THE NEWSLETTER

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(Published from time to time. Chairman of the Society, Alan R. Duke. Editorial Committee, H. Mewhinney, L. E. Aten, Ivan Newlin.)

THE ORIGIN OF CRESCENT-SHAPED GORGETS

L. E. Aten

At a recent meeting of the Houston Archeological Society, a short discussion arose after the presentation of a report on a historic Louisiana site concerning the origin of lunar or crescent-shaped silver gorgets commonly seen suspended about the necks of some historic Indians in the Southeast and other portions of the United States.

The following brief paragraph, concerning the origin of this interesting and fairly common artifact is quoted from Osceola: Portraits, Features, And Dress by John M. Goggin, Florida Historical Quarterly, Volume 33, Number 3-4.

> Crescent gorgets. These lunar or crescent-shaped silver pendants were quite popular among the Southeastern Indians until the beginning of this century. Originally gorgets of this form were 18th century European officers' insignia, being derived from earlier armor. They were first given by the English to Indian chiefs as recognition of rank. Later, as these became popular, they were made for general Indian trade and eventually were made by the Indians themselves.

ARCHEOLOGICAL TOOLS AND DATING METHODS

Alan R. Duke

Science is providing the archeologist with a growing list of methods to assist him in dating and identifying material from the past. The following procedures are being used or are being developed:

Radiocarbon

Principle: All living things contain Carbon 14. After death the quantity of Carbon 14 diminishes in a definite ratio with time. The C-14 remaining can be measured to provide the age of the specimen.

Application: Dating of charcoal, bone, wood, shell.

Factors Leading to Inaccuracies:

(a) Improper selection of samples.
(b) Improper preparation of samples.

Dendrochronology

Principle: Tree and shrub growth rings vary with rainfall. By comparing rings of specimen in question with rings of a master specimen, one can establish the date of a wood sample.

Application: Dating of wood (where growth rings are visible).

Factors Leading to Inaccuracies:

(a) Errors in master charts.
(b) Variations in growth rings of specimen due to temperature, locality.

Radioactivity

Principle: Buried bone and teeth absorb radioactive materials from the ground so that radioactivity increases with the passage of time. This radioactivity can be measured and related to the age of the specimen.

Application: Dating of bone and teeth.

Factors Leading to Inaccuracies:

(a) Variation in absorption rate of bone.
(b) Amount of radioactive material (uranium) in soil.
(c) Permeability of the soil containing the bones.
(d) Variations in rainfall and climate.

Obsidian Dating

Principle: A freshly exposed surface of obsidian will take up water from the air to form a surface layer. This surface differs in density and in refractive index from the rest of the obsidian. The thickness of this layer is proportional to the age of the specimen - the thicker the layer, the greater the age.

Application: Dating of obsidian flakes and artifacts.

Factors Leading to Inaccuracies:

(a) Rate of layer formation varies with temperature and composition of obsidian.
(b) Mechanical erosion (weathering) may result in reduction in thickness of layer.
(c) Exposure to fire alters layer.

Glass Dating

Principle: Most glass will weather in time, including specimens buried in the ground. The thin layers on the surface of the glass can be counted much like tree rings to give an estimate of the elapsed time since the glass was buried.

Application: Dating of glass from historic sites.

Factors Leading to Inaccuracies:

(a) Improper preparation of samples.
(b) Loss of weathered layers through cleaning, etc.
(c) Time lapse before glass is buried.

Proton-Magnetometer

Principle: Disturbances of the earth resulting from burials, foundations, etc., cause variations in the earth's magnetic field. Use of a super-sensitive magnetic detector permits detection of the disturbed areas.

Application: Discovery of sites not readily detectable on the surface.

Factors Leading to Inaccuracies:

(a) Metal cables, iron fragments, magnetism in some igneous rocks make operation of the magnetometer difficult.

Thermoluminescence

Principle: With the passage of time radioactive decay of pottery constituents occurs. The light on luminescence, due to this decay, given off when the pottery is heated to 500 degrees Centigrade, can be measured and related to the age of the pottery.

Application: Dating of pottery.

Factors Leading to Inaccuracies:

(a) Method determines only the time elapsed since the pottery was last heated to high temperatures.

Soil Analysis

Principle: Perishable materials buried in the soil leave traces of chemicals long after their physical form has been destroyed. The presence of these chemicals in a particular place can be detected by analysis and the original materials identified.

Application: Finding and identification of buried perishable materials.

Factors Leading to Inaccuracies:

(a) Contamination of samples from surrounding soil.

PREHISTORIC LEVEES

W. L. Atwood

Remnants of prehistoric levees are still to be found on Cedar Bayou, extending from Roseland Park to Negrohead Lake. The theory that these formations were caused by the flooding of the stream is held by many learned scholars and is used to deny the evidence that they represent the work of man. I agree that it is a good one for those who do not care to take the time and effort to find out for themselves. That theory comes in pretty good when someone asks the question: "What caused this high ground on the banks of the stream?" It would appear rather stupid for someone that claims to be an expert to reply, "I don't know." Hence, the theory can always come in handy in such cases and the reply would sound logical that it was caused by the streams flooding. If the person who asked the question was a student, then he, or she, later became an adult he would join that growing ranks who accepted the idea as facts.

About ten years ago that was the answer that I got when I mentioned these levees on Cedar Bayou. Since that time I have walked these levees many times when the tide was low, searching for shell middens and artifacts that were below present sea level. I found that at places these levees covered middens with pottery in them. Also I found that there were strata of shell separated by layers of sterile clay. The height of the levee varied to such an extent that it was impossible for the soil to have been laid down by flooding. At one place it would be only two feet high, while another would show ten feet or more.

Several years ago I took some tools to a place near Devil's Elbow and dug out a section of a cedar tree that had been used, along with some fifty others, as a foundation of a section of levee that was passing over a section of marshy ground. I thought it was possible that some early pioneers had constructed this levee for mules to walk on when pulling sail boats up the stream. I wanted to see if these cedar trees had been cut with a saw or steel axe. The method of felling the tree was to burn it at the base until the remaining portion could be broken. A section showing this burn and break was sawed off and sent to Dr. Carey Croneis, with the geology department of Rice. Yesterday, March 28, I went to the same site and obtained some more of the cedar wood that was used in the foundation of the levee. I had hoped to be able to count the number of trees, but as the tide was rather high this was not possible.

On the basis of observations made over twenty-five years, I feel certain that these levees were made by Indians. The soil used in the construction did not come from salt water, as there is no evidence of red clay in any section of the levees. They are always constructed at a point where the stream is on the east side and a wide marsh on the other. As red clay can be found on all of the aboriginal spoil banks along the bayou, it is rather obvious that this clay came from soil beneath salt or brackish water. Water coming from some of the oil wells in the Goose Creek field will stain the soil so that it resembles the red clay that comes from salt water. This red ocher is water-soluble and in some cases the red coloring leaches downward, leaving a gray soil above the red.

I have not been able to find a trace of a levee, or of the red clay, at a point upstream higher than the uppermost shell midden. Instead of levees being built up by the flooding of the stream, just the opposite occurs. The top of the levee gradually washes away. I dug through one section and found underneath carbonized marsh grass and the same type of soil found in some marshes today. There is so much carbon in it that one might get the idea that it was saturated with crude oil. One such levee was built across Cedar Bayou and the stream diverted to a point approximately half a mile to the east of the old bed.

A MEDITATION ON MOUNDS

H. Mewhinney

I, for one, stand in small awe of college professors and I shall never contend that Wisdom has found her final habitation in the anthropology faculty at the University of Texas.

Nevertheless, it might be suggested to the members of our Society that, for whatever it is worth, professorial opinion is nowadays unanimously against the idea that any aboriginal spoil banks, levees, canals, fish ponds, or temple mounds exist anywhere along the Gulf Coast of Texas, much less in Harris County.

This is utterly at variance with what earlier professors thought some years ago. Under Aristotle's Principle of Identity---that A cannot be both B and Not-B---it must be accepted as incontrovertible proof that some professors are sometimes wrong. Either some of them were wrong then or all of them are wrong now. Which---it is not for us to say.

Thirty-odd years ago, when J. E. Pearce first set up an anthropology department at the University of Texas, he used to drive into the countryside on week-ends and find mounds all over the place. His reasoning may possibly have been that, if mounds graced the landscape of Ohio, then in all fairness there ought to be some in Texas, too. And indeed there were and are a few in the northeastern part of the state.

But as time went by the geologists, the mammalogists, and the ecologists gradually convinced the archaeologists that those protuberances on the landscape consisted chiefly of:

1) Natural levees, built up as the creeks deposited silt. (See Richard M. Pearl, "College Outline Series: Geology, "1960, Page 109.)

2) Dunes, either of sand or of clay, formed by the wind. (See T. N. Campbell in "A Review of Texas Archeology, Part One," 1958, Page 147. See also Pearl, opere citato, Page 155 et sequentes.)

3) Burnt rock middens, formed in part as cooking fires cracked successive slabs of limestone. (See Dee Ann Suhm in "A Review. . ." et cetera, Page 68.)

4) Swellings formed as pocket gophers honeycombed the soil in search of nutriment. (See Campbell, opere citato, pagina citata.)

5) Residual and miniature hillocks, formed by differential sheet erosion. (See Pearl, opere citato, Page 107.)

6) All manner of protuberances formed by agriculturists of Caucasoid race, equipped with fresno scrapers and teams of mules or, as in the Post-Pearce Aspect, equipped with bulldozers.

Pearce was far from alone in finding all those aboriginal structures. Still earlier, Frank Hamilton Cushing---the same fellow who spent five years with the Zunis---was finding aboriginal canals and fish ponds up and down the Florida coast. But: Tempus edax rerum. The year 1952 came along and John W. Griffin, by that time the archaeologist for the Florida Park Service, published a paper in "Archeology of Eastern United States" which disdained so much as to mention those aboriginal fish ponds.

The long and short of it is that in 1962 the canons of proof for archaeology are stricter than they used to be. More credit is given to the pocket gophers and less to the aborigines.

HOUSTON ARCHEOLOGICAL SOCIETY

Treasurer's Report - Fiscal Year
June 1, 1961 - May 31, 1962

Balance on Deposit - First Pasadena State Bank,
Pasadena, Texas on May 31, 1962 - $241.04

Receipts

1961 - 1962 Dues	$244.05
Money collected for Symposium dinner	37.26
Total receipts	$281.31

Disbursements

Oklahoma Anthropological Society Dues 1961-1962 1962-1963	$ 7.00
T.A.S. annual dues, 1961 and 1962	20.00
Newsletter expenses	15.78
Post cards, stationary, ballots, etc.	43.71
Symposium dinner expenses	71.41
	$157.90

Balance on hand - June 1, 1961	$117.63
Total receipts, June 1, 1961 - May 31, 1962	281.31
Total to be accounted for	$398.94
Total disbursements	157.90
Balance on hand as of June 1, 1962	$241.04

Charles B. Fleming
Secretary-Treasurer