

Alabama Archaeological Society

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Associate Editors
Bart Henson
Dorothy Luke

STONES & BONES NEWSLETTER

Editor
Amos J. Wright
2602 Green Mountain Rd.
Huntsville, Alabama 35803

MEMBER OF THE EASTERN STATES ARCHEOLOGICAL FEDERATION

NEW TECHNOLOGY FOR ARCHAEOLOGICAL SURVEYS

In last month's newsletter an archaeological survey along the South Texas coast by ship-borne magnetometers was reported. Similar magnetometer surveys in Alabama waters are also being conducted.

N. Read Stowe, archaeologist at the University of South Alabama, has forwarded information on one survey in which he actively participated, and co-authored the report. (Report abstracted.)

THE SURVEY

Four field surveys were conducted in a small section of Mobile Bay during May 15 and 16, 1974. These surveys consisted of: (1) a magnetic anomaly survey utilizing a magnetometer and a strip chart recorder; (2) a sub-bottom structure survey utilizing a multi-tip sparker-array and a graphic recorder; (3) a bottom surface survey utilizing a recording fathometer; and (4) a target identification survey, for above bottom targets only, utilizing conventional scuba diving. The actual field survey took one and a half days and amounted to 15 man-days (one man day = 12 hours) of work while the total survey, including pre- and post-survey activities but not travel time, amounted to 31 man-days of work. The University's vessel, Pisces, was used as the survey platform.

The magnetometer was set at a sensitivity level of ± 50 gamma (100 gamma full scale on the strip chart recorder) during a routine transverse run. If a target greater than 50 gamma was encountered, the sensitivity level would be immediately switched to ± 250 gamma range or greater if necessary. The instrument has a capability of ± 5000 gamma. If the anomaly registered 100 gamma or greater, the target would be marked with a "target-marker buoy", the Pisces' north-south run pattern would be broken, and a criss-cross pattern over the target would be instigated in order to determine the maximum gamma value and approximate physical dimension of the anomaly. The area of target would be recorded and a diver survey would verify if any of the target could be positively identified.

The sub-bottom profiling survey procedure was similar to the magnetometer survey. The "sparker" was operated at a 800 Joules (800 watts sec.) power level throughout the entire survey. A depth penetration of 180 feet or greater was recorded during each transverse.

March 1977

The diving survey consisted of the following sequence: (1) a diver setting a 16-pound reference anchor on the target; (2) swimming out to a 60 foot reference line from the anchor; (3) returning to the anchor and attaching a 50 foot swim line; (4) moving back out on the reference line; and (5) swimming a circular pattern keeping the swim line taut while staying on the bottom and feeling until he crossed the reference line again. If the diver returned to the reference line without wrapping the swim line around anything, the area was considered clear of above bottom surface wreckage.

RESULTS

Only one "target" was located within the study site during the survey. A magnetic anomaly slightly in excess of 50 gamma was detected on two "magnetometer transverses". The sub-bottom profiler and recording fathometer records did not reveal any indication of a "target". The diving survey identified the "target" as a rusting 55 gallon drum partially exposed above the bottom.

Ed. - The survey established that there were no significant identifiable historical or archaeological sites or objects in the survey area - thus clearing the way for possible mechanical alterations to the area.

HOW LONG?

"It appears that firm evidence revealing that man has lived in the Americas for more than 70,000 years now exists." Such statements may soon become more common and may even be used with deletion of such noncommittal introductory words as "it appears that".

Speculation on the antiquity of man in the Americas is growing more interesting as a result of a dating technique developed in 1974 by Dr. Jeffrey Bada, a chemist in La Jolla, California. By now, most everyone is probably quite familiar with this dating method which applies only to bone and is called "Amino Acid Racemization". The process is based on the changes that amino acids undergo after living bone protein dies. Use of the method has been applied to a number of human bone finds and results have been producing quite a stir.

According to articles in the New York Times and Science, Amino Acid Racemization is gradually gaining acceptance among die-hard anthropologists and dealing with the evidence produced is becoming the main concern.

The amino acid process is said to correlate very well with the carbon 14 system within the C-14 range limits, but the greatest value of the amino acid dating is that it provides dates for bone much older than the limits of C-14 dating capabilities.

Willie Wesley

IN MEMORIAM

Dr. Ripley P. Bullen, Curator Emeritus at the Florida State Museum and a leading authority on Florida and Caribbean archaeology, died in Gainesville December 25, 1976. Dr. Bullen came to Florida in 1948 as Assistant Archaeologist of the Florida Board of Parks and Historic Memorials and joined the Florida State Museum in 1952 as Curator of Social Sciences. He made a major contribution to the delineation of Florida prehistory; was founder of the Florida Anthropological Society; and was author of over 200 books, monographs and articles. Dr. Bullen will be missed, and we will all feel this great loss to Southeastern archaeology.

NASA INVOLVED IN DECIPHERING CAVE PAINTINGS

A team of NASA/university astronomers and U. S. Park Rangers has deciphered a number of ancient Indian "rock art" paintings and petroglyphs in the southwestern United States as possibly commemorating the explosive creation of the Crab Nebula in 1054 A. D.

Each of the paintings found in previously inhabited areas of Arizona, California, New Mexico and Texas includes a crescent moon next to a large star-like object. Calculations by the team verify that western North America is the only place where the supernova (exploded star) that created the huge nebula could have been visible in conjunction with the crescent moon.

According to Dr. John C. Brandt of the Goddard Space Flight Center, "our observations support the celebrated Chinese Sung Dynasty records - the Sung Shih - which record the Crab Nebula Supernova as observed from the Far East 921 years ago. These records describe a very bright star which appeared in the sky about 12 years before the Normans' final invasion of medieval England in the famous 1066 A. D. Battle of Hastings."

(From NASA Activities, October 1975)

THE AMATEUR IN ARCHAEOLOGY

As Director of the Arkansas Archaeological Survey and as one who has had a hand in developing the Arkansas Certification Program for Amateurs, I would like to reply to the letter by Ms. Pollak in the January 1976 issue. Ms. Pollak, commenting on an article by Richard Wertine (ARCHAEOLOGY 28 [1975] 220-227) which described the Arkansas program, suggests that the Arkansas program is training technicians, that this is not necessary, that such technicians will further damage an already endangered resource base, that there is an abundance of college-trained students to do the necessary research, and that "amateurs" should restrict their activities to the important areas of site location and reporting. I feel these points of view, which I am sure Ms. Pollak is not alone in holding, warrant comment.

It is true that in most instances the Arkansas program will be training technicians (in the best sense of that term), but they will be some of the better trained technicians in the history of archaeology. The program will not train them to be anthropologists, neither

will it train them to be theoreticians. But you don't need to be able to understand the relationship between archaeological theory and linguistic theory to be able to develop an adequate research design, to execute superlative field research in archaeology, or to capably interpret the results. Anyone who fully completes the Arkansas program still may not qualify as an anthropologist, but he should be able to handle archaeological research design and field applications and subsequent interpretations on a level with almost any formally trained M. A.

Don't misunderstand me. Having just been involved in helping draw up a code of ethics and research standards for professional archaeologists, I would be one of the last to contend that anyone, much less everyone, should rush out and start to dig. But to go to the opposite extreme and contend that only individuals with formal degrees can contribute meaningfully to archaeology would be to me equally ridiculous. Archaeology needs capable technicians just as does any complex profession.

In Arkansas, people have the opportunity to obtain more extensive and more intensive training in field archaeology than in any college or university affiliated program with which I am acquainted. Equally important they have an opportunity to develop an awareness of their limitations. Such individuals are less likely to assault the resource base in an improper manner than almost anyone I know.

There will never be enough college or university trained archaeologists or students in training to do what needs to be done. Unless the profession enlists the intelligent help of a concerned public and helps train some of this public in how to help provide the necessary data, we will indeed have to sit by and watch the data bank be robbed because then the "robbers" will far outnumber the informed citizenry which right be in a position to prevent it.

To imply that amateurs must restrict their contribution to reporting sites is an insult to the public's intelligence and a long outdated reversion to professional elitism. Personally I am willing to assure that archaeologists with Ph.D's have a varying degree of intelligence and competence and that this applies also to the rest of the public. With adequate and appropriate training and motivation nearly all of us can perform competently within our capabilities and, if we are adequately trained and appropriately motivated, we can also recognize the limitations of those capabilities. The Arkansas program is designed to enable the maximum number of people to attain those maximum capabilities and recognize their limitations (if any). It is true that not all of us (Ph.D or otherwise) are capable of recognizing our own limitations. But to use that occasional individual lapse as an excuse for not providing each individual with an opportunity to contribute to archaeology to the maximum degree possible when, as rest of us agree (though evidently not Ms. Pollak), we need all the intelligent help we can get, would be, to us in Arkansas, the height of shortsightedness.

In Arkansas, amateurs, experienced personnel and professionally trained personnel work closely together as an integrated team. The Arkansas program is designed to provide everyone with an opportunity to contribute meaningfully to archaeology in whatever area and to whatever degree they might want and be able. Arkansas, and all archaeology, is gaining thereby. To me that is aiming as high as is possible.

Charles R. McGimsey III
Arkansas Archaeological Survey

(From ARCHAEOLOGY, April 1976, V: 29, #2)

A. SUCCESSFUL HARVEST

At Pueblo Bonito, located in Chaco Canyon National Monument, New Mexico, two exterior corner windows were apparently used to record the winter solstice sunrise which assisted the prehistoric Anasazi in developing a more successful harvest from their agricultural activities. This hypothesis is put forth by Jonathan E. Reymann, Assistant Professor of Anthropology at Illinois State University, in an article "Astronomy, Architecture, and Adaptation at Pueblo Bonito" (Science, September 10, 1976). At best the environment at that time was hostile to man in pursuing agriculture and successful farming was not inevitable. The farmers, at least, had to anticipate killing frosts of late spring and early fall and try to avoid them. The issue is how did the Chaco farmers determine not to plant too early nor too late so that seed would properly germinate. They may have developed calendars, but more likely such things as the blooming of certain plants; return of particular animals; and other occurrences of nature were used for this purpose.

Prehistoric celestial observation was usually made in conjunction with or from a particular structure or architectural feature. Once the pattern of celestial movement is recorded, a permanent record of this passage is usually made by aligning some architectural feature to the path of motion - that is, the sun's apparent movement along the eastern (sunrise) and western (sunset) horizons. The windows at Pueblo Bonito are architecturally unusual and are situated in the highest part of the south wall of the site. They are located in the third story and one has a clear view of the eastern horizon. The windows were tested at sunrise on December 21, 1973 (winter solstice) and December 22, 1973, and again in 1975. The position of the sun at sunrise does not appear to change for three or four days around the solstice. As the sun rose on the winter solstice, it was evident that the predictions were correct. The window in Room 225C seems to have a parallel-jamb alignment to the winter solstice sunrise at tangency, and the window in Room 226-SEC is also aligned, parallel-jamb, to the winter solstice sunrise, again at the point of tangency.

The incorporation of celestial information into architectural features simplifies the observation and recording of astronomical data and apparently was used at Pueblo Bonito to establish a more accurate calendar where the Chacoans' chances for a successful harvest were increased.

CHAPTER NEWS

HUNTSVILLE CHAPTER:

Dr. Betty Price, physician-instructor at the University of Alabama in Huntsville Medical School-Ambulatory Care Center, was the speaker at the February meeting. She presented a slide-illustrated program on the history and customs of the people of Nepal. Dr. Price's presentation was based upon the personal research and observations of the Nepalese people made during her two years there as resident physician to the U. S. Technical Aid Mission.

The chapter meets each third Tuesday at 7:00 p.m. at the Senior Citizens Center, 300 Church Street, N. W. (on the lake across the street from City Hall and the Fire Station). New officers are:

Ms. Dorothy Luke	President
Mr. O. D. Hartley	1st Vice President
Mr. Michael Moquin	2nd Vice President
Ms. Cynthia Sims	Secretary-Treasurer
Ms. Georgia Dunn	Librarian

CULLMAN CHAPTER:

At the January meeting, a bluff shelter was discussed that is believed to be "untouched" but is in danger of complete destruction by the owner.

The February program was by Don Wilbanks - "A Look at What Erich Von Daniken Has Done for and to Archaeology". This is a very interesting and controversial topic today in archaeological circles. New officers for 1977 are:

Mr. David Bowling	President
Mr. Ron Morrow	1st Vice President
Mr. Eulis King	2nd Vice President
Mr. Ricky Schmale	Treasurer
Mr. Howard King	Editor

EAST ALABAMA CHAPTER:

New Officers for the East Alabama Chapter (Auburn) are Dr. Ralph Strength, president; John Cottier, vice president and program chairman; Daine Cranford, treasurer, Mrs. Leo Gosser, secretary; and Dru McGowen, assistant secretary and publicity.

Speaking to the group in January was Houston Wright, in a discussion of projectile points. In February, John Cottier and student, Bob Morgan, presented a joint slide presentation on ancient burials. Morgan worked on the Koster site in Illinois this past summer.

The next meeting is March 9 at 7:30 in Thach Auditorium, when plans for some local projects will be discussed.

NEW 1977 MEMBERSHIPS

Alabama Gulf Coast Archaeological Society	5451 Racine Avenue Mobile, Alabama 36618
Bird, Mr. & Mrs. Maurice	P. O. Drawer G, Calera, Ala. 35040
Davis, Mr. Kevin J.	6125 Adams Park Drive, Columbus, Georgia 31904
Dixon, Dr. Joseph M.	1717 11th Avenue South, 516 Medical Towers, Birmingham, Ala. 35205
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Johnson, Mr. Jay K.	812 Fillmore Avenue, Oxford, Mississippi 38655
Kinney, Mr. R. A.	3613 Snapwood Road, Birmingham, Alabama 35216
Lafferty, Mr. Robert H. III	Archaeological Research, Drawer BA University, Alabama 35486
Lowery, Mr. & Mrs. L. T.	1130 Joaneen Drive, Saraland, Alabama 36571
McCulloch, Mr. Tom	714 Cleermont Drive, S. E. Huntsville, Alabama 35801
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Mitchum, Mr. Jeffrey M.	819 Temple Terrace, Oviedo, Florida 32765
Morris, Mr. John W.	200 West Bluff Street, Florence, Alabama 35630
Owens, Mr. & Mrs. Lloyd W.	3479 Loch Ridge Trail, Birmingham, Alabama 35216
Pincha, Miss Pamela M.	P. O. Box 7915, University, Alabama 35486
Rolingson, Dr. Martha A.	Arkansas Archaeological Survey, University of Arkansas Museum, Fayetteville, Arkansas 72701
Schuyler, Mr. Robert L.	Dept. of Anthropology, City College Convent Avenue at 138th Street New York, New York 10031
Semencio, Mr. Carl	32-40 89th Street, Jackson Heights Queens, New York 11369
Smith, Mrs. Betty A.	Social Science Division, Kennesaw Junior College, Marietta, Ga 30061
Smithweck, Mr. David M.	508 Seville Drive, Mobile, A Alabama 36609
Springer, Mr. James W.	Dept. of Anthropology, Northern Illinois University, Dekalb, Illinois 60115
Steponaitis, Mr. Vincas P.	Museum of Anthropology, University of Michigan, Ann Arbor, Mich. 48109
Western Carolina University	Dept. of Sociology & Anthropology Cullowhee, North Carolina 38723
Williams, Mr. James	650 Sannoner Avenue, Florence, Alabama 35630
Wright, Mr. Joe L.	7610 Apple Valley Road, Germantown Indiana 38138
Wolf, Mr. Tim	Route 3, Box 646-A, Theodore, Alabama 36582

10TH ANNUAL FUND DRIVE CONTINUES

Our faithful member-donors are still coming through in their performance and desire to participate in the Research Association's archaeological endeavor for this year - with more information regarding this to be announced shortly. Since our last report, we add the following to our list:

William B. Stepp, Huntsville, his ninth donation over eight years
Lively-Long-Josselyn Pebble Tool Papers, their first this year to the Dan Josselyn Memorial Fund

Refer to the inside back cover for information on how to make your donation to the Research Association and get on the 1977 donors list early - remember, your donation is tax deductible.

Milt Harris

MEETINGS

Mar. 19 - Florida Anthropological Society, U. of South Fla., Tampa
Apr. 7- 9 - Alabama Academy of Science, Tuscaloosa, Ala.
Apr. 28-30 - Society for American Archaeology, Braniff Place, New Orleans, La.
Apr. 29-30 - Georgia Academy of Science, Emory University, Atlanta, Ga.
Oct. 12-16 - National Trust for Historic Preservation, Mobile, Ala.
Nov. 4- 6 - Eastern States Archaeological Federation, Hartford, Conn.
Nov. 29-Dec. 4 - American Anthropological Association, Houston, Texas

Marjorie Gay

REINDER

Don't forget, this is the last month we can carry those members who have not paid their 1977 dues. Unless you pay before March 31, you will be dropped from the mailing list. Send in your dues today!

FEBRUARY BOARD OF DIRECTORS MEETING

The meeting was held at the Red Mountain Museum in Birmingham on Sunday, February 27, from 2:00 to 5:00 p.m. Reports from all standing committees were given. Major items covered were approval of the proposed 1977 budget, the establishment of a scholarship fund and a publications fund, and tentative plans for Society-sponsored seminars across the State. The Program Committee is now working on these plans. Special Publication #2 (Durant Bend) has been printed and copies are now being distributed.

The meeting was well attended, with representatives from most chapters and areas of the State present.

All chapters are reminded to furnish the Secretary with the name of their president (who is automatically a member of the Board) so he/she can be informed of future board meetings and receive the complete text of the minutes.

THE ALABAMA ARCHAEOLOGICAL SOCIETY

Following are the objectives stated in our Constitution, slightly modified for emphasis: To promote informed interest in the study of Archaeology in Alabama and neighboring States; to encourage careful scientific archaeological research in such ways as surface scouting, mapping, marking, studying and especially reporting; to promote and support professionally directed excavations and discourage unsupervised "digging"; to promote the conservation of archaeological sites and to favor the passage of laws prescribing such; to oppose the sale of antiquities, and the manufacture and sale of fraudulent artifacts; to encourage and develop a better understanding of archaeology through providing Newsletters, Journals, Chapter and State meetings, helpful associates and good fellowship; to serve as a bond between individual archaeologists in the State, both non-professional and professional; and perhaps most importantly, to give everyone the opportunity to "do something about archaeology" through the accomplishment and enjoyment of these high aims.

The Society needs and welcomes as members, all persons whose ideals are in accord with the objectives set forth above. Active members receive the JOURNAL OF ALABAMA ARCHAEOLOGY, devoted to articles on the archaeology of Alabama and nearby States, and also receive the STONES & BONES NEWSLETTER, published monthly, containing news of members and their activities, also State, national and worldwide events of archaeological importance.

The Society is a non-profit corporation and all contributions are deductible when making your income tax return.

THE ARCHAEOLOGICAL RESEARCH ASSOCIATION OF ALABAMA, INC.

This Association, an affiliate of our State Society, is a non-profit corporation, whose aim and purpose is to finance archaeological advancement in Alabama, the FIRST State to provide such financial support through popular subscription. All contributions to this association are deductible in making your income tax return (if, of course, you itemize your deductions). Your check should be made payable to the association as shown above.

MAIL TO:

Mr. Wm. M. Spencer, Suite 1510, First National - Southern Natural Bldg., 1900 - 5th Ave., No., Birmingham, AL. 35203

Journals and Special Publications

Available back issues of the Society's Journal *THE JOURNAL OF ALABAMA ARCHAEOLOGY*, and all Special Publications are available from the Journal Editor. Please see back of this page for listing.

Stones and Bones Newsletter

Comments, news items, reviews and other material for inclusion in the Newsletter should be addressed to:

Stones and Bones Editor / Amos J. Wright
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Mr. Amos J. Wright
2602 Green Mountain Road SE
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