Upper Paleolithic Notation and Symbol

Articles which recently appeared in Science and in the Boston Globe reported that examinations of stone and bone fragments in Upper Paleolithic levels of Europe will force revisions in concepts of the development of writing in Homo sapien sapien cultures between 34,000 B.C. and 10,000 B.C.

Alexander Marshack, a Research Fellow of the Peabody Museum at Harvard, described his findings in a paper delivered to the American Anthropological Association meeting in Toronto last December. The paper also appeared as an article in Science (November 24, 1972, Vol. 178) from which the information presented here was taken.

The author performed microscopic analyses of over 1,000 whole and fragmented artifacts over a seven year period, proving the existence of over a dozen classes of symbol usage, each with its own purpose and semantic content. Marshack notes that the "separate development of these diverse systems, representing the first art and symbol of modern man, can be tracked through the full 25,000 year period of the Upper Paleolithic and into the Mesolithic period that followed, circa 8,000 B.C. to 5,000 B.C."

Marshack uses a late Upper Paleolithic bone tool, upon which he found "complex notation and the periodic use of engraved animal images," as the focal point of the article. The introduction of notation and animal imagery began c. 32,000 in Cro-Magnon hunters of the Upper Paleolithic period. Between 15,000 B.C. and 13,000 B.C., their use becomes more apparent in France and Spain and has been clearly documented. A close analysis of these latter artifacts has made it possible "to begin the study of the
relation among these classes of symbols and to assay some of the contents in their use and association."

"The bone tool described in the article comes from the La Marche site in Central France and was found at Magdalenian levels c. 13,000 B.C. While other artifacts discovered there had clear, varied, etchings of human and animal images on stone, the bone tool came from an earlier level. Initially it was written off as an uninteresting piece but later microscopic examination "revealed an unforeseen cognitive complexity, which became increasingly apparent as the analysis proceeded." The main face of the tool has rows of tiny lines which run at different angles to each other and are of various shapes, suggesting the carver turned the object as he worked. Analysis showed the object had been turned seven times, although probably more for comfort and ease of handling rather than for an alliterative or numerical purpose.

"Subsidiary markings also appear some-what apart from the main sections and their nature leads the author to reason they either initiate the notation or "act as a terminating period or set." Marshack concludes the markings are not random or decorative but "rather an intentional accumulation of sequential sets divided into subsets and therefore (although not necessarily arithmetic) 'sums'! The interlocking data suggest notation."

The bone, 21 centimeters long, has a jagged, horizontal breakage at midbone. Analysis of the edge suggests it was split by leverage applied at each end rather than accidental smashing. The edge was also smoothed and shaved to a fine point. Interestingly, the bone had two periods of usage. Each time it served as both a working tool and as a surface for notation. Yet Marshack concludes the tool was engraved by the same hand and in a similar cultural context.

"The bone has a remarkable accumulation of notational markings as well as two horses. The animal drawings are quite impressive. One horse appears as a pregnant mare with a protruding belly and a round head. Marshack's examination show the drawing was completed in stages. Perhaps more important than the animal drawings themselves are their relationship to the numerous sets of lines surrounding them. Marshack discounts the theory the lines represent hunting tallies but instead states the tally marks "seem more applicable to periodic ritual or sacrifice at specialized times."

Marshack delves into a fascinating discussion of deducing the meanings of the line sets and subsequent interpretations. He concludes that the "open variability of the ... notations suggests that they were used by the engraver alone. A tradition in which widely understood, phenomenologically related signs and sets connected with lunar periodicities were accumulated had a great potential for developing into pictographic writing and, eventually, arithmetic." This well-written, well-illustrated article deserves a close study by anyone interested in the development of prewriting and the thought patterns of early man.

Jeffrey B. Aronson

Burial Site on Boston Harbor Road

The existence of a 4,600 year old burial site was announced this summer after a two-year excavation. Located on Peddocks Island in Boston Harbor, the site was uncovered by amateur archaeologist Josephine Walsh.

As reported in the Boston Globe, the site was discovered in April, 1971 by Mrs. Walsh. She did not publicize her find for fear that pothunters would strip the site, owned by the
regional Metropolitan District Commission. Mrs. Walsh discovered the site by accident while "digging for soil for her rose bushes." In the process, she unearthed a jaw bone and other skull bones. She put the bones in plastic containers, made sketches of the site, and got in touch with Dr. Dena Dincauze, who was then assistant curator of North American Archaeology at the Peabody Museum.

One week later, Mrs. Walsh, Dr. Dincauze, and Emilio Favorito, a Harvard student viewed the site. The three worked for a day removing a layer of shells - "relics of an Indian clam bake" - and debris which covered the grave. Beneath the debris were a bundle of bones. As the pit was too small for the body to be fully laid out, it was probably a secondary burial site. Many of the body's bones - a male American Indian, aged 50-60 years old at death - were missing and/or broken.

According to Catherine Papadopoulos, a Harvard graduate student in Anthropology, the man had a mild case of arthritis and his teeth were badly worn. Interestingly, the teeth showed no evidence of decay. Dr. Dincauze concludes that the man was "in fairly good physical condition... lived well into middle age, and therefore, was probably one of the elders in his tribal grouping."

The average life-span of Northeastern Indians during the pretechnological period has never been calculated. However, the average life-span prior to the technological era was but 35-40 years.

Dr. Dincauze believes the island was actually connected to the mainland 4,500 years ago or had only recently been separated. Peddocks Island, the second largest of the Harbor Islands, lies but a quarter mile from the peninsula that forms the town of Hull. The island had no electricity, telephones, few paved roads and no public services. Thus the surrounding sea would have been shallower and warmer than in modern times. The island would have been marshy, and thus the inhabitants would have chosen hills for campsites due to the better drainage. Peddocks Island would have been occupied in the spring or summer by hunter-gatherers. Dr. Dincauze asserts "they subsisted on good edible foods. They ate berries, fruits, leaves and roots. Their meat diet consisted of mailny deer. They also ate shell fish, including clams, oysters, and lobsters. There is no evidence that they cultivated anything."

Dr. Maurice Robbins, President of the E.S.A.F. and the Massachusetts State archaeologist, called the discovery "the oldest dated non-cremation site in New England. His conclusion was supported by Dr. Stephen Williams, curator of the Peabody Museum, who said he was unaware of any older uncremated burial site in New England.

A most gratifying result of the excavation was the excellent cooperation of the Metropolitan District Commission in not disclosing the existence of the site until after a complete salvage excavation. In addition, the MDC covered the site after the work was finished to prevent potential looting.

---

**MAN IN THE NORTHEAST**

*New England's Own Best Seller*

Man in the Northeast is now entering its third year of publication and we extend our congratulations to Howard R. Sargent on the success of this journal. It is published twice a year and can be ordered at $6.00 per year for individuals, and $8.00 for institutions. Articles range from Indians studies to the recent past, chosen by an editorial board which
includes, among others, Bill Havi-
land of UVM, Gordon Day, and Dean
Snow.

This professional publication de-
serves support. Back issues are
available and can be ordered, along
with new subscriptions, from Man in
the Northeast, P. O. Box 148, Fitz-
william, NH 03447.

1971 Nos. 1 & 2.
1972 Nos. 3 & 4.
1973 Nos. 5 & 6.

FROM OUR TABLES OF CONTENTS:

The Belcher Island Murders: An "Anti-
Nativistic" Movement. Dryfoos, No. 2.

Early Man in the Northeast and the
Late Glacial Environment. Funk, No. 4.

Types and Attributes in Iroquois

The Ethnohistorical Implications of
Early Delaware Linguistic Mater-
ials. Goddard, No. 1.

Radiocarbon Dates for a Windsor
Occupation at the Shantok Cove
Site, New London County, Connecti-
cut. Salwen and Ottesen, No. 3.

Problems of Urban Historical Archae-
ology. Ingersoll, No. 2.

The Eastern Boundary of Iroquoia:

The Rune Stones of Spirit Pond, Maine.
Haugen, No. 4.

Mermen, Mermaids and Indians: A
Psychocultural Interpretation.
Dryfoos, No. 3.

Prehistoric Indian Skeletons from New

The Atlantic Phase: A Late Archaic
Culture in Massachusetts.
Dincauze, No. 4.

Preliminary Report on Excavations
at Cow Point, New Brunswick.
Sanger, No. 1.

HELP BUILD VAS MEMBERSHIP

New members are always welcome: if
you know of interested individuals,
send their names to:

Richard Adams
Membership Secretary
% Commodore Restaurant
Vergennes, VT 05491

EASTERN STATES ARCHAEOLOGICAL
FEDERATION
ESAF

The Annual meeting was held in
Harrisburg, Pennsylvania, November
10 through 12. The Federation is an
association of amateur Societies,
like the VAS, embracing the eastern
Atlantic from Florida to Quebec.
Unlike Vermont most groups at the
state level are associations of
mostly independent chapters. The
VAS was represented for the first
time and an oral report was given at
the general business meeting. Items
of note at the business meeting were:
"Doc" Robbins, mentor, visiting
lecturer and friend of the VAS is
President of the Federation for the
coming year. He hopes to organize
divisional meetings (ours would em-
brace the New England states) this
year, thus making it possible for
us to at least meet some of our
closer neighbors. Secondly, Louis
A. Brennan, New York State Archaeo-
logical Society, is editor of a new
journal to appear this year. The
first issue will focus on paleo-
indian material. Third, and a bit
of a shock to yours truly, is that
many of the states in the ESAF have
societies no larger than ours, with
many chapters and very active, not
only in excavation and collection,
but as participants in establishing
protective legislation.
The papers given will be abstracted as usual in the annual report which will be available to us at our annual meeting in the Fall.

Two areas of concern to most present were the accelerated attrition of sites through construction; industrial, private, Federal flood control and highway. Many groups are working on partially destroyed sites just feet away from the bulldozers.

The other concern is lack of communication between neighboring states working in each others state without permission or knowledge. An ad hoc committee was formed to study this problem, which will report to the Federation at the next meeting with a plan to overcome this problem.

The next meeting will be in Delaware, and the following year Maine will host the meeting.

-Edgar Bacon

ESAF ANTIQUITIES RESOLUTION

The following resolution was adopted by the Executive Board of the Eastern States Archaeological Federation at their November meeting, and they requested each member Society to publish it for comment by the membership.

Any statements sent to the VAS, Waterman Building, University of Vermont, Burlington, will be forwarded to the ESAF.

RESOLUTION: CURBING COMMERCIALIZATION OF ANTIQUITIES

WHEREAS, the existence of a market for artifacts, whether objects of art or of antiquity, tempts unscrupulous persons to steal such objects from their lawful owners, to

THEREFORE BE IT RESOLVED:

1. That no archaeologist (professional, non-professional, or amateur) or museum should buy any artifact without first obtaining proof that it had been legally and ethically acquired by the current and previous sellers, and
2. That persons found to be dealing in stolen or fraudulent artifacts should be prosecuted, and
3. That publicity be given in every possible way to these policies.

ROMAN ARTIFACTS FROM BADEN-BADEN

A Photographic and slide display presented by Matthias Riedel, Department of Roman Archaeology, University of Freiburg, Freiburg-im-Breisgau, Germany.

BE SURE TO SEE IT AT THE ANNUAL MEETING

GET IT FREE FROM VAS

The VAS has received copies of Floyd G. Loundsbury's "Iroquois Place-Names in the Champlain Valley", courtesy of the SUNY State Education Department in Albany. Copies are free to members and orders should be sent to:

Jeffrey B. Aronson
Dean's Office
College of Arts and Sciences
University of Vermont
Burlington, VT 05401
An Old Tavern Dig

(Ed. Note: Last April we received a note from students at the Mountain School in Vershire, Vermont, that they were excavating a colonial or 19th century site, and they requested assistance from the Society. We supplied minor bits of information and the class, under the guidance of their teacher, Ms. Kay Rittent, took it from there. This article was composed by Harriet Macy, Bill Allen, Christopher Sloan, Peter Donahue, Michael Linehan, Huntly McNiven, and Nat Conrad. Our congratulations to all these students.)

This spring our Anthropology class decided to have a dig because there used to be an old tavern not far from the school. We thought that we might find interesting things from the 18th and early 19th century.

We looked at the area where the tavern had been. Three of us followed the foundation around and made a map of it so we could locate objects we found. The class divided into groups of two or three and chose locations for digging. One group worked around the fireplace, another at the front steps, one group inside the kitchen area and one outside the kitchen area.

Michael, Bill and Christopher started digging at a pile of bricks which proved to be the house fireplace. There was a slab of slate approximately 6 x 24 x 60" set on top of another slab with a brick and mortar hearth on top. Extra bricks found in the pile were black on only one side and all hand-made. Here we found spoons, plates and an inkwell, one of the few unbroken glass pieces.

Harriet started digging at the steps but soon moved to the right where she saw some interesting surface items just outside the kitchen area. Christopher, Bill and Michael soon joined her. They found a broken Munn's (word obliterated) of opium bottle, various chips of china, metal buckets, and farm tools. Also found were medicine bottles, stoneware plates made in England, scythe blades, old forks, spoons, plates, cartwheels, and broken crocks. It looked like a possible trash area.

Huntly dug in the area around and under the tavern steps. He dug along the foundation behind the steps, then along the edges and finally under the steps. Along the foundation behind the steps were found a lock, and key, on the left side were found a stove grate and a salt cellar, a chain, a file. On the top of the bottom step was found a double-bladed axe head. Along the foundation were also found spoons, a steel knife, nails and bolts. Under the steps were several pieces of pottery. The steps were solid slabs of granite.

Peter and Nat decided to dig in an area that seemed to be an addition to the house, possibly the kitchen. They roped off an area 10' x 4' and started digging. They found most of the parts of a broken stove, a broken teapot (which they put together) lots of broken china, some of which came from Germany and some from England. They found a cast iron cooking pot. In this area several objects with dates on them were found: an apple peeler patented in 1856 and a trap patented in 1890. Several bits, horseshoes and other horse gear were found.

Some of the most interesting objects found were tools: tiles, saws and scythe blades, axe heads and shovels, along with chains, hinges and locks. Among our hinges are some two feet long and some curiously curved hinges shaped somewhat like a "J".
As we found things we displayed them on shelves with a card to show where they were found in relation to the map. As visitors came during the first few weeks they helped us to identify items and told us more about the period of time we were studying. One identified some of our nails as rose-head nails dating somewhere around the 1790's. It seems that the tavern was quite active during the 18th century, complete with livery stables and a blacksmith shop. During the last century the surrounding buildings were allowed to fall down and the house was used as a home until it too was abandoned in the 1930's.

KENTUCKY ARCHAEOLOGICAL ASSOCIATION PUBLICATION

The Kentucky Archaeological Association announces the publication of Bulletin 2; a Bibliography of Kentucky Archaeology by Mary L. Bowman, 1973.


Please fill out and return this RESERVATION form.

The cost of both brunch and dinner will be $6.00. Please indicate the number of people attending and their preference for dinner.

CHICKEN DINNER □  HAM DINNER □

NAME

ADDRESS

NUMBER OF PEOPLE ATTENDING

Please return this form to Jeffrey B. Aronson, Vermont Archaeological Society, 128 Colchester Avenue, Burlington, VT 05401.

This publication may be purchased for $3.00 from:

Vernon White, Secretary-Treasurer
Kentucky Archaeological Ass'n.
Dept. of Sociology and
Anthropology
Western Kentucky University
Bowling Green, Kentucky 42101

The Kentucky Archaeological Association is a fairly new organization composed of professionals and non-professionals who are interested in promoting a more scientific study of the archaeology of Kentucky.

The Kentucky Archaeological Association will normally publish two archaeological bulletins and some newsletters each year pertaining to Kentucky archaeology. Membership dues should be sent to the secretary-treasurer. The annual membership categories are as follows:

1. Individual $5.00
2. Family 7.00
3. Contributing 15.00
4. Institutional 6.00