

# SAS

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## NEWSLETTER

SOCIETY FOR ARCHAEOLOGICAL SCIENCES

### CURRENT RESEARCH

#### **INAA CHARACTERIZATION OF SOAPSTONE SOURCES IN LABRADOR**

A long range study is currently being conducted to examine the geochemical characteristics of soapstone source areas and archaeological specimens from Labrador (eastern Canadian Arctic). The project is a cooperative endeavor between archaeologists Christopher Nagle (Brandeis) and William Fitzhugh (Smithsonian Institution) and geochemist Ralph Allen (University of Virginia). Most of the work is concentrated on material from Dorset Culture sites (2500 - 1000 B.P.) since archaeological evidence from this period is strongest. However, analyses of Maritime Archaic and Neo Eskimo material is also projected. One of the principal objectives in sourcing the material is to explore patterns of soapstone procurement, manufacture and use. In order to achieve this, it is necessary to understand the characteristic variability of the outcrops as well as the artifacts.

There are twenty known outcrops and seven suspected locations of soapstone distributed throughout northern Quebec, Newfoundland, and Labrador. Most are fairly small occurrences or irregular outcroppings of larger unexposed deposits. Much work remains to adequately explore, describe and sample these outcrops, but approximately five samples from each known source are available for analysis.

Their earliest analyses of soapstone materials were directed toward confirming the potential for discriminating different soapstone deposits in Labrador and gaining some idea of the variability in the artifacts. The characterization technique used is INAA of the rare earth elements (REE) present in soapstone. It was previously used by Allen to characterize soapstone formations in the eastern United States.

Most soapstone deposits can be successfully discriminated from one another because of the high sensitivity and precision of this technique, and because REE in soapstone deposits tend to vary more between different formations than within them. Concentrations of rare earth elements in soapstone samples (normalized to concentrations in chondritic meteorites) are plotted and the resulting patterns are compared. The shape of the resulting curve is important because it reflects the relative partitioning of the trace elements in the soapstone. The absolute concentrations of the elements reflect the concentrations in the original rocks, and perhaps in the minerals present. Of course, it is important to know how much variation can be expected within each deposit. In this regard, material close to the contact zone with the original country rock may have much higher concentrations of rare earth elements relative to material from well within the metamorphosed zone.

To date, the Newfoundland and Labrador outcrops have been analyzed, and average rare earth element profiles are available for each. Most of the curves are distinctive enough in pattern or magnitude to discriminate the soapstone deposits they represent. However, a potential problem exists in distinguishing outcrops in several areas of northern Quebec on the northwest side of Ungava Bay. The samples that are similar tend to come from the same geographic area and may represent outcrops of what is basically the same regional formation. Another difficulty is that some of these samples are also similar to outcrops from Moores Island, Labrador. In cases where the REE curves are similar, other elements may discriminate between two sources, and petrographic differences are being investigated as well.

The source characterization provides a foundation for the interpretation of soapstone utilization at Dorset sites in the Seven Islands Bay region of northern Labrador. Artifacts from these sites were grouped according to their stage of manufacture (debitage, preform, finished) and each group was sampled. The concern was to establish the extent to which material in each group matched the local Peabody Point quarry source or was of non-local origin. The preliminary results are interesting. Local soapstone procurement and vessel manufacture are indicated: all preforms were of local material, as was 70% of the debitage. The remaining 30% of the debitage which appeared to be non-local could be the result of repair and reworking of finished vessels from other sources. A surprising 66% of the finished vessels were non-local in origin. Furthermore, their profiles matched a variety of sources. A possible

# NEWS OF THE PROFESSION

## **ARCHAEOLOGY POSITION AT MIT**

The MIT Anthropology-Archaeology Program and the Center for Materials Research in Archaeology and Ethnology anticipate an opening, pending budgetary approval, for an assistant professor of archaeology to begin September 1981. Candidates are being considered in two areas. (1) Ceramic Archaeology. Archaeologist with a specialty in the study of ceramics. Applicant's primary research must include the technology of ceramic production. She/he must have extensive experience in the technical, laboratory analysis of ceramics. Teaching responsibilities include a graduate seminar-laboratory course in ceramics as ancient materials and undergraduate electives in archaeology. (2) Physical Anthropology, with a specialty in paleonutrition, paleopathology, and paleodemography. Applicant must have extensive experience in the biological, laboratory, and archaeological aspects of research in this area. Teaching duties include undergraduate courses on human evolution, physical anthropology, and archaeology.

Teaching will also include undergraduate courses on laboratory techniques in archaeology and introductory courses in archaeology.

Applicant must have the Ph.D. Send only covering letter and vita to Heather Lechtman, MIT, Rm. 8-138, Cambridge, Mass. 02139. Equal Opportunity/Affirmative Action Employer.

## **SMITHSONIAN INSTITUTION FOREIGN CURRENCY GRANTS PROGRAM**

The Smithsonian Foreign Currency Program, a national research grants program, offers opportunities for support of research in Burma, Guinea, India, and Pakistan in the following disciplines: Anthropology and Archaeology, and related disciplines, Systematic and Environmental Biology, Astrophysics and Earth Sciences, and Museum Programs. Grants in the local currencies of the above listed countries are awarded to American Institutions for the research of senior scientists. Collaborative programs involving host country institutions are welcome and frequently required. Awards are determined on the basis of competitive scientific review. The deadline for submission is November 1 annually. For further information write the Foreign Currency Program, Office of Fellowships and Grants, Smithsonian Institution, Washington, D.C. 20560, or call (202) 287-3321.

## **NEW ARCHAEOLOGICAL SCIENCE SPECIALTY FOR SOPA**

In 1978, the SAS Acting Executive Board authorized the creation of a committee composed of members of both the SAS and the Society of Professional Archaeologists (SOPA) to consider the feasibility of creating an Archaeometric Physical/Natural Science research specialty within SOPA. The committee was composed of E. Mott Davis, David A. Frederickson, Richard MacNeish and R.E. Taylor. David Browman and Richard MacNeish provided strong leadership in SOPA to have the proposal considered. David Browman recently reported the favorable action of SOPA on a proposal whose wording was finalized by the SOPA Membership Committee. For further information, please contact Dr. David L. Browman, Department of Anthropology, Washington University, St. Louis, Missouri 63130.

## **ASSOCIATION QUEBECOISE POUR L'ETUDE DU QUATERNAIRE**

The SAS has received a communication from the Association Quebecoise Pour L'Etude du Quaternaire encouraging colleagues and organizations interested in the Quaternary to establish contact with them and to exchange published materials. The Association has broad concerns including geological, geomorphological, archaeological and biological interests. SAS members interested in communicating with the Association can contact Jean-Marie Dubois, Department de géographie, Université de Sherbrooke, Sherbrooke, Quebec, Canada J1K 2R1.

explanation for this diversity in origin is marriage-related movement of lamps and cooking pots.

Analysis of source material and artifacts is still underway. However, the preliminary results show promise that neutron activation of soapstone can contribute to the understanding of prehistoric raw material procurement as well as interregional population movements and exchange in Labrador.

## NEWS OF THE SOCIETY

### SAS MEMBERSHIP RECORDS AND MAILING LISTS COMPUTERIZED

During the past three months the membership records of the SAS have been transferred to a computer based system which is maintained at the Radiocarbon Laboratory, Department of Anthropology, University of California, Riverside. Matthew Hall, SAS Secretary-Treasurer, Christine Prior and Christiana Mojarro have been instrumental in the conversion process. Updating now can be accomplished more rapidly and with less chance of error. In addition, mailing labels can be prepared automatically through a printer attached to the computer terminal. SAS members should review the Newsletter mailing labels and inform us of errors so corrections can be made. Also, if renewal notices are received too early, please let the Secretary-Treasurer know so that we can check our records.

### SAS CONTRIBUTION TO SAA FRYXELL FUND

At the last SAS Business Meeting, the Executive Board and membership voted unanimously to contribute \$100 annually to the Fryxell Award Fund of the Society for American Archaeology (SAA). This award honors the late Dr. Ronald Fryxell, a geologist whose research typified the pursuit of excellence in interdisciplinary archaeology. The award is given annually by the SAA to those individuals who have made the most significant contribution to interdisciplinary studies in the archaeology of the Americas. Previous recipients of the Fryxell award are Peter Mehringer, Vance Haynes, and James Griffin.

## MEETING NOTES

### ELEVENTH INTERNATIONAL RADIOCARBON CONFERENCE

The Eleventh International Radiocarbon Conference will be held from June 20 to 26, 1982 on the campus of the University of Washington in Seattle. Members of the Organizing Committee are: Minze Stuiver, Pieter Grootes (Quaternary Isotope Laboratory), and George Farwell (Nuclear Physics Lab., Department of Physics).

The scientific program includes the following topics: C-14 and archaeology; mass spectrometric dating with accelerators and enrichment of C-14 samples; discussion of other radio isotopes; natural C-14 variations, with special consideration of the influence of climate change in past atmospheric C-14 and CO<sub>2</sub> levels; general technique; the influence of man on C-14 levels in the environment; C-14 and overlapping dating methods; special topics.

Acceptance of papers will be decided on the basis of extended summaries (~ 2 pp). Parallel sessions and poster sessions may be scheduled, depending on the number of papers accepted. One or more working sessions may be planned during the conference as well. Conference proceedings will be published in **Radiocarbon**.

Those interested in attending the Radiocarbon Conference are requested to notify the organizing committee immediately. Write to: Quaternary Isotope Laboratory, Ak-60, University of Washington, Seattle, Washington, 98195.

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EDITOR: S.P. De Atley, Conservation Analytical Laboratory, HTB AB070, Smithsonian Institution, Washington, D.C. 20560

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ASSOCIATE EDITORS: Matthew Hall, David McJunkin, Christine Prior

# RECENT PUBLICATIONS

## **CARD BIBLIOGRAPHIC COMPENDIUM**

A bibliographic compendium on scientific archaeology has been prepared by Linda Ellis (Department of Anthropology, Harvard University). It covers all of the following major fields of analysis: mathematical techniques (computer and statistical analysis); chronometry (radiometric and non-radiometric); environmental reconstruction (soil analysis, paleoclimatology, paleopathology, paleozoology, paly-nology, paleobotany); remote sensing (resistivity, magnetometry, photogrammetry, and others); spatial analysis; and materials analysis. Research published in 6 major languages (English, German, French, Italian, Russian, and Spanish) is included.

All scientific and archaeological journals (24) contributing to the applications of science in archaeo-logy have been fully indexed. The length of the compendium is 200-300 pages. Three indexing and cross-referencing systems have been developed based on 1) analytical technique, 2) material, and 3) geogra- phical region. One can locate each article in any of the three indexes, and can locate further references of interest under each subjective subdivision.

This compendium is one in a series of publications of the Center for Archaeological Research and Development, Peabody Museum.

## **1980 ARCHAEOLOGY SYMPOSIUM, PARIS**

The proceedings of this meeting, published in *Revue d'Archeometrie* are obtainable from L. Langoet, Universite de Rennes, Campus de Beaulieu, Avenue du General Leclerc, 35031 Rennes Cedix, B.P. 25A, France.

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Radiocarbon Laboratory, Department of Anthropology  
University of California, Riverside, California 92521