EASTERN STATES ARCHEOLOGICAL FEDERATION

ALABAMA
CONNECTICUT
DELAWARE
FLORIDA
GEORGIA
MAINE
MARYLAND
MASSACHUSETTS
MICHIGAN
NEW HAMPSHIRE
NEW JERSEY

NEW YORK
NORTH CAROLINA
ONTARIO, CANADA
PENNSYLVANIA
QUEBEC, CANADA
RHODE ISLAND
SOUTH CAROLINA
TENNESSEE
VIRGINIA
WEST VIRGINIA

BULLETIN NO. 25

MAY, 1966
The Annual Meeting of the Eastern States Archeological Federation was held Saturday and Sunday, November 6 and 7, 1965, at Princeton and Trenton, New Jersey.

Registration members and guests began at 9:30 A.M., Saturday, at the New Jersey State Museum, Trenton.

Sigfus Olafson, President, opened the meeting at 10:00 A.M., introducing Kathryn B. Greywacz, President of the Archeological Federation, of New Jersey. Mrs. Greywacz, in her address, referred to the New Jersey Society of the State Museum in the founding of the Society of New Jersey. Mrs. Greywacz reviewed the part taken by Leigh M. Pearsall's foresight and enthusiasm in visualizing the need for a regional organization which had its inception at the four-state conference of archeological societies of Delaware, New Jersey, New York, and Pennsylvania, held in Trenton, May 27, 1933. She spoke of President Albert Louis MacCord, Archeological Society of Virginia, and his role in archeological research which he hoped would continue and grow in the future.

She said the New Jersey Society had been pleased and honored to be admitted to the Federation without prejudice to the existing member societies from these two states; that the 1966 Annual Meeting be held in New York, November 5 and 6. It was voted that each of the above report be voted on separately. All passed unanimously except the one concerning the admission of the Archeological Society of Maryland, Inc. After a lengthy discussion, the Maryland Society was admitted with the following society vote: eight in favor, one negative, and two abstaining.

Don W. Dragoo, Treasurer, reported a balance on hand of $248.78 in the general account as of November 9, 1965. Receipts during the year included $284.01 registration balance from the 1964 meeting, $637.00 dues from affiliated societies, $54.50 from sale of Bibliography No. 1, $23.94 for printing 1964 banquet tickets, $750.00 for printing Bulletin 24, $100.00 for Corresponding Secretary's expenses, $59.50 for stationery, and $41.75 for handling the sale of publications at the annual meeting. The balance of $181.26 in the Bibliography No. 2 special account. Receipts included $259.50 from the sale of Bibliography No. 2, $41.75 for handling charges, and $50.00 from the University of Oklahoma (National Science Foundation grant) for return of proceeds from first year's sales, $31.20 for mailing bags, $30.24 for typing, $5.21 for postage and $1.50 debit for bad check.

Maurice Robbins, Research Chairman, reported that the committee appointed for the fiscal year, in addition to himself, consisted of Arthur C. Lord (Massachusetts), Howard Sargent, Eugene Finch (New Hampshire), Frank Glynn, Richard Bourne, Douglas F. Jordan (Connecticut), Wendell Hadlock (Maine), and Milton Hall (Rhode Island). The original suggestion was that since so much confusion exists in the nomenclature and classification of projectile points, the committee should attempt to find some common system which could be adopted. This was modified by a further suggestion that the effort be confined to the New England area with the idea of expansion should the attempt prove feasible. Considerable correspondence and conference between members resulted in the following conclusions: member societies of the Federation, to a large extent, work within the boundaries of their own state, and sometimes set up or adopt varying systems of nomenclature and classification. These varying systems have become so rooted in the general work that it would be most difficult if not impossible to alter them. By this time we had assembled a number of classification systems and also information concerning several attempts currently underway to produce others of much wider scope. Several weeks and reams of correspondence later the committee decided to meet on April 11, at the Bronson Museum, to discuss the developments. This meeting was attended by Maurice Robbins, Sigfus Olafson, who is a member of the committee ex-officio, Wendell Hadlock, Milton Hall, Arthur Lord, and Douglas Jordan. After a lengthy and animated discussion the committee decided that it would not attempt, at this time, to compile a classification, nor would it adopt any of the several systems now in use. It further decided that conclusions regarding the similarity or differences between artifacts cannot be accurately determined from either drawings or photographs of the artifacts. For example, there seems to be an opinion that the types known as Poplar Island,CT:<b>

The minutes of the Attleboro meeting, November 7 and 8, 1964, were accepted as printed in the Federation Bulletin No. 24.

Dorothy Cross, Recording Secretary, presented the following recommendations of the Executive Board: that the 1966 membership dues of the Federation be the same as last year, $10.00 for societies of 100 or less members, and $5.75 for each additional 100 members or fraction thereof, or $1.50 for each additional 100 members; that the Directory list only the names and addresses of the Officers, Staff Chairmen, and State Representatives of the Federation, and the President, Vice President, Treasurer, Secretary, and Editor of the Society, etc.; that the constitution and by-laws be revised. Mr. Olafson will appoint a committee at this meeting; that the Maine Archeological Society and the Archeological Society of Maryland, Inc., be admitted to the Federation without prejudice to the existing member societies from these two states; that the 1966 Annual Meeting be held in New York, November 5 and 6. It was voted that each of the above report be voted on separately. All passed unanimously except the one concerning the admission of the Archeological Society of Maryland, Inc. After a lengthy discussion, the Maryland Society was admitted with the following society vote: eight in favor, one negative, and two abstaining.

The Business Meeting was opened by Sigfus Olafson, President, Sunday, November 7, at 9:35 A.M. at the Princeton Inn.
To date, projectile points for this comparison have been received from Sargent, New Hampshire; New Hampshire and Vermont, Wendell Hadlock (Maine), and, of course, specimens from Massachusetts are available. We have not as yet received specimens from Rhode Island or Connecticut. We are of the belief that this project is possible and that the results produced in this fashion would be expanded to include other areas than New England. If the Federation feels that this project is worth while, the committee will continue along this line. Perhaps by this time next year we may have some significant facts to present.

J. Alden Mason, Editorial Chairman, reported that with the help of the Recording Secretary and her staff, the Editorial Staff Director edited and published the annual Bulletin of the Federation, Bulletin No. 24, May, 1965. It consisted of 15 pages and contained the minutes of the 1964 meeting, the reports of the state societies, and the abstracts of papers delivered at the meeting.

Howard A. MacCord, Public Relations Chairman, reported that the only public relations activity during 1965 was the release to the wire services of the announcement concerning the annual meeting of the Federation at Trenton in Princeton, in November, 1965.

Donald C. Wilder, Membership Chairman, reported. "There is only one matter on which I have received sufficient data to make a recommendation to you for action under the duties assigned to me by the ESAF Constitution (Section 109), and that is the application for admission to the Federation by the Maine Archaeological Society. The above-cited section decrees that the Membership Chairman shall receive and investigate all requests for affiliation and make his recommendations to the Executive Board. Acting under this decree, I direct your attention to the Maine Archaeological Society, that it began in 1955 as a Maine Chapter of the Massachusetts Archaeological Society. It was organized by Mr. Gerald Dunn (a member of MAS for several years during his residence in Massachusetts) after he moved from Massachusetts to Maine. From the beginning of this chapter it was understood that when it felt it could stand by itself, it would do so. In time this took place, and in 1963 the Maine Archaeological Society made application for admission to ESAF. No action was taken on admission on either the 1963 or 1964 meetings of ESAF. I am informed by Mr. Harry G. Nickel, President of the Maine Archaeological Society, that it still wishes to be admitted to ESAF. I am informed by Mr. Dunn, who is presently Secretary of the Maine Archaeological Society, that it has a membership in excess of 800, about evenly divided between Maine members and out-of-state members, most of the latter group having been acquired during the past summer through interest in the Society's Pennmound Point dig. The Society has chapters in the areas of Millinocket, Portland, Gardiner, Bristol, Waterville, and Ogunquit. Members of the Society have five digs presently in progress, and the Society publishes two Bulletins each year. The Society has provided special display space at the Metropolitan Museum in New York. As the official headquarters of the Society, has a display on loan at the Portland Museum of Natural History, and has provided a special display of artifacts from the Depositors' Trust Company at Boothbay Harbor. Members of the Society in the last year have presented 27 programs to non-archaeological groups such as service clubs, women's clubs, and youth groups. I have examined the by-laws of the Maine Archaeological Society, and find nothing in them contrary to the objectives of ESAF as expressed in the ESAF Constitution. I have examined the ESAF Constitution and find nothing in it that prohibits the admission of more than one society from a given state. Therefore, on the basis of the above facts, I recommend as Membership Chairman that ESAF accept the application of the Maine Archaeological Society for ESAF membership.

Getting away from the facts, it is my opinion that the primary objective of ESAF should be the advancement of knowledge of the prehistory of the Eastern States, and the mechanics of this advancement should be of secondary consideration. If two groups can work in a given state, and the net result is the advancement of knowledge, I see no harm in it. From a coldly financial point of view, it would seem that the members of more member societies, the greater the income to ESAF to carry out its objectives. In the case I have set forth above, the applying organization, on the basis of the facts set forth, is larger and more active than the present member organization from the same state, yet bears this organization no malice, and is perfectly willing to see it continue to do what it can to advance the knowledge we all seek.

In the coming year, if I am continued in office, I hope to be able to act on a suggestion by President Olafson to see what might be done to organize a state archeological society in Vermont, the only eastern state not presently represented in ESAF.

C. G. Holland, Program Chairman, reported that requests for participants on the program were sent out in January and September. The response was modest and in good measure by previous participants. It appears to be difficult for information concerning the program to be filtered into the rank-and-file members of the various societies. Thanks are due to President Olafson, Dr. Dorothy Cross, and Mr. Fred Kinsey for bringing the program to its final form. Dr. Holland added that his appreciation goes to all the participants and to those who would have given reports if there had been need.

Elwood S. Wilkins, Jr., Exhibits Chairman, reported that exhibits for the meeting were displayed in the foyer of the New Jersey State Artistorium, Cultural Center, Trenton. Herbert C. Kraft was in charge of the arrangements for exhibit space and his efforts were greatly appreciated. Exhibits included displays from the Piscautauke, Maine; The John East Mound, Virginia; Lewis Creek Mound, Virginia; an historic site at Pemaquid, Maine; and a cache of blades from the Choptank River, Maryland.

Mr. Olafson appointed the following to the Constitution Committee: Howard A. MacCord, Chairman, Edward V. McMichael, Maurice Robbins.

The Business Meeting was brought to a close after a rising vote of thanks to the Archeological Society of New Jersey and the New Jersey State Museum for their hospitality and cooperation.

Dr. Dragoon took the chair and the following contributed papers were presented: "Archaeology and the Quest for Heritage" by John L. Cotter, National Park Service: "Miners' Pits and Dental Finding in the Tuscaloosa Area," by Maurice Robbins.

The above-cited section decrees that the Membership Chairman shall receive and investigate all requests for affiliation and make his recommendations to the Executive Board. Acting under this decree, I direct your attention to the Maine Archaeological Society, that it still wishes to be admitted to ESAF. I am informed by Mr. Dunn, who is presently Secretary of the Maine Archaeological Society, that it has a membership in excess of 800, about evenly divided between Maine members and out-of-state members, most of the latter group having been acquired during the past summer through interest in the Society's Pennmound Point dig. The Society has chapters in the areas of Millinocket, Portland, Gardiner, Bristol, Waterville, and Ogunquit. Members of the Society have five digs presently in progress, and the Society publishes two Bulletins each year. The Society has provided special display space at the Metropolitan Museum in New York. As the official headquarters of the Society, has a display on loan at the Portland Museum of Natural History, and has provided a special display of artifacts from the Depositors' Trust Company at Boothbay Harbor. Members of the Society in the last year have presented 27 programs to non-archaeological groups such as service clubs, women's clubs, and youth groups. I have examined the by-laws of the Maine Archaeological Society, and find nothing in them contrary to the objectives of ESAF as expressed in the ESAF Constitution. I have examined the ESAF Constitution and find nothing in it that prohibits the admission of more than one society from a given state. Therefore, on the basis of the above facts, I recommend as Membership Chairman that ESAF accept the application of the Maine Archaeological Society for ESAF membership.

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Stones and Bones, the Society Newsletter, has been mailed monthly throughout the year to the 570 members and to an additional 52 individuals and organizations. The Newsletter has contained from 9 to 12 pages per issue, and has included an "educational page" each month, prepared by local chapters.

The Journal of Alabama Archaeology is published semiannually by the Society. The June, 1965, issue of the Journal was "Bluff Shelter Excavations on Sand Mountain," by Margaret V. Clayton, Research Assistant, Department of Sociology and Anthropology, University of Alabama, being a study of excavations made on Sand Mountain in North Alabama during the summers of 1962, 1963, and 1964. The first printing is in process, copies of which will be available within the next few days.

Field work sponsored by the Society during 1965 was again conducted by the University of Alabama and financed through the fund-raising campaign led by the Archaeological Research Association of Alabama, Inc., an organization which has an annual fund drive for archaeological research. This year's activities have included further excavations on Sand Mountain in the vicinity of Ider, Alabama. Two bluff shelters were studied and found to yield Woodland and Early Archaic material. An interesting feature of one shelter was the presence of pictographs typical of Southern Cult motifs. Excavation yielded very little material that might be considered for publication. A drip-line trench did produce a pearl bed and a greenstone celt fragment, the significance of which has not yet been determined.

Enthusiasm of the Society is at the present time directed toward a winter project of surveying pebble-tool sites. It is hoped that next summer a site in northeast Alabama can be excavated in an effort to find in situ evidence of a pebble-tool industry in Alabama.

Connecticut—Frank Glynn reported for William Krause that the Archaeological Society of Connecticut has a membership of 290. The 32nd Annual Meeting was held May 1 at Storrs. David Clymer spoke on early man and late glacial events in New England, Professor Irving Rouse on Stonehenge and its antecedents. The latter talk was illustrated with slides, including some that Professor Rouse had made during a recent sabbatical year in Europe. The Fall, 1965, meeting was held at New Haven and commemorated the 25th Anniversary of the New England Conference of the American Museum of Natural History in Woodbury. Lyent Russell summarized the present status of excavations on Graniss Island which began 20 years ago and are still continuing. Bone materials from the "dig" have recently been studied by Joseph H. Waters, and Professor Rouse has classified the pottery.

Four Newsletters were published during the year and Bulletin No. 33, containing "Animal Remains from Some New England Woodland Sites," by Joseph H. Waters, and "The Phillips Site Excavation," by Roger L. Keener for the Albert Morgan Chapter.

Two chapters have continued successful programs combining winter indoor meetings with summer digging. The New Haven Chapter held in that area and the Albert Morgan Chapter in the Hartford area.

Professor Bert Salwen conducted Columbia University's fourth summer field session at Fort Simontok, a 17th-century Mohican site on the west bank of the St. John River. In addition to his students were visited—and sometimes helped—by a number of members of the state society.

The most important find of the year appears to be the Rye Hill site in Woodbury discovered by Mr. and Mrs. Ned Sinnott. When discovered, the upper portions of the hill were already much removed by a gravel quarrying. The remains of one pit yielded broken and fire-damaged flints, cremated bone, charcoal, and charred acorns. The circumstances indicate that there were burials here comparable to those at the Mansfield site. The Mansfield site and others such as the "Burial Cult" sites more widely spread over the northeast.

Delaware—Elwood S. Wilkins, Jr., reported that the Archaeological Society of Delaware now has a membership of 175. There are two chapters.

Five public meetings were held, one being a banquet meeting. The others featured a speaker or speakers followed by a social hour. Exhibits were shown at all meetings and topics and subjects presented were Robert R. Jordan, "The Pleistocene in Delaware"; Elmer G. Worthley, "Survival Foods of the Indians"; Bernard Wailes, "A New Archeological Revolution." Six members gave papers at the meetings. Members met at the State Museum, July 21, 1965. A member of the Museum is automatically a member of its adjunct organization, The Archaeological Society. The Archaeological Society holds no separate meetings, nor does it have a Bulletin. Membership expenses are borne by the Museum, and publications are issued by the Museum.

The Museum, located within Acadia National Park, was open May 30 to October 15. Museum attendance was staggering. The one-room display area and one-man staff were hard pressed. Two new dioramas describing winter and fall Eastern Woodland Indian activities were very popular.

Additional storage and research space, additional staff for peak week-end tourist traffic, two dioramas of spring and summer Indian activity. a rough survey of the Upper St. John River, and two investigative digs are contemplated for the summers of 1966 and 1967.

Wendell S. Haddock, Curator, detailed his activities for the year in his annual report. He lectured widely in Maine, was called upon for consultation by the State Highway Commission and private individuals with finds or collections. He directed field work at three historic sites for which the Maine State Legislature earmarked monies for excavation, restoration, and marking: Castine, Fort Pownal, and the 1607 Popham Colony at Phippsburg. He is a member of the Governor's Council on the Arts and Culture, the Archives Committee, and the Advisory Committee on Historic Sites. He is a Trustee of a burgeoning Maine League of Historical Societies and Museums.

Mrs. Eva Butler, the Museum's research historian and ethnologist, has several papers ready for the printer, waiting only illustrative material.

Easton, Maryland—Members of the Waterford Chapter, located in Aroostook County, will be excavating during the summer and fall of 1966. The first, inspected briefly this September, may offer clear stratigraphy for an interior stream-side hunting and fishing site. We hope for enough charcoal and bone for dating purposes. The second "dig" will be on the Maine St. John River, which is scheduled to be inundated by Dickey Dam, a Federal Power Project. If work there provides important information, it may signal the start of several seasons of excavating, and a fuller survey of the watershed.

Maine's northern sector, bounded on one side by New Brunswick and on the other by Quebec, is rich with material, judging by surface finds and local lore, but relatively little systematic work has been done there.

A preliminary air survey of Allagash, St. John, Aroostook, and Machias River Valleys was made this fall to study the correlation of waterways and Indian camp sites, some already documented.

The Museum will be watching the progress of the Dickey Dam project, also the Allagash Waterway proposals, a proposed Maine to Quebec highway, and the St. John-Aroostook Conservation Plan. A large unoccupied land area is involved in these schemes. Some of it will be removed from private control permanently. Museum members are pin-pointing Indian sites in the affected areas wherever possible with fine cooperation of landowners. Hopefully, Museum records and advice will assist in proper protection or proper salvage of valuable sites before flooding, take-over, or building.

A great deal of excavating has been going on this past summer in Maine but not under Robert Abbe auspices. Mrs. Helen Camp's work at Pemaquid stirred up lots of interest. In addition, individuals and groups from the Maine Archaeological Society have been working on good sites, results generally known, as yet.
We hope our Museum and the Maine Archaeological Society can find common ground and be mutually helpful. The Maine Archaeological Society is active, with meetings, Bulletin, and some organized week-end work. There have been some component and serial members whose work is of significance. The Abbe Museum will cooperate with them and advise whenever possible. The Abbe Museum hopes some of their members will help with its projects. We will continue to plumb the treasures of the island for data and artifacts. Perhaps their acceptance into the ESFA will foster more active communication and cooperation between the two groups.

MARYLAND—Douglas R. Woodward reported that the Archaeological Society of Maryland has a membership of 70.

Two meetings per year are held for the whole Society. Each of the two constituent chapters holds monthly meetings.

Speakers at the last Society meetings included Dr. Robert L. Stephenson and Bruce Powell, speaking on the Accolee Creek Site and Colonial Archeology, respectively.

Monthly Newsletters have been issued during the year, including a report on the Hargett-King Rock Shelter.

Three field projects have been conducted during the year.

MASSACHUSETTS—Maurice Robbins reported that the Massachusetts Archaeological Society, Inc., has a total membership of as of October 1, 1965, or as of October 5, 1965, (60 of whom are entitled to receive the publications of the Society). These are organized into twelve local chapters which meet regularly during the winter season and carry on field work in the summer season.

The Winter Meeting of the Society was held on April 10, 1965, at the Hyannis Motor Inn, Hyannis. The evening speaker was Dr. Joseph Hartshorn, Acting Director of the U.S.G.S. for the New England Area, who delivered an excellent lecture on the geology of Cape Cod. The twenty-seventh Annual Meeting of the Society was held on October 23, 1965, at the Providence Holiday Inn in South Attleboro. Dr. J. F. Deetz of the University of California at Santa Barbara gave a talk entitled "The Grave Stones of New England." This paper concerned his work with the colonial gravestones of the area.

Four regular numbers of the Bulletin (Vol. 26) were issued during the year, together with two Newsletters.

The Chapter is continuing its work at the Wapamuken #8 site in Middleborough, at which a Paleo-Indian and an Archaic complex are present. The Shawkemo Chapter is doing field work on the island of Nantucket, the Cape Cod Chapter at a site near Orleans, and the newly formed Wamassoogok Chapter is excavating a colonial site near Abbington.

The Bronson Museum which is operated by the Society has been open to the public throughout the winter and the attendance has been very good. Sunday school classes at the Museum will start in November to run through March.

MICHIGAN—Leonard Griffin reported that the Michigan Archaeological Society, as of November 1, has a membership of 536, an increase of 243 since April. We now have eight local chapters, an increase of four since April. Four other chapters are now in the formative stage.

Two regular meetings are held during the year. At the Annual Meeting on April 4, 1965, at Michigan State University, the following papers were presented: "Newaygo County Prehistory," by Earl Frah, University of Michigan; "Notes on the Valley Sweet Site, Saginaw County," by David Brose, University of Michigan; "Excavations at Dothan, Jordan," by Dr. Bastian Vandenbergen, Calvin College, Grand Rapids; "Trade Beads—Prehistoric & Historic," by Dr. Ruth Herrick; "Collections from Tabun at the University of Michigan," by Gary R. Sprague, University of Michigan.

At the Fall Workshop, held at Niles on September 26, Wilbur Cunningham, Harvey Franz, and Amos Green spoke on "A Framework of Local History," John Mathay, of Michigan State University, on "Early Weapons and Firearms," George Davis, of Grand Rapids, on "Archaeological Photography," and David Brose, University of Michigan, on "Late 18th and Early 19th Century Crochery and Tableware.

The Michigan Archeological Society now maintains two publications, the Michigan Archaeologist and the Michigan Archaeological Society Newsletter. The Michigan Archaeologist, edited by Dr. James Fitting, of the University of Michigan, has a new 6 x 9 format and, this year, will publish twice as many pages as last.

The Michigan Archaeological Society has recently purchased the Sanilac Petroglyphs, Michigan's only known prehistoric rock carvings. It is now preparing to erect a suitable structure over them and to make them available for public viewing.

NEW HAMPSHIRE—Howard R. Sargent reported that the New Hampshire Archaeological Society has a membership of 207, which represents an over-all increase of 34 members.


The annual meeting was held at the Litchfield site on May 16th. After a visual study of excavation procedures the members discussed "The Celts-Minoans Complex in the Merrimack Basin."

The South Shore Chapter, under the direction of Professor J. Frederick Burtt, Editor of the New Hampshire Archaeologist and Past President of the Society, was named the second recipient of the Chester B. Price Memorial Award for outstanding service to the Society and the appointment of a state archeologist. A committee has been chosen to work on the proposal.

The educational work of the Society has been expanded by supplying information to thousands of school children by way of a television station WENH-TV in Durham, and by many personal appearances of members before school classes. The program "New Hampshire History," appearing on WENH-TV as part of an elementary school program, featured our President, Mr. Colby. In discussion of prehistoric artifacts, and a short sequence filmed during the summer field season at the Department of Anthropology, Nathaniel Hawthorne College, showing field methods.

The publicity program of the Society has been expanded by lectures to civic groups, by state-wide coverage in newspapers, and through a series of displays at the State House Visitors’ Center. Artifacts from the Contoocook and Merrimack Valleys were arranged by the publicity committee.

The Society hopes to sponsor a bill in the State Legislature for the establishment of a state archeologist. A committee has been chosen to work on the proposal.

NEW JERSEY—Herbert C. Kraft reported for Mrs. Herbert L. Taylor that the Archeological Society of New Jersey has a current membership of 406 individuals and institutions. Three chapters are also affiliated with the Society.

Four meetings were scheduled during the year. The January meeting was, however, cancelled. The important outing was held at the Princeton Inn, and Hunter Ross, Franklin Folsom, Dr. J. Alden Mason, and Mrs. Merritt L. Budd talked about their travels and archeological experiences in such far-flung places as Russia, Egypt, England, and South America. The March meeting, held at the Nassau Inn in Princeton, was highlighted by a music-and-dance illustrated lecture by Jack Preston, entitled "Historical Depth in Igroqua Music." The October meeting was presented in the newly opened State Museum at Trenton. A tour of the open galleries and halls was arranged and a planetarium show was presented for the membership. The film "The Hunters," concerning itself with primitive human life in the Kalahari region of South Africa, was also shown.

NEWSLETTERS Nos. 70-73 were issued.

Field excavations were continued at the Tocks Island Reservoir area along the Delaware River in Warren and Sussex counties. This work was supported by funds from the New Jersey State Museum, the National Park Service, and the Archeological Society of New Jersey. During the 12 weeks in which the field work was carried out, three sites were extensively tested and twelve sites were surveyed with a few test pits each. Additional surveys were carried out in historic sites. These included a survey of forts and block-houses, colonial dwellings, and cemeteries and roads threatened by inundation from the proposed dam and National Recreation Park. The colonial copper mine at Fahanqua was also surveyed, recorded, and photographed.
The Society held one "open dig" day at one of the Tock Island sites and about 75 of its members availed themselves of this opportunity to learn and contribute. The New Jersey Museum of Science, now located in its new facility, has instituted a full-time Assistant Curator of Archeology. The archeological wing of the new Museum is not yet completed for public visitation, but the Junior Museum has many fine exhibits devoted to prehistoric and contemporary work with blown-up photographs of burials and artifactual material.

Chapters of the Society conducted individual programs with monthly meetings throughout the year. Some also conducted "digs." The Lehigh Valley Chapter No. 11, with headquarters at Allentown, again participated in the Annual Meeting and symposium of the New Jersey Academy of Science. The meeting was held at Rider College. The morning session was devoted to a Symposium on Oceanography and included Undersea Archeology. The afternoon session, chaired by Herbert C. Kraf, was devoted to prehistoric and historic archeology and included the following papers: "The Rediscovery of a New Jersey Colonial Road, Using Archival and Archeological Evidence," by Stanley Patton; "The Bloomingdale and Charlotteburg Ironworks: Historic Archeology in North Jersey," by Edward J. Lenik; "The "Teshoa,' a Frequently Unrecognized Local Indian Knife and Scraper," by Herbert C. Kraf; and "The Frequency Distribution Curve as a Tool for Projectile Point Analysis," by Ralph E. de Vries.

New York—Louis A. Brennan reported that the Annual Meeting of the New York State Archeological Association, the state organization of the Society's official, held last November under the auspices of the Frederick M. Houghton Chapter on April 24 and 25. After the business session and election of officers the following program was read: "A Cultural Sequence and Chronology, with Archaeological Illustrations," by Martha Vinka pads; "Stride of Niagara Frontier Archeology: Regional Differences," by Dr. Marian E. White; "Burial Practices in a Prehistoric Cemetery Located in Fort Erie, Ontario, Canada," by Joseph Gronier; "The Weller Site," by Stanley Vanspanck; "Dyer's Lake," by Richard L. McCarthy; "An Early Woodland Site in Guyserville, New York," by Charles Wray; "Meaningful Amateur Archeology," by Kurt Brown; "New Data on the Hudson Valley Archeologist," by Robert Funte; "The Hudson Valley Archeologist in the Light of the Sylvan Lake and Hanotak Rock Shelter Excavations," by Louis A. Brennan. Speaker at the banquet was Louis Binford on the subject "Recent Field Work in Illinois." The April 23 program consisted of a field trip to the flint mines of Dyer's Lake under the guidance of Richard L. McCarthy.

The Bulletin, the Association's official publication, appeared three times with a total of 80 pages, about 90 per cent of which consisted of archeological reports.

The Chenango Chapter continues to publish its bimonthly Bulletin devoted to monographs in archeology, and the Lewis Henry Morgan Chapter has expanded and revised its bimonthly Newsletter for publication of mainly archeological matter.

The Archaeological Society of New York was the October issue of State Archeologist William A. Ritchie's "The Archeology of New York State," a 342-page volume published by the American Museum of Natural History. This major work presents a synthesis of New York prehistory from Paleo-Hunter to late Woodland, dating approximately A.D. 1450. The Lenape Chapter No. 12, Milford, continued work on 36 Pi 14, the Zimmermann site, and also reported on the Cussewago River site with their excavations. After the site, which was located on the property of Dr. E. E. Emery, has been working on the Griswold site, and pottery types indicate a strong Iroquoian influence from traditions stemming from the south. The North-Central Chapter No. 5, Williamspire, always active in all archeological work, has been excavating Antes Fort with hopes of rebuilding the dwelling. Because it also celebrated its tenth anniversary, this group ran a series of articles on archeology in the local papers, and exhibited articles in stores window about town. Besides site excavations by members of the Lower Susquehanna Chapter No. 9, New York, in which three fluted points were excavated on an Archaic site, a fluted spearpoint of chalcedony is a most recent find. The Frances Dorrance Chapter No. 11, Wilkes-Barre, reported on their salvage work with three elk antler human effigies turning up. Pottery recovered belongs to the Wyoming Complex in the Late Woodland, dating approximately A.D. 1450. The Lenape Chapter No. 12, Milford, continued work on 36 Pi 14, the Zimmermann site, and also reported on the Cussewago River site with their excavations at the site of Cussewago Town, an historic Indian village. The archaeologist of the Delaware Chapter No. 14, Easton, continued work on the "Key Delaware Site" (36 Bu 5), the Overpeck site, and also reported on the site of the "Shelter Road" site of the Delaware. The third work of any kind, such as the ship to 758 during 1964-65, with several more bolas of sandstone recovered, making a total of 17, of which 3 are of hematite. Twenty sherds of a sandstone bowl have been recovered to date. Thallium at a depth of fifty inches. Work on this site began in 1959 and continues throughout the winter months. Salvage work is still being done on the lower Shippingsport site (36 Bu 4). The bones of the rice rat and the prairie mole are excavated on this site. The work of the historical Society No. 18, Warren, has been very active with excavation in the Kinzua Valley with some important artifacts turned up, especially in the pottery line. Of more than forty rock shelters located, twenty are being excavated by the members. Salvage work continues in this area before the completion of the dam. A lot of work is to be done in so little time.

Tennessee—Alfred K. Guth reported for LeBaron W. Pahlmeyer that the Tennessee Archaeological Society increased its total membership to 736 during 1964-65. Of these 184 are new members. The losses
of 140 previous members was due to the death of 3, and 146 who did not pay their dues.

The Annual Meeting was held October 1-3 at Murfreesboro, Tennessee. Meetings were held in the Display Room of the Jackson Motel and in the auditorium of the Middle Tennessee Electric Co-operative Building. Speakers and topics were as follows: "Archaeology in Nickajack Reservoir," by Carey B. Oakley, Jr., University of Tennessee student; "Preservation of Archaeological Sites," by Fred C. Bohannon, Archaeologist, Natchez Trace Parkway, National Park Service; "Buffalo River Survey," by Chip Miller, Shawnee County Chapter; "Ceramics," by Charles H. Faulkner, University of Tennessee; "Excavations of Sand Mountain, North Alabama," by Sarah Helen Teal, University of Alabama; "Pitted Stones and Their Probable Uses," by Capt. Paul W. Hughes, Rutherford County Chapter; "Old Stone Fort Manchester," by Carey Waldrip, Coffee-Franklin County Chapter; "Archaeological Wanderings," by Dr. Don Eyler, Nashville; "Study Collections," by Dr. Charles H. McNutt, Memphis State University; "Moccasin Bend," by Dr. Alfred K. Gates, University of Tennessee. Captain Hughes presided during the Saturday morning session, Dr. Morris Frank, President of the Rutherford County Chapter, during the afternoon session.

The Annual Banquet was held at the Stones River Country Club. Leroy J. Camp, President, Tennessee Archaeological Society, presided. Lewis Larson, Georgia State College, was the guest speaker. He discussed his recent work at the Etowah site, near Cartersville, Georgia. The Board of Directors met on the morning following the adjournment of the Annual Meeting a tour of the Old Stone Fort, near Manchester, was conducted by Carey Waldrip.

Publications issued during the past year were The Tennessee Archaeological Society Bulletin, No. 2, August 1964, and Vol. XXI, No. I, Spring, 1965. Three issues of the Newsletter were also distributed.

The Tennessee Archaeological Society sponsored no field program during 1965. However, individual members have carried on excavations and site surveys.

VIRGINIA—Howard A. MacCord reported that the Archeological Society of Virginia has increased its membership from last year's 726 to a new high of 965. Nine new chapters have been organized, bringing the total to fourteen. Forty-three members reside outside the state, and forty-five institutions subscribe to the Society's publications. The valuable scientific contributions made by Mr. Charles Edgar Gilliam of Petersburg through the years were recognized by the Society, which conferred an Honorary Membership on him.

The Society met only once during the year; this was the Annual Dinner Meeting, held in Richmond on October 9, 1965. The meeting included an afternoon of presented papers, a dinner, and a fine talk by John Whithoff on his work at "The Sheep Rock Shelter." Since 1965 is the Society's twenty-fifth year, special recognition of this fact was made at the Annual Dinner Meeting. Also, at the meeting, officers for 1966 were elected. Local chapters usually meet monthly and each conducted its own series of programs.

Four issues of the Quarterly Bulletin were sent to members and subscribers. A total of one hundred and sixteen pages were in the four issues.

Eleven excavations were planned and carried out, or are still in progress. These were (by chapter area): Northern Shenandoah Chapter—The Miley Site, Shenandoah County, Va., Northern Virginia Chapter—The Jeffrey Village Site, Loudoun County, Va., Nottoway Chapter—The Kello Site, Southampton County, Va., The Tawney Site, Gates County, N.C., Patrick Henry Chapter—The Belmont Site, Henry County, Va., Peninsula Chapter—The Walker Dam Site, New Kent County, Va., Southern Shenandoah Chapter—The East Mound, Augusta County, Va., Weyanoke Chapter—The Brookside Landing Site, Campbell County, Va., The Red Hill Site, Charlotte County, Va., Society members in Giles County, Va. (no chapter nearby)—The Lehrich Site, Giles County, Va., Society as a whole, in conjunction with the Virginia State Library and the Union Bag-Camp Paper Corporation—The Hand Site, Southampton County, Va.

Four of the above excavations were of a salvage nature, and the remaining seven were sampling-type, except the Hand site, which was an extension of a project involving a larger grant to hire supervised volunteers. These projects were also carried out by volunteer workers from the Society. The site reports on the above work are in varying stages of completion, and all will ultimately be published.

The site survey work continued in all parts of the state. A two-week-long survey was made by the River Basin Surveys of the Smithsonian Institution in the valley to be flooded by a power dam across New River, just north of the North Carolina line. A one-day survey was made of a portion of the Jackson River in Bath County, Va., where a dam is being planned. Dr. Don Dragoec continued test excavations at the Moyneysk site in New Kent County.

Special projects for the year include preparation of an Index of Volumes 11 through the Quarterly Bulletin; operation of an exhibition in the nine-day-long State Fair in Richmond; work on a Bibliography of Virginia Indian and archeology, continuing the work begun by Roy G. Pierce in the late 1940's and early 1950's; and calling and conducting a regional conference on Underwater Archeology at the Mariners' Museum at Newport News on October 16, 1965.

A field program for 1966 will continue in the pattern set in 1965 and preceding years.

WEST VIRGINIA—Edward V. McMichael reported that the West Virginia Archeological Society, Inc., now has a membership of 207.

Chapters generally meet monthly, while the State organization held one Annual Meeting, this year in Charleston, West Virginia, in the State Capitol Building House Chamber, on October 2nd. Speakers included treatment of the State President, Dr. Paul H. Price, State Geologist, and by former Governor Homer Holt. Bettye J. Broyles then presented "Excavations at the St. Albans Site," Howard A. MacCord, State Archaeologist of Virginia, was guest speaker and he discussed "Current Archeological Research in Virginia," Dr. Charles F. Harper, Chairman of the West Virginia Historic Commission, spoke on "Historic Markers at Archeological Sites," and Dr. Edward V. McMichael, State Archeologist, reported on "1965 Excavations at the Buffalo Indian Village Site." In addition, reports were made by the three active chapters, Kanawha, Wheeling Area, and Monongahela Valley.

One issue of the West Virginia Archeologist, No. 17, was issued, and one publication and a reprint by the State Archeologist were distributed to society members; also two issues of Archeology Newsletters and two Society Newsletters were issued (Vol. VIII, Nos. 1-4).

Field work has been conducted by McMichael and Broyles and is reported in absolute elsewhere in this Bulletin. Oscar Mairs and Hills Yone conducted an archeological survey in the East Lynn Reservoir, Wayne County, under the auspices of the West Virginia Geological Survey, for the National Park Service. No sites meriting excavation were found. The Kanawha Chapter has helped to salvage a small Middle Woodland mound near Charleston, under the supervision of Oscar Mairs; they have also greatly aided Broyles in her excavation at St. Albans, as well as run surveys of the Kanawha River banks for additional deep stratified sites. The Wheeling Area Chapter continues to process and analyze material from the Fairchance mound near Moundsville and has helped with exhibits in the Society Museum at Grave Creek Mound. Also through a grant from the Mount Museum of $250, the animal bones from the Fairchance mound are now being analyzed by John Guilday who already reports presence of the rice rat at this c. 400 A.D. burial mound, the earliest such occurrence in the Upper Ohio Valley.

The Monongahela Valley Chapter, centering in Morgantown, was just newly organized this year and has already met monthly and taken one field trip to sites in the Morgantown area.

A special continuing project of the Society is a radiocarbon dating program, and five dates have been secured this year from Yale University. These are: V-1537, Fairchance Mound, Hopewellian, 1530 ± 80 B.P.; Y-1538, 8930 ± 160 B.P. Kirk Level, St. Albans Site; Y-1539, 8250 ± 100 B.P. Lecroy Level, St. Albans Site; Y-1540, 8160 ± 100 B.P. "Kanawha" level, St. Albans Site; Y-1541, 1170 ± 60 B.P. 46-Pa-3, an Adena Mound. Of these all are very satisfactory save the Adena date which seems too late; however, the St. Albans dates are beautifully in sequence and provide the first carbon dates for these Early Archaic types.

The Society continues to run the Mount Museum, Moundsville, but now without the services of a person "trustee," which were withdrawn earlier this year; thus there may be greater expense in running the Museum, but the lessening of certain problems probably compensates.

To date the Mound Museum has paid for all Society publications.

ABSTRACTS OF THE PAPERS DELIVERED AT THE MEETING

POST-PLEISTOCENE CHANGES IN THE NORTHEASTERN COASTLINE

By Bert Salwen

The growing interest of American archaeologists in the general processes of cultural dynamics has, of necessity, brought with it an increased interest in the ecological dimension—in the relationships
between archeological cultures and their environmental settings. It has, therefore, become increasingly important to know as accurately as possible what the natural surroundings of specific sites were like at the time of occupation. In many cases these surroundings have been greatly modified in the years between occupation and excavation.

When the sites under consideration are situated in coastal areas, one of the most potent factors in overall environmental change is change in the position and configuration of the local shoreline. And shoreline change is, in turn, largely due to change in relative sea level—vertical movement of the surface of the sea measured with respect to adjacent land surfaces. This paper summarizes, for the archeologist, some recent geological findings about post-Pleistocene changes in relative sea level along the northeastern coast of North America.

The data presented come mainly from studies made at seven localities in New Jersey (Stuiver and Daddario 1963), New York (Newman and Fairbridge 1962), Connecticut (Blohm and Stuiver 1963), Cape Cod, Massachusetts (Redfield and Rubin 1962), Plum Island, Massachusetts (McIntyre and Morgan 1962), Maine (Blohm 1960), and Nova Scotia (Harrison and Lyon 1963). A recent study from Virginia (Newman and Rusnak 1965) may be due, at least in part, to discrepancies in sampling techniques, or treated separately.

These studies differed from each other in procedural detail, but all used the same basic technique—the radiocarbon determination of the age of organic specimens (plant or animal remains) or wood samples, recovered from known depths, which lived at or near the surface of the sea. The resulting curves also differ somewhat from each other in position and slope, but every one of them indicates that the relative sea level in the northeastern area is now rising, and has been doing so for some time. Most, if not all, of the coastline from New Jersey to Maine appears to have undergone rapid submergence from at least 6,000 years ago (from as much as 12,000 years ago in the southern part of the region) to about 2,000 years ago, and has been maintained at a reduced rate from that time until the present. We still face problems, of course. The differences in the data from the different localities may be due, at least in part, to discrepancies in sampling techniques, or may represent real differences in local conditions (for example, differential warping of the coastal crust). In the first case, it might be possible, by combining all of the available information, to construct a single "best" curve for archeological purposes that would be valid for the entire coast from New Jersey to Massachusetts or even further north. In the second, each locality under consideration should be treated separately. Until more data are available, this latter course is undoubtedly the safest; the specific geological data from each small locality should be applied to that locality only.

But, most significantly, we now have available for the first time information that should make it possible to reconstruct prehistoric coastlines with a useful degree of accuracy, along more than 1,000 miles of New York interior coast, over a time range extending almost from the end of the Pleistocene to the present.

With the full realization that these curves are still in the process of development, and that modifications must be expected, we can proceed to use them cautiously when considering problems of cultural dynamics at coastal archeological sites.


THE SCACCIA SITE: AN EARLY WOODLAND HABITATION COMPONENT IN WESTERN NEW YORK

By Robert E. Funk

The Scaccia site is located on the western edge of the Genesee River flood plain near Cuylerville, New York. The site, discovered by members of the Morgan Chapter, New York State Archeological Association, was turned over by them to the State Museum in July, 1965. Excavations under the writer's direction uncovered 53 features, primarily hearths and refuse-filled pits, in addition to those found by the Morgan Chapter. A possible house pattern, squarish with rounded ends, and about 16 feet on a site, was recorded.

The site yielded considerable amounts of Vinette I pottery, plus other Early Woodland elements such as Meadowood points, side-notched drills, Adena points, birdstones, and a blocked-end tube. Remains of Archaic occupation were also evident.

Materials from the site are currently under study. Traits of both Meadowood and Middlesex cultures are present though not definitely in association. This situation duplicates that at the nearby Cuylerville site. Meadowood is primarily a western and central New York culture, whereas Middlesex is largely confined to eastern New York. It is possible, then, that contacts between the two cultures are manifested at the Cuylerville and Scaccia stations.

THE TACONIC TRADITION

By Louis A. Brennan

On most sites in the Croton River mouth area of the lower Hudson Valley there is found a series of intergrading stemmed, usually narrow-bladed points ranging in descriptive type from Lamokoid through Bare Island to full form.

Because of the occurrence of the series under archeological circumstances that indicate cultural continuity, because the styles formally intergrade and because the series begins with a Lamokoid type for which the date now accepted by Ritchie is 4500 B.P., and ends with a full form style, dated at 3000 B.P., it is regarded as a point-making tradition evolving conservatively through time. The name given this series is the Taconic Tradition and by numbers and widespread provenience it seems to have been the dominant tradition in this area from Middle through Late Archaic and into Transitional times when it disappears, as projectile-point form evolves out of the basic convention.

Though the Taconic Tradition is poised for this area, only similar stemmed points have been common in collections from Maryland to Massachusetts, through Pennsylvania and into upper New York State. The tradition is evidently of regional importance as a co-tradition of the Laurentian broad notched-blade technology of projectile-point production.

MINIATURE HUMAN EFFIGY HEADS IN VIRGINIA

By Howard A. MacCord

Representations of humans and animals in various materials have been found in many parts of the world. These may be art forms, or they may have had magico-religious meaning. Human heads carved of stone or modelled from clay have been found in Virginia. None of these is over one and one-half inches high, and most are spherical, with a drilled perforation from top of head to neck. Eyes are usually round, and the nose usually long, relative to the face. The mouth is usually shown by distinct lips carved in relief. One has a face on the back of the head, as well as on the front.

Seven stone heads, all carved from soft stone such as soapstone, are surface finds from Virginia. None of these is over one and one-half inches high, and most are spherical, with a drilled perforation from top of head to neck. Eyes are usually round, and the nose usually long, relative to the face. The mouth is usually shown by distinct lips carved in relief. One has a face on the back of the head, as well as on the front.

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A stratified Woodland site at the head of Piscataway Bay in Prince George's County, Maryland (17 Pr 5), was discovered in November, 1964. Excavation of the site has continued since that date and has been stimulated by construction activities in the general area. Fortunately, the site has not been disturbed yet, but the pressure of land development has dictated prompt exploration.

The site is in a region where many other sites are known, the most important of which is the Accokeek Creek site which was reported on by Dr. Robert L. Stephenson in 1963. The importance of the Piscataway site is its undisturbed and stratified character. Excavation to date indicates up to 30 inches of stratified deposits in an undisturbed state except for superficial agricultural disturbance in Colonial times. The site has been forested for at least 100 years. This situation has probably contributed to its preservation.

Excavations to date reveal a range of artifacts covering the entire Woodland period overlying what appears to be a limited deposit of pre-pottery-age materials. Most significant findings to date concern the pottery. Potomac Creek and Mayowne wares occur in the upper level of the site. In addition, a shell-tempered, fabric-impressed ware, possibly Rappahannock, has also been found. The dominant pottery at the site is Mockley ware (described by Stephenson) which occurs at the intermediate levels. Popes Creek ware occurs next in sequence below the Mockley ware, and it occurs both above and below the Popes Creek ware. A few sherds of Marcey Creek ware, a steatite-tempered pottery, occurred at the lowest levels. A number of projectile points and a grooved ax, as well as miscellaneous bone and stone artifacts, have been found along with the pottery. These have not been sufficient in number yet to justify tentative conclusions.

The most significant finding to date at the site is the apparent older age of the Accokeek Creek relation to the Popes Creek ware. This is at variance with the usually accepted relationship.

THE CHANGING ROLE OF THE AMATEUR IN MICHIGAN ARCHEOLOGY
By Leonard Griffin

In Michigan, as no doubt in many other states, the role of the amateur archeologist is undergoing rapid change. This development is of such consequence and so widespread as to deserve attention and consideration.

From the time of Thomas Jefferson, our country has always had its pioneers who, although amateurs, have contributed greatly to our knowledge of American archeology. In the 19th century, men such as Bella Hubbard, Henry Gillman, Henry Schoolcraft, and Wright L. Colburn, left records of great value to Michigan. Harry L. Smith and Wilbert B. Hinsdale paved the way for professional archeology in our state.

In the early 20th century, such well-read and highly astute amateurs as Fred Dustin, Willard Cunningham, George Fox, Amos Green, and Harvey Franz, carried on this pioneering work. In more recent years, Jerry DeVisscher, Edward Gillis, George Davis, Dr. Ruth Herrick, Harold Roll, and Edwin Cornelius, to name only a few, have continued to contribute extensively to Michigan archeology.

In spite of this enviable roster, the great majority of those interested in the prehistoric Indian in Michigan remained basically relic collectors with insufficient regard for the significance of the artificial material which came into their possession. This attitude brought the professional to view the amateur with some suspicion.

However, within the past few years, the image of the amateur has been undergoing striking changes. The exception is fast becoming the rule. This has been brought about by the basic character of today's amateur, by his taking advantage of increased educational opportunities and available literature in the field, and by a unique training program which has been instituted by the Michigan Archaeological Society.

The average amateur in Michigan today, is becoming a trained excavator familiar with scientific methods to the extent that the professional is beginning to rely on him, not only for site discovery, but for actual assistance in professional projects in the field. During the summer of 1965, several amateurs, both in the Lower and Upper Peninsulas of Michigan, including work on what may possibly prove to be Michigan's first mastodon "kill" site. More and more amateurs have a proficiency which allows them to undertake independent work and to interpret and publish the results. This is being reflected in our journal, the Michigan Archaeologist.

This new attitude is being reflected in the strength and activity of our state society. Between April and October of 1965, the membership of the Michigan Archaeological Society rose from 286 to over 450 and its local chapters have doubled in number, with others in the formative state. The Society is now involved in the largest project of its existence. It is moving toward national preservation, and optimum public display of Michigan's only known petroglyphs.

We hope and trust that this new attitude, strength, and enthusiasm is also being developed throughout the rest of our United States.

THE ARCHEOLOGY EXPLOSION IN MICHIGAN
By James E. Fitting

During the past decade there has been a tremendous increase in archeological activity in Michigan. In 1952, Quimby's synthesis of Upper Great Lakes Prehistory in Archaeology of Eastern United States contained only 13 citations to Michigan publications. At that time there were only 10 sites in Michigan, excavated in the 20th century, with even perfunctory reports.

Archaeological knowledge has increased in the past decade with the receipt of financial support of numerous organizations. The chronological framework of Michigan prehistory has been filled out by dozens of radiocarbon dates on sites in the state.

Where there were two reports on Late Archaic materials we now have distributional studies by Mason, Quimby, Peske, Fitting, and Peru. We have a number of reported sites such as Barnes and Hi-lo. The Holcombe Beach Ridge has furnished a series of five dates within a mile with extensive chippage and identical artifact assemblages for a synchro-nous study of the peoples of 9,000 B.C. in southeastern Michigan.

In 1952 there were no known Archaic sites in Michigan. Since then we have excavated the Kimmel, Kolanoff, and Andrews sites, to be included in Mark Papworth's Ph.D. dissertation; the Kimmel, Hodges, Pomranky, and Eastport sites with reports by Binford and Papworth, and the Strobel and Fethersley sites, which will form the basis of Taggart's Ph.D. dissertation. There are numerous reports of additional sites such as the Conrado, Daimondale, St. Joseph's River Bluff, and Ueck caches. Shorter reports have appeared on the West, Hunt, and Stone School sites, and longer manuscripts are ready for publication on the Schmidt site and the Warner School site.

We have an excellent extensive Early Woodland site at the Schultz site and smaller Early Woodland concentrations at close to a dozen other sites in Michigan. Marion Thick Pottery has been found in a stratigraphic context at the Norton Mounds and the Spoonville Village site.

Perhaps our greatest progress has been in Middle Woodland studies with two years of excavation at the Norton Mounds and four years of excavation at the Schultz Village site and mounds. Middle Woodland materials have been excavated and reports are being prepared from Berrien County, Newaygo County, and several smaller sites in Saginaw County. In northern Michigan, Lake Forest Middle Woodland has been found on Isle Royale; Naamkating Point, Bois Blanc Island, the Eckdahl-Goudreau site, Summer Island, and the Goodwin-Gresham site.

Late Woodland sites include the Riviere an Vase, Verchave, and Pulley sites in southeastern Michigan, Moccasin Bluff in southwest Michigan, Gilead Lake in Branch County, Spring Creek in Oceana County, Lake Schultz, Mahoney, Bussinger, and Valley Sweet in Saginaw County, and Butterfield in Bay County. Earthworks have been excavated in Missaukee and Alcona counties. Late Woodland mounds have been dug in Wexford, Newaygo, and Oceana counties. Around the Straits of Mackinac we have two years of excavation at the Juntenen site, with shorter time periods at the Eisen site and Scott Point. The upper level at Eckdahl-Goudreau is Late Woodland, and Upper Mississippian materials have been found on Summer Island and at the Backlund site.

Historic sites archeology has not been neglected with work at the Ada site, Fort Drummond, Port Charlot Island, and Fort Leanoold. Many smaller historic farm sites have been excavated and reported.

We have progressed in special studies such as that of plant utilization by Mattell, Ames, and Whitehead and in physical anthropology by Eyman, Betard, and Wilkinson. Food has been published on the use of resistivity surveying and Brose on infra-red photography. A monograph is in press on relative dating by level of natural radioactivity, and we are pursuing studies of the potential of neutron activation.

This is only the starting point. The study of Michigan prehistory is on the move and the only direction we can go is forward.
EXCAVATIONS AT THE ST. ALBANS ARCHAIC SITE, 1964-1966

By BETTY J. BROYLES

The St. Albans site was discovered in the spring of 1963 when a large section of the Kanawha River bank about 7 miles west of Charleston, West Virginia, slumped away, exposing occupation sites containing red burned earth and charcoal. Many chips and projectile points were picked up along the edge of the water, and a few were dug out of the occupation zone exposed in the bank. Several of the points were identified as Kirk Corner-Notched, estimated by Joffre Coe to be 7,000-8,000 years old (Coe 1964-70).

The nature of the deposits and the antiquity of the artifacts prompted the use of the core drilling rig belonging to the West Virginia Geological Survey. Six core samples were taken, revealing stratified layers of burned earth and charcoal to a depth of 37 feet below the present surface—the original surface was six feet higher, but was removed for the construction of US 60. (See Price, Hunter, and McMichael, 1964:219-222, for details of the core drilling."

Excavation was begun in 1964 in an area 35 by 15 feet situated about 7,000-8,000 years ago (Coe 1964-70). LeCroy points have been found throughout the eastern states, but this is the first instance where they have been uncovered in a stratified site in a zone containing nothing but LeCroy points.

In the 5 to 8 foot levels, 3 zones (11, 12, and 14) containing the second unnamed type were encountered. The name St. Albans has been given to this small thick side-notched point. The points from Zone 14 are larger than those from Zones 11 and 12, and may be a transitional type between Kirk and St. Albans. No date has been received for these zones, but they should date about 8500 years ago or 6500 B.C.

Between 8 and 10.5 feet below the surface, three distinct zones (16, 18, and 20) were located, each separated by a thin sand layer. All three zones contained Kirk Corner-Notched points, the only people being that those from Zone 20 are only about half the size of those from Zones 16 and 18. A radiocarbon date of 8930 years B.C. ± 100 years was obtained from a hearth in Zone 20. Artifacts were scarce in the levels below the Kirk Zones, but hearths, chips, and a few artifacts were found in 8 of them (Zones 24, 26, 28, 30, 34, 36, 38 and 40), indicating occupation. The concentration of occupation for these zones seems to be up river, therefore the 1966 excavation will be conducted in this area.

The artifacts from Zone 24 included a well-made blade, a uniface scraper, and the blade portion of a serrated-edged projectile point. The only artifact from Zone 20 was a crude uniface scraper, and from Zone 34 a small pink chert uniface scraper.

Three projectile points were found on a terrace in Zone 35 (15.5-16.5 feet). Only future excavation will reveal whether or not there is 8 feet of Kirk Zones and whether or not the side-notched point belongs in a lower level (possibly picked up from an early occupation level in the 1964 Zone 20). One badly broken projectile point was found in Zone 40, but no chips or hearths.

Artifacts other than projectile points were found in all the zones, including scrapers, knives, blades, drills, flint gouging tools or hoes (one each from Kanawha Zone 4, and Kirk Zones 18 and 20) and one flint chip or goug from Zone 36.

After the first of November, a small section (10-15 feet) was taken down to the 29-foot level, about 7 feet below the normal level of the Kanawha River. According to Griffin's Fort Ancient Aspect (1964:20), Site (46-Pu-31) is located midway between Charleston and Point Pleasant in the lower Kanawha Valley. It is on a rolling terrace immediately on the east bank of the river. In Griffin's Fort Ancient Aspect site is briefly mentioned as the Wells Complex, on a former property owner; the land is now owned by a chemical firm and threatened plant construction was the impetus for excavating at this site. The primary components are Fort Ancient, although several other earlier cultures are represented.

Initial excavation methods the first season, 1963, consisted of trenching the main Fort Ancient village in order to outline the village by finding palisade lines; these trenches were usually 20 feet in width. The second season, 1964, trenching continued and evidence was found for part of the site having been eroded away by the river; also a bulldozer was used to tally the site. The only result was an individual house outline and the general village pattern. The last summer, 1965, work was more limited; it consisted of attempting to work out various problems at the site and included the finding of another Fort Ancient village outline which was previously worked, and excavation in a burned Archaeol site.

The plan of the original village consists of an empty central plaza about 250 feet in diameter, surrounded by three rows of houses in the latest stage of occupation, and all enclosed by an oval palisade. Rectangular houses were placed end to end, 3 to 4 feet apart in concentric rows, with the rows being 15 to 20 feet apart. Two house-pattern types occur, a smaller rectangular type with two interior center posts, averaging 18 feet wide and 32 feet long. Small circular fireplaces occur, often rebuilt, and the houses usually have been rebuilt 3 to 5 times, indicating a period of intensity of the village. A larger rectangular house type also was found which averages 25 feet across and 50 feet long, with three 15-inch diameter center posts and a large rectangular fireplace between two of them, and then 6 to 7 secondary center posts midway between the main ones and the side walls. The surrounding palisade was a double line with five feet between the two lines, indicating a village of rebuilding and/or expansion of the village is seen in many different lines of posts in most places where encountered. Sheet midden is very thick along the palisade, and this combined with a depth of refuse pits would indicate that the site was primarily disposed of along the palisade. The overall size of the palisade at maximum extent was 650 feet long, and probably about 450 feet wide—however, one side was eroded away by the Kanawha River.

A second village, probably earlier in time, overlaps the first village described, and is occupied less intense than in the other village. It was 400 feet wide; the length was not determined. Probably only one or two rows of houses occurred in this town.

The only artifact from Zone 14 was a well-made blade, a uniface scraper, and the blade portion of a serrated-edged projectile point. The only artifact from Zone 20 was a crude uniface scraper, and from Zone 34 a small pink chert uniface scraper.

Three projectile points were found on a terrace in Zone 35 (15.5-16.5 feet). Only future excavation will reveal whether or not there is 8 feet of Kirk Zones and whether or not the side-notched point belongs in a lower level (possibly picked up from an early occupation level in the 1964 Zone 20). One badly broken projectile point was found in Zone 40, but no chips or hearths.

Artifacts other than projectile points were found in all the zones, including scrapers, knives, blades, drills, flint gouging tools or hoes (one each from Kanawha Zone 4, and Kirk Zones 18 and 20) and one flint chip or goug from Zone 36.

After the first of November, a small section (10-15 feet) was taken down to the 29-foot level, about 7 feet below the normal level of the Kanawha River. According to Griffin's Fort Ancient Aspect (1964:20), Site (46-Pu-31) is located midway between Charleston and Point Pleasant in the lower Kanawha Valley. It is on a rolling terrace immediately on the east bank of the river. In Griffin's Fort Ancient Aspect site is briefly mentioned as the Wells Complex, on a former property owner; the land is now owned by a chemical firm and threatened plant construction was the impetus for excavating at this site. The primary components are Fort Ancient, although several other earlier cultures are represented.

Initial excavation methods the first season, 1963, consisted of trenching the main Fort Ancient village in order to outline the village by finding palisade lines; these trenches were usually 20 feet in width. The second season, 1964, trenching continued and evidence was found for part of the site having been eroded away by the river; also a bulldozer was used to tally the site. The only result was an individual house outline and the general village pattern. The last summer, 1965, work was more limited; it consisted of attempting to work out various problems at the site and included the finding of another Fort Ancient village outline which was previously worked, and excavation in a burned Archaeol site.

The plan of the original village consists of an empty central plaza about 250 feet in diameter, surrounded by three rows of houses in the latest stage of occupation, and all enclosed by an oval palisade. Rectangular houses were placed end to end, 3 to 4 feet apart in concentric rows, with the rows being 15 to 20 feet apart. Two house-pattern types occur, a smaller rectangular type with two interior center posts, averaging 18 feet wide and 32 feet long. Small circular fireplaces occur, often rebuilt, and the houses usually have been rebuilt 3 to 5 times, indicating a period of intensity of the village. A larger rectangular house type also was found which averages 25 feet across and 50 feet long, with three 15-inch diameter center posts and a large rectangular fireplace between two of them, and then 6 to 7 secondary center posts midway between the main ones and the side walls. The surrounding palisade was a double line with five feet between the two lines, indicating a village of rebuilding and/or expansion of the village is seen in many different lines of posts in most places where encountered. Sheet midden is very thick along the palisade, and this combined with a depth of refuse pits would indicate that the site was primarily disposed of along the palisade. The overall size of the palisade at maximum extent was 650 feet long, and probably about 450 feet wide—however, one side was eroded away by the Kanawha River.

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Artifacts other than projectile points were found in all the zones, including scrapers, knives, blades, drills, flint gouging tools or hoes (one each from Kanawha Zone 4, and Kirk Zones 18 and 20) and one flint chip or goug from Zone 36.
About 500 burials were encountered in the three seasons' work, the vast majority of these having been buried under house floors just inside the side walls; due to the length of occupancy, burial pits saw repeated use, with much disturbance of earlier burials. In the later village the dominant pattern was extended burials generally without grave goods, although child burials would often contain beads and other ornaments. In the earlier village, flexed burials are more common with somewhat more grave offerings. There were frequent indications of bark over the bodies, and rare cases of stone linings in the graves.

Artifacts are very plentiful, with pottery and bone being most frequent. The ceramics are shell tempered, with preliminary analysis showing about 75% cordmarked surface, 25% plain surface in the later village (figures are not yet available for the earlier). Cordmarked jar forms usually have a plain neck zone, and often have 2 to 4 "hourglass" strap handles. Generally the pottery can be included in the Madisonville Cordmarked and Madisonville Plain types. Jars, bowls, and salt-jam forms occur, the latter being quite rare with rough exterior surface. Decoration is rare. Pottery "pestles," figurines of animals and humans, disks, rare pipes, and some sherds occur.

Many bone tools occur, with beakers, turkey leg-bone awls, deer ulna awls, perforated and cut deer toe bones, flutes or whistles, turtle-shell cups being the more common items. Triangular projectile points, tear-drop scrapers, triangular knives, and chipped flints are flint artifacts. Rare copper and brass occur, usually as rolled beads or just fragments. A few objects, like a glass bead along with a bone one, indicates a protohistoric date for the later village. Shell artifacts include mussel-shell hoes, conch-shell gorgets of various forms including weeping-eye masks and the rattlesnake motif, and margarita and olivellina beads. Non-artifactual debris includes tons of animal bone, largely deer, many mussel shells, charred corn cobs, grains, and possible husks, charred nut hulls, and one possible sunflower seed.

Ground stone artifacts are celts, chisels, hammerstones, arrowshaft straighteners, sars of sandstone, pitted stones, and metate-like ground stones. Pipes, while rare, include a "disk-bowl" form, an eagle effigy clutching a human head, and a few other variform types.

The later village probably dates from around 1650, and one possible historical account of 1674 may refer to this village (Gabriel Arthure). This village shows influence of the Southern Cult and the Stone Box grave culture which is lacking in the earlier village. In the earlier village shows some artifact types largely lacking in the later village, such as cane-coal pendants and circular "gamestones." An estimated date for the earlier village would be c. A.D. 1500. Both villages are definitely Fort Ancient, and the later village formed part of the basin of Mayer-Oakes' Clover complex and also shows great resemblance to the "later" Madisonville site material; the earlier village is distinct and it will probably be necessary to erect a new focus for this and the many other Fort Ancient villages like it in central and southern West Virginia.

Other occupations are present at the site and include hints of Middle and Early Woodland in the form of stray corner-notched and stemmed blades, and other decorated components, and may also be assignable to these cultural periods. Also present is a buried Archaic level about 4 feet below the Fort Ancient remains, and sealed off by flood deposits. Two projectile-point types are a corner-notched type and a contracting-stem type, which blend into one another. Many triangular knives and/or blanks were found, along with much flint chippage. A number of hearths were located with ample charcoal for eventual carbon dating. While not definite, this is very likely a Late Archaic horizon of perhaps 3000 B.C.

**TWO INDIAN MOUNDS IN THE SHENANDOAH VALLEY**

*By O. D. VALLIZE*

During late 1964 and early 1965, two similar mounds near Stauton, Virginia, were excavated by the Southern Shenandoah Chapter and other members of the Archeological Society of Virginia. The first, the Lewis Creek Mound, was a classic example of a large mound about 2.5 meters above the present surface. This mound had been extensively disturbed by relic hunters in years past. The mound was completely removed in the current digging, and construction of a highway over the site will further obliterate the mound. The center of the mound has the broad parts of 159 skeletons and numerous artifacts loose in the soil thrown back by the previous diggers. Under the mound and in peripheral areas, 20 undisturbed burials were found. Most burials were secondary, though several flexed, primary burials were encountered. Scattered finds of burned human bones show that some individuals were cremated.

The second, the East Mound, with approximately the same dimensions as the first, had not been extensively disturbed, although several small burials were removed to enable the owner to improve his tillage of the area. One hundred and forty-two undisturbed burials were found, plus a half dozen which had been disturbed by the Indians or by later diggers. Artifacts were not numerous, but those found seem identical to those from the Lewis Creek Mound, except that several stone and clay pipes were found at the East Mound.

Charcoal from each mound has been submitted for radiocarbon dating, and the results will be published in the Quarterly Bulletin of the Archeological Society of Virginia.

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**THE STRATEGY OF ARCHEOLOGY**

*By Irving ROUSE*

There are two parts to archeology: (1) recovery, preservation, description of human remains; and (2) interpretation of the data thus obtained. I shall discuss the two parts in turn. Part 1 includes the techniques of surveying, excavating, and recording sites, and of collecting, restoring, and cataloging artifacts. Archeologists report the results obtained by these techniques in descriptive monographs, addressed to their colleagues, and also display the results in museum exhibits for the benefit of the public. In preparing monographs, it is customary first to describe each site and its features, then to break it down into its successively occupied parts, i.e., its components, and finally to describe the contents of each component separately. If a large number of sites have been excavated, it may be advisable to group the components which have yielded similar artifacts into a class (called a "focus" by some archeologists) and to describe the contents of that class as a unit. The artifacts obtained from each class of component may in turn be grouped into classes and each class described as a unit, so that these artifacts need not be described one by one. In preparing museum exhibits, archeologists usually select typical components and typical artifacts (sometimes called "types") in order better to illustrate each class. Use of the concept of class in these ways not only saves much of the time, effort, and expense required to treat components and artifacts individually, but also it focuses the attention of readers and museum visitors on the essential qualities of the components and artifacts.

Part 2 of archeology, following logically after description of the remains, is a matter of interpretation, i.e., of drawing conclusions from one's descriptive data. This has to be done differently in the case of human prehistoric remains and artifacts. In historical or contemporary remains, the archeologist is able to take advantage of historical records or contemporary literature. He searches these for references to his sites and artifacts, and draws his conclusions from the references, using the remains themselves only to fill gaps in the documentary evidence. If, on the other hand, he is dealing with prehistoric remains, he must draw his conclusions from the remains themselves, using the techniques of paleohistoric rather than historic research. Thus, whereas the interpretation of historic remains is based primarily upon documentary evidence, the interpretation of prehistoric remains has to be based primarily upon the remains themselves. It is for this reason that the prehistoric archeologist has often been compared to a detective, drawing his conclusions from a relatively small number of clues.

Meager though these clues may be, the prehistoric archeologist is able to draw the same kinds of conclusions from them that the historic archeologist obtains from documentary evidence. In effect, the prehistorian asks four basic questions about his remains:
1. Which kind of artifacts were recovered? The answer to this question is drawn from the classes of artifacts established during the first, descriptive part of archeological research. Each class exemplifies a particular type of artifact, which the prehistorian defines in terms of its distinctive attributes. He may also classify the features of his artifacts in order to form types of features, or modes, which are likewise
defined in terms of their distinctive attributes. From each class, the 
prehistorian is further able, by using the procedures of inference and 
analogy, to reconstruct the ways in which its constituent artifacts or 
features were made and used.

2. Who produced the artifacts? For an answer to this question, 
the prehistorian turns to the classes of components established during 
the first part of archeological research. Each class of components is 
indicated by a single group of people, i.e., a number of prehistoric 
communities which can be recognized, reconstructed, and named because 
they have produced characteristic artifacts. The prehistorian defines each group by 
listing the types and modes distinctive of its components; he calls these 
types and modes "determinants," or else a "complex," "industry," or 
"style." He may also classify assemblages of artifacts and other 
materials which he finds within the individual components, such as 
caches and grave furniture, and thereby produce classes of assemblages, 
which are indicative of certain types of activity among the people being 
studied. Applying the procedures of inference and analogy to these 
classes, he is able to learn something about the people's customs and 
social structure. Taken together, a people's determinants, the remainder of its 
types and modes, and its reconstructed components and social 
structure constitute what we often refer to as a "culture" in the 
archeological sense.

3. When and where did the people live? To answer this question, 
the prehistorian proceeds to construct a regional chronology, consisting of 
a number of local areas and periods. The techniques for so doing 
need not be discussed here. Once established, the chronology is used 
to date the components and, through them, the individual components of 
each class of components. Having thus determined the position of each 
people relative to its neighbors, the prehistorian is able to study the 
relationships among them—the existence of trade, warfare, and religious 
interaction, for example.

4. How did the culture of each people develop? Finally, the 
prehistorian is able to study continuities and changes in the cultures 
of peoples. He customarily expresses these continuities and changes in 
terms of the concepts of a series (tradition) and stage. A series consists of a number of cultures, or of individual types of artifacts, 
which have developed one from another, whether through time or space. 
In other words, it is a line of development, exhibiting both continuities 
and changes that have shaped the culture. A stage (also known, confusingly, as a "type") consists of cultures which exhibit 
the same degree, as opposed to direction, of development. The 
prehistorian, then, may group his cultures or artifact types into either 
series or stages of development or both. He may also infer processes, i.e., the ways in which the development took place—accumulation, 
degeneration, evolution, innovation, persistence, etc.

A fifth question frequently occupies the attention of prehistorians: 
Why are the remains the way they are? The answer to this question 
must be based upon the answers to the previous questions, as follows:

1. Which? From his study of types, modes, techniques, and 
functions, the prehistorian should obtain some idea of the technological 
and social factors that have affected the remains. For example, he may find 
that the artisan has had to adapt the shape and decoration of a certain class of 
artifacts to the qualities of the materials at his disposal, and that the artisan's range of 
designs has been limited by his techniques of decoration.

2. Who? Having reconstructed the culture of a people in all its 
aspects, the prehistorian will be in a position to examine the inter-
relationships between various aspects of that culture. He may theorize, 
for example, that inefficient means of subsistence have kept a people's 
art and religion relatively simple—that so much time had to be spent 
in making a living that little time was left for other activities.

3. When and where? The prehistorian should be able to correlate 
his regional chronology with the succession of ecological zones that 
have been worked out by natural historians. He may then study his 
people's adjustments to the zones and to changes in them. For example, he 
may conclude that a people practiced seasonal migration in order to 
take advantage of the food resources available in different zones.

4. How? From technological, social, and ecological factors, the 
prehistorian may finally turn to the specific historical events that may 
have shaped a people's culture. The culture-historical continuities and 
changes he has worked out in order to answer question (4) will provide 
him with a basis for reconstructing events. In effect, he will seek to 
determine which continuities and changes can be attributed to particular 
events. For example, he may explain the contemporaneous occurrence of 
members of the same series in adjacent areas—the phenomenon often 
termed a "horizon"—by postulating a migration of people from one 
area to the others; or he may speculate that a change from one culture 
to another is due to a natural or human catastrophe, such as an 
earthquake or war.
CLAY PIPES FROM LOUISBOURG

By IAIN C. WALKER

Studies of pipe material at Louisbourg by the author have so far covered two areas of the King’s Bastion: Casemate Right One and Casemates Right 13-15.

In Casemate R1 the stratigraphy was divisible into three major deposits (1749-50, 1755-60, and the third to 1760). The material from Casemates R13-15 was datable to 1720-60.

Pipe material from Louisbourg came from two sources, The Netherlands and England. Dutch pipes differ from English pipes of this period in shape, size (Dutch bowls being smaller), in the plane of the bowl not being parallel to the line of the stem, and in the lip of the Dutch bowl having a form of rouletting. Dutch material is usually more delicate and better made than English, frequently having a polished surface.

The Dutch pipe industry was centred on Gouda, and a register of makers marks kept. However, these marks could be bought, traded, etc., so that it is rarely possible to date the marks except by context. However, in 1739-40 Gouda pipe makers were allowed to place the city coat of arms on their products to try to prevent counterfeiting, and shortly afterwards they added the letter S (for the Dutch word for “ordinary”) to pipes that belong to that class, the lowest of their three classes. Thus pipes with the coat of arms (a shield divided vertically in two, with three vertical stars in each half) and/or the letter S are not earlier than 1739-40.

A glass-lined Dutch pipe found at Louisbourg included the crown and the repairs of 6 (with and without the arms and found in 1735-50 and c. 1700-1749/50 contexts), the letters SVO (1750-60), the mermaid (1750-60), the trompeter (1720-32), and a monogram-like design which appears to be the letters W with a C and a reversed C overlaid (1720-32). The letters LV, surmounted by a crown, with what appears to be a flying bird underneath, occurred in a 1720-32 context, and pipes with this mark carried complex stem decoration. Both the Dutch and English used rouletting as a stem decoration, the Dutch edging their bands of decoration with small impressed triangles, the English using lines of conjoined circles. These types of decoration occur throughout the Louisbourg occupation period.

A common English pipe in 1755 and later contexts is that with the letters TD, encircled, on the bowl facing the smoker, and the same letters on either side of the heel. Common amongst the earlier material were pipes made by the Robert Tippet family of Bristol (3 in 1720-32 contexts, 5 in 1749 contexts, and 2 known to us that date to 1700). The only written reference to him is in 1755 and, as a pipe of his has also been found at Louisbourg in an undated context but with a bowl typologically datable to not much before 1800, it is possible that there were in fact two John Stephens, father and son, working.

The letters EC encircled in the side of the bowl (1755-60) appear to represent Evans Cheevers, who commenced work in 1741. A bowl with a lion guardant surmounting a crown flanked by the letters G and R, and with the letters W and M, each crowned, on either side of the heel, came from a 1755-60 context and perhaps is connected with the coronation of George II in 1760, as it appears to be a non-standard variant of the maker who used the initials WM.

Stems with a bitherto unrecorded maker’s name, Reuben Sidney, presumably English, occurred in 1720-32 and c. 1700-49/50 contexts. A stem with the name Carter on its top surface occurred (c. 1700-49/50). The name of the maker, the manner of marking (which is, however, common in NE England) is known in Bristol at this time.

Marks at present unidentified include what appears to be a heart surrounded by a circle of dots (5 examples), and the number 8 on the base of the bowl (both 1755-60). Stems with elaborate decoration (all 1755-60) seem to be from Chester, though the nearest parallels there date to c. 1700-30, while another decorated stem (1720-32) closely resembles pipes made both in Chester at this time, and The Netherlands.

One rare mouthpiece fragment with a red wax coating was also found.

Independent dating by the marks, supplemented by Binford dates gave very accurate dating, as subsequent comparison with archeological
and historical data proved. However, prior to the English occupations
(see previous abstract) the French and English, and this affected Binford dates, making them as much as 15
years too late.

OBSERVATIONS ON THE ARCHAEOLOGY OF THE TOCKS ISLAND RESERVOIR AREA IN PENNSYLVANIA

By W. Fred Kinsey

The present paper and the other Pennsylvania papers by Barry Kent and John Hall are the result of work contracted for by the National Park Service. An archeological survey and salvage of sites was undertaken in the proposed Tocks Island Reservoir which will flood 37 miles of Delaware River Valley extending from Shawnee-on-Delaware in Port Jervis, New York. A National Science Foundation grant enlarged the scope of the program by making funds available to conduct a summer Archeological Training Institute for 12 superior high school students.

In the summer of 1964 forty-nine sites were located in Pike and Monroe counties with relative ease. Test trenches were dug on many of these sites and the amount of cultural material and the number of subsurface structures uncovered was impressive. Evidence of man ranging from Paleo-Indian times to the Historic Period was observed.

In view of the experience gained during the site survey, we expected extensive testing to be extremely productive. However, there was a vast field of cultural material there but it is not very diverse. The area compares with Bell-Philhower in New Jersey and sites of the Mohawk Valley in New York.

Several factors may account for the failure to uncover a significant amount of data. It is possible that the destructive forces of nature, particularly flooding, have destroyed important sites. Possibly we missed the big sites or we failed to expose a large enough area. At present there is no evidence of a large settlement at any of the sites. Houses may have been scattered and occupations do not seem to have been long lasting.

Pits of various sizes and shapes are the most numerous feature on sites along the Upper Delaware Valley but their functions are not well understood. Perhaps the careful recording of contents, size, and profile of many of these perplexing features will eventually lead to a better understanding of their original intended use. These features are similar from site to site.

It is obvious that the Upper Delaware Valley was inhabited over a long span of time but it is likely there were never any concentrations of populations on the Pennsylvania side. Possibly the river valley was subject to seasonal occupation. Indians might have lived in small hamlets and communities in higher elevations and moved on to the bottom land only in the spring of the year. The abundance of net-sinkers attests to an emphasis on fishing activities which could be related to the migration of fish each May and June. Possibly warfare was never an important factor until the trade rivalry of historic times when local communities drew together for mutual defense at the Bell-Philhower site in New Jersey and other historic sites.

More sites will have to be worked and larger areas explored. Once the region is under the waters of the Tocks Island Dam the negative as well as the positive evidence will be gone.

OBSERVATIONS ON THE ARCHAEOLOGY OF THE TOCKS ISLAND RESERVOIR AREA IN NEW JERSEY

By Patricia J. Marchiando

The New Jersey State Museum has been engaged in archeological field work in the Tocks Island Reservoir Area since 1959. The purpose of this work is two-fold: first, to locate sites of aboriginal occupation, and second, to locate sites of historic significance.

This program of archeological and historical survey is sponsored by the National Park Service, Department of the Interior, the New Jersey State Museum, Division of the Department of Education, and the Archaeological Society of New Jersey. These sponsors have made possible the project which has completed its seventh year of field excavations and laboratory study. Ronald Mason began the survey in 1958 and excavated at the Campen site; Charles Ward surveyed the area from 1961 to 1963; and finally myself in 1965.

Forty-one Indian sites have been located in the Tocks Island area, 10 sites have been extensively test excavated, 12 have been test pitted, and 19 have been surface visited. These sites represent occupation from the Early Hunter period to the Protohistoric period. The Early Hunter material, consisting of fluted points, has not been found in association with any other Early Hunter material. Seven cultural phases are represented in the Tocks Island Reservoir Area; the Late Archaic, the Early Woodlands, the Woodland, the Middle Woodlands, the Late Woodlands, the Protohistoric, and the Early Hunter.

During the 1965 field season four sites were extensively test excavated. These include the Van Campen Field, the Miller River Field and the Friedman I and II. Sixteen sites were surveyed or tested. Approximately 5,000 artifacts were recovered, 40 features recorded, and three burials excavated during the 12 weeks in the field.

The historic survey included the location and investigation of forts, houses, churches, schools, and cemeteries. This survey took us from the copper mines of Pahaquarry to Minisink Island, a distance of about 35 miles.

With the proposed flooding date for the Tocks Island dam only ten years away, more intensive survey work and excavation must be done.

AN ARCHAIC SITE ON THE UPPER DELAWARE

By John Hall

The Egypt Mills site was located during the Tocks Island Survey work of 1964, and excavated in the summer of 1965. The field is on a terrace of the Delaware River, three and one-half miles north of Bushkill, Pennsylvania. Immediately to the west, steep shales rise from the valley floor.

Topsoil was removed from the site by bulldozer. The cleared area was staked off into 156 five-foot squares, 67 of which were cleared to an average depth of 30 inches in three-inch levels. The remaining 89 squares were cleared to the subsoil and found to be sterile.

Tenucer-shaped pits were exposed and excavated; they were generally sterile. Some pieces of pottery were found, but little else.

The most common artifacts were projectile points. These were, as was most of the other artifacts, found scattered throughout the site, and not associated with features. Sixty-one points were found and, while they do not clearly separate stratigraphically, some observations are possible. There is a tendency for points from the deeper levels to have narrower bases than those from higher levels, which tend to be expanded, except for a small group which clusters at about 22 inches. This group is made up of side-notched points of a local black chert, a type uncommon to other portions of the site. The more numerous point varieties are made of a local hard shale or hornfels. Jasper flakes and cores are present, but there are no diagnostic artifacts of this material.

The projectile point complex from Egypt Mills has no apparent relationship to other complexes, such as the Iroquois, the Woodland. Presumably it is on a late Archaic time level, somewhat in phase with the Laurentian cultures of New York.

The scarcity of cultural remains may be explained in various ways. It may be that there was a relative absence of historic occupation in the area. Possibly many of the material normally found on a site was at one time present, but has been destroyed or removed through natural processes.

THE TESHOA AND THE ELONGATED PEBBLE TOOL

By Herbert C. Krafz

Among the problems that at times beset archeology is the over-looking and discarding of artifacts that appear to “show no evidence of use,” or that do not fit into a preconceived notion of what an Indian relic ought to look like. Yet, many of the unsophisticated, seemingly unworked, and oftentimes not very pretty implements are precisely the type of “disposable tools” upon which the Amerind in our area depended to a very large extent.

Two such artifacts are the “teshoa” and the “elongated pebble tool.” Both items, represented by numerous specimens, were excavated by the author, working for the New Jersey State Museum, at several sites in the Tocks Island area. Additional specimens were subsequently encountered in the examination of private collections from southern New Jersey and eastern Pennsylvania.

Joseph Leidy, writing in 1872, was the first to identify the teshoa, then in use by the Shoshoni Indians in the vicinity of Fort Bridger in southern Wyoming. Charles C. Abbott recognized them in New Jersey in 1883 and Henry C. Moore mentioned them in 1884. W. A. Phillips found them in Michigan in 1897. Subsequent literature fails to mention them, at least the eastern forms, until Wittholtz and others rediscovered them in the Overpeck site.

The teshoa is a small, irregular or secondary decoration flake, percussion-removed from a flinty or compact sandstone river pebble or cobblestone. Normally, the smooth convex surface or
indurate rind of the original stone forms one entire surface of the flake, while a less convex and rough granular surface characterizes the opposite or detached side. The two faces meet in a continuous knife-like edge extending around the flake.

The thicker end is, in a number of specimens, marked by an indentation or pit indicative of the point of percussion. A corresponding bulge of percussion, a bulbar scar, and fissures or furrows radiating from the point of impact may also mark the fractured inner surface.

The less numerous irregular teshoas are for the most part formed from secondary decortication flakes. These usually have only a patch of the original rind on a part of the outer face, preferably as one side of the cutting edge. Most of the irregular teshoas owe their lack of symmetry to the overlapping scars from previously removed flakes.

Megascopic examination often indicated little apparent alteration of the blade edge other than the fact that some were very sharp and others perceptibly dull. A few, however, had bits or edges visibly striated from use, and others manifested crushed edges. Further examination with a low-power binocular microscope revealed additional wear marks that helped suggest their originally intended use, and established them as an undoubted tool.

The teshoa was doubtless used in several ways, depending upon the task at hand. When employed as a scraper, the striations, where observable, were perpendicular to the face and across the working edge. When used as a plane, the striations appeared only on the forward edge of the fractured face. When used as a knife, the striations ran parallel to, and along the cutting edge. When employed as a chopper, or against a hard substance such as bone, wood, or antler, the edge was often irregularly serrated or crushed.

These rude, but very sharp and very efficient "disposable tools" were, I believe, the knives, the scrapers, and the choppers of many a Late Woodland and some Archaic sites, for no other readily identifiable chipped knives or traditional scrapers were found in association with them. They were a very practical and sensible tool which could be discarded when dull, for it took only a minute to make a new one.

The elongated pebble tool is a perplexing implement that was made from specially selected river pebbles averaging about 3 to 5 in length, and about 1 1/2 to 3 1/2 in diameter at the working end.

Some of these elongated pebbles were modified into chisels on one or both ends, and some had a spatular form. Many were abraded on the blunted ends and so may have served as pressure flaking tools. The ones that puzzled me most, however, were those elongated pebbles, quite numerous on certain sites, that had a more or less thinned or "pulled out" working end with a blunted tip, and a heavier handle on the opposite end.

Diligent microscopic examination of the latter revealed very few striations, and little evidence of use other than a smoothly worn end and a slick, hand-rubbed feel. Because of this apparent lack of wear evidence, the original use of these elongated pebble tools must remain an open question. They are not sharp enough for awls and I doubt that they were used to incise or form pottery since, it seems to me, the aplastic grit would have scratched at least some of the implements. Yet, had they been employed in working bark, wood, or skin, there would have been less occasion for the production of pits or striations.

I cannot help but feel that these elongated pebbles were specially selected for a specific purpose. They were for all practical purposes the only pebbles on the sites, and nature is not so selective that it deposits only these comparatively rare forms in an occupation site and leaves the much more numerous rounded and irregular pebbles elsewhere.

UPPER DELAWARE VALLEY CERAMICS

By BARRY C. KENT

The Upper Delaware River Valley is here defined as that portion of its drainage system north of the Water Gap.

The study of ceramics from this region quickly shows that there was a great deal of contact with, and influence from, two large adjacent culture areas. The Upper Delaware Valley is a kind of bottleneck-shaped passageway into which certain culture traits were being funneled from the culture area centered in New York State and the Piedmont and Coastal areas to the south. As a result there was a certain amount of mixing within the Upper Delaware of cultural traditions from these two areas which it joined.

During the Early Woodland Period the major ceramic influence in the area came from the north, viz., the Vinetee I pottery. In Middle Woodland times the mainstream of ceramic traditions seems to have been primarily from the south in the form of interior-exterior net-impressed wares.

A small amount of southern influence in this region can be seen during Late Woodland times, but the contacts with the Owasco-Iroquois area to the north is by far the most obvious and important. Ceramic trends during this time period are in many cases exact parallels of the Owasco and Mohawk series in New York State. Deviations from strict copies of these neighboring types increase through time until a local trend can be identified. This new trend in the Upper Delaware is a result of local recombination and reorganization of certain Iroquoian designs and techniques of pottery manufacture which reach a culmination in the type known as Munsee Incised. This apparently marks the final stages of native-made ceramics in this area, and thereby leaves open to question the ceramic ancestry of the later historic Delaware Indians.