scar pattern and notes as to materials, heat treating, grinding, other pertinent physical characteristics, and the provenience as precisely as could be determined. Other specimens were added to the counts by systematically reviewing the literature for the region.

Discussion

The four regions are discussed below. Assessments are made of what is known for each in terms of chronology and settlement and subsistence patterns. In the concluding sections, "Issues of Relevance for Further Research" recommendations are made concerning priorities for additional work.

Yazoo Basin

Much of the modern era archaeology has been conducted under the assumption that there were no early cultural remains to be found in the

Yazoo Basin, or the rest of the lower Mississippi alluvial valley (Phillips, Ford and Griffin 1951:295-296). It was assumed that river action had either eroded away such material or that it was covered with many feet of overburden. Brain (1970:104-106) presented the evidence that corrected this assumption. His artifactual evidence is predominantly of the Late Paleo-Indian Period. The geological evidence as presented by Saucier (1971) delineates those portions of the region likely to produce Paleo-Indian and Early Archaic remains. The Yazoo Basin has two braided stream surfaces that are Pleistocene remnants (fig. 8). It is within those areas that the discovery of essentially undisturbed Paleo-Indian - Early Archaic deposits is to be anticipated. The artifacts of that period found outside the braided stream areas are few and are probably there because of prehistoric collecting by individuals who crossed the braided stream areas and returned with the artifacts to one of the more recent meander belts of the region.

The forces of nature in the form of river meander belt formation have neatly divided these study units in two with an eastern remnant hugging the valley escarpment between the approximate latitudes of Sledge and a point about ten miles south of Greenwood and a western remnant that actually consists of four adjacent remnants separated by more recent deposits. The western remnant includes parts of Washington, Bolivar, and Sunflower counties, while the eastern remnant extends into parts of Panola, Quitman, Leflore, Carroll, Grenada, and Tallahatchie counties.

Paleo-Indian components are confirmed at nine sites on the western remnant surface and at nine on the eastern surface. Since no concerted efforts have been made to find sites of this age in the Yazoo Basin and especially on the eastern remnant surface, it is assumed many more actually exist.

Paleo-Indian is defined in various ways, depending on the point of view of the particular scholar. Jeffrey Brain's (1971) scheme that divides the period into four eras and includes most if not all of what had previously been termed Early Archaic is a logical approach when the evidence at hand, namely the lithic technology, is considered. There is a definite continuum of development in flaked stone technology through the Early Archaic with typological separation of bifaces being a near impossibility in many cases. Most of the unifaces in use in the Paleo-Indian period could also be lost in Early Archaic (notched biface complexes). Just as there is continuity between Paleo-Indian and Early Archaic, there is a definite break in the continuum between Early Archaic and Middle Archaic with quality flaked stone technology taking a definite turn for the worse at the beginning of the Middle Archaic. While we agree with Brain on the essential unity of the early lithic remains of the area, the purposes of this project are better served over all for the division between Paleo-Indian and Early Archaic to be made with Dalton, which is considered here to be terminal Paleo-Indian. Other than Brain's

1970 article, the only effort directed to understanding this period is the braided stream surface survey of Connaway (1988:43-69).

Currently, the recorded data for both braided stream surfaces consists of 18 sites and 89 diagnostic artifacts for the Paleo-Indian period and 159 diagnostics and 19 sites for the Early Archaic period. A few other items such as steeply chipped unifaces and smooth sided adzes could belong with either period. Unfortunately most of the material cannot be precisely provenienced. While precise proveniences are a problem, most of the material can be attributed to one or the other braided surfaces.

The fact that such a separation can be made provides an interesting opportunity for comparison. There appear to be major differences in the distribution of diagnostic artifacts between the two surfaces. (Although with the small number of sites involved, this could be the result of sample error.) From a list of diagnostic points numbering sixteen types of the Paleo-Indian and Early Archaic periods, only seven occur on both surfaces (fig. 9) and closer comparison is even more interesting. To set the stage for comparison, it should be stated that we subscribe to the theory that there was basically one projectile point type at any one time in the earlier end of the time spectrum in the southeast. While there is no doubt that different kinds of named bifaces were used for different functions at least part of the time and were subjected to different types of resharpening, it is felt that these differences are mainly correlated with time and do not represent the various functions performed by one group at one time. The classified diagnostic types in fig. 9 are listed from top to bottom in what is felt to be their chronological order, based on their morphological similarities and the stratigraphy at the Hester site (22Mo569).

It is interesting to note that all of the earlier three point types, Clovis, Quad, and Beaver Lake are from the eastern surface and that with Coldwater, the fourth type, sixteen are from the eastern surface while only one is from the west. Moving down the list chronologically, Dalton points are several times more numerous on the western surface than on the eastern surface and a close examination of the individual points reveals one outstanding difference between the eastern and western groups: Most of the beveled Daltons (fifteen of seventeen) from the west are right hand beveled (fig. 10), a trait they have in common with points from northeast Arkansas. Although only one Dalton point from the eastern surface is beveled (on the left) Dalton points from the nearby hills to the east are almost invariably left hand beveled when they are resharpened by a beveling technique.

Several of the eastern surface types of the Early Archaic Period are lacking in the west. These are Decatur, Jude, Stilwell, a point which is being termed a diagonal side notched, and Greenbrier. And the Pine Tree point, although noted on the western surface is much more plentiful on

the eastern surface. Conversely there are three specimens of Scottsbluff noted on the western surface and none have been recorded so far for the east.

Considering the fact that the distance between these areas is only about thirty miles, there are considerable differences in material culture and they call for an explanation. There are several alternatives which should be considered:

1. Certain areas were unoccupied during a portion of the period. This may have occurred as the braided stream shifted from one side of the valley to the other.
2. The limits of the distribution of some of the types were reached. Scottsbluff is a plains type and the only three recorded are from the western surface.
3. The eastern surface was visited frequently by hill people from the east with a different material culture and they did not venture very far to the west. The raw material of many of the Pine Tree points is Kosciusko quartzite which outcrops in the hills several miles east of the valley escarpment.
4. There may have been a cultural barrier or boundary line somewhere between the two present-day surfaces. According to Roger Saucier (personal communication), the braided stream would not have served as an effective physical barrier. According to a recent study (McGahey 1987), the preponderance of exotic Paleo-Indian lithic raw material in Mississippi comes from the Tennessee and Ohio River Valleys or the area to the north and east. A much smaller and relatively insignificant portion comes from the area west of the Mississippi River with only minor amounts of Novaculite and Pitkin chert being represented. Three of the four points from the Yazoo Basin classified as Clovis are of material from the Fort Payne formation in Tennessee and Alabama.
5. Sample error.
6. All of the above.

The only writer to dwell at any length on the periods under discussion here in the Yazoo Basin is Brain (1970 and 1971). His 1971 report provides a synthesis of what was known and believed at that time. As previously mentioned, four periods were proposed for the Paleo-Indian era including what is generally considered Early Archaic. The initial period 16000-10000 B.C., is hypothetical and simply allows for the future discovery of a "pre-projectile point" culture. Period II, 11,000-9000 B.C., represents the initial appearance of fluted points in the basin. The only artifact cited by Brain for this period is termed "Triangular Clovis."

In the opinion of this writer after personally examining the point upon which this categorization is based, it is actually an unserrated Dalton point. Figure 4A and B (Brain 1971:12) are both at exaggerated scale. Period III (9000-7500 B.C.) according to Brain includes the following markers in the Yazoo Basin: Midland, Plainview, Quad, and Scottsbluff (1971:14). Three of the four mentioned point types are of western origin. From a personal inspection of the points by the present writer, it was concluded that Scottsbluff is the only type in the group to be definitely of western origin and it seems to be made from local chert. The points illustrated as Plainview and Midland may be classifiable as such but forms like these are also common in the east.

Brain prefers to think of the "dichotomy" between the Folsom-Quad and Scottsbluff traditions as cultural rather than temporal. The present writer would prefer to think of them as both cultural and temporal differences. Dalton points based on numerous C-14 dates appear to be earlier than Scottsbluff and Quad and Folsom both predate Dalton. It would seem that Scottsbluff is an imported idea of western origin made on local material and it does not belong in Period III but Period IV in Brain's scheme.

Indications are that there was a shift in settlement-subsistence systems from Paleo-Indian to Early Archaic. It is obvious from the relative uniformity of Clovis points over most of the continent that there was initially a generally homogeneous culture over vast areas which within a few hundred years began to develop into regional cultures. This is strikingly apparent to this writer over the state of Mississippi. The majority of recorded fluted points in Mississippi (now over one hundred) are of exotic raw material. The primary source of this raw material is the Tennessee River Valley with another possible source area in southern Indiana on the Ohio River. Immediately following the fluted point period (Brain's Period II), there is a rapid decline in percentages of bifaces manufactured from non-local chert or flint to the point where in the Dalton period exotic material is exceptionally rare. Concomitant with that development is the initiation of regional styles which are reflected in the literature with a proliferation of types, to name but a few: Quad, Pelican, Coldwater, Simpson, Hinds, and Beaver Lake. It is commonly accepted that there were dramatic changes in the natural environment, coinciding with these cultural developments and that the environmental shift resulted in cultural adaptations to the new faunal and floral populations. Mammoths and mastodons are thought to have been widely ranging, necessitating nomadic lifeways for those who subsisted on them. With the extinction of the Pleistocene megafauna, white-tailed deer became the main food source and since these animals are much more restricted in their movements, a life of nomadism for hunters was no longer necessary.

The degree to which earlier groups were nomadic is open to question. As interpreted by Brain (1971:21), Paleo-Indians traveled in small bands, killing occasionally as the need for meat arose. Brain interprets the lack of occupation sites of this period and the small numbers and scattered pattern of artifacts as being the result of this way of life. Williams and Brain (1983:394) state that ". . . the traditional model of nomadic tribes following the herds is not satisfactory in the environment and reconstructed paleontology of the Mississippi Valley." They go on to suggest the beginning of the process of territoriality shortly after the valley was initially populated. Other writers (Gardner 1974; Wilmsen 1968) suggest that settlement-subsistence systems at this time were regionally confined and did not involve nomadic wandering. The present consensus then seems to be that the "nomadism" of fluted point people has previously been overstated.

As indicated above, the artifactual evidence for the Middle to Late Paleo and Early Archaic demonstrates greater regionalization through time. This is presumably the result of a process of greater adaptation to a new environment so that the potential of local resources is more fully understood with the passage of time.

Issues of Relevance to Further Research

The major need at present is for a greater and hopefully more representative inventory of sites and artifacts. The east-west contrast discussed above will move into sharper focus with additional data and be found to be a fact or to be the result of sample error. Further progress in the elucidation of these study units will involve the definition of artifact complexes for the cultures involved, a verification and refining of the chronology implied above and hopefully the recognition of the various types of sites involved in the settlement-subsistence systems of each culture. Obvious needs for such goals are single component sites and multi-component stratified sites which are in good condition. It appears very likely that the cultural situation in the Yazoo Basin at this time period will not be totally understood without reference to the nearby loess hills. It is clear that there was interaction at least between the eastern braided surface and the uplands because of raw materials movements and the extension of "hill" projectile point types into the eastern edge of the valley. Preserved sites should be contained under overburden at the base of the bluffs in certain situations and these areas should be closely scrutinized. Every site with an early component present should be depth tested.

There are problems which can be addressed here at various levels: Raw material types in fluted point complexes may have a bearing on the question of fluted point origin and certainly have a bearing on the question of the direction from which the earliest known inhabitants entered the valley. Further why was the Paleo culture so much more

successful in northeast Arkansas than in the Yazoo Basin? According to Roger Saucier who participated in the Dalton project in the western lowlands of Arkansas and Missouri in the early 1960s, over 17,000 Dalton points were recorded. Although the work has barely begun with Dalton in the Yazoo Basin, it is apparent that no appreciable percentage of that number will ever be recorded here. It would appear that Dalton culture developed in Arkansas-Missouri and radiated out from there. Did the total of Dalton technology diffuse into the basin? There are smooth-sided adzes here. Were they later arrivals? Why are there such differences as right hand as opposed to left hand beveling? Why are Dalton points not reworked into end scrapers in the basin (or the rest of Mississippi), as they are in Arkansas? Is this because that trait originated in Arkansas and was slow coming into our area? (It does show up in the initial Early Archaic). As the investigations of the earlier cultures are only beginning a list of questions could be almost endless. To reiterate, what is needed is an expanded inventory and good sites. Until then the "issues of relevance" will not come clearly into focus.

Northeast Mississippi

Because of the dearth of knowledge of the Paleo-Indian - Early Archaic periods in some of the physiographic regions, the decision has been made to combine the Tombigbee Hills, Black Prairie, Pontotoc Ridge and Flatwoods into a Northeast Mississippi region. There has been little work done within this region which focuses on the time under consideration. The major references are Brookes (1978) and Bense (1987).

Brookes' work at the Hester site (22Mo569 and 22Mo1011) has resulted in one publication and another is hopefully forthcoming in the near future. The Hester site, with a deposit up to five feet deep and stratified with representation from virtually the entire pre-mid Archaic sequence is the most significant known site of this period in the state. There are fluted points present (Clovis and Cumberland), although they may not represent an occupation at the site. There is a definite Quad component and a clearly defined Dalton stratum followed by the various side, then corner notched point types. The undisturbed portion of the occupation terminates with the early Mid-Archaic forms Eva and Morrow Mountain.

The work of Bense was a lengthy study of "Midden Mounds" in the Tennessee-Tombigbee Waterway project area, which demonstrated the existence of stratified early sites in the floodplain of the Tombigbee River and contributed to the knowledge of settlement patterns, primarily of the Early- and Mid-Archaic periods although due to the project specific nature of the survey only a limited environment is represented.

The earliest identified cultural remains in the area are Clovis and Cumberland points with Clovis presumably the earliest. Known fluted

points in the area number thirty-one although only twenty-two can be attributed to specific sites. Thus far no site has yielded more than five fluted points (Hester) and the small number recorded over the entire northeastern region presents a major question since adjacent portions of the state of Alabama have more recorded fluted points than anywhere else (Eastern States Archaeological Federation:1982). Fluted points in Northeast Mississippi are almost exclusively of Fort Payne chert which is abundant in the Tennessee River area of North Alabama. Mississippi seems to have been initially occupied from the area to the north and east if the predominance of exotic lithic raw material originating in that area is an indication (McGahey 1987). The origin of fluted points seems to have been in the Southeastern United States (Eastern States Archaeological Federation 1982:31) and on the basis of the exotic material cited above, may well have occurred in the Tennessee Valley.

Distributions of fluted points in Northeast Arkansas (Morse 1973:30) and North Alabama (Futato 1982:30-32) appear to be well defined with those in Arkansas being primarily along major rivers and those in North Alabama mainly along the Tennessee River floodplain and in upland areas which were presumably Pleistocene lakes. The fluted points in Northeast Mississippi have been found in various topographic settings including ridge tops, river floodplains and along smaller streams.

Clovis, or similar points, have a statewide distribution in Mississippi and are found over much of North America. Cumberland, however, is a much more geographically restricted form. Its known Mississippi distribution is entirely within the northeastern quadrant of the state. This restricted distribution appears to represent the first step toward regionalization. The trend continues throughout the Archaic and intensifies with later cultural diagnostics being restricted to smaller areas (McGahey 1981). With post Cumberland groups there is an increasing tendency for local lithic raw materials to be used and for exotics to be phased out. The Dalton culture which is terminal Paleo Indian utilized almost exclusively local materials (McGahey 1987:10). This is viewed as a process of adaptation to the local environment, which with Dalton had reached the point where ties with the north and east were no longer necessary.

According to Bense (1987:25), the upper Tombigbee Valley was initially occupied in the Late Paleo Indian period after settlement of the Middle Tennessee Valley floodplain in the early Paleo or Clovis period, with settlement progressing in a north to south direction. The direction from which the initial settlement occurred seems borne out by other data (McGahey 1987) although in contradiction to Bense there is definite evidence of Clovis Culture over the entire area. Based on current evidence, there is a slight trend for the Tombigbee Hills physiographic region to be occupied more heavily than the Black Prairie (to the south and west) in the earlier periods, with increasing use of the prairie later in

the early lithic sequence (fig. 11). (The sequence is discussed in the section on chronology). There also seems to be a parallel trend for there to be more diverse use of the region earlier with fluted points being found in most topographic situations including ridge tops remote from streams and on smaller streams. The trend after that period, however, appears to be to focus increasingly on the resources of the floodplains of the major streams (fig. 12). If these trends are true and not the results of survey bias, they may indicate a process of initial exploration of the area and the resulting discovery that a floodplain existence along major streams was the most effective form of subsistence. From the start, however, most sites and artifacts were situated on major streams. The fact of the environmental diversity of site locations in this period is somewhat troubling in that it seems to contradict situations reported in neighboring states. The turbulent geological history of the Tombigbee itself may have skewed the sample by scouring away (Bense 1987:400) or burying early sites.

Chronology

Periods one through five of figures eleven and twelve are defined as follows: 1-Fluted points, 2-Quad, Beaver Lake, Arkabutla, 3-Dalton (lanceolate and side notched), 4-Greenbrier, Big Sandy and Cache River - like points, 5 - Corner notched or corner removed points of the early archaic period, including Plevna, Decatur, Jude, Pine Tree, Lost Lake and similar forms. The five periods are presented here with some uncertainty. The sequence is based primarily on stratigraphy at the Hester Site, similarity seriation, type of heat treating and the generally accepted concept of a pan-eastern sequence beginning with fluted lanceolate points and proceeding through unfluted lanceolates followed by side notched and then corner notched forms. The general sequence should be fairly non controversial. The main questions would seem to be as to whether or not the five period concept is valid. Have the appropriate dividing lines been drawn or do further subdivisions need to be made? The ultimate reality with regard to this chronology will probably reveal that there was basically one point type in use in the area at any one time. The five divisions were made by lumping several types together in order to get a more statistically valid look at general trends.

The Hester site (22Mo-569 and 22Mo1011) has provided the most data regarding the early lithic sequence of any site within the area. The sequence of occupation at that particular site may or may not begin with Clovis. There are three Clovis points and two Cumberlands from the site. None, however, are in good context and they may all have been transported there by later prehistoric inhabitants. Two of these fluted points have been excessively battered and broken, possibly in use as wedges for splitting bone. There does appear to be a definite Quad

component generally in situ below the Dalton zone. the Quad points, like the fluted specimens are largely of exotic material.

There are two main areas of concentration of midden at the Hester site which has now been divided in two with one area designated as 22Mo1011. This area, which was largely excavated by collectors with no notes taken, seems to have a different type of Dalton occupation than site 22Mo569. The difference seems to be mostly explainable in chronological terms. This assessment is based on the fact that seven of ten Daltons from 22Mo1011 are of the side-notched form and only sixteen of forty-two from 22Mo569 are side notched. It is assumed on the basis of comparative morphology that the lanceolate forms tend to be earlier. Nine of the ten Dalton specimens from 22Mo1011 have been subjected to a heat treating process which produces a striking, over-all, color change, turning the basically tan local cherts a bright lustrous red, orange or pink. The only one of the ten not heat treated in this manner was of a lanceolate form. Only a small percentage of the Daltons from 22Mo569 received such heat treatment. The only certain specimen was side notched. Four others were burned and they may have been intentionally heat treated prior to being burned. Greenbrier and Big Sandy points which follow Dalton chronologically, have a much higher overall incidence of this type of heat treating. Points in the Hester sequence following Big Sandy (Hester side-notched) are basically all subjected to this type of heat treatment. The situation at Hester then seems to be that over all color change in the heat treating of bifaces begins with Lanceolate Dalton points, picks up rapidly with the side notched Dalton, is overwhelmingly preferred with Greenbrier and Big Sandy (Hester side-notched) and after that, is the only heat treating technique practiced. Stratigraphically, the picture isn't precisely that clear. What is clear is that lanceolate and side-notched Daltons are in direct association in the carefully excavated midden of 22Mo569 and are below Big Sandy (Hester side-notched) which is below Decatur. The Greenbrier points from this site were few and unfortunately were from disturbed areas. Their place in the above proposed sequence stems from their similarity to Dalton points and the fact that some of them are still not completely color changed by the heat treating process. We are thus in disagreement with Bense's placement of Greenbrier in a pre-Dalton context (Bense 1987:10). This new or more recent heat treating technique must have entered North Mississippi from the northeast and spread slowly to areas to the west and south. In the north central hills area to the west around Grenada and Oxford this technique is seen initially on Big Sandy points and in increasing percentages on Decatur and subsequent types. Continuing westward, it is rarely seen in the Yazoo Basin on early points.

The Hester sequence also clearly demonstrates that Pine Tree and Lost Lake points are later than Jude and Decatur, although there were

so few Lost Lake points excavated in situ that it was not possible to date them relative to Pine Tree with great confidence. (Brookes personal communication, 1988) has proposed a sequence of projectile point types based on his interpretations of the Hester specimens and stratigraphy (fig. 5). Some refinement of the existing typology is proposed. Type or variety descriptions are not offered here as they are hopefully forthcoming in a publication but fig. 5 illustrates the forms.

It is felt that in the Paleo-Indian, Early and Mid-Archaic periods, there was basically one point type in use by a particular group at one time (see Broyles 1971). This is certainly suggested by the stratigraphy at Hester where among those types adequately represented there are definite preferences according to depth. Unfortunately the Midden Mound project does not seem to have yielded much useful information regarding the early Archaic sequence. Part of the problem with that project is that the so-called Kirk Cluster was used as a catch-all to lump most Early Archaic corner notched points together. From observation of the published photographs, it is apparent that Lost Lake, Pine Tree, and Decatur were sortable, but in most cases were simply labeled "Kirk" (Bense 1987:95, 52). We will never establish a viable Early Archaic chronology unless we distinguish between forms which could have chronological significance.

Settlement and Subsistence Patterns

As was mentioned previously, based on currently available evidence it appears that settlement began in the fluted point period with the first inhabitants coming into the area from the middle Tennessee River Valley where they had become adapted to life along the major rivers and lakes. There was probably an initial period of exploration of the new territory, as evidenced by the wide distribution of fluted points in diverse environments, and a gradual shift to a more floodplain oriented way of life. The Black Prairie seems, on current evidence, to have become more attractive during the Early Archaic Period, and life throughout the area became less nomadic as evidenced by the development of regional styles of bifaces, a trend which began in the Late Paleo-Indian period and intensified through time.

The earliest food remains recorded in the area are from the Dalton period. The Hester site's Dalton zone yielded hickory nut, walnut and hackberry remains. The Big Sandy zone contained hickory nut and walnut and Decatur levels contained all of the above mentioned plant foods with the addition of wild plum and acorn. The pine tree zone yielded hickory nuts and hackberry (Lentz 1985). The F. L. Brinkley midden (22Ts729) yielded hickory nut, walnut, and acorns from the early Archaic (stratum 3) levels (Otinger, Hoffman and Lafferty 1982:213). Hickory nuts and acorns were found in the Early Archaic levels of the Poplar site (22It576) (Bense 1987:21), and 22It621 (Bense 1987:214).

Although no identified faunal remains are known from the period and area under consideration here, data from a nearby area suggest the use of or consumption of white tailed deer, raccoon, rabbit, squirrel, chipmunk, porcupine, skunk, turkey, bob white and turtle (DeJarnette, Kurjack and Cambron 1962). These species were found at the Stanfield Worley site in Colbert County, Alabama. To what extent these remains are representative of the floral and faunal resources exploited in the area remains to be seen. The identified floral remains were present as a result of charring and the consideration of only charred remains is known to produce biased results. No attempts at other forms of floral data recovery such as pollen or phytoliths were made at the Hester site and although such data was sought in the midden mound project, the results were not productive (Bense 1987:224-230).

The list of faunal remains from the Stanfield Worley bluff shelter may well be representative of animal species exploited in our area since it is not that far away but data from Northeast Mississippi would be helpful.

The people of the Paleo Indian - Early Archaic era are assumed to have been hunters and gatherers at the band level of social organization. Such a society should have left few substantial sites within the area in which the band moved. Most of the sites which have received any degree of study within our area of discussion are not substantial and few could be considered possible candidates for base camps. The East Aberdeen site is said to have been used ephemerally, possibly as a hunting and gathering camp (Rafferty 1980:28). "The limited data from the early Archaic component fit in well with the assumption frequently made that these groups were dependent on rather generalized hunting and gathering, that group size was small, and that people had not yet fully developed the localized and specialized seasonal round settlement pattern that increasingly characterized the later Archaic" (Rafferty 1980:292).

According to Bense, all Dalton sites are thought to represent low density hunting and gathering groups with a similar settlement pattern to Paleo Indian (1987:13). (Dalton is here considered as terminal Paleo-Indian). The Dalton component at the Hester site is felt to be a hunting-butchering station (Brookes 1978:30). The Poplar site (22It576) is thought to represent a seasonal camp used by family groups. Features and midden of the Early Archaic suggest hunting and gathering, food and hide preparation, tool production and wood working (Bense 1987:52). Activities at the Walnut site (22It539) probably included biface manufacture, tool maintenance and regeneration (Bense 1987:71). 22It621 was probably a camping station and was possibly used for hunting and hide preparation (Bense 1987:95). There is some possibility that the Ilex site 22It590 functioned for at least a time as a base camp although the sparsity of artifacts makes this unlikely (Bense 1987:85). Of the sites discussed in Bense's 1987 final report, the overall impression

was one of intermittent use. Only ten features were recorded from the early components of the four main sites and most of them resulted from stone tool manufacture and repair (Bense 1987:397). Bense hypothesizes that Paleo-Indian occupation of the area was sparse and confined to the floodplain and the Early Archaic people were first to regularly inhabit the floodplain (1987:400-401). She sees the Early Archaic and early Middle Archaic settlement of the area as being a "residential mobility pattern" (1987:236). A residential mobility pattern is defined as a series of residential camps, occupied by a single band or microband for the purpose of exploiting the resources of the closely surrounding area. Such sites are occupied for only a short time, perhaps for less than one season. This is contrasted with a logistic mobility pattern which is composed of base camps, residential camps and/or extraction camps. Base camps may be occupied by more than one band or a macroband. Base camps are recognized by different distribution of debitage classes and varieties of feature types. The partitions of activity space in base camps will be greater than in residential camps. Housing evidence and garbage and storage pits are also to be expected at base camps (Bense 1987:236).

So far no evidence of houses is known from the period under question in the area of concern, although the F. L. Brinkley midden (22Ts729) did yield four Early Archaic pits including one with a sandstone metate and an associated large cobble (Otinger, Hoffman and Lafferty 1982:42, 180).

If there is a base camp among recorded sites of the period under consideration here it is probably the post Dalton period occupation of the Hester site (22Mo569 and 22Mo1011). Although there are no structure remains or storage pits recorded, there are numerous areas of tool concentrations, especially of nutting stones and the quantity of tools at this site is very impressive when compared to the total yield of the midden mound project excavations. Approximately 1700 sq. ft. of excavated space at Hester yielded 272 Early Archaic and Late Paleo Indian projectile points and many times this many other tools. Another area of the site approximately four times this size yielded over 300 such points to a very carelessly performed amateur excavation. The total yield of the midden mounds reported in Bense 1987 is less than 200 early points and over 10,000 sq. ft. were excavated. Although there has been a minimal number of sites excavated to any significant extent, there are several dozen sites which have been surface collected under ideal conditions and none so far have yielded even a considerable fraction of the material from Hester. There is always the possibility that a site similar in size and density of occupation is buried under more recent deposits or has been scoured away by the river, but based on current evidence, it seems that such sites were rare in Northeast Mississippi.

Issues of Relevance to Further Research

As is the case with any similar slice of time-space, there is an almost endless number of questions which could be asked. The basis of a chronological framework is now known because of the fortunate discovery of the Hester site, yet there are many unanswered questions even here. Some of the recognized point types found in the area are poorly represented or absent at this site. Other stratified multi-component sites must be found and tested to fill in the gaps. The Hester site should be acquired by some public agency which will insure its protection as it still has the potential to yield much vital information.

It is probable that the chronology is divisible by the number of diagnostic projectile point types in the area. Each such slice of time will have its own characteristic tool kit and accompanying settlement/subsistence pattern. Analysis and publications of the descriptions of the various tool types accompanying, Dalton, Big Sandy, Decatur, etc. Components at the Hester site will be a good first step in the direction of understanding these relationships. It is possible, after this is accomplished that surface collections can be more intelligently interpreted when it is understood what tools and raw material types are associated with the individual diagnostic bifaces. The discovery and excavation of single component sites is also a vital need in this context.

There are not many sites of this age in the area with remaining integrity of deposit. As far as is known at present, there are only two sites with relatively undisturbed deposits of Dalton or earlier materials. These should be protected if at all possible and if they or for that matter, other sites of Early Archaic-Paleo-Indian age are excavated, great care should be taken to retrieve all possible data on subsistence since little such data has been recovered to date.

The Pleistocene flora and fauna were probably significantly different from that of the Holocene. Thus far there is no subsistence data available on the presumably late Pleistocene fluted point complexes although several streams in the area have yielded well preserved remains of now extinct species such as mammoth and mastodon. Some of the same streams have yielded fluted points.

The questions of site types and settlement pattern obviously are largely unanswered. Are there base camps in the area in this period? Is the prevailing or only pattern one of "Residential Mobility"? The lack of features such as house patterns and cache pits which was discussed earlier is an interesting question. Were the shelters utilized in this period so insubstantial as to leave no indication in the soil? Apparently pits were excavated as evidenced by the F. L. Brinkley midden excavation. If their presence was necessary at a base camp they should appear at Hester with post Dalton components.

Are there any surviving human skeletal remains? And, if not, are there patterns of artifact burial such as at the Sloan site in Arkansas (Morse 1975) which would have accompanied burials?

Thus far survey in Northeast Mississippi has been primarily confined to the Tombigbee Hills and the Black Prairie. The Pontotoc Ridge and the Flatwoods have received relatively little attention. The work which has been done in the Tombigbee Hills and Black Prairie has been overwhelmingly connected with the Tennessee-Tombigbee Waterway and is thus lacking in environmental diversity when compared to the two physiographic regions total area. Correcting this survey bias should be a major priority.

North-Central Mississippi

The North-Central Mississippi area consists of the North Central Hills and the northern part of the Loess Hills from the Yazoo-Holmes County line northward. As with the other geographical subdivisions in this study, little has been done which focuses exclusively or even primarily on the period under consideration. Diagnostics of this period are numerous in private collections and have been documented in two master's theses (McGahey 1968 and Fortune 1985) and were also utilized by Broyles et al (1982:12). Isolated finds out of context have been reported by Koehler (1966:46, 52) and Connaway (1968:51). Both of these sites were Middle Woodland burial mounds.

In the only major survey effort in the area, over 65,000 acres have been covered and no Paleo sites and only 18 Early Archaic sites were found (France et al 1992:47-58). This effort was focused on the drainages of smaller streams and the quarter sections were selected by stratified random sampling. These results, while somewhat surprising, should not be completely unexpected. Most of the sites yielding diagnostic artifacts throughout most of the prehistoric sequence in Mississippi have been situated on the first terrace of major streams and on high spots in their floodplains. As far as is known at present, no sites of this age have been found in the area with preserved context.

Chronology

The entire range of early lithic diagnostics is well represented in the area, primarily in private collections. The largest of these collections have been obtained in the flood pool portions of the large flood control reservoirs--Arkabutla, Sardis, Enid and Grenada lakes. Sardis and Grenada lakes are entirely within the North Central Hills. Arkabutla is entirely within the Loess Hills and Enid is about equally divided between the two regions. The vast majority of diagnostics utilized in fig 2. (North Central) are from these reservoirs.

It is assumed that the chronology determined at the Hester site (22Md569 and 22Mo1011) and discussed under the Northeast

Mississippi region is also applicable to this region, although there are some differences. The Cumberland point is almost totally absent from North Central Mississippi but is a major part of the fluted point inventory in the Northeastern region. Cumberland is assumed to follow Clovis in the chronology of the Tennessee Valley and Northeast Mississippi. What occupies the same time period in this area (assuming it was occupied) is unknown at present. Quad points are well represented and may follow Clovis. Based on a heavy reliance on Fort Payne chert for Quad points, a trait shared with fluted points, they appear to be the logical successor if Cumberland is absent. Beaver Lake points, often called "unfluted Cumberland" are thought possibly to follow Cumberland, yet they too are seldom seen in this area. Their distribution seems to coincide generally with that of Cumberland. The Coldwater point which is never found in Northeast Mississippi is quite common in the area and appears on a technological basis to fall between fluted and Quad points and Dalton. Dalton points which on the basis of the Hester data, appear to include both lanceolate and side-notched forms are thought to predate the side-notched forms such as Big Sandy I (Hester side notched) and Cache River. Again based on the Hester sequence the corner notched or corner removed points are thought to follow the side notched forms. As with the proposed sequence at Hester, the succession of types would be Jude, Decatur, Pine Tree, and Lost Lake (see fig. 4 for representative points of the North Central Mississippi sequence). There are corner notched forms present in the area which do not fit into the Hester sequence. Plevna, for instance while present at the Hester site was not there in sufficient numbers for a confident placement within the chronology. Stilwell is present in the North Central area in significant numbers but does not occur at Hester and as far as is known does not occur in Northeast Mississippi. There are no projectile point/knives in the area that are thought to be possibly transitional between Early and Middle Archaic so the corner-notched basally ground types represent the end of the early lithic sequence as understood in the North Central area.

Settlement and Subsistence Patterns

The biased nature of the data with most of the diagnostics from a few relatively restricted areas presents somewhat of a problem in discerning settlement patterns. Most of the diagnostics are from the Northwestern part of the area as defined, having been collected from the flood control reservoir pools as mentioned previously. This places a northwestern or northern bias on the data since the southern and southeastern portion of the area is so poorly represented relatively speaking. The reservoir collections also tend to weigh the sample heavily in favor of major stream floodplain terrace association, yet survey work along the smaller streams in the area has seldom yielded early lithic diagnostics, the most notable such survey being the previously cited one (France et al 1992) so the

picture may not be that badly distorted. The general trend for early lithic remains to be found in association with major streams seems to be solid (fig. 13).

Evidence is mounting that the Loess Hills area both north and south was more heavily occupied than the rest of the state (at least excluding the Yazoo Basin). In the previously cited work by France et al, 90% of the Early Archaic sites were located in the Loess Hills although more than half of the area surveyed was in the North Central Hills. This evidence correlates with the trend seen in fig. 14 for South Mississippi. It seems that the Loess Hills region was especially important in the early lithic periods. Deer are relatively more prolific there today and if they were also relatively more plentiful during the Paleo-Early Archaic periods, the explanation may well be that the earlier subsistence-settlement systems were much more dependent on deer or other game more abundant in the Loess Hills than in later periods.

Lithic raw materials give some indication about the ways in which human settlement was dispersed over the area or at least in which direction the material moved. The fluted points of period 1 and presumably the unifaces accompanying them in the North Central area as well as the rest of the state are overwhelmingly made from material obtained from the north and east of Mississippi. Primarily the material is Fort Payne chert usually Blue-Gray but often Dover. The use of exotics has traditionally been viewed by Paleo-Indian scholars as being suggestive of a highly mobile way of life, although recent thought on the subject is somewhat tempered with the belief that the mobility may not have been as great as originally believed. As in all other areas of the state, the use of exotics in the North Central area drops off rapidly after the fluted point period to almost nothing in the Dalton period (McGahey 1987:11). As stated elsewhere, with respect to the Yazoo Basin and Northeast Mississippi, the cessation of the heavy utilization of exotics together with the proliferation of regional styles suggests an increasing adaptation to the local environments.

Also with respect to lithic raw materials, there is a peculiar preference within the terminal Early Archaic for the locally obtainable Kosciusko Quartzite. There are two varieties of Kosciusko Quartzite which were used prehistorically in Mississippi. There is an extremely light gray or white variety which is relatively rare at any time in prehistoric artifact complexes. There is also a darker gray variety which is very fine grained and can be mistaken macroscopically with chert. The latter variety has an unusual distribution chronologically with only an occasional specimen represented in periods one through three and no known specimens in period four, and a much heavier usage with Pine Tree points specifically at what is assumed to be the end of our period five. The great majority of these points are not found more than a few miles from the outcrop of the Kosciusko formation. The material is then

essentially unused until the Woodland-Mississippian transition when it is heavily used in areas near the outcrop for the manufacture of arrow points. Collins and Madison points of this material in private collections number in the thousands. Of the 102 Paleo-Early Archaic projectile point/knives of Kosciusko Quartzite for which the Mississippi Department of Archives and History has records, 96 are Pine Tree points. There are 5 Middle Archaic points and 2 Late Archaic-Woodland points. The material, based on current knowledge, is not common in workable form and personal experience indicates that it must be heat treated to be worked effectively. It was obviously not a very sought-after material. The question naturally arises as to the mobility of groups living in the area of the outcrops in periods of peak usage. Were these groups isolated or largely isolated from other sources which may have been preferable but out of their reach because of opposition of neighboring groups?

Tallahatta quartzite, a much more plentiful and easier to work material, also occurs in the North Central Hills, primarily in the area around Meridian and in adjacent portions of Alabama. It too was exploited from the earliest period but shows no such peculiar pattern of chronological distribution as Kosciusko quartzite. It was traded or widely moved in the Early Archaic period and specimens are found in all parts of the state unlike the Kosciusko quartzite which seems never to have been a popular item for trade at any time. Major reliance on Tallahatta quartzite or long distance trade of the material did not develop outside the outcrop area until the Mid-Archaic period, however.

As far as is known to this writer, there are no available data on floral and faunal remains attributable to this period within the area.

Issues of Relevance to Further Research

Additional large-scale survey is the key to answering most of the questions regarding this period in the North-Central area. The survey of France et al previously mentioned probably gives a very good picture of the archaeological record of small stream drainages in the Loess Hills and the northern portion of the North Central Hills. What is lacking is systematic large-scale survey of this nature in the southern and southeastern part of the area. It is also obvious that more survey should be devoted to the terraces and floodplain of the larger streams since it is obvious that at least in the northern part of the area, this is the type of environment which is going to yield most of the early sites.

As with any other historical context within the state, there is a need for well preserved, deep, stratified sites and single component sites which can clarify the chronology, provide the missing subsistence data and provide insight into the technological inventories of the various phases. Before the flood control reservoirs discussed above were constructed and rapid deflation of the top soil occurred there was little appreciation for

the quantity of early lithic material. There are surely similar sites in association with the larger streams of the area awaiting discovery.

The peculiar nature of the exploitation of Kosciusko quartzite will bear further investigation. No quarry sites have been discovered. Was the material quarried or was it collected in secondary deposits in streams which flow through the area?

South Mississippi

The South Mississippi area is defined as the Longleaf Pine Belt, the Jackson Prairie, the Coastal Pine Meadows, and the Loess Hills from the Yazoo-Holmes County line south. As with the rest of the state, there is very little known of the period.

The work at the Beaumont Gravel pit site (22Pe504) by Carey Geiger and other members of the Mississippi Archaeological Association probably represents the greatest investment in time and effort in an early lithic site. The major components revealed were Late Paleo-Indian and Early Archaic. Much of the rest of the prehistoric sequence is present, however, telescoped into a relatively thin deposit of organically stained sandy soil overlying gravel. The site is situated on the natural levee of a relict channel of the Leaf River. The Late Paleo - Early Archaic components, representing subperiods three, four, and five are concentrated near the bottom of the deposit and are probably not going to be sortable vertically. Dozens of early tools have been recorded in situ, however, including many unifaces with the notched "Waller knives" being well represented. 22Pe504 is discussed briefly in Geiger (1980:10-12) and Geiger and Brown (1983:3-14). A more detailed discussion should be available soon in the form a Master's thesis from the University of Southern Mississippi.

Atkinson and Elliott (1979:53) tested site 22Js587 in Jasper County recording four Dalton points in a deposit with a depth of ca. 90 cm. One of the points was in the 70-80 cm level suggesting the possibility of isolating a single component Dalton assemblage. This should be well within the range of possibility since no other early lithic components are thought to be present. The site is in the terrace of the Tallahalla-Naukfuppa Creek system, a major stream.

A site recently discovered in Jones County (22Jo568) represents a third site where early lithic remains are thought to remain in situ. The site has a deposit depth of ca. 70 cm. A Big Sandy point and a fragmentary period 2 or Middle Paleo point were found at the 40-50 cm level. Unifacial tools were also present (Scott 1992:6). This site is in the floodplain of Bogue Homo Creek, a large stream.

Reams (1992) has tested site 22Pe665 and excavated Dalton and unifacial tools although the deposit is thin and the context may be destroyed. The site is situated on the first terrace above the headwaters of Cypress Creek, a major stream.

Over 40,000 acres of South Mississippi, almost all of it within the Longleaf Pine Belt, has been surveyed by the U.S. Forest Service in the last few years. In spite of this effort, not many sites with diagnostics have been discovered and only rarely has a site been found representing the period under discussion here. Almost all of the survey, however, has been in upland areas which have been severely eroded and therefore focused away from the settings likely to yield large intact sites such as floodplains and first terraces of major streams.

Chronology

The entire chronological sequence is represented in surface collections, mostly private, scattered throughout the area. Many of the early lithic components of these collections have been recorded and constitute valuable data regarding raw materials, type distribution, etc. Typical examples of specimens representing subperiods one through five are illustrated in fig. 6. In the absence of stratified sites or absolute dates, the sequence has been arranged through knowledge obtained in other areas and through similarity seriation, with Clovis (period 1) assumed to be the earliest diagnostic biface in the area. Cumberland seems to be absent, apparently being primarily restricted within the state of Mississippi to the northeastern area adjacent to the Tennessee River. The Middle Paleo period, period 2, is rather well represented primarily with the Hinds point (McGahey 1981:4) fig. 6B and C and some representation of Coldwater fig. 4C, 3B and Quad-like points (fig. 4B, 5C). Sub period three is Dalton, which surprisingly has the strongest representation of any of the five subperiods in the region when either numbers of recorded projectile points or sites are considered (fig. 2 - South Mississippi). Dalton, which represents the late or terminal Paleo-Indian, includes forms which may be classified elsewhere as Hardaway or San Patrice. This relationship seems clear at the Hester site (22Mo569 and 22Mo1011) where the more classic Dalton form, a lanceolate point, was found in close association in clusters with its side-notched variants. Period four is represented in this region primarily by the Cache River point and apparently related forms (fig. 6F). Greenbrier, which is well represented in the northern part of the state and has been included under period four, appears to be a northern type not found in South Mississippi. Period five (fig. 6, G, H, I, and J) is relatively well represented but not to the extent of the other three regions.

Settlement and Subsistence Patterns

As would be expected, the early sites have a strong tendency to be situated on or near a relatively large, presumably permanently flowing stream (fig 15).

Thus far no data are reported regarding floral and faunal remains although the potential seems to exist in a few known sites such as

22Jo568 and 22Js587 where testing has revealed organic remains. So the only evidence bearing on subsistence is settlement patterns. The Loess Hills apparently had a far greater population for its size than any of the other regions included under the South Mississippi region. This trend was much more obvious in periods one and two (fig. 14). This is all the more interesting since the Loess Hills is only a minor part of the entire area, constituting less than 20% of the total. There is a general trend for the Loess Hills to produce more sites and artifacts per period than areas to the east for all periods. A recent corridor survey across most of South Mississippi yielded 82 sites of primarily Woodland and Late Archaic age. 40% of them were in the Loess Hills, which only constituted 17% of the corridor (Ecology and Environment Inc. 1992). As was previously mentioned in the section on North Central Mississippi (France et al 1992) obtained similar survey results with a massive survey in that area. Also as discussed in that section, it was speculated that possible reasons for this apparent density of sites and artifacts was an abundance of deer and other game and also plentiful gravel chert deposits. The presence of the Mississippi Alluvial Valley to the west of the Loess Hills may also have been attractive for those who were inclined to exploit both the uplands and the vast floodplain of the Mississippi.

As previously discussed for North Central Mississippi, the initial or fluted point era saw a heavy reliance on exotic flints and cherts from areas to the north and east of Mississippi. The trend is less striking in South Mississippi but still is considerable and in the Middle and Late Paleo periods drops off to almost nothing. Rarely is any exotic material seen in the South Mississippi area after the fluted point period. The flaked stone artifacts are almost exclusively of Citronelle gravel chert and in the eastern part of the area occasionally of Tallahatta quartzite which is available a short distance to the north. The trend to locally available raw material is generally considered to be indicative of an increasing adaptation to local environments after the initial exploration and settlement in the fluted point period.

Issues of Relevance to Further Research

The picture presented above regarding this area is inadequate and should be bolstered by additional large-scale survey, hopefully including areas such as terraces and floodplains of major streams. This survey will hopefully yield the single component sites and the deeply stratified, well preserved sites necessary for more precisely defining the chronology and the material culture of each period or subperiod.

There have been no studies done regarding the floral and faunal remains in the defined area for this period. Only two sites show promise of containing organic remains. These materials surely exist. The rivers of the area have yielded numerous examples of late prehistoric through early historic era wooden artifacts and structures in the last few years

(Connaway 1981:57-61; McGahey 1974:4-5). There is every good reason to assume that Archaic or even Paleo remains are preserved below the water table in the Homochitto and other streams' floodplains in the areas. Informants are frequently reporting finds from these streams and there is reason to assume that eventually much older material will be discovered.

The matter of Dalton predominance in the area in numbers of recorded components and diagnostics is of considerable interest. Most are of the side notched and presumably later variety. Why was the area so much more popular during the late Dalton period? An inspection of fig. 2 clearly show this to be an anomaly.

The regional distribution of notched unifaces such as Waller knives and Edgefield scrapers is another item of interest (see Lauro 1982 and Geiger and Brown 1983). these forms (fig. 7) seem, based on currently available evidence, to be confined to the South Mississippi region, being most common in the Leaf and Pearl drainages. Notched unifaces are occasionally found in the northern part of the state but do not conform to either of these types. The previously cited work at 22Pe504 has conclusively demonstrated the association in time with the Early Archaic or Late Paleo-Indian periods. Whether further analysis of the data from that site will refine the chronological position of these tools remains to be seen. Their predominant association with the Coastal Plain needs to be explained. Goodyear et al suggest a seasonal use in the Coastal Plain of Edgefield scrapers by groups who annually moved down from the Piedmont to the Coastal Plain (1980:11-12).

Conclusions

The preceding presentation represents a preliminary attempt to understand major trends in settlement within the state of Mississippi over the Paleo-Indian Early Archaic period. It is intended as a starting point for inquiry and represents only what is known at present. As is obvious, there is much to do. The chronology is only beginning to take shape and the representation of diagnostics is limited primarily by the ability of people who collect artifacts to find them and the ability of professionals to find the collectors. Collecting conditions for both amateurs and professionals vary considerably with the greatest surface visibility being in the Yazoo Basin and in agriculturally utilized areas of the rest of the state where row crops are grown and the mud flats of flood control reservoirs after the water level falls in the fall and winter season. The row cropped land and the reservoirs are limited in their potential to tell the whole story on settlement patterns because they are primarily floodplains and terraces of large streams. The uplands remain heavily vegetated for the most part as do the most of Southeastern and East Central Mississippi. Preliminary indications are that searching for early lithic sites in the uplands and small stream drainages is a difficult

problem based on the work previously cited by France et al in North Central Mississippi and the work the United States Forest Service in South Mississippi. Many if not most of the early lithic sites in upland settings may not have diagnostics in the form of bifaces or formal unifacial tools. Creative ways will have to be explored to deal with this problem and many others before real progress can be made toward understanding this cultural unit.

References

Atkinson, James R. and Jack D. Elliott

- 1979 A Cultural Resources Survey and Evaluation in the Tallahalla Creek Lake, Jasper County, Mississippi. Mississippi State University.

Bense, Judith A. (ed.)

- 1987 ***Final Report, the Midden Mound Project.*** Report of Investigations 6. University of West Florida, Office of Cultural and Archaeological Research.

Brain, Jeffrey P.

- 1970 Early Archaic in the Lower Mississippi Alluvial Valley. ***American Antiquity*** 35(1):104-105.
- 1971 The Lower Mississippi Valley in North American Prehistory. Manuscript, National Park Service, Southeastern Region, Tallahassee.

Brookes, Samuel O.

- 1978 ***The Hester Site: An Early Archaic Occupation in Monroe County, Mississippi.*** A Preliminary Report. Archaeological Report No. 5. Mississippi Department of Archives and History, Jackson.

Broyles, Bettye J.

- 1971 Second Preliminary Report: The St. Albans Site, Kanawa County, West Virginia. West Virginia Geological and Economic Survey, Report of Archaeological Investigations 3.

Broyles, Betty J. and Robert M. Thorne, with Harry P. Owens

- 1982 A Cultural Resources Reconnaissance of the Four Corps Owned Lakes in Mississippi: Grenada Lake, Enid Lake, Sardis Lake and Arkabutla Lake. Center for Archaeological Research, Department of Sociology and Anthropology, University of Mississippi. Prepared for the Vicksburg District, U.S. Army Corps of Engineers.

Connaway, John M.

- 1968 Archaeological Excavation of the Great White Mound 22Gr41. In Archaeological Excavation of the Baker's Creek and Other Mounds. Anthropological Papers of the Museum of Anthropology, University of Mississippi, 1(1-4), University, Mississippi.
- 1981 The Sturdivant Fishweir (22Am500). In **Archaeological Investigations in Mississippi 1969- 1977**. Archaeological Report No. 6. Mississippi Department of Archives and History, Jackson.
- 1988 Remnant Braided Stream Surfaces in the Northern Yazoo Basin: Preliminary Observations. **Mississippi Archaeology** 23(1)43-69.

DeJarnette, David L., Edward B. Kurjack, and James W. Cambron

- 1962 Stanfield-Worley Bluff Shelter Excavations. **Journal of Alabama Archaeology** 8:1-111.

Eastern States Archaeological Federation

- 1982 A Compilation of Fluted Points of Eastern North America by Count and Distribution: An AENA Project. **Archaeology of Eastern North America** 10:30-33.

Ecology and Environment, Inc.

- 1992 Mississippi Cultural Resource Surveys for the Tennessee Gas Pipeline Company West-East Crossover Project. Report on file Mississippi Department of Archives and History. Report no. 92-050.

Fortune, Linda Gay

- 1985 The Utilization of Lithic Resources in Sardis Lake, Lafayette County, Mississippi: Further Study of Projectile Points from the Savage Collection. Unpublished Master's Thesis. Department of Sociology and Anthropology, University of Mississippi.

France, Van, Gay France and Beverly Bastian

- 1992 Cultural Resource Studies in Six Watersheds, Demonstration Erosion Control Project, Yazoo Basin, Mississippi, Phase II. Center for Archaeological Research, University of Mississippi. Prepared for the Vicksburg District, U.S. Army Corps of Engineers.

Futato, Eugene

- 1982 Some Notes on the Distribution of Fluted Points in Alabama. Eastern States Archaeological Federation. A Compilation of Fluted Points of Eastern North America by Count and Distribution: An AENA Project. ***Archaeology of Eastern North America*** 10:30-33.
- Gardner, William M.
 1974 The Thunderbird Paleo Indian Site and the Middle Shenandoah Valley Research Program: An Overview 1971-1974. Department of Anthropology, Catholic University of America, Washington, D. C.
- Geiger, Carey L.
 1980 Survey of Selected Sites in the Leaf River Flood Plain, Perry County, Mississippi. ***Mississippi Archaeology*** 15(2):8-25.
- Geiger, Carey L. and Ted Brown
 1983 Waller Hafted Knives from Southeast Mississippi. ***Mississippi Archaeology*** 18(1)3-13.
- Goodyear, Albert C., James L. Michie, and Barbara A. Purdy
 1980 The Edgefield Scraper: A Distributional Study of An Early Archaic Stone Tool from the Southeastern United States. Paper presented at the 37th Annual Southeastern Conference in New Orleans, Louisiana.
- Koehler, Thomas H.
 1966 Archaeological Excavation of the Womack Mound (22Ya1). Bulletin No. 1. Mississippi Archaeological Association, University, Mississippi.
- Lauro, James
 1982 The Edgefield Scraper and Waller Knife: Early Archaic Tools from the Pearl River Drainage, Central Mississippi. ***Journal of Alabama Archaeology*** 28(2)147-153.
- Lentz, David L.
 1985 Archaeobotanical Remains from the Hester Site: The Transitional Paleo-Archaic and Early Archaic Horizon. Report Submitted to the Mississippi Department of Archives and History, April 5, 1985.
- McGahey, Samuel O.
 1968 An Archaeological Survey of Certain Sites in Sardis Reservoir. Unpublished Master's Thesis, Department of Sociology and Anthropology, University of Mississippi.

- 1974 A Prehistoric Dugout Canoe. **Mississippi Archaeology** 9(8)4:5.
- 1981 The Coldwater and Related Paleo Indian Projectile Points. **Mississippi Archaeology** 16(1).
- 1987 Paleo-Indian Lithic Material: Implications of Distribution in Mississippi. **Mississippi Archaeology** 22(2).

Morse, Dan F.

- 1973 Dalton Culture in Northeast Arkansas. **Florida Anthropologist** 26:23-30.
- 1975 Paleo-Indian in the Land of Opportunity: Preliminary Report on the Excavations at the Sloan Site (3-Ge-94). In the Cache River Archaeological Project, An Experiment in Contract Archaeology.

Otinger, Jeffrey L., Charles M. Hoffman, and Robert H. Lafferty III

- 1982 **The F. L. Brinkley Midden (22Ts729) Archaeological Investigations in the Yellow Creek Watershed, Tishomingo County, Mississippi.** Report of Investigations No. 36, Office of Archaeological Research, University of Alabama.

Phillips, Philip, James A. Ford, and James B. Griffin

- 1951 Archaeological Survey in the Lower Mississippi Alluvial Valley, 1940-1947. **Papers of the Peabody Museum of American Archaeology and Ethnology** 25, Harvard University, Cambridge.

Rafferty, Janet E., B. Lea Baker, and Jack D. Elliott, Jr.

- 1980 Archaeological Investigations at the East Aberdeen Site (22Mo819) Tombigbee Multi-Resource District, Alabama and Mississippi. Mississippi State University.

Reams, Robert E.

- 1992 Mechanical Site Preparation Areas FY92 Black Creek Ranger District, Stone, Forrest, Perry, Green and George Counties, Mississippi. U.S. Forest Service, Jackson.

Saucier, Roger T.

- 1971 Quaternary Geology of the Lower Mississippi Valley. Arkansas Archaeological Survey, Fayetteville.

Scott, Susan

1992 The GWO Site (22Jo568): An Early Archaic Site in Jones County, Mississippi. Report on file at Mississippi Department of Archives and History, Jackson.

Williams, Stephen and Jeffrey P. Brain

1983 Excavations at the Lake George Site Yazoo County, Mississippi, 1958-1960. ***Papers of the Peabody Museum of American Archaeology and Ethnology Papers*** 74. Cambridge.

Wilmsen, Edwin N.

1968 Lithic Analyses in Paleo Anthropology. ***Science*** 161:982-987.