

THE



BULLETIN

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Number 21

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Scandal

As of January 1-with only a month to go before the February 1 deadline--there had been no submissions for 1961 Fellowships and no nominations for the Achievement Award. Two Fellowships have been conferred during each of the three years since the Fellowship and Awards program was inaugurated and annual achievement Awards have been bestowed for two of the three years. As of press time it seems all too obvious that nobody in the NYSAA did any work of which to be proud in the first year of the seventh decade of the century. What's more, we haven't heard any rumors of work in progress by any other than (what else shall we call them) the regular Fellows?

The Front Page

Sigfus Olafson, of the NYSAA Mid-Hudson Chapter, who has just relinquished the presidency of The West Virginia Archaeological Society after ten arduous organizational years, was named vice-president of The Eastern States Archaeological Federation at the Toronto meeting. Joffre Lanning Coe of North Carolina was named president. It would seem very likely that Sigfus elevation to the second highest ESAF office is partly by way of recognition of his successful campaign to get a state archaeologist for West Virginia. Sigfus has, further, a long and distinguished record as editor of the excellent series of periodical publications of The West Virginia Society, as a promoter of archaeological projects (he helped negotiate professional excavations of the Natrium and Cresap Mounds, among other sites), as a field worker and as a contributor of papers in archaeology and history. What is more, Sigfus leaves the presidency of The West Virginia Society with its finances triumphantly in the black, boasting a balance of something like \$2000, in round numbers. If Sigfus could only be induced to devote his organizational and business talents to the ESAF and the NYSAA, both of which are chronically ailing in the exchequer 1

NYSAA Fellows Marian White and Don Lenig contributed distinguished papers to the symposium, at Toronto, on the Iroquois. Something certainly should be done about publication in toto of all papers contributed to this, and all future, symposiums of the ESAF. We are awaiting the submission of White's and Lenig's papers to THE BULLETIN.

NYSAA members who also gave papers at Toronto were Charles F. Hayes, III, Morgan chapter, and Sigfus Olafson and Louis A. Brennan of Mid-Hudson chapter. Alfred K. Guthe, Morgan chapter, was moderator of the session on projectile point classification where the Olafson and Brennan papers were delivered. Hayes' contribution was on the historic Orringh Stone Tavern in Monroe County, Town of Brighton; a pamphlet on this same site, by Guthe, seems to be available through the Rochester

Museum of Arts and Sciences. Guthe was in charge of excavation.

The 1961 ESAF annual meeting will be at restored colonial Williamsburg, Virginia, a great place for a short, mid-autumn holiday week-end. It is indisputable that some of the ESAF program is not inspiring, even to inveterate archaeologists the attractions of Williamsburg will help bridge over the dull stretches, as they will also give those wives, whose interest in archaeology derives mostly from marital togetherness, something to do besides window shopping.

It is the conviction of one who has been NYSAA representative to the ESAF annual meeting for the last three years, and who has attended previous sessions, that the programs could do very well with a little more quality control. Jeune site reports are interspersed indiscriminately among papers of import and significance, with the effect of overwhelming the best with the tedious. And there is a general impression that the most important papers are saved for more prominent placement at higher ranking conferences and in publications. This may be caused by the fact that the ESAF holds its annual meeting in mid-fall, immediately after the close of the excavation season and before there has been time for study of notes and materials. On the other hand, this would appear to be just the occasion for announcement of hot, or warm, news from the field.

These remarks aside, the ESAF conference which has been drawing increasing support, deserves even more. Local chapters are essentially parochial in interest. Since state boundaries are artificial and irrelevant to the problems of archaeology, though they often include natural ecological and geographical situations which are the real "states" or "counties" of prehistory, state conferences are not the only answer to wider horizons. No site is an isolated, unique phenomenon. It is a unit in a much larger set of relations, in a much wider range of associations, and its references are with places often outside political state boundaries. Iroquoisia is not confined to New York; it is a Canadian matter also. The Hudson River is not to be understood apart from the prehistory of New Jersey and Pennsylvania, at the very least. The meeting place of those who have information to give and observations to make that will enlarge our understanding of our local archaeology is the annual ESAF convention, which is truly regional in scope and outlook. But it can become more productive only as more and more investigators in archaeology attend it and contribute.

Corrections

(1) The estimated age of Zinjanthropus (East African Man) discovered by Dr. L. S. B. Leakey is 600,000 years. An inexcusable oversight in our proof reading of the last issue let it get by at something that might have been construed as six millions. Make the correction in your BULLETIN, No, 20, NOW!

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More information on Zinjanthropus--now being called "the Nutcracker" because of his powerful jaws and massive teeth--has recently been excavated and released by Leakey. It appeared in The New York Times of December 18, 1960. Bones of a second individual have been found, at one of two Zinjanthropus camp sites where an inventory of stone tools was in association. A bone tool called a lissoir, or leather polisher, picked up at one camp site, gives evidence. Leakey thinks, that these 600,000. year old men wore skin clothing. The Nutcrackers were by choice carnivorous, apparently, driving the big game animals --enormous sheep and rhinoceros sized pigs--into swamps and other such traps. With tools in demonstrable association, they become the oldest known race of men.

(2) Dr. Chester S. Chard of the University of Wisconsin, Department of Anthropology, a life member of NYSAA, sends us the following:

"In re NYSAA Bulletin No. 20, page 20.

"No one would be more pleased than I if you were to exhume an indubitable Neanderthal Man in your backyard at Ossining. However, the South American 'Neanderthals' that were peddled at Vienna last summer are strictly phony, and their 'discoverer', Julius Spinner, is not to be relied on. * I was there. I suffered through it a second time in Paris. It is too bad that a legitimate point of view has to be trumpeted by unreliables* like this; it gives us a bad name and makes sober citizens reluctant to listen to you or me.

"Since you criticize the accuracy of The New York Times reporting on the same page (I don't object to this) I should perhaps point out that the meeting in Vienna was the 34th International Congress of Americanists--Not the International Conference of Archaeologists' (There ain't no such animal)."

*Language slightly changed to protect the writer and THE BULLETIN from at least a million dollar libel suit.

Observe that THE BULLETIN seems now to have its correspondents even on the international news front. A more extensive report on the 34th ICofA by Dr. Chard is invited.

Recommendations

(1) The editor is in receipt of reprints of two articles on Old World archaeology by Dr. Chard of critical importance to anybody interested in archaeology beyond the hobby of digging for arrowheads. In "An Outline of the Pre-history of Siberia; Part I, the Pre-Metal Periods, " Chard surveys in some detail the archaeology of that region of the Old World from which both Amerind populations and cultural patterns are supposed to have been substantially imported. This piece appeared in the "Southwestern Journal of Anthropology" Vol. 14, No. 1; University of New Mexico, Albuquerque; Spring, 1958. A shorter summary, easier to read and digest, of the same material appeared as "New World Origins. A Reappraisal" in "Antiquity," XXXIII, 1959, Newbury, Berks, England. We quote the following from the latter piece, to give an idea what it is about.

"Although it would be theoretically possible to derive later manifestations such as Folsom from interior Siberia, there is no other basis whatsoever for attempting it. None of the Siberian Paleolithic cultures has so far shown any specific resemblances to New World ones. In particular, the earlier Siberian stages lack the most conspicuous New World features pressure flaking and bifacial projectile points. "..... And....

"In fact, the Asiatic evidence at the moment suggests an original movement to America of crude chopping-tool cultures, probably early in the Wisconsin (Wurm II) stage--to allow the needed time--and the indigenous development of all early New World cultures on this simple foundation, difficult as it may seem."

Chard suggests that if there were migrations from Asia subsequent to this primitive crude-chopper stage arrival, they came at about 5000 years ago, and they laid the base under the Woodland and the Eskomoid cultures with their microlithic technology. But the symposium at the New Haven conference of The Society for American Archaeology in May on the subject of Archaic-sub Arctic relationships attested, in almost every paper, that cultures "Archaic" in character were moving north in the wake of the glacial retreat before and during this time. Burins, those engraving tools usually bracketed with microlithic industries, as paleo-Arctic traits (for example, the Denbigh Flint Complex) are reported in the July, 1960 issue of "American Antiquity" by Jeremiah F. Epstein as having been found in Texas in paleo hunter, Desert Culture and Archaic contexts. Witthoft, in private conversation, told us at Toronto that cores and blades had been found in the southwest with Clovis points. Thus, burins and blade-stripping from cores appear to have been in America before the 5000 years at which Chard says there may have been migrations of culture-bearers from Asia.

(2) Where what is specifically Woodland, that is, its pottery and burial properties, might have come from is the subject of a paper by Frank Ridley, "Transatlantic Contacts of Primitive Man", in the *Pennsylvania Archaeologist*, Vol. XXX, August 1960, No. 2. Ridley, who visited Russia, last year, reports on the striking similarity of the pottery of our northeastern ceramic cultures to pottery from north-western Russia. The resemblances are not at one period but over several millennia. Ridley writes, "The Russian pottery seems to have been in use from 3000 B. C. to 1000 B. C., with priority in time for the Gorbunov culture. In northeast North America the similarities are temporally spread from 2400 B. C. to 400 A.D., with most of the early pottery equated with Russian Gorbunov, and the later pottery more related to Russian Pechora, White Sea, and Karchian types."

Archaeologists have learned to be careful about resemblances; they are not always what they seem. A curator of art of the American Museum of Natural History, discussing this subject lately with your editor, pointed out that there is remarkable coincidence between many Egyptian and Meso American art forms and motifs, without any possible means of transmission of them from Egypt to America at the proper time. Yet resemblances require explanation. Either they occur by reason of actual trait a diffusion, or there are certain pragmatic imperatives at work which dictate that the same idea and technological stages of development be gone through, at least at the

beginning, in independent invention. We know, now, of no means by which cultural influences could have been transmitted, between 5000 and 4000 years ago, from the White Sea to, say, Penobscot Bay. Ridley, considering alternatives, can find no resemblances as exact as those between Woodland and North-western Russian pottery over the trail back to Asia, however, leaving us with a dilemma: the best Woodland pottery resemblances occur in two places that have no apparent physical connection; but where there is a connection, over which pottery could have passed to the north-east, the resemblances are far from specific. Independent invention of pottery and parallel stages of development is an answer, but the fact remains that the Russian and American developments were in parallel over a matter of about 3000 years,

The whole case rests on how good the resemblances are, and The Pennsylvania Archaeologist has done a fine job of reproduction of Ridley's examples,

The Latest

The July issue of "American Antiquity," the quarterly journal of The Society for American Archaeology, arrived in November, a mere six weeks after the October issue was due, but what is time to an archaeologist as long as things are in stratigraphic order, and the October issue follows, with a suitable time lapse, the July? This issue, being the first of the new volume, includes the names of all who are now members of the SAA and thus receive "American Antiquity." Of the seventy-five New York addresses listed, many--fewer than half (our guess, from our personal knowledge of the membership is about 25 to 30)--are members of the NYSAA and will therefore receive this BULLETIN. This is our reason for noting in this issue, and in any subsequent issue, what seems to be the latest information from "American Antiquity" most likely to be of interest and value. As follows:

#Orville H. Peets, after experimenting with atlatls weighted with bannerstones, concludes they have no effect in adding force to a spear cast; the function of the bannerstone, or atlatl weight, is to give the atlatl balance on the hand.

#Jim J. Hester has tabulated dates of finds of the large, extinct Pleistocene beasts, and comes to the conclusion that the big-game-herding animals--the Columbian mammoth, the American horse, the camel and bison antiquus--along with the dire wolf, seem to have survived until 8000 years ago, with southern herds lingering on latest. The mastodon, a forest dwelling animal which also inhabited the eastern woodlands, may have lasted later than 8000 years ago. This moves the "Great Extinction" of large Pleistocene fauna forward 2000 years from its former putative date of 10,000 years ago, placing it nearer the Altithermal.

#True burins and graters have been reported by Epstein in the Archaic of Texas as before noted. New York site-diggers should familiarize themselves with the burin (it occurs in many nondescript and easily overlooked forms) and with strip-blade and core technique, so as not to ignore finds of these important types. True burins are not reported from New York as yet, but how many have been thrown away or gone

unrecognized? THE BULLETIN will try to interest John Witthoft in doing a technical piece on these artifacts.

#Alice P. Hunt and Dallas Tanner report on early man complexes near Moab, Utah, in the earliest of which a variety of Pinto point is found in association with Folsoms. The Folsom is usually regarded as a paleo-hunter type of point; Pinto points have not been regarded as paleo-hunter points. The Pintos occur in several varieties, but are easily categorized as stemmed or side-notched points with bifurcated or indented bases. Points that fall into this category are found rather commonly in the eastern Archaic.

#But the article which, discusses directly what is only implied in the foregoing, that is, the contemporaneity of projectile point types often baldly called "Archaic" with paleo-hunter forms:, is "An Eden-Scottsbluff Burial in Northeastern Wisconsin, " by Ronald J. Mason and Carol Irwin. The base of a, side-notched point that would cause no comment if found on a New York Laurentian site was in association with points of the distinctive "Yuma" ripple-flaking technique in Scottsbluff and Eden shapes at the Renier site. These later points have always been found with extinct bison species and are dated at about 8000 B. P., somewhat later than Folsoms. The side-notched "Archaic" form is related by the authors to similar points found by G. A. Agogino and W. D. Frankforter at the Simonsen (Iowa) site of a kill of the extinct bison occidentalis, and to points found at Turin, Iowa. Mason and Irwin write "The contemporaneity of such totally different projectile point traditions indicated by the ages of Eden-Scottsbluff points in the High Plains and the age of the Simonsen-Turin complex (C14 dated at 8430 plus or minus 520 B. P.) in Iowa is clearly supported by the finds at the Renier site in Northeastern Wisconsin. A culture-contact situation seems the most reasonable explanation, one involving paleo-Indian and Archaic traditions."

The Local Angle

What brings the foregoing home to New York is a letter received recently from Maurice Robbins, director of Bronson Museum, Attleboro, Mass., who supervised the excavation of Wapanucket No. 6, the first Archaic village ever excavated, on Assawompsett Lake (C14 dated about 4200 B. P.). Robbins writes:

"During this last season we have been excavating a new site about a quarter mile east of Wapanucket No. 6 on the same side of Assawompsett Lake. Intermixed with the Archaic type of material we have found three fluted points in situ together with flute flakes and one polyhedral core from which. strip blades have been struck. This site is datable, as we have some forty hearths with plenty of charcoal but no cash to have it processed. A few hundred yards distant, on the shore of the lake, we have also found a fluted point and a number of flake artifacts, possibly burins."

In a later communication Robbins included photographs of some of the materials from this site, Wapanucket No. 8. One "Archaic" type point found in situ with the fluted points matches the Turin-Simonsen-Renier points in all respects, and Robbins

makes that point specifically in his letter.

It hardly needs be said that if such a site exists in Massachusetts there must be something very much like it in New York, and where to look for it is no puzzlement. It will be on the shores of that extinct lake in Orange County known as "The Drowned Lands." Brammer, Olafson and Brennan visited the Hallock site, on a late bench bank of this extinct lake, in November and saw material of several horizons in a plow-turned soil that rested on an old beach. Some of the material from that vicinity has distinct paleo-hunter technological affinities.

In a most uneditorial aside the editor of THE BULLETIN would like to point out that the contemporaneity of the "paleo", that is, big-game hunter culture and the usufructian, that is, "Archaic" culture is the picture of Amerind prehistory presented in his "No Stone Unturned" published a year ago and written three years ago.

Introductory

The foregoing notes serve very aptly to introduce the following paper by John Witthoft, recently elevated to the position of Pennsylvania State Anthropologist.

This paper was submitted to THE BULLETIN over two years ago and was, presumably, written a year before that. It still, however represents Witthoft's views. It will be observed that:

1, Witthoft posits a Eurasian origin for the paleo-Indian hunters of big-game, whereas Chard finds no archaeological evidence for their antecedents in Eastern Asia.

2. Witthoft argues that "Archaic" (usufructian) cultures evolved from the paleo-Indian, whereas the pieces cited from American Antiquity and the letter from Robbins testify to the contemporaneity of the two,

3. Witthoft states that the Lamoka Lake people made no use of "the abundant shell-fish", whereas Ritchie (Wm. A. Ritchie, 1932) speaks of "concentrated masses of bone and shell" in the midden earth, twice mentions the presence of clam shells specifically and gives an impression of their abundance when he says "A great quantity of calcium carbonate and phosphate was derived from the clam shells, bones, and fish scales.... "

Regardless of the position the reader takes on (1) and (2), Witthoft's exposition of the big-game hunter and the "Archaic" or usufructian living patterns is distinguished and invaluable archaeological writing and THE BULLETIN takes great pride in presenting, as an original contribution:

NOTES ON THE ARCHAIC CULTURES OF THE APPALACHIAN MOUNTAIN REGION

Preface

John Witthoft

Pennsylvania State Museum

Our broader pictures of American prehistory are at the present time being modified so rapidly by floods of new data and by new concepts of time, space, and

diversification, that very few of the earlier general statements about the Archaic seem adequate. We are becoming increasingly aware of the great time spans involved in what I call the Archaic Epoch, and of the great variety of industries and of material culture complexes which must be included within the technological stage or chronological period which we call Archaic. Sears postulated a generalized Archaic, a basic culture-complex subject to slight variation over huge times and regions (W. H. Sears 1948). In contrast to this largely theoretical view, we are coming to see in the Archaic material a vast and infinitely variable series of simple technologies, with space and time units often as small as county and century. Geographically, the unit of Archaic material culture is beginning to look, not like a generalized Archaic pattern, but like the community of a single hunting territory- the band or horde, or the larger community of intermarrying family hunting bands-- the tribe, in the sense of Australian ethnology. Ritchie's early definition of the Laurentian, in the Brewerton complex and early reports on the southern shellmound complexes indicated long chronological survival of ill-defined, highly variable artifact series as the typologically diffuse product of geographically large culture groups (Ritchie 1932a; 1940; 1951c:130-31). Many of us applied this idea to our local areas, and recognized generalized Archaic complexes with huge and highly variable inventories of artifacts, Some of these have since proved to be artificial composites, produced by the intermixing of materials from twenty or thirty distinct time horizons and culture complexes. Others of the same all-inclusive variety are now considered highly suspect and appear not to have as good validity as do Ritchie's Brewerton and Vosberg. I shall return to this at greater length, since the first breaks in this problem came in the Appalachian region. We are only now coming to realize the scale and scope of Archaic problems, and to sense what critical selection of sites and procedures of excavation are necessary to the further elucidation of the Archaic way of life and the culture history of American man in Archaic times.

The Paleo-Indian Background

We can scarcely arrive at any good picture of the Archaic without deeper and broader knowledge of paleo-Indian cultures; many relationships and overlaps between the two are suspected, while the most basic and deepest contrasts are also apparent between paleo-Indian and Archaic technologies and ways of life. This is confused by the geography of modern scholarship. Many western complexes which have been described as paleo-Indian would be called Archaic in the East and many complexes which we call Archaic in the East would be handled in a different fashion in the Southwest or California. Therefore Krieger has proposed the term Early Hunter as a complement to the term paleo-Indian. Early Hunter is defined not in terms of material culture details but in terms of general way of life (Krieger 1947). Krieger's distinction between Early Hunter and Archaic has been misunderstood and is basic to the broad distinction which must be drawn between Archaic life and that which preceded it.

The Early Hunting peoples were free-ranging and nomadic, moving in any direction into unexplored territory in search of game or following herds of large mammals. Their social organization could not have been that of hunting territorialism, where the horde is

enclosed within a geographic tract by super naturalistic and social restrictions. This area was exploited by a seasonal cycle of movement determined by highly conventionalized ritual and economic conventions. The paleo-Indian peoples seem to have exploited only a small part of the economic resources of the countryside, almost restricting their economic activity to the hunting of large game. Peoples restricted within band or family hunting territories exploit practically all of the economic resources of their environment and tend to emphasize the minor but abundant resources. In terms of mammalian ecology, the Early Hunting patterns were comparable to the innate behavior patterns of the now-extinct Plains wolf (the Lobo), while Archaic territorialism was comparable to the territorialism notable among North American bears. The first, free-ranging, is unknown to ethnology, although a few African Pygmy and Bushman bands show what may be vestiges of such behavior. Territorialism has been studied in beautiful detail in the behavior and belief of the Australians and of the American Indians of our northern forests. Life during Archaic times in eastern North America must have approximated rather closely the existence of modern Australian primitives, but in a region of greater economic resource.

It has been suggested that the concept of free-ranging, nomadic life in paleo-Indian times is based upon evolutionary, theoretical considerations rather than upon evidence, and that ethnography cannot support such an interpretation. I cannot accept these objections. The concept of free-ranging is based upon archeological evidence, which, although it is as yet somewhat slight, is most striking to all of us who have dealt at first hand with the paleo-Indian problems of any large geographic region. There is first, the almost total lack of regional variation discoverable in the paleo-Indian artifact series. As Cotter has pointed out, if areal co-traditions can be defined for paleo-Indian, they pertain to the hugest geographical regions imaginable, on a scale quite unknown for any culture complexes more primitive than the Roman Empire (Cotter 1954). Vast regional distributions seem to be most notable in earlier paleo-Indian times and to give way to regional specialization as one examines later paleo-Indian complexes; the geographic range of Clovis is much greater than that of Folsom; Folsom and several other distinct regional complexes occupy the area which had earlier been covered everywhere by Clovis.

In the second place, the patterns of dispersal of lithic materials by paleo-Indian peoples are quite different from those of any later times. Paleo-Indian sites consistently include a significantly high proportion of tools made from flints from distant outcrops, and small proportions of tools of flints derived from still more distant outcrops. In contrast, Archaic sites generally include only a small proportion of tools made from stone derived from outcrops more than a hundred miles away. There is a significant difference, of order rather than mere arithmetic, between paleo-Indian and Archaic in this respect. This is most conspicuous in all of our controlled samples from paleo-Indian and Archaic sites of the same region.

The distribution of paleo-Indian specimens and sites is so scattering, and the sites themselves so tiny and thin, that the settlement pattern involved is obviously not that of frequent revisits to a good campsite or of any prolonged habitation at one

spot. Rather the camps were occupied for a very brief period and seldom revisited. The sporadic appearance of campsites and isolated specimens without evidence of further local habitation and the infrequency of sites over large geographic regions suggest an extremely low density of population and support the ideas of great mobility and nomadic life for paleo-Indian peoples. The close similarities between artifacts from many different geographic regions indicate travel and intercommunication, if not actual occupation of different regions by the same community within a single generation.

Finally, in theoretical contexts there is certainly nothing primitive in the concept of free-ranging and nomadic economic life, on the contrary, it must have been a highly specialized and peculiar manner of existence. It necessitates that men be able to live upon economic resources that can be harvested in abundance without need of detailed local geographic knowledge. Acorns and shellfish are such resources in certain ecological niches, but they are factors of sedentary life. Large game animals in an optimum environment are almost the only natural resource that can support nomadic life, and there are several reasons why they have not often been the sole support of human communities. They constitute a resource that is soon exhausted by killing, unless the game population be tremendous, or unless the hunter have the resources of new country. In either case, human population increase would quickly fill the vacuum and result in destruction of game herds, as it probably did in ancient America. The exclusive exploitation of large game for meat requires that the hunter possess exceptional killing tools and excessive skill in turning them against large mammals. Most Bantu groups of Africa lack both of these cultural assets, and thus can make little use of big game even where it is available. Finally, economic nomadism and free-ranging imply that a band of hunters, following such a life without geographic boundaries, either lack or have discarded much of the supernaturalism and worldview that characterizes most primitives. They must have a religion which lacks ritual and legendary associations with landscape features. They must believe that the world is infinitely unbounded and without center or homeland. They must continuously make a home and deal with the gods in new geographic environments, sustaining a self-reliant view toward nature, and emphasizing lore about the great beasts and ignoring much of the minor biota. Otherwise the band can scarcely transgress habitats and climatic zones.

I believe that this sort of world view is a highly unusual thing, which may have come into existence during Upper Paleolithic times in Eurasia. Changes in the Pleistocene scene and climate coincided with the development of flint blade-making and other drastic improvements in the making and arming of weapons. The great steppe lands of central Eurasia were well populated by large grazing animals. Men armed with new and superb weapons ventured onto these grasslands, and there evolved a body of skills which soon made man the most significant predator on the Pleistocene game herds. In this environment, with massive resources of food and with excellent arms and skill, the whole body of attitudes and cultural property which must go with nomadism could easily have come into existence. The shifting Wurm glaciation and changing boundaries of the interior grasslands made possible expansions east and northward. These probably brought steppeland hunters into the great prairies of the

New World. I have pointed out some typological basis for this hypothesis; I believe that both Predmostian of the Old World steppes and Clovis, as well as many related complexes, were but different facets of a single development in world culture history that occurred during the Upper Paleolithic (Witthoft 1952: 493-94; 1954b). It scarcely included any primitive traits. Clovis was a complex incapable of sustaining itself because it was self-terminating through destruction of game resources and through human population increase. Paleo-Indian life would of necessity give way to other economies and different types of culture complexes. Indeed, it was most certainly one of the parents of the Archaic way of life in North America, although we still know too little of the intermediary steps and of other possible antecedents to the Archaic.

The Background of the Archaic

In contrast to paleo-Indian specialization on large game, Archaic man came to occupy almost every sort of ecological niche available in our temperate regions. Certain subhabitats were either missing or ignored in eastern North America, but many different and diversified economic assets were utilized. At Lamoka Lake, in New York, bands gathered on the shores of a lake rich with fish and wildlife and lived a sedentary existence during warmer weather with a climate at least as mild as the present (Ritchie 1944:292-310). The people remained at this favored watering spot until the acorn harvest was over and spent winter months in small hunting camps in the back country. The acorn was a major food resource, but the Lamoka people do not appear to have utilized the abundant shellfish. Along the large streams of the Mississippi system, other bands gathered at swift water shoals during warm weather and fed largely upon the flesh of river mussels. They also spent the winter season scattered in hunting camps away from the great river valleys. The sea coasts may likewise have been of importance in seasonal cycles of movement and settlement within a band territory, but the drowned shores of Archaic times have as yet been little studied. Band territorialism among the Naskapi, Montagnais, Micmac, and Malecite continues to the present day this pattern of cyclic movement over a territory, with warm season utilization of water resources and winter movement between hunting camps. I believe that northern territorialism is an Archaic survival rather than a product of modern acculturative forces. I interpret the Archaic through ethnographic data, and I feel the correspondences represent real relationships and continuities.

We know very little of the seasonal or cyclic utilization of territories in the Appalachian region. The concept of territorialism here is based largely upon the study of patterns of dispersal of flints and other materials from outcrops at which they were gathered by aboriginal workmen. In many cases, we believe that these dispersal patterns can be used to map a band territory or a tribal territory, although we note that such patterns rarely violate watersheds. Frequent coincidence of stone distribution and drainage pattern may be very significant; it could reflect actual cultural boundaries. If it does, it would certainly indicate a stable population and tight integration of territorialism with physiography. In other cases a major stream, such as the Susquehanna, appears to have been a natural boundary between

cultural domains, with a mixture of the material from different traditions.

Except on the lower reaches of the large streams of the Mississippi drainage there appears to have been no significant Archaic utilization of shellfish resources. Even on the upper Tennessee and the Ohio; none of the shell deposits seem to pertain to any early horizons within the Archaic or to be as early as the shell heaps of the lower Mississippi and the Gulf coast. Possibly this economic practice did not spread into the higher Appalachians during Archaic times, or its occurrence was so slight as to have been of little importance until very late in the Archaic. Archaic sites of the Appalachian region scarcely characterize the river valleys; rather, they are found on the bottoms as well as everywhere else. In the high country, every bench against the mountain, every strong break of contour at any height, any change in level of a mountain streamlet, any ridge top, and any forested peak or mountain bald seems to have at least one small Archaic site. This is especially conspicuous in the southern mountains. This is a region of deep and ancient forest soils, which served as a refuge for many plant species during the Pleistocene and which also was the nursery area from which the North derived part of its plant cover with the restoration of temperate climate. Archaic man could never have lived here except in deep forests. Here we can be very certain that the ecological niche which he occupied was one of climax hardwood forest, where plant food resources predominated over animal foods. This is a region in which we find almost no trace of paleo-Indian occupation, unless we go east to the Piedmont, west to the valleys of the Tennessee, or south to the Georgia foothills. Beyond these boundaries, paleo-Indian material is found in an abundance not equaled elsewhere in North America. The northern Appalachians show a related distributional pattern, probably caused by an ecology not well suited to paleo-Indian life. We should search for ancient prototypes for the Archaic pattern of life in these old climax forest niches, where a "proto-Archaic" with heavy quartzite cleavers and planes may have survived through paleo-Indian times.

The Transition Between Paleo-Indian And Archaic

Paleo-Indian complexes of the Great Plains apparently added culture traits and modified their economic emphases to become the Archaic cultures of that region. Earlier phases of the diversified economy of the Plains have been variously considered as late paleo-Indian (Hurt 1953), Early Archaic (Krieger 1947), and the Plains Archaic Tradition (Mayer-Oakes 1951:322). The flint tools are almost entirely degraded forms of classic paleo-Indian types, including such classes as Scottsbluff, Angostura, Eden Valley, and Plainview projectile points. The main food source was a variety of mammals, almost entirely of modern species with considerable emphasis on slightly larger varieties of bison. Grinding tools were the major cultural innovation, presumably used in the processing of vegetable foods. Precise information on these tools and their contexts is sparse, but some of the grinders appear to have been manufactured types rather than natural forms. They may include pulping tools, adapted to the preparation of roots for food, as well as mullers for the crushing of porridges or breadstuffs. The relative importance of these tools, the precise age and contexts of specific examples, and the typological status of most, are by no means clear. They have not always been distinguished from the natural whetstones used by paleo-

Indian peoples for honing bone tools. I suspect that many grinders were intruded from later Archaic contexts. Nevertheless, I am convinced of the grinding tool association with Plains cultures of paleo-Indian extraction and consider them a major cultural innovation within this tradition. They appear to characterize Plains life of about 9000 years ago and are the earliest forerunners of the Archaic for which we know age, cultural context, and typology.

Mayer-Oakes (1955a: 20) has recognized an intrusion of his Plains Archaic tradition into the northern Appalachians through the Ohio valley in his Globe Hill complex with lanceolate projectile points and shaped grinding stones of granular rock. I believe, however, that the Globe Hill complex is a much later phenomenon of Late Archaic times. The resemblances between the Globe Hill lanceolate point and Plains Archaic tools may be an accidental one. The association of the Globe Hill points with bannerstones and with adz blades of aphanitic rock is certain evidence of a later date. Nevertheless, the upper Ohio region has a culture complex of Plains Archaic tradition, known only by scattered lanceolate projectile points of several forms, including the "Ohio Yuma" points of local collectors. The upper Ohio represents the easternmost border of the distribution of a whole series of projectile points of the Plains Archaic tradition. The local culture contexts and chronology are as yet entirely unstudied, but the geographic distribution is sharply outlined at the headwaters of the Ohio and Tennessee drainage systems.

Within the upper Ohio region there are some small sites on high ground that have produced several projectile points of late paleo-Indian forms and other tools that may be related. These forms include projectile point types of which we think as Late Archaic, with sharply defined notches or barbs and a well formed tang. The major argument against fortuitous association is the precise typology of these forms. They are, in many cases, not the ordinary Late Archaic types of the region, but uncommon local types, well formed of excellent flint, with expert flaking, sharply defined notches and tangs with smoothed edges. In North Carolina, this knife-form is the Palmer type at Coe's Hardaway site, St 4, near Yadkin. It marks the lowest Archaic level in a deep stratified site, as part of a complex lacking projectile points and overlaying a Dalton-style paleo-Indian horizon. We consider them knives rather than projectile points, because they are frequently beveled by reedging and sometimes show edge wear. Their edges are often serrated. The sites from which they come produce a variety of paleo-Indian types, both of the local "Ohio Yuma" forms and of the types of the Dalton Focus (Chapman 1948). I understand the Dalton series to include a projectile point type and a knife type. The projectile point has almost parallel, straight basal edges which are ground. It shows attempts at fluting, which seldom produced a well defined channel. The knives have somewhat excurvate basal corners, heavily ground basal edges, and are generally of a somewhat pentagonal outline as a result of extensive reedging. Their edges are generally serrated and are often strongly beveled as a result of resharpening. They share so many typological details, except for shape, with the tanged knives that we suspect they overlap one another in time. The notched and tanged knives with ground basal edges continued into much later times, but they appear to be the first forerunners of the full-blown eastern Archaic of the Mississippi Basin.

Several recently reported sites suggest an overlap between the Plains Archaic or closing paleo-Indian tradition and an Archaic of the eastern tradition. Graham Cave in Missouri, Modoc Rock Shelter in Illinois (Fowler and Winters 1956), and Russell Cave in Alabama (Miller 1956, 1957) have all produced forms of tools normally associated with the Late Archaic of the East in early contexts. None of these convince me that the Archaic material is actually as early as the Dalton Focus. The mixing of lower levels at Graham Cave, the question of location of artifacts within the soil sequence at Modoc, and the problems about the Alabama dates are too complex to discuss here. However, these sites reinforce our belief that the eastern archaic tradition is part of a continuum going back into paleo-Indian cultures. The Eastern Archaic may have been in existence in its area of origin as much as 8000 or 9000 years ago, with a few of its traits foreshadowed in older cultures of an essentially different tradition. I cannot accept the three sites that have been reported as a link between the Eastern Archaic and the Plains, Archaic as anything but a multiple-component association of the two traditions, with a gap of centuries or millennia.

Possible Subdivisions of the Archaic

There is little doubt that the Archaic will eventually be understood in terms of chronological periods and developmental stages, and that meaningful geographic and cultural divisions will ultimately be defined. However, at present it is difficult to see such orderings with any clarity and those suggested are subject to considerable doubt. For example, I have postulated Early and Late Archaic Periods; the first characterized by spearpoints lacking stem constriction and by the absence of grooved axes, bannerstones, and other elaborated ground stone tools (Witthoft 1954a- 40-41). I believe that this distinction is valid, but that it is too simplistic, and that a greater developmental complexity with strong regional differences prevailed. Coe's data from recently excavated Pedee Valley sites in North Carolina. (St4 and Mgv22) presents the strongest objections to my simple and convenient theory.

There are other criteria by which some would place a portion of my Archaic in a declining paleo-Indian stage or see segments of it as actual paleo-Indian industries. This is in line with much of the thought in western North America and especially involves the much disputed Sandia, Lake Mohave, and Gypsum Cave projectile point types. In the East, such interpretations generally involve lanceolate projectile point forms, such as Coe's Guilford point (Coe 1952: 304), Miller's pentagonal points (Miller 1948), and Mayer-Oakes' Globe Hill points. I am convinced that these particular types are actually late rather than early in their local Archaic sequences, and I cannot see any strong evidence of the persistence of paleo-Indian culture traits into any of the Archaic cultures east of the Mississippi basin. I believe that intermediary stages between eastern paleo-Indian and Archaic remain to be discovered and studied. Whether these transitional stages will prove to be developmental-Archaic evolving from paleo-Indian--or acculturational--"Proto Archaic" modified by paleo-Indian--remains to be seen.

Many of the conditions of our newer field data and concepts would be met if there were, in many parts of the continent, primitive gathering cultures older than paleo-

Indian, which persisted independently in certain ecological niches and merged with it into the cultures of the Archaic. Both traditions may have evolved independently and yet have occasionally intermingled and mutually modified one another. Primitive gathering cultures would be of essentially Lower Paleolithic style and would probably look very much like early Cochise, George Lake, or San Dieguito. Tule Springs is the best candidate for such an early complex.

In light of this problem and in view of the unfolding picture of the complex variability of Archaic industries and economic bases, certain specific types and directions of research are needed. Of primary importance is precise typological and geological study of simple Archaic sites. In this we must avoid the classic failure of the old Trenton Gravel controversy, where one faction swallowed every implausible claim without any skepticism, while the other rejected all primitive industries without examining the data.

Secondly, we need to define Archaic culture complexes and foci, determine their culture areas, fix their place in local sequences, and relate them to other sequences by chronological cross-ties, such as transported artifacts. Enough has been done so that we can see, here and there, strongly marked geographic and cultural boundaries, sharp chronological discontinuities, and revolutions in technology and economy. Rather than the drab and typologically hopeless homogeneity of Archaic artifact types which formerly commanded our attention, we can glimpse millennia of culture history and varying human experience.

Within the next few decades, we should be able to sketch an over-all impression of Archaic life in terms of cultural development, changing economic bases, ecological adaptation, and progressive invention. These will reflect local social phenomena of community and band. Marked population displacements may be indicated and movements of peoples, as contrasted to more fixed location of tribes during Woodland times. Precise studies will be difficult, since sites are generally very unrewarding in clear data. This research must involve very tight work in typology and petrography as well as in survey and excavation techniques. Much of the work to be done is at our finger tips if we consider the many series of local catalogued surface collections from shellmounds lying unused in storage.

(Bibliography omitted for reasons of space. References may be obtained from Witthoft, Pennsylvania State Museum, Harrisburg.)

Epilogue

The foregoing is so rich a distillation of Witthoft's expansive and profound knowledge of American prehistory that a mere two or three readings will not do it justice. We believe it to be a very nearly classic statement on the "Archaic" and the "Paleo-Hunter" and that most of it, though not all will be shown to increase in validity with the investigations of the next decade. For the present, it provides a most useful perspective for investigators in New York prehistory.

Be There

The NYSAA Annual Meeting is scheduled for Saturday, April 8, at the Fenimore House, Cooperstown, with The Van Epps-Hartley Chapter as host. Those who have papers to propose for the meeting should get in touch with W. Arthur Johnson, 163 Old Loudon Rd., Latham, N.Y. Copies of papers read and all Chapter and Committee reports should be submitted to THE BULLETIN.

Tottenville Project: A Preliminary Note

Jerome Jacobson

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During the past summer and fall, 1960, I directed field research at the Burial Ridge area of Tottenville, Staten Island. In May, I had completed a Master's essay in the Department of Anthropology, Columbia University, based on museum and library research on the site, and on the 1959 field work of Albert Anderson and Donald Sainz, of Staten Island. The 1960 field investigation was supported financially by a graduate student honorarium from the New York State Museum and Science Service. Surface hunted and excavated intermittently for more than 100 years, the Burial Ridge site still holds great quantities of aboriginal material, spread mainly in a shelly deposit that covers at least eleven acres of the south-western tip of Staten Island (Ward's Point). Lying under about two inches of black humus, the brown shelly zone is about a foot thick and seems to represent the historic Raritan village of Aquehonga with a plowed admixture of later European occupation.

Preliminary tests by Anderson and Sainz indicated lower zones containing Middle and Late Woodland ceramics similar to those from the Abbott Farm site near Trenton, as reported by Dorothy Cross in 1956. These sherds resembled some wares found in the western part of coastal New York that had been tentatively dated as Early and Middle Woodland with reference to Carlyle S. Smith's chronology for the coastal area. The 1960 excavations centered in a clearing in the second-growth woods about 100 feet northwest of Burial Ridge. Students from Columbia University and other volunteers helped with the project. Preliminary analysis of the finds shows a Bowmans Brook focus component immediately below the historic deposit. A Transitional or Archaic stratum lay below, in the yellow sand sub-stratum. No level yielded sherds diagnostic of Abbott Farm influence. However, digging by local collectors along the bluff directly west of Burial Ridge turned up some sherds of Abbott Farm Incised at what seemed to be the same physical level as the Bowmans Brook materials further inland. Closer analysis--now in progress--of the sherds found in the clearing may help define the relationship between two apparently contemporaneous archeological cultures during Bowmans Brook times.
