

# EASTERN STATES ARCHEOLOGICAL FEDERATION



CONNECTICUT  
DELAWARE  
FLORIDA  
MAINE  
NEW HAMPSHIRE  
NEW JERSEY

NEW YORK  
NORTH CAROLINA  
PENNSYLVANIA  
RHODE ISLAND  
VIRGINIA  
WEST VIRGINIA

BULLETIN NO. 12

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SEPTEMBER, 1953

EASTERN STATES ARCHEOLOGICAL FEDERATION  
MINUTES OF THE 1952 ANNUAL MEETING

The 1952 Annual Meeting of the Eastern States Archeological Federation was held Friday and Saturday, November 7th and 8th, at the United States National Museum, Washington, D. C.

Registration for members and guests began at 10:00 o'clock.

The General Meeting was opened by William A. Ritchie, President, at 10:30 A. M. Dr. Alexander Wetmore, Secretary of the Smithsonian Institution, greeted the Federation members and guests, and briefly outlined the archeological work of the Smithsonian from 1846 to the present.

The following papers were then presented: "Petroglyphs on Guyandotte River in West Virginia," (illustrated), by Sigurd Olafson, West Virginia Archeological Society; "New Discoveries on the Choptank River, Delmarva Peninsula, and Their Implications," by J. Alden Mason, University of Pennsylvania Museum; "The Grave Creek Mounds," (illustrated), by Delf Norona, West Virginia Archeological Society.

The afternoon session opened at 2:00 o'clock with William A. Ritchie presiding. The following papers were presented: "A Paleo-Indian Workshop Site in Dinwiddie County, Virginia," (illustrated), by Ben C. McCary, The Archeological Society of Virginia; "The Scarecrow Site: A Late Prehistoric Village in Washington County, Pennsylvania," (illustrated), by William J. Mayer-Oakes, Carnegie Museum, Pittsburgh; "The Westfield Site: Prehistoric Iroquois of Western New York," (illustrated), by Alfred K. Guthe, Rochester Museum of Arts and Sciences; "New Finds Relating to the Early Point Peninsula Burial Complex," (illustrated), by William A. Ritchie, New York State Museum.

An informal dinner in the Queen Elizabeth Room, Hotel Raleigh, was followed by an address entitled "Recent Developments in the Early Man Problem in the New World," (illustrated), by Frank H. H. Roberts, Jr., Director, River Basin Surveys, Smithsonian Institution.

The Business Meeting was opened by William A. Ritchie, President, on Saturday, at 10:15 A. M.

The minutes of the Chapel Hill meeting, October 26th and 27th, 1951, were accepted as printed in the Federation Bulletin No. 11.

Kathryn B. Greywacz, Corresponding Secretary, reported that the regular correspondence had been handled during the year; the directory of state societies was revised and copies distributed; copy was prepared and arrangements made for the printing of meeting announcements, forms, and correspondence paper; 19 copies of the Bibliography were distributed, leaving a total of 609 on hand. As of November 6th, the total membership of the twelve state societies comprising the Federation was 2,114.

Carl Miller, Acting Treasurer, reported that cash balance on hand as of November 6th, 1952, was \$364.94, most of which was in the Publication Fund. Bills for Bulletin No. 11 and for this meeting had not as yet been deducted.

Margaret Blaker reported for the Research Project. She distributed mimeographed copies of a working outline for the proposed ceramic index and examples of forms which could be filled out for pottery types. She said that the Research Committee had suggested that the blank forms be sent to the member societies and to others working on pottery types in the Eastern area, before December 1st, 1952. Editing would be done geographically: the New England area by John Witthoft; the Middle Atlantic area by Margaret Blaker; the Southern area by Joffre Coe. After individual editing, the Committee planned to meet in the Spring of 1953 to put the types in consistent form. The final result could be in one of two forms: (1) a thumbnail description of each type on a

given page arranged alphabetically; (2) types grouped by geographic areas with additional synonyms and an index at the end. The Committee had considered two means of publication: (1) as Research Series No. 2 of the Federation; (2) as a publication in the University of Michigan series of the Pottery of the Eastern United States. Dr. Ritchie suggested that full descriptions and illustrations of unpublished pottery types be placed in the University of Michigan series, but published and known types or wares should be put on cards which could be purchased by people working on pottery of this area. It was decided that the Committee should explore all possibilities of gathering information and of possible publication.

John Witthoft, Editor, explained that the delay in publishing Bulletin No. 11 was due to the attempt to reduce the cost and to produce it in lithoprinting. The form in which the supplement to the Bibliography should be published was discussed. It was decided that it would be close enough to the original publication if the items were arranged by states. It should include all publications up to the end of 1952, and from this time, until late Spring of 1953, the items could be sent to the various states for checking. Then, after final editing, it should be ready for publication.

C. A. Weslager, Director of Public Education, reported that he had sent a form letter to the secretaries of the member societies requesting information about their activities in the field of public education. *Delaware* claimed excellent cooperation from the local press with two front page stories, one Sunday feature, and many smaller articles. Members talked before civic groups and appeared on a special archeological program on television. Meetings were publicized on the bulletin board in the Wilmington Library. *Florida* has a Public Relations Committee to handle such activity. Professional members have appeared before youth and other groups but the member usually was identified by the institution employing him rather than as a member of the Society. *Maine*, through the Robert Abbe Museum, has had weekly articles in the Bar Harbor Times. The Museum Director gave twelve lectures before civic groups. *New Hampshire* reported using a mobile unit for exhibiting artifacts in schools. Certain members gave talks before Kiwanis Clubs and various Women's clubs. *New York* has had several stories in local papers regarding the work of the new chapter at Glens Falls. The Mid-Hudson Chapter of Poughkeepsie sponsored an exhibit of artifacts at the Dutchess County Fair and the Glens Falls and Long Island Chapters had exhibits in local institutions. Members of various chapters spoke on archeological subjects before local audiences. *North Carolina* had a feature article in the Daily Press concerning the restoration of a mound and site in Montgomery County, as well as numerous shorter articles. Individual members talked before community groups. *West Virginia* had publicity in the Moundsville papers and on the radio on the opening of the Grave Creek Mound Museum, and in the newspapers, and on the radio and television in Huntington. Members addressed Women's clubs, Rotary, Kiwanis, etc.

Carl Miller, Vice-Director of Exhibits, described the temporary exhibits set up for the meeting, and the permanent exhibits in the United States National Museum.

The above reports of the officers and directors were accepted.

It was voted to dispense with the reading of the Vice-Presidents reports on the recent activities and future plans of the Archeological Societies of the Federation. Reports received are as follows:

*Connecticut*—Carroll Alton Means reported that the membership of the Archeological Society of Connecticut is 287.

Two meetings were held during the year. November 10th, 1951, at the Lyman Allyn Museum, New London, John

Witthoft gave a beautifully illustrated talk on "Recent Archeological Discoveries in Pennsylvania." May 10th, 1952, at the Connecticut Agricultural Experiment Station, New Haven, Charles Wisdom presented an illustrated lecture on "The Ethnology of the Eastern Highland Maya of Guatemala."

News Letters Nos. 61, 62, and Bulletin No. 26 were issued.

Excavations on the Calvin Main Site in Ledyard were continued under the direction of Mrs. Eva Butler for the Willimantic State Teachers College, and the Grannis Island Site in the Quinnipiac River at New Haven continued to engage the attention of the New Haven Chapter. Frank Glynn of Westbrook excavated a curious rock pile beneath which he found an aboriginal fire pit. Important sites in eastern Connecticut were visited in anticipation of future work.

The colored slide library was enlarged and has been in constant use by educational groups. A Research Committee, under the chairmanship of Mrs. Butler, was formed to correlate the references to local aboriginal culture in historical sources.

*Delaware*—Arthur G. Volkman reported that the Archeological Society of Delaware has approximately 80 dues-paying members.

On December 1st, 1951, John Witthoft addressed the Society on "The Strickler Site: A Conestoga Indian Town of 1677-1717." On April 26th, 1952, John Swientochowski, a society member, gave a demonstration and talk on "How the Indians Made Their Arrowheads." At the Annual Meeting on June 7th, there was a symposium on the material recovered from excavating the site of an early log cabin near Wilmington. On November 1st, C. F. Kier, Jr. presented a lecture on "Archeology, Mirror of the Ages."

C. A. Weslager wrote a pamphlet on the Indians of Delaware, to be illustrated by John Swientochowski, under the sponsorship of the University of Delaware. It is hoped this may be distributed to Society members.

Field work consisted of: excavating the log cabin mentioned above; test digging of a traditional Indian cemetery on Blackbird Creek near Taylor's Bridge, which proved to be non-Indian; a preliminary examination of a Delaware Indian burial ground near Glenmore, Pa. (in co-operation with the Chester County Historical Society) where an Indian burial with 18th century European grave offerings was found. Future plans call for the exploration of an Indian burial ground near Northbrook, Pa., and the excavation of the historic Dickenson House near Dover, Del., in co-operation with the State Archives Department.

*Florida*—Frederick W. Sleight reported that the Florida Anthropological Society has a membership of 168.

The fourth Annual Meeting was held February 16th at Rollins College, with the largest membership gathering in the history of the organization. Ripley P. Bullen was appointed Chairman of the Arrangements Committee for the fifth Annual Meeting which will be held in the Florida State Museum.

Volume V, Nos. 1-2 of the *Florida Anthropologist*, containing 24 pages, was published in June, 1952, and Vol. V, Nos. 3-4 is in press. Six issues of the News Letter, from the desk of the President, were published during the year.

A number of public services were extended to clubs and service organizations through lectures. Keeping Florida informed concerning its anthropology is one of the activities of the Society. At the present time a special committee is investigating recent policies formulated by the Florida Park Service that seem to this Society as being detrimental to archeology in this state.

*New Hampshire*—William A. Newman reported that the membership of the New Hampshire Archeological Society is 63.

The Annual Meeting was held at the South Unitarian-Universalist Church in Portsmouth on October 18th, 1952. Douglas Jordan gave a short illustrated talk on recent excavations in Massachusetts which resulted in the finding of fluted points. Lawrence M. Crosbie talked about his field explorations at home and abroad and Irving Rouse presented an interesting illustrated lecture on pottery and its importance in connection with other artifacts. The excavations at Lockmere were continued. The greater part of the Abram Drake collection of Lakes Region artifacts is now on exhibit in the Gale Memorial Library, Laconia.

A committee on artifact classification has been formed under the chairmanship of J. Frederick Burt, who has been exploring the Tyngsboro, Massachusetts, area.

*New Jersey*—Charles F. Kier, Jr. reported for Dr. Lancelot Ely that the membership in the Archeological Society of New Jersey had reached an all time high of 274. During the year, the Manta Chapter was formed.

Quarterly meetings were held and the policy of having one guest and one member speaker was followed successfully whenever possible. At the January meeting, held at Newark with the New Jersey Historical Society as host, Dr. Ethel Boissvain-Lesser spoke on "A Narragansett Powwow," and Charles F. Kier, Jr. showed kodachrome slides made by the slide project. At the March meeting, Mrs. Margaret Blaker talked on "Archeology of the Potomac-Chesapeake Area and its Relation to New Jersey," and Dorothy Cross spoke on "Delaware and Related Horizons in New Jersey." The Annual Meeting in May featured two films: "Making Primitive Tools" and "Longhouse People." The October meeting was held in the private museum of Judge Arthur C. King, Tom's River.

News Letters 25 and 26 were issued in February and July and Bulletin No. 5 was published in May.

For the colored slide project, 160 out of a proposed 195 slides have been made. Grouped into six sets, these should be available to schools, civic organizations, etc., by the end of 1953. The circulating library was conducted successfully, and many new books were acquired.

The Unalachtigo Chapter completed the excavation of the Wood's Mill Site in Salem County, and a report will appear in Bulletin No. 6. In May, the Chapter participated in a five-day field trip to Flint Ridge, Ohio, visiting workshop and quarry sites. They also visited the mound area and the State Museum at Columbus.

*New York*—Alfred K. Guthe reported that the New York State Archeological Association has a membership of 237.

The Auringer-Seelye Chapter, Glens Falls, was organized, bringing the number of chapters to five. As the state organization is primarily a co-ordinating body composed of dues-paying chapters, its activities are few in number.

The Annual Meeting was held at the New York State Museum, April 5, 1952. Formal fifteen-minute papers were presented by: James Shafer on "The Baumann Site: A Preliminary Report," Malcolm Kinney on "The Shagabok Site: A Preliminary Report," Mrs. Dorothy Raynor on "The Roberts Farm Site, East Moriches, L. I.," Donald Lenig on "The Weaver Lake Site," Charles Wray on "The Power House Site," Alfred K. Guthe on "The Westfield Site," and Dr. William A. Ritchie on "A Probable Paleo-Indian Site in Vermont." At the annual dinner Gordon F. Ekholm spoke on "Is American Indian Culture Asiatic? Pros and Cons on a Vital Historic Question of Trans-Pacific Connections."

The newly-formed Auringer-Seelye Chapter (Glens Falls) members have located flint mines and other Indian sites in the area and partially excavated one. This produced a cremation, a slab burial and one adjacent fine platform of stones. Other activities included a field trip and arranging for the exhibition of a gift collection from the Lake George Region in the Crandall Library, Glens Falls.

The Long Island Chapter is striving to preserve records of known sites on the eastern end of the island. Members have been doing field work and the materials recovered are exhibited at the Museum Building at Riverhead, L. I.

The Mid-Hudson Chapter (Poughkeepsie) as a group participated in two field trips to Cruger's Island and individuals carried on projects.

The Morgan Chapter (Rochester) held meetings at irregular intervals and spent a day excavating a prehistoric Iroquois site near Rochester.

The Van Epps-Hartley Chapter (Fonda) surveyed over 100 sites in the Mohawk Valley and eastern New York. Other projects are the compilation of the names and addresses of collectors in the Mohawk, Hudson and Sacandaga valleys, re-cataloguing the chapter's collection, and arranging exhibits in the Mohawk-Caughnawaga Museum.

Dr. William A. Ritchie spoke at least once before each of the chapters, with the exception of the Long Island Chapter.

*North Carolina*—Ernest Lewis reported for Joffre L. Coe that the Archeological Society of North Carolina has a membership of 159.

A special field meeting was held July 27th, 1952, at the Town Creek Indian Mound. Speakers included: Joffre L. Coe and Harry T. Davis, "Remarks on the History of Archeological Work at Town Creek Indian Mound," John Witthoft, "The Creek Indian Square Ground and its Ceremonies," Ernest Lewis, "Archeological Interpretations, Current Excavations, and Future Plans for Town Creek Indian Mound," John Heimnick, "Archeological Survey of the Buggs Island Reservoir Area," William McIntyre, "Division of State Parks Plan for Research at Town Creek Indian Mound and other Sites."

News Letter No. 24 was issued in July. The whole volume for 1951 of the *Southern Indian Studies*, consisting of a paper by Theodore Stern entitled "Pamunkey Pottery Making," was distributed.

Society officers obtained funds for an emergency survey of the Buggs Island Reservoir area and two trained workers conducted a two-month surface survey and put in test pits at two locations. The Society also continued to be interested in the excavation and research program at Town Creek Indian Mound, having been instrumental in getting this project underway.

*Pennsylvania*—J. Alden Mason reported that the Society for Pennsylvania Archeology has 307 paid-up members.

At the Annual Meeting held in Pittsburgh May 24th and 25th, in addition to several brief reports, Dr. W. S. Webb talked on "The Adena People, Mound Builders of the Ohio Valley."

Three issues of *The Pennsylvania Archaeologist*, were published: Vol. 21, Nos. 3-4, pages 43-62, with 3 plates; Vol. 22, No. 1, pages 1-46, with 5 plates; Vol. 22, No. 2, pages 47-78, with 10 plates.

No field work was done by the Society, but the State Museum in Harrisburg and the Carnegie Museum in Pittsburgh conducted such work.

No special projects are planned, except to increase the membership, improve the journal, and to reactivate some moribund chapters.

*Rhode Island*—William S. Fowler reported that the Narragansett Archeological Society has a membership of about 35.

Monthly meetings were held during the winter.

The Twin Rivers hunting site excavation is scheduled for publication in October, 1952.

The Society's field work for the 1952 season consisted of excavation of a large village site at Green Point on Narragansett Bay where evidence to date seems sufficient to establish the presence of the last three culture uplifts that are known to have shaped the prehistory of New England. While all possible diffusionary traits that crowded in upon coastal peoples from adjoining culture centers are not always found on Rhode Island sites, evidence of independent creative activity is perhaps more apparent than in border regions of New England.

Most members take an active part in field work carried on during the summer months.

*Virginia*—E. B. Sweeney reported that the Archeological Society of Virginia has a membership of 150.

Six meetings were held during the year. The following illustrated talks were given: "Wild Flowers the Indian Knew," by H. A. Manria; "The Archeology of Central Mexico," by L. B. Bagby; "Houses of the Aboriginal Indians as Recorded by the Early Settlers," by E. B. Sweeney; "Something Old—Something New," by Horace G. Porter. At the Annual Meeting, June 7th, 1952, Joffre L. Coe gave an illustrated address on "Secrets of the Archeological Profession." At the first meeting in the fall, October 10th, members brought artifacts for display and a round table discussion was held.

Four issues of the Bulletin were published: Vol. 6, Nos. 2, 3, 4; Vol. 7, No. 1.

Individual members made field trips to known camp and village sites.

*West Virginia*—Sigfus Olafson reported that the membership of the West Virginia Archeological Society is now 73.

The Annual Meeting was held at Huntington, October 18th. Speakers and their topics were: James B. Griffin, "The Cahokia Culture and its Relation to the Upper Ohio Valley"; William J. Mayer-Oakes, "The Speidel Site, a Fort Ancient Village in Ohio County, West Virginia"; Delf Norona, "The Society's Grave Creek Mound Museum at Moundsville"; Joseph W. Inghram, "Archaic and Other Materials from the Cedar Grove Area in Kanawha County"; J. J. Adams, J. H. Edwards and S. F. Durrett, "Cabell County, West Virginia, Archeology."

Two issues of the *West Virginia Archaeologist* were published during the year. The Society purchased for free distribution to members: one issue of the *West Virginia Historical Magazine*, containing archeological material and copies of the Smithsonian publication on the Natrium Mound, by Ralph Solecki.

The Society assisted the Carnegie Museum of Pittsburgh in its survey of archeological sites in the West Virginia portion of the upper Ohio Valley. It also completed the Grave Creek Mound Museum at Moundsville, which was opened to the public July 4th, 1952. This museum is now not only self-sustaining but funds are being accumulated which will enable the Society to issue more frequent publications and to engage in field work.

The Society has made progress in its efforts to establish a Department of Anthropology and Archeology at West Virginia University.

The Business Session was brought to a close at 11:15, and the following papers were presented: "Dating Trade Pipes—Some 'Cans' and 'Can'ts,'" by J. C. Harrington, Archeologist,

National Park Service; "Identifying Colonial Ceramics from Archeological Sites," (illustrated), by C. Malcolm Watkins, Division of Ethnology, Smithsonian Institution.

The Afternoon Session was opened at 2:30 by William A. Ritchie who received the report of the Nominating Committee from Irving Rouse, Chairman. The following were unanimously elected: President, William A. Ritchie; Recording Secretary, Dorothy Cross; Corresponding Secretary, Kathryn B. Greywax, Treasurer, James L. Swanger.

For the Executive Committee, Dorothy Cross announced that the membership dues of the Federation would continue as a \$5.00 minimum for societies with 100 or less members and \$5.00 for each additional 100 members or fraction thereof and that the 1953 Annual Meeting would be held Friday and Saturday, November 6th and 7th, at Rochester, New York.

With Father Thomas Grassmann presiding, the General Session was resumed and the following papers were presented: "The Location and Terminal Date of Historic Patowomeke," (illustrated), by T. D. Stewart, Division of Physical Anthropology, United States National Museum; "The Conoy Town, 1718-1742, Bainbridge, Pennsylvania," (illustrated), by John Witthoft, Pennsylvania Historical and Museum Commission; "The Excavation of a Colonial Log Cabin near Wilmington, Delaware," (illustrated), by C. A. Weslager, The Archeological Society of Delaware; "The Munsee-Lenape Site, Sussex County, New Jersey," by Charles A. Philhower, The Archeological Society of New Jersey.

It was voted to extend sincere thanks and appreciation to the United States National Museum, Dr. Alexander Wetmore, Dr. Frank H. H. Roberts, Jr., and Frank M. Setzler for their co-operation and hospitality.

The meeting was adjourned at 4:15 P. M. A total of 53 registered delegates, members and guests from ten states, the District of Columbia and the Philippine Islands attended the meeting.

Respectfully submitted,

DOROTHY CROSS,  
Recording Secretary.

## ABSTRACTS OF THE PAPERS DELIVERED AT THE MEETING

### PETROGLYPHS ON GUYANDOTTE RIVER IN WEST VIRGINIA

By SIGFUR OLAFSON

Petroglyphs on Guyandotte River, Cabell County, West Virginia, were visited by Squier and Davis in 1846, and described and illustrated in their "Ancient Monuments." When visited in 1951, this site (46-Ch-5) was found to be in practically the same condition as when seen by Squier and Davis. During this 105-year interval there was no discernible erosion, from which it may be inferred that the petroglyphs could be of considerable age. They occur on boulders of hard, weather-resistant Mahoning sandstone, which, no doubt, is partly responsible for their good condition.

The principal group, spread over an area of about 9 by 12 feet, includes a human figure 6 feet 3 inches tall, a deer or elk head, a turkey, animal and bird tracks, rows of pits, and various other figures. On the end of this boulder are two birds, one very well drawn. A nearby boulder has on its top the outline of an animal, or an animal's pelt, and on its vertical face, another group about 4 by 11 feet in area, including a serpent-like figure about seven feet long, with ears or horns, legs, and a long snake-like body terminating in a fish tail. Among other figures in this group is the upper part of a human torso with right arm upraised, similar to petroglyphs in Pennsylvania which are supposedly of Algonkian origin.

The drawings of Squier and Davis are quite accurate except for the last group, which apparently was concealed in part by a growth of moss and lichens.

Squier and Davis mention a "circle" near this site. This has been destroyed, but there is a village site with shell-tempered pottery, mussel shells and artifacts on the surface. There are several earth mounds in the vicinity and several small stone mounds are also nearby, usually on the ridges or on top of the hills. Petroglyphs occur at several other sites in the vicinity, but these bear little resemblance to those at the site described above.

It appears probable that these petroglyphs date from late prehistoric times.

### NEW DISCOVERIES ON THE CHOPTANK RIVER, DELMARVA PENINSULA, AND THEIR IMPLICATIONS

By J. ALDEN MASON

The existence of an ossuary at Sandy Hill on the outskirts of Cambridge, Maryland, has been known since at least 1889. In 1897, Dr. Henry C. Mercer published a report on his researches there in 1892. The bones are of persons of all ages, disarticulated, relatively well preserved, and unaccompanied by any grave goods.

About 1940, reports were received of burials of a different type having been found there, apparently articulated single burials, the bones covered with red ocher, in a poor state of preservation, and accompanied by artifacts of a high quality. Among the latter were long stone tubes, many gorgets, many large thin flaked blades, beads and other objects of copper, and objects of hematite.

It was suggested by one writer that these well-furnished graves represented ossuaries of important men, while the ossuaries with disarticulated bones of persons of various ages and sexes, without any grave furniture, held the remains of commoners. This hypothesis, implying contemporaneity, is discredited by recent evidence.

This year, similar burials were found during the commercial removal of Sandy Hill, which is probably a sand dune which drifted to cover both these burials, and the ossuary and recent Indian village site. The skeletons are covered with ocher and accompanied by stone tubes, gorgets, large flaked blades, and objects of copper and hematite, verifying the earlier reports. The stone tubes are of Ohio fireclay, found only near Portsmouth, Ohio, and some of the other stone materials are native to Ohio and not to the local region. The entire aspect is Ohioan and Adena, and very similar to or identical with the objects found in a mound at Beech Bottom, West Virginia, generally considered as typical Adena. The tubes give clear tones when blown as whistles.

These burials afford good proof of a close contact between the Delmarva Peninsula and the Ohio River drainage in the Adena period: this probably correlates with the Early Woodland period in this region, which John Witthoft gives a provisional date of A. D. 600-900. They can have no cultural or temporal relationship to the ossuaries on the same Sandy Hill, which doubtless are of early Colonial, probably Nanticoke, origin.

### A PALEO-INDIAN WORKSHOP SITE IN DINWIDDIE COUNTY, VIRGINIA

By BEN C. McCART

A survey of fluted points found in Virginia carried on for several years by the author finally led to the discovery of a Paleo-Indian workshop site in Dinwiddie County, Virginia, on the farm of J. S. and J. E. Williamson.

The site covers approximately 40 acres, and many cores, 5 to 10 inches in diameter, and thousands of unutilized flakes are to be found on the surface. The material consists almost entirely of variegated chert, and chert is rare in this section. The flakes differ greatly in size and shape, but the most characteristic are parallel sided and faceted as the result of previous flaking.

Finds include: 58 fluted points, 46 of them made of chert, averaging 55 millimeters in length, but broken basal portions indicate that some were at least 100 millimeters in length; over 225 chert snub-nosed scrapers, many having a spur or sharp point at each side of the nose; approximately 50 side scrapers made from medium to large flakes with the secondary chipping largely confined to one side and to one edge of the flake; 30-odd apparently unfinished points, many of which are broken and do not reveal the crescent-shaped base of the finished points. The extremely sharp pointed gravers, made on flat flakes, have not shown up on the Williamson Site, but twelve implements have been found which could serve as awls, or which might be classified as chisel-gravers.

The survey of Virginia fluted points, as well as the Williamson Site, prove that the Paleo-Indian preferred finer materials such as chert or flint to quartzite, as contrasted with the preference of the Neo-Indian for the latter material.

An interesting feature of the Williamson Site is that approximately 175 projectile points of the Neo-Indian horizon have been recovered from the eastern periphery of the Paleo-Indian site. All these presumably later points or arrowheads, with the exception of six of chert, are made of white, brown and grey quartzite. It is very rare that an arrowhead is picked up on the Paleo-Indian Site proper, and no pottery fragments of any kind have appeared there. Therefore, the Paleo-Indian Site is just as pure as one can hope to find in Virginia.

#### THE SCAREM SITE: A LATE PREHISTORIC VILLAGE IN WASHINGTON COUNTY, PENNSYLVANIA

By WILLIAM J. MAYER-OAKES

This paper is a preliminary report on the Scarem Site, one of the many Late Prehistoric sites in the Upper Ohio Valley. As such, it deals with results of work done by Allegheny Chapter, Society for Pennsylvania Archeology and preliminary tests by the Upper Ohio Valley Archeological Survey.

The site, 36Wh22, is located in Washington County, Pennsylvania, about twenty miles west of Pittsburgh. It is situated on a high terrace on the west side of Raccoon Creek just opposite the mouth of Little Raccoon Creek.

The site shows up as a dark earth ring 250 feet by 150 feet. None of the excavations produced stockade or house post molds. Refuse and fire pits were found in the Survey tests.

Chert and pottery artifacts were most common; those of bone and other stone, more scarce. Refuse animal bones were common. Antler tools consisted of flakers, drifts and conical projectile points. Various types of bone were used for splinter awls, fishhooks and a unique triangular projectile point. Bird bone was favored for cylindrical beads, turtle carapace for cups and spoons. Pendants were made from raccoon and bear canines.

Triangular points are the most common chert form. There are, however, a number of stemmed and notched points, drills, blades, and scrapers which may represent an earlier occupation. Worked stone includes crude disks, granite and hematite celts, a decorated vase-shaped pipe, and sandstone abraders and pitted stones. In addition platform pipes, gorgets, and worked hematite have been found.

The pottery sample consists of 3,140 sherds, 99 per cent shell-tempered. The remaining grit or untempered sherds were from small toy pots. The major type is "Monongahela Cordmarked," the basic and earliest shell-tempered pottery in the Upper Ohio Valley. Another type, "Monongahela Plain" is represented as a minor pottery type. The grit-tempered type represents a minority on most Late Prehistoric sites and has been termed "Scarem Plain."

The vessel shape is primarily a simple vase with a slight rim flare. Decoration is usually confined to the rim and consists of incising, paddle-edge indentations, and punctations. Rounded castellations occur, infrequently, as rim appendages.

Pottery pipes are represented by stem and bowl fragments. The typical pipe is a decorated obtuse angle elbow form. However, a bird effigy pipe has been found on the site.

The Scarem Site fits into the Monongahela complex which is considered part of the "Mississippi Pattern." The presence of punctate rimsherds may indicate that Scarem is a late unit within Monongahela development since such sherds appear in greatest abundance on sites producing early trade goods. There is definitely no linkage with pre-Monongahela units since grit or limestone tempering is not present. The Scarem Site appears to be a link in the cultural chain that connects the West Virginia Panhandle Fort Ancient and central Monongahela units.

#### THE WESTFIELD SITE: PREHISTORIC IROQUOIS OF WESTERN NEW YORK

By ALFRED K. GUTHIE

This site, in the town of Westfield, Chautauque County, New York, is located either on or close to a portage used in 1735 and probably prior to it. It lies on a low gravel ridge (former glacial lake beach) between Lake Erie and Chautauque Lake. Since Chautauque Lake is a part of the Mississippi drainage basin, this site might prove to be of value in correlating cultures in two or more archeological areas.

Attention to the site was drawn by Ross Pier Wright and his sons who excavated 237 pits here in 1927 and 1928. Their continued interest in the site was of value to a small party from the Rochester Museum of Arts and Sciences which excavated 20 pits over a two-month period. These and the pits excavated by the Wrights were located near the crest of the ridge.

Pit contents included: potsherds; carbonized grass, corn and bark; a few human bones; stone artifacts. Three pottery types can be recognized:

*Type I:* Shell-tempered, with cord-wrapped paddle surface roughening except when rims are decorated, then rims are smoothed. Decoration is rare, but when present is a chevron design executed with incised lines. The vessels are elongated globular forms with vertical or outward flaring rims and flat lips.

*Type II:* The grit-tempered counterpart of Type I in form. Decoration consists of cord-wrapped stick impressions placed transversely on flat lips.

*Type III:* A grit-tempered type with corded-roughened or a smoothed surface finish. Decoration is executed with incised lines (some interrupted linear) placed horizontally on an incipient collar. Linear or circular stamps border these lines. Form: low incipient collar, constricted neck, round bottom, globular.

The stone tool inventory includes cylindrical pestles, net sinkers, perforated discs, mullers, celts, notched and triangular projectile points, ovate blades and hammerstones of various shapes.

The Wrights located four ossuaries, one bundle, and some flexed burials; the museum none.

Cultural relationships are on the Late Owaseo or early Prehistoric Iroquois level. The presence of all the pottery types in one pit with no apparent stratigraphic difference, indicates a transitional site. Types I and II resemble Monongahela Woodland types, while Type III includes Neutral types found also in Southern Ontario. The ossuaries, tubular bone beads and projectile points also resemble Ontario materials, while one pipe form suggests western Pennsylvania affinities.

#### NEW FINDS RELATING TO THE EARLY POINT PENINSULA BURIAL COMPLEX

By WILLIAM A. RITCHIE

The Point Peninsula 2 Focus, or classic stage of this culture, is important as one of the earliest of the advanced cultures in the northeastern area. Known at present from a handful of burial sites and one habitation station in northern, central and western New York and in southeastern Ontario, its exact temporal relationship to the other high cultures in the area is still undemonstrated. A single date of 988 B. C.  $\pm$  170 years, obtained by Libby and Arnold on crematory charcoal from the Oberlander number 2 site, will soon be checked against a similar sample from our 1952 season's excavations in northern New York. It should be remarked that this date is about 1,000 years earlier than any Hopewellian date yet established. No radiocarbon determinations are available for Middlesex.

This season's work at a new site on the Indian River, Jefferson County, New York, confirmed the tentatively identified rock crematories described by me last year at the Chapel Hill meeting. Better preserved examples of identical features containing a total of eight unburied cremations still *in situ* were recorded. Vinette 1 pottery and a few sherds of Vinette 2 were occurred in the close vicinity of several crematories.

On a sand ridge 500 feet distant three large and deep (30, 72, 74 inches, respectively) burial pits were located, containing a total of seven burials, three of them cremations made on the stone crematories, four represented only by unburned tooth crowns or badly decayed bone fragments. Red ochre deposits and stone artifacts occurred in every pit, and included a cache of 245 thin mortuary blades, fire-making kits consisting of iron pyrites nodules (altered to limonite) and flint strikers, gorgets, projectile points, whetstones, scrapers, etc.

Burial data for this culture obtained in the 1951-52 Indian River excavations by the writer include the following traits: (1) cremation, probably of bundle burials wrapped in leather shrouds, generally accompanied by mortuary offerings, on stone crematories, on or near the surface of the ground; (2) secondary pit burial of such cremated human and industrial remains; (3) inhumation of bone bundle and possibly of flexed body in the flesh, generally in mass of red ochre, and usually with grave goods of stone, bone, copper, galena and marine shell; (4) extensive use of red ochre; (5) large offerings of thin leaf-shaped cache blades; (6) fire-making kits present with nearly every burial; (7) "killed" offerings of frequent occurrence; (8) sometimes grave goods, but not associated human remains, have been in a fire.

The rich and varied artifact inventory, considered in conjunction with the burial traits, indicate a cultural affiliation with the glacial Kame culture of Ontario and elsewhere.

The tendency toward differentiation and diversity manifested by this culture betokens a formative stage of development and, in connection with its early position in the temporal sequence, suggests that it may have been an important donor culture to other advanced cultures of the general area, including the Hopewellian.

#### DATING TRADE PIPES—SOME "CANS" AND "CAN'TS"

By J. C. HARRINGTON

No detailed treatises on clay tobacco pipes have been published in recent years; earlier ones are not always reliable. The best recent contribution is a six-page monograph by Adrian Oswald, "English Clay Tobacco Pipes," *The Archaeological News Letter*, April, 1951. At present, the most reliable and useful dating criteria are: size and shape of bowl; angle of lip; type and location of maker's mark. Maker's initials are not particularly valuable at present. Many pipe makers had the same initials; original initials sometimes were used by son and grandson.

The most reliable criteria are size and shape of bowl. Mainly, bowls developed from early small, bulbous shapes to long, thin forms of the early eighteenth century. Beginning in the latter part of the eighteenth century, they decreased in size. There are many minor characteristics that help to establish the date within the seventeenth century. The angle of the lip is a useful criterion, changing from slanting to horizontal about 1700. Early bases were flush with the bottom of the stem; then came a flat heel, then a spur. Milling, or rouletting, around the lip appeared early and began to disappear before 1700. Position of maker's mark has significance; first on heel, then on body, lastly on sides of bowl at base.

Pipe bowls of English origin can be dated within a reasonably small span of years provided the entire bowl is available for study; in describing pipes always give accurate outline, to scale, and correctly oriented with stem; initials alone usually are of no value in dating.

#### THE LOCATION AND TERMINAL DATE OF HISTORIC PATAWOMEKE

By T. D. STEWART

The documentation of an historic site provides some of the main premises upon which subsequent archaeological interpretations depend. In the case of Patowomeke (Potomac), Capt. John Smith's map made in 1608 provides unmistakable clues on location and identification. The site is located on the neck of land between Aquia and Potomac creeks where the Potomac River turns east. There seems to be only one site in this location and it corresponds in all respects with Smith's description.

The last direct record of the town's existence is provided in a letter by an unknown Jesuit priest telling of Father White's sojourn there in the year 1642. Although the land on which the town was located was patented in 1651, the Virginia Land Records are silent about the continued existence of the town. However, indirect evidence from court records indicates that the Indians were forced to move off the patented lands promptly. Thus after the middle of the 17th century, the name Patowomeke, or rather the now simplified spellings of this name, appear to refer to the area occupied by the tribe rather than to the town.

In spite of the fact that the town thus was occupied for 40 or more years after initial contact with the Jamestown colony, and was visited frequently by English traders, surprisingly little in the way of European objects has been recovered in the excavations.

### THE EXCAVATION OF A COLONIAL LOG CABIN NEAR WILMINGTON, DELAWARE

By C. A. WESLAGER

Starting on October 9th, 1951, and continuing until January, 1952, members of the Archeological Society of Delaware, at the request of the Public Archives Department, excavated the area surrounding, and within, a one-room log cabin located near Wilmington. The cabin was subsequently dismantled and removed to Dover where it will be reconstructed as a museum exhibit.

In a recent paper ("Log Structures in New Sweden During the Seventeenth Century," *Delaware History*, Vol. 5, No. 2, pp. 77-95, Sept., 1952) I have emphasized the importance of the Delaware Valley in the history of the log cabin. It was here in the early Swedish settlements that log residences first made their American appearance. The 17th century English colonists from Newfoundland to Virginia, and the Dutch at New Amsterdam, did not build their residences of logs.

The excavation produced 74 pounds of iron objects, 17 pounds of animal bones, 217 bottles of fragmentary glassware, 114 complete or fragmentary ceramic objects, 35 coins, more than 300 buttons ranging from early to late types, 50 fragments of white clay smoking pipes, and a heterogeneous collection of miscellanea. Approximately 75 per cent of the material was sieved from the earth beneath the floor.

All things considered, we are inclined to date the cabin no earlier than 1750, although its structural characteristics reflect Scandinavian influences.

### THE MUNSEE-LENAPE SITE, SUSSEX COUNTY, NEW JERSEY

By CHARLES A. PHILBOWER

The village of the Munsee-Lenape was located thirty miles above the Delaware Water Gap and immediately below the Great Minisink Island. Vander Donck, on his map of 1656, indicates the village by its Indian name Tschichtewacki, meaning strong place, thus characterizing the use of a stockade. On an anonymous map of 1650 the region was labeled in Dutch "Minesink ofte t'Landt Van Bacham," Minisink or the land of villages. On a later map a circular stockade bears the caption in Dutch, "Ander Manier von Minnesincksche Dorpen," another method of Minisink villages.

The earliest historic reference to the Minisinks is found in Thomas Budd's Account of Pennsylvania and New Jersey, 1685. The first recorded white person to go to the Minisink town was Captain Arent Schuyler who went there in 1694.

The Dutch settled in the Minisink country during the first half of the eighteenth century, and following the Treaty of Easton, 1768, the Monsies vacated the land and the Dutch took possession. Johannes Westbrook purchased the Minisink village site of "Syacoop, Indian of Minisink, owner and true possessor," Dec. 6th, 1730, and a descendant, Burson Bell, is the present owner.

The first digging on the site was done by Dr. Edward S. Dalrymple, of Branchville, in 1893 and 1894. His notebook shows that twelve skeletons were unearthed, associated with copper and glass beads, a copper kettle, a silver spoon, thimbles, bells, combs, a mirror, a pewter pitcher, bone ornaments, shell beads and a large native copper axe. In 1914, George S. Heye and George H. Pepper unearthed 68 burials immediately west of the Dalrymple "dig." The skeletons were invariably extended. Pepper concluded that this was the historic Minisink village of the Munsee.

The writer has done considerable digging on the western end of the site and found 180 burials, all but one flexed. Post holes disclosed the location of the stockade on the top of the hill about 75 feet above river level. Immediately behind the village were some 75 contiguous burials, with every skull crushed, suggesting the death toll of the attack by the "Senecas" in 1663.

In 1947, Dr. William A. Ritchie worked on the site under a grant from the Indiana Historical Society. In a six-week period 100 pits were explored on the Bell (east end) and Philhower (west end) areas of the site. Dr. Ritchie reported that the predominant culture was Owaseo with Castle Creek dominating the later occupation. He concluded, "That Munsee culture was undergoing replacement from Owaseo to Iroquoian tradition even before European contact and that the recognition of the final stage of this development as Munsee seems to fulfill a logical prediction from archeological evidence."

### RECENT DEVELOPMENTS IN THE EARLY MAN PROBLEM IN THE NEW WORLD

By FRANK H. H. ROBERTS, JR.

There is no need to go into the history of the past 25 years and review the various finds which have established an "Early Man" for the New World. Most of you are familiar with the story of Folsom, Sandia Cave, the Yuma problem, and discoveries in the east bearing on the general subject. Dr. Ben McCarty has told you about the Paleo-Indian site in Dinwiddie County, Virginia. Many of you undoubtedly have seen the recent publication of John Witthoft describing and discussing the Shoop Site in eastern Pennsylvania and setting up his interline Chert Industry. Others of you no doubt have heard your president, Dr. Ritchie, speak about the Paleo-Indian material from the Reagan Site in northwestern Vermont. The increasing information on the manifestations in this part of the country is extremely gratifying and we trust that the future will see more such developments.

Numerous aspects of the problem might be considered, such as the recent Alaskan finds in the Cape Denbigh area, the large workshop site on Manitoulin Island in the north of Georgian Bay in southern Ontario, or the La Jolla Terrace remains in southern California, but the subject in general has become so big and complex in recent years that it is not possible in the available time to do more than limit one's self to a few specific items. So I will confine my remarks to two main problems: the relation of the Plains and Great Basin-Plateau areas; this involves the questions of cultural differences, chronology—both geologic and that determined by radiocarbon—and migration routes; and the sequence of complexes in the Plains area. The latter, of course, also includes the features of stratigraphy and Carbon 14 dates.

In the early 30s Steward and Cressman independently arrived at the hypothesis that west of the Rocky Mountains there developed a series of types of as yet undetermined sequence whose general pattern differed markedly during its early phases from the Folsom and related forms east of the mountains. Most agreed with that view but disagreed with the suggested age. The general opinion of those working in the Great Basin was that it was occupied by man at some time in the early Post-Pluvial and in association with a now extinct fauna. Steward estimated (1937), 10,000 to 15,000 years for his oldest Black Rock Cave material in Utah. Cressman was more conservative and using estimates based on the eruption of Mt. Mazama considered his Paisley Cave and the Wiekup Dam Site artifacts as being between 4,000 and 10,000 years old (1940) with the probable age being nearer the smaller figure. His Fort Rock Cave specimens found

beneath the Newberry pumice were regarded as younger but still several thousand years old. Gypsum Cave in Nevada was accepted as being of considerable antiquity and Harrington suggested a date of 10,500 years ago for its occupation. Ventana Cave in southern Arizona with its sequence of cultures has posed a problem because of unconformities in the deposits. The bottom level containing materials which Harry ensis the Ventana Complex has been variously dated at from 10,000 to 8,000 years ago. It certainly represents an older, moister period than subsequent levels and the artifacts were in association with various extinct animal remains. The upper levels correlate with the Cochise and probably date from about 7,000 years ago to recent times. The cultural materials also indicate a certain relationship with those from the California Desert and Pinto Basin. As most of you are aware Carbon 14 dates obtained by Dr. Libby give us a much clearer picture than heretofore. The materials from Fort Rock Cave in Oregon, on the basis of the sandals made from shredded sagebrush bark, indicate an age of approximately 9,000 years before the present. The final Newberry eruption, however, appears to have been at about 2,000 years before the present. There are four cones, though, and it is not certain from which the cave pumice came. The Mt. Mazama eruption is given as approximately 6,450 years ago. Gypsum Cave dates are approximately 10,450 and 8,520 before the present.

What may well be the key to the whole problem of developments in the Great Basin area is Danger Cave near Wendover, Utah. Dr. Jesse D. Jennings of the University of Utah dug there in the seasons of 1950-51-52 and obtained a mass of interesting material. The cultural debris there ranges from 11 to 14 feet in depth, the bottom of the midden resting on an old beach of Glacial Lake Stansbury. On the top of the beach gravels, in the basal layer, were several thin milling stones somewhat suggestive of those of the Cochise. Continuing on up through the various layers, which apparently record a series of frequently recurring occupations, were a series of artifacts which definitely belong in the Nevada-Mohave-Pinto Basin-Cochise pattern, but which also, in the opinion of Cressman, are wholly in the Great Basin tradition. Those of you who heard Jennings last spring at the meetings of the Society for American Archaeology at Columbus, Ohio, may recall that he stated he found no sharp cultural change in the several layers. The differences are mainly those of percentage in the various artifact types. The completion of his studies will undoubtedly do much to straighten out the relationships in the area. What probably will be particularly significant is the series of dates from the cave. The floor on which the midden rests consists of two feet of sand deposited on cemented gravels. Charcoal, wood and mountain sheep dung were found in the sand layer. Carbon 14 tests of the dung gave an age of approximately 11,450 years and the uncharred wood approximately 11,150. In the sand stratum two inches above the gravel and below the sheep dung were two small fireplaces and some nondescript tools. Unquestionably man was in the district prior to the time indicated by the two dates. Charcoal from just above the sand in the bottom refuse dated approximately 9,789. Charred rat dung from a thin layer of charred rat dung and ash found on top of the sand tested approximately 8,960. Charred bat guano, plant stems, and twigs from a level four feet to four feet four inches below the top of the midden gave approximately 3,819 years and similar materials from one foot six inches to two feet below the surface ran approximately 1,930 years before the present.

The evidence suggests that the shrinking of Lake Stansbury following the climax of the Mankato period in late Wisconsin times uncovered the mouth of the cave and made possible its use by both men and animals. The beach level, however, is that of the 110-foot level of the lake which indicates that it was considerably later than that of the maxi-

mum reached during the Wisconsin glaciation. Geologically it would seem that the first occupation was toward the end of the early Post-Pleistocene or Anathermal age. This is somewhat at variance with the indications of the Carbon 14 dates which in general have suggested that approximately 11,400 to 11,000 years before the present was the time of the Mankato. It is interesting to note, however, that bat guano mixed with the gravels of an old beach of Lake Labontan in a cave in the Humboldt Valley in Nevada gave a Carbon 14 date of approximately 11,199, while the late Pleistocene shrinkage of Lake Texcoco in Mexico started approximately 11,000 years before the present. The widespread indications of the phenomenon are significant but unfortunately there is not time to discuss it.

This has been a most sketchy consideration of the Great Basin, but in passing it may be said that there is evidence for a widespread basic cultural pattern which is distinct from and until very recent times shows little relationship to the cultures east of the mountains. In the early stages the Great Basin peoples seem to have been primarily food gatherers more than hunters.

East of the mountains there are the Sandia, Folsom, Plainview, Yuma, and subsequent complexes. Recently, however, some materials related to the Cochise have come to light along the Rio Grande in the vicinity of Albuquerque, New Mexico, and there are others which suggest connections with the Clear Fork of the Texas area. For the purpose of the talk this evening the work of the Texas Memorial Museum at the Clovis sites in eastern New Mexico is significant. Work there has revealed three definite cultural horizons in clearly defined strata. The lowest level, consisting chiefly of sand, produced several crudely shaped and beveled bone tools and contained in its upper portion examples of the large fluted points which have been designated Clovis. Mammoth bones were the most abundant animal remains, although there was some showing of extinct bison. Bone implements have also been found in association with a Pleistocene fauna in the Potter Creek Cave, California, in a Pleistocene fossil bed in Mexico, and also under circumstances suggesting some relation to the Wisconsin period in Oregon, Nevada, New Mexico, Manitoba, and Florida. Major Webb had indications of bone implements preceding those of stone in some of the Kentucky Archaic sites. Hence, as Krieger suggests, it is possible that there was an early, widespread bone industry in America but its relation to the stone industry is not clear. Closely related to the evidence for the oldest horizon at Clovis is the discovery near Naeco, Arizona, of five Clovis fluted points in association with mammoth remains. The find in Mexico of mammoth and associated artifacts is in the same general category, although there were no fluted points.

The second horizon at Clovis occurs in a layer of diatomaceous earth which in places contains some fine sand, some clayey material, and considerable organic matter. The most abundant bones are bison and the associated projectile points are of the classic Folsom type. This deposit and its cultural material is practically identical with that at a site near Lubbock, Texas. The latter is significant because it yielded a Carbon 14 date of approximately 9,883 and serves to establish the chronologic position of the Folsom fluted complex.

The third horizon consists of a layer composed chiefly of sand dark-colored by organic matter, some clay, and some caliche. The bones are mainly bison and the characteristic artifacts are the Eden and Scottsbluff types of Yuma points accompanied by a few Plainview forms. Comparable but somewhat later evidence found at a site near Helena, Montana, was described in the October (1952) issue of *American Antiquity*. Richard G. Forbis and John D. Sperry report on stratification which had Folsom fluted in the bottom level, Scottsbluff Yuma in the stratum above, and in the top layer

artifacts resembling those from Signal Butte II. The Scottsbluff forms are similar to one variety found at the type site but are not what is commonly thought of in connection with that name. The evidence at Helena, however, does tend to corroborate that found at Clovis.

Reference was made to a Plainview point in the Clovis deposits. The proper place of the Plainview in the overall sequence is somewhat in doubt. At the type locality the specimens were in association with an extinct species of bison. It was a kill, however, and not much was found in the way of an implement complex. As a result of the River Basin Salvage program several important sites were found in western Nebraska, in the Lime Creek district, and at one of them there is a definite Plainview horizon. E. Mott Davis of the University of Nebraska has been digging there for the last three field seasons and by the time his work is completed he should have a much better understanding of the Plainview. Present indications are that it may have had late contemporaneity with Folsom, but it undoubtedly continued on after Folsom passed from the scene. The site is located on a terrace which has been correlated with the Mankato substage of the Wisconsin. The upper part of the fill above the Plainview level is a loess which is attributed to late glacial times. Thus far there is no age for the deposits as there has not been a Carbon 14 test on material from that level. There may be an age indication from another source, however. At a site in the Angostura Reservoir area in southwestern South Dakota a Plainview point was found in association with other forms of projectile points in a cultural stratum yielding charcoal which gave an age of approximately 7,715 before the present. Other points found there are similar to a series from a site in the Agate Basin in eastern Wyoming almost due west from the Angostura area.

The Wyoming points are of interest for another reason. They are very suggestive of some of those found in association with the Denbigh Flint Complex in Alaska. They suggest some relationship to some of the Yuma forms but just what it may be is not clear at this time. That they fall in the same general period is indicated by the fact that at the Horner site near Cody, Wyoming, a Yuma complex containing both Eden and Scottsbluff projectile forms was found and a Carbon 14 date of approximately 6,876 was obtained for it from charred animal bones. The Horner Site was first worked by Dr. G. L. Jepsen of Princeton, and Dr. Loren C. Eiseley

of the University of Pennsylvania. During the 1952 field season a joint party representing the Smithsonian Institution and Princeton University under the leadership of Dr. Waldo R. Wedel and Dr. Jepsen worked there and obtained additional material. Dr. Libby now has charcoal from the site and there should be additional dates for it. Not far from Cody, almost due south in the Eden Valley, is the Finley Site which is the type locality for the Eden type Yuma. On purely geological evidence Dr. John H. Moss has dated it as of about 7,000 years old. In that connection it is interesting to note that Moss suggested the Finley Site was on the route from the Plains to the Great Basin and that cultural influences and people may have passed that way moving westward from the Plains. As suggested earlier, present evidence does not show that either took place until very late times.

There are other relatively old remains in the Wyoming area but they hardly fit into the Paleo-Indian category. At several sites in the Keyhole Reservoir basin in the drainage of the Belle Fourche River points similar to those in Signal Butte I were found. Charcoal from one of the sites dated approximately 2,790 while Signal Butte I shows approximately 2,950, which gives rise to interesting implications.

In contrast to the Great Basin the prevailing economy east of the mountains during the early periods appears to have been predominantly hunting. There undoubtedly was some gathering and there are certain evidences of grinders for wild seeds but game was the primary base of subsistence.

Now to return briefly to the subject of migration routes. Until Carbon 14 indicated a need for revising our concepts it was generally agreed that the peoples first spread down the eastern edge of the Rockies and subsequently into the basin. That was based on geologic evidence for an earlier opening of routes east of the mountains. Previous theories in that respect may still prove to be sound. When the first migrants to the New World drifting southward from Alaska reached the Missouri River in what is now western Montana some of them may well have turned and followed along its valley upstream to the passes leading to the Snake River plain and the northern Great Basin, arriving in that area at about the same time others reached Wyoming and the western Dakotas. At present, though, we should at least revise our ideas to the extent of recognizing that developments in the two areas were for the most part contemporaneous and along different lines.