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Article Summary: In the Archaic period 8,000 to 1,500 years ago, foragers fed themselves by hunting, gathering wild plants, and fishing. They also created regional artifact types and developed long-distance trade networks.

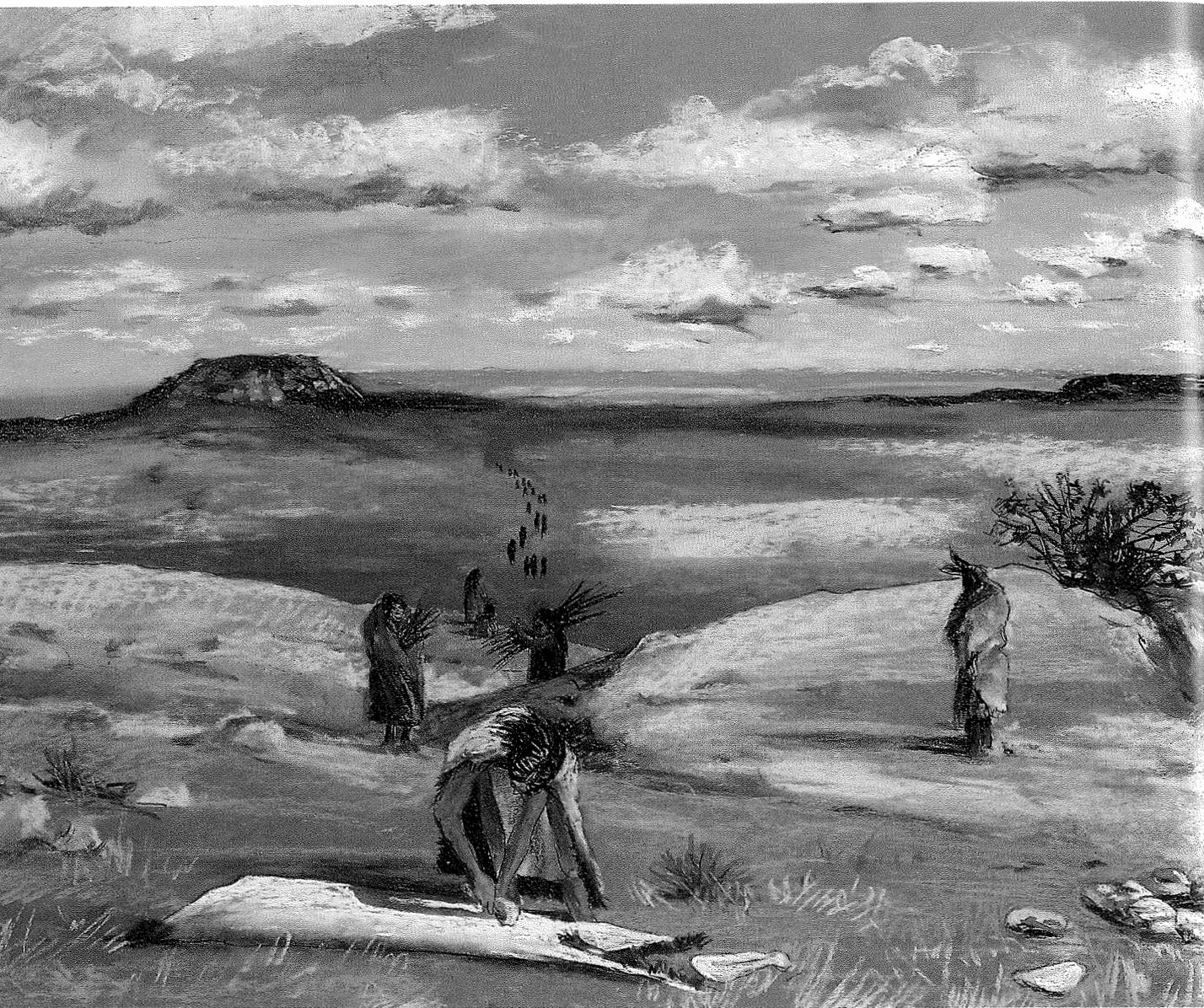
Cataloging Information:

Geologic Time: Early Archaic period, Middle Archaic period, Late Archaic period, Woodland period

Nebraska Archeology Sites: Logan Creek (Burt County); site 25RW2 (near Indianola, Red Willow County); Spring Creek (Frontier County); Signal Butte I and Signal Butte II (Scotts Bluff County); Ash Hollow Cave (Garden County); Cedar Canyon (Sioux County)

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Photographs / Images: image of butte tops, favored locations for Forager camps; Middle Archaic knives; image of an atlatl; Early Archaic points (Logan Creek site); Late Archaic gorget (Red Willow County); 1932 excavation of a Middle Archaic site on Signal Butte; examples of Middle Archaic weapon technology (McPherson and Garden Counties); stratified site on Signal Butte; *mano y metate*, a hand stone and grinding tool (Garden County); pointed bone awls, a flintknapping tool, and a stone weight, all from Scotts Bluff County; ornaments made of shells and bones of birds and small mammals; awls (Burt County); various projectile points found in Nebraska

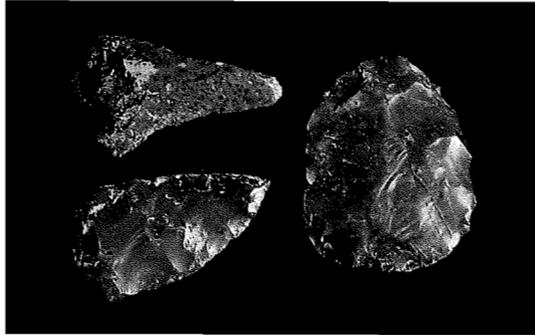


Perhaps because they were easily defended and allowed the residents to watch for game in the valleys below, butte tops were favored locations for Forager camps. Most, dating from 1,500 to 5,000 years ago, are in the North Platte Valley of Scotts Bluff, Banner, Morrill and Garden counties.

CHAPTER NINE

The Foragers

Diversified Lifestyle



Middle Archaic knives

**By Gayle F. Carlson, Curator of Anthropology
Nebraska State Historical Society**

THE TRANSITION FROM THE PALEOINDIANS to their successors, the Foragers, was marked by important changes in the climate and habitat of the Plains and in the way people lived under the new conditions. Archaeologists call this second major period of cultural development, which began about 8,000 years ago, the Archaic period.

Archaic people began to practice burial ceremonialism, which assumed major importance to later Woodland people. Pottery first appeared in this region among the Archaic people, as did burial mounds and horticultural experimentation. There is no evidence for pottery in Nebraska, but small amounts have been found in the Kansas City area.

The climate in the Great Plains had gradually changed from the cool, moist conditions prevailing at the end of the Ice Age to conditions considerably warmer and drier than we experience today. Apparently the climatic changes, and perhaps human hunting pressure, contributed to the extinction of many large animal species, leaving an animal population similar to that encountered in North America by the first Europeans. The climatic shift also changed plant communities, reducing tree cover and creating open grasslands.

As a result of those changes, people on the Plains became less dependent on big-game hunting and adopted a wider variety of techniques to feed themselves. These foraging activities included hunting of large and small game, gathering wild plant foods, fishing and gathering mussels.

Foraging allowed more thorough exploitation of an area, and since there was less emphasis on following wandering animal herds, groups became less nomadic. By remaining in one place the Foragers became more familiar with local and regional resources, and gradually improved their foraging methods. Another effect of their more sedentary lives was the development of regional artifact types. That appears to have been slightly offset, however, by the gradual development of long-distance trade networks. Throughout the Archaic

period, groups probably consisted, for the most part, of extended families.

The hunters still used the spear-thrower, or atlatl, as their main weapon. It was a hand-held throwing stick that, in effect, acted as an extension of the throwing arm and boosted the range and velocity of a spear. Evidence indicates that experiments to improve the performance of that important weapon continued throughout the long Archaic period. By the time the spear-thrower was replaced by the bow and arrow in the following Woodland period, 1,500 years ago, it had been improved about as much as possible for the technology then available. Experimentation ranged from changes in the size, the method of attachment and the strategic placement of weights; changes in the shape, method of attachment and type of material used for other components; and in the elastic properties of the tool itself. The distinctive Paleoindian spear points were replaced during Archaic times by a variety of often less-well-made and slightly smaller notched and stemmed forms.

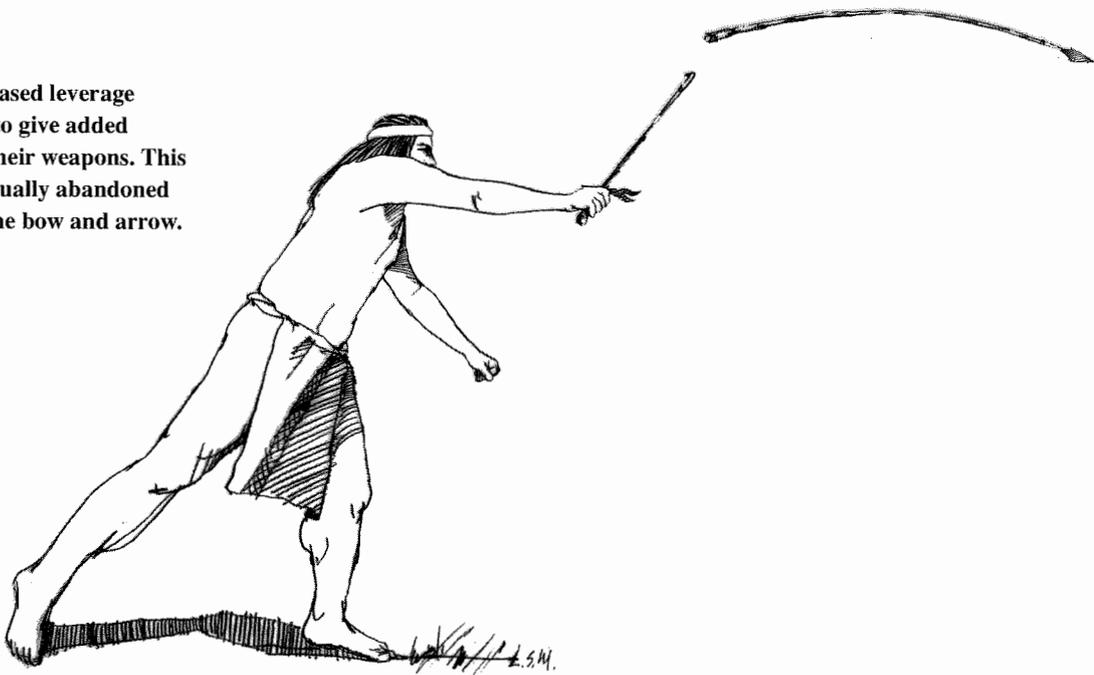
Archaeologists have not found good evidence of dwellings from the Archaic period in Nebraska, except for one that was possibly a light, temporary shelter. However, Archaic "pit houses" have been excavated in bordering western states, providing some idea of what habitations of the period were like.

In Nebraska the Archaic period is subdivided into three units: Early Archaic (8,000 to 5,000 years ago), Middle Archaic (5,000 to 3,000 years ago) and Late Archaic (3,000 to 1,500 years ago).

Early Archaic

At the beginning of the Archaic period the climate was considerably warmer and drier in the Great Plains than it is today, and it seems to have stayed that way for about 3,000 years. Some scientists have speculated that such adverse conditions would have caused general depopulation of much of the Plains as people migrated to higher altitudes, the wetter East or other more favorable climates. This may have occurred to some degree, at least during more extreme periods of drought, but evidence indicates that groups of the Foragers were able to cope with conditions throughout the Plains, although in somewhat reduced numbers than may have been the case during other periods. One site in eastern Nebraska that has yielded considerable information for this period is the Logan Creek site.

Hunters used the increased leverage provided by the atlatl to give added velocity and range to their weapons. This spear-thrower was virtually abandoned after development of the bow and arrow.





The Logan Creek and Spring Creek Sites

A deeply buried, stratified site along Logan Creek south of Oakland in north-eastern Nebraska was discovered in a railroad cut and was excavated during the 1950s and 1960s by the Nebraska State Historical Society. A joint team from the University of Nebraska at Omaha and the Nebraska State Historical Society re-examined the site briefly in 1991.

The site is located on a topographical feature called a “fan” that extends from the eastern valley edge of Logan Creek. Vegetation on the hilltops and slopes was sparse, and although rains were infrequent, they were quite heavy when they did occur and caused extensive gulying and slope wash. The resulting sediments formed the fan-shaped deposit, on which people found a desirable place to live. As more rains came, more sediment buried succeeding levels of camp debris until at least eight occupational levels were preserved in layer-cake fashion. The six uppermost Archaic zones date from between 7,350 and 6,020 years ago. The zones were occupied by closely related groups that are considered members of the same cultural complex.

Those zones contain hearths, pits and small, shallow basins and a few molds or casts of decayed posts. Three of the post molds were associated with an oval concentration of light, burned timbers that may have been the remains of a small, temporary shelter. Animal bones and mussel shells were plentiful at the site. Bison bones were the most common, although a wide variety of other local animal and fish species were also being used. Bison (an early form of the modern species) appear to have been hunted principally during the fall and winter months.

Typical Logan Creek artifacts are small- to medium-size, side-notched projectile points and side-notched scrapers. Other less common artifacts also were found, including knives, unnotched scrapers, drills, grinding stones,

Early Archaic points, dating from 6,000 to 8,000 years ago, are the oldest notched points found in Nebraska. These are from the Logan Creek site in Burt County.

LONG-DISTANCE TRADE

By Gayle F. Carlson, Nebraska State Historical Society

There is abundant evidence of long-distance trade among the prehistoric inhabitants of Nebraska that extends back at least to the Archaic or Foragers period. An early site, dating to about 230 B.C. or possibly slightly earlier, that demonstrates this trend convincingly is site 25RW2 near Indianola in Red Willow County. At that southwestern Nebraska location a burial site was discovered. The remains of four people were interred in a high bluff south of the Republican River.

Because of the emergency salvage nature of the investigation some funerary material undoubtedly was lost. However, what was recovered documents a well-established trade network that extended for hundreds of miles in several directions.

Artifacts are often categorized as either utilitarian or exotic. Utilitarian items from the site include chipped stone items — a scraping and cutting tool, a projectile point and a block of slightly worked stone. One was made from local stone, one was made of stone from eastern Wyoming and the third from stone originating in either eastern Kansas or southeastern Nebraska. All of the raw

materials could have come from within a radius of about 250 miles of the site, probably acquired during normal seasonal hunting and gathering rounds.

The exotic items, on the other hand, demonstrate a quite different pattern of procurement. The most distinctive item, a large gorget probably intended to be worn on a cord around the neck, was made from the shell of a *Busycon contrarium*, a marine species that ranges from New Jersey to Florida and throughout the Gulf of Mexico. Several beads were made from shells identified as *Olivella biplicata*, a species that ranges along the West Coast from British Columbia to Baja California.

Fragments of mica probably came from either North Carolina or the Black Hills. There also was a copper stain on the facial bones of one of the people, apparently from an ornament that was either not recovered or deteriorated prior to the discovery. It most likely was made from native copper originating in the vicinity of Lake Superior.

Some or all of the exotic items may have come directly from the source areas as raw

materials, or they may have been obtained indirectly through other groups as finished artifacts. The large gorget appears to be closely related to the "sandal sole" gorgets associated with the Glacial Kame mortuary complex found in parts of Ohio, Michigan, Indiana, Vermont, Ontario and possibly other locations.

Other items also may have originated with that cultural group or others in the general area, such as the Adena, which appears to be the earliest documented user of mica as burial accompaniments. A likely trade partner for the supposed West Coast materials has not yet been identified.

The exotic artifacts from site 25RW2 strongly suggest that the site's former inhabitants were participating in a long-distance trade network, primarily for the acquisition of items having religious and ceremonial significance. Exactly how the materials were distributed is not clearly understood, but the trading range obviously covered hundreds of miles of territory, extending from the East Coast to the West Coast and from the Gulf of Mexico to the Great Lakes.

OPPOSITE:

A Late Archaic gorget, probably worn suspended from a cord around the neck, is from a 2,000-year-old site in Red Willow County. Made of shell from the Atlantic Coast or Gulf of Mexico, it is evidence of long-distance trade.

hammer stones, bone and antler items, awls, a fish hook and other objects.

The location was attractive because of its proximity to Logan Creek, where water would have been available, along with fish, abundant mussel populations and other aquatic foods. Glacial stones found in the site and used for a number of purposes may have outcropped locally at the time. Stone for chipping stone tools, found in the earlier levels, may have come from gravel or glacial deposits fairly close to the site. Later levels reveal that local stone was gradually replaced by material from more dependable outcrops 25 to 75 miles away.

Bison herds may have been more plentiful there than in the drought-stricken Great Plains interior, and harvestable plants also may have been present. The high hills to the east would have been an advantage for observing the movements and locations of game.

The Spring Creek site, located on a terrace of Red Willow Creek in Frontier County in southwestern Nebraska, was investigated in the early 1960s by the Nebraska State Historical Society during salvage excavations associated with the construction of the Red Willow Reservoir. The site produced artifacts much like those found at Logan Creek. There may be similar sites farther west in Nebraska, but none are as well documented. Spring Creek may have been occupied somewhat later than Logan Creek, about 5,800 years ago. The campsite, deeply buried under windblown loess, produced bone concentrations, a cluster of grinding stones, a firepit, a storage pit and several shallow basins. It appears that only a small part of the site was excavated. Side-notched projectile points similar to those at Logan Creek were recovered, but side-notched scrapers were not. A variety of flaked stone, ground stone and bone tools was found, along with a large amount of animal bone, mostly from bison.



25RW2-3

Burials

One human burial discovered in Nebraska may also be from that time period, and if so, would be the earliest so far found in the state. It was reported to the Anthropology Department of the University of Nebraska-Lincoln by a landowner in Boone County in east-central Nebraska in the late 1970s. The burial, for which details are sketchy, was accompanied by a broken, but apparently quite large, side-notched spear point showing general similarities to the Logan Creek type.

Middle Archaic

By about 5,000 years ago, or perhaps later, climatic conditions in the Plains improved somewhat, and several different populations, leaving their distinctive archaeological expressions, appeared in Nebraska. The best known, the McKean complex, arrived from the west and north and spread thinly over the Nebraska Panhandle and parts of the northern half of the state about 4,500 to 3,000 years ago.

Western Nebraska Butte-Top Sites

Several partly excavated butte-top campsites in the Nebraska Panhandle have produced the best evidence in the state for the McKean complex. The one yielding the most information is Signal Butte in Scotts Bluff County, which was excavated by the University of Nebraska and the Smithsonian Institution in the 1930s. It is a stratified site, with the lower level, or Signal Butte I, having been occupied during Middle Archaic times. This rich occupational level, averaging about a foot in thickness, includes many hearths and storage

Small artifacts and bones from a Middle Archaic site atop Signal Butte in Scotts Bluff County are recovered from the soil by screening. The site was excavated by the Smithsonian Institution in 1932.





These examples of Middle Archaic weapon technology are from sites in McPherson and Garden counties. An antler with a large hole was used as a wrench to straighten spear shafts. Antler tines were used in pressure flaking and sharpening points and knives.

or roasting pits, both sometimes lined with flat rocks. Animal bones and artifacts were abundant. The small- to medium-size spear points from Signal Butte are of several types, including the McKean lanceolate, Duncan and Hanna stemmed types and a less common side-notched form, the Mallory point. Other chipped stone items, including scrapers, knives and drills, were common. The large amount of chipping debris indicated that some tools were being made on the site, probably from raw material obtained nearby.

Various ground stone items, such as grinding and hammering tools, shaft polishers, an axe and paint pigments were recovered. Worked bone and antler items included flintknapping tools, awls, bird-bone beads, a claw-shaped shell pendant and a number of bone fragments bearing incised geometric designs, possibly gaming pieces.

The Tramp Deep Site

Little Middle Archaic research has been done in the remainder of the state, except at the Tramp Deep site in northeastern Nebraska. This stratified site was excavated in the 1960s by the Museum of the University of South Dakota. About 17 feet below the surface, archaeologists found an occupational level dating to the end of the Middle Archaic period, about 3,000 years ago. The artifacts resembled those of the more westerly McKean complex sites and included stemmed spear points that appear to be of the Hanna type and various other cutting, scraping, chopping and drilling tools.

Burials

Two human burials dating to the Middle Archaic period have been found in Nebraska. The first grave, badly disturbed by earthmoving machinery in 1982 and reported to the Nebraska State Historical Society, was located in Scotts Bluff County near the North Platte River. Nine side-notched, chipped stone

artifacts (five knives and three projectile points), a stone bead and some bird bones were found with the burial. The artifact collection found at the site most closely resembles that of the Oxbow complex best known on the far northern Plains of Canada and Montana and dating as early as 5,000 years ago.

The second burial, a young adult male, was discovered in 1992 on the eastern edge of Sidney in Cheyenne County and was investigated by Nebraska State Historical Society archaeologist Terry Steinacher. A large chipped stone, side-notched tool, apparently a hafted knife, which shows evidence of having been resharpened, accompanied the burial. There were also parts of a turtle shell with holes drilled in it for suspension as an ornament, and five small, teardrop-shaped pendants or necklace segments made of what is believed to be a green feldspar from the Rocky Mountains. Also found were some badly deteriorated mussel shells, raven wing bones and a small amount of red paint. Those objects also seem similar to artifacts of the Oxbow complex. The burial has been radiocarbon dated to about 4,500 years ago and is the earliest well-documented human interment in the state.

Late Archaic

For the final segment of the Archaic period, 3,000 to 1,500 years ago, only limited archaeological research has been carried out in Nebraska. A few habitation sites in western Nebraska have been investigated in some detail, and a number of burial sites scattered widely throughout the state have provided most of the remainder of the information known. As with earlier periods, comparative information from surrounding areas can be used to expand on the available details.

The most characteristic artifact type for the period, particularly for the western half of the state, is the Pelican Lake point named for a site in Saskatchewan, suggesting how far the idea for this tool spread. It is a medium- to large-size corner-notched spear point.





ABOVE:

Foragers used a *mano y metate*, or hand stone and grinding stone, to process wild seeds and nuts. This implement was found at Barn Butte in Garden County.

OPPOSITE:

Signal Butte in Scotts Bluff County contains a stratified site. The lower level, Signal Butte I, was occupied in Middle Archaic times. Signal Butte II, the upper level, is the best documented Late Archaic site in Nebraska.

Western Nebraska Habitation Sites

The best documented Late Archaic site in Nebraska is Stratum II at Signal Butte (usually called Signal Butte II) in Scotts Bluff County. This second cultural level from the bottom was much thinner than Signal Butte I, yet the excavated portion produced several shallow fire pits and other small storage or roasting pits and a distinctive array of artifacts. Included were many corner-notched projectile points, as well as some unnotched varieties, chipped stone scrapers, knives, drills and graters, grinding stones and hammer stones, bone awls and flintknapping tools and a few thin pieces of worked bone with perforations and angular incised designs. Archaeologists also found small quantities of unworked animal bone and mussel shells. The apparently brief occupation of the site has been dated at about 2,500 years ago.

Lower levels at Ash Hollow Cave in Garden County, another stratified living site investigated by the Nebraska State Historical Society in 1939, also produced evidence of a Late Archaic occupation, similar in material content to that at Signal Butte.

The Cedar Canyon site in Sioux County was investigated by crews from the University of Nebraska State Museum during the 1930s. Several buried hearths and charcoal layers were discovered eroding out of the canyon edge at depths of as much as 25 feet below the modern ground surface. The artifact assemblage associated with the living levels at the site, and radiocarbon dates of about 2,000 years ago, place those buried remains within the Late Archaic period.

Limited surveys in western Nebraska by archaeologists and inspections of local artifact collections suggest that Late Archaic habitation sites are quite abundant compared to those of earlier periods. Our first conclusion is that those people experienced population growth through time. Another reason may be that Late Archaic remains are slightly more accessible because they are less deeply buried than those preceding them.

The two pointed bone awls (bottom) were used in working hides; the blunt bone above them was a flintknapping tool. The stone weight (top) was used to fine-tune atlatls. All are from a site in Scotts Bluff County occupied 2,000 to 3,000 years ago.





Burials

Burial sites attributed to the Late Archaic have been discovered at several locations in Nebraska. Compared to limited finds from earlier periods, the Late Archaic burials are somewhat more ornate. That comparison suggests an elaboration of burial ceremonialism that has been documented in other parts of the country.

In most cases, Nebraska discoveries have resulted from natural erosion or from earthmoving or farming activities. Landowners or heavy equipment operators usually have been the first to examine the discoveries, with trained archaeologists sometimes doing follow-up field work or sometimes learning about the discovery long after it was made and salvaging only small amounts of relevant information.

Two different complexes can be recognized in the state. One of these encompasses eastern and central Nebraska finds in Cedar, Burt, Douglas, Red Willow and McPherson counties. Another, in western Nebraska, includes sites in Scotts Bluff and Morrill counties.

Sites belonging to the eastern and central Nebraska complex or complexes are represented by a few individuals per site. All seem to be primary burials, which are flesh burials, with body parts in their correct anatomical positions. Some were accompanied by powdered red pigment and they include at least some of the same grave goods — artifacts intentionally accompanying the burials. Common items are corner-notched projectile points, chipped stone cutting and scraping tools, atlatl weights and gorgets — large perforated items intended for suspension around the neck — or possibly other decoration. Distinctive marine shell gorgets found on two sites in Red Willow and Cedar counties appear to be “sandal sole” gorgets, also found in eastern states and Canada on sites of the Glacial Kame cultural tradition. Those gorgets may be

Late Archaic people 2,000 to 3,000 years ago wore ornaments made of shells and the bones of birds and small mammals.

direct trade items. Two ground stone gorgets from another site in Douglas County also suggest more general eastern affinities. Less common items found with burials are marine shell and snail shell beads, rectangular shell objects with notched edges, copper (evidenced only by a stain on human bone), mica, beaver teeth, an antler shaft-straightener, antler flaking tools, a bone cutting or scraping tool, other miscellaneous bone and antler items, a chipped stone drill, a chipped stone corner-tanged knife and part of a turtle shell.

Sites belonging to the western Nebraska burial complex or complexes are represented by larger numbers of individuals at each site. At those sites both primary and secondary burials (the latter redeposited or "bundle" burials that were originally buried at another location, possibly above ground) were found. Powdered red pigment is not present, but some of the bones are burned and charcoal is present in the graves. Some artifact types are shared with the other complex or complexes but some are not. Items found fairly commonly are corner-notched projectile points, chipped stone cutting and scraping tools, atlatl weights, bone beads, bone awls and small perforated shell pendants.

The dating of the burial complexes is imprecise, but they would appear to be late. They may fall into the period of about 2,300 to 1,800 years ago, although some artifact types that appear to have direct ties to other cultural groups (such as the sandal-sole gorgets) suggest dates possibly as early as 3,600 to 3,000 years ago for some of the sites. There is evidence of an already well-developed, long-distance trade network at those sites. At one site in Red Willow County were found marine shell from the Gulf Coast or East Coast, another type of marine shell that may have come from the West Coast, mica from either the Appalachian Mountains or the Black Hills and copper from the Lake Superior area.

Awls from the Logan Creek site in Burt County were made from bison rib and leg bone splinters 8,000 to 6,000 years ago.



PROJECTILE POINT RESEARCH

By Peter Bleed, Professor of Anthropology, University of Nebraska-Lincoln



Points found in Nebraska (from left, oldest to newest) are: Clovis, Agate Basin, Logan Creek, McKean, Duncan/Hanna, Pelican Lake (two points), Scallorn, Washita River (two points), Fresno and a metal point.

As in other parts of North America, projectile points have been a traditional focus of archaeology in Nebraska. In large part that is because chipped stone points are interesting to the general public. Points easily grasp the imagination and carry romantic images about life in the past. Well-made points also present graphic evidence of the skill and technical achievements of Nebraska's precontact occupants. Modern research, however, has progressed beyond those romantic impressions, and archaeologists now recognize projectile points as sources of information about ancient economy and culture.

Archaeologists initially used the many different kinds of projectile points as markers to define subdivisions and periods of Nebraska's prehistoric past. Based on the assumption that projectile point variations reflect cultural patterns of precontact groups, sites with different types of points were thought to reflect different cultures.

Certainly, major subdivisions of Nebraska's past can be described on the basis of their distinctive projectile points, especially during the Paleoindian period. Later points are more diverse and variable. Points from Woodland and Central Plains tradition sites, for example, are not easily assigned to homogeneous types. Research among primitive hunters in other parts of the world suggests that kind of variability in projectile points results when social boundaries are either contested or variable. Factors other than simple ethnic affiliation also can influence point shape. To understand the full significance of projectile point variability, archaeologists now consider points from many perspectives.

Replication studies by skilled flintknappers have exposed the processes involved in making stone points. Thus, we understand the precise series of steps that Folsom flint-

knappers went through to make their fluted points. Modern flintknappers also have described the specific skills, manual dexterity and complex tool kits ancient stone workers must have used.

In addition to high quality raw material, the Folsom flintknappers, for example, evidently also had several hammerstones, pressure tools and clamps that could hold the point blanks securely as the flutes were being detached. With those insights, archaeologists are now seeking to understand how Folsom hunters scheduled all the technological steps and equipment with the other aspects of their hunting economy.

Functional studies show that not all "points" were used as projectile tips. Microscopic investigations of the wear and edge damage shows that many notched and pointed bifaces (stone tools with flakes removed from both surfaces) were actually used as knives. Furthermore, some projectile points appear to have been used in many ways and recycled into different types of tools. Archaic period Meserve points, for example, seem to be new tools lost or abandoned before they had undergone the resharpening that would change them into types archaeologists have called "Dalton" points.

Understanding the functional and technological processes responsible for points helps to explain their variability and shows that stone tools were made to function within the context of broader economic and social activities. It makes archaeologists ask why many Early Archaic hunters carried "long-use" tools that could be resharpened and maintained while Woodland hunters appear to have preferred "expedient" tools that could be quickly made and easily discarded.

Recognizing that stone points are the surviving portions of larger projectiles has en-

couraged archaeologists to use points as a source of information about the weapons and strategies of prehistoric hunters. Spears thrown by hand or with an atlatl require bigger, heavier and broader points than the small tips of arrows shot from a bow. Those differences show that bow hunting began to supplant spear hunting during the Woodland period and that the bow and arrow was the main weapon among Central Plains tradition people. Since spear hunting and bowhunting require different strategies, archaeologists need to understand changes in point styles and the broader economic alterations marked by the changes.

Consideration of the design of hunting weapons provides useful insights into the appearance of projectile points. Small points may be used against very big game, but prehistoric hunters could vary the size and shape of their points depending on how they wanted them to work. Large points, for example, appear to have been chosen by hunters who wanted to kill game quickly with knock down power. For other hunting strategies, point-makers appear to have preferred points that killed by causing a bleeding wound.

Even broken points can reflect the design of stone age weapon systems. When basal sections of points are more common than the pointed tips, as is often the case at Paleoindian campsites and in many Central Plains tradition villages, it appears that hunting weapons were not being repaired where they broke, but rather that they were brought back to a domestic area for repair. Maintenance of weapons during slack periods is typical of hunters who undertake carefully planned hunting expeditions. It is not the way expedient hunters treat their weapons. Viewed in this light, projectile points are a source of information about how ancient Nebraskans planned their annual round and moved to find necessary resources.