

NATIVE NORTH AMERICANS

An Ethnohistorical Approach



Daniel L. Boxberger, Editor

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edited by

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Preface

This book grew out of my need for a text for my course on Native North Americans that I teach to approximately 150 students each quarter at Western Washington University. While there are numerous texts available for such a course, and most of them very good, I nonetheless was unable to find one that suited all of my needs. First of all, most texts I have used tended to gloss over or ignore completely the Great Basin and Plateau areas. Since I have a special interest in these two areas I was annoyed that few texts even dealt with these groups at all. Secondly, my course takes a strong ethnohistorical focus and therefore I wished for a text that would take a similar approach. Too often North Americanists tend to get caught in the mode of attempting to reconstruct the "traditional" culture. In my view this is misguided and we must face the fact directly that Native North Americans are dynamic changing cultures and need to be looked at not in the context of their "pristine" existence but in the context of their relationships with the dominant societies in North America. To ignore the fact that Native people are a part of the overall complex whole of North American culture is to do them a disservice. Last of all, I tend to rearrange my courses every term and I find that textbooks are rarely organized in such a manner that accommodates this. Rarely, if ever, do I organize my course in the same way a text is organized. Therefore this text was designed so that each chapter can stand alone. They can be read in any order and therefore the instructor can begin or end with any area they choose.

When Kendall/Hunt approached me with the idea of doing a textbook on Native North America I was hesitant. Although I discuss each of the ten culture areas in my course I did not feel confident that I could write a chapter on each that would pass the scrutiny of experts in those areas. Therefore we thought that an approach that would work best would be one that incorporated works from specialists in each of the culture areas. Contributors were sought that were outstanding scholars in their area and that have demonstrated an interest in the ethnohistorical approach to understanding Native North American societies. We believe that the result is a text that is both useful as a teaching tool and as a statement of the anthropological approach to the history of Native North Americans.

The authors would like to acknowledge some of the people who helped put this book together. They include Samuel Proctor, Steven Morin, Eugene R. Anderson, Jr., Sylvia M. Broadbent, Mark Q. Sutton, R. E. Taylor, Philip J. Wilke, Donald R. Tuohy, Richard O. Clemmer-Smith, Jim Kangas, Maria Billings, Janice Harper, and Patricia Warren.

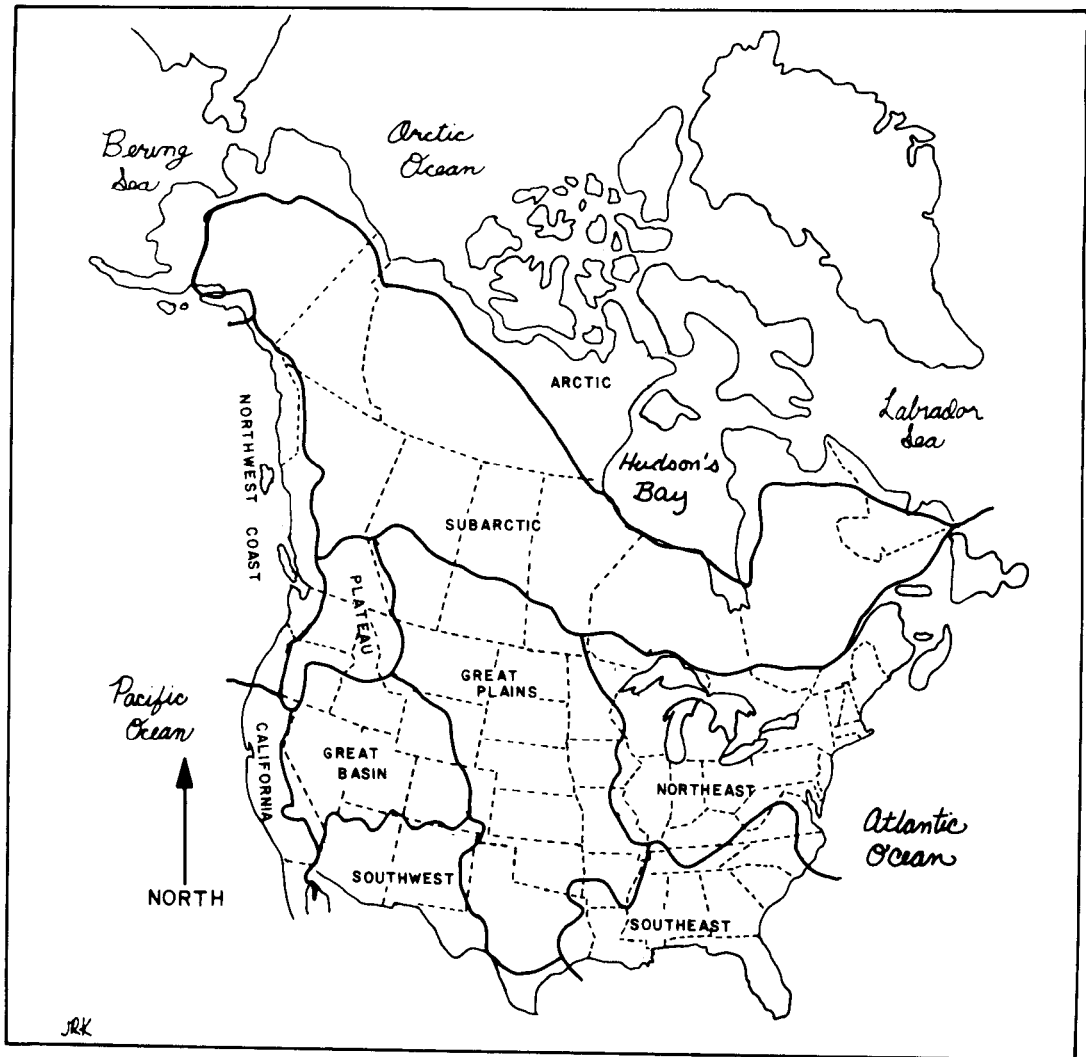
Introduction

This textbook is designed to accompany a general course on the Native cultures of North America. We must bear in mind, however, that the North American continent was (and is) inhabited by a wide variety of indigenous cultures. When Columbus sailed into the Caribbean some five hundred years ago he encountered societies the likes of which Europeans had never imagined. Here were cultures that in many ways were more sophisticated than the European culture that “discovered” them. Here were cultures that had domesticated dozens of useful plants that were totally unknown to Europeans, Asians and Africans. Here were cultures that developed civilizations independent of Old World influence. Columbus called them “Indios” and the appellation has stuck. But they all had names for themselves. They were the Inuit, the Lakota, the Tohono O’odham, the Dene, and the Seneca, just to name a few. While the general public may consider them all “Indians,” they are as different from one another as the English and Chinese. In order to be able to talk about such a large and diverse group of people anthropologists have developed the concept of “culture area” and have classified the Native people of North America (north of Mexico) into ten groups.

A culture area is simply a geographical area occupied by a number of people whose lifestyles show a significant degree of similarity with one another and at the same time show a significant degree of dissimilarity with the lifestyles of people of other such areas. In theory the recognition of a culture area must be based on a representative sample of all aspects of the cultures considered—ultimately it is a statistical problem—but usually working definitions are based on other means—primarily intuition.

The concept of culture area has changed over the years. The anthropologist Clark Wissler in his 1917 book *The American Indian* lumped different tribes together based on their dominant food source. So Native cultures along the Northwest Coast and the Columbia Plateau were subsumed under the “Salmon Area”; and the people of the Northeast and Southeast were the “Eastern Maize Area”. While this was a useful concept for understanding the relationship between human cultures and their subsistence base, it ignored some important differences between groups within the areas.

In his 1939 book *Cultural and Natural Areas of Native North America*, the anthropologist Alfred L. Kroeber noted that there was a striking correspondence between the physiographic regions of the geographer and the cultural regions of the anthropologist. Kroeber refined the concept of culture area and divided North America into the culture areas that are still generally in use by North Americanists today. While the concept of culture area has been explored since (for example Harold Driver in his 1961 book *Indians of North America*) the areas outlined by Kroeber have withstood the test of time. The ten culture areas that are explored in this book roughly correspond to the culture areas of Kroeber



Culture Areas of North America

and the culture area boundaries in use by the Smithsonian Institution in their ongoing project the *Handbook of North American Indians*.

The concept of culture area was perhaps best defined by Kroeber when he said that it is a "region which has a relatively similar way of living common to its component socio-economic systems and cultures." Culture area is a useful device for classification and discussion. It allows us to talk about a large number of distinct groups in general terms. We must not lose sight of the fact though that there is considerable variation within culture areas as well as between culture areas. Even though we may lump several groups together for purposes of discussion we have to remember that each Native American culture is unique, with its own language, its own traditions and its own territory. The ten areas we will explore in this book are the Arctic; the Subarctic; the Northeast; the Southeast; the Plains; the Southwest; the California; the Great Basin; the Plateau; and the Northwest Coast. In addition chapters that discuss the prehistory of North America and the contemporary issues that are of concern to Native communities are included.

This text takes an ethnohistorical approach to the study of the Native people of North America. The term "ethnohistory" usually refers to the use of historical data to conduct anthropological research. We believe that in order to understand the situation of contemporary Native people we must first understand the historical factors that have shaped their societies. The ethnohistorical approach allows us to carry out our anthropological research in a manner that is historically informed. Therefore we must not only consider aspects of traditional ethnography but we must also consider the impact of the dominant society on Native people and the particular circumstances that have had an effect on their lives. For all too long anthropologists have been overly concerned with the attempt to recreate the Native cultures as they existed prior to White contact. While this approach has its use, it ignores much of the change Native societies have experienced and many of the factors of social dynamics that can be observed in any society. Hopefully, what we will do in this text is make the student aware that simply because Native people no longer live a lifestyle like that of their ancestors it does not make them any less interesting to those of us who study human behavior.

Each of the ten chapters that discusses a particular culture area is accompanied by a map which places some of the groups mentioned in the text in geographical context. We feel it is important to know where Native groups are located as well as something about them.

Both the chapter on prehistory (Chapter 1) and the chapter on contemporary issues (Chapter 12) discuss Native Americans in more general terms. The prehistory chapter gives us an overview of how archaeologists have reconstructed the history of North America before there were written records. The contemporary issues chapter outlines some of the issues of general concern to Native people in Canada and the United States as we all prepare to enter the twenty-first century.

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North American Prehistory

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Archaeological knowledge of the prehistory of North America has increased at an almost exponential rate during recent years. Yet, with the exception of a few well-studied areas, the prehistory of North America remains largely unknown. This seeming paradox becomes less puzzling when we consider the size of the North American continent in relation to the proportion of it explored by archaeologists up to the present time.

This chapter will review and broadly summarize current knowledge concerning North American prehistory, from the first migrations into a vast, unpopulated continent during the epoch of major glacial advances, to the first recorded contacts between the original migrants' descendants and European settlers many millenia later. In addition, a brief account will be given of the development of American archaeology, and of some major archaeological discoveries contributing to current tentative reconstructions of the manner in which this monumental journey may have taken place; the likely homeland of those who accomplished it; and its permanent consequences for members of the human species, both past and present.

Migrations: Theories, Routes and Time Frames

Ever since Columbus's discoveries, the origins of America's earliest inhabitants has been a subject of interest and conjecture, both to scholars and to the general public. A variety of imaginative theories have attempted to account for the origins of the American Indians since the early sixteenth century. Some of these have traced their homeland to the "Lost Continent of Atlantis"; others have identified them as survivors of the lost tribes of Israel (Wauchope 1962). A more rational suggestion, first offered by Father Jose de Acosta in 1590, is that the Amerindians' ancestors reached America by migrating from Europe or Asia, via land bridges that may have existed in the past (Beals 1957). The one point of agreement shared by all such theories is that the New World's first inhabitants arrived as the result of migration from some Old World location.

In the twentieth century, studies carried out by archaeologists, geologists and anthropologists have provided some support for Father Acosta's idea, pointing to Asia as the original homeland of native Americans and Bering Strait as the location of the principal land bridge. Geologists have determined that a broad expanse of land connecting Siberia

and North America indeed existed periodically in the past, when sea levels dropped as Pleistocene ice sheets trapped much of the oceans' volume in glacial ice sheets. The resulting isthmus of 'Beringia', more than a thousand miles wide at its maximum, would have afforded a natural route for early migrants of all species, including man.

Establishing a time-frame for the earliest migrations into North America has proved to be a more difficult problem. Until quite recently, the earliest accepted date for man in the New World was 12,500 years ago, the approximate date assigned to the earliest Clovis points. While this is now widely regarded as being too late, the matter is far from resolved. The fact that all early human remains found in the Americas are those of modern man (*Homo sapiens sapiens*) indicates a period of migration no earlier than about 50,000 years ago. This date is consistent with the presence of Asian characteristics in all early human remains so far discovered in the New World. Since such ethnic differences between human groups are believed to have originated roughly 70,000–50,000 year ago, the appearance of "Asian" traits would correspond with the earliest known human migrations out of Southeast Asia that led to the peopling of Australia and the Pacific Islands at about this time. The earliest population movements into the Americas may also have taken place within this time span (Shutler 1985:121). While some migration models place humans in North America as early as 250,000 years ago, there is currently no firm evidence to support such an early date.

Other questions concerning the North Americans' origins center on the routes and transportation methods employed in their long journey. Some investigators have postulated that an ice-free corridor existed during much of the Pleistocene, a narrow unglaciated strip of land along the eastern slope of the Canadian Rockies between the advancing Cordilleran (western) and Laurentide (eastern) ice sheets. Those who hold this view maintain that humans could have migrated southward into the North American interior after crossing from Asia via the Beringian land bridge, and subsequently occupied much of the area north of Mexico throughout the Pleistocene, even during glacial maxima. Archaeological evidence of human hunters in North America during the Pleistocene, who appear to have stalked the now-extinct Pleistocene big game fauna that included the woolly mammoth, has been recovered in the form of fluted projectile points. Presumably these were manufactured for making spears used in hunting these large mammals.

Knut Fladmark (Fladmark 1979, 1983) has argued from paleoenvironmental evidence that an ice-free corridor, if it indeed existed, would have presented a harsh, frigid environment, often flooded, and devoid of biological resources needed for food. Fladmark suggests an alternative marine-oriented migration scheme, with early Asians migrating along the coastlines of northeastern Asia, Beringia, and finally North America in a series of relatively short voyages, perhaps separated by fairly long periods of occupation of intervening coastal and island areas. Fladmark notes that a maritime people could have accomplished this, using only small, technologically simple watercraft, similar to those employed by Asian migrants to the Pacific Islands at roughly the same time. Such people would have readily adapted to coastline and island environments. The unglaciated refugia these offered would have been a far more hospitable home for humans during glacial maxima than the

putative ice-free corridor. Although the logic of this argument is indisputable, there is unfortunately no archaeological evidence to document such a coastal migration. The dramatic rise in sea level following the melting of the glacial ice flooded the Pleistocene coastline of North America, inundating any remaining evidence of early migrant occupations that may lie beneath the sea on the continental shelf.

Some other models seeking to account for the initial human occupation of North America are based upon linguistic evidence. Lexicostatistical methods developed by Maurice Swadesh have been applied in attempts to date the linguistic divergence of Native American populations from earlier parent-language groups (Swadesh 1962, 1964). Such models are based on the assumption that basic vocabularies change through time at a fixed, predictable rate. While such studies have been useful in reconstructing possible migration routes followed by early settlers, as well as suggesting a sequence of several major waves of migration, their principal underlying assumption of a constant rate of linguistic change has not been satisfactorily demonstrated, making conclusions based upon this method somewhat speculative (Ehret 1976; Kinkade and Powell 1976).

Physical anthropologists have attempted to document early migrations through the comparative study of certain human biological traits, in both living populations and in skeletal remains of early North Americans. Such studies consider morphological characteristics of skeletal structures, as well as dental traits and blood group frequencies. It is assumed that statistical frequencies of such traits will, given a sufficiently large sample, permit investigators to determine the degree of genetic relatedness between living population groups, such as those of North America and Asia, as well as their relative genetic distance from earlier groups that may have been ancestral to both (Turner 1983). However, rates of change in gene frequencies reflected in variations of gross physical traits have not been sufficiently well established to provide data supporting migration patterns (Szathmary 1979). Another factor complicating such studies as these is the considerable degree of ethnic mixing that has occurred in New World populations since the time of European contact.

Other studies have attempted to trace the Old World affiliations of Native Americans by measuring frequencies of various kinds of skeletal pathology (Stewart 1979). These, however, have been limited by the absence of comparative skeletal data from Asia. In addition, they share with genetic distance studies the handicap of an insufficient data base from which to make valid generalizations.

In all, the evidence documenting the most important migration in human history is extremely tenuous. Drawing firm conclusions about its beginnings, as well as obtaining satisfactory answers to questions concerning its duration, major and secondary routes followed during its course, alternative methods of transportation that may have been used, and the adaptive patterns of early migrants must await the accumulation of more evidence—anthropological, archaeological, and linguistic—than is currently available.

Many theoretical schemes seeking to explain the initial appearance of humans in the New World have treated this phenomenon as an "event", a one-time, discrete, isolated occurrence in time; however, it is now becoming clear to researchers that the journey from Asia to North America was most likely a continuous process, comprising a series of

population movements that took place over a vast period of time. Documenting such an extended phenomenon will, of course, require a great deal more evidence than would a single event. Accumulating the evidence needed to reconstruct this epochal journey remains a major goal of North American archaeologists and prehistorians.

The Paleoindians: Were There Humans in North America During the Pleistocene?

The earliest remains of human presence in North America have been characterized by archaeologists as belonging to the Paleoindian Period of cultural development, which includes cultures dating from the earliest period of human occupation up to the time that big-game hunting ceased to be the principal North American economic activity. The decline of big-game hunting is usually attributed to climatic and environmental changes occurring at the end of the Pleistocene, when the ice sheets that had formerly occupied the northern latitudes of North America melted away, sea levels rose, and the landscape began to take on its present form. These extensive environmental changes would also bring about some sweeping changes in human lifeways.

The time span of the Paleoindian era varied in different parts of the New World. Archaeological evidence appears to indicate that it ended sometime between 6000 and 7500 B.C. in most parts of North America, after the big game species on which the Paleoindians may have relied as a principal food source became extinct, requiring the adoption of the new subsistence pattern characteristic of the Archaic Period.

The characteristic artifact produced by Paleoindians was the fluted Clovis projectile point. Mounted at the head of a wooden spear, such points provided efficient weapons for killing the kinds of game that abounded in Pleistocene times. In archaeological sites, points of this type are frequently found in association with other tools that were used for processing meat, hides and bone; these include stone knives and scrapers, as well as spear points and needles made of animal bone; the latter were probably used for sewing clothing fashioned from the hides of animals whose meat was used for food.

The Paleoindian tool kit supports the supposition of a lifeway dominated by hunting. This is further reinforced by the presence of kill sites where early hunters left the butchered remains of their prey, sometimes accompanied by tools used in the butchering process. Species hunted by the Paleoindians included the mammoth, mastodon, moose-elk, and giant bison. The hunting of these animals was very likely a group effort, carried out by small bands of hunters whose cooperation permitted them to procure sufficient food for their families.

Paleoindian populations appear to have been small, mobile groups, each consisting of about 20 closely related persons, who pursued a nomadic life patterned on the migration habits of their primary prey. Certainly smaller animals were also hunted; however, it is usually assumed that large game, when available, will be pursued first, since these provide the highest nutritional return for time and effort invested in hunting. There is also evidence that the Paleoindian diet included some wild plant foods. At the Meadowcroft Rockshelter

site in Pennsylvania, remains of hickory nuts, acorns, cherries and other nuts and fruits were recovered from levels radiocarbon dated to between 17,000 and 10,000 B.C. Since these remains were accompanied principally by small blade tools rather than fluted projectile points, they have been considered as possible evidence for a "pre-Clovis" occupation, representing a more generalized adaptation than that displayed by the manufacturers of Clovis points (Fiedel 1987:67).

The question of pre-Clovis habitation in North America remains a matter of controversy. Evidence of this exists in a number of localities, including the Pacific Northwest, where small microblade tools resembling those produced by the Diuktai culture of Northeast Asia frequently occur in early artifact assemblages. Although very little is known about the social organization or religious beliefs of these early Americans, we can infer that these were similar to those of more recent nomadic hunting societies. Such societies are characteristically egalitarian; their religious beliefs are typically dominated by animal deities, and rituals are designed to promote good hunting and an abundance of game.

Although early remains of human activity have been reported from many locations throughout the North American continent, firmly dated material from primary, undisturbed archaeological deposits is quite rare. Skeletal remains of early North Americans are even more scarce; to date, no well-dated human physical remains older than ca. 10,000 years B.P. have been recovered. Cultural remains believed to be somewhat older than this have been found at a number of locations, although their dates have frequently been disputed.

Dating of remains from the Paleoindian period, the earliest cultural period on the American continents, remains a major problem in the study of early man in North America. Other problems include the general lack of cultural material from primary, stratified deposits, and the presence of purported "artifacts" that are often of doubtful human manufacture (MacNeish 1982). A further impediment to identifying and interpreting evidence of early human occupation is that of small sample sizes. This is a consequence of the scarcity of early cultural materials, which often occur in assemblages too small to permit meaningful statistical analysis.

It was long believed by American archaeologists that the first North Americans appeared on the scene approximately 12,000 years ago, and supported themselves by hunting the woolly mammoth, giant bison and other large Pleistocene animals now extinct. The archaeologist Paul Martin proposed a model to account for the rather abrupt disappearance of this Pleistocene megafauna, in which he attributed its extinction to "overkill" resulting from the activities of early human hunters (Martin 1982). According to this view, human populations killed more animals than could be replaced at a normal rate of reproduction for undomesticated species. This view has been criticized on a number of grounds, including the likelihood that human populations of the Pleistocene epoch could not have been sufficiently large to produce an impact of this magnitude on game resources; nor have kill sites been discovered in numbers that would support such a view. In general, archaeologists have attributed post-Pleistocene faunal extinctions to paleoenvironmental changes, which occurred as a result of the disappearance of the continental ice sheets.

The earliest well-dated human skeletal remains found in North America include a skull believed to be that of a woman, from Midland, Texas. Although radiocarbon and uranium dates placing this skull as early as 20,000 years ago have been obtained, these are contradicted by dates some 7,000 years more recent, obtained from deposits underlying the skull. A "best guess" would place the age of the Midland skull at between 9,000 and 10,000 years ago, an estimate supported by overlying deposits that included Folsom-style artifacts. The skull itself displays Asian Mongoloid characteristics (Fiedel 1987:43).

A second well-dated group of human remains was discovered in the 1960s at the Marmes Rockshelter site, located near the confluence of the Snake and Palouse rivers in southeastern Washington State. The skeletal remains were found in association with tools, including leaf-shaped points, scrapers and choppers, that suggest a typical Paleoindian hunting adaptation based upon the semi-nomadic pursuit of large game. Similar tool assemblages dating to the Paleoindian period have been recovered from several other sites in the Northwestern Plateau region near the Marmes Rockshelter, including Windust Cave and Lind Coulee. The human skeletons representing "Marmes Man" have been roughly dated in the 8700–10,000 year range B.P. (Fiedel 1987; Kirk and Daugherty 1978), placing them in the latter part of the Paleoindian period.

The earliest evidence yet found for human hunting of Pleistocene fauna in North America comes from the Manis mastodon site near Sequim, Washington. At this site, the remains of a mastodon butchered about 12,000 years ago contained a bone projectile point, embedded in a healed wound in one of the animal's ribs. This has been regarded as unquestionable evidence of human hunters in the northwestern United States as early as twelve millennia ago (Kirk and Daugherty 1978). The only lithic tool recovered at the Manis site was a cobble spall, although other chipped and broken cobbles may have been utilized as tools (Gustafson et al. 1979). What is perhaps most significant about this site is that the bone point apparently failed to kill the mastodon, since healing of the bone had occurred around the wound. The animal seems to have died later of natural causes; humans living in the vicinity may subsequently have scavenged the remains. The circumstances, plus the lack of specialized tools at the site, suggest these early North Americans were not the big-game hunters featured in the Paul Martin scenario (Martin 1982, 1984), but may have been more generally adapted, relying on smaller game species, fishing and plant collecting for the bulk of their subsistence. This pattern more closely resembles the typical North American lifeway of the Archaic period.

Other archaeological evidence documenting early human activity in North America comes from a group of sites in the Old Crow basin of the northern Yukon. These sites have yielded a number of items classified as artifacts, all of them made of bone, antler, ivory and teeth; no lithic tools have been discovered. Richard Morlan, who has worked in the Old Crow region for many years, believes that humans occupied the area beginning around 30,000 years ago, and possibly even earlier (Morlan 1984). The Old Crow sites display all of the typical problems encountered by those attempting to document early North American habitation. All the deposits are secondary; there are problems in dating, and there are serious questions about the artifactual nature of the tools recovered (Morlan and

Cinq-Mars 1982; Morlan 1984). The Old Crow material appears to support arguments for a pre-projectile point "stage" of North American cultural evolution since, like many other tool assemblages from the Northwest region, it lacks the Clovis point typical of the Plains hunters (Fiedel 1987:53).

Perhaps the best evidence for man's early presence and activity in North America is that recovered from the Meadowcroft Rockshelter in western Pennsylvania (Adovasio, et al. 1977, 1978, 1980). Although the stratigraphy and dating of this important site remain somewhat problematical, it may well yet turn out to provide the earliest firm evidence for human habitation in North America as early as 17,000 years ago.

Post-Pleistocene Adaptations: The Archaic Cultures of North America

The nature of cultural change is such that its processes are not directly observable. While it is possible to say that a given archaeological assemblage represents a particular cultural phase, period or manifestation, and that this particular entity differs from another that temporally preceded it, documenting the process of change itself is not directly possible from material evidence. Such processes must be inferred from such evidence as changes in the relative frequencies of particular classes and styles of artifacts in successive assemblages at the same site, or at culturally similar sites within a region. While the process of change is dynamic and continuous, its material remnants "frozen" in the archaeological record are static and discrete. This requires the interpreter of such data to make an intellectual leap in order to fill in the missing data, those concerning the mechanisms of change that brought about the evolution of one culture into another, each of which can be identified from its material remains.

The transition from the Paleo-Indian cultural period in North America to the new cultural adaptation we call the Archaic was a case in point. The transformation of the old hunting culture of the Pleistocene epoch, into the very different and varied cultural manifestations of the Archaic, was doubtless a long, gradual process, comprising countless isolated events whose specific details must remain forever unknown in their particulars. Their summed effects are, of course, discernible to archaeologists, in the form of observable changes in tools, settlement patterns, dwelling remains and other material evidence of past human activity, revealing a changing pattern of adaptation leading to the new lifeway characteristic of the Archaic Period.

Since this transition was a gradual process rather than a discrete event, we cannot attach a precise date to its beginning. Archaeological manifestations of the Archaic Period begin to appear at different times in different parts of North America, and to develop with varying degrees of speed and intensity. What we *can* perceive is a pattern of archaeological features, artifacts, and relationships that mark a significant change in the ways in which humans exploited their physical environment and its resources, a change observable in the appearance of new kinds of residences, new varieties of social and family units who oc-

cupied these, new technology for getting a living, and evidence of new ideas that accompanied these sweeping changes.

The North American Archaic is characterized by a particular group of diagnostic traits, which together constitute what some Old World prehistorians have termed the "Neolithic Revolution" (Childe 1951). The most important of these is the appearance of polished stone tools. The new technology of stone grinding and polishing has been regarded as being both culturally and technologically significant everywhere in the world. Not only do these new techniques permit better-made and more efficient tools to be made to perform an expanded set of tasks; their appearance has additional significance, for in many areas this transition marks a shift in subsistence, signalling the beginning of a more intensive use of plant foods than was characteristic of the Paleoindian period. Hunting and fishing were to remain economically important throughout the Archaic, but the primary prey species pursued by Archaic and Paleoindian hunters were very different. By Archaic times, the megafauna of the Pleistocene had become extinct, leading to a greater concentration on deer and on smaller species, such as rabbit and birds. Large smooth polished grindstones, appearing at this time, indicate the use of seeds or grain kernels that require grinding to render them edible and digestible.

Where these distinctive new techniques are found, evidence for other changes is also usually present in the form of semi-permanent or permanent dwelling places, occupied by groups larger than the small family band, which had been the basic human unit of Paleoindian times. These habitation sites range from remains of temporary seasonal camps occupied by several families for a limited time, perhaps only while a particular crop or prey species was being harvested, to small clusters of semi-permanent dwellings representing the earliest hamlets.

Taken together, the complex of techniques and traits indicative of an Archaic lifeway constitute evidence of a broad-spectrum readaptation to the changed environmental conditions of the post-Pleistocene epoch. Such change was of considerable significance, involving the appearance of a new and more temperate climate with increased rainfall, and a fairly rapid rise in sea-level. Marine transgressions flooded the old Pleistocene coastline, inundating the continental shelves on the West and East coasts of North America, creating a new marine biotic zone in the resulting shoals and estuaries. This new marine environment provided a habitat for a variety of shellfish and other marine species, affording a new source of food for human populations. New food resources were of concern at this time, due to another dramatic event of the immediate post-Pleistocene period, namely the relatively sudden extinction of most of the large terrestrial mammalian species, including the mammoth, giant ground sloth, and giant bison who had supplied the mainstay of the North American Pleistocene human diet. The disappearance of these large animals forced innovations in subsistence practice upon former hunting peoples, who were now obliged to look elsewhere for their livelihood.

For all these reasons, the post-Pleistocene human readaptation was marked by an increasing diversification of subsistence activities, prompting innovations in lithic tool technology. Utilizing the resources of a variety of microenvironments, including those of off-