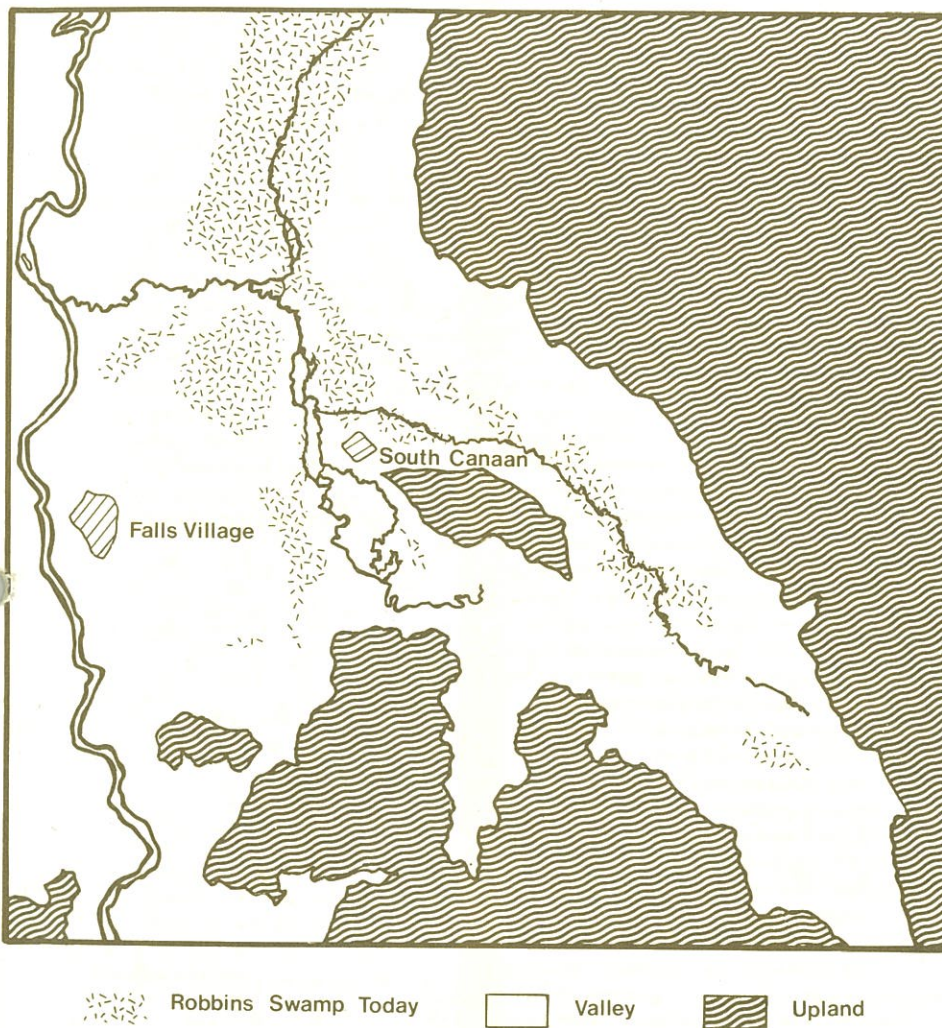


ARTIFACTS

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The American Indian Archaeological Institute



The reasons for this constant figuring are not obvious. It has been suggested that a comparison to the discipline's past allows one to realize how much progress has been achieved. Thus this argument implies that modern archaeologists know the past better than their colleagues once did.

Others have stated that while the archaeological study of the past is very different now, the apparent changes do not reflect progress. Rather the discipline does not look and work as it used to because the past itself has changed. This is not meant literally; the past cannot pick itself up and rearrange its records. *What changes is the present and how archaeologists in the present view and study the past. Modern archaeology does not know the past better but it does think about it in a very different way.*

How is modern archaeology different? It has less to do with artifacts than might be imagined. Artifacts are interesting but only because they are positioned in archaeological records in peculiar and particular ways. It is these patterns which archaeologists need to study since they have some sort of meaning. What sort of meaning? That question is much more difficult. In fact the search for and interpretation of meaning is the locus of every significant debate which is now occurring in American archaeology.

For some archaeologists the patterns at archaeological sites reflect behavior. This behavior might be associated with an individual; much of it is enacted by groups. For some scholars all of it is concerned with making a living or people leading their lives, what archaeologists call adaptation. However not every archaeologist thinks that every archaeological record reflects past behavior or adaptation. Some of the patterns might represent other activity including thought and belief. We also know that some of the patterns which archaeologists have found do not have anything to do with the past, but represent how we look at the archaeological record itself.

This implies that archaeological research has always been oriented towards questions and answers. As the questions changed so did the methods used to acquire and study data. These different methods gave different interpretations which sometimes answered the question that was asked. At any one time, now or earlier in American

Towards Archaeological Histories of Robbins Swamp

Self-respecting archaeologists never used to consider writing histories about themselves or their lives and work. Everyone believed that there was not much to learn from self-reflection. Our job was to gather data, extract from its mass an insight or two and offer an interpretation of the lives of others.

This began to change in America during the early 1960's. To undertake archaeological thought (and this includes all kinds of archaeology) in the contemporary world requires a sense of the discipline's earlier efforts. Little if any interpretation now occurs without an explicit measuring against archaeology's recent past.

history, archaeological inquiry was an internally consistent system of thought which governed how and why we studied the past. What we got from the past was relative to this system of inquiry. Further, as this system changed so did the past.

This identification of the relative position of archaeological interpretation is commonly recognized and accepted. It is also the source of the measuring that is so characteristic of the contemporary discipline. As archaeologists look towards the past they feel the need to explain the relationship between their system of inquiry and the resulting interpretation. *Once this insight is understood it can be seen that much of the study of the past is not discovery but rather projection.* That is, inhabitants of the present or modern world look to the past to find themselves, their lives and their society. Extending the argument suggests that modern archaeologists tend to tyrannize the past by swearing that it looks just like the present.

This does not mean that the past cannot or should not be studied. However it does suggest that knowledge of the past must be acquired by archaeologists who are more conscious of their world, their discipline and their lives and the effects that each of these has upon their work. In the same way archaeologists need to be aware of how their interpretations help to determine how everyday life in the modern world is constructed and enacted. These thoughts have not occurred to many archaeologists, especially in America.

The purpose of this article is to demonstrate how modern archaeological studies of the prehistoric past are composed. One of the goals is to show how and why the present projects itself onto the past. At the same time this radical critique implies that some sort of knowledge of the distant past can be obtained which offers glimpses of peoples whose lives were completely separate from our own.

These lives are encoded in archaeological records in rather obscure ways. Yet the implications of holding the past separate from the present should allow us to invent new approaches or rethink old ones which can be used to discover these codes. This decoding is being undertaken in a time and place which is somewhat familiar to members of the Institute's community: Robbins Swamp in Litchfield County. What follows is a beginning as I learn to move towards the prehistoric past along a different route.

One further comment is necessary. It is always difficult to decide how unfamiliar ideas should be communicated and often the style of presentation is altered to match the audience. Sometimes the alterations take uncommon thoughts and simplify them. The result can be an idea whose original value and significance is destroyed. Yet translation is necessary since we cannot expect everyone to use and understand the same vocabulary.

Here we have tried to preserve the authenticity and significance of a theoretical perspective which is just emerging in American archaeology. We do this in the belief that this perspective is capable of renovating how Americans think about the relationship between the present and the past. Along the way American archaeology is bound to be transformed as well.

What follows is both a whole and pieces. There is a sequence of thought which continues throughout the article. It begins with an idea about the relationship between the present and the past, explores how this relationship is used by modern archaeologists, and suggests how other kinds of knowledge might be developed by ignoring this same relationship. As this argument unfolds different sorts of archaeology are contrasted with one another. While this might be a bit confusing it does help the reader understand that different approaches to the past produce different interpretations. By the time the whole sequence of thought is finished the reader will know why our approaches to the study of some aspects of prehistory are different and how we plan to use these approaches in Robbins Swamp. Thus the sequence of presentation summarizes perspectives for the past as well as research plans.

The whole provides an opportunity for the reader to understand how archaeological thought is constructed so when the article is finished there is a frame in place. Sometimes portions of the frame are further defined and explored in separate pieces; these pieces reflect and help to inform the whole. They are meant to be viewed as tours which extend the sequence of thought in specific places. If the reader ignores them the whole is still intact. If the pieces are used one might see the whole more easily.

Standing the Past on Its Head

There is no reason why archaeological or historical interpretation must be written as a projection of the present onto the past. It seems logical and inevitable that such a process should occur but only because we assume that the past and present are universal categories, that they are ordered along a time continuum which stretches backwards and forwards, and that given enough time the past becomes the present. We assume that this order is natural, that it has always existed, and that everyone everywhere has always used it to organize their lives and histories. These assumptions are not wrong but they are more specific in their applications and origins than we might suspect.

This concept of time and the past and present is actually a quite recent invention in America. Here the idea of universal time, as it is called, did not appear

until the middle of the 18th century or even later. When it did appear it seemed to be associated with the emergence of mercantile societies and their need for exact measurements of time and money or how to make money using money over time. The evidence is clear about this historical invention in Tidewater Virginia (Isaac 1982) and the Chesapeake (Leone 1980) and must be applicable to similar northern centers of commerce such as Boston, New Haven and Providence.

What did time in America look like before it became universal? It did not exist in its modern form. Time was not divided into uniform and equal measures such as hours or weeks. Nor was it standardized and widely shared so, for example, rural time was not the same as urban time. Farmer's time was not equivalent to merchant's. Both Rhys Isaac (1982) and Mark Leone (1980) have examined diaries and letters of the 18th century from Virginia. Each has found that time was not used consistently to order and associate events until after 1750. In fact Leone's (1980) work demonstrates that the idea of cause and effect, which depends upon the separation and ordering of past and present events, does not appear in diaries until the decade prior to the American Revolution.

In the same way recent studies at the AIAI have begun to explore how the past was separated from the present during the second half of the 19th century (Handsman 1982a,b). Then, in some settings in Litchfield County, class conflicts emerged as the owners and managers of work places began to accumulate capital in new ways. They redesigned industrial sites and methods of manufacture as well as the lives of their workers. They even learned about exploitation and competition. Some of this change was accepted. Much of it was the focus of conflict and resentment with workers resisting the ideas as well as the growing divisions in power and wealth.

It was an era of uncertainty and the emerging capitalists began to look backwards in systematic efforts to legitimize themselves and their place in the new economy and society. They looked to the past, projected themselves into it, and so made the past look like the present. They reasoned that their place in capitalist society could be validated, and therefore beyond criticism, through history. So they constructed a past for themselves and used it to convince everyone that the new economic order, capitalism, was not so new. The outcome of this invention of history was what Karl Marx called alienation: the working class became less aware of the coming transformations in their lives since they believed their lives and society had always been this way.

a separate yet equal past was made obvious and real through artifacts. For example during the last quarter of the 19th century the center village of Litchfield underwent an architectural renovation. The village was colonialized, stripped of its Romantic and Gothic elements, and made to look as it was thought to be more than a century earlier (Handsman 1982b). This process and artifact was constructed by the capitalists who owned the village's historic houses. The outcome, which is still visible today, offered that class an object lesson, a rationalization, and a verification. This activity reflected a period of uncertainty and struggle during which the working class in Torrington's factories (some of which were owned and operated by capitalists in Litchfield) began to realize their lives were changing inextricably. They turned to unions and strikes. The capitalist class turned to the past, found themselves and transformed an historical struggle into a natural order.

It is in historical situations such as these where the roots of modern archaeological projection can be discovered. Here separations were constructed which provided modern America with a set of premises or taken-for-granted which determine how we lead our lives. Among the most important of these constructions are the individual, the biological family, economy, work, time, capital and the past. Each is an invention which did not begin to appear in America until the mid-18th century or later. In fact in Litchfield County some of these taken-for-granted did not emerge until the appearance of large-scale industrialization and capitalism (Handsman 1980b, 1981, 1982b, c, 1983). Thus modern America is a recent phenomenon whose history is encompassed by earlier versions of mercantilism or later capitalist economies.

This argument implies that some of the past cannot be a projection of the present. Prior to capitalism or mercantilism, American communities must have been premodern and everyday life, culture and society must have been bounded by premises which were very different. If this is true then any interpretation which is about the past must use a framework which keeps the present separate from the past.¹ We do this to control the inevitable process of projection by defining the historical limits of the modern world. Beyond these limits lie the premodern and prehistoric worlds which were neither capitalist nor mercantile.

This approach to the past has its origin in the late 19th century work of Karl Marx. It continues to be uncommon and there seems to be no popular name for it. The term *archaeological histories* is appropriate since it suggests the recognition of the process of projection, a search for the unknown and unthought, as well as an awareness of historical emergents. The writing of archaeological histories

simultaneously. One is familiar, modern and ours and is available through an inspection of things which are close and immediate; the other world is remote and may be organized through a cultural order which is unique and unknown. The challenge of decoding the unfamiliar is archaeological.

No matter what one calls them archaeological histories are characterized by three approaches:

1. An exploration of the modern process of projection in which the past is made into a duplicate of the present. Often this process results in a mystification of history and the real conditions and conflicts of modern existence are hidden from view (Althusser 1971). When the past is made like the present we are fooled into thinking that our lives can be no different, that our lives will always be this way and that our lives have always been this way (Leone 1981).
2. A discovery of how some premodern and prehistoric pasts were constructed as cultures and societies whose premises were not capitalist. Complete understandings of such times and places are often not possible but our work can offer sketches or glimpses of them.
3. An examination of the historical emergence of modern everyday life. These studies will be focused on the premises and categories characteristic of 19th century industrialization and capitalism (Handsman 1981).

For more than half a decade my research at the AIAI has been attempting to explore each of these approaches. Some of what has been written can be identified as archaeological histories and includes studies of premodern kinship and settlement (Handsman 1980b), 19th century urbanization and the transformation of everyday life (Handsman 1981), the momentary emergence of a modern economy and society in the center village of Goshen (Handsman 1982c), and the separation of the individual in 19th century Litchfield County (Handsman 1983).

My research has focused upon the recent past of northwestern Connecticut during the period between 1750 and 1930, when aspects of Litchfield County's landscape became modern, industrialized and capitalist. Prehistory was ignored, not because we were not interested – much research was accomplished which was prehistoric in its focus and methods – but because it was thought that archaeological histories of the distant past could not be written:

Prehistorians have no documents to read and no one to talk with who has any real connection to the prehistoric past. The distant past is mute, it is inert, and the only way to bring it back

image of ourselves (Handsman 1981).

In retrospect this assessment has been too pessimistic, my way of saying that I was very early in 1982 we have been able to determine whether the distant past can be approached critically from the world. *Is it possible to discover everyday life in prehistoric time how separate that world was from the study prehistoric processes of a world and write histories of them without writing ourselves into that time and place?*

The immediate archaeological history was an exploration of Holocene or the categories and everyday life which were evident in the last 12,000 years. Its focus was Swamp, a large freshwater lake located in the Town of Cornwall, northern end of Litchfield County (1). One of our goals was to document Holocene environmental reconstruction of Swamp itself and its associated basin. We know that there have been significant climatic variations during this period and that the change in temperature range and rainfall have caused modifications to the form of the Swamp as well as environmental features (Handsman 1981).

This complicated history of environmental fluctuations and periods would have been thought of as prehistoric populations, ignored, responded to, and either actively or passively received. *All of these processes should be represented in the archaeological record and can be represented by archaeologists.* Therefore the first step is to examine the link between climatic variability, environmental fluctuations and prehistoric behavior. We are convinced that the form of the link at any moment in the past could vary from a strict function (*Behavior Varies as a Function of Environment*) to possibilism (*Behavior Varies with Environment but Not Entirely*), or may be represented by no structure at all (*Behavior Varies but Not as a Function of Environment*).

Examining this sort of relationship between behavior and nature is an aspect of this critical study of archaeology's theory of prehistoric behavior. There are at least three theoretical questions who will produce important insights:

1. Is everyday life in the distant past always conceived of as enacted as a rational and practical order? Or does it depend on the needs and desires of the entrepreneurs? Or does it depend on the logic of prehistoric behavior? Or does it depend on the logic of prehistoric behavior? Our analyses of prehistoric behavior are based on the idea that the distant past worked through this process so we have never been able to discover whether ex-

LOCATION OF
RESEARCH AREA

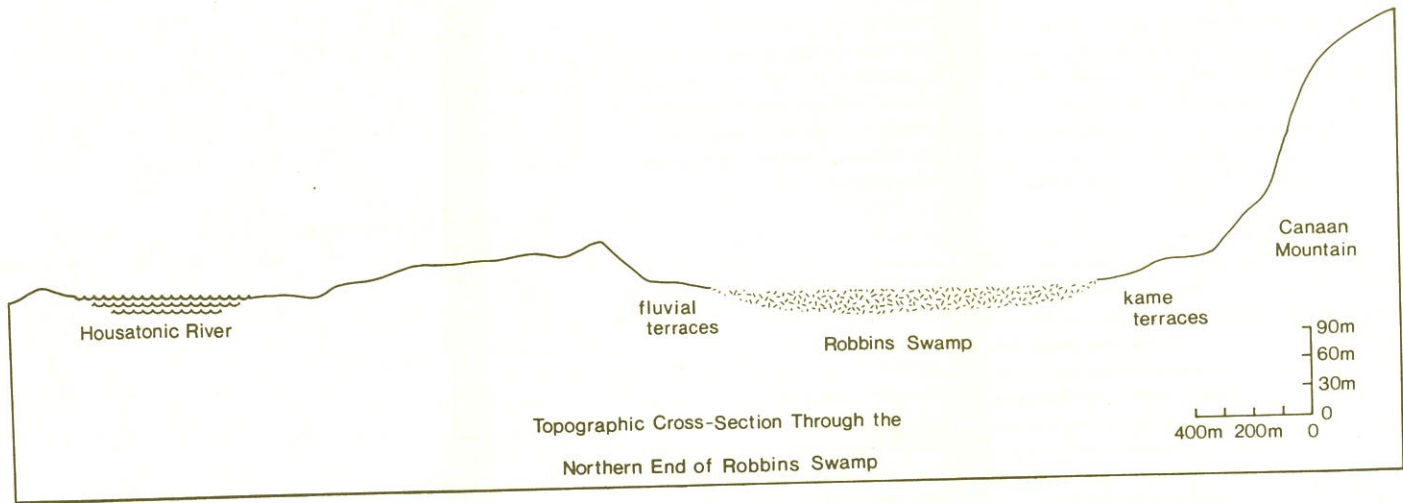
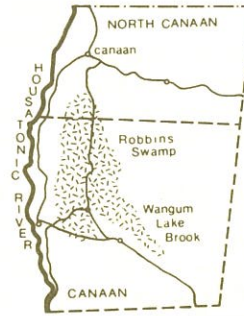


Figure 1. Location and Topographic Cross-section of Robbins Swamp. *This swamp is one of the largest freshwater wetlands in southern New England and has been a focus for prehistoric occupation and use since the Early Holocene, 9000 years ago. Its size, form, and ecological structure have changed many times since the glacial ice disappeared. By writing both environmental and archaeological histories of Robbins Swamp we hope to achieve a different understanding of everyday life in the distant, premodern past.*

existed or if the premise itself has anything at all to do with premodern societies.

2. Does a sequence of Holocene adaptations exhibit a history of behavioral strategies which are increasingly efficient or specialized or more complex? That is, will a history of prehistoric adaptation represent some sort of evolutionary path so that the past will eventually merge naturally with the present?

Each of these is a traditional expectation and the posing of these questions suggests that the current model of prehistoric adaptation has been rejected. In its place we have substituted a theory which, as it is worked out over the next few years, will modify the structures and premises of contemporary archaeological inquiry (Carbone 1982, Handsman 1982e, Kohl 1981). As a result everyday life in the distant past will be known differently. Yet the knowledge produced during the study of Robbins Swamp is relevant to more than a revisionist archaeology. *The writing of archaeological histories of Holocene adaptation will offer Native Americans a version of the past which is neither biological nor capitalist and thus reveal*

to them and to us how separate their world once was.

Karl Marx was one of the first to suggest that the relationship between the past and the present was neither given nor inevitable. He discovered that any present shaped and used any past in its own image so that historical interpretation was not a process of understanding but of projection. By reversing the path of analysis and interpretation Marx realized that the equivalence of the past and present denied people the opportunity to use history to understand how different life once was. *This denial also meant that these same individuals would find it impossible to understand how their lives came to be. This is what Marx called alienation* (Tour One).

It is now more than one century later and the function, role and effects of alienation have not disappeared (Brown 1973). Although the study of the past has become divided among a number of specialized disciplines, its relation to and equivalence with the present is still thought to be both a given and a natural. This does not mean that every discipline which studies the past looks like it did during the second half of the 19th century. Nor

is it being suggested that these same disciplines have not been subjected to some rather startling changes which might be called revolutionary. Even if both of these statements were true – and I think they are for American archaeology – the past and the present are still connected and this connection is usually a mask which destroys our ability to reconstruct meaningful versions of everyday life long ago.

In America the distant past was inhabited by Native Americans. They lived in it and most of the archaeological record in the United States reflects a history of their everyday lives. Yet the interpretive opportunities implicit in this situation are denied by modern archaeology and the prehistoric record is assumed to reflect behavior which is distinctly modern and capitalist. For example everyday life in the distant past is conceptualized archaeologically as reflecting a form whose cultural premises were dominated by rationality, economic calculations and practical advantage. From this *paleontological perspective* the distant past was inhabited by modern capitalists so Native Americans are earlier and recognizable forms of ourselves.²

TOUR ONE: American Archaeology and the Alienation of Others

By standing the past on its head one realizes that the era is normally thought of as an earlier yet identical version of the present. We know that projection destroys the uniqueness of premodern societies. What is less obvious is that projection also misrepresents the real conditions of everyday life in the present. This was the point of the invention of Litchfield's colonial veneer. It helped to substantiate a particular version of the past which itself represented the real conditions and conflicts of everyday life for the workers. As such the Litchfield example shows how alienation might be encoded in historical archaeological sites.

In the modern world the causes and signs of alienation are more numerous and qualitatively different. Alienation now is incredibly subtle. It is supported by invented links between the past and the present but then hides these inventions and presents them as accurate and authentic facts. Archaeological interpretations are one source of links; the conduct of archaeological inquiry provides the necessary sense of accurate and objective knowledge. While archaeologists often are unaware of such activity, archaeological interpretations are being politicized and used to support and extend the alienation of others.

For example the recent work of Carmel Schrire (1980) reveals that the contemporary Australian government regularly uses archaeological interpretations of aborigines during discussions of modern problems. Such uses impose scientific labels such as hunters-and-gatherers and paleolithic groups, substantiate a perception of primitiveness, and thus deny aborigines any sort of identity which is modern. The result is that access to concepts of health, law, sanitation and power are denied. The aborigines are kept primitive and placed on reservations separate from modern society (Leone 1982:752).

Similar processes can be identified in America. Through either *paleontology* or *biology* (see the Main Text) modern archaeology fashions prehistory in the image of capitalism, denying us access to a prehistoric past which really was separate and different. The implications of this loss are especially astounding for Native Americans. Like the rest of us they are missing a version of the prehistoric past which would recognize the reality and distinctions of their premodern everyday life. It is this cultural system of premises which in the past defined their uniqueness and which continues to do so today. So when their past is merged

with that of Euroamericans their current sense of identity is diminished and may even disappear. Yet the problem is more complex than this.

Many contemporary Native American groups are attempting to inhabit two worlds at once. They want to interact with the modern world and to use its economic system without sacrificing traditional lifeways, beliefs or premises which are premodern, at least in part.³ Some of these groups are learning to be power brokers and energy specialists (MacDonald 1980). Others are interested in alternative technology and the production of specialized goods and crops for consumption or resale. The creation, organization and management of such efforts depends upon a blending or balancing of the traditional past and the capitalist present. If Native Americans are denied separate pasts because their histories are written as versions of capitalism then they will find it far easier to accept this loss of the world of tradition. Therefore the obvious potential which is inherent in their efforts to redefine contemporary capitalism and exploitation will be lost. They will become like us and cease to offer a possibility for the future (Hogan 1983). *This is what Karl Marx meant by alienation.*

Unlike this fossil version some archaeological interpretations are founded upon a more dynamic view of prehistory. Here everyday life is thought of as a sequence of adaptations which over the millennia become more efficient, more specialized and more differentiated. From this *biological perspective* behavior was a matter of survival and those who survived were better adapted. Once again the separateness of Native American culture is denied, this time through a biological definition in which nature determines culture.

Like those political economists studied by Marx, modern archaeologists think of prehistory as either an era populated by modern fossils or a continuum inhabited by an evolving population. Each or both of these metaphors determine how we study the past, how we reconstruct the form of everyday life in the past, and how we link the past to the present. This is done without much critical thought, not because archaeologists cannot think but because we assume that the past is related to modern times naturally and not by way of projection. So the past is not separated from us nor are the lives of the people who inhabited that era.

Prehistoric Adaptation and the Problem of Singularity

The construction of equivalences between Native Americans and us or between the present and the prehistoric past depends upon modern archaeology's theory of prehistoric adaptation. What does this theory look like? First it suggests that prehistoric adaptation is *not* synonymous with subsistence. It is possible to discover what people ate at some point in the past; in fact much effort has been spent achieving this goal. *Yet this knowledge will not allow an understanding of how and why prehistoric populations organized themselves and their sense of environmental space and history to acquire what they ate.* Adaptation consists of organizational principles and strategies which are only in part about food. Archaeologists cannot expect to concentrate upon food alone and learn about adaptation. Yet it is possible to study adaptation and everyday life without the slightest evidence as to what people ate.

This argument was rather innovative about twenty years ago and now is widely shared. It has provided the foundation

for new approaches to the past which have changed the writing of prehistory. Once archaeological literature was filled with descriptions of artifacts and little that could be called interpretation. Now everything is interpreted and we have much detailed information about economic and social behavior, subsistence, prehistoric weather and housing. One result of this new orientation toward adaptation is that archaeological literature is much more interesting to read. Yet the theory of adaptation which we now use is too limited and limiting.

Most contemporary studies of prehistoric adaptation are interested solely in describing how particular populations acquired food by moving around a landscape. Archaeological evidence of such movements is sought through the recognition of specific patterns which are assumed to reflect systematic behavior. However the identification of such patterns does not necessarily lead to their interpretation or explanation. Although perfectly sound and testable analytical procedures have been developed to isolate patterns (Chang 1972, Struever 1971), archaeologists continue to be incapable

of explaining why one particular adaptive strategy was chosen by a population instead of some other. In the same way archaeologists have not realized that several different strategies might be considered and constructed by one population inhabiting an unchanged environmental setting. *Further, the cultural systems of premises or taken-for-granted which encompass the categories and principles of adaptive poses might be quite dissimilar themselves.*

All of this cultural, social and organizational variability needs to be encompassed by an archaeological theory of adaptation. Such a theory should be capable of explaining the observed differences as well as accounting for the similarities:

We must seek to understand the relationships between the dynamics of a living system in the past and the material by-products that contribute to the formation of the archaeological record remaining today. In still more important ways we seek to *understand how cultural systems differ and what conditions such differences as a first step toward meaningful explanation for patterns* that may be chronologically preserved for us in the archaeological record (Binford 1980:5, emphasis mine).

This sort of variety is denied by archaeology's current theory of prehistoric adaptation which assumes both pattern and process to be singular constructs. That is, by thinking of adaptation as the enactment of a *particular sort of process* and by organizing the scientific search for signs of this process through a specific approach, American archaeologists have created only one version of the past.

I doubt that this assumption of singularity is a conscious choice; it really does not matter. What it reflects is a modern theoretical premise (held as truth by archaeologists) which specifies that nature or environment is a given and not a social construction, that culture and society and behavior are simply reflections of or are determined by nature, and that adaptation is obvious and singular since it represents "people doing what comes naturally." When explored archaeologically at the scale of specific poses or strategies of adaptation, what is assumed to come naturally is an economic logic or practical order.

This perspective is common in archaeological studies of hunters-and-gatherers. The premises which encompass and define everyday life are thought to be economic, rational and practical. Thus the cultural orders of distant, premodern times are earlier versions of modern society's capitalist logic. This process of projection proceeds through the use of the singular model of adaptation which defines prehistoric everyday life, indicates how such lives might be encoded in archaeological records, and suggests how these records might be examined by archaeologists. So the model is not just a

description of what the past looks like but is also an intellectual system which determines how we learn to know that other time.

Thus the singularity is an unbroken whole beyond which it is impossible to see. The point of writing archaeological histories is to destroy the wholeness of the singularity and discover evidence of cultural premises which distinguished the past from ourselves. When modern archaeologists invent theories which propose to discover such separations they cannot help but reconstitute archaeological inquiry. Along the way new patterns never before seen or sought will be recognized. Some of these patterns will prove to represent cultural premises for everyday life which are neither capitalist nor biological.⁴

The Archaeology of Taken-for-Granted

The theory which posits the existence of cultural systems of premodern taken-for-granted suggests that some pasts are indeed different from the present. If such premises were known to be reflected in archaeological records and if archaeologists could discover the relevant codes, then the theory offers one solution to the dilemma of singularity. Certainly one of the most difficult tasks is the development of new field methods and techniques to recover the relevant patterns. Such innovations must truly be prior since they will determine how we approach the excavation of any archaeological record. Consider the situation in Robbins Swamp.

Our work has just begun and we have no data yet which could prove relevant to the search for premodern cultural orders. This deficiency does not mean that such information does not exist nor that it has not been preserved. It simply reveals that our initial studies were not focused upon either the specific problem or the correct approach. However we can explore the issue through other works which can demonstrate two truths: that taken-for-granted are encoded in archaeological records of varying ages and that archaeologists are capable of deciphering such messages.

Prehistorians have largely ignored the existence of and search for cultural orders since the theory was assumed to be irrelevant to an understanding of adaptation. Consequently there are few efforts to explore although a younger generation of British archaeologists is using a structuralist approach with great success (Tour Two).

In America much of the pioneering work associated with an archaeology of taken-for-granted is focused upon the historical archaeology of the 18th and 19th centuries (Deetz 1977, Handsman 1981, Leone 1980, 1982b:744-746, 755). This focus is not without meaning since

TOUR TWO:

It is difficult to understand how one might search for signs of premodern cultural orders at prehistoric archaeological sites. The work of some British archaeologists who have been using a structuralist approach is suggestive and demonstrates how cultural orders are encoded in archaeological records. Some of this research is focused upon the study of living people in Africa (Hodder 1982a); the rest of it is concerned with exploring aspects of Europe's later prehistory (Hodder 1982b).

Structuralism is hard to talk about and even more difficult to understand and use. Yet once learned the approach offers interpretations and insights which are remarkable. When employed by archaeologists (Leone 1982b:742-746) the niqueness of the perspective is defined by three suppositions:

Supposition One: Structuralists deny that any analysis of society must begin with separate levels such as technology, social organization, politics or economy. Instead culture is thought of as a symbolic whole (an order) which determines the parts of society, the systems of relations which link these parts and the processes through which the whole, parts and relations are enacted in everyday life (Sahlins 1976:1-54).

Supposition Two: The relations which order the parts themselves as well as the whole are constructed as opposites or contrasts between inside and outside, right and left, male and female, culture and nature, life and death, give and receive, and have and have not. Sometimes these contrasts consist of pairs which are equal, sometimes one member of the pair is dominant, and sometimes one member encompasses the second. Every society's whole does not include all these pairs nor is the relationship between each pair equivalent from one society to the next. In fact it is possible for a society's symbolic whole and relations to change from one moment to the next. That is what my work at the Institute suggests about the historical emergence of modern America.

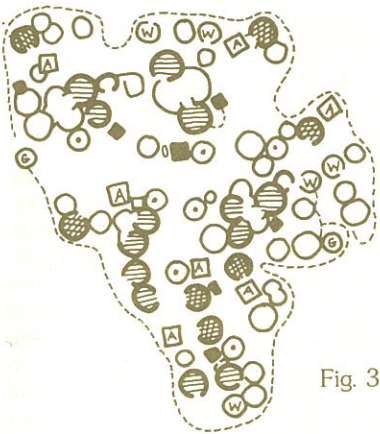
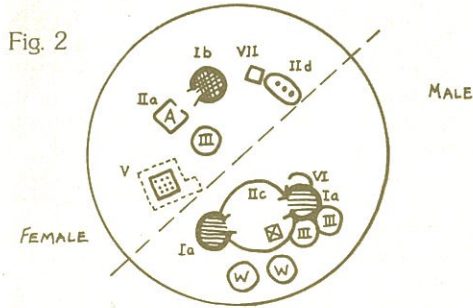
Supposition Three: Evidence of the relations and the wholes and the parts and the pairs is reflected in historic and prehistoric archaeological records. The link between the cultural orders and archaeological sites is provided by everyday life. For structuralists everyday life does not just happen but is enacted within the categories and relations posited by the whole and its parts. Since the archaeological record is a reflection of everyday life what is encoded there represents cultural systems of premises, symbols and principles.

But what might an archaeological record of wholes, structures and relations look like, particularly within a prehistoric

settlement? The late David Clarke's (1972) analysis of the cultural order embodied by an Iron Age site at Glastonbury in southwestern Britain provides some glimpses. On the basis of a spatial analysis of architectural features, activity areas, distributional patterns of specific tools or objects, and the location and extent of preserved food remains, Clarke

and relations which ordered this society. There are two aspects to his work. First he isolates a modular unit of architecture and society which is composed of two contrasting segments: a major, "familial," multi-purpose activity area and a minor, largely female-related domestic area associated with foodways (Figure 2). This unit appears and reappears throughout the one hundred year history of the

settlement (150-50 B.C.) so symbolic and spatial order develops as a confirmation of modular unit. By 50 B.C. the of 15 houses or 7 elementary 3) whose complete order extend the basic relations society and settlement with forming them (Figure 4).



Key

- ⊖ - Ia Major House
 - ⊙ - Ib Minor House
 - ⊠ - IIa Ancillary hut
 - ⊙ - IIb Workshop hut
 - ⊕ - IIc Courtyard
 - ⊙ - IId Baking hut
 - ⊙ - IIc Guard hut
 - ⊕ - IIe Annexe hut
 - ⊙ - III Workfloor
 - ⊙ - IV Clay patch
 - ⊕ - V Granaries or Storehouses
 - ⊕ - VI Stables
 - ⊠ - VII Sties or Kennel
 - ⊠ - Waggon stance
- Palisade or fence

Figure 2. Modular Unit of an Iron Age Settlement at Glastonbury (Clarke 1972:815). The unit is the basic social relation and symbolic whole of the community actually represented "on the ground" by this architectural plan. The axis divides the units into oppositions which appear again and again at different scales throughout the settlement. The upper half is female, associated with domestic activity and represented by minor houses, baking huts, granaries or storehouses, and other areas of activity.

Fig. 3

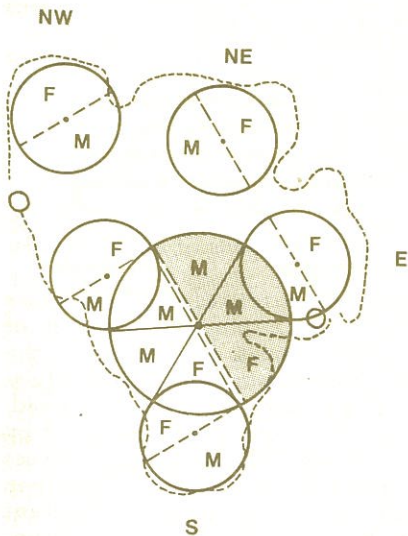


Figure 3. The Archaeological Site of the Iron Age Settlement at Glastonbury B.C. (after Clarke 1972:834). Plan includes 7 structural units and 13-15 houses for a population between 100 and 125 individuals. Units towards the top were constructed last in the settlement. The structural translation of this plan is depicted in Figure 4. Key included with Figure 2.

Figure 4. Structural Model of the Cultural Order of an Iron Age Settlement at Glastonbury, ca. 50 B.C. (after Clarke 1972:835). Each of the smaller modular units is divided into the opposition between male and female, inside and outside, kindred and stranger. The units at the top were built latest and their plan expresses the correspondence between female-related activity areas. Such areas include activity sites exterior to the major houses. These sites were towards the outside world at the outer edge of the community, precisely where a woman's kinship would have been directed. The larger modular unit and the associated smaller units represent the original core structure of the settlement. The larger unit is of particular interest since it represents 2 halves, each composed of 3 parts (2 male, 1 female). In addition, Clarke suggests that the left or unshaded half was dependent upon and subservient to the right half, hypothesized that this arrangement reflects the initial social unit of fathers and brothers to the right and their sons (and their wives) to the left, the first two generations who inhabited the village.

Fig. 4

TOUR TWO continued from page 7

For Clarke the modular unit's major and minor parts represent a physical depiction of a set of opposites whose relations, contradictions and tensions defined everyday life. At the smallest spatial scale, the modular unit itself, the contrast can be summarized as inside versus outside, male versus female, and group versus individual. Once the entire settlement's plan can be discerned these opposites can be encompassed by additional ones such as kindred versus family, solidarity versus blood, headman versus commoner, and father versus children. Each of these opposites is a symbolic contrast between the inward-looking, patrilocal, independent kin group (headed by men) and the outward-connected women who married into such groups, whose children became part of such groups, yet whose affiliation and sense of solidarity lay with their parents elsewhere. In a very real sense women were the key symbol in this Iron Age settlement and the locus of their day-to-day activities was situated outside the home (major houses), separate from their husbands, and towards the boundaries of the community which looked outwards.

At the very least this early piece of structuralist archaeology is interesting but I think that it is much more than that. This is a reconstruction of a cultural order which is believable, testable and even faithful to Roman recollections of Celtic society. It provides a glimpse of a premodern everyday life whose premises and categories were neither economic nor biological. At Glastonbury Celtic society was defined by a contrast between blood and marriage which created social units, social membership, feelings of duty and love, and the spatial plan of the village itself. Everyday life was enacted within the relations defined by this contrast. Women acted as members of a society which was ordered by culture.

The point of the example is not to suggest that the Iron Age of Great Britain has any sort of real connection to Litchfield County. However there is no reason to assume that a structuralist approach cannot be used to inform us about prehistoric society in southern New England. As a theory of archaeological knowledge it offers a startling alternative to the contemporary idea about prehistoric adaptation. If it works it will reveal that cultures and societies once existed in the distant past whose taken-for-granted were different from ours.

continued from page 6

the historical roots of the modern capitalist world can be traced to this 200-year period, but not beyond. Each of the cited studies examined different patterns in archaeological records and found evidence of the appearance of new premises and categories such as the individual, history and the past, and more specialized and differentiated everyday lives. Alone and as a set these newly-invented taken-for-granted reflected the emergence of early modern societies.

The archaeological patterns themselves were not obvious and their interpretive potential was defined by the theory. In fact the theory suggested where the patterns might be and how one should search for them. Often the patterns were situated in the most mundane places whose significance was overlooked.

For example Mark Leone has begun to examine the social and economic history of Annapolis, Maryland, searching for archaeological and artifactual signs of the emergence of mercantile and capitalist society. One of his analyses explored the construction and arrangement of a formal Georgian garden which was built for William Paca, one of Annapolis' most famous and influential merchants. The garden's design was produced through two concepts, bilateral symmetry and multiple terracing, which together composed a formal relationship between spatial perspective and universal time. That is, the garden was constructed as merchant's time was: divisible, ordered, segmented and balanced. Further since the garden was both nature and culture, its plan implied that a universal time and a spatial perspective were also natural and given categories which had always existed.⁵ So the Paca Garden did what the colonialization of Litchfield accomplished. Both represented the earlier invention of a universal time as a natural category, effected a separation between the past and the present, projected the present onto the past and created a sense of unending history. Both compositions also sought to misrepresent present circumstances and conflicts by creating the illusion that everyday life had always been as it then was. The fact that each of these records was thought and constructed is reflective of and reflected in new sets of taken-for-granted.

I am not suggesting that the prehistoric inhabitants of Robbins Swamp built formal Georgian gardens and knew about universal time. Obviously they did neither. However their everyday lives were predicated upon systems of taken-for-granted which were implicit yet reflected in their behavior and therefore encoded in archaeological records. I do not know as yet what these premises looked like. What I

am sure of is that these prehistoric cultural orders were not capitalist. To present them as entrepreneurial is projection.

*A Neobehaviorist Solution to Singularity:
Examining the Middle Holocene*

To discover cultural orders in the distant past provides one method of escaping a singular theory of prehistoric adaptation. In the future this method might resemble a structuralist approach. Whatever the analytical framework, its focus will be the recognition of those premises and categories which defined premodern cultural orders. Interpretations based upon these premises will not require Native Americans to be fossils and archaeological writing will stop being paleontology. The past will be brought into sharper view because of a separation inserted between it and the present.

A different sort of interpretive separation can be effected through a *neobehaviorist approach* which attempts to study, in a more recognizable fashion than structuralism, the validity of assumptions employed by prehistoric archaeologists. It is behavioral because it is concerned with the actions of groups of people in the past. Yet the approach is not interested in understanding how such actions were encompassed by a cultural order. It is neobehavioral because it attempts to evaluate, through rigorous analytical tests, some of the assumptions which underlie a singular theory of prehistoric adaptation.

For example the singular theory or premodern life suggests that a Holocene history (the last 12,000 years) of adaptation would reveal a pattern of increasingly efficient or specialized strategies, itself representative of an evolutionary path. Such a developmental sequence is thought to leave particular traces in the archaeological record reflective of a significant linkage between environment and behavior. One of the tasks of an archaeological history is the evaluation of this type of evolutionary or biological model which orients the past naturally towards the present.

This aspect of the Institute's study of Robbins Swamp is concerned with using a neobehaviorist model to explore Holocene adaptation since 12,000 B.P. (12,000 years ago). This behaviorist analysis is directed towards an exploration of the linkage between environment and adaptation during periods of climatic variability.

For more than ten years paleoecologists have been reexamining the history of Holocene climates, focusing upon the widely-shared assumption that postglacial environmental change was rapid, unidirectional and best represented by modern analogs. These preliminary studies have demonstrated that the Holocene period was characterized by significant variability in annual rainfall, annual tem-

perature range, length of growing season and other climatic factors (Bryson et al. 1970, Wendland and Bryson 1974). These fluctuations are known to be reversible and are of differing and non-repetitive durations.

Evidence from New England, the Northeast and the midwestern United States has allowed paleoecologists to construct more sophisticated models of Holocene climatic and environmental history (Tour Three). These models suggest that the past 10,000 years can be characterized as a period of climatic oscillations which continue even today (Table I). These periods would have been represented by changes in the distribution and spatial patterns of critical resources including surface water, vegetation and selected food species. While the ecological content of Holocene woodlands may not have varied for more than 9000 years (Guilday 1982), the spatial pattern and scale of regional settings did change. This variability suggests also that a singular model of prehistoric adaptation is inappropriate to studies of the distant past (Butzer 1978, Carbone 1982, Dincauze 1981, Handsman 1982e).

Data representative of climatic oscillations and environmental histories have been preserved in a variety of settings and records. Archaeologists and paleo-environmentalists do not have to rely upon pollen records alone (Butzer 1978, Carbone 1982, Swain 1978). All that is required is a well-formulated, problem-oriented research design which specifies the sorts of paleoecological information which must be collected.

During the spring and summer of 1982 field crews from the AIAI implemented a research plan that was both archaeological and paleoecological in orientation. The plan was developed in order to gather a first set of data relevant to archaeological and environmental histories.

Robbins Swamp is an extensive wetland situated in the northern end of Litchfield County between the villages of Falls Village and Canaan, Connecticut (Figure 1). Its main axis extends in a northerly direction for 6.2 kilometers from Route 126, roughly parallel to the valley floor of the Housatonic River. The shorter dimension of the Swamp, along an east-west axis, varies from .70 to 1.30 kilometers in width (see cover illustration).

The southern half of the Swamp's main stem is drained by the Hollenbeck River which flows north and west through the wetlands towards the Housatonic River. Swamp Brook, a tributary of the Hollenbeck, drains the northern half of Robbins Swamp as it continues south. Near the intersection of Routes 63 and 7, adjacent to the village of South Canaan, the Swamp extends east and then south for a distance of 4.3 kilometers. This valley narrows away from South Canaan and is drained by Wangum Lake Brook, one of a series of six tributaries which

Table I. Climatic Episodes of the Holocene Period
(after Carbone 1982, Davis et al. 1980)

Episode	Years B.P.	Major Episode	Minor Episode	Climatic Variables
Late Holocene	2500 to Present	4	—	Cool and Moist
Sub-Boreal	5000 to 2500	—	3	Warm and Dry
Atlantic	8500 to 5000	—	4	Warm
Boreal	9300 to 8500	1	—	Warm and Dry
Pre-Boreal	10,000 to 9300	1	—	Cool
Late Glacial	13,000+ to 10,000	1	—	Cool and Dry

This is a summary of climatic episodes (characterized in comparison to today) which might have occurred in Litchfield County during the Holocene. The xerothermic interval extends from 8500 to 2500 B.P. The Middle Holocene Sub-Boreal episode is of particular interest to our studies. Many of the sites located in 1982 are associated with this period and the earlier part of the Late Holocene.

flow from the western face of Canaan Mountain.

Both the main stem of Robbins Swamp and its arm in the valley of Wangum Lake Brook are oblong interior basins surrounded by landforms of higher elevations. For example the Swamp's western edge is defined by a set of fluvial (river) terraces developed at the base of a limestone ridge; its eastern limit is marked by kame (glacial) terraces and the wall of Canaan Mountain beyond (Figures 1, 5). Similar sets of landforms are situated at the southern end of Robbins Swamp and include the highlands of Beebe Hill and Barrack Mountain as well as a series of Late Pleistocene ice-contact deltas near the junction of Route 63 and 126.

Thus the entire drainage basin of Robbins Swamp is surrounded by stable formations of higher elevations whose ages range from terminal Pleistocene (13,000 B.P.) to much older bedrock knobs and ridges whose tops are covered by thin mantles of glacial till. Below these older landforms a series of Holocene features can be identified including fluvial terraces, floodplains, "erosional islands," alluvial fans and possible wind dunes constructed from fine silts deposited in glacial lakes. All of these geomorphological settings were used by prehistoric populations during the past 10,000 years. Some of these surfaces would have been affected by the postulated history of climatic variability as would the Swamp's entire drainage basin and surrounding environmental settings.

For more than ten weeks between mid-June and mid-October of 1982 an Institute crew explored the archaeological record associated with landforms adjacent to Robbins Swamp and its extension. Twenty-four properties were examined during the first season; these tracts were distributed among five localities which were situated along the main stem of Robbins Swamp and the valley of Wangum Lake Brook. Most of these properties were open, plowed fields planted in corn which were walked systematically and surface collected. Preliminary distribution maps of artifact scatters and concentrations were prepared for each of these fields.

During this first season field activities were organized in order to collect infor-



Figure 5. View of Kame Terrace East of Robbins Swamp. Canaan Mountain is in the background. This plowed field was walked this past summer by a crew from the AIAI.

mation related to three problems:

1. What sort of prehistoric archaeological record has been preserved around Robbins Swamp?

2. Do the extant archaeological resources adjacent to the Swamp exhibit different patterns reflective of climatic variability, environment features, poses of adaptation, or even distinct cultural orders?

3. What sort of paleoecological records have been preserved within the drainage basin and how might the study of such records contribute to a knowledge of Holocene climatic and environmental history?

Excavations were also undertaken at five sites. Four of these were alluvial fans within the valley of Wangum Lake Brook and the fifth was a plowed knoll in the same valley which was tested during the fall. As a result of these field strategies we have been able to evaluate future prospects for intensive archaeological and paleoecological research as well as isolate several patterns in the prehistoric record which are reflective of Holocene environmental history.

Data collected from the initial field season demonstrate that the prehistoric archaeological record of the Robbins Swamp basin is long (a 9000 year continuum), abundant (about 24 new prehis-

TOUR THREE: New Perspectives on Holocene Environmental History

Evidence in support of the new perspective on Holocene environmental history has been collected from widely separated regions. Some of it is completely new and based upon the development of new technologies. Other interpretations are founded upon older data which have been subjected to different analyses. Some of this activity has demonstrated that climatic records from different continents show striking similarities, probably the result of atmospheric circulation across the Northern Hemisphere.

Even though the climatic records from a different continent cannot be used to reconstruct a natural history elsewhere the presence of these patterns of circulation allows us to use such data to characterize the form of variability. For example an analysis of an ice core retrieved from the Greenland Ice Sheet identified two patterns of temperature variability which have occurred since 15,000 B.P. (or 15,000 years ago).⁶ Until about 1500 years ago the annual temperature range varied in a relatively unpredictable fashion. Sometimes there were long periods of stability; other intervals revealed rapid and reversible changes, especially between 6500 and 4500 years ago. However this pattern disappeared about 1500 B.P. when fluctuations began to be separated by a regular interval of about 120 years. No matter what the form of fluctuation was it is obvious from this long temperature record that the Holocene period should not be viewed as one whose climatic history was lineal or predictable (Dansgaard et al. 1969).

Obviously massive ice sheets are few in number and the sort of climatic record frozen within a long ice core is not available to each archaeologist or paleoecologist. However some information about Holocene climatic history can be isolated within the patterns established by pollen curves. These curves or diagrams are constructed from preserved pollen retrieved in a systematic fashion (often as cores) from the bottom of bogs or freshwater lakes. Pollen is related in a complex way to surrounding vegetation and can be used as a source of information about past vegetation as well as climatic change.

Traditionally pollen diagrams depict changes in the form of *frequency curves* so at any "moment in time" (actually an interval of time) one can determine the *relative abundances* of pollen types present. These data are then compared to contemporary patterns through the use of analogs which allow one to translate a fossil assemblage into a reconstruction of a regional vegetation community (Davis 1969a). Stratigraphic information and associated radiocarbon dates help to arrange such translations along a time axis, producing a history of Holocene

vegetation for a particular location (Figure 6, Table II).

Many of the percentage diagrams in New England reveal patterns similar to those identified at Berry Pond, located in the Berkshires in western Massachusetts (Whitehead 1979). Comparison with modern analogs and other fossil diagrams shows that within a span of 14,000 years the vegetation changed from tundra to spruce woodlands to mixed deciduous-coniferous forest to a series of temperate deciduous forests. This last change occurred about 9000-8600 B.P., during the Early Holocene. Thus it can be argued that a relatively familiar, though not entirely modern, environment had appeared within 4000 years of the disappearance of glacial ice.

The changes recorded prior to 8600 B.P. are interpreted as the climatic history of a warming trend which culminated in the emergence of relatively temperate conditions about the time of pollen zone "C." The subdivisions of this major zone seem to represent fluctuations in the relative amounts of particular species (hemlock, spruce, hickory) as well as the appearance of new species such as chestnut in zone C-1. Some of these fluctuations are thought to reflect climatic variability; others are due to the migration of arboreal species into new geographic regions (Davis 1969a,b).

From the perspective of Holocene archaeology the recognition and interpretation of the divisions and variability within zone "C" is of crucial importance.

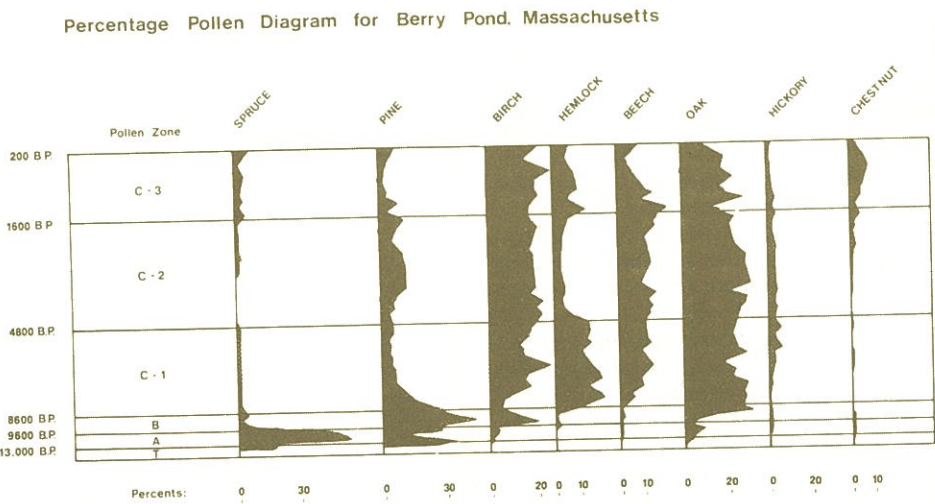


Figure 6. Percentage Pollen Diagram for Berry Pond, Massachusetts (after Whitehead 1979:Figure 5). This diagram was constructed with data recovered from a small pond in the Berkshire region of western Massachusetts. Its form is similar to many diagrams in New England and the Northeast. The dates on the vertical axis are radiocarbon determinations. Table I helps to translate this data.

Table II. Translation of the Percentage Pollen Diagram, Berry Pond, Massachusetts (Whitehead 1979).

Pollen Zone	Radiocarbon Dates	Dominant Species	Vegetation Community	Analog
C-3	1600-200 B.P.	Spruce, Chestnut, Oak, Hickory, Beech	Deciduous	Numerous
C-2	4800-1600 B.P.	Pine, Oak, Hickory, Birch, Beech	Deciduous	Appalachian Oak Forest
C-1	8600-4800 B.P.	Hemlock, Birch, Beech, Oak	Deciduous	East and Southeast of Lake Ontario
B	9600-8600 B.P.	Pine, Birch, Oak	Mixed Forest	Northeast of Lake Huron
A	13,000-9600 B.P.	Spruce, Oak, Pine Minimum	Open Spruce Woodland	South of James Bay
T	?-13,000 B.P.	Non-arboreal, Pine	Tundra	None Close

It is this zone which is associated with most of the prehistoric record in southern New England. Thus analyses of its variability will be crucial to our studies of the archaeological histories of prehistoric adaptation in Robbins Swamp.

Often the variability of each "C" zone is ignored or not even recognized. The use of percentage diagrams facilitates this bias as one tends to assume that each zone's assemblage is the only meaningful analytical unit. However it is possible to ignore those assemblages and isolate significant evidence of climatic variability by constructing *pollen influx diagrams*.

Influx diagrams differ from percentage diagrams because they depict the *net number of specific types of pollen grains* accumulated per unit area of sediment per unit time. The net number of pollen grains is determined through counts; radiocarbon dates help to establish a time frame along the entire core or column. Often influx diagrams are not constructed for every type of pollen. Only those types thought to be indicative of climatic variability or other sorts of fluctuations may be analyzed. Such diagrams have proved instrumental in isolating evidence of important variations in specific accumulation rates associated with each of the "C" zones. These variations apparently reflect climatic oscillations (Davis 1969b, Davis et al. 1980).

For example Margaret Davis (1969b)

has identified a significant increase in the accumulation rate of ragweed pollen at Rogers Lake in southern Connecticut. This increase first appears about 8500 B.P. and fluctuates in intensity (300-800 grains) until 4500 B.P. The influx diagram for this species does not reveal a similar increase until the historic period when Euroamericans cleared the land for agriculture. This practice reduced the amount of arboreal pollen, allowed non-arboreal species to thrive, and caused noticeable jumps in the influx rates of non-arboreal pollen including ragweed (Brugam 1978, Davis 1969b:420).

The earlier increase in ragweed pollen associated with zone C-1 is attributed to an interval of warm-and-dry climate which reduced the density of the deciduous groves and opened the landscape, allowing grasslands to appear (Davis 1969b:419). This interval, known as a xerothermic period, is also represented by increases in the accumulation rates of hemlock and white pine pollen from Berry Pond, Massachusetts and Lost Pond, New Hampshire (Figure 7) (Davis et al. 1980). After 4500 B.P. the climate became cooler and wetter, an episode represented by decreases in the influx rates of ragweed, hemlock and white pine. These oscillations suggest that the Middle Holocene period, 6000-3000 B.P., may be of particular interest to our neobehaviorist studies.

Continued from page 9

toric sites were recorded), and well preserved. Excavations within the valley of Wangum Lake Brook reveal that an extensive paleoecological record also exists including buried land surfaces and swamps, preserved organic mats and bogs, and a series of lacustrine beds representing a late glacial and early postglacial lake (Tour Four). This paleoecological record will, after much more intensive study, allow the construction of an environmental history for Robbins Swamp. This history will cover the Holocene period and identify episodes of climatic oscillation which should be similar to those described in other regions. As this work continues archaeological studies will also be conducted to explore the processes of prehistoric adaptation.

We are particularly interested in the Middle Holocene period, the interval between 6000 and 3000 B.P., when the climate was warmer and drier than that of the periods which preceded and followed it (Sub-Boreal episode in Table I). This major episode and oscillation would have had dramatic effects upon the environmental settings as well as the environmental grain of the research area. Much of the surface water which had been present during the Early Holocene would have disappeared including smaller ponds as well as the glacial lake. Thus an important type of environmental feature was missing (Figures 8, 9).

In the same way the amount of ecological diversity (the environmental grain) present was diminished as many of the small habitats defined by surface water or a high water table also disappeared. Unlike the heterogeneous pattern characteristic of earlier Holocene intervals much of the Middle Holocene's environmental grain was homogenous (Figure 10). Towards the end of this period, about 3500 B.P., the regional climate began to shift towards a cooler and wetter interval. This interval is represented by a decline in the influx of hemlock and pine pollen and a rise in hickory (Zone C-2, Table II; Figure 7).

The duration of the episode is not well understood yet there is little doubt that it would have altered the earlier regional environment. New settings would have appeared including ponds and swamps and some of the lakes would have increased in size. At the same time the environmental grain would have become more diversified as new habitats of differing sizes and complexities emerged (Figure 11). So over the course of the Middle Holocene, between 6000 and 3000 B.P., the form and size of Robbins Swamp would have changed as would the environmental settings and grain of the surrounding landscape.

This reconstruction is conjectural. While it is based upon extensive research conducted by paleoecologists, intensive

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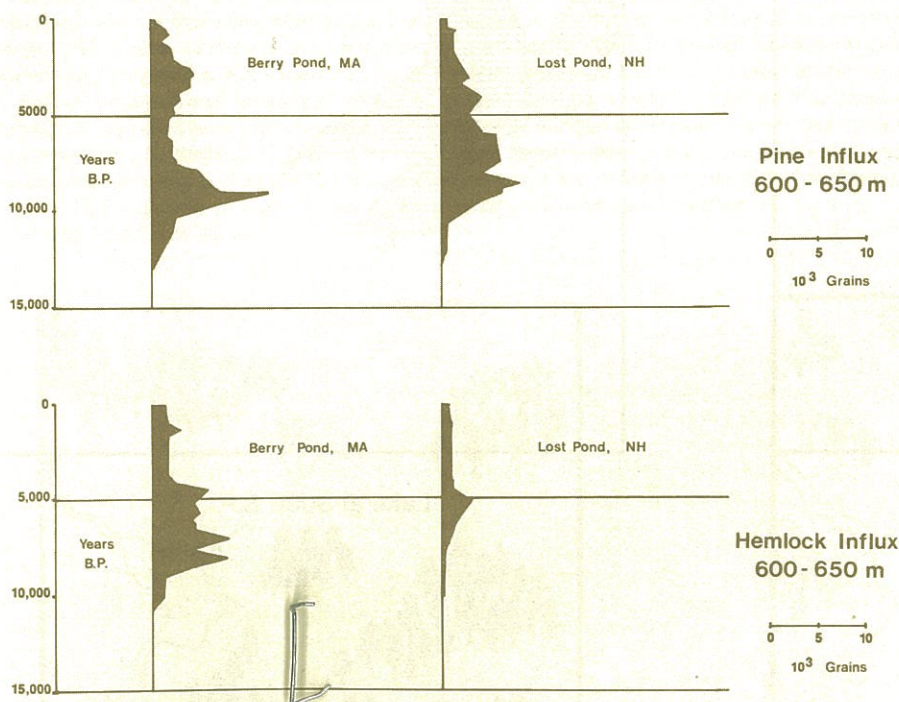
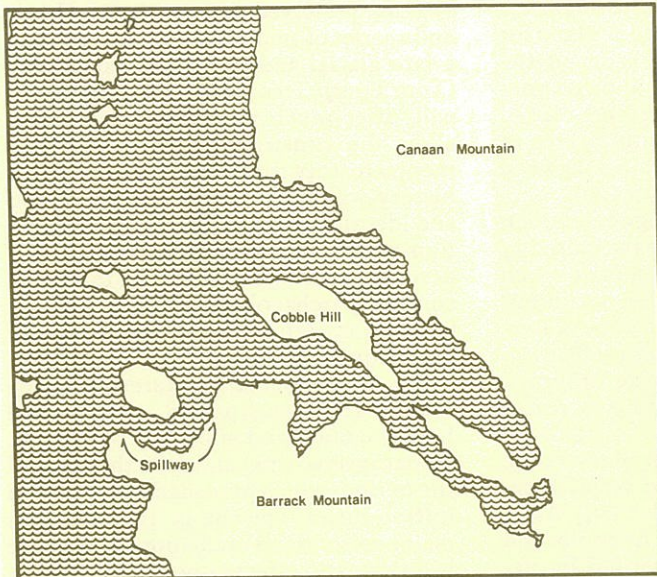
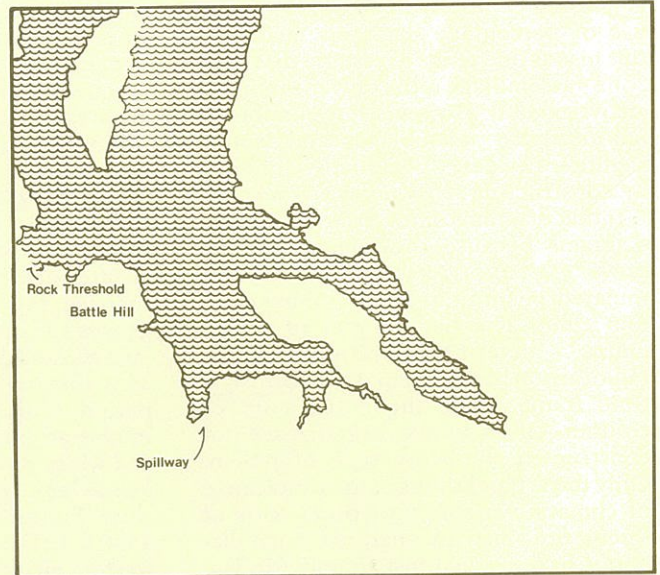


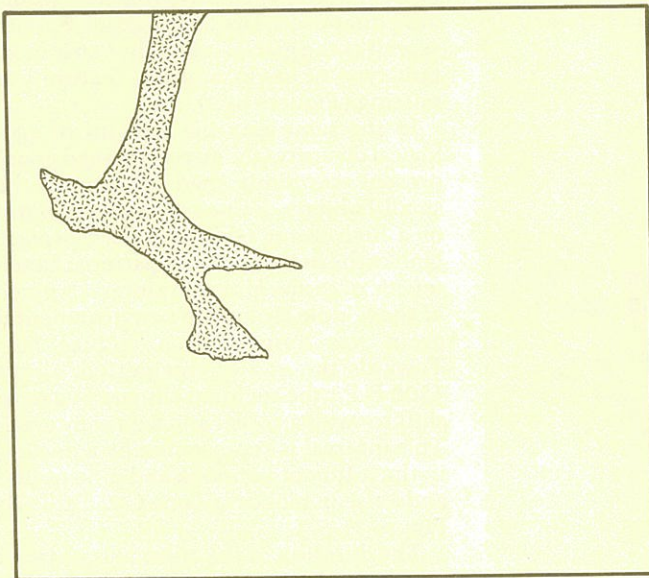
Figure 7. Influx Diagrams for Hemlock and Pine, 15,000-0 B.P. *This diagram was constructed from data published in Whitehead (1979) and Davis et al. (1980). The increases in the influx rates around 8500 B.P. mark the beginning of a xerothermic interval which lasted until about 4500 B.P. During this interval the climate would have been warmer and drier than today, particularly between 6500 and 4500 B.P. These changes would have affected the form and size of Robbins Swamp as well as the patterning of the adjacent environmental settings.*



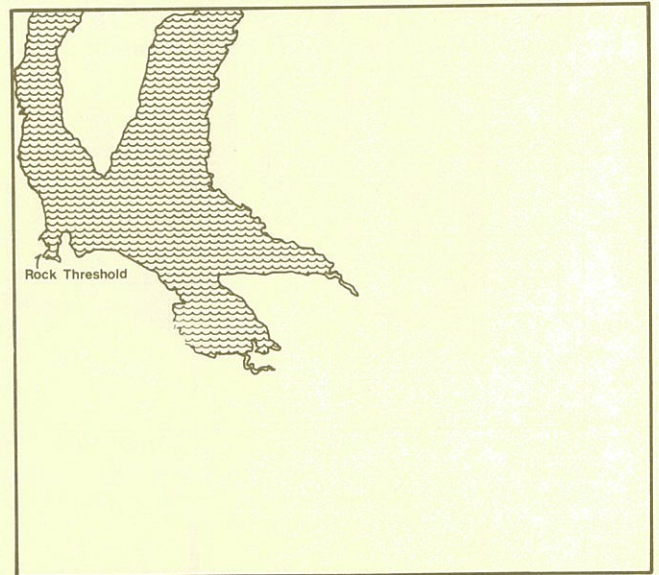
Lake at 13,000 B.P.



Lake at 9000 B.P.



Swamp at 6000 B.P.



Lake at 3000 B.P.

Figure 8. Conjectures about the History of the Glacial Lake, 13,000 to 3000 B.P. Each diagram depicts the relative amounts of lake and land areas exposed at specific intervals. At its maximum around 13,000 B.P. the glacial lake dominated the landscape except for Canaan Mountain, Barrack Mountain and Cobble Hill. Between 13,000 and 9000 B.P. the size of the lake shrank and its drainage changed from the valley along Johnson Road (spillway) to the gap north of Battle Hill. The bedrock ridge at Falls Village along the Housatonic River would have served as a natural dam by 9000 B.P. A dramatic reduction of the lake's size and its mutation into a swamp would have occurred during the warm Atlantic interval (Table II). The cooler and wetter climate associated with the end of the Sub-Boreal would have produced a lake or series of connected ponds by 3000 B.P.

Holocene History of Water and Land

Fig. 9

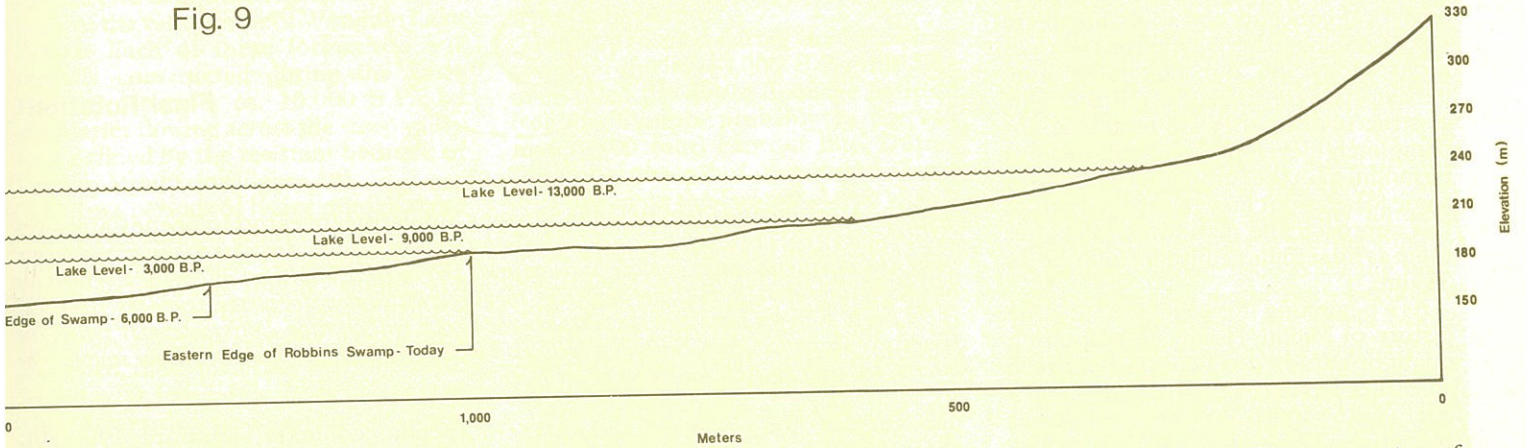
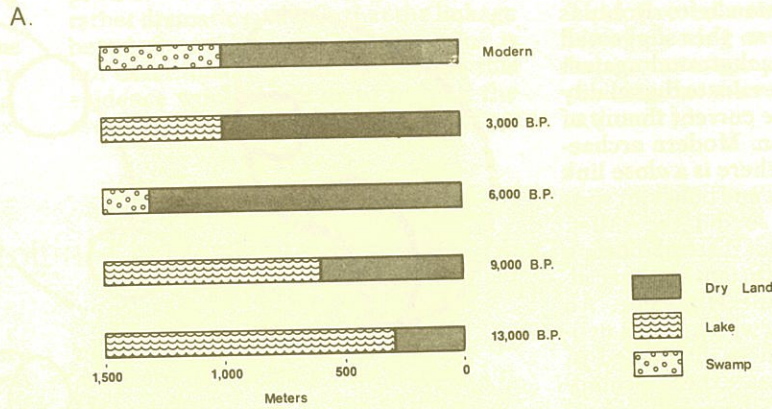


Figure 9. Holocene History of Water and Land along the Northeastern Edge of Robbins Swamp. This is a conjectural reconstruction of the hydrological history of the Swamp. The water elevations at particular moments match those shown in Figure 11. Note the amount of additional landscape which is available in this locality as the lake disappears between 13,000 and 6,000 B.P. Note also that the water level at 3,000 B.P. would have flooded earlier surfaces so some prehistoric sites may now be underneath the Swamp.

Figure 10. Schematic Representation of Environmental Grain at 6,000 B.P. After more than 2,000 years of predominantly warm climatic conditions the regional environment surrounding Robbins Swamp had become quite homogenous. Some surface water continued to exist but the number of different settings or ecological communities was limited. Oak-hickory and hemlock-pine groves were frequent as were groups of beech. Open areas covered with grasses and weeds were also common.

Figure 11. Schematic Representation of Environmental Grain at 3,000 B.P. Towards the end of the Sub-Boreal period climatic conditions shifted towards a cool and wet interval, transforming the earlier homogenous grain. Now the regional environment became quite diversified and included numerous small settings. Among the most important are additional ponds and wetlands, oak-chestnut and oak-hickory groves, and larger deciduous forests.

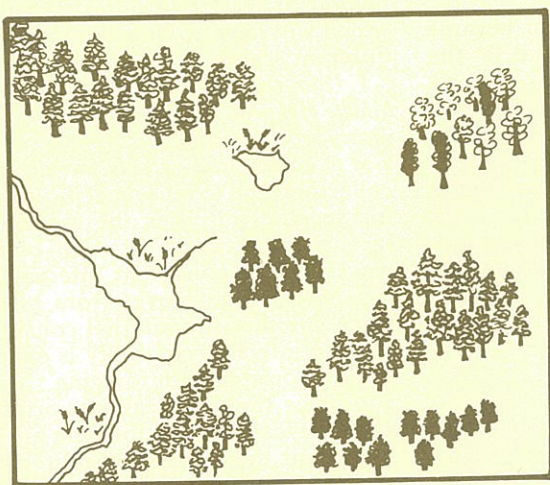


Fig. 10

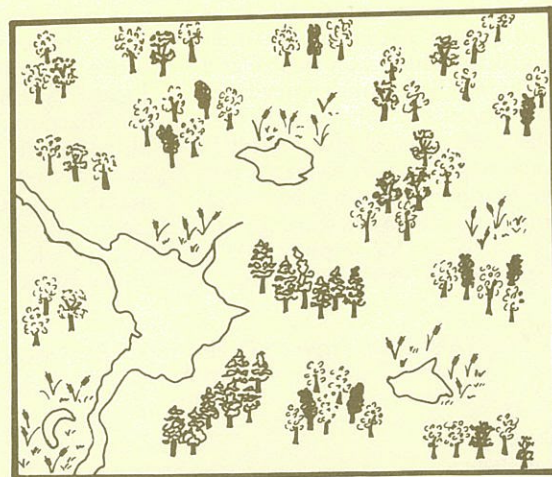


Fig. 11

- OAK-HICKORY FOREST

- SWAMP

- BEECH GROVES

- HEMLOCK-PINE FOREST

- OAK- CHESTNUT FOREST

studies are needed to discover how pertinent the reconstruction is to Robbins Swamp. Nevertheless the suggested changes provide a background against which we can learn to evaluate the validity of some aspects of the current theory of prehistoric adaptation. Modern archaeologists believe that there is a close link between environment and behavior so as one world changed so did the other. Further it is assumed that adaptation became increasingly efficient and specialized during the Middle Holocene. An archaeological history which uses a neo-behaviorist approach is interested in studies which can evaluate these assumptions of linkage and developmental change.

This sort of critical evaluation requires analytical concepts and tools which are just beginning to be invented in American archaeology. So our efforts as neo-behaviorists are similar to our thoughts as structuralists; they are tentative, not completely developed and will need to be modified in the future. Yet we do have some ideas about how to proceed within this approach and plan to use and alter them as our studies continue in Robbins Swamp.

As a beginning it is suggested that the history of Middle Holocene adaptation might be explored as a contrast between an earlier strategy called foraging and a later (post 3500 B.P.) one identified as collecting. These strategies can be distinguished on the basis of principles of social and economic organization as well as differences in their uses of regional space and more specific localities or places (Table III). The recent archaeological investigations of Nunamiut Eskimo populations by Lewis R. Binford (1980, 1981) demonstrate that archaeological records can be expected to contain patterns which are reflective of each or all of these differences.

Foragers normally move away from residential camps to gather foods on an encounter basis. Some of each day is spent hunting and gathering by individuals or groups which vary in size and make-up. There is little consistency from one day to the next as to where particular food species are acquired. Much space is covered each day and over longer intervals and there is little tendency for those involved in the search to reuse particular localities or places. This implies that a foraging strategy is especially non-re-

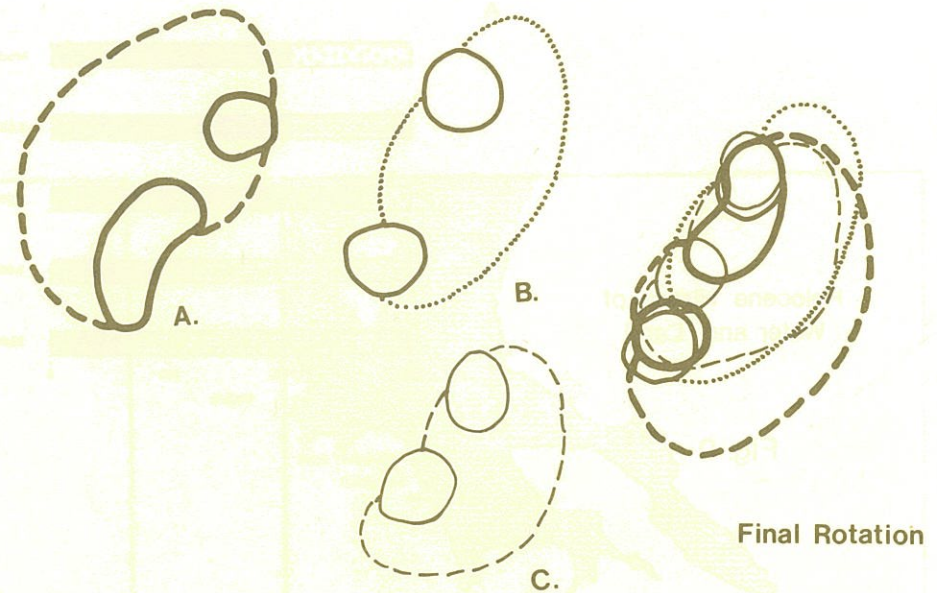


Figure 12. Schematic Plans of Units Showing Similarities of early Holocene Campsites (Wilmsen 1974:113). One way to determine whether identical sets of organizational principles are being used at different times or places is to construct this sort of spatial plan. When the diagrams for each of the three units (A, B, C) are completed, they are oriented along the same axis and superimposed. If the camps have the same plan the parts and the wholes will coincide. Differences may reflect the presence of dissimilar organizational principles. The solid lines define the limits of bone scatter. The interrupted lines encircle the limits of artifacts.

dundant and non-patterned and an archaeological record of foraging should reflect these tendencies (Table III).

It can be suggested that foraging strategies are especially useful in environmental settings which are unstable and homogeneous so that the positions and amounts of particular species cannot be predicted. Foraging is the sort of adaptive strategy which emphasizes "learning about the distribution of resources in a region" (Binford 1981:11). Given the hypothetical reconstruction of the environmental grain around 6000 B.P., the prehistoric populations of Robbins Swamp could very well have been foragers.

As the environmental grain became more diversified after 3500 B.P. the locations and amounts of food resources stabilized and hence were more predictable. In this setting populations might have chosen to become collectors who acquired food through the use of organized task groups as well as specific technologies. Rather than searching for food, collectors procure "specific resources in

specific contexts" (Binford 1980:10). Therefore, unlike foraging, a collecting strategy is patterned, redundant and differentiated and its archaeological record should look very different.

If there is a determinant link between environment and behavior then a history of Middle Holocene adaptation could be represented as a change from a foraging to a collecting strategy. Such a change would in some sense also be evolutionary as collecting is a more efficient and specialized tactic. Thus viewed from the long-term perspective the archaeological record of the Middle Holocene should exhibit at least two different patterns which will have to be examined at two different scales:

1. Over the 3000 year period during the Middle Holocene, the amount of archaeological variety between specific sites or places - locations used to acquire food - should increase. Since collectors tend to reuse specific localities for specific purposes the assemblages (groups of artifacts) at each of these places will be consistent internally but different as one moves from place to place. Neither the internal consistency nor the intersite variability is expected to be associated with foraging.

2. Since the organizational principles and everyday lives of foragers are non-redundant the archaeological record of their residential bases should also be non-patterned and inconsistent. This is in contrast to the base settlements of collectors which should be internally consistent and homogeneous. A comparison of the archaeological plans of space in residential bases should isolate evi-

TABLE III. How to Distinguish Between Foragers and Collectors in an Archaeological Record

Category	Foragers (6000 B.P.)	Collectors (3000 B.P.)
Environmental Grain	Homogeneous	Diversified
Food Acquisition	Encounter	Scheduled
<i>Archaeology of Space</i>	<i>Non-sites, Low Visibility</i>	<i>Sites, Higher Visibility</i>
Use of Places	Non-redundant	Redundant
<i>Archaeology of Place</i>	<i>Heaps</i>	<i>Sites</i>
Pattern between Places	Non-patterned	Patterned
<i>Index of Variety</i>	<i>Less Specialized</i>	<i>More Specialized</i>
Organizational Principles	Non-redundant	Redundant
<i>Spatial Plan of Residential Base</i>	<i>Heterogeneous Plans</i>	<i>Homogeneous Plans</i>

ence of increasing homogeneity during the Middle Holocene (Figure 12). Suppose that neither of these patterns reflected in the Middle Holocene archaeological record of Robbins Swamp. Each inconsistency between our "ex-

pecteds" and the "actuals" could be rather dramatic evidence that the linkage between environment and behavior is not determinant. At the same time this evidence would force us to rethink the assumption of changes in the direction

of increasing efficiency and specialization. Thus a neobehaviorist approach is capable of allowing us to evaluate two of the important assumptions which underlie the singular theory of prehistoric adaptation. *continued on page 18*

TOUR FOUR: An Initial Look at the Paleocology and Archaeology of Robbins Swamp

Most of the evidence of the basin's well-preserved paleoecological record was identified through studies of a series of alluvial fans distributed along the eastern edge of the valley floor of Wangum Lake Brook. Each of these formations was initially constructed during the Early Holocene period, ca. 10,000 B.P., by tributaries flowing across the steep valley wall defined by the resistant bedrock of Canaan Mountain (Figure 13).

During periods of heavy rainfall these tributaries carried sediments of varying sizes in suspension and transported larger materials through rolling, sliding and bouncing. When the water reached the valley floor and the gradient of the stream flattened, these materials were deposited as lobes, as low ridges or as bars whose thicknesses decreased along the downstream axis.

Such geomorphological settings provide contexts where complicated stratified deposits could accumulate. These deposits include buried land surfaces and other features used by prehistoric populations. Four alluvial fans were tested during the summer and the fall and each contained evidence of buried deposits associated with prehistoric archaeological materials.

For instance the alluvial fan at the Nichols site began to be constructed about 12,000 B.P. and its record contains preserved soil horizons representative of former land surfaces. Archaeological materials were recovered from these buried horizons including pieces of fire-cracked rock and flakes which help to emphasize the prehistoric use and research potential of such settings. The excavations at Nichols also exposed a Late Holocene series of mud flows and coarser alluvium (sands and small gravels) which filled a late prehistoric swamp, ca. 1000 B.P. (Figure 14). Associated archaeological materials including incised ceramics suggest that this feature was used as either a settlement or a more specialized activity site by late prehistoric populations (see Collections Spotlight page 18).

The depositional processes associated with alluvial fans in this valley also helped to preserve important signs of the region's late glacial and early postglacial (ca. 9000 B.P.) environmental history. Perhaps the most significant discovery was excavated beneath a fan along the

northern edge of Cobble Road near the southern end of the valley (Figure 15). Here sediments representative of an extinct lake were uncovered beneath a contemporary pasture.

Initially formed during the Late Pleistocene, prior to 13,000 B.P., this lake once filled the entire drainage basin of Robbins Swamp, probably to the 240 meter (800 foot) contour line. During this initial phase the lake covered a large area including the Swamp's basin as well as adjacent valleys such as the Hollenbeck River, Wangum Lake Brook, and the lower courses of the tributaries which now flow off Canaan Mountain. The Housatonic River's valley itself would have been flooded as far north as Sheffield, Massachusetts (Figure 8).

Between 13,000 and 9,000 B.P. the size of this glacial lake would have been reduced in a relatively steady though complicated pattern. By the Early Holocene period the lake's shore must have been at or just below the 210 meter (700 foot) contour line. The lakebeds and later Holocene stratigraphy isolated at the Nichols site and along Cobble Road (Figures 14, 15) support this reconstruction. For example the 270 meter section exposed along Cobble Road shows that the

lake disappears at about an elevation of 210 meters.

At its maximum the extent of the Early Holocene lake would not have matched its predecessor at 13,000 B.P. Nevertheless the lake would have continued to dominate the regional landscape, covering Robbins Swamp and the Housatonic's valley above Falls Village (Figure 8).

Between 9000 and 6000 B.P. the lake disappeared completely. Much of the water loss represents the xerothermic interval and its warm-and-dry climatic patterns. About midway during the Atlantic episode (ca. 7000 B.P.) the once continuous lake might have become a series of interconnected ponds whose surface areas and depths would have been quite variable. The continuation of a predominantly warm interval would have resulted in the eventual disappearance of even this sort of setting. By 6000 B.P. much of the landscape was dry land including localities now under water or within the modern swamp (Figures 8, 9, 16).

The presence of this early hydrological feature and its subsequent history of fluctuations would have provided one set of environmental variables which prehistoric populations might have used.



Figure 13. View of Two Alluvial Fans at the Base of Canaan Mountain, Valley of Wangum Lake Brook. The crew is standing on one to the right. The barns at the left edge were built upon the other.

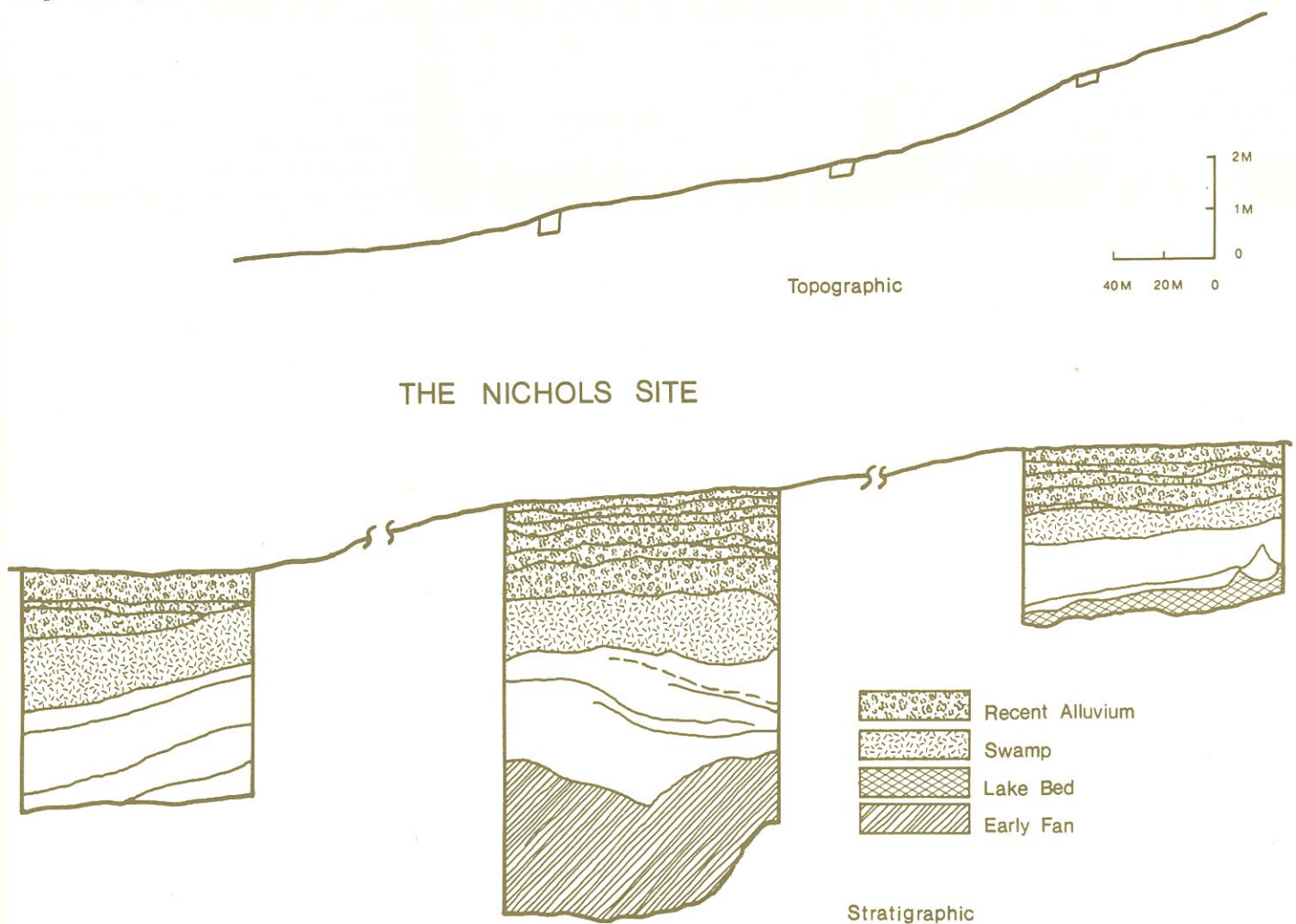


Figure 14. Topographic and Stratigraphic Cross-sections of the Nichols Site. *This site is situated on one of the alluvial fans formed at the base of Canaan Mountain in the valley of Wangum Lake Brook. Several two meter squares were excavated along the longitudinal axis of the fan. Each of these contained evidence of the existence of a late prehistoric swamp which had been buried by later alluvium including sands and silts. In the square towards the top of the fan it was possible to identify the entire series of sediments which had been deposited over the Early Holocene lakebeds.*

In some localities the Holocene history of the boundary between land and water would have provided a context for patterns of land use and site location (Figure 9).

Along the northeastern edge of Robbins Swamp the kame terraces range in elevation between 240 and 200 meters above sea level. All of this area was under water at 13,000 B.P. By the Early Holocene period (ca. 9000 B.P.) the landscape would have begun to emerge, a process which continued uniformly towards the west until about 3000 years ago. Therefore at successive intervals different parts of this area would become available for a variety of uses by populations in the distant past.

Similar histories can probably be reconstructed in other localities. Several patterns recognized in the archaeological record of Robbins Swamp indicate that the Holocene history of hydrological fluctuations was reflected in systematic behavior:

1. Although Early Holocene artifacts

(9000 B.P.) were rare, those identified were situated above the 210 meter (700 foot) contour, suggesting that most of the basin continued to be under water. Similar correspondences have been noted from archaeological studies of early lake systems in northern New England (Nicholas 1980) and provide some parameters for locating the earliest archaeological sites around Robbins Swamp.

2. The archaeological record of the edges of the Swamp, located on terraces and other land forms below the 200 meter (670 foot) contour, includes Middle and Late Holocene sites and artifacts associated with the Late Atlantic (6000 B.P.) and Sub-Boreal (3000 B.P.) climatic periods (review Table 1). This geographical pattern supports a later Holocene history of dessication, the subsequent lowering of the lake's level, and the emergence and use of new landforms (Figure 9).

3. At least three sites were discovered at elevations below the 200 meter contour on landforms whose topography

suggests that they are erosional knolls or islands, remnants of what were once more continuous surfaces. Although their origin is not well understood, these surfaces are elevated above the surrounding floodplains of Robbins Swamp. Each of them was used intensively by Middle and Late Holocene populations and is represented by extensive and intensive archaeological records. Such knolls would have been either connected to adjacent landforms or surrounded entirely by water depending upon the associated climatic context.

Each of these three patterns provides preliminary evidence that some aspects of the archaeological record of Robbins Swamp reflects Holocene climatic variability and environmental change. These patterns are recognizable at particular geographical scales and apparently represent the systematic placement of certain sites on landforms whose histories are defined by fluctuations in the Swamp's hydrological regime.

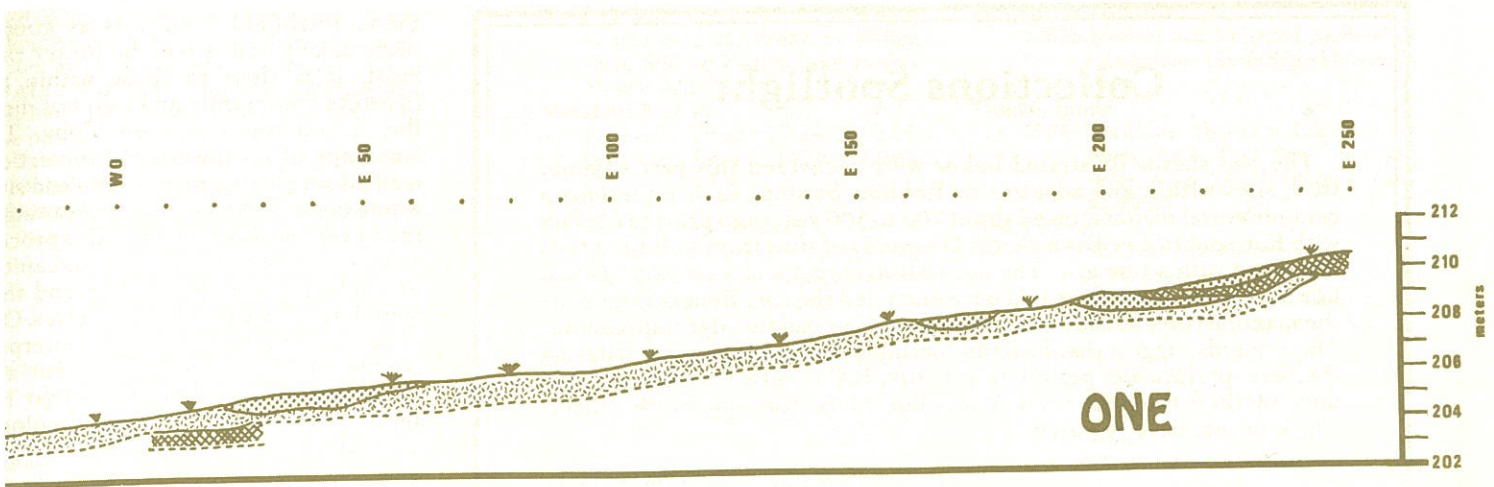
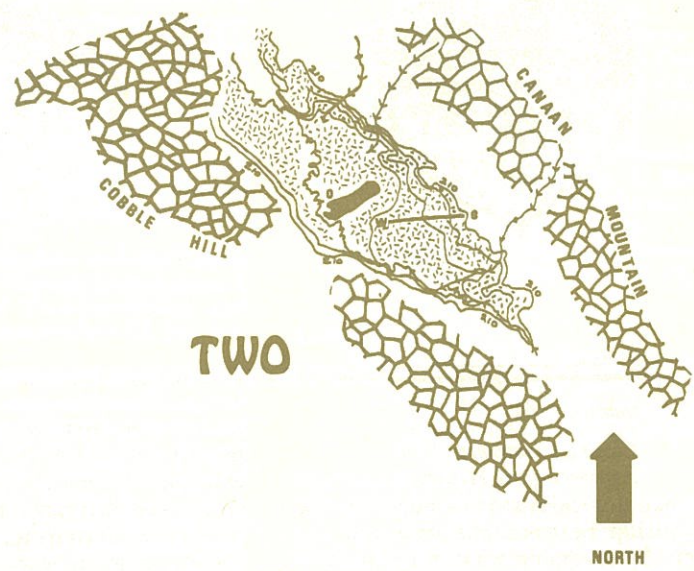


Figure 15. Stratigraphic Cross-section of Holocene Lake along Cobble Road. Holocene lake is represented by the stippled pattern, sand deposits by dots, and gravel lenses by cross-hatching. Preserved wood and twigs, buried within and beneath these beds, will allow us to determine the age and subsequent history of the lake. Some sand and gravel materials were introduced later into the lake by streams coming from Canaan Mountain. These alluvial fans may have provided upsites on the lake's shores.



W 0: Stippled pattern delineates the size of the early postglacial lake it might have appeared around 10,000 B.P. in the upper end of the valley of Wangum Lake Brook. The knoll "o" would have been a small large island surrounded by water or a swamp.



Figure 16. Photographic View of Landforms along the Eastern Edge of the Swamp. Edge of Swamp lies in the background at the base of the slope. The crew is standing at about the elevation of water at 9000 B.P. The surface beyond them would have emerged between 9000 and 6000 B.P.

Collections Spotlight

The two sherds illustrated below were recovered this past summer from sites within and adjacent to Robbins Swamp. Each represents a ceramic vessel manufactured about 700 to 500 years ago prior to contact with Euroamericans. Both sherds are pieces of rims from well-fired pots tempered with a fine grit. The decoration consists of a series of incised horizontal bands which would have encircled the rim. Beneath this zone the manufacturer added a band of fingernail or paddle-edge impressions. These sherds suggest that Robbins Swamp was occupied and used during the late prehistoric period (circa 700 B.C.). Sites of this age are uncommon in the Housatonic Valley but this pattern apparently reflects a lack of intensive research.

— Russell G. Handsman, Ph.D.
Director of Field Research



Illustrations by Roberta Hampton

Continued from page 15

Closing Comments about Archaeological Histories

Archaeological histories work out the relationship between the past and the present by reversing what is assumed to be a natural order. This reversal—standing the past on its head—is an explicit recognition of a condition of which everyone is aware: the past is dead and mute. It cannot talk for itself; we are the ones who make the past speak and how we make it talk depends upon our lives, the present. The recognition of this relationship does not impose any sort of absolute skepticism upon either history or archaeology. We are not saying that the past cannot be known nor are we suggesting that every individual creates and uses a different version of the past. What we believe is that the process of projection cannot be ignored. It can be used as a doorway through which we enter the early modern world as well as the premodern past which might be either historic or prehistoric.

What does this imply about archaeological inquiry? It has to be critical, more aware of itself, and more conscious of how it functions in the modern world. As a perspective, archaeological histories allow us to do all of these things. Perhaps the most unique quality of archaeological

histories is that they can explore prehistory and history at the same time. For example this article has considered evidence and interpretations from studies of early modern America, later capitalist society, historic worlds which were still premodern, and the prehistoric pasts of Neolithic groups as well as hunters-and-gatherers. Everything is and can be considered. This is not true because of a natural and logical connection between the distant past, early history, later history and the present. Such links exist only because of the invention of universal time.

Archaeological histories use evidence from different cultural and historical settings because we are concerned with exploring how the present imposes itself upon the past. This process of tyranny proceeds through the use of sets of premises or taken-for-granted which were themselves historically invented. Archaeological histories explore the emergence of such premises and use the interpretations to look towards the present and beyond to a separate past. Thus the prehistory of any region will always be an historical study as well.

One more point should be made more obvious. Archaeological histories are an exotic way of looking at the past but one need not go to exotic places to write

them. Litchfield County is as good a place as any and it may be better than most. It is close to those within the Institute community and I do not mean this in the sense of geography. The landscape of northwestern Connecticut is filled with living places and dead sites where people worked out the meaning of their everyday lives. Some of this process was modern, some mercantile or capitalist, and some was premodern and thus completely separate from ourselves. Out of such comparisons will come interpretations which inform the present and some past at the same time. That has always been the purpose of archaeology, the search for-ourselves.

—Russell G. Handsman, Ph.D.
Director of Field Research

Acknowledgements & Notes

Some of the inspiration and effort involved in this article and in the initial study of Robbins Swamp has been supplied by Roberta Hampton. She knows more than she is willing to acknowledge and has been an able colleague who has helped me to extend the original concept of archaeological histories. Roberta also drew most of the illustrations used here. Both of us enjoyed working with a competent field crew who were sometimes interested in talking theory. Our thanks to Leslie Bennett, Mike Bowe, Adam Burnett, Gerry Geci, David Hofstatter, Bobbe Kerr, Bonnie Sheldon, Helen Starwalker and Gordon "I'm not singing folk-songs" Whitbeck. Mr. Raymond Upson of Woodbury was a dedicated volunteer who helped more than he knows. We are grateful to the property owners who allowed us to study their land and hope we can continue to work together. I am thankful for Susan Payne and Peggy Dutton, who have been patient, supportive and interested.

It is projected that 1982 will be the initial season of a long-term commitment to studying the prehistory of Robbins Swamp; five years will be needed to complete the project. This preliminary study of the archaeological record of Robbins Swamp was supported by a matching grant-in-aid from the U.S. Department of the Interior, through the Connecticut Historical Commission, under the provisions of the National Historic Preservation Act of 1966. The Institute's Friends of Research donated additional monies required to match this grant and aid the completion of this project.

1. The substance of this particular argument is based upon a significant evaluation of the work of V. Gordon Childe and his descendants in European prehistory written by Mark P. Leone (1982a).
2. See Albers and James (1981) for a study of this image of Native Americans in historical fiction. The analysis of Trigger (1980) evaluates the historical processes through which American archaeology has shaped a nation's images of the American Indian.
3. See some of the articles in *American Indian Environments: Ecological Issues in Native American History* (Vecsey and Venables 1980).
4. Many of the articles in Ian Hodder's (1982b) *Symbolic and Structural Archaeology* demonstrate the validity of this supposition.
5. This description of the Paca Garden is

based upon an unpublished manuscript, "Ideotechnic Artifacts and Historical Archaeology," written by Mark P. Leone. A copy is on file at the AIAI. Mark is a friend and colleague whose questions and answers always provide the next problem for study.

6. Patterns of temperature variability were based upon the measurement of fluctuations in the amount of a particular oxygen isotope.

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Other Notes from the Field

Michael Bove and David Hofstatter offer some comments and observations about their initial experiences as fieldworkers in 1982. These statements have been selected from long letters which each wrote upon the request of Russ Handsman.

Michael Bove: *The work was less physical and more painstaking than I imagined. A million times my inclination was "to chunk it out" rather than dig by centimeters. It took a good while to grasp that the artifact finding was but a small part of the work being done—actually I understood that soon enough—it's just that with my lack of understanding about the purposes for the dig it seemed that there was a good chance that our dig was not very fruitful. The kinds of artifacts being found were more fragmented and unrecognizable than I had expected.*

My powers of observation and analytical thinking were hatched. Some co-workers would notice color variations and subtleties in texture of the soil that escaped me at first experience. It was fascinating for me to see how much could be learned from what seemed so little. I have tried to continue honing observation skills in all areas of my day-to-day Holocene life since that time.

I miss the lively conversations we had on the job and I also miss the beautiful work sites on the Shepaug and Wangum Brook. From my time with the crew I gained a refined appreciation of the variety and richness of this area and also began to broaden my awareness of scientific research and methods.

David Hofstatter: *There are many avenues of discovery available to archaeological research teams. Beyond the unearthing of artifacts, their contexts and circumstances of occurrence, opportunities exist for learning some less obvious aspects of this science. As a non-scholar with a general interest in science and an idealized, Kodachrome concept of archaeology fostered*

largely by popular geographic publications, I made some spiritual, emotional and rational discoveries of my own while meticulously rubbing about fifteen tons of soil through a screen last summer.

My first unexpected find was that our project's success would not be measured by the quantity or refinement of the artifacts found as much as by their overall contribution to our vision of the daily lives of the people who used them. Even an absence of artifacts at an excavation or in a layer of soil could be informative.

But daily life, for such a routine concept, seems to expand under my scrutiny and include or be influenced by more and more things. It becomes the enigmatic focus of this study of ancient people, not quite encompassing the universe . . . It basks in obscurity, and is probably the central challenge in our quest; a fleeting glimpse is a gift. While popular archaeology might prefer the aesthetic grandeur of pyramids, pottery and temples, the disciplined study could find as much in the quieter, figurative graffiti.

Prehistoric adaptation, as the crux of this project, is explored, ultimately, to understand better our own lifestyles and adaptations: our culture. Adaptation is the foundation of culture.

AIAI Summer 1983 Fieldwork Opportunities

During the summer of 1983 the Research Department will be conducting studies of a single prehistoric archaeological site along the eastern edge of Robbins Swamp, situated north of Falls Village near Route 7 about thirty minutes north of Litchfield. We will be undertaking excavations of a locality whose landscape history is reflective of the climatic period between 6000 and 3000 B.P. Participants will have the opportunity to learn about paleoecological as well as archaeological research. Activities will include shoveling and troweling, screening, mapping and the recording of information from stratigraphic profiles.

Two training sessions will be offered for the inexperienced. Each is 5 days in length, 8 hours per day. Participants provide their own transportation but can arrange to meet the Institute's van between Litchfield and Falls Village. Complete the form below to register for a TRAINING SESSION and send to: Russell G. Handsman, Research Department, AIAI, Box 260, Washington, CT 06793.

Name: _____ Telephone #: _____

Address: _____

Session I: June 13-17 _____ Session II: June 20-24 _____

Fees: \$50/members, \$75/non-members, \$35/students under 19

TOTAL ENCLOSED: _____

VOLUNTEERS: If you have participated in our fieldwork in the past we would welcome your help this summer. Write and let us know about your interest and when you can work. We will get back to you.

So this, the role of artifacts, was my first lesson in archaeology. It was a relief to find the following lessons less complex:

— That flint was called "chert," and arrowheads, "projectile points."

— That research questions may be posed based on gaps in current knowledge and the field activities then designed to answer them, rather than exclusively asking questions of the results from experimental digging.

— That our approach in locating and deciphering prehistoric campsites was roughly 20% archaeology and 80% fluvial geology.

Archaeology, more than daily life or even artifacts, is words. Big, rhythmic, highly specific, Latin-rooted words, the length of paragraphs, constitute daily life in archaeology. They make the day, every day. They are a challenge I can't resist. Geologic jargon is closely akin to that of archaeology, but slightly inferior. (Compare geomorphology to winged bannerstone.) Consider the provocative semi-lunate end scraper and the compression and economy of notched netsinker. I can't get over the whispering majesty of Late Pleistocene megafauna. Almost seismic in its implications, this term comprises giant beavers ten feet long, among other nightmares.



Shop Talk

New Arrivals: Among the new arrivals in the AIAI Shop is a "family" of black pottery *mudhead* figures from the Southwest. Mudheads or *Koyemsi* are perhaps the best known of all the Hopi Kachinas. In almost every Hopi event or ceremony Mudheads appear as clowns, interlocutors, drummers or announcers, diverting the audience at will.

Jo Mora, famous painter and photographer of the early 1900's who chronicled the life of the Hopi, wrote:

The Hopi have several types of "well-trained" clowns . . . [Their] masks are soft, made of painted cloth with various knobs protruding from the top and sides of the skull . . . They were natural comedians . . . Whereas few will contend that the old time Hopi was not a well entertained person, I will add that he was a showman and had developed in his mythology, the art of handling an audience. Just one glance at the clever way he handles his clowns during a performance shows he certainly knows audience psychology.*

And just one glance at the group of contemporary clay mudhead figures displayed in the AIAI Shop will bear out their comedic appeal.

Keeping the mudheads company in the shop are two delightful Storyteller dolls. These painted ceramic seated figures, covered with hordes of clinging and listening little people are made by Mary Frances Herrera, one of several fine potters following in the footsteps of Helen Cordero of Cochiti who first originated the Storyteller in the early 1960's. Her model was her storytelling grandfather whom she affectionately remembers from her youth.

Rounding out the new arrivals in the Shop is a charming terra cotta painted figure of a Pueblo mother and child about five inches high. This traditional clay figurine is from Jemez Pueblo, known for figure work in clay.

We invite you to drop in and become acquainted with our new "friends" and while you are at it, browse among the other new items arriving for Spring in your AIAI Museum Shop.

— Molly Little
Shopkeeper

*SITES Catalogue, 1979. *The Year of the Hopi, Paintings and Photographs by Jo Mora, 1904-1906*: Smithsonian Institution, Washington, DC. Page 53.

Southwestern pottery figurines, Storytellers and Mudheads, for sale in the Museum Shop

Two carbon-14 dates have been obtained from the mastodon site, Ivory Pond, in western Massachusetts. The first sample from an actual piece of mastodon bone was dated to 11,440 +/- 655 years B.P. (9490 B.C.). The second sample from white spruce cones preserved in the bog with the mastodon bones was 11,630 +/- 470 years B.P. (9680 B.C.).

The real significance of these dates is not their age, since most dateable mastodon finds in the northeastern United States are about this old or older, but their associations. To have two different materials, cones and bones, with such similar dates coming from the same stratum in a bog means that other associated items should be the same age. Were the dates very different from one another, then one might assume that significant disturbance had occurred or that one or both of the samples were contaminated and that neither date may be correct.

The same stratum in the bog also contained identifiable seeds, *Naja flexilis*, a plant that grows on the shallow peri-

extreme than those of today. Pollen samples have been taken from the bog, but as yet have not been analyzed.

With the cooperation of the landowner, who wishes not to be disturbed, full scale research effort is being made to recover as much as possible of the paleo-environmental evidence from this unique site. We are currently evaluating the possibility that scratches on the large mastodon bones are butchering or cut marks. In the worst case, then we can place hunters on the scene. In the best case, man's hand cannot be confirmed. Scientists will have the missing picture yet from a single site in western New England environment than 11,000 years ago.

I would like to acknowledge the continuing cooperation and assistance of Robert Funk, New York State Museum; Bartlett Hendricks, The Ives Farm; Jim Parrish, Berkshire Regional Planning Commission; and the landowners.

— Roger
Director



Photos by K.



Annual Meeting May 13th

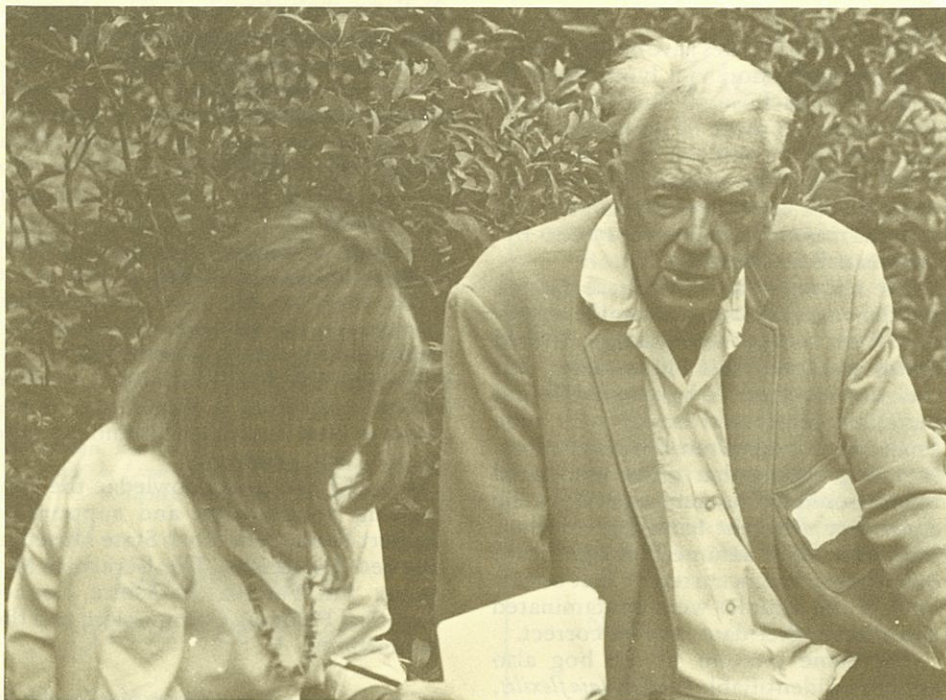


Photo by Dave Pokrywka

Friday the 13th, May 13, 1983 will be the Institute's Annual Dinner Meeting. This year we invite our members to gather together at a new location, the Harrison Inn, Southbury, CT for cocktails, dinner, an AIAI update and a slide program on Eastern Algonkian baskets by Lyent Russell.

Dinner reservations should be made by telephoning Ursula O'Donnell at AIAI at 203-868-0518 before May 9th. Main course choices are Beef Burgundy with Noodles or Chicken Florentine at \$13.00 per person inclusive.

Charter member Lyent Russell will be our guest speaker. Mr. Russell will share his extensive knowledge of Eastern Algonkian baskets with us. A number of Mr. Russell's baskets are on view, until September 1983, at AIAI in the exhibition, "Woodsplint Basketry of the Eastern Algonkian."

Mark your calendars for May 13th. AIAI's Annual Meeting renews, for staff and members alike, friendships and our shared interest in the Institute's study of the Past.

Outreach

Winter time in the Education Department is when we can catch our breath and get on with the many projects that get pushed to the side during the fall when over 5,000 students participated in our programs. This winter we are bringing our programs to several thousand students in Naugatuck, Hartford, Waterbury and Simsbury through the generous support of several corporate sponsors. At the same time we are developing cassette tours for various areas at the AIAI Visitor Center. These recorded tours will be available later on this year at our registration desk for a nominal charge.

The springtime promises to be very busy once again with the anticipated throngs of school children. Karen Cooper's *Story Hours* have proved to be very popular all over the state. Many craft workshops have been scheduled in the next few

months, including those in woodsplint basketry, edible wild foods, woodland pottery and a flintknapping workshop. During the third weeks of July and August our second annual *Under the Sun*, Indian Craft Demonstrations, will be presented by Native American craftspeople working in such fields as hidetanning, beadwork, woodcarving, pottery and basket-making, fingerweaving and much much more. *Come and see.*

Once again such weeklong programs as *Exploring Geology*, *Experimental Archaeology*, *Let's Find Out About Indian Crafts*, *Woodland Indian Survival Techniques* and *Let's Find Out About Indians* will be offered. See calendar (this issue) or call AIAI Education Department for details.

— Stephen E. Post
Director of Education



Siftings

In five years, 61,769 students have participated in Education Department programs.

Spring professional meetings include the Middle Atlantic Archaeological Conference April 8-10 in Rehoboth Beach, Delaware; the Archaeological Society of CT in New Britain on April 16; and the Society for American Archaeology April 28-30 in Pittsburgh, PA.

Many Trails: Indians of the Lower Hudson Valley opened March 13th at The Katonah Gallery, 28 Bedford Road, Katonah, N.Y. This major exhibition on the Coastal Algonkian traces the history and art of the Munsee, Mahican and Unami peoples from early Contact in the Hudson and Delaware Valleys to their present locations in Ontario, Oklahoma and Wisconsin and will be open until May 22, 1983. In conjunction with the exhibition, artists will demonstrate the arts of ribbonwork, beadwork, pottery, basketry and silversmithing in a Native American Arts Festival on May 14th. Plan to attend!

Members of the Connecticut Department of Education's Bureau of School and Program Development and the Equity and Intergroup Relations Unit met with a committee of Native Americans at the AIAI February 14. The state is seeking to identify special educational needs of Connecticut Indian children. Dr. Albert Alexander, Equal Educational Opportunities officer, arranged the meeting with the goal of educating state staff members about Connecticut's first peoples.

In Memoriam

It is with deep sadness that the Institute notes the recent deaths of two dedicated members.

Dr. Arnold T. Anderson, Trustee and Chairman of the Development Committee

Mr. Robert Rives, Past Chairman and member of the Finance Committee

Both these men were distinguished business and civic leaders who gave most generously of their professional expertise and personal time to the Institute. Their inspiration and leadership were examples to each of us who had the privilege of knowing them and working with them.

Mikki Aganstata Cherokee



Hers is an unbiased voice. Mikki Aganstata works for the state and serves the people. In this case, 'the people' are most often the Indians of Connecticut who are associated with reservations and the state is the Connecticut Department of Environmental Protection. For three years she was the Indian Affairs Coordinator until that position was eliminated, and now, responsible for many of the same duties, she is the Assistant Director of Operations, Division of Conservation and Preservation at the DEP. Incredibly, she is also a full-time student in the juris doctorate program at the University of Connecticut. The mother of three young-adult children, her undergraduate degree is in anthropology from the University of Massachusetts at Amherst. Mikki grew up in North Carolina near Ualla Boundary, the reservation of the Western Cherokee. Her surname, Aganstata, is a traditional Cherokee name meaning "groundhog beater."

During summer visits back to the Great Smokies she studied fingerweaving with Mary Shell, a Cherokee craftswoman who presently demonstrates fingerweaving at the Oconoluftee Village in Cherokee, North Carolina. Mikki Aganstata has no examples of her own work to show to curious reporters since she has given away everything she has ever woven. Due to a busy schedule she has not been weaving lately, but with the coming of a new year and heavy course load for the spring semester she said she thought it was now time to start again—because of her hectic schedule. Weaving, she says, is one way to get in touch with the natural rhythms of life.

Will she keep this one? Not likely. At the moment, Mikki explains the colors in her work will remind her of someone and she will give the sash to that lucky person. In her work and in her private life she is known for her generosity of time and effort.

— Karen Coody Cooper
Native American Studies
Program Director

THE FRIENDS OF THE INSTITUTE

After more years than the existence of the AIAI Visitor Center, Debbie Swigart has retired, only officially, as chairperson of the FRIENDS of the Institute, AIAI's volunteer guild. Former administrative assistant Mary Anne Greene, whose loyalty and enthusiasm for the Institute knows no bounds even after fifteen hours of telephoning to schedule callers for our phonathon, is the FRIENDS new chairperson. (All the staff is most appreciative and delighted that her smiling face continues to appear regularly to help out or to round up help.)

On February 14th Mary Anne invited past volunteers and interested area volunteers to a reception at AIAI during which President Ned Swigart recounted the history and dynamic growth of AIAI as only he can. Then the volunteer needs were outlined and candidates signed up, joining the ranks of hundreds of others who have donated well over 12,000 hours of service in the past decade.

One thousand two hundred hours of volunteer service during 1982 were formally recognized at this meeting.

Two Hundred Hours Plus

Peg Dutton volunteers as co-editor of *Artifacts* and assistant shopkeeper, arriving almost every Wednesday and often other weekdays.

Linn McDowell, a Taft senior, volunteered for all departments daily for twelve weeks.

One Hundred Hours Plus

Although her time has not been formally entered in the Logbook, we know *Debbie Swigart* has been involved at least this many hours during 1982.

Fifty Hours Plus

Dora Blinn for Membership and Founders' Day.

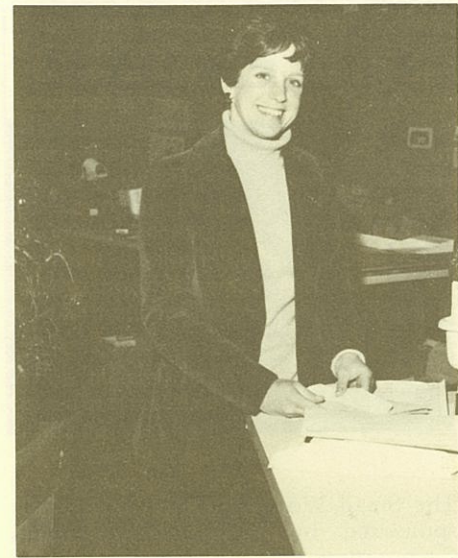


Photo by Myron Mack

Naomi Colmery for the Education Department.

Alice Kitzelman for the Research Department.

Marian Schindler for groundskeeping of the Practical Paths and Habitats Trail.

Karl Young as Chief Handyman and Groundskeeper.

Fifty Hours Almost

Bob Branch as Assistant Handyman and Groundskeeper.

Mary Anne Greene as Volunteer Chairperson.

Michael O'Donnell for Membership and Founders' Day.

Robert O'Donnell for Membership and Founders' Day.

Florence Wekenman for the Education Department.

Marie Sheehy, Trustee as Secretary of the Board of Trustees, Finance and Executive Committees.

Many other people contribute all kinds of time and skill to making our annual Founders' Day the special occasion it is.

If you are interested in volunteering, please call *Mary Anne Greene* at 868-0836.

Spring Teachers' Workshop

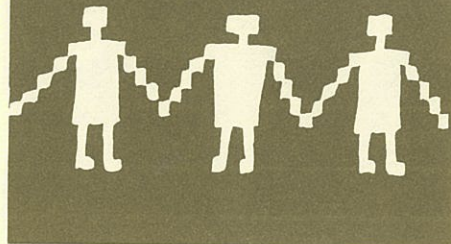
A Survey Course of American Indians

Derived from a course by *Karen Coody Cooper* at Western Conn. State College

Thursdays, from 3:30 to 4:45 p.m.

- April 7 — Historic Period of Connecticut Indians including Today.
- April 14 — Origins: The Paleo and Archaic Peoples.
- April 21 — Eastern Woodland Indian Lifeways.
- April 28 — The Southwest and Great Basin.
- May 5 — Plains and Plateau.
- May 12 — California and Northwest Coast.
- May 19 — Subarctic and Inuit.
- May 26 — Avoiding Indian Stereotypes in the Classroom.
- Fee: — \$55 members; \$65 non-members; \$10 per session if not taking whole course. Register with the Education Department; schedule subject to change.

CALENDAR



The Small World Film Festival is now sponsored by United Technologies Corporation.

MAY

1/Sun, 2:30 pm films, *Himalayan Shaman: Northern Nepal* and *Himalayan Shaman: Southern Nepal*.

7/Sat, 10 am *Pre-Mother's Day Beadstringing Workshop* for children nine and older. Find out what mother's favorite colors are and make an attractive necklace for her. One-and-a-half-hour program including slides and examples of beadwork. \$3.*

7 & 8/Sat & Sun, 2:30 pm film, *Pilgrim Adventure*.

14/Sat, 1 pm, *Indian Survival Walk: Spring's Bounty*. A walking lecture and look at new spring shoots and buds and Indian uses of them. Led by Edmund K. Swigart.

14 & 15/Sat & Sun, 2:30 pm film, *Civilized*

Tribes.

21 & 22/Sat & Sun, 2:30 pm film, *Five Foot Square (Archaeological Dig)*.

28, 29, 30/Sat, Sun, Mon, 2:30 pm films, *Future Shock* and *Native American Myths*.

JUNE

4 & 5/Sat & Sun, 2:30 pm film, *Anonymous Was A Woman*.

11/Sat, 10 am-4 pm, *Woodsplint Basketry Workshop* by Mohawk basketmakers Irene Richmond and Sara Ransome from St. Regis Reservation of New York State. \$30/members, \$40/non-members.*

11 & 12/Sat & Sun, 2:30 pm film, *Bagpipe*.

18/Sat, 1 pm, *Archaeology* slide lecture of the science of recovering the past plus a view of AIAI fieldwork activities by Education Department Director Steve Post.

18 & 19/Sat & Sun, 2:30 pm films, *Eskimo in Life and Legend* and *Owl and the Raven*.

25 & 26/Sat & Sun, 2:30 pm films, *Mesa Verde: Mystery of the Silent Cities* and *Exploring the Unwritten Past*.

JULY

2/Sat, 1 pm, *Edible Wild Foods*. Dr. Warren Koehler of New Milford will discuss the use of wild plants for foods using examples harvested in the area.

2, 3 & 4/Sat, Sun & Mon, 2:30 pm film, *More Than Bows and Arrows*.

5-8/Tues-Fri, 9:30-11 am, *Woodland Indian Survival Techniques*. A workshop exploring hunting, gathering and foraging ways of the Eastern Woodland Indian by Edmund K. Swigart. \$30/members, \$40/non-members.*

9 & 10/Sat & Sun, 10 am-3 pm, *Woodland Indian Pottery Workshop* by noted primitive technologist Jeff Kalin. Outdoor firing July 30, Sat., weather permitting. \$40/members, \$50/non-members.*

9 & 10/Sat & Sun, 2:30 pm, *Cortez and the Legend*.

11-15/Mon-Fri, 8:30 am-3 pm, *Exploring Geology* for twelve to fifteen year-olds by experimental archaeologist John Pawloski. Field trips to mineral and stone resource locations that have been used by colonists and Indians. \$85/week.*

16 & 17/Sat & Sun, 2:30 pm films, *How Indians Build Canoes* and *Indians of Early America*.

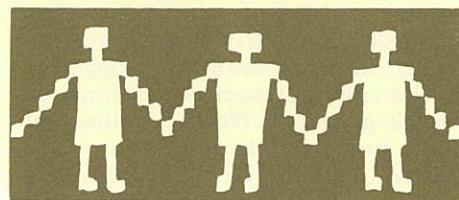
18-22/Mon-Fri, 10 am-3 pm. "Under the Sun" *Indian Crafts Demonstrations* with a different Native American craftsperson each day. (Presented annually the third weeks of July and August).

23 & 24/Sat & Sun, 2:30 pm films, *Indian Land (Native American Ecologists)* and *Indians in the Americas*.

25, 26 & 27/Mon, Tues & Wed, 10:30 am-2 pm. *Let's Find Out About Indian Crafts* for nine to eleven year-olds. Working with clay, cornhusks, fibers and beads. \$25/members, \$35/non-members.*

30/Sat, *Founders' Day*—MEMBERS ONLY
31/Sun, 2:30 pm films, *Master Weavers of the Andes* and *Masks*.

*Register by calling AIAI at 203-868-0518.



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