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PROCEEDINGS
of the
Third Annual
Middle Atlantic

Archaeological Conference, *3d, University*
of Delaware, 1972.

University of Delaware

1972

Edited by
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Section of Archaeology

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EDITOR'S INTRODUCTION

The reader is cautioned to carefully scrutinize the following description of the nature of this publication. It should be especially noted that direct quoting of the statements of participants is to be discouraged.

The Middle Atlantic Archaeological Conference was established to increase the opportunity for communication and discourse among active students of prehistory in the "Middle Atlantic Seaboard Cultural Province" (Stephenson 1963). The first meeting was held at the Catholic University in Washington, D.C., and was both an organizational meeting and a "meeting of the minds". The second meeting, held at the American University, proved to be somewhat more successful in encouraging open discourse. The third meeting, of which this publication constitutes the proceedings, was held at the University of Delaware in March of 1972.

The Third Annual Middle Atlantic Archaeological Conference was organized by the Program Chairman and Editor (Ronald A. Thomas, Delaware Section of Archaeology) around three basic themes: community patterns, mortuary practices, and Early Man. An introductory session was conducted allowing for the reporting of current research. The Program Chairman provided each session chairman with basic conference guidelines and then terminated his participation in the session. Session chairmen, therefore, should be given credit for each session.

In order to transcribe the proceedings of the conference the Program Chairman took responsibility for taping the sessions. It was also found necessary to utilize tapes kindly provided by Tyler Bastian of the Maryland Geological Survey - Archaeological Section. Tapes were found to be adequate for recording the statements and presentations of the primary speakers. However, the rambling style of speech and the fact that slides were often used in illustrating certain points necessitated extensive editing. Questions from participants at distances from the tape recorder also had to be edited or, in some cases, omitted. Consequently, the printed proceedings are the sole responsibility of the Editor and each participant may, if desired, disclaim all or any part of the statement attributed to him. The Editor apologizes to any participant slighted or misquoted but would like to point out the necessity of such a course of action in order to complete the transcribing in a reasonable time.

The gratitude of the Editor must go to Ms. Susan Gross who spent countless hours in listening to tapes and attempting to arrive at rough typed drafts for the Editor. Any reader who has attempted to carry out such a project will immediately realize the substantial contribution of the transcriber. Ms. Gross' time was provided by the Division of Historical and Cultural Affairs, Section of Archaeology of the State of Delaware.

Ronald A. Thomas
Editor/Program Chairman

PROGRAM FOR THE THIRD MIDDLE
ATLANTIC ARCHAEOLOGICAL CONFERENCE

University of Delaware
Newark, Delaware

March 17 and 18, 1972

Friday Morning, March 17

Registration (8:30 - 10:00 a.m.)

Area Activity Reports (10:00 - 12:00 a.m.)

Colonel Howard A. MacCord, Sr., Chairman

This session should be devoted to brief summaries of the results of work conducted during the past year and statements of plans for the coming year. Each participant will be called upon to talk about the area with which he or she is familiar. Reports on new methods, theories and sources of funds should be included.

Friday Afternoon

Community Pattern Studies (1:30 - 5:00 p.m.)

Dr. Barry Kent and Ira F. Smith III, Chairmen

The study of the internal organization of occupation sites will be discussed. Emphasis will be on the methods that can be used to extract information of this kind from sites.

Saturday Morning, March 18

Mortuary Practices (9:00 - 12:00 a.m.)

Ronald A. Thomas, Chairman

This session will be devoted to a discussion on human burial practices of the Middle Atlantic Coast. An attempt to survey the variety of practices will be followed by a discussion of the sociological implications of these practices. Those of us with data on the subject are requested to come prepared for an in-depth discussion.

Saturday Afternoon

Early Man (1:30 - 5:00 p.m.)

Dr. William Gardner and Herbert Kraft, Chairmen

This will be a two-part session. Herb will begin by hosting a discussion of artifact types and especially projectile point typology pertaining to Early Man (Pleistocene Man). He asks that participants bring along specimens from their areas. Bill will then turn the subject to data on settlement and community pattern. His recently excavated Thunderbird site will serve as a basis for discussion.

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Friday Afternoon Session
Dr. Barry Kent and Ira F. Smith III, Chairmen

COMMUNITY PATTERN STUDIES

(BARRY KENT) I'm not certain we are quite prepared to offer you an intelligent definition of what community pattern studies involves. However, I think that all of us here have some idea of what we should be discussing within this framework.

I feel personally that it is difficult to do this kind of analysis or engage in these kinds of studies without some regard for the culture history. Don't limit yourselves to things other than culture history. Include them if you feel there is some relationship to what you want to discuss with regard to community patterning or settlement pattern.

(IRA SMITH) We're going to begin with myself more or less giving a formal statement on a particular excavation which I conducted this past summer which had good settlement pattern information and can be taken further in discussions of community pattern if we want to analyze it in depth. I want to present you with some of the basic information we obtained from the site and then discuss some of the aspects of it. The site I want to discuss is called the Quiggle site.

[The Quiggle site is located on the west branch of the Susquehanna River of the Ridge and Valley Province of the Appalachian Mountains. It is in Clinton County near the town of Pine. In 1920 the University of Pennsylvania and the Rochester Museum of Arts and Sciences conducted a joint dig at the site as part of a general survey. This expedition was intended to expose a major portion of the occupation. Both trenches and test pits were opened with no evidence of major features such as house floors, storage pits, etc., being found. Witthoft in Susquehannock Miscellany mentioned a mixture of Shenks Ferry pottery and Susquehannock pottery in midden areas. I could not help but feel that this indicated the presence of features in the subsoil level.]

(WITTHOFT) The photographs of the excavation show Bill Ritchie standing on a pit base almost up to his armpits. He was obviously in a cache pit. Other photographs show features resembling the Shenks Ferry bed pits. Their shallow middens are the typical Shenks Ferry pits.

(SMITH) Although I was certain that there was a community pattern to be discovered there in my examination of the excavated material I was unable to find any Shenks Ferry pottery. My thoughts were that this was a Susquehannock site with shell-tempered pottery.

(WITTHOFT) My conclusions at that time were based also on an examination of the local surface collections. The site looked very similar to one at the mouth of Willow Creek in Mumsee. This was a stockaded site with a mixture of Shenks Ferry and Susquehannock material.

(SMITH) This past summer we were able to spend seventeen excavation days on the site and were able to open 25,000 square feet. Our excavation was set up in the area which I thought Ritchie had excavated. We immediately ran into the area of heavy rocks which were mentioned by the early excavators. We then moved up onto the hill and began to find stains that appeared to be ditches around the village. A stockade was then found and followed. The configuration of the interior of the village was then investigated and we found a series of structures with interrupted areas. The village is defined by a circular ditch two hundred feet across which was anywhere from four to eight feet in width. The ditch was very shallow. Inside the ditch was a single line stockade. The evenly spaced posts in one area led to clusterings and then two lines of parallel posts. Very few refuse pits were found inside the stockade although many post molds were found in no definable patterns. Four graves were found scattered throughout the site both inside and outside the stockade. Any cemetery attending the village was probably outside of the village. On the last day of our excavations we found a causeway across the ditch and a gateway. This differs from the typical stockades with overlapping entranceways which we are accustomed to.

The most unusual discovery was the tobacco shed or key hole structure. These features were found all around the outside of the stockade. They are about ten feet in diameter and have igloo-like protrusions leading to a stained area. Some appear as semisubterranean units. The stain may contain fire-cracked rock or some evidence of fire. Several were under stockade lines and although cultural stratigraphy seems probable all artifactual material was similar.

The site seems to have been occupied by the Susquehannock Indians some time during the first half of the sixteenth century. It leads to many questions such as what are these small structures. Also of interest is the fact that they were outside the stockade. Does this mean that we are excavating our Late Woodland villages in the wrong manner when we start at the center and work to the stockade, where we are usually forced to stop for lack of time? This leads to speculation as to whether these belong to the village or whether it is a frontier fort type of situation.

(PAUL CRESTHULL) Could they have been something like the Eskimo igloos, with an entrance and a ditch which was dug down below ground level to go into your entrance tunnel?

(SMITH) This is a possibility, but I would ask perhaps why the pile of rocks was right at the mouth of your entrance.

(WITTHOFT) We got something like that at the Schadt site, within the palisade, but there it seemed to be an entranceway because it was at ground level at its outer end and sloped down to the square, semisubterranean house. This is one of a variety of house types at Schadt.

(SMITH) What was the distribution, just all over the site?

(WITTHOFT) They were scattered all over the site.

(FLOYD PAINTER) Did you consider it might be a sweat lodge, and those stones are heating stones?

(SMITH) I've considered it. What do you think of it? There's seventeen of them there in the small area which I excavated, and, guessing that if they follow suit in areas I haven't excavated, there's going to be a lot of sweat houses. The stones don't seem to be burned, just cracked rock; perhaps they had been heated and cracked in that fashion. However, they don't seem to have been burned in situ.

(HOWARD MACCORD) How many of those fit together? The cracked rocks.

(SMITH) To be quite honest with you, I didn't try to fit them together.

(MACCORD) You might be able to determine if they were in situ or had been dumped out from excavating the interior of the house.

(WITTHOFT) Ira, at Schadt some of these subterranean buildings had a fireplace in the middle of the floor with quite a bit of stone but no deep burning. In other places the stones from the fireplace had been highly scattered. They had been thrown against the walls and so on.

(SMITH) Do you interpret by this that these are then living units?

(WITTHOFT) Yes, winter houses perhaps.

(QUESTION) Are you getting artifactual material?

(SMITH) Generally speaking we are, but not much. It's what you might get from a scattering around the village area...just a few broken potsherds, etc.

(STATEMENT)...if we can figure out whether men or women were using these buildings, perhaps we could determine if they were menstrual huts.

(SMITH) How might we attack that from the archeological point of view? I'm afraid that the distribution of these things is so little that we probably couldn't do something like that. In fact, if there's any correlation in artifact distribution there seems to be less in there than anywhere else on the site.

(DICK REGENSBURG) Could they be summer lodges? It could be too hot to live within the stockaded village when they didn't have any ventilation. Perhaps you could check the deer antler to see if they were seasonal.

(SMITH) Unfortunately there's no identifiable bone other than chips coming out of these...literally, just small chips. They're all oriented within the eastern quadrant.

(QUESTION) There were no remains associated with it at all?

(WITTHOFT) There's another parallel. I've never seen a dug down house in Owasco sites, but I partially dug a very tiny site way up in the mountains

at Lawrenceville, which was Castle Creek, and that consisted of circular pit houses with the centers of the floors dug down 2-1/2 to 3 feet and filled with midden. It was all winter stuff in there. Castle Creek was apparently a little hunting camp of the people who came up out of the lower valleys.

They had no entranceway. I was unable to find post molds.

(KRAFT) How do you define winter stuff?

(WITTHOFT) I mean deer, fish and so on. There was a little charred corn...mature, dry corn.

(KENT) Vance, I don't know whether you and Ira have talked about this before, but it calls to mind the thing that Charlie worked on at the Nace site...what was the size and description of that? This was the Shenks Ferry site.

(PACKARD) Unfortunately, there was never any publication on this. It is not the same size. It could fit within a ten-foot square. It was probably semisubterranean and there was an entranceway somewhat longer than the ones from Quiggle, perhaps ten to twelve feet in length. [Remainder cannot be transcribed]

(DON DRAGOO) Well, Ira, we've been working on these things about ten years in the upper Ohio Valley and the Allegheny Basin. They are diagnostic features of the early Iroquoian sites in that area around 1100 or 1200. We're getting a semisubterranean pit with post mold pattern around the inside, and this sloped entryway into them. This is the same situation which you have here. Usually these pits have very little debris. They're just very, very empty of house refuse. Occasionally we will get a few potsherds, but generally speaking in terms of other pits within the village they're very barren of material. Another interesting thing we have noticed about many of them is that there will be a cluster of burned stones and rock just inside the pit at the neck, just as you would come down the entryway at the opening into the house site. There would be a nice cluster of stones, many of them showing burning and fracturing.

Our first impression of them was that they were probably storage structures. We have found them inside the stockade lines. Most of the villages are very similar in general outline to the one you have shown, a nice, generally circular village with stockade. Some may have a trench on the outside, others don't. The earlier ones seem to be lacking the trench. The later ones seem to have it. Generally, these are confined in the upper Allegheny area to the earlier phases of our sequence. They are inside the village, scattered between the long houses.

It's possible that they could have been used as sweat houses. There's so little material in these to tell us one way or the other whether they were for storage. A couple of them contained a few grains of corn, but it's not conclusive enough. It's a very diagnostic feature, and unlike anything else we find on any of the other sites. It's completely unrelated, I believe, to the Monongahela situation, where we do get storage structures which are often

attached to the houses or pits with an entryway, but they're of an entirely different shape. These things usually stand along in the village. They're not attached to any of the houses. Their size is approximately the same, around eight to ten feet. They have somewhat shorter entryways than the ones you have experienced.

(SMITH) Those are in the vicinity of ten feet.

(DRAGOO) You have a very long entryway, while the entryway in our upper Allegheny tends to be about three feet, because there tends to be a quite precipitous slope to that entryway.

(SMITH) Everyone here has mentioned something really from Iroquoian, more or less at the outskirts of the Middle Atlantic cultural provinces. There's a phenomenon that doesn't come into the province. I don't want to pursue this all day long, but just out of curiosity what's the situation in the Middle Atlantic Province? Do we have this kind of thing?

(MacCORD) In this dished out house floor are the post molds vertical?

(SMITH) At the entrance they sort of slope...well, they're parallel. They're pairs of posts or whatever at the entrance and they just slope inward. The others are vertical around the main structure.

(MacCORD) The interpretation of that elongate dark midden-like material at the entrance...I've got a similar thing inside the overlap of the palisades, where two lines overlap and you have a footpath where people can come and go. In muddy weather they would trample the mud underneath a foot or more deep. They would throw stones and potsherds in there to stabilize the mud and give them something to walk on. We may have that at the entrance to your houses.

(RON THOMAS) Of course in Delaware we have no post molds. We have features, a good number of which are about ten feet in diameter and circular, but some stretch to fifteen feet in diameter. They are usually filled with shell. They have prepared flat floors, two of which have been lined with shell, perhaps for drainage purposes. One of these we excavated at the Island Field site measured fifteen feet by eight feet and was two feet deep. At the west end it had a funnel-shaped depression leading down to the floor. The floor had a central fire hearth beneath which was an extended burial. These seem to be Late Woodland. Quite a few have been excavated but remain unrecognized.

(KENT) As I suspected, this business of community pattern studies has changed into a discussion of features at various sites. Maybe this is the nature of the animal with which we're dealing at this point. It's very difficult to get to an interpretive analysis stage. We're going to call on Herb Kraft who has indicated that he would give us some information on work he has been doing. Herb, if you want to, give a descriptive report. That is fine, but if you have analysis we'd be delighted to hear it.

[The talk by Herb Kraft could not be transcribed from our tape recorder, and we were not able to locate another transcript of it.]

(HOWARD MacCORD) I will be talking about the Indians on the Late Pre-historic time level. The sites I am going to discuss now are in the Valley and Ridge Provinces and are not in the tidewater areas. They do not conform to the villages John Smith described and in fact we have not yet seen any publications on eastern Virginia house patterns. Some have been found recently along the Chickahominy River which are rectangular, the same as Captain Smith describes. At a site along the Nottoway River small oval house patterns are found where the posts supporting the structure are about four feet apart, a very skeletonized framework. They were fifteen to twenty feet long and twelve to fifteen feet wide. In the mountain area I have dug about six sites, all of which yield circular houses in stockaded villages.

The country is mountainous with narrow valleys. One such site which we dug completely with power equipment used to strip off the topsoil was in Bland County, Virginia. The complete outline was mapped and found to be a large circle some one hundred thirty feet by one hundred forty feet in extent. In the village was a circle of circular houses and small storage structures. In this village the storage structures are separate from the houses and are made by putting posts into the ground. The structures measure anywhere from six to eight feet in the greater dimension.

They appear to have had only a seasonal use. The village was only occupied for four or five years. Large pits were found outside the houses as were all of the burials. Some were even found outside of the stockade. Two gates in the palisade were located and found to be of the overlapping type. Both gates were guarded by an external structure which I take to be some sort of guard house or gate house or possibly some sort of a reception center for visitors. Fire had been built in both structures. The largest house in the village was a circular structure twenty-five feet in diameter. In its center was a burned area not countersunk into the ground. Other houses ranged as small as fifteen feet in diameter and did not have fires in the center. The large structure had four post molds forming a square around the fire area. It is suggested that due to the dome-shaped roof of this large house the weight of winter snows would necessitate support posts.

The gate house is oval and eighteen feet by twelve feet in dimension. The floor was sunk into the ground with a central fireplace. It is outside of the palisade.

The Meharrin site is located along an old abandoned channel of the Meharrin River and dates to around 1700 A.D. Houses were small and oval and measured about twenty feet in length and fourteen feet in width. No evidence of a central fireplace was found. A similar site in the more mountainous area of the state was excavated as a highway salvage project. It was stockaded and contained circular house patterns ranging from eighteen to twenty-seven feet in diameter. The larger ones had an internal fireplace and support posts. This site is in Tazwell County not far from Bluefield, West Virginia. One house had posts set in a wall trench reminiscent of the construction of sites in Tennessee, the first instance I have run across in Virginia of this style of construction. [The foregoing refers to the Crab Orchard site.]

(T. DALE STEWART) We had this type of construction at the Potomac Creek site, a historic site in tidewater Virginia.

(MacCORD) Outside of the gate was a rectangular structure twenty feet by fourteen feet with a central dividing partition. All of these sites tell us much of the community patterning of the immediate prehistoric period of the mountains of western Virginia.

(PACKARD) Everything which you have been showing us looks very Southeastern.

(MacCORD) I think you are right but we seem to be finding out that this roundhouse complex stretches all along the Piedmont up to the Delaware.

(PACKARD) What is the associated pottery?

(MacCORD) Limestone-tempered Radford type almost exclusively. This area is supposedly Shawnee or Cherokee historically. I don't feel that it is either since Cherokee houses are square with wattle and daub construction and we don't find these traits here. If the Buffalo site is Shawnee with square houses it is not related to that culture either. We are dealing with an entirely different people here. The roundhouse pattern seems to be rather widespread and the square houses come in later.

(DRAGOO) Since you started that series of sites down there I've been struck by the similarity of your sites with those of the Monongahela area. They're exceedingly similar. You have the same basic outline. Your houses are almost identical to most of the Monongahela houses.

(MacCORD) I would think so. We need to dig the intervening areas, but the few sites that we've dug in the Shenandoah Valley were circular houses.

(DRAGOO) Of course many of the southern and eastern Monongahela sites in the area also have pottery more like the Radford pottery than the shell-tempered typical Monongahela pottery.

(WITTHOFT) I suggested long ago, and I still think it's valid, that we're dealing with northern and southern village patterns in the Eastern Woodlands. We can map them and map shatter belts between them. You have the southern villages with small nuclear family houses surrounding a plaza of one type or another. The northern type are longhouse towns, sometimes consisting of only one longhouse, where the ritual area is the longhouse itself.

The southern type would include all of middle Mississippi, for example. The stuff on the Missouri would be a variety of it. John White gives us drawings of two towns, one is northern and one is southern. He was right on the dividing line. Shenks Ferry is a southern village pattern, and here we're in a shatter belt of shifting boundaries in Late Woodland times. Their law correlates to these patterns in social organization of the village and household and ritual structures and so on.

(MacCORD) It seems to me that the style of building houses is a fairly conservative thing. It wouldn't change in one generation.

(WITTHOFT) I think the shift is from round to square in a number of areas, but I'm not sure.

(MacCORD) The houses are immediately inside the palisade, and what little of the center I could expose is completely empty. There are burials in the central open area but no houses.

(WITTHOFT) Does Selden Island (Potomac River) have much of a plaza in the center, Howard?

(MacCORD) We didn't dig enough of Selden. We did get one little segment of the palisade, and we didn't get a house pattern, so I don't know what's there. Any other questions, comments? I think we've got a strong tie-in with Monongahela and with southwest Virginia. We'll depend on Bettye (Broyles) to find the intervening areas.

(WITTHOFT) Some Radford is the ancestor of some Monongahela.

(MacCORD) I tested one small area of the Piedmont in Virginia near Lynchburg last year and I got three house patterns, one I uncovered completely and two of which I just uncovered segments, and they were circular, about fourteen feet in diameter. They were on the Late Woodland time level, too. I think this is a widespread phase outside of the area John Smith described.

(BARRY KENT) In regard to what John Witthoft was just saying, in light of this northern and southern pattern of village arrangements, he mentioned the Shenks Ferry site which does have a kind of ceremonial complex, perhaps plaza center, in it. For those of you who haven't seen it yet, and I suppose many of you have, this is what he is referring to...the recent publication of "Pennsylvania Archaeologist", which shows Kinsey's excavations at the Murry site, in which he has two concentric rings of houses arranged around the periphery of the village. At the very center there's a large circular house, which is in itself different from all the other outlying houses. It's a kind of rounded end, long parallel sided thing. I'm inclined to ask John (Witthoft) at this point to pursue what he was getting at in terms of the sociological interpretations of some of this. I'm glad John brought it up. It's a part of what we really should be discussing. I don't know whether you were prepared to go into that at this point, John...

(WITTHOFT) I think so. It's something I've worked with. I should start with Bill Sears' essay on the Southeast in Chang's book Settlement Archeology, because Bill is extending this idea of settlement pattern to beyond the specific village. He sees evolutionary forces in social organization and political structure, or perhaps ritual structure, going on in the elaboration of the Southeastern town. The peak of this is what we see at Etowah, for example, or Moundsville, or Town Creek, where we have a so-called ritual center which is a large town with a very big plaza and a large men's house associated with it, a so-called temple mound, surrounded by a number of other large villages, likewise palisaded but lacking the large, rather ritualized cemeteries, and the big plaza and the very large temple structures of the towns. These are satellite communities. There are still other communities which lack any apparent

ceremonial or ritual structures.

He sees this going back in time, growing out of simpler site specializations, of which we should be trying to map a whole region as though it were a tribal unit or a political unit, extending it beyond the village itself to include roughly what we might call ritual centers, what we might think of as hamlets and farmsteads, even, associated with them. This would be growing out of a primitive Southeastern village, which is this clustered circle of nuclear family houses arranged around a plaza with no apparent structures associated with the plaza. I have called these men's town houses because from the Cherokee and Creek ethnographic data and historical data we know that these were exogamous villages, and that the men moved into their wives' houses from another town, and they maintained a community of men in a separate lodge, the Cherokee "ossa", the town house, the so-called temple on the rectangular mound of the archaeology, where there were separate ritual functions involving the members of the community sociologically and the outsiders who came from another clan or moiety.

These are closely parallel to men's house towns and their sociology in the Amazon and Orinoco and in some parts of Southeast Asia and the Islands... the social interrelationships between the architecture of the community and its social organization.

On the other hand, in the North, the grandest of these men's town houses was Cahokia, even more so than Etowah and Moundville. Instead of the village growing into a number of nuclear family houses by population increase and generation in the North, the houses become enlarged so that the original community was a round house, which became a long house, and then became a longer and longer house, exactly like the long house communities of the Amazon. There are no notable differences in kinship charts, but quite conspicuous differences in the subtleties of their sociology. There are no ritual centers, no plazas, no separate ritual centers in a Northern town. Each long house is also the temple. Of course, these temples have survived after the long houses, in the Delaware Indian big house and the Iroquois long houses and so on. One of the first things the Jesuits did with their converts in Canada was make them partition off completely the center of the long house floor so this could no longer be used for ritual purposes.

I think it might be rewarding to compare the sociology, the political organization and the patterns of warfare between men's towns and long house towns. The differences are conspicuous in the Amazon. The Amazon was named for the fierce women of the long house towns. Sears has tried to extend this now to higher levels of specialization and community density in his attempt to map boundaries and distribution of towns and architectural features within each of the subculture areas of the Southeast.

Of course, Cahokia is not like Etowah. There are local differences, just as the ritual center at New Madrid is not like the one at Angel Mounds, nor are either of them like Cahokia. Each has the local flavor. It's a cultural evolutionary approach to changes in North American Indian culture and society through the total picture of the architecture of a total community, of a total tribal area.

(KENT) John, I think this is a beautiful statement of what we really ought to be discussing here today in terms of what Ron (Thomas) has set up for us as an outline for discussion. At the same time I think we will all admit that this is a very difficult area of interpretation. John has his own special knack for this, about which most of us are somewhat intrepid with regard to stepping into some of this. We're a little afraid of this kind of analysis, and actually very little of this has been done, particularly in the Northeast. I think the Northeast has been criticized for that.

(WITTHOFT) Town Creek is the classic example, the only well studied example, of a so-called ritual center of a southeastern tribal area. It was not occupied by very many people. It had a huge plaza and a good-sized temple mound with a men's house on it, rebuilt many times. There were many more dead than living at Town Creek at any one time. In the valleys around Town Creek, scattered at fairly close intervals, ten or fifteen miles or more, there are large palisaded towns with the same kind of pottery, the same kind of burial practices, which have small plazas and lack mounds, or lack mounds of any size. Here the men's house functions were not as important. They seemed to be more concentrated at Town Creek itself. The Town Creek area is perhaps one of the best studied ones in which it's possible to do the kind of mapping Sears was talking about.

(PACKARD) There aren't any towns north of Town Creek. It is interesting to note the similarity of Town Creek to the Cherokee houses of Tennessee.

(WITTHOFT) But the Cherokee men's house or temple, from the very beginning up until this last example in 1870, was an earth lodge. The Cherokee ones are uniformly earth lodges up until 1870. From the Cherokee and Creek we can still get good ethnographic data on these structures and their functions, as we can from the Iroquois and Delaware on their long houses.

(DRAGOO) John, I'm not convinced that we can make a generalization concerning the northern longhouse over all of this area as having been derived out of circular structures.

(WITTHOFT) No, but we can see what is happening in Canada. I wouldn't know about other areas.

(DRAGOO) Well, I'm not so certain about Canada. We can track the longhouse essentially even into Middle Woodland times. On some of the sites on the upper Allegheny, for example, we're getting longhouses and also structures which are circular on the same sites. There is a differentiation of the two different structures.

(WITTHOFT) The time levels when this happens...it happens in Owasco, and the Wyoming Valley sites around Wilkes-Barre are amazing because of the great mixture of house types within a single village...a single palisade, think of a single component, where we get small square houses, small round houses, oval houses, actual great longhouses, and these subterranean rectangular

structures with a passageway and no plaza.

(STATEMENT) You're getting several things coming together and blending in this type of situation.

(KRAFT) Which sites for example?

(WITTHOFT) Well, the one I knew best was Schadt, which we excavated almost completely, but my summary maps are still not quite complete. Then there's the Parker site.

(SMITH) What I found there is basically what John is saying, but I couldn't differentiate houses on the inside of the village. What we had was a ditch, a stockade, and we had the semisubterranean houses, but they were distributed along the inner arc of the palisade just as those at Quiggle were distributed along the outer arc, and then inside the semisubterranean structures were the post holes indicating some sort of surface structure. Whether it was longhouse or round house, or short long house I couldn't tell.

(WITTHOFT) Also at Schadt we found a tremendously elaborate palisade which was an earth-filled wall with three feet of earth in it between double sets of post molds which had had horizontal logs crimped between them and then they were earth-filled. From the siege of the town we found the imprints of scaling ladders buried in the moat. And we had arrow points which had been driven down into the moat, and when we made the measurements of those angles and extended them, this indicated that this palisade had been eighteen feet high. There also had been enormous towers built inside of it, framed on post molds of posts that were up to two feet thick, and these posts had gone down deep, four to six feet, because of the weight they were bearing. This was not an unsophisticated type of fortification.

(QUESTION) At Town Creek, do you find within this structure any clustering of artifacts because of the community life patterns or activities?

(WITTHOFT) I don't know. I would have to ask Joffre (Coe) what he found in the eighteen successive temples which were on this mound. Normally when we dig a so-called temple mound we find under the floor the burials of old men, and we find things that have mainly to do with men's activities, especially things like arrow points and chunky stones, and some ritual paraphernalia, including sometimes these copper plates with the raptorial birds and so on, which apparently refer to the lacrosse game in men's activities. We know a lot about ethnographic data on these structures.

(PACKARD) You have a real problem there because the temples were made out of village debris, the mounds, and where do you stop being into the floor and getting into the fill? If you look at this material from Town Creek the most common artifact, like 90 per cent, is the pottery.

(WITTHOFT) Of course, when you dig one of these sites, you find that they have packed floors, trod down by human feet, and when the temple fell into disrepair it was burned down and earth brought in and heaped upon it, so you have a burned layer lying on a trod floor. The stuff that's on that floor in the burned layer is what is significant, plus the material in the graves dug down from the floor of that temple.

(SMITH) We're going to call a break in just a minute. Perhaps you've all noticed something and perhaps I am guilty of it, as I initiated the first paper. With the exception of what John was getting into with men's houses and so forth, we're not quite sure what we think of when we discuss settlement patterns. We've all spoken on Late Woodland sites and post mold patterns. Is this all there is to settlement pattern?

All of us, myself included, have given, up until John's comments, descriptions of individual units...a house, a semisubterranean structure, something like this. We've just barely touched on the relationship of one unit to another within a village setting, or the relationship of one village to another, one type of village to another type of village. We haven't even approached this thing we're calling activity studies today. Perhaps during the second half of the session we should begin to gear our minds to something a little different.

(TYLER BASTIAN) I would like to discuss excavated sites with known site patterns from Maryland. One of the sites of the Montgomery Focus described in a manuscript by Slattery and Woodward is the Winslow site. The excavation was in an arc where the concentration of pits seemed to occur. Not much was done in the central part of the site. No good data is available on house patterns. Circular storage pits and graves of an elongated nature were found. The concentration of pits may have been a full circle and not part of the site been destroyed by the digging of the Chesapeake and Ohio Canal. The arc of pits is not beside a large house but may relate to a stockade although not enough post molds were found to verify this.

(QUESTION) Could that be a ditch of varying depths paralleling a stockade?

(BASTIAN) The data conclusively show that these are a series of storage or trash pits.

(T. DALE STEWART) I believe one or two of the pits produced infant burials.

(BASTIAN) They did, but these were usually the outside pits. There were also Colonial pits at this site. I believe, however, that it dates from roughly 1100 A.D. for the most part.

The Biggs Ford site is on the Monocacy River in Frederick County, Maryland. This site also has an arc of large pits with occasional scattered smaller pits. An outline of a house with parallel sides and straight ends was found. A possible stockade was recorded. The site has two components, one of which is found also at the Winslow site. Graves, however, contain pottery from Late Pre-contact time levels. I believe the Late Woodland component is represented by the large elongated pits and the later, almost Contact, component is represented by scattered graves and probably the house patterns.

From the report on the Moyaone section of the Accokeek site we can again see the elongated pits around the edge of the site. A series of stockades was also seen.

(MEL THURMAN) Although we haven't yet completely analyzed this site we do have a house pattern. I would say it was parallel sided with rounded ends and was at least four or five meters long and three meters wide. The central area, I think, was a plaza area. I believe the post molds recognized in that area by Mrs. Ferguson do not exist and never did exist. We were unable to find any evidence of cross-sectioning of post mold stains by her and I think she misinterpreted the data. Only in the stockade area do we get any evidence of cross-sectioning being attempted.

Further, I think in terms of what John mentioned about the relationship of men's houses, where there are any, I don't have any evidence of men's houses being associated with the plaza area. It should be noted that there are in various documents, e.g., the Anonymous Relations of Maryland, references to the unmarried men's society, which is similar in name to the unmarried men's society among the Powhatan groups. I think that quite possibly, even though there is no evidence from mounds or anything, part of John's model is applicable to the situation in what I take to be the latest occupation at the so-called Moyaone site.

(BASTIAN) Is there anyone here who has actually visited the excavations which were undertaken by Mrs. Ferguson?

(STEWART) I'd like to simply say that at Potomac Creek, the site I worked on down in Stafford County, on the Virginia side, there were these same concentric rows of palisades. From the appearance of the post molds, the inner ones were the oldest. They were difficult to clean out, whereas those on the periphery contained jet-black earth, very soft and easy to remove. The pottery suggested that the decoration was becoming a little more florid as you get to the periphery, as if that were a later variety. Also, there were ditches around the outer palisades, suggesting that it wasn't a continuous trench but possibly elongated pits. Here and there were suggestions of their being discontinuous, but I finally thought that it was a continuous ditch. After seeing all this evidence today, I think that maybe some of them were discontinuous. The outer ones were very rich and powdery, as if they had thrown all their trash into them.

(BASTIAN) In this site a major component was Late Woodland, roughly A.D. 1100 to 1200; however, there were other components there too. Exactly what belongs to what here I'm not sure.

(STEWART) They found some European material with one burial in this outer trench, and I suspect that might have been intruded in there later.

(WITTHOFT) In these Wyoming Valley Pennsylvania sites they dug these huge trenches outside of the palisade to get earth to fill the wall with. These are not discontinuous, but there are places where the trench is very deep and very broad, and places where it's very shallow, and approaches being discontinuous. If you plowed it down, you'd have this pattern.

(BASTIAN) Stephenson made this suggestion in regard to these pits at the Accokeek Creek site.

(PACKARD) In Lancaster County Susquehannock sites we have the same situation. We have a trench which is more or less discontinuous. Schultz does not but it has the large circular pits around it. It moved because of erosion, the continuance of this trench. Also, when this site was dug they didn't use power equipment, so coming down square after square they had a tendency to vary the height as they went. With power equipment you might obliterate the entire trench. You get a different picture.

(BASTIAN) All of these sites I've shown you here today were cultivated and so the top ten to twelve inches has been destroyed. If there were a continuing trench of varying depths it would be destroyed.

(HOWARD MacCORD) I was fortunate enough to work on that site back in 1936, and we did cross-section many of the post molds. I remember doing that. I was quite young and inexperienced at that time, and I know Mrs. Ferguson was reflecting the state of knowledge at that time. She was not digging in a stratigraphic manner. To her, it was just one single component with a graphically enlarging population requiring a larger village, so they built successive stockades. I don't know whether we could ever reinterpret her efforts or not, because she didn't dig with the idea of keeping material segregated by overlapping pits for example.

(THURMAN) I would like to say to Colonel MacCord that while I concur that Mrs. Ferguson cross-sectioned a number of the post molds, it would be physically impossible for her to have cross-sectioned a significant number of the post molds from the entire site in the length of time which was at her disposal. I can get houses from portions of the area. Mrs. Ferguson has mapped thousands of post molds but she couldn't find one house. I am sure that the evidence can in fact be reinterpreted and has been reinterpreted.

(GEORGE REYNOLDS) It would take a lot of ground hogs to make that many holes.

(BASTIAN) We've been talking principally about what I would refer to as Late Woodland, with the exception of the Biggs Ford site, where there is a later component, too. At the Hughes site the same circular pattern was recorded by Richard Stearns. The Selden Island site, according to John Witthoft, was a palisaded village with the houses arranged around a central plaza. At the Potomac Creek site in Virginia Carl Schmidt reports a continuous trench and post mold patterns.

(STEWART) I think a lot of those lines there probably reflect the fact that they were shallow trenches with posts put in them.

(BERT SALWEN) This is something surprising...all of these sites showing individual post molds, going way back into Late Woodland times. You can get up into what little we know of fortified sites in New England and Long Island. By and large, wherever we have a really prehistoric or early historic component we have a ditch like these, and then in historic times they change to posts. I was surprised to see this doesn't seem to be true in this area.

(BASTIAN) This is referred to as a defensive ditch. Perhaps it is a

ditch resulting from construction of an earth embankment. We've mentioned all the sites I know of, which is any sort of community plan data for Maryland west of the Bay.

On the Eastern Shore, few sites have been fairly extensively excavated. I did some work on the Reeves site. Here we encountered no post mold patterns and an irregular pattern of pits. There was no particular arrangement that I was able to discern. There are similar situations at the Moore and Willin sites in Worcester County which have been excavated by the Sussex Society of Archaeology and History. George Reynolds mentioned that at the Crumpton site, which is up on the northern Eastern Shore, they did find some post molds of a house with parallel sides and rounded ends...a rounded end (they have only about a third of the house). I think that's the total data on post molds and village plans for Maryland.

(WITTHOFT) I wondered if Howard MacCord had any good impressions of the excavation at Williams Port, Maryland. I think you're the only one who saw any real amount of it. That's an important site because of the time level and cultural relationships.

(MacCORD) Unfortunately, I had worked only one day on that site. A bulldozer was used to strip away flood-deposited overburden until the occupation stratum was reached. A big pottery sample, a few isolated post molds... nothing that made a pattern...and burials and refuse pits were found.

(BARRY KENT) We have one more previously offered contribution, this time by Henry Wright.

(WRIGHT) We have only limited information on community patterns from the area in which my interests lie. Post molds are rare and only one site has been extensively investigated. It may be easier to study community patterns within community social organizations if we first study areal settlement patterns. The area which I am going to present is within the Smithsonian Center for Regional Environment Studies.

The sequence from this area has not been published so I can summarize it briefly. In later prehistoric times, beginning several hundred years B.C., we have a sequence of five prehistoric cultural phases. The first phase is what I call the Accokeek Phase. It is distinguished by sand and crushed quartz tempered pottery with cordmarking and by small stemmed points. It ends about 100 A.D.

The second phase I call the Smallwood Phase. It is a local variant of Popes Creek. It has both shell tempered and crushed quartz tempered, as well as mixed tempered, pottery which is predominantly net impressed with scraped interiors. The points are medium sized and stemmed. This is from the records of Ted Stearns.

The third phase is called the Selby Bay Phase. It is distinguished by heavily shell tempered, net impressed and cordmarked pottery. The points are large stemmed and lanceolate specimens that are made from all kinds of strange exotic and imported material. This is an area where only quartz is locally available in quantity. Most are made of imported rhyolites from the

South Mountain in Pennsylvania, argillites from the Trenton area, and a rather strange stone called green jasper whose source I do not know. The Selby Bay Phase ends some time around 700 A.D. and was defined by Thomas Mayr.

The fourth phase is called Sullivan's Cove and is a local early Late Woodland with collared, incised pottery with some cord wrapped dowel impressions. Large triangular points also characterize this phase.

The fifth and final phase, familiar to most of you, is called Little Round Bay after a site excavated by Stearns. It contains Rappahannock fabric impressed pottery with decoration rather like that of the Townsend Series pottery from Delaware and the Eastern Shore of Maryland.

The settlement pattern of the Severn River consists of small middens and campsites. These are all very tiny sites. This is accompanied by one large central shell heap in a very exposed position above the river. The Accokeek Phase sites all contain the Accokeek pottery. No excavation has been conducted at the large sites so we are not sure if this was a central base camp of seasonal use.

The Selby Bay Phase, distinguished by the Mockley Series pottery, has a simple settlement pattern. It has a series of very large shell heaps and another series of very small shell heaps. The refuse material does not show seasonal differences between the two kinds of sites. This apparent duplicity of settlement types, I believe, can be explained by the fact that the Severn was only occupied at certain times of the year. A large series of sites were located on the Patuxent River and may be linked to the sites along the Severn River. We must have spring and early summer fishing and agricultural sites on the Patuxent and fall and winter sites on the Severn. The distance is only ten miles at the most.

The Sullivan's Cove Phase is distinguished by a different kind of settlement pattern. On the Severn River we have only small sites containing shell middens, burials, post molds, etc. No excavation has been conducted.

This settlement pattern continues to develop in the Little Round Bay Phase with small sites but with one large village at the head of the Severn River. The village seems to be linear with a row of shell features paralleling and adjacent to the river. A concentration of refuse behind the features may represent a line of houses such as those illustrated by the drawings of John White in areas further to the south.

The West River survey covered almost every foot of ground in an attempt to cover all of the small camps as well as the base camps. We found at least seventy sites in this small area of six square miles. We have campsites of three kinds: those with lots of grinding stones (this brings to mind Howard Winters' Law that the number of grinding stones on a site is inversely proportional to the distance from the site to the car); sites with tiny flakes of bifacial retouch; sites with heavy flake and core tools.

[A portion of Henry Wright's slide talk was not transcribed.]

(KENT) I think what we've seen here this afternoon, especially what Henry Wright has just talked about, is really two levels of the kind of analysis we're supposed to be discussing this afternoon; that is, settlement pattern or community pattern studies, or intersite and intrasite comparisons of archaeological remains. For the most part, I think we have been in a kind of quandary with regard to these studies and our own feelings about them. Generally speaking, we seem to be a little reticent about getting into the analysis of this material.. the kind of thing that John was hinting at earlier. This is largely reflected by the difficulties in terms of the kinds of materials we're excavating, the kinds of sites we have. At the same time, I think that many of us are rather critical (and in many cases for good reason) of this same kind of work which is now being done by the so-called processualists or "new archaeologists" or what-have-you. Very often their evidence is very scanty, and yet they seem to make some very grandiose interpretations based upon the kinds of material they have.

Following the last presentation the meeting was oriented toward an exercise in community pattern studies. Dr. Kent and Mr. Smith presented the audience with several data sheet handouts and utilized a large site map to lead into a discussion on what kinds of interpretations can be made. The data they presented was from an actual site but not all the facts were presented.

A lengthy discussion followed during which the audience participated by firing questions and suggestions at the moderators. The discussion ended when Dr. Kent revealed that the community being discussed was that in which he presently resides. The exercise revealed the potential dangers in interpretation.

Saturday Morning Session
Ronald A. Thomas, Chairman

MORTUARY PRACTICES

(THOMAS) I have a handout to be gone over later which will explain a scheme which we will attempt to follow in our discussion. I think a method of entering into this discussion is to define the various terms some of us use. There has been quite a bit of interest lately in mortuary practices. Most of you have read The Memoirs of the Society for American Archaeology, which came out recently on the social implications of mortuary practices. Some of you may remember the work that Jake Gruber did at the Mohr site in southeastern Pennsylvania. A recent "Pennsylvania Archeologist" has an article by Kinsey and Graybill on the Shenks Ferry mortuary customs.

If you go further back in time you will note that there were quite a few early excavated sites in Maryland and northern Virginia, such as the work by Ferguson and Stephenson, which discussed mortuary practices in very great detail. The scheme which they used is very much like the one we will use today. There have been many burials excavated in the part of the country in which we work. I realize that some of us are lacking in burials—Herb Kraft is always complaining about the lack of burials in the Upper Delaware Valley—while those of us in the Delmarva are blessed with burials.

(KRAFT) I'll swap you some post molds.

(THOMAS) Thanks! For those of us who aren't able to discuss community patterns such as those we discussed yesterday, we sometimes turn to such things as mortuary practices to elucidate the past. There are many different kinds of burials in this area and we will try to survey them. Most of our burials come from the late prehistoric and historic eras. There are more than a few sites scattered throughout the Middle Atlantic Coast which we can probably place in a Middle Woodland context. We have even fewer which can be placed in the Adena-like Early Woodland complex. And then we have only a few—maybe two or three sites—in which we have definite evidence of Archaic burials.

I am hoping someone will present new evidence at this point. The need to bring out more information about burials and the need to have all of us devote more of our time to burials is the main reason we are having this session today. And hopefully, by the time we've finished with the morning session we'll have outlined an analytical procedure most of us can follow to bring out the kinds of information which are available. I'm going to call on three people for the first session, and I'd like to have them, using slides in most cases, discuss the different kinds of burial practices they have found in their areas. This will be just a descriptive survey. We're going to try to do it in chronological fashion. I'd like to call first on John Witthoft to discuss what he knows of Archaic burials.

(WITTHOFT) Thank you, Ron. As you know, I hate burials, and one thing I like so much about the Archaic is that we get very few burials in the areas in which I work. We're not really as fortunate as those in some parts of South America and Mexico where the people cremated their dead and then ground the bones up and mixed them into their bread and into their beer. But in New

York, for example, as far as I know, there are a total of four Laurentian burials known in all of the sites excavated, and two of those have been found by pot hunters.

We have the peculiar situation of Frontenac Island where we have a great many Archaic burials laid on the surface of a rock island and simply swallowed up in midden with ashes and rubbish. Because of the way Frontenac was dug, we don't know whether these people were inhumations or not, or whether they're just bodies swallowed up in the midden, but most of the Archaic sites that we've dug we have found no trace of any burials of the people, even in those sites where there have been fairly abundant pits, as at Conoy Town, in Lancaster County, Pennsylvania.

When we excavated at Sheep Rock, I felt that we had found an answer to this problem of our missing dead in these Archaic sites. Our Terminal Archaic at Sheep Rock is a thick set of strata about three feet thick, which has its closest relationships to Brewerton rather than to the other Laurentian horizons. Within the Laurentian horizons at Sheep Rock we found four burials: two were newborn; one was a highly fragmentary, very mature male, apparently the remains of a corpse which had been found in the woods and brought home to bury; and one was a woman who had been partially or completely scavenged, probably by bears or foxes. In each case, the body or fragments of the deceased had been laid on the ground surface and a small mound of gravel and dirt had been heaped up over it. But there was one pit...one of the newborn infants was laid on a small hearth and a small heap of gravel and dirt piled over the body with no objects buried with it whatsoever.

If this were the usual situation in Laurentian and some other North-eastern Archaic complexes we would have no chance of the survival of any skeletal material because of the shallowness of the sites. We would have something like the recent and modern Hopi Indian patterns of burial in New Mexico, where the body of the deceased is taken out of the mesa top to a place at Old Orabi (It was called "The Halfway House of the Dead"). The body was placed on the ground and covered with a small mound of rock slabs. Within a few years the creatures and plants of the desert and the mesas returned everything to the ecology of nature. In the Northeast, if there were any chance of such a mound surviving erosion and the organisms of the topsoil, certainly it could not have survived the first plowing of the land, the first farming. I think this situation probably accounts for the general absence of any record of Late Archaic mortuary practice.

We also found one Transitional burial in Sheep Rock associated with our Susquehanna spear point horizon and the soapstone potsherds. This again was a newborn infant. It had not been placed in an excavation, but had been placed in the hollow of a rock ledge above the floor of the rock shelter and the hollow above the infant had been filled with gravel. There was perhaps six inches of gravel above the highest part of the infant burial. In this burial they had placed with the child a cup or a ladle carved from the shell of the box turtle, a very ordinary artifact. In the top of the fill above the burials there was a large piece of a broken soapstone kettle with worn edges which had apparently been used as a shovel to scoop up gravel and dirt to cover the burial. This burial of this small child shortly after interment had been

riddled through by pack rats, so that everything in the fill was completely disorganized and churned up, although all the bones were there in this dry environment.

I would not be at all surprised if in Archaic and Transitional horizons this were a frequent situation; i.e., burials on ground surface covered with just enough dirt to satisfy the aesthetics of the community. Of course, this contrasts very strongly with our Woodland and especially Late Woodland horizons which I don't want to discuss now.

(THOMAS) John mentioned a point to which we will probably return later. He mentioned that the so-called old man of the Sheep Rock is a partial burial. If you would, keep that in mind, because we may want to come back and discuss that in more detail later. I want to call Dick Regensburg next, but first has anybody here excavated any other Early Archaic or Middle Archaic burials in this area, the Middle Atlantic Coast?

(QUESTION) I'd like to ask John about the Massachusetts situation where we seem to get a lot of cremation ceremonies.

(WITTHOFT) This is a very peculiar set of cultural complexes which we cannot deal with yet in terms of geography or chronology. They're such peculiar situations. (By the way, I slipped on my Sheep Rock thing. The adult partial burial is Middle Archaic, the two infants are Laurentian, Late Archaic, and the other infant is Transitional. so we have quite a time span involved.)

(THOMAS) Do we have a date for the Middle Archaic burial?

(WITTHOFT) Extrapolating from dates above and below, it would be somewhere in the vicinity of six thousand.

(THOMAS) So far that qualifies it as the earliest burial...

(WITTHOFT) The earliest Archaic burial I know of in the Northeast.

(THOMAS) Once you get into the Terminal Archaic or the beginning of the Transitional...

(HOWARD MacCORD) I don't believe it follows the burial pattern but in two deep shelter caves on which we worked in southwest Virginia we get scattered human bones in the midden, and they seem to have been cracked open...they looked like animal bones. We may have a little evidence of cannibalism there, but we can't prove it. As to the Archaic level, I would say Middle Archaic.

(THOMAS) Am I right in thinking that Bill Gardner has gotten a human bone from that site on top of the hill near Thunderbird?

(GARDNER) What bone? We don't have any Paleo material.

(THOMAS) As I explained, once we get into Terminal Archaic or Early Transitional period or whatever you want to call it, about 3000 to 2000 B.C., we start getting a lot of ceremonial type burials. The site best known in this area is that which Dick Regensburg is digging at Marlton, the Savitch site. Dick, do you want to comment on that?

(REGENSBURG) When you get into the Terminal Archaic the cremations are elaborate. They begin to cremate their dead in quite elaborate patterns. I found out that I wasn't the first one to discover cremations in the Terminal Archaic. It was done about 1916 by the University of Pennsylvania, although it wasn't recognized as such at that time. I was very fortunate in going through the Koens-Crispin site, which is at the University of Pennsylvania. They forgot to throw away a box of bone which they had found, and it turned out to be human bone, incinerated, cremated, the remains of one of the burials. Which burial it belonged to or which set of atlatl weights were found with it I don't know.

Are most of you familiar with the Koens-Crispin site, where all those atlatl weights...maybe you're not. Hawkes and Linton dug the site first with the University of Pennsylvania, and Dorothy Cross redug the site in 1941. She examined another section of the site.

I started at the Savitch Farm site for the purpose of finding out why there were so many tools, such a prolific site. In our test pitting in the very first fall, the first few weeks, we landed right on top of the cremations. We uncovered 38 graves with 43 bone bundles. What is unusual here is we have actual ossuaries with up to four bundles in a single grave...separated bundles within the ossuary, perhaps in separate containers. The ritual appears to have taken place (I'm guessing because we haven't found the crematories other than possibly one) at their occasional campsites in their year round pursuit of fauna and flora. Then they were redeposited in this central location, of which we have reasonable proof that it was a fall occupational site. Almost all the features contain charred nut shells and acorns. We don't know how many pits were missing at the Koens-Crispin site, but the site report diagrams three roughly parallel lines oriented about twenty degrees west of magnetic north.

At the Savitch Farm site again we have three roughly parallel lines similarly about twenty degrees west of north in their orientation. There is some regularity in the way they were placed in the ground. They could have been oriented twenty degrees east of south, but we think of north because we try to orient our sites in that manner. Whether the cremations were placed on top of a stone platform, on top of the wood, inside the wood, we don't know. We haven't found anything that would suggest how this was done.

Ironically, they did a very good cleaning when they removed the individual from the crematory. They very carefully picked every scrap of bone, leaving behind every trace of charcoal. Of the 43 bundles of bone there isn't five grams of charcoal. Yet we have fairly good preservation of charcoal on the Savitch Farm site. However, they did not clean out the burned hearth rock which was at the base of the crematorium. The deposited bone was put in some kind of a container with an average length of seventeen inches and an average width of nine and one-half inches. It's a very neat pattern. The tools were buried with bone bundles and they were placed in the north-south axis.

The atlatl weights, which most of the time were placed in pairs at the Koens-Crispin site, were also placed in pairs at the Savitch Farm site. If there weren't two atlatl weights another object was substituted. They often

placed one projectile point or knife with one atlatl weight. We have one instance where they took a pair of fossils and placed them in the grave. They were cast Eocene or Late Cretaceous brachiopods. Maybe they didn't have any tools they wanted to sacrifice or offer. The Koens-Crispin site had the same thing—fossils in the graves. We are lucky in that we are able to recognize some other objects within the bone bundles. Tiny turtle shell, possibly ornaments, were incinerated so that they were badly fragmented, twisted, shattered, making them difficult to recognize. The individuals have burned bone beads. At least four of the graves contained bead necklaces. Are there any questions?

(QUESTION) Where is the site located?

(REGENSBURG) About five miles due east of Philadelphia, on the Rancocas Creek or more properly on a tributary of the Rancocas. Yes.

(QUESTION) Have you checked the age or sex of the cremations?

(REGENSBURG) We haven't done that. It's very, very difficult. We would probably be able to handle most of them that way. The first object that you would use for aging an individual would be teeth. In a cremation of any adolescent or adult the teeth explode...

(WITTHOFT) What is the geographic extent of this complex?

(REGENSBURG) It has probably a five-mile radius. The Koens-Crispin site is three miles as the crow flies from the site of the farm. We also have five other sites which are abundant in lithics of the same identical time period, and I don't know if I'll ever get to examine them or not.

(FLOYD PAINTER) What do you know of the distribution of this mortuary custom?

(REGENSBURG) This is the second cremation complex that we know of.

(PAINTER) A crematory complex was uncovered in South Carolina and with one of the burials was a large Savannah River spear point, identical, almost, to your Koens-Crispin type.

(REGENSBURG) Very good. I didn't know that it went that far south.

(PAINTER) We have the same type, I think, on the western edge of the Dismal Swamp in Virginia and North Carolina, with bannerstones and with projectile points.

(REGENSBURG) Is there any residue left on these artifacts?

(PAINTER) Yes, sometimes a sort of calcium deposit, probably from the ashes of the cremations.

(T. DALE STEWART) What was the average depth of the cremations?

(REGENSBURG) We have a very shallow site at the Savitch farm. The Koens-Crispin site was much deeper. We have from ten to twelve inches in the thickness of the topsoil. Our cultural living floor is three inches below the base of the topsoil or fifteen inches...The tops of the grave pits were eighteen inches, so it was only three inches below the living floor to the tops of the graves on the average.

(HERB KRAFT) It was rather interesting that you had three different types of bannerstones associated with your burials. I was just wondering what types of atlatl weights Floyd Painter spoke of. They were generally winged, weren't they?

(REGENSBURG) These atlatl weights are made out of exotic stone. The common stone of the Savitch Farm site is a variety of argillite. It does not weather like the typical argillite. It is a tough siltstone gathered in the Delaware River. Serpentine and talcs were used abundantly as they were at Koens-Crispin.

(THOMAS) To summarize, John (Witthoft) painted a scanty picture of burials during the Archaic. Then during the Terminal Archaic Hawkes and Linton, and now Regensburg, find a full-blown mortuary cult which exists on the basis of radio-carbon dates at around 2300 to 1900 B.C. Are there any other complexes of this period?

(WITTHOFT) Assawompset in Massachusetts is of the same date and is a somewhat related complex. But what we want to emphasize is that the artifacts of this Koens-Crispin/Savitch complex are found in only one-quarter of a county. It is an unbelievably localized set of industries. The same thing is true of Assawompset. That complex is extremely localized geographically, tied to a single soil type, as is the Savitch/Koens-Crispin complex. These are not part of a widespread situation. They are very specialized and remarkably localized.

(REGENSBURG) Three of our graves did not contain calcined bone but did contain a set of artifacts oriented in a north-south alignment.

(THOMAS) You're suggesting, then, that you have an uncremated burial destroyed by the acidic soil.

(REGENSBURG) We are wondering how many more there were.

(THOMAS) It should be pointed out that many of the caches we have found in this area could have been grave offerings.

(REGENSBURG) At Savitch a slight difference in the depth of the artifacts is critical in determining possible grave caches.

(THOMAS) Any other comments? There seems to be a large leap from the localized Archaic mortuary complexes to the widespread Early Woodland forms.

(WITTHOFT) Transitional graves have been found with cremated bone but they have been found by local pot hunters. I understand they contained carved

soapstone vessels with their bases knocked out and other tools. I don't know of any, however, that have been found in the last forty years.

(KRAFT) At the Miller Field site a good Orient component was found related to four rings of stone localized in one area. Bone was not present due to the acidic soil. Ritchie found similar features on Long Island. This year at the Harry's Farm site we found another of these rings in an Orient component.

(THOMAS) Do we have any Archaic sites in which bone preservation is good?

(WITTHOFT) Only at Sheep Rock and Frontenac.

(BILL FITZHUGH) I've been working mostly in Laborador and Newfoundland and a little in northern New England. A comment was made that it seems like the further north you go during the Late Archaic period the more mortuary ceremonialism you get. Of course, most people are familiar with the Moorehead material in Maine. This is now Jim Tuck's excavation. It has a large cemetery dated between 2500 and 1500 B.C. There are early ceremonial complexes in the St. Lawrence area, some recently discovered that haven't been investigated very carefully. Burial mounds four or five feet high covered with stone slabs and layered sand deposits over a sub-mound box crypt were found in which there were lavish deposits of red ocher, full-channel gouges, and some very interesting large serrated edge triangular points. I think we are going to be getting in the northern areas ceremonial complexes with quite elaborate preparations which go back probably as early as 3500 or 4000 B.C. This comes down into Maine, directly through the Moorehead material at least to about 1500 B.C.

(REGENSBURG) We haven't mentioned ocher on these graves. Ocher is a very prominent offering. Further south use of ocher decreases. We have mention of ocher at the Koens-Crispin site. At the Savitch site there is one grave where there is actually an offering, a deposit of ocher.

(PAINTER) We have an exception in North Carolina. This is Early Woodland. We have a bundle burial complex with secondary burials. No ocher is found on the burials but in two instances ceremonial offering pits have been dug adjacent to or between burial pits. The offerings which have been placed in there include pots and beads and gorgets, heavily coated with red ocher; i.e., the offerings, not the burials.

(STEWART) On this level you can't forget that to the west at Indian Knoll you have the biggest collection of American Indian skeletons from one site probably that is known, just filled with atlatl remains and individuals buried in shell midden. Where the alkaline environment has preserved them, they're not only more numerous but better preserved.

(WITTHOFT) Isn't there just about every variety there, too, including cremations, bundle burials, and so on in small numbers, as well as the flexed burials and a few extended ones?

(THOMAS) I think what we are going to do now is jump ahead in time. One of the best known and most spectacular of the mortuary complexes for the

Middle Atlantic Coast would be the Adena-like situation.

(WITTHOFT) Of course we have some local things which are earlier on which we have some data.

(THOMAS) Early Woodland material?

(WITTHOFT) Yes. These are sites on the Meadowwood time level, because they include Meadowwood tools carried from western New York, and they're rather nondescript cultures. They have very rough, thin corner-notched points, all from a bad material, and the pottery is what Jimmy Griffin and I used to call "nondescript cord-marked". It's reddish, sand tempered ware, with rough exterior cord-marking, simple forms, and the interiors are scoured. There isn't much more you can say about them. They're scattered all over eastern Pennsylvania, southern New Jersey, the Delmarva Peninsula, and down into Maryland.

On one of the islands in the Susquehanna River north of Harrisburg I dug a part of a buried living floor of this complex. It was silted in and buried under three feet of layered alluvium, but it was an intact living floor, with a typical point and pottery scattered on it, and a couple of Meadowwood tools. But here on the living floor, and by a hearth, I found a pile of cobblestones about four feet in diameter and mounded over, and it had been silted in. It was deeply burned. There was no charcoal, but between the cobblestones there was a froth of bubbles, of thick tar, almost like human charred fat and juices. Right next to the deepest stones, in a small pit, I found a slightly post-juvenile male who had been moderately cremated. The face was almost intact, but calcined without shattering. On the living floor, alongside the grave pit, there was a handful of nine unfinished flakes for these crude Early Woodland points.

This is the only one of these that we have seen. We know other sites of this same type, and in two of them actual Meadowwood graves had been found, apparently representing a traveler. One of these was in the Upper Delaware Valley north of Easton. There were no physical remains left of the body except teeth, but there were a handful of worn out Meadowwood tools, a big whetstone of Ohio leadstone, one of the big Meadowwood gorgets of the banded Huronian shale of Ohio and one of the tubular cigar-shaped pipes of Ohio stone, a typical Meadowwood grave.

The other one was at land level in York County and here there was a small site scattered with this nondescript cord-marked pottery, the stuff we find in sand blowouts all over the Delmarva Peninsula. One pit had an extended burial in limestone soil, so that there was some bone preservation. With this individual there were 24 of these worn out Meadowwood flint tools of all types, one of the very, very long non-eyed birdstones of the classic Meadowwood type, one of these twelve-inch fellows, a large cigar-shaped pipe of the banded Huronian shale, and a smashed pot of this nondescript cord-marked stuff. So we have another Point Peninsula wanderer.

These are the three graves that I know of for this Meadowwood time horizon. The sites of this time horizon are tied together by a fairly abundant scattering of imported Meadowwood tools of the western New York Onondaga flint.

Now surely we will be able to find other sites of this type which have some depth and get further cross-ties to them besides just the Meadowwood ones. This is your pre-Adena.

(THOMAS) When we move into the Adena horizon we have perhaps a half dozen sites in the Middle Atlantic Coast which have been partially excavated, in most cases by people who were unfamiliar with archeological technique, but occasionally by people who made very good observations.

Just to briefly survey these sites, I think possibly the earliest date we have is 600 B.C. for the Rosencrans Ferry site. Now again the evidence is scanty but it appears to be like this. There were possibly thirteen or fourteen burials excavated on this site. All of these burials were redeposited. There were no articulated remains found at this site. Most of these burials had with them burial goods which vaguely resemble the Adena complex. I'm speaking now of the large so-called ceremonial blades, the gorgets, some copper artifacts and boatstones. I think one of the most interesting items was a copper boatstone which had three whelk columella beads still adhering to its surface. This is of a typical shape, but it was made of copper. At any rate, there were a number of objects with these things, obviously placed very carefully in the grave alongside the cremated remains.

John (Witthoft) mentioned the burial in the Susquehanna Valley. You may recall also that at Rosencrans Ferry there was a frothy black substance which I understand was analyzed by somebody in New York State and they thought it might be leather or some sort of a fabric rather than human flesh, but it still is enticing to believe that perhaps this is a cremation in the flesh, and the fleshy materials as well as the cremated bones were redeposited. Of course, we have no direct evidence for that. This site did have one Carbon 14 date, 610 B.C.

When you come down into the Middle Atlantic Coast, the West River site is very well known. It was dug in 1956. The West River site consists almost entirely of redeposited cremations. These cremations had possibly been made on dry bone, rather than in the flesh. Then the bone was gathered up and placed in heaps at various levels within a large pit. The artifacts were then scattered around. These were not carefully placed on top of the cremated bones. The site included a large double pit, that T. Latimer Ford refers to as a crematory, and a reburial pit which was about fifteen feet away which contained a large concentration of bone. One of the interesting things about this is that there was bark which had been thrown in the grave as the grave was filled up, apparently bark which may have been used as a covering for a primary burial in the same vicinity. I'd like to talk about this a little bit later when we talk about the model which I'd like to propose.

The Cambridge site in Maryland and the Frederica site in Delaware were very poorly known, but apparently they consisted of redeposited cremations, disarticulated uncremated bone, and there is a good possibility that there were also some primary graves: i.e., extended burials existing at one of these sites.

The St. Jones site, another Adena site, consisted entirely of redeposited cremations and again we're going to refer back to these sites later. I've got some sketches to show you later on this morning. I believe that is all of the Adena sites from which we've gotten bone material.

(WITTHOFT) Ron, at the West River site where I dug with Ford we had good bone preservation, and there was in that site, dug down from the floor like the cremations, a flexed juvenile with this pink-red bone all over from overall body painting with hematite.

(THOMAS) Has any of this been reported?

(WITTHOFT) No, none of this has been published. But what we saw at Miss Murray's place, where I dug with Ford, was exactly what I saw in the remains of the Dover Bypass site, where the pot hunters had missed part of the floor. We found that we were on a house floor, and the burials and cremations were dug down from it. But there the bone preservation was horrible, and only the bone which was saturated with copper verdigris or which had been cremated survived. We also found deer bone on that floor at Miss Murray's... you know, regular deer garbage bone. But otherwise those floors are clean, like an Adena house.

(THOMAS) I want to discuss this in greater detail later this morning, because it fits right in with this idea of developing the two-phase funerary program, which I think existed from the very beginning on up in the Middle Atlantic Coast.

(WITTHOFT) We certainly had at Dover Bypass burials which were not cremated.

(THOMAS) Also at St. Jones.

(WITTHOFT) I found a portion of one where the pot hunters had taken a huge copper breastplate off the body, and I had the whole front of the torso, flesh and bone. I don't know where that material is now. We can't relocate it.

(THOMAS) It doesn't exist any more. There was also a report of these extended burials at Cambridge, but the reporters were working with lanterns and very poor conditions, and we're not certain of this at all. Later on I want to discuss the possibility that we have primary burial pits within these Adena sites which we can't find. Dr. Dragoo, do you want to mention anything about Adena burials in this area?

(DON DRAGOO) Well, I just wanted to say that at St. Jones there was uncremated material as well as cremated material. You stated awhile ago that it was cremated.

(THOMAS) I mentioned also uncremated. There is a report on the St. Jones site, in fact there are two reports published by the Delaware State Museum, one by Dr. Stewart and one by Leon deValinger. The artifacts, for those of you who are interested, are not only Adena, not only Ohio Valley, but many other places are represented in the artifact contingent. Paul.

ted (PAUL CRESTHULL) There was uncremated stuff at Frederica, too, is that correct?

(THOMAS) Oh yes, I think so. Some was preserved by copper; however, other bone was not stained by copper salts and I believe it was uncremated. It may or may not be.

(WITTHOFT) I only know about the material I handled which somebody picked up before and the one portion of undisturbed floor which we got. The midden in the undisturbed floor included many small pits, and in those pits there was no good bone, but there were the fragments of cremations apparently where a body had been lightly cremated and everything but the cremated bone had dissolved. We had only a handful left of what had been a total skeleton.

(THOMAS) Possibly in a primary position, then?

(WITTHOFT) No, the pits were too small.

(CLIFF LEFFERTS) Where did that material come from that we got from Barry Kent and Ira Smith?

(THOMAS) It should have come from Frederica.

(WITTHOFT) It's not Adena. Those are Late Woodland burials in the vicinity of the site.

(LEFFERTS) I don't believe it was cremated but it was in really poor condition.

(WITTHOFT) Those are Late Woodland.

(LEFFERTS) I was saying it came out of Frederica, but...

(WITTHOFT) They were adjacent to but apart from the Adena site.

(THOMAS) Tom (Mayr), do you have any comments on West River?

EDITOR'S NOTE: The remainder of the discussion on Early and Middle Woodland burials was not taped due to a malfunction in the tape recorder. Brenda Lavelle has requested that her presentation not be included in the proceedings. The transcript now takes up during Doug (Belaker's slide presentation on an ossuary site in southern Maryland.

(BELAKER) In addition to the articulated material we found over one hundred and fifty examples of partially articulated material, representing individuals who had died some time before the actual burial ceremony in the ossuary. They had laid in state in a primary deposit somewhere and were partially decayed at the time they were transferred to the ossuary pit. Smith, White and others speak of death houses at least for the leaders, but

the ethnography is a little skimpy on just how they treated their common people. We don't know if they used scaffolds or death houses for everyone, or if they actually buried the people and then dug them up for reburial in the ossuary.

I think Dr. Stewart reported several years ago an interesting observation: One of the skulls of these ossuary members had a mud daubers' nest inside the skull, suggesting they were probably not buried primarily but were placed on scaffolds or in death houses. The evidence is not clear on just which of these was the actual case. If any of you have some insights on this I would welcome them. In addition to the completely articulated material and the partially articulated material we also have completely disarticulated material which represents individuals who died some time before the actual burial ceremony, i.e., who died earlier than those represented by partial articulation. These are either randomly scattered throughout the pit, or they are arranged in bundles where there is no actual articulation of anatomically related bones, but the bones have apparently been collected and placed together in a bundle arrangement. What we used in trying to find the meaning of this material were actually four classification systems superimposed on this pit.

To begin with, we used a two-foot grid system lined out over the entire pit. All the scattered material which was apparently not arranged in bundles and not articulated was recorded, after photographing and measuring their positions, by location in a particular two-foot square. This will enable us much later to determine the distribution of individuals within the pit to any two-foot area.

The partial articulation material was given a partial articulation number and its position in a particular two-foot square recorded. Of course, the completely articulated individuals were treated as just that. Their positions were described as was their location within the pit. The bundled material was given bundle numbers and their positions were described as well. This is a very artificial system to use, and it is superimposed over a very unclearcut architectural picture in that very seldom do long bones fall into one particular two-foot square. It is the rule more than the exception that they overlap through many squares, or at least two. You have to make a field decision as to what you want to do with them. I think this is, in retrospect, a reasonable approach to the excavation of one of these ossuaries, in that it allows us some type of special control in studying the distribution of individuals within the pit. It is working on the assumption that there is a nonrandom distribution, and that if you analyze this material you can get at some of the information as to the location in which they have placed the individuals.

At the bottom of the ossuary pit we found the other two examples of complete individuals, one lying on his stomach and one with the skull removed lying on his back. Once this individual had been isolated you could see the very tight, flexed arrangement. The lower limbs had been brought up over the femora in a nonanatomical position, possibly involving some cutting of the muscles and ligaments. We haven't examined this very carefully for cut marks, but it may produce some. This is being done in other ossuaries as well. Dr.

Stewart may want to comment on this later.

My task now is to analyze this material from a physical anthropologist's point of view and then superimpose that information back on the grid system, and determine if I can find any distribution of categories of individuals to see if there is any particular pattern to where they placed males, where they placed females, or where they placed any particular age group. In studying the distribution of the partially articulated material we may get some insight into the order in which they filled the pit and whether, in going from the scaffold area or wherever the primary deposit was, they first chose those individuals who were partially decayed and then chose individuals who were completely decayed, or first chose those individuals who were most recently deceased and then chose those who had died a long time before. This may be reflected in the distribution of this material in the pit.

I think the point I want to drive home today is that these things do not have to be treated as just a random mass of bones. There is a certain amount of data which can be extracted even from this apparently entangled situation. I think we have evolved a somewhat reasonable approach.

From the strictly physical anthropological sense, I'm interested in using this skeletal sample, recognizing that from at least what we know of Huron ossuary deposits it may well represent a relatively complete sample. If it does, if the ethnography bears that out, then we have a rather unique opportunity with a complete sample to study demographic aspects of the physical population. We can get into their birth rates, their death rates, establish a death curve, a life table, etc. I am also hoping that by studying the ratios of the completely articulated individuals to the partially articulated individuals to the completely scattered individuals we'll get some idea of the period involved between ossuary deposits. With the Huron it was seven to twelve years, depending on your source of information. It's really unknown for this population just what the time element was. If we can get at that by studying these ratios of articulation in the material, then we may be able to get a sound estimate of population size using the mortality curves which I can reconstruct from the skeletons. This is the kind of information I am after and the general type of methodology which has evolved to get it.

The artifacts we have found do not appear to represent grave offerings per se. We found a few shreds, a few pipe fragments, and shell fragments that apparently were in the fill and were not placed in as actual offerings.

(MacCORD) Do you find infants?

(UBFLAKER) Yes. They are of all ages. I'm getting the feeling as I study this that we don't get quite the representation of infant material that we would expect, knowing what we do about infant mortality rates in other populations. I think that may be a reflection of preservation in the primary deposit, in that many of the infants would be likely to be lost in the process of lying six or seven years in a scaffold or death house or whatever and then being carried to this pit. I think that there's not too much chance of adults being lost that way. I think our adult estimate would be quite accurate.

(PAINTER) Concerning the social status of these people, John Smith described their beliefs that after the death of the chiefs they went to an afterlife, where they sang and danced. But the common people would not have any afterlife; they would rot in the grave like dead dogs. Perhaps these were the common people.

(UBELAKER) It obviously is the common people, by the presence of females and infants. Obviously they're not leaders. (LAUGHTER) But this is a good point, in that this ossuary may very well not contain the remains of the leaders. The accounts we see show the leaders being deposited in death houses. The drawings and descriptions all refer to that quite vividly. If the leaders' death house were cleaned out periodically there is a good chance that it was not mixed in with the common ossuary. It may be in the form of a smaller ossuary, or they may have had some other means of disposal.

(KRAFT) In this particular situation, are these ossuaries isolated or are they associated with villages?

(UBELAKER) We haven't isolated the village yet for sure. There is a good chance a modern house is sitting on it. There has been material reported there. We have confined our excavations to just the ossuaries at this point.

(BERT SALWEN) Being sort of naive about this sort of thing, why would I suppose, if I got into something like this, that if these are the common people there is something more somewhere else? Why wouldn't this be representative of the whole population?

(UBELAKER) It very well could. The only reason to suggest that there is something other than this is from the ethnography where Captain John Smith and several others have described the Indian practice of treating their leaders where apparently after they had died they cut a longitudinal slit, removed the internal organs, and cleaned the bones as much as they could, repacked the corpse with sand according to one account, or with jewels and treasures according to another, and reentered this man into a death house. The John White drawings show something like eleven of these individuals stretched out in a death house.

(QUESTION) Is there a possibility that the leaders are represented by the complete burials...that possibly these are distinct personalities...the articulated burials?

(UBELAKER) I doubt it. The only way that would be is if they decided to call a ceremony when a distinguished person died, but I don't see any reason to believe that. If only these ossuaries had been well excavated at Huron sites. Anderson and Kidd have both excavated ossuaries. Kidd thinks he found the ossuary which was the one reported in The Jesuit Relations. He presents a very convincing argument that it may have been the ossuary which was described...the same sort of picture, except that they have no artifacts.

(GARDNER) Have they found any ossuaries with artifacts, grave offerings?

(UBELAKER) Dr. Stewart could probably tell you more about that than

I can. Some of them do have, especially those overlapping into the historic period (once we reach the historic period we start getting a lot of historic goods very quickly.).

(T. DALE STEWART) May I point out a few things? In the majority of these ossuaries which I have seen there is always some burned bone with them, and at this site we were beginning to get into burned bones. You could probably say this site is of the Potomac Creek period because of the pottery. We've gotten some beautiful examples in the fill of Potomac Creek ware.

At the Potomac Creek site in one end of the ossuary was a pile of burned bones apparently secondarily placed there because there is no charcoal with it. We think we may run into that in this case. There was a rather interesting distinction in these two ossuaries. They run right in a line northwest/southeast and the long axes in both ossuaries are on this axis. This probably has some meaning in terms of orientation. I think we ought to look at all of these ossuaries and see if they tend to be oriented in some position like this.

An outstanding feature in this ossuary was the occurrence of land snails throughout the layer of bones, a multitude of land snails. We didn't see a land snail in the first one. Is this a seasonal thing, a different period of time? I haven't yet gotten our malacologist to tell me the life history of these land snails...whether they can burrow three feet down or not. This would be interesting to know. Or were they with these [human] remains when they were put there? I think we have pretty good evidence of some of them being inside the skulls. One burial was on his side with an abnormal position of the lower legs. I have explained this on the basis of illustrations showing bodies laid out in the death house on their backs, fully extended. I now have records of about eight or ten of these. They're usually on the bottom or side [of the ossuary pit] as if they were put in first. I've explained that they cut the hamstrings and drew the lower legs up so that they're in the abdomen. This is one way they could shorten the body to transport it, and put it in the pit. Occasionally they rolled it over. As Howard (MacCord) says, possibly they were wrapped in skins or something and it wasn't too obvious whether they were putting him face down or face up. I've seen several in both positions.

In the Potomac Creek ossuaries we got skulls that seemed to have sand in them, not the clay in which they were buried, and sand in among the bones sometimes. This may be the remains of individuals who had been placed back in their skins with sand around them. We don't know if this might be some evidence of these specially treated individuals. We have found cut marks around the joints. We haven't looked for this detail yet in these ossuaries. We think we'll come up with a lot of that. These cut marks seem to be related to the position of tendons, and of course disarticulation includes stripping the bone.

Shell beads are the most common find and are often associated with children's remains. In the Potomac Creek ossuary I thought I saw these on the very bottom of the ossuary, under the bone and scattered at intervals,

as if part of the ceremony was to throw in some of these shells and then put the remains in. Of course you could say they filtered down through the bones in the course of time. I can't prove that but it was very suggestive to find this sort of distribution. Doug (Ubelaker) has mentioned the mud daubers' nest. We found the nest inside the skull and also in among the bones, as if they were just taken up with the bones.

When we count the remains we find that these are not complete skeletons. There's always fewer of many of the items of the skeleton than in other instances. The skull is most numerous perhaps. I'll always remember an instance where I got involved in a medical/legal case. A couple of colored men were cleaning out a well near Quantico and out came all these bones. They paid no attention to them...some animal bone, of course...until the skull rolled out. People recognize the skull as the most typical part, and they probably made certain they got the skull. Many other parts might have gotten scattered. I think maybe you couldn't lose many of the femora, (They're great big bones) and maybe tibia; however, when you get down to small bones I think a lot of them got lost. When we make tallies of the bones we're arriving at uneven numbers; sometimes there's a right but not a left. Our estimate depends on how carefully these are analyzed.

I think this is going to provide us with a means of calculating the local population of this site. This hasn't been done. I think it's a great opportunity because here is a sample offered to us by the Indians which represents all of the dead of a certain period of time. By getting mortality curves I think we can learn more about this custom.

(HERB KRAFT) I had noticed before some discoloration of the soil...it looks as if it were burned...I was wondering was there any preparation of the pits prior to the interment of the bones?

(UBELAKER) It was very firmly packed, and there was some evidence of burning. It wasn't very dramatic. It was very subtle, if it were there at all.

(KRAFT) From what Dr. Stewart says if there was charring of the bones it was done somewhere else. is that correct?

(UBELAKER) Yes, there was no burning in the pit.

(KRAFT) Is there any way else you can explain this burning then?

(UBELAKER) Perhaps a scaffold or a death house burned, something like this.

(STEWART) There's also a problem here in whether these burned bones represent individuals burned in the flesh or after they were defleshed. Bill Krogman once thought he could tell the difference, but I'm very dubious whether he could. The question is whether the fire would have direct access to the bones and produce greater damage when they were defleshed. The flesh would protect the bones up to a certain point and they would be sort of cooked. This is something that could well be investigated, and some day we may have

the technique, so it would be well to save all such samples for future study.

(KRAFT) John (Witthoft), you mentioned that in Woodland burials you're getting a frothy, tarry substance suggesting that the body was burned in the flesh.

(WITTHOFT) Look at Ray Baby's experiments with cadavers following up the Hopewell cremations. He has demonstrated that it morely depends on the quantity of good wood that you use.

(DAN GRIFFITH) What would the fact that you might have an insufficient number of infant burials represented do to the life table statistics?

(UBELAKER) You mean that the infants were not dying?

(GRIFFITH) No, that the infants found weren't a representative sample of the population of infants.

(UBELAKER) That they were buried elsewhere?

(GRIFFITH) Yes, or because of poor preservation they weren't found.

(UBELAKER) Well, I think we'll have to look at this very seriously when we get the death curve computed and see if there is an obvious lack of infants or not. It's something you just have to deal with in this kind of work. Obviously, there are a lot of assumptions involved in any attempt to go that far with analysis. First of all, in computing this you assume that the population has remained stable for the length of time that they've been burying at this site. This may or may not be the case, but you have to assume that to do the work. There are many assumptions involved like that which you just have to make if you want to try it.

(NORMAN PRICE) How many skulls were recovered from this ossuary?

(UBELAKER) I think we've got a count of about one hundred and twenty.

(STEWART) We haven't numbered them but there are well over a hundred. We still have a quarter to excavate.

(UBELAKER) How do you feel about the total representation of the population in this? Do you know of any evidence which suggests that there may have been another method of disposal of some of the individuals?

(WITTHOFT) You should have a lot of infants if you've got a real sample.

(UBELAKER) Something like 30 per cent or so. That's what I would expect also.

(WITTHOFT) We've got separate disposal in Owasco and in Susquehannock.

(UBELAKER) It was documented in the Iroquois and the Huron ethnography, too, where they buried an infant along the path, hoping that someone else would

pick them up and go with them.

(HOWARD MacCORD) I dug an accretional mound, a sand mound, in North Carolina, which Dr. Stewart analyzed. We had the skeletal material of 168 or so burials, and not a single infant in the whole crowd.

(UBELAKER) If they had that practice they weren't consistent, in that I have found some which were right about at birth. One thing which will be interesting, as Dr. Stewart pointed out, is the distribution of types of bones—the relative representation of the various individuals—to see what the Indians themselves valued in what they placed in the ossuary...how they really wanted to represent the individual when they transferred him from the primary deposit to the secondary deposit. In the initial analysis of the first ossuary I find that the subadult material is represented most frequently by temporal bones, especially the petrous portion and the inner ear, mainly because that is the best preserved of any part of the skeleton. I think that's the key factor. However, with the adult material so far the femora give the maximum count, very closely followed by the mandible, and then the maxilla. These so far appear to be the key bones, so to speak.

(TOM MAYR) Did you find any post molds along the sides of the pits?

(UBELAKER) That's the next step. When we go back we need to enlarge the excavation. Because of the shortage of time and the fact that I had to run off to South Dakota, we had to begin with just the excavation of the material and try to get that done. We haven't searched the area looking for any platform as of yet. Of course, with the Huron ossuaries you find this and they have been found archeologically...a platform erected around the actual pit, from which they lowered the bundles of disarticulated skeletons into the pit.

(THOMAS) Before we break for lunch, I'd like to ask John Witthoft to remark on his work with the actual positioning of the corpse in the grave pit.

(WITTHOFT) I'll try to summarize this. In my youth I had seen all these strange varieties of grave posture, most of them nonsymmetrical and obviously not culturally designed, and I had never seen a field technology used adequate to explore these problems, particularly since either graves had grave goods...rarely...and that's all people wanted or there was nothing with them and nobody wanted to bother with them and shoveled them out of the way.

In 1948 I started excavating Owasco sites in the Upper Susquehanna Valley with this specific problem in mind, using a field technology which involved removing totally the soil content of the grave with in no way altering the walls. This involved digging in such a way that one could find the digging stick marks while at the same time dissecting all earth away from the bones and disturbing nothing whatsoever, and precisely recording all details of the posture by photographs and by careful, measured drawings.

I first tackled a winter corn storage area of deep cache pits on a

gravel terrace where I had good bone preservation, and I discovered that these contained winter graves. The bodies were brought up from the village site below, they were placed in the bottom of the storage pit, and the sides of the pit were undermined with little tunnels to get the body as close to the wall as possible. The head was tunneled back, the knees were tunneled back, an akimbo elbow would be tunneled back, and then the body was covered with sand from the river bars, carried about a half mile. It was the only unfrozen soil. On top of this was a layer of leaf mold. They obviously left the pit open and it was probably used again. Then the next year they would fill the pit up.

I looked at these bodies and I thought they were absolutely stiff when they were buried. They didn't mold them against the wall of the cache pit. They tunneled out. They are in all these familiar grotesque positions, including a woman of about twenty-two, who carried an undelivered full-term fetus, and had died in agony with both arms wrapped around her body.

When I dug the village sites I found a totally different kind of burial in them, in which we found a special Owasco nit type which is a bed; i.e., a circular pit with straight walls dug a foot and a half to two feet down into the ground with a hard packed floor. In some of these we have found charred marsh grass bedding on the bottom. In these pits lie the dead of the village site, presumably exactly as they died, in every imaginable flexed, unflexed, partially flexed, knees up in the air, arms akimbo, nonsymmetrical pattern that one could imagine, obviously not moved. Eventually they had a mound of earth heaped over them.

I thought, "the normal posture of sleep is close to the posture of normal death." These people had not been touched or moved until they were apparently dead from advanced rigor mortis. We've explored this in many other sites since, and it applies to the Bronze Age sites of Europe. It also applies to many regions in the United States, so that all the mythology I was accustomed to hear about tightly flexed burials, the role of the undertaker in posing a body, the role of extended burials, have little to do with it, except that we have frozen in the grave the posture of death.

Even with the Shenks Ferry graves, with the extended males and flexed females, they sometimes misestimated in digging the grave. The feet were too far apart and the front of the grave wouldn't fit, so they undermined it, to drop the body in and turn it. These things are not cultural, except as they freeze for us the life of the people.

In the Iroquois and Susquehannock sites, by 1620 or 1630, practically all of our burials are flexed, but we're beginning to get the little woolen blankets. By 1640 more than half of our graves are extended, and after 1700 it is the total number. We're seeing here factors in the life of the people: the protection against cold, the tightly flexed people who were accustomed to sleeping curled up like a ball against the cold, the perforated olecranon fossa, and the squatting facets under the knees for people accustomed to lifelong tight flexure and growing up with it.

In the Owasco sites underneath the beds we found a peculiar type of grave. It is an inverted mushroom dug down from the floor of the bed pit. You could dig it with a clam shell or a potsherd by digging a shaft down and then at the length of your arm cutting out a cave all the way around underneath.

These have been seen in all kinds of Owasco sites, and no one has paid any attention to them. I dissected about thirty of them, and every infant had a pair of arches of the caps of unerupted deciduous teeth. They are more numerous than any other age group in the Owasco sites, so numerous that they suggest perhaps infanticide, in addition to the normal hazards of childbirth.

Since that time we have been studying four other kinds of bed pits dug down into the ground of different cultures, including those found in dry rock shelters, which still have the bedding in them, and sometimes a mummified corpse. We have to take an entirely different tack toward the evidence frozen in the grave than that of the cultural factors or the undertaker/director. It's not mortuary practice: it's the facts of life which we see frozen in the position of the skeletons.

(KRAFT) Excuse me, John. Before you go on, these bed pits are presumably within the house patterns, right?

(WITTHOFT) They're within the houses or in the rock shelter or in the cave.

(KRAFT) Why aren't we finding more of the burials, then, within the houses?

(WITTHOFT) Well, at Overpeck they're outside of the village, but cultural differences...

(KRAFT) You imply, for example, that these were bed pits within the house? That they then took the frozen corpse—the rigor mortised corpse...

(WITTHOFT) In the winter they couldn't get dirt to cover it, so they put it in caskets and used the river sand. At other times of the year they simply brought in earth and made a heap of earth on the floor of the house over the grave. The drawings of these are amazing when you look at them one after another, culture after culture. You see the man buried on his face with his knees drawn up and both hands stuffed into his mouth up to the knuckles... he was dying in agony. The others are flexed corpses of women who were carrying a full-term fetus, obviously dying in a special kind of agony, and so on.

Then, as compared to this, I've excavated the graves of a few white men and a few Indians who have been murdered and dumped into a grave immediately after death, and the appearance is totally different. They're poured, like that one slide we saw. They're just flopped. They look as though you've simply poured the body at that stage of flexibility.

(TYLER BASTIAN) Are there ethnographic data for bed pits?

(WITTHOFT) There are in the West. These are obvious, though, because we get remains of the bedding, and we get the hard trod floors. It makes sense. You dig down below ground level to get below ground drafts, and you get a place to put your mattress in, too. We get the manure of children in these bed pits in the dry shelters, and we sometimes get the manure of human adults as well as that of the dogs, and we get food scraps.

(QUESTION) John, what sites are you speaking of particularly with these bed pits?

(WITTHOFT) I'm speaking of, for example, Canandaigua, Owasco, and proto-Susquehannock Late Iroquois sites of Bradford County. I've seen the same pits in many other sites in the Owasco and Iroquois of New York which I have not dug, but which I've seen exposed. The Susquehannock sites have beds of a quite different shape, and somewhat deeper. The Shenks Ferry ones are very broad and shallow and do not have scraped sides. We have found some of those which had been burned out when they were filled with dirt to level the ground and where the bedding and other stuff in them was charred in place. Of course, we've got them at Sheep Rock, and we've seen them in the dry cave sites... rock shelter sites of Kentucky. Some of those have corpses in them.

(VANCE PACKARD) Would you postulate then because Strickler has no pits inside the houses that by that time blankets had come in?

(WITTHOFT) Well, blankets are all over the place at the Strickler cemetery, and most of the Strickler graves are extended.

(KRAFT) John, is any of this Owasco data published?

(WITTHOFT) No, it's mostly written up but it's not published, nor the Susquehannock or the Shenks Ferry data.

(KRAFT) I'm just speaking about the limited excavations we've done on Owasco material. We get the shallow pits and we get the matting in the bottom, but I have yet to find any burials or anything like that.

(WITTHOFT) The bottoms of those pits are pounded like the clay floor of a hard house.

(KRAFT) They're hard, but many times you find the same thing outside the house.

(WITTHOFT) Maybe you missed part of the house.

(KRAFT) Well, I suppose it's possible.

(STEWART) You make a good case for this and I'm impressed by the fact that we get fixations on certain explanations. There's a tendency when you see the mouth open on a skeleton to say, "Oh, he died in agony", whereas it is just the jaw dropped after death. I don't know where the truth lies in between these. I keep thinking of the picture we have of the known Indians treated by the shamans. They're usually stretched out on their backs and so on. Did they die in that position or were they left alone just to come up into this tightly contracted position? On the other hand, I go back to an experience I had in Iraq where we uncovered a Neanderthal who must be dated to sixty or more thousand years ago because he was twenty-three feet down in the deposit from the floor of the cave, and he was in the same contracted position—one hand up to his face, knees drawn up, and so on. Dr. Solecki had explained

all these skeletons in this cave as being killed by a fall of rocks from the ceiling of the cave because it was in an earthquake area. We found rocks on top of some of them.

In this one I said, "There's no real rock in contact with this specimen. It looks like a burial to me." But he had this fixation. They later analyzed a sample of earth for that skeleton and found it packed with flower pollen. He has written a book about this and called these "the first flower children".

This is something we're not doing much with, analyzing our soil around the specimens to see if you get seasonal indications and some idea of the flora of the area at the time. I also think in the case of these ossuaries how much information has been lost. Mrs. Ferguson had four huge ossuaries, one with over six hundred remains in it, and she made weekend events for her friends. She would invite all these people to come and she dug a trench around the ossuary and had them sit around there in a circle and pull the bones out and put them in paper bags. Of course, they would get one end of a bone and put it in a paper bag, another end would go in later, and so on. They had no idea of how these were laid in.

(WITTHOFT) Well, even the individual burials are a horror. I don't envy you.

(STEWART) This particular burial custom seems to be so different. What has always puzzled me is how are we going to account for this when we have these ossuaries way up north (I guess there are ossuaries in the Southeast... not the same thing)? Is this a Northern custom which has come South? Is it related to the Ironquois?

(WITTHOFT) Yes, and the Huron captives among the Iroquois continued to make ossuaries, but they buried their dead and emptied the graves for the ossuaries. I don't know what they did in Huron country. Then there are the descriptions of the Algonkian northern feasts of the dead, where the people of all the northern forests came together, some carrying the ashes, some carrying the bones, at twenty-year intervals or something like that.

(STEWART) But this particular complex which we get here has its own peculiarities.

(THOMAS) I think we had better break up. Next year we're going to have to meet for seven days.

(NAN ROTHSCHILD) I have a request to make before we go. I've been working on a study of sexual status among the Eastern Indians for the past year. I am searching for data and I have about seven thousand burials recorded so far. I'm putting them in computer files, and I'm very eager to hear about any sites which have good information about age and sex. If you know about such sites, please get in touch with me. I'm at New York University, and I'll be happy to exchange information with you.

Saturday Afternoon Session
Dr. William Gardner and Herbert Kraft, Chairmen

EARLY MAN

(GARDNER) Herb Kraft is going to talk about his work in New Jersey. Then I will take over and talk about working in the Shenandoah Valley. While I am giving mine I will go out on a limb and make some statements about settlement patterns, different types of sites, different types of activities, and perhaps even community patterns and inferences about social organization. Then Floyd Painter is going to talk about the Williamson material and the specialized tools of the Cattail Creek Tradition. After this there are a number of other people who have been suggested...John Witthoft on the Shoop material, and the gentlemen from the Smithsonian who are reexamining this material, and anyone else who has something to contribute or who is doing work on Paleo-Indian sites we don't know about.

(KRAFT) I'm afraid it's going to be another descriptive report. To begin on an historic note, I think it's rather interesting that it was about one hundred years ago that Charles Conrad Abbott published The Stone Age in New Jersey. In it he postulated a Trenton Gravel implement he felt was Lower Paleolithic. There were the proponents of his ideas, Putnam and Harvard for example, who felt that there was quite a similarity between these argillitic implements and those of the Lower Paleolithic in Europe. There were those who opposed him on this. I think the opponents did win out, and rightfully so. But nevertheless there was this time when we were thinking about great antiquity of man in the New World. And we know that perhaps because of this tendency to look for Paleolithic man here there was this counteraction. We know at the turn of the century there was the attitude that man could not have been here very long. With the finding of the Folsom points and so forth out West I think we began to reconsider our position, and today we recognize that man in the New World has a somewhat respectable antiquity. People like McNeish...22,000 B.C. or so, into Peru, and so on. But I think the East, too, for a long time lagged behind. We found fluted points. We found many things. But certainly with the discovery of the Williamson site and John Witthoft's Shoop site the corpus of information has been expanding.

This is one of the maps I've just recently taken out of "Pennsylvania Archaeologist" which Ronald Mason made showing the distribution of the Paleo-Indian points in the Delaware Valley and since that time the number of fluted points has increased enormously. The Shoop site is marked by the triangular point here. You can see something of the distribution of these points. We know today they have been found from Cape May all the way into the northern part of New Jersey. The site I am going to talk about is on the Musconetcong River. We've been trying for a number of years to get permission to excavate this site. It is owned by a spinach farmer, and he has been wavering between wanting to sell the property or getting another crop out of it. While he has been very excited about the material (at least we have tried to get him more and more excited as time has gone by), he always wants to get one more damn spinach crop out of it. That's where it is now. He wanted us to excavate on the perimeter of this area, but there are so many people watching my moves up there. Just as soon as I get near this place they'll put two and two together and I can just kiss it good-bye. I think we're going to

have to get in there and do the job completely or stay away from it. The site itself is on the Musconetcong River, at an area where the river makes a wide bend. There is a hillock there which has a gradual rise, about a fifteen or twenty feet gradient. For a long time the site had been known for artifacts, especially closer to the river. They had been finding some Transitional material. In recent years, with the new method of farming, the farmer has been going down about ten to twelve inches into the subsoil and apparently since that time has been bringing up a good number of Paleo-Indian artifacts.

I first got to know about this site purely by accident. I was giving a talk for the New Jersey Historical Society a few years ago. We were talking about Early Man in New Jersey, and this individual came up and said, "I've got some arrowheads that we've been finding on our site." You hear this a thousand times. But he kept tugging at me because there was this whole handful of fluted points from this site. Well, fortunately he had been keeping it pretty quiet and we were able to convince him of the importance of this thing and he has been most cooperative ever since that time. As a matter of fact, he has scoured this field time and time again, and everything he has found he has turned over to us for analysis and examination.

What I would like to do today is show you some of the types of material we have found. I think it is a rather exciting site. As I said I have not yet been able to excavate it, although I have hopes. In the meantime what we have tried to do is analyze or try to get all this material photographed, not only in color but in black-and-white. We've made sketches of it; we've put it on cards, we've tried to do a lot of homework, in other words, so that once we get on this site we will know what to look for and hopefully a little bit more about how to go about looking for it. The material as we first encountered it—the point types are what I would like to show you first. We've got here perhaps one of the longest points. Most of the points (by the way, we've got 106 fluted points from this site) are broken, and we have primary basal portions. There are a few that are whole. But the important thing is that we have, as you shall see, about six different types of fluted points from this site. The vast majority of these have the beveled striking platform, although a few of them have nipples and some, if I may quote Don Drago, are about the closest thing to the Folsom points he has ever seen in the East.

Here again are some of these types that look very much like Bull Brook types. Various broken specimens here. We also have some that are more trianguloid, as we see in this example here, where these are fluted on both sides, but where there is no perceptible indentation on the base. Incidentally, we find that a good many of these are not heavily ground. Some of them seem almost unground, either laterally or basally. Some, of course, are quite heavily ground. The material in some cases is Pennsylvania jasper. We also have grey flint, which could come from the Kittatinny Mountains (we do have outcroppings of this material here), but much of the rest was quite exotic. We have points that are made of Onondaga chert from New York State. A good portion of them are made of the Normanskill flints, including Cocksackie, and there are some points that are made of material that I just don't know where it comes from.

Here we have another type, with expanded centers, a pumpkin seed variety. The chalcedony here probably comes from the limestones of Lehigh County, Pennsylvania. As you see, the variety of these expanded center fluted points with rather shallow basal indentations and with beveled striking platforms. Here you can get an idea of the size of some of these. Compare this point, which is about three-quarters of an inch long. Many of them, by the way, have been fired. The jasper has been thermally altered. Again, one of these waisted types, probably Normanskill. Another variety of these waisted, deeply indented. This one is of Onondaga chert. Some of this material is extremely fine, blue-green or blue-black flint which does not seem to be indigenous to our area. Many of them seem to have this waxy feel or kind of a lustre that Don Crabtree and Doug Byers feel is indicative of heating to make the material more vitreous prior to chipping. We find a good deal of this multifluting, this Enterline technique, which is quite evident here on these points.

ty Considerably more than half of the points we have are of this small variety—very skillfully and carefully made, multiple-fluted, presumably that Enterline type that John Witthoft found. Some of them have been rechipped, as we see here. The point on this has been definitely rechipped bifacially. We see it again on this point here. There we find again one of these small fluted points, with just a little indication of a nipple. This is perhaps the most outstanding example that we have of this deeply indented type, where the nipple is still very evident. You can see the multiple fluting, the preliminary channel flutes which have been taken out and the removal of the center. The workmanship on this is absolutely exquisite. Here is a closeup of that same point with the striking platform. Here we find another which is made on a flake and is basally indented. It is unifacially flaked, and the end of this seems to have been used for a specialized type of graver or something.

I think something quite similar to this was found at the Debert site. We also have the Debert type of points. As you can see here, we have the bases of two that seem to be quite deeply indented and certainly George McDonald, who excavated the Debert site, felt that these were typical Debert points.

[You can see that these are much larger than many of the others. We have quite a few of the channel flakes. The most interesting thing is that we also have Plano or Plano-like points on this site. Some are triangular which are similar to those from the Reagan site in Vermont. They are very thin with ground bases. The material is the same as that of our fluted points. It appears that some of the red color has been acquired after the artifact had been fractured. It seems to have been discarded into the fire. We found a number of cases where they had been subsequently chipped by plow action and they still retained their brown color internally. It appears, therefore, that usually the surface coloration due to heat was done after the tool had been discarded and was not due to purposeful heat treatment as has been the case in some of Crabtree's finds.

Eighty-one end scrapers have been found, many are almost jewel-like in their material. The craftsmanship is very fine. A number of keeled

scrapers were found. Many show the flint cortex unlike those at the Shoop site. They are cobbles...spoke shaves included seventeen small and twenty-six heavy specimens. Single spurred and multiple spurred graters are also found.]

(MacCORD) One question. Any indication of microliths...?

(KRAFT) Oh, I'm glad you mentioned that. I may not recognize it; however, I don't seem to see here these objects that George McDonald and John Witthoft are talking about. I don't see these bipolar little implements. Maybe I just haven't recognized them, and for that reason I'm saving all the material so that it can be gone over by someone a lot more expert than I am.

(QUESTION) Is there any preference for lithic materials within specific point types?

(KRAFT) I'm going to have to beg off on that, ok? I would say that on very small point types there is a very definite preference for Pennsylvania jaspers. The only big point we have—the large point I showed you first—certainly is made of Pennsylvania jasper.

(WILKINS) I'm interested...you showed that slide of Ronnie Mason's there. I happen to have with me one of those points, found about a mile from here, found when I was a boy, around 1913 or 1914. You talk about your exotic material...that is your favorite Hopewellian material from Flint Ridge.

(KRAFT) We don't have any of it in our sample. By the way, I brought a tray of material, not artifact types necessarily, but lithic materials, to show the diversity of the lithic materials that occur on this site. If anybody would like to look this over and give me any comments on where some of this material might have come from, I would be grateful. I've eliminated most of the materials which I know, Pennsylvania jaspers, for example, but for some of the others, I just don't know.

...The man is perfectly willing to let us excavate the site. He tells us he has to get one more spinach crop out of it this year. He was going to do this last year, but then his spinach crop failed on him because of the wetness and everything else.

(SMITH) You haven't been able to collect this site, then?

(KRAFT) We've been able to collect this site, but it has been a sort of random walking, and they have not tried to localize, except in a large surface area on top of this rise. We know where most of this material comes from, but it's a large area. The knoll itself is several acres in extent. We're really hoping that we can at least get in there and do a good segment of this.

(QUESTION) Have you had a chance to do anything on use wear with the artifact types?

(KRAFT) We're working on that now. We see a great deal of attrition on our scrapers, and we've noticed that the vast majority of these scrapers seem to fall between about sixty-five and eighty-five degrees. But apparently

e. the angle becomes much more acute with wear. In some cases the angle has actually gotten to 105 degrees, beyond the perpendicular, from attrition.

(QUESTION) Do you get mainly crushed or edge grinding?

(KRAFT) Mainly crushed, or the exfoliation of the end, and not so much of the edge polishing. There's very little of that. I think one of the things that has interested me about the fluted points is that so few of them have what I would call really good polishing, either lateral or basal grinding. There is some, but you have to really feel it, and my paws are a little bit rough.

(PAINTER) A little trick, Herb. Rub the edge of it against your lower lip. It's very sensitive and you can detect grinding.

(QUESTION) Have you established from samples of the soil that flaking actually took place on the site? In other words, have you found tiny little chips...?

(KRAFT) Yes, we found a great deal of flaking material here, and most of the material has been Pennsylvania jasper. The exotic stones that we have... we have not yet found any of the Onondaga chert, for example... I think most of the material John found on the Shoop site was Onondaga chert. We do have Onondaga points, and also Normanskill flint. We have very few flakes or chipping debris of the Normanskill type of flint, but we do have a lot of the black flint, from local outcrops in the Kittatinny Mountains and we also have a tremendous amount of the brown jasper.

(GARDNER) I always hate to follow someone who has 120 projectile points. After I went down to Gainesville to talk on my Paleo-Indian site at the Eastern States Archeological Federation meeting and saw literally hundreds and thousands of Clovis points mounted on boards it was somewhat distracting.

I think what we are talking about here in the Shenandoah Valley is really fundamentally different from what Herb is talking about and what other people have excavated. We are dealing with a series of sites around a quarry. I will sketch an outline map of this site, this being the south portion of the Shenandoah, this being Flint Run area, the total complex we're calling the Flint Run Complex. The things we have are running about eighty-five per cent waste material and about fifteen per cent utilized flakes and/or prepared tools. So it is a different situation...not what you would call a hunting camp. It is in no way suggestive of any degree of mobility in terms of a population movement. As I go on and talk about this, I am beginning to feel that these people were here several months out of the year, not only exploiting the quarry but extracting their subsistence from a wide range of environmental resources, where you have a considerable amount of horizontal zonation and less vertical zonation. But you are in the mountains, so you do have a quite varied resource, and for this reason I cannot think these people were hunting any kind of migratory animals or any particularly

large animals, but were just general foragers. Perhaps they went elsewhere during a certain part of the year and performed this other type of activity.

In terms of total number of sites, we have something like fifteen to twenty areas which are producing Paleo-Indian material. They tend to be distributed up and down the river, and to some degree up Flint Run in relation to the quarry. In terms of general physiographic zones, you have what we are calling for the present high bluff sites, and you have flood plain sites. The only set of sites located on the other side of the South Fork from the quarry is the Thunderbird sites in the plain. There are probably several individual sites over here, as there are in other places. You also have flood plain sites here on the Flint Run flood plain which are not as extensive. The occupation in both of these flood plain areas is quite extensive and it is quite intensive.

You get tremendous amounts of core wastage, very large flakes and, of course, you get flakes all the way down to very tiny flakes. In these high bluff sites, you tend to get less of the large waste material and much more of the smaller material...the tiny flakes, and you get less of the core wastage and the large flakes. Along the bluffs, the further you get away from the quarry, the less intense the activity is and the less extensive it is. The sites get smaller and your waste material is reduced in size. I think these two broad categories of sites are going to give us some information about different activities within this total complex. Obviously, quarrying over here; living camp sites where they worked their material, but they also have quite a range of tools; bifaces of various function; numerous kinds of scrapers; gravers; and burins. Most of this material is made on flakes.

Most of the projectile points tend to come from up here, or sites of this nature. This has been true of the surface collections. You also get projectile points from over here, and this is where we did our excavation at the Thunderbird. We haven't excavated over here yet. All of this I'm discussing is somewhat impressionistic, based on information we received from informants looking at surface collections and our own investigation of the sites. The landowner has completely turned over this river bottom for about six miles to us, and we can work apparently in perpetuity or until something happens.

In terms of site distribution, I think we can and will be able to talk about settlement patterns with speculating these being perhaps hunting stations and these primarily being living sites where they were doing not only manufacturing...probably the main activity was manufacturing...but they were doing other things.

[I believe this settlement pattern will be like you have in the Archaic and using Caldwell's terms they seem to have reached primary forest efficiency.

We seem to have four or five different components in terms of projectile points from early Paleo into early Archaic. A controlled surface collection at Thunderbird resulted in clustering suggesting intensive areas of activity. There seems to be two or three areas, one of which seems to be a structure. The structure has a smaller fluted point type in association. A Dalton-like and a Plano-like type also occur at the site.

[SLIDE TALK]

We have been unable to find any charcoal in enough quantity to be dated. We have the offer of all the free radiocarbon dating we want, but we have no charcoal. What I've been telling you is mostly things we are going to be testing in the next several years. We are going to excavate and look for another structure, we are going to expand the areas around the chipping areas, and we are going to go deep into the flood plain to look for vertical separation.

(HEITE) On that house floor and working floor you had there, do you have any ideas about population and length of occupation?

(GARDNER) Not at the present. I feel that this is a synchronic thing. The structure belongs to the work area, and I feel that this was a one-span occupation. Who knows how long it took them to do whatever they were doing there? They may have been there even longer than that if we could say that these outlying sites are hunting sites. Again this is something we are going to look for. I think the structure and the living floors are synchronic and they are associated with the component that comes after the large fluted Clovis type, but we'll have to test that further.

(QUESTION) Concerning the post molds of the structure, have you noted any different angles in the placing of them?

(GARDNER) No, because they tend to be smallish and be about two to three inches in diameter. What we are getting is the very bottom of them, and we do, in profile, get the sharpening of the pole. But as to which way they were leaning, we don't know. Unfortunately they built their structures where the plow could get to it. This is back up on the slope, away from where the alluvial deposition is.

(BASTIAN) Well, the fluted points and early diagnostic material... I'd like to know where it was found in your excavated areas in the flood plain?

(GARDNER) In the excavated areas where we were showing the work areas, right? Ok, that's where you have the small, thin fluted points. You also get other tools, of course, but in terms of points that's where you get those.

[SKETCHING DESCRIPTION OF ARTIFACT LOCATION]

(BASTIAN) There isn't any Archaic material near the house structure?

(GARDNER) There are three quartzite points on the surface, but within the structure there is nothing but jasper. This is why I stress that one of unfortunate things about this is that they did switch off to quartzite, because you don't have any quartzite chipping around there to amount to anything. You do have a little bit, but 98 per cent of the material from within here is jasper. This is not to say that these people may not have built this structure. I think three quartzite points do not show anybody staying there long enough to have built a structure. And you would expect to see more

quartzite than any other material.

[SKETCHING DESCRIPTION]

(PAINTER) I wasn't aware that I was going to talk. I had some beautiful closeup slides of special tools made but I didn't bring them along, so this will be a chalk talk, and the title of it will be "Special Tools of Early Man". I'll give a brief outline of the Williamson site, then we will go into the special tools. The Williamson site, in Dinwiddie County, Virginia, is situated on the rolling hills on either side of Little Cattail Creek, and it is right on the fall line. The site proper lies on either side of the creek and covers perhaps more than one thousand acres. The site is littered with spalls, cores, reject material—Paleo workshop material—all over the area; all over the hill sides, down in the creek bottom, everywhere; but concentrated in three different spots in this area are the habitation sites, where the fine workmanship was done, similar to Bill's house site, and there occurs the special tools, hundreds of end scrapers, hundreds of side scrapers, tools in great variety. In fact, I've been accused of exaggerating when I made drawings of some of the tools which came from the site. They're almost unbelievable. And they're not brought out in any of the sites.

Most of you are familiar with many of the kill sites in the western states...these romantic, glamorous kill sites, where they killed a mammoth. They find a few fluted points, two or three scrapers, a blade knife or two, and that's all. You don't hear about the special tools because none existed there. That was a kill site, not a camp site. But here in the East we are fortunate in having these large camp sites, such as Herb's site in New Jersey and Bill's site in the Shenandoah Valley and the Williamson site and the Shoop site and Bull Brook. Here we have been able to isolate many of the tools that are absent from the complex in the western states. So we have here the Williamson site. This is the quarry workshop area, probably one of the largest in the country. Bill's gives me a close second.

We have many of the special tools which we have isolated on the site and we shall go now into the special tools (many of them are very unglamorous, by the way). A hammerstone. We have a little information on them. At Lindenmeier they mentioned they did find hammerstones. I've never read of hammerstones at Bull Brook or any of the others. But here we have hundreds of them, all pecked and abraded on the ends. We picked up the ones that were utilized the most, that were pecked all over the surface or were reduced down to a small, nut-sized thing from hammering. We're always looking for the abrading tools of Early Man. Who ever heard of the tools that they abrade with? What did they grind the lateral edges and the basal concavities of these points with? What did they grind the edges or the tops of their blade cores that they were striking blades from? What did they use to grind it?

I had a picture of a sandstone slab with grooves in it or something similar to the later Archaic and Woodland Period material that I see on various sites, and I was always looking for grooved stones. I found pieces of bog iron, which is concretions of sand and iron, and thought perhaps they

might have used that. However, there were no grooves, no signs of wear, and bog iron is rather soft and weathers away. Then we finally found what we were searching for: these hammerstones that we had been picking up, looking at the crushed ends of them, tossing them back because there were so many of them, made of quartz and quartzite. Finally we found one which had been split just in half. The outside surfaces of these are river-worn cortex or river-worn cobbles...very smooth, almost polished. Where they had split, the surface was an abrasive, almost like emery paper.

[They had smoothed or rubbed the centers and edges of the cobbles, perhaps used to abrade prepared cores before striking with a baton. Some may have been used to smooth the concavity at the base of fluted points. The split cobble abraders saw far more use than the fluted projectile point ever did...The adze, heretofore, was not known. It was used to cut wood. Adzes have been isolated in the Dalton complex. Another tool we have isolated is what we came to call lancets. These would not be found on a "kill site". They are bifacially chipped around the edges of a random flake and are used for cutting purposes.]

[CHALK TALK]

(KRAFT) Does anyone have any questions?

(QUESTION) What is the total count from the Williamson site in artifacts?

(PAINTER) I have no idea...maybe ten thousand. Over 200 fluted points, seven or eight hundred end scrapers, only a few of these triple spurred graters, and numerous side scrapers and blades without number.

(CRESTHULL) I'd like to comment on this. After hearing you talk I've recognized that we have one example of a triple graver in an Early Archaic site in Maryland.

(PAINTER) I suggest it is not Early Archaic. I suggest it is Paleo.

(CRESTHULL) We've never yet found Paleo material.

(PAINTER) Well, I think you can usually isolate Paleo material in an Early Archaic site by the choice of material which Paleo man uses. He would use the jaspers, cherts, chalcedonies, whereas the later frequently use more quartzite and what have you.

(QUESTION) How many double spurred graters do you have?

(PAINTER) Four. I have four multiple spur graters.

(KRAFT) John, we've prevailed upon you during this entire session, but I don't know that anybody knows more about the Paleo-Indian in our area. Certainly you are one of the first to really systematically work on a site

in terms of its technology and everything else. I wonder if you would comment on the Shoop material vis-à-vis the other materials you've found in recent years.

(WITTHOFT) We're dealing with many different time horizons and possibly with many different regional variations in the Paleo-Indian industries of North America, and some of them we know very imperfectly. Shoop remains in my mind the industry of all of these we know anything about the one with the smallest tool inventory. It is also the only site of its exact sort where we find some tools of a Shoop type at Williamson along with the many other Paleo-Indian types that probably aren't related. As compared to Shoop, for example, Bull Brook has a considerably larger tool inventory, a larger number of tool types, a greater variability within each type. We don't really have anything to jump to beyond that for comparison. We have a large sample from a single horizon unless we bring in Lindenmeier which lies at a great distance. Here we have an even larger tool inventory than we have at Bull Brook and greater variability within each tool type.

All of these industries need intense internal study within themselves, because we're dealing often with many stages in the use, resharpening, reuse and final exhaustion of a tool type at all stages. And we're dealing with the remaking of tools: broken fluted points which are made into knives, for example: tips off fluted points which are made into "end scrapers", so called; flakes of many random sorts which are used as casual tools; nuclei which are pressed into use as though they were casual flakes or something else. I'm not satisfied with the Shoop picture, for example, because we have only a surface collection from here, and we never had anything more from this particular site. Bull Brook can be compared to Shoop despite the distance because to some extent the people at both sites drew upon the same lithic sources, but I am sure not at the same time, in a minority manner. Williamson we can scarcely compare to the other two because Williamson is on the flint outcrop which the people were using as raw material. Thus, we should expect much industrial evidence at Williamson that will be missing at Shoop, more than one hundred miles from the source of lithic material, and missing at Bull Brook, more than two hundred miles from one of its major sources of lithic material.

At Williamson I think our main problem in modern times is to attempt to sort time horizons within the Williamson site because we're doubtlessly dealing with a continuum within Paleo-Indian times of sharply changing industries which we see for a moment of time at Bull Brook and Shoop. The main thing is, the sites we have present us with more puzzles than they do with knowledge. They are asking us more questions than they answer for us. For example, at ST-4, in the Yadkin with Joffre Coe's later fluted point industry, at the time I was working with the Shoop site we had no excavated samples from ST-4; we had only Herbert Doerschuk's surface collection, and, being a surface collection, it deceived us in several ways.

It was skewed by the eye of the collector, rather than being a totally random sample, so there were distortions in proportions of tools, and there may have been some things mixed in from Early Archaic horizons which didn't belong in the sample. Most conspicuous were the pointed graters and double graters on flakes in the Doerschuk sample, and I referred to these as a part

of that inventory. In the excavated sample, we found that these little gravers on flakes and double gravers were not the result of human industry, but were the result of being flakes exposed on the surface of a rock pavement and trod upon. They were present in the surface collection but not in the excavated material, where the flakes had been supported by soil, rather than trod upon on the gravel pavement. I wouldn't want to emphasize too much what we need on excavated samples as complete samples we can make, including the tiniest kinds of debitage.

At Shoop I was able to work out the manner of resharpening of beveled end scraper edge by the drawing of different kinds of flakes from it. I found the minute retouch flakes in several distinct types in the very fine debitage on the site, which were the result of a highly specialized manner of resharpening and rejuvenating an edge. At Shoop we could learn nothing to speak of about cores except from what the blade tools and flakes told us. At Williamson, some of the core forms we postulated for Shoop had turned up on a number of other core forms.

I think it is important at the present stage that some very skillful student, well trained in technology, should begin a very intensive survey and study of the collections available from Williamson, as well as prepare for some highly critical excavations if areas of the site can be found that provide a kind of laboratory to examine many of the questions (and they are numerous) which Williamson presents to us. We're up against very difficult problems of technological analysis, use analysis, and particularly studies of what happens to a single tool type as it is used and reused finally to exhaustion and eventually comes to in no way resemble what it began as, our familiar friend the spurred end scraper, which is nothing but the stump which is left of an end scraper on a blade. We need quarry workshop data, we need data from habitation sites of other kinds, and particularly we need more sites in more different environments and situations as they can be found, and I think they remain to be found. They are only found by great labor and sometimes by very refined mapping such as was used by Ben McCary in narrowing down the regions within which something like the Williamson site might be found by the concentration of stray surface pieces.

Many of the problems we see are years from being solved, and they're going to take a great deal of refinement and hard work, and increased refinement in studies within specific types and within specific technologies, particularly as they pertain to the normal used up and reworked tools.

(KRAFT) John, before you go, can I ask you one more question? Can we tell anything about patterns of migration from some of these sites?

(WITTHOFT) I don't want to talk about patterns of migration, but patterns of social contact, whatever that means. Now at Shoop, as we said, lithically Shoop is 99-99/100 per cent pure, like Ivory soap. More than half of it is western New York Onondaga limestone flint. That's more than one hundred miles away in one direction. Along with that, there was a tiny amount of Hudson River flint, Deepkill; there was a tiny amount of Flint Ridge chalcodony from Ohio; there was a tiny amount of Pennsylvania jasper; and there were four lithic materials which I cannot identify. They come from too great

a distance. At Bull Brook, north of Boston, there is a very considerable number of tools made from Pennsylvania jasper. There's an even larger percentage made from Deepkill flint from the Lower Hudson Valley. I suspect that these two are the majority materials, but Bull Brook reached in other directions for lithic materials. These show us, not migration routes, I don't think (at Shoop they may show us the last spot where this particular band had been living for awhile). At Bull Brook they show different directions of contact or of travel or visiting, or a migration in following of game herds.

When we go to Lindenmeier in the West we have a great variety of lithic materials. If we map their sources against Lindenmeier we have radii going out in every direction for hundreds of miles, as though Lindenmeier were sort of central, reaching out in every direction for first class lithic materials, even down to the Alibates dolomite region of Texas. I think that the study of lithic materials is important, and the proportions are important, because they show us contact networks, whatever that means.

(KRAFT) But it still seems to imply, doesn't it, the diversity of point types in one site? Does that impart to you the continuous, perhaps year after year, visitation of these places?

(WITTHOFT) I don't know. It may be a multiple component. Once a farmer in northern Pennsylvania gave me a Clovis point that he picked up on a mountain top when he was dragging out firewood behind a horse. It is in the State Museum collection in Harrisburg. It's a big Clovis point and it's made from the chert of East St. Louis, Illinois. I wouldn't be surprised at any distant transport of a Paleo-Indian tool...extreme mobility plus, probably, far reaching social contacts.

(KRAFT) Thank you very much, John. Let's see...Don Drago has left us, I believe, has he not? I would certainly like to have heard from him. Bert Salwen, would you care to comment at all? Perhaps on the Port Mobile site? (Bert replies in negative) Howard, do you have anything to contribute? (MacCord negative) You all want to go home, is that correct? Yes, Elwood Wilkins.

(WILKINS) Speaking of topics for next year, talking about hypothesizing things, I think there has been a lot of hypothesizing in regard to one thing, and that is the action of heat on lithic materials. I've done quite a bit with it myself. I've been in contact with some of the people who are well known, Don Crabtree and others, and I find that these people are not working with material I'm working with. They're working with limestone cherts. I'm working with Pennsylvania jasper, our local material, from the Williamson site. They're all laterites, a different type of thing. I'm not at all certain they act the same.

(STEVEN COX) Just one comment here. I've been working on the Shoop collection for the Smithsonian, and one of the things I've been doing is making metrical measurements on about six hundred tools from the collection. If there is anybody working on Paleo-Indian material who is interested in

doing a statistical comparison, the materials and data will be available from about June 1 for a substantial portion of the Shoop site at the Smithsonian.

(KRAFT) Do we write to you?

(COX) Probably not after June 1, but you can write to Bill Fitzhugh.

(KRAFT) All right, thank you. You'll get a letter. Is there anybody else who would like to add anything to this discussion? Well, then, I guess I can speak for Bill and thank you for your participation.

Saturday Afternoon Session

CLOSING REMARKS

(RON THOMAS) I'm going to ask you to stay for about two or three minutes. This morning I asked your opinions of the course of this conference and I received little response. Since then I've been thinking about it and I'd like to give you my opinion of the entire thing. At the risk of offending some people I'd like to say a few things. First of all, you recall that we spoke of the fact that when we started this organization it was primarily so that we could get together and hash things out. Our main fear was that we would create another Eastern States Archeological Federation. We didn't need another ESAF. And as I look around the room I am afraid that this is exactly what we have. We have a large group of people that is not a working group; we have a large number of topics including site reports and reports on particular subjects which are purely descriptive, and I have a feeling that this is not what you want to do. I am going to make a suggestion and I don't know what you're going to think of it, but I'm going to make it anyway. I don't think this meeting should have site reports or activity area reports in the future. I think we can get the same information from reading what we each report in our own local journals and I think we get the same thing at ESAF. I think we have wasted a whole morning when we could have used the session better for getting into the real meat of the various problems. My suggestion is that whoever is the chairman next year does not ask for activity area reports.

Second, I think that for all the effort I went to in order to try to get everybody to not prepare formal papers and to orient their work toward a particular subject I failed. I'm really disappointed about the whole thing. We had too many people standing up and giving site reports, including Herb, including Bill, including Colonel MacCord and so forth. I grant you this is probably necessary because we've got to put the data forward, but I'm afraid that this is getting to the point where we are putting forth this information at the expense of being able to argue about it and discuss it. I think most of us are probably aware of the general things that are going on. At the risk of offending people I think we should skip this from now on. I think we should all come ready to act, as I think Lou Brennan said, on a particular problem and really delve into it.

I remember writing two or three letters to the people who are chairing the sessions and to many others who have been to meetings in the past: Make sure that everybody doesn't come and just stand up and give a descriptive site report. Even though Barry (Kont) and Ira (Smith) came up and said, "This is a great meeting," and all that, and a few of the others said the same thing, I think there have been many highlights of the meeting, but I think it could be improved considerably.

Again, at the risk of offending some of you...what the hell, I may as well do it...if we had a round table around which there were contributors the students and nonparticipants could listen. Asking questions, like the five minutes we discussed photographic techniques, was completely out of line in my opinion. I think it took away from the chance to discuss something in more detail. If we would have a round table discussion everybody would be

welcome to come and listen in. We could get a large room. I'm sure it would not be any problem. We welcome your registrations, and the ability to publish the proceedings, but I'm afraid there are too damn many people here and participants are too far apart. When Colonel MacCord wants to speak he is way back in the room and he can't offer as much as he could. I think we're going to have to set up the meeting, and I'm urging whoever runs it next time, to do it a little differently.

One other point, some of you remember last year down in Gainesburg when we all took a nice long trip to see the Crystal River site. We wasted a whole afternoon doing it. With all respects to Dick Regensburg, I don't think we should visit his site unless the whole session is on Transitional or Terminal Archaic. Otherwise, we are going to have a nice tour, see the beautiful artifacts, just as we can at any other museum. Many of us can go by ourselves. Dick is always there...he has welcomed everybody. I think it would be a waste of time to do that. Now, that's my opinion, damn it!

(PAINTER) Let's elect an official to run this organization.

(THOMAS) This is not an organization. we don't want any such thing. We want to give a group of people who want to argue about things.

(SALWEN) There was a discussion earlier that wasn't continued. Two suggestions were made. One suggestion was just made which I want to argue against, the other suggestion was made earlier. I think the idea of concurrent sessions would wreck things, and the other idea I feel would really kill us is if we did make it an organization. All of us belong to too many organizations and we have no time in the world. I think you're absolutely right.

Just one little suggestion. If you're going to organize round tables. can the chairmen of the round tables try to get short digests from each participant before the meeting to be circulated?

(THOMAS) We've tried that, but nobody replied.

(SALWEN) You know something else? Anthropologists never do this, but other people do. This may be the time to tell the participants this is what we want them to do. The paper doesn't have to be long.

(THOMAS) Bert, you came to the meeting and your work is in the Middle Atlantic Valley, but we have not heard of what you are doing. Howard Winters also came, and he is not working in the Middle Atlantic Valley. Both of you have much to offer this conference which those of us in the Middle Atlantic Conference have been completely neglecting, and if you would be able to sit and actually participate it would be great.

(SALWEN) I think you underestimate the value of the meeting which you have set up today.

(THOMAS) I attended a meeting called the Caddo Conference in 1964 or 1962, and Jimmy Griffin and Clarence Webb were there and ten or twelve other people. The proceedings just came out last year. I was only a graduate

student then and that's the conference which struck me as a model of what I wanted this meeting to be.

(TYLER BASTIAN) You didn't organize it that way.

(THOMAS) No, we didn't. We tried, but it didn't work out that way.

(BASTIAN) I don't think you tried. That has been my impression.

(THOMAS) Well, okay. I'll tell you what happened. I wrote a letter to some of you and suggested I didn't want to keep any students away because we all have students who learn something from it. However, Colonel MacCord put it in the Newsletter, Maryland put it in the Newsletter, and I don't know who else put it in their newsletters. It just kept increasing, and if we know it is going to increase next year let's get the round table and put everybody else around. If they want to contribute let them come up and sit at the table. But at least those of us who want to are going to be there.

(WILKINS) We didn't put it in our Newsletter, but you got up at the meeting and mentioned it.

(THOMAS) Yes, I did.

(KRAFT) All right, you're putting me in a spot in a way. I just want to get a little reaction.

(WITTHOFT) You're nonelected to a nonorganization.

(KRAFT) Thanks! No, seriously, as I said, I, too, learned. All right, I shot off my mouth like everybody else and I tried to contribute my little bit. Maybe it was a show-and-tell kind of a session, but damn it I learned and I feel that I am coming away from this session having gained a great deal of insight in a great many areas. Now, maybe it wasn't all on as high a level as you would have liked it, but I would really like to know. We've all been going to Eastern States long enough, and that doesn't change either in a way. Lou (Brennan), how would you run it?

(BRENNAN) You'll have to say something ahead of time. You'll have to put out statements so that everybody thinks about them ahead of time and brings something to these meetings. What we are bringing is the only thing we know how to bring, just what we've done. We haven't prepared anything for this conference.

(BASTIAN) No, we didn't know what was going to happen.

(BRENNAN) All we've been bringing is what we did before, what we've been doing. As I told you, a site report. What else did I have to bring? I didn't know of anything else I was supposed to be thinking about...I didn't have my lesson.

(THOMAS) Lou, there were certain people who were asked to prepare things, to comment on things. Barry and Ira sent out letters to certain people. I

don't know who you contacted, if anybody, but I contacted about eight people and asked them to do it and I'm grateful some of them did it, but the point is these people have not responded.

(BRENNAN) You have to give out some kind of a lesson assignment and say, "This is what you have to do."

(BASTIAN) In order to do the sort of thing you want, you have to get together a small group of people who you already know are interested in these specific things and will cooperate. This sort of thing is being done in the Southwest by Longacre and about six or eight other people, and there are no observers invited and it's not done on the basis of friendship. They have a publication out and in their preface they indicate how this is done. To address certain specific topics in detail, you're going to have to invite those people who you know are interested and will contribute and have your meeting and ignore the masses. I don't see how you can otherwise do it.

(KRAFT) You're exactly right.

(MARY LOWRY) Ron, I think what you want is what you had down at Island Field site I don't know how many years ago. There were professionals there. Herb, you were there.

(KRAFT) Right, and I remember Dr. Stewart was there.

(LOWRY) And some of us amateurs were there, too. We sat and listened and we were fascinated and learned a tremendous amount, because you just kicked ideas back and forth, and you really got a start on solving some things. I think that's what you're trying to do, and that's what is fun for us to listen to.

(KRAFT) But I think we got to solving certain things today, too.

(THOMAS) In spite of the large group, I can see that.

(SCOTT SILSBY) To that end, I would like to make a suggestion. I have a personal interest in what John was talking about, sorting out blade industries, where you get a very definite set of attributes from different types. Why don't we set up for next time to do that? I'll bring all my flint knapping tools and other items and get some of these other people involved in it.

(KRAFT) You're on.

(SILSBY) If you will set a thing up right now I'll volunteer to bring my stuff, for what it's worth.

(KRAFT) Well, all right, we know your feelings. I think I share these feelings with you to a certain extent; however, I still feel a responsibility to many other people who come a long way and don't want to get too damn involved in technology...in the nitty-gritty of the thing, either. I didn't do what Tyler Bastian has suggested and ignore the masses and get into a corner where we could call each other names or whatever.

(THOMAS) That's what we want to do.

(KRAFT) You know we don't do this in public.

(THOMAS) I've heard you give this talk four times already.

(KRAFT) You asked me!

(THOMAS) Everybody can hear it. They know when you are going to speak.

(BASTIAN) Herb, you will be traveling to the Middle Atlantic Conference next year, and Ron will start up a new conference of some sort.

(THOMAS) Now, wait a minute!

(BASTIAN) I'd rather go to Herb's conference.

(THOMAS) It is exactly what came to my mind as I was thinking this out. When we started this, we didn't want to begin another conference because there are already enough of them. You know, we go to twenty-five meetings a year, all of us. Bettye, you probably go to fifty. We don't want another conference.

(CONNIE O'SHAUGHNESSY) Well, I think on the lighter side, instead of serving coffee next time let's drink Ron's beer.

(KRAFT) Well, I hope we'll be clear headed enough to respond in a way that's meaningful.

(SALWEN) I've been to meetings...I don't know if anyone is working in the Plains but the meetings there are held in hangars. Sometimes you bring half of the students from half of the digs in the area and there would be almost as many people as there are here. The point is that everybody was coming straight from a dig and they knew what they were talking about and they would get up and argue on the blackboard about sequences...They'd get a lot of stupidity sometimes, but everybody was involved and, you know, things were worked out. I think we can do that with this many people if the topics are limited and you know what they're going to discuss and they are things everybody is really working on.

I came here to observe, really, because while I am working in the tail end of the area I hadn't been to the Middle Atlantic conferences the first few times and I thought I ought to see what is going on. I'm not working on any mortuary material and I'm not about to contribute. My only Paleo-Indian material is a surface collection of about six points. I really didn't have too much to say on that, and I didn't expect to, but if the topic were such that people were ready to contribute and if we felt that this is why we were coming here, we could do that I think with the same number of people, and I think you are absolutely right about the comparative data. We need one topic for the entire day.

(BASTIAN) I agree with that. I was not prepared to talk on any of the subjects, really. I've not done extensive research on any of it, but Barry (Kent) and Ira (Smith) wrote to me and said, "Why don't you say a little

about settlement patterns in Maryland." Well, I put together what I could, but it's not a study in depth, certainly.

(BETTYE BROYLES) Ron, I would not want to step on anyone's toes, either, as you said a moment ago. We're having a problem with the Southeastern Conference right now because it grew too large and too involved. It was originally just what you want this to be, a working conference. However, within the last five or six years it has no longer been a working conference because there are over two hundred people going to the meetings. This last meeting they appointed a committee of three of us to investigate what could be done, and I can quote you some of the comments which have been made to me. What I am saying is not my opinion, but what has been written to me.

First, there were complaints because too many students came to the meetings. The older members of the conference couldn't even get into the conference room. This has happened here today. There are people absent this afternoon who could not get into the meeting room. This was one of the big complaints. I realize this is one of the ways students can learn and I'm not offering any solutions, but this was one of the main complaints which have been written to me because I am a member of this little committee they set up.

The other one was picking a topic instead of having the papers, just as you said, as we've been having contributed papers. They want to go back to a working-type conference with one topic for both full days, which is what we used to do. In fact, we spent two years on agricultural...I've forgotten the exact topic...it was on agriculture, anyway. We didn't cover it all in two days one year so we resumed it again the following year...continued right where we'd left off. If this will help you any these are the comments from the Southeast Conference.

(NED HEITE) Along that line, wouldn't it be a good idea before we close today for somebody to pose questions for people to be thinking about all year?

(THOMAS) Ned, we asked for that this morning and everyone had all kinds of ideas and the suggestion was that we write them in, send them to Herb, and maybe he could come up with an idea.

(HOWARD MacCORD) In spite of what Ron has said, I think this conference was worthwhile, and I believe even if we had one central theme...I don't care how narrow is the topic you choose...each of us is going to have to bring to that conference what we know about that subject and present it in the form of a presentation for people to shoot at and argue with, so we're getting the same situation.

(THOMAS) We had three this time, and three were too many. Let's do one next time.

(MacCORD) I think a mixed program is fine. I'm taking away a great deal I didn't bring with me, all up here, and while I'm on my feet I'd like to express my thanks to the group—Ron and his committee—for the tremendous work

they've performed and I'm grateful.

(STATEMENT) I'm a student so I don't know if I should say anything. I would like to pose a question which might be helpful to orient the program for next year. Do you know the difference between an hypothesis and a fact? I think if someone worked that out and distributed it it would help people to orient what they are going to do here, because I don't know if everyone understands the difference. I'd like to throw out a quick definition for people so that it might be something to discuss on the way home.

A fact...a scientific archaeological fact...is something which has been hypothesized, tested and demonstrated from the hypothesis. That is, anything, therefore, which didn't arise from an hypothesis is not a fact, an archaeological fact. So that if you have a lot of knowledge about something and it has never been formulated hypothetically and tested, it's not very valuable to researchers.

It would really be of great benefit to organize the kind of discussions which Ron was asking for around hypotheses next year because probably everyone here has them, but they've never been formulated and they're not facts in fact, and therefore they're largely useless archaeologically.

(WILKINS) May I make one little remark about hypotheses. Dr. Wyler D. Bancroft, professor of physical chemistry at the University of Rochester in the 20's and 30's, would set up an hypothesis, then he would set out to prove this hypothesis right. He would also have to prove it wrong. So you have to look at both sides when you look at an hypothesis. You can't go from one side only, and that is done frequently.

(KRAFT) Are there any other observations, questions, statements? Well, if not, note one thing. Since I've been sucked into this job for next year, I want you to write your questions to Herb Kraft, at Seton Hall University, South Orange, New Jersey. And for Christ's sake write them in.

You've put me in one hell of a spot, Ron. You've taken all of the fun out of archaeology. I came here to get away from all this.

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