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# Paleoenvironments

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## PALEOENVIRONMENTS

Report prepared by Mary Lou Curran

Moderator: Mary Lou Curran, University of Massachusetts/Amherst

Workshop participants:

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Frank Cowen, University of Vermont  
John Cross, University of Massachusetts/Amherst  
Kristine Crossen, University of Maine/Portland  
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David Goldsmith, Brown University  
John Grimes, Peabody Museum, Salem, Massachusetts  
Mary Hancock, University of Maine/Orono  
Bob Johnson, SUNY/Albany  
George Myers, SUNY/Stony Brook  
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Accepting the need for understanding environmental dynamics through regional and localized paleo-environmental reconstruction, our group attempted to determine how we would go about meeting that goal. First, we agreed on the need for a plan for obtaining data, starting with the development of a structure for improving communications. We discussed the advantages of such structures as the Institute for Quaternary Research at Orono, Maine. Finally, we identified some of the major problems involved in attempting an interdisciplinary approach.

More opportunities are needed to discuss what information we have available, what we need, and how we can get what is lacking. We must understand the problems, the limitations, and proper use of a variety of data sets and terminology. We are told, and often repeat that archaeology, by nature, is an interdisciplinary science. However, we need to be realistic about how much of a generalist an archaeologist should be. At a certain point the quality of technical data is diminished because the archaeologist may not be qualified to interpret the technical data borrowed from the other disciplines. We all agreed that better understanding of the basic assumptions and biases of scientists in other disciplines is needed.

We recognize that we have borrowed from other disciplines without considering that we have information important to the other disciplines--whether it supports existing data or adds totally new information. We see archaeologists in a unique position to stimulate interest and provide a focus for work on various research problems. As a five-year plan for improved paleoenvironmental research, we suggest that archaeologists: 1) establish permanent working relations with members of relevant disciplines; and 2) share their excitement about the value of other disciplines' search for archaeologists. If we can stimulate a serious interest among other scientists, we may have succeeded not only in an interdisciplinary exchange, but we may solve some of our funding problems, since each discipline may tap its own funding sources.

We should sponsor a series of informal workshops: 1) to establish a framework for ongoing meetings; 2) to share data; and 3) to consider the major research problems for Quaternary research in the Northeast, involving such disciplines as palynology, geomorphology, marine, wetland, and coastal terrestrial ecology, and the numerous "paleo" sciences -- climatology, zoology, botany.

Potential workshop topics could include:

1. The environment as a context for understanding man. Are we environmental determinists? possibilists? undecided?
2. To what extent can the paleoenvironment be reconstructed from archaeological sites in the frost-churned soils of the Northeast?
3. The need for regional planning in paleoenvironmental studies. What critical data sets are missing, incomplete, needed?
4. At what stages of research are such data important and useful? How should paleoenvironmental data be used in model building? What data sets are needed to test the models? Are there adequate modern analogs?
5. What is the appropriate technology for collecting data? Should this be done during archaeological survey, as well as site excavation?

6. Given the character of the sampling universe, what are the appropriate sampling techniques for each data set?
7. Is an archaeologist qualified to interpret paleoenvironmental data? Should archaeologists divorce themselves from other anthropologists to permit time to acquire a better foundation in the physical and biological sciences?

Research design sessions might focus on some of the following questions:

1. What impact has glaciation had on the habitation of the Northeast?
2. How has man been affected by changing sea level, shorelines, and biotic communities?
3. What environmental factors have influenced man's behavior the most strongly and during what time periods?
4. To what extent are the function of artifact assemblages shaped by man's adaptation to specific environments?
5. How do habitat changes through time influence human population movement?

We hope that the enthusiasm generated during the weekend will not be lost and have strong desires to meet again soon. The workshop session was far too short for our needs.