



Woodland Indians canoe the waters of Old Woman Creek estuary (artist: Jim Glover).

CHAPTER 8. ARCHAEOLOGY

PREHISTORIC PEOPLES

The historic record for northern Ohio covers nearly 350 years, from the early journals of French and English explorers and missionaries to the present day. The period of human occupation of this area before written records is about 30 times longer – the Prehistoric Period (Figure 8.1). During this period the area surrounding Old Woman Creek was inhabited by various groups of Indians. The cultural patterns of these groups are well described by Otto (1979,1980) and Shane (1992), and summarized here as a context for the archaeological investigations that have taken place in the vicinity of the Reserve.

PALEO-INDIANS

These peoples first inhabited southern Ohio as early as 15,000 years before the present (YBP) near the end of the Wisconsin ice age. As the glaciers retreated and vegetation was reestablished, these nomadic hunters spread into northern Ohio following the game animals which they preyed upon. The new forests were spruce and fir and the open lands were vegetated with grasses and sedges. The game animals were also quite different from today and included woolly mammoth, mastodon, giant beaver, muskox, and caribou (Figure 8.2).

Pollen records for the Lake Erie basin show that the time between 13,000 and 9,000 YBP was characterized by major vegetational changes and, by inference, major climatic shifts (Shane 1994). As the ice retreated from the region, late-glacial warming led to the replacement of spruce forests by conifer-deciduous forests and the eventual elimination of conifer taxa on the plains surrounding the lake by 9,000 YBP (Shane 1994). During this time (13,000 to 11,000 YBP), the Paleo-Indians are thought to have entered the Lake Erie region, although there is some evidence of earlier occupation in limestone caves and rock shelters in western Pennsylvania (Adovasio et al. 1978) and on abandoned beach ridges of Lake Huron in southern Ontario (Ellis and Deller 1990, 2000). The environment was that of a boreal forest dominated by spruce and pine and human populations were most likely small and scattered (Shane 1987, 1994). Large mammalian species (Figure 8.3), such as woodland muskox (*Bootherium bombifrons*), American mastodon

(*Mammut americanum*), elk-moose (*Cervicoides scotti*), and giant beaver (*Castoroides ohioensis*) were present in the region at this time and are associated with boreal forest habitat (McDonald 1994). Paleo-Indians overlapped in time with these now-extinct Pleistocene mammals and there is evidence they hunted them (Fisher et al. 1994). There is little to indicate the degree of impact such exploitation may have had on these animals, but overhunting and climate change may have hastened their decline.

By 11,000 YBP winters were less extreme and summers were warmer in the Lake Erie region. Increasing diversity of vegetation and fauna would have provided multiple new environments to exploit as sources of food and shelter for human populations. The Clovis peoples entered eastern North America during the late-glacial period, just prior to 11,000 YBP, and may have been the first wave of colonizing people in the Lake Erie region (Tankersley 1994). The single most diagnostic lithic artifact of the Clovis culture is a fluted biface projectile point, referred to as the Clovis point (Agenbrood 1988). The Paleo-Indians were nomadic, probably living in small groups (40 to 60 people) that obtained most of their food from hunting with wooden spears tipped with distinctive fluted points made of flint (Figure 8.4).

One of the earliest, well-documented Paleo-Indian occupations in the Lake Erie region is the Paleo Crossing site in northeastern Ohio dated at about 11,000 YBP (Brose 1994). This Early Paleo-Indian site is located in the Cuyahoga River valley, about 70 km south of Cleveland, Ohio and is thought to have been occupied between 10,000 and 11,500 YBP based on chert artifacts, post molds, granules of charcoal, and radiocarbon dating (10,980±75 YBP). The site is characterized by lithic artifacts, particularly projectile points of the “Gainey” style (Clovis occupation), and the waste flakes from the manufacture and/or use of these tools. The 1 ha site sits on a southern break below the crest of a glacial kame located just west of a series of glacial kettle lakes. The dates and style, variety, and lithology of the tools suggest that the site represents the initial colonization of the Lake Erie basin. Likewise, the Fisher site in southern Ontario demonstrates early Paleo-Indian occupation (Storck 1997) in the region.

PREHISTORY CHRONOLOGY		
18,000 BC	Asian migrants cross Bering land bridge and enter New World.	PALEO-INDIAN
9500 BC	Fluted point came into use. Few Paleo finds exceed this date.	
9000 BC	Fluted point users spread over most of North America.	
8500 BC	Transition to Archaic Period. Descendants of Paleo-Indians lived a less nomadic life.	
8000 BC	Early Archaic. Marked by first use of side notched, bifurcated, and corner notched points.	ARCHAIC
6000 BC	Middle Archaic. Many new styles of hafting designs invented. First ground stone tools such as axes and pestles developed.	
2500 BC	Late Archaic. Increased sedentism, development of elaborate mortuary complexes such as Red Ocher and Glacial Kame.	
1000 BC	Early Woodland. Widespread use of pottery. First mounds built by the Adena people in southern Ohio.	WOODLAND
1 AD	Middle Woodland. Hopewell culture appears marked by geometric earthworks, trade routes, exotic material. After a few hundred years, Hopewell system breaks down.	
400 AD	Late Woodland. Appearance of first village sites in central and southern Ohio. Use of bow and arrow begins.	
1000 AD	Fort Ancient culture in southern Ohio. Sandusky and Whittlesey traditions in northern Ohio, and Monogahela in eastern Ohio. All live in large agricultural villages and subsistence was based on maize cultivation.	LATE PREHISTORIC
1650 AD	All prehistoric people had left Ohio and Ohio was without inhabitants.	HISTORIC
1750 AD	Many Indian groups such as Shawnee, Miami, Ottawa, and Wyandot move into Ohio from other areas.	

Figure 8.1. Chronology of Ohio's Prehistoric Indians (modified from Converse 1994).



Figure 8.2. Animals of North American forests and plains 15,000 years ago (from Maxwell 1978).



Figure 8.3. American mastodon in an Ohio Pleistocene bog (after Feldmann and Hackathorn 1996).

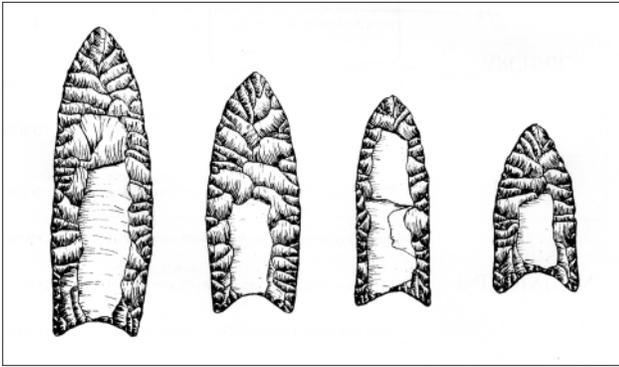


Figure 8.4. Fluted projectile points used by Paleo-Indians in Ohio (from Converse 1994).

The oldest evidence of early human occupation in the Reserve comes from excavations at the Anderson site, situated on a bluff overlooking Old Woman Creek in Erie County (Shane 1981,1992). This site (Figure 8-10), which has been occupied off and on for the past 10,000 years, may have been attractive to prehistoric people because of its well-drained sandy soil and its strategic location above the creek valley. Because Lake Erie was at least 20 m lower than present when the Paleo-Indians occupied the site, there was no estuary in the valley as there is today (Herdendorf and Bailey 1989), but the valley was probably a conduit for the movement of game and the upland terrain was rich in forest and grassland resources (Reeder and Eisner 1994).

Little remains of the camps of the Paleo-Indian hunters, other than their distinctive lanceolate-shaped spear points and perhaps the fire-stained stone cobbles scattered throughout their sites. No fireplaces, refuse pits or other facilities of the Paleo-Indians were found at the Anderson site that would permit a direct way of determining the age of the occupation. However, the spear points that were found are similar to the points found at the Squaw Rockshelter site south of Cleveland (Brose 1989) and the Paleo Crossing site in Medina County (Brose 1994). Archaeologists at the Cleveland Museum of Natural History have obtained radiocarbon dates ranging from 9,200 to 11,000 YBP for wood charcoal that was associated with the fluted points. A similar age is suspected for the Paleo-Indian occupation at the Anderson site.

From 11,000 to 10,000 YBP the climatic conditions in the region became more complex, with short-term temperature and moisture reversals in contrast to the gradual warming trends of earlier

millennia. Increased mobility in human populations seems likely during this period because the landscape was no longer predictable from generation to generation. Prolonged drought conditions would have placed unprecedented stresses on human and animal populations (Shane 1994).

Stothers and Abel (2001) point out that an enormous amount of archaeological information has “vanished beneath the waves” of Lake Erie. Research on the glacial geography and environment of the Lake Erie basin has presented the opportunity to correlate Wisconsinan ice masses, glacial lakes, and paleo-environments with various Paleo-Indian and Early Archaic cultural complexes. Beginning about 14,250 YBP, glacial retreat allowed the Eastern Basin of Lake Erie to drain along the edge of the Appalachian Plateau to the Mohawk River. As a result, Early Lake Erie was established about 12,400 YBP at a level as much as 30 m below the present lake level (Bolsenga and Herdendorf 1993). Thus, by 11,000 YBP when the first humans arrived on the scene, they likely settled areas of the lake basin that have long since disappeared under the gradually rising lake (Stothers and Abel 2001). The detailed bathymetry revealed by recent investigations (Holcombe et al. 2001a,b) may yield potential sites of prehistory occupation. The complex terrain features of the former peninsulas and islands which now comprise the submerged Pelee-Lorain Ridge, some 25 km northeast of the Reserve, may hold the most promise for the discovery of such sites.

Later in the Paleo-Indian period, another group of hunters called the Plano Complex moved into northern Ohio from the west (about 9,500 YBP). Artifacts from this culture have been found associated with the abandoned beach ridges formed around the glacial lakes that once occupied the Lake Erie basin at levels up to 64 meters above the present level of Lake Erie (Otto 1980, Herdendorf 1989).

ARCHAIC INDIANS

The warming trend was re-established during the period from 10,000 to 9,000 YBP as climatic parameters approached modern values and gradients. Spruce, hemlock, pine, and larch either disappeared or were restricted to sheltered ravines; oak, hickory, walnut, and maple became the dominant trees. Later, 7,000 to 6,000 YBP, beech became important (Shane 1994). Human populations would have been affected

by the loss of conifer forest, but the more diverse and plentiful fauna of the deciduous forest that replaced them and the milder winters would have also increased forage opportunities.

These new opportunities coincided with occupation of the region by people of the Archaic culture (Otto 1980) whose economy was based on hunting, fishing, and gathering. With the expansion of the deciduous forest into northern Ohio, Archaic Indian peoples adapted to the changing environment by developing new food sources and modifying technologies to utilize the resources of the newly established woodlands. In addition to hunting game, such as deer, they gathered plant foods, especially from nut-bearing trees (e.g. oak, hickory, and walnut).

The Ringer dugout canoe (3,600 YPB), found in the remnant of a glacial lake in Ashland County, Ohio at the head of the Vermilion River which flows into Lake Erie, suggests that Archaic people were

engaged in water-borne trade in the region (Brose and Greber 1982). This canoe is believed to have had a cargo capacity of about 530 kilograms (kg) plus two crew members. Rather than the long-distance canoes of the later Woodland people (used to transport such commodities as copper, mica, flint, pottery, fresh conch shells, and salt), the Archaic canoe seemed best suited for local travel, carrying passengers and subsistence cargoes (Figure 8.5).

Most sites found in northern Ohio seem to have been small hunting camps. Typically these camps were located on a vantage point above a stream valley to maximize hunting efforts by utilizing bluff tops as observation areas to locate and pursue deer moving through the valley (Abel 1994). Although there is abundant evidence of Archaic period occupations in northern Ohio, only a few Archaic artifacts were found in the areas excavated along Old Woman Creek. However, the Weilnau site on the Huron River in Erie County, Ohio has been interpreted as a seasonal hunting

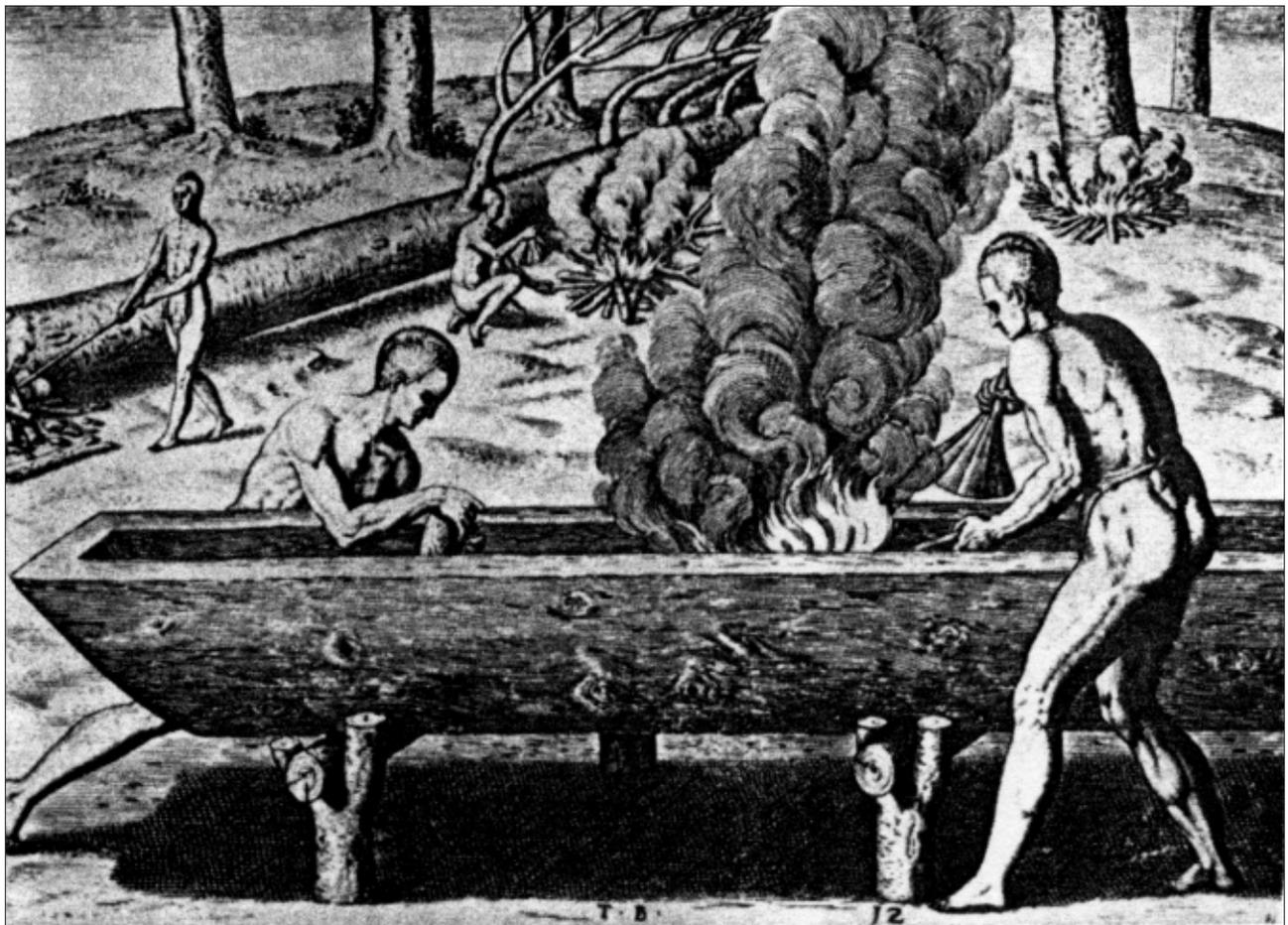


Figure 8.5. Engraving of American Indians making a dugout canoe (from Harriot 1590).

camp for these people (Abel 1994). Archaic peoples established hunting and fishing camps in various parts of their territories during different seasons of the year according to the availability of food resources.

In addition to chipping spear points and knives from flint, Archaic Indians developed a technique for making axes and various types of food processing tools. They tended to use hard rocks for these purposes, such as granite erratics which are abundant in the glacial deposits of the watershed and in the hollows between the ancient beach ridges (Campbell 1955, Herdendorf 1963). Lake Erie bifurcated-base and Stanley stemmed-base points found at the Weilnau site (Abel 1994) indicated an age of 8,300 to 7,800 YBP, which corresponds to the Early Archaic cultural period in northern Ohio; whereas Brewerton side-notched and Genesee projectile points from the Anderson site indicate Late Archaic peoples (5,000 to 3,500 YBP).

The Weilnau site, located on a high bluff overlooking the Huron River valley in Milan Township, Erie County, Ohio contained a habitation structure and

projectile points associated with the Early Archaic period (Abel and Haas 1991, Abel 1994). The habitation structure consisted of a shallow, circular depression (3.2 m in diameter) surrounded by post molds. A cluster of fire-cracked rocks near its center was interpreted as a hearth. Abel (1994) interpreted the Weilnau site as a hunting camp. The site offers a clear view of the broad floodplain and meanders of the Huron River, some 20 m below. The valley constricts immediately downstream of the site forming a bottleneck for game moving in that direction. Abel postulated that Early Archaic hunters used the bluff tops near the site as observation points to locate and pursue deer and other game moving through the valley. The habitation structure and the hearth suggests cold-weather occupation (autumn and winter), when deer are most mobile and best hunted. The Huron River valley was probably utilized heavily by deer during these seasons, especially since the river rarely freezes below the site under current climatic conditions and most certainly was ice-free during the mild Climatic Optimum (8,000 to 6,000 YBP).

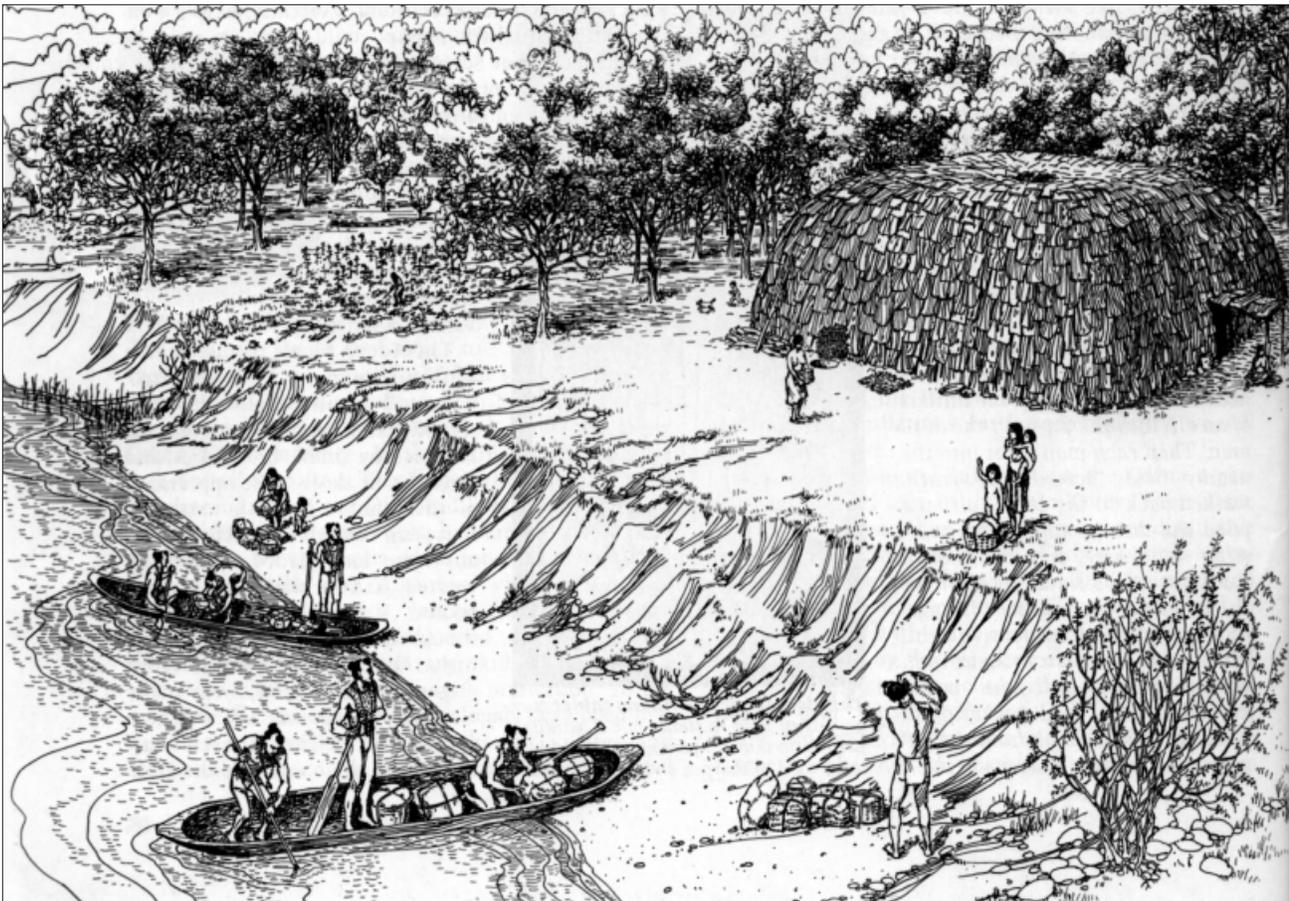


Figure 8.6. Depiction of a Woodland Indian village in northcentral Ohio (from Maxwell 1978).



Figure 8.7. Seasonal hunting camp typical of Archaic and Woodland Indians (from Maxwell 1978).

WOODLAND INDIANS

About 3,000 YBP the way of life of Indian people in much of eastern North America began to undergo a fundamental change, largely in response to the domestication and cultivation of plants. With crops to supplement food traditionally obtained by hunting and gathering, they were eventually able to establish more or less permanent villages (Figure 8.6). Fired, clay pottery also appeared at this time, permitting resources to be stored, which also favored more permanent settlements. Thus, these peoples began to follow a yearly round of activities, in part controlled by the need to come together in summer to plant, cultivate, and harvest crops. Archaeologists call this last 3,000 years of eastern North American prehistory the Woodland Period (Shane 1992).

One of the most extensively documented and perhaps the single most important aboriginal wild plant food source associated with the embayments of Lake Erie was wild rice (*Zizania aquatic* and *Z. palustris*). Wild rice constituted a food staple for most Algonquian- and Siouan-speaking tribal groups living in the Great Lakes region (Keenlyside 1978). The occurrence of “once abundant stands” of wild rice at Point Pelee and Long Point, Ontario may have been

one of the primary attractions for late prehistory aboriginal peoples.

At first, Woodland farmers cultivated only indigenous Midwestern plants for their seeds, such as the marsh elder (*Iva*), lamb’s quarter (*Chenopodium*), gourd (*Lagenaria*), and perhaps sunflower (*Helianthus*); these crops were later replaced by cultivated corn, beans, and squash introduced from Mexico (Shane 1992). Perhaps for the next 2,000 years, cultivated plant foods supplemented a subsistence economy based on hunting, gathering, and fishing. By about 900 A.D., Indian farmers became reliant on corn, beans, squash, and sunflower for a significant portion of their food (Prufer and Shane 1976). At about the same time bows and arrows came into common use for hunting (Figure 8.7).

The major village at the Anderson site was occupied during the 15th century, in the Late Prehistoric Period. Although the villagers grew corn, as evidenced by the carbonized kernels recovered from village refuse pits, the large amounts of animal remains and nut shells indicate that farming may have been less important to the village economy than hunting, fishing, or gathering. Evidence for angling with hook and line at the Anderson site includes polished bone

fishhooks. Fish from Lake Erie and its estuaries were probably also taken with nets, traps, or spears. Although little archaeological evidence remains of these devices at the Anderson site, such devices were found at the Harbour site (Late Prehistoric – 900 YBP) on Pipe Creek where it flows into Sandusky Bay, Erie County, Ohio. While only the remains of catfishes, northern pike, and freshwater drum were recognized at the Anderson site, 27 fish species were identified at the Harbour site by Cavender and Bowen (1994), demonstrating an extensive use of the Lake Erie fishery; identified species included:

Ambloplites rupestris (rock bass)
Amia calva (bowfin)
Aplodinotus grunniens (freshwater drum)
Coregonus artedii (cisco)
Erimyzon sucetta (lake chubsucker)
Esox americanus (grass pickerel)
Esox lucius (northern pike)
Esox masquinongy (muskellunge)
Ameiurus melas (black bullhead)
Ameiurus natalis (yellow bullhead)
Ameiurus nebulosus (brown bullhead)
Ictalurus punctatus (channel catfish)
Lepisosteus osseus (longnose gar)
Lepomis gibbosus (pumpkinseed sunfish)
Lepomis macrochirus (bluegill sunfish)
Micropterus dolomieu (smallmouth bass)
Micropterus salmoides (largemouth bass)
Minytrema melanops (spotted sucker)
Morone chrysops (white bass)
Moxostoma anisurum (silver redhorse)
Moxostoma cariinatum (river redhorse)
Moxostoma erythrurum (golden redhorse)
Moxostoma macrolepidotum (shorthead redhorse)
Notemigonus crysoleucas (golden shiner)
Perca flavescens (yellow perch)
Pomoxis annularis (white crappie)
Sander vitreus vitreus (walleye)

All of these species, with the exception of the river redhorse and cisco, have been reported in the vicinity of Old Woman Creek estuary during the past 50 years (Herdendorf et al. 2001d). The Harbour site fish assemblage represents the shallow, nearshore waters habitat of Sandusky Bay and the deeper waters of Lake Erie about 900 YBP. Many small and medium sized fishes were present along with some very large individuals. The wide size variation and high diversity indicates capture by trap or seine, a hypothesis that is supported by the recovery of netsinkers at the site.

Collection grounds with relatively firm, unobstructed bottom conditions were probably selected close to the village. The dominance of adult pumpkinseed sunfish suggests these were taken during the early summer spawning season when adults were easily captured in shallow water by seining. Some open water species were present, but most share an affinity with shallow, vegetated margins of the bay. Other vertebrates identified from refuse pits and middens at the Harbour site, such as muskrats, ducks, turtles, and frogs, agree with the fishes in habitat preference (Cavender and Bowen 1994).

Studies of animal bones from prehistoric Indian habitations in northern Ohio show that white-tailed deer was the single most important game animal for the Woodland people (Shane 1992). In addition to meat, deer provided hide for clothing, bone and antler for tools and utensils, sinew for thread and binding material, and brain for tanning. Elk, raccoon, rabbits, bear, and wild turkey were also hunted in the upland forest surrounding the estuary. Beaver, muskrats, and waterfowl were taken from the wetlands.

Wild plants from the wetlands along the shore embayments of Lake Erie and from the upland forests appear to have provided at least half of the foods eaten by Woodland people. Nuts, numerous kinds of seeds of herbaceous plants, and greens were collected from the forest, as were many medicinal plants. Hickory nuts, in particular, were crushed and boiled in water to release their oil, which was collected and used for cooking. Wetland plants provided raw material for making mats, baskets, bags, house coverings, and a great many wood utensils. Cattails, bulrushes, the inner bark of basswood, and elm were important materials.

Fired clay pottery vessels and smoking pipe bowls were fashioned from clay probably collected from a source along Lake Erie tributaries (Shane 1992). Pots were unpainted and were decorated along the rim with bands of simple rectangular tool impressions. Oval post-mold patterns, floor depressions, and hearth structures at the Anderson site indicate that Late Prehistoric houses were similar to the 17th to 19th century dome-shaped lodges or “wigwams” built by Ottawa and Sauk Indians of the western Great Lakes region. These houses probably consisted of oval pole frames, covered with various available kinds of tree bark and bulrush or cattail mats.

LATE PREHISTORIC AND CONTACT INDIANS

The last prehistoric culture to inhabit northwestern Ohio was known as the Sandusky Tradition which presumably arrived from the south about 1,000 A.D. Contemporary groups of Indians in northeastern Ohio and northwestern Pennsylvania were known as the Whittlesey Tradition and in southern Ohio as the Fort Ancient Culture. Members of the northern cultures may have been the ancestors of the Erie Indians who were reportedly destroyed as a group in northeastern Ohio by the marauding Iroquois from western New York in 1654 (Otto 1980). These people inhabited small villages built on promontories on high banks overlooking streams that emptied into Lake Erie. Communities were fortified with palisades and exterior ditches (Figure 8.8).

Late Prehistoric Indians used the bow and arrow for hunting. The proximity of the lake and rivers to villages enabled these people to fish extensively, both with hooks and with nets. Their nets were weighted with rounded pieces of stone, particularly slate which

was roughly notched on opposite edges for attachment to the nets (Otto 1980). They also cultivated corn and collected wild plant food and mussels.

Around 500 YBP the northeastern shore of Lake Erie was inhabited by ancestral Neutrals, followed by the Neutrals and Tobacco Indians about 400 YBP (Addison 1994). These peoples were also subdued by the Iroquois Indians, as were the people of the Huron Nation who resided to the north around Georgian Bay. Archaeological investigations indicate that both the Neutrals and the Iroquois occupied a relatively small area between Lakes Erie and Ontario and used the hinterlands of the north shore as hunting grounds (Burns 1985, Ellis and Ferris 1990). These groups represent the region's Contact Indians. However, there were very few Indians living along the north shore of Lake Erie when the first Europeans began to move through the area in the late 17th century (Noble 1978). Likewise, the south shore had very few aboriginal inhabitants at this time (Figure 8.9).

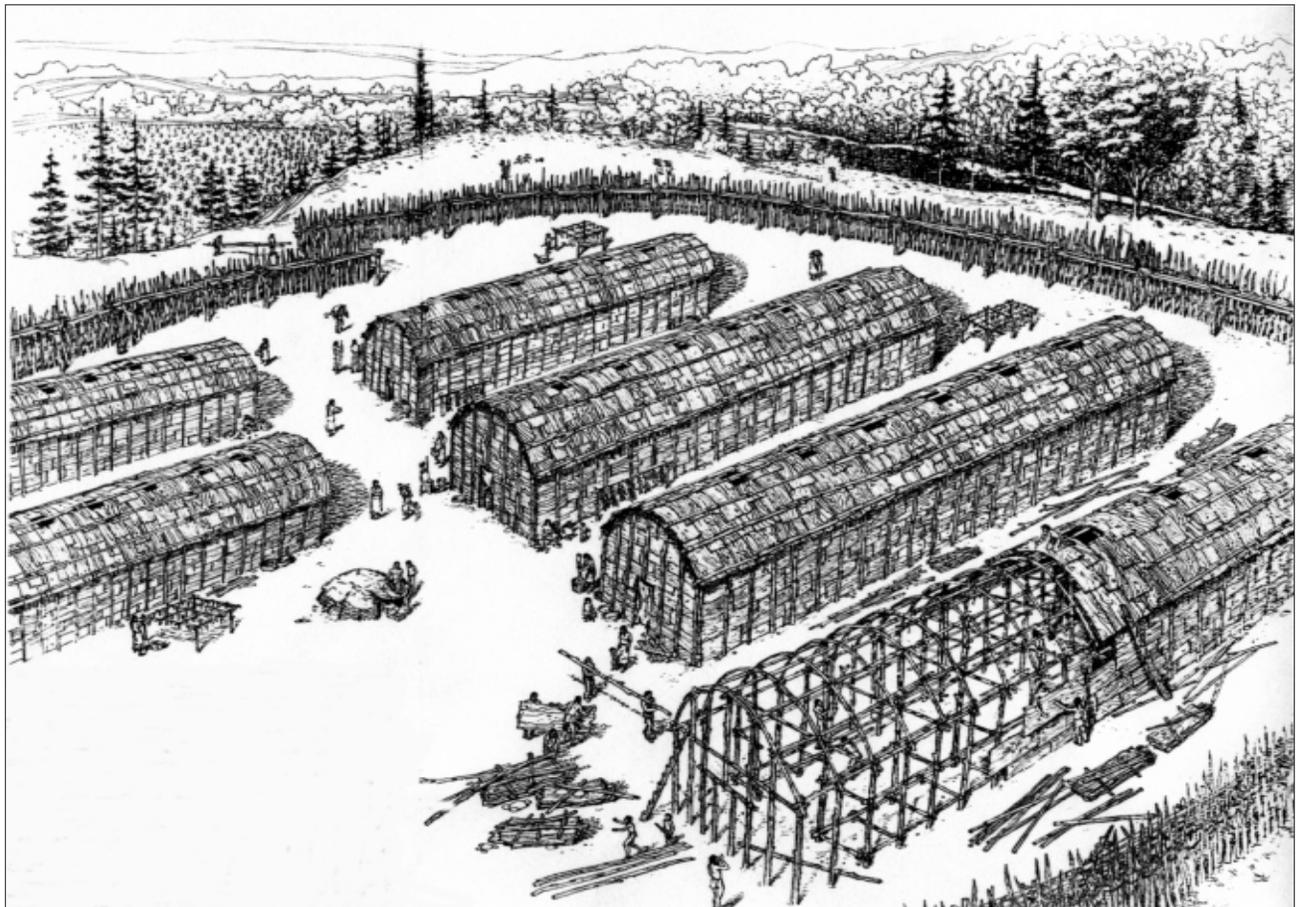


Figure 8.8. Early 17th century village of Erie and Seneca Indians (from Maxwell 1978).

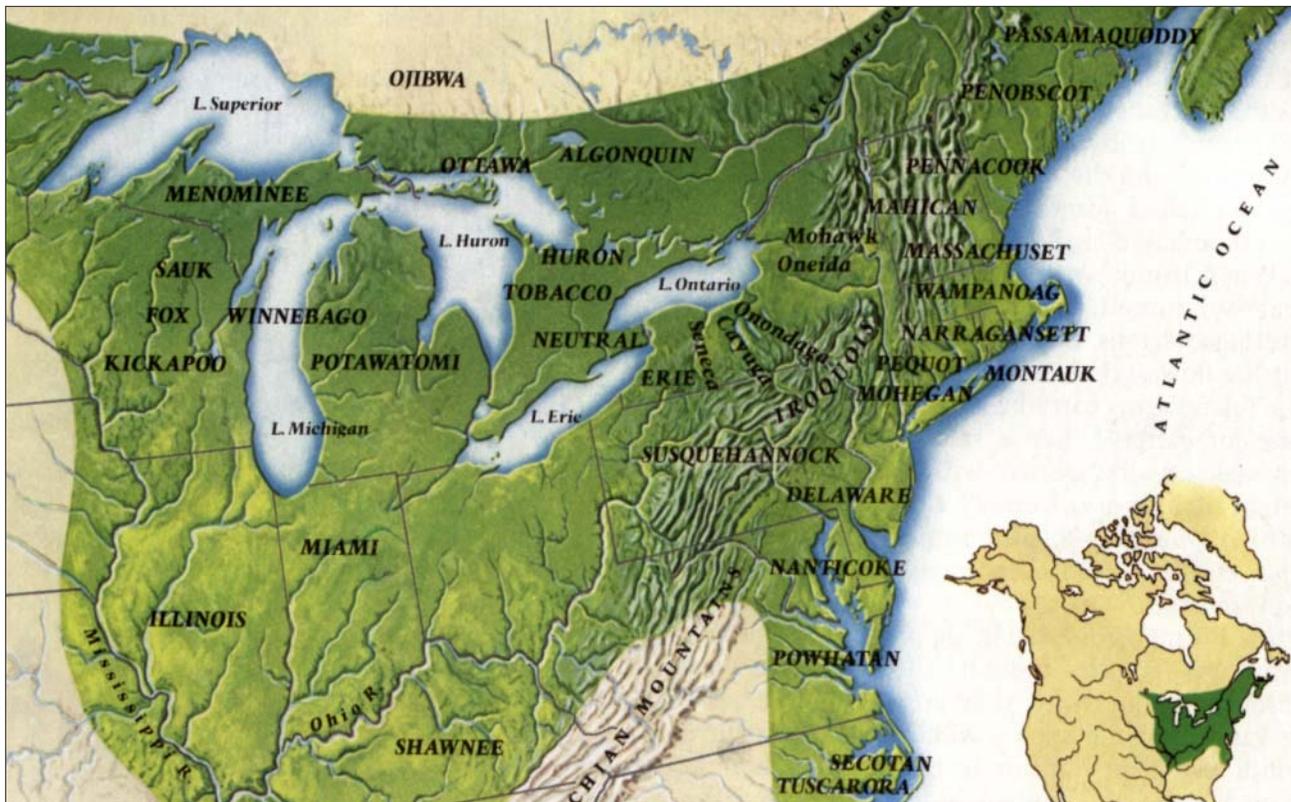


Figure 8.9. Tribal groups in the Great Lakes region when Europeans arrived (from Maxwell 1978).

ARCHAEOLOGICAL INVESTIGATIONS

Two archaeological sites (Anderson and Jenkins) overlooking Old Woman Creek estuary and a third site (Enderle) 4 km to the west on the Huron River estuary were excavated in 1976 and 1977 as part of a highway mitigation project before the construction of Ohio Route 2 which traverses the Reserve near the southern boundary (Figure 8.10). The results of these investigations were reported by Seeman and Bush (1979) and Shane (1981,1992). These sites document occupation by Paleo-Indian, Archaic, and Woodland peoples. A fourth site (Weilnau), located 10 km farther upstream on the Huron River, was excavated in 1990 (Abel and Haas 1991, Abel 1994). This site provides additional information on the Early Archaic culture in the vicinity of the Reserve. All four sites occupy high ground overlooking resource-rich estuaries or stream valleys.

JENKINS SITE

This is a small multi-component site situated on a promontory forming the eastern bluff of the Old Woman Creek valley, at an elevation of 185 m (608 feet) above mean sea level (MSL). The soils at the site

(Del Rey loam) formed in glacial lake sediments (Redmond, et al. 1971). Four cultural features were found beneath the plowzone. Each was a circular, reddish discoloration of the subsoil, containing minute charcoal flecks. Shane (1981) interpreted these as the bases or burned soil “ghosts” of hearths that were originally located higher in the soil. The actual hearths were probably destroyed by plowing when modern agricultural practices were introduced at the site.

No artifacts were associated with the hearth features. Surface surveys indicated that the vast majority of the Jenkins site lies in the Reserve north of the Ohio Route 2. The greatest concentration of surface artifacts were found on sandy knolls approximately 50 m north of the highway right-of-way. These artifacts and a few items from the plowzone near the hearths confirm the presence of both Archaic and Late Woodland components at the site. Based on the finding that a significant portion of the site was located north of the right-of-way, Shane (1981) concluded that construction of the highway would not severely impact the site.

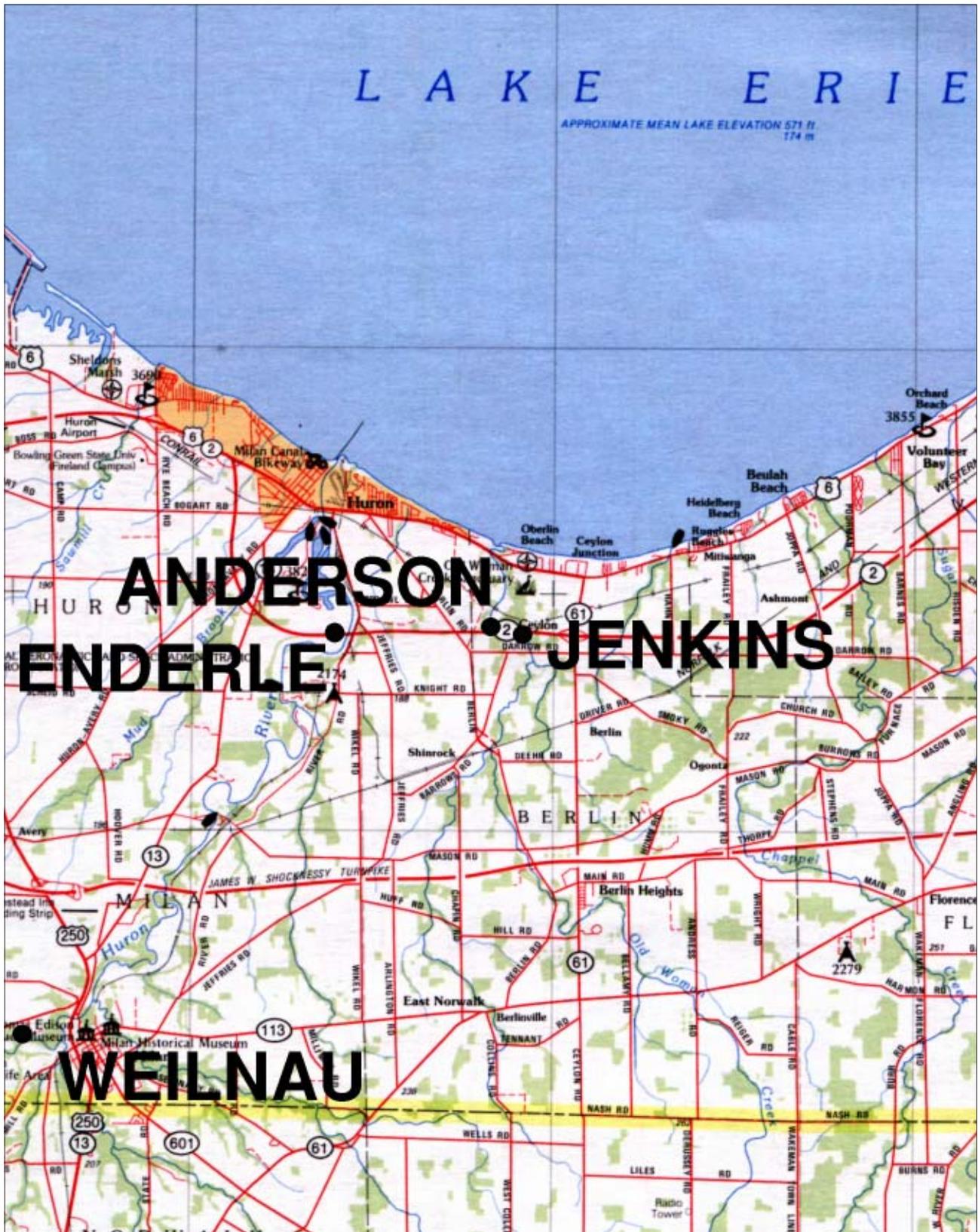


Figure 8.10. Archaeological sites in the vicinity of Old Woman Creek State Nature Preserve and National Estuarine Research Reserve (base map from Ohio Atlas & Gazetteer, Fifth Edition, DeLorme, Yarmouth, Maine, 1999).

ANDERSON SITE

This is also a multi-component site that is located on a promontory forming part of the western bluff of Old Woman Creek valley, at elevation of 185 to 187 m (608 to 614 feet) above MLS. The soil at the site (Metea loamy fine sand) formed in glacial Lake Lundy sediment (deposited ca. 12,400 YBP). This late Pleistocene sand deposit was about 1.5 m thick at the crest of the promontory and thinned toward the edges where it intersected an underlying silt and clay deposit (Sisson silt loam). Excavations revealed that most of the cultural materials were in the upper 60 cm of the sand deposit.

A total of 163 cultural features were identified and excavated at the site, including:

Refuse/Storage Pits	104
Hearths & Hearth Bases	30
Middens & Sheet Middens	14
House Floor & House Depressions	4
Post Mold	1
Defensive (?) Enclosure	1
Rock-Filled Pit	1
Historic/Modern Refuse Deposits	3
Indeterminate	5

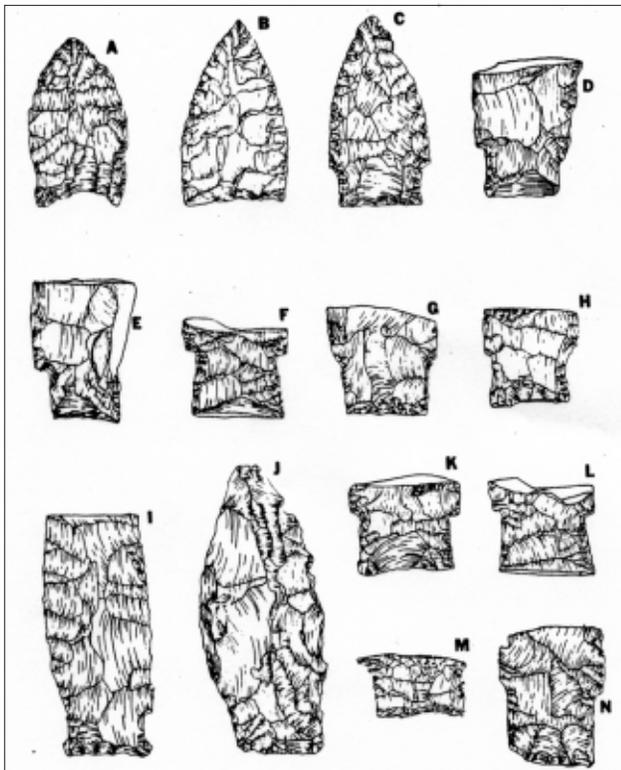


Figure 8.11. Late Paleo-Indian projectile points from the Anderson site (Shane 1981). A, B—Hi-Lo type points; C—N—Scottsbluff type points.

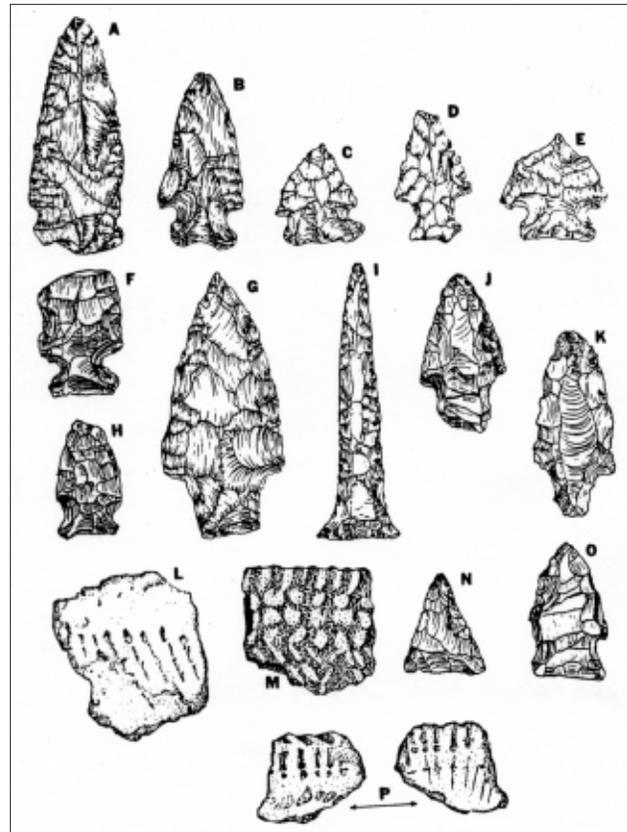


Figure 8.12. Archaic and Early Woodland artifacts from the Anderson site (Shane 1981). Archaic period: A—F, H—Brewerton side-notched projectile points; G—Genesee point; I—expanded base drill. Early Woodland period: J—K—stemmed projectile points; L, M, P—thick-walled grit-tempered cordmarked pottery; N, O—leaf-shaped chert bifaces.

The following occupational history of the Anderson Site is based on the work of Shane (1981,1992). Initial occupation of the site was by Late Paleo-Indian hunters (10,500-9,000 YBP) who used stemmed and unstemmed lanceolate projectiles (Hi-Lo and Scottsbluff types) to take down their prey (Figure 8.11). Other stone tools, such as spurred end scrapers, blades, and end scrapers on blades, which are often associated with Late Paleo-Indian sites, were not recovered. Following this occupation there appears to be a cultural hiatus until the site was utilized by Late Archaic hunter/gatherers (5,000-3,500 YBP). Artifacts found at the site that are associated with these people include: Brewerton side-notched projectile points, Genesee points, expanded-base drills, and polished slate atlatl weights (Figure 8.12). No specific features were associated with either the Late Paleo-Indian or Archaic artifacts, leading to the interpretation

that the occupations were of a transitory nature or were centered elsewhere in the area.

Evidence for Early Woodland habitation (2,800-1,900 YBP) at the site is more positive – a hearth and 4 refuse pits. These yielded stemmed projectile points, thick-walled grit-tempered cord-marked pottery, and leaf-shaped chert bifaces (Figure 8.12). The next occupation was the Late Woodland culture (800-650 YBP) and is represented by a small component at the site. A bell-shaped refuse pit contained pottery similar to the Vase tool-impressed type of the Late Woodland Western Basin Tradition of northwestern Ohio and southeastern Michigan. Wood charcoal from the pit yielded a radiocarbon date of 1280±65 A.D. (DIC-790). Animal remains in the pit indicated deer, muskrat, birds, and fish were food sources.

By far the most important component at the site was a 15th century Sandusky Tradition village. The most striking feature was a roughly circular enclosure (~64 m in diameter) that was bounded by a trench, 9 m wide and 1 m deep. This feature enclosed an area of approximately 3,250 m² and contained three possible house structures within its confines. The trench appears to have served as a defensive structure for the village. A radiocarbon date of 1460±125 A.D. (DIC-788) was obtained for material in the trench, whereas a date of 1690±100 A.D. (DIC-785) was determined for material in an interior refuse pit. Cultural debris was scattered throughout the enclosure trench in discontinuous deposits. Grit-tempered pottery included 100 smooth and 42 cord-marked body sherds, 11 Mixer tool-impressed rim pieces from 10 vessels, 8 Parker Festooned rim pieces from 6 vessels, 7 Mixer cord-marked rim pieces from 4 vessels, 4 Reeve opposed rim pieces from 2 vessels, and numerous basal sherds (Figures 8.13 and 8.14). The Mixer tool-impressed and Parker Festooned types were represented by totally reconstructable vessels.

A variety of projectile points were also found, including Madison triangular points (Figure 8.15) which are diagnostic of Late Woodland and Mississippian cultures (Justice 1987). The enclosure contained at least 3 depressions and floors thought to be the remains of houses and numerous refuse deposits. The refuse pits, hearths, and middens contained straight drills, “hump-backed” scrapers, ground slate celts, manos, metates, bi-polar cores, clay pipes, flaked slate choppers, sandstone beads, netsinkers, and chert flakes, cores, and debitage (Figure 8.15).

Both plant and animal remains were abundant in the refuse pits and middens. Floral remains included maize, hickory nut, butternut, acorns, and walnut, while faunal remains were deer, muskrat, rabbit, small rodents, birds, fish (especially bullheads, pike, and freshwater drum), and mollusks. Maize was the most common food source found in the pits.

Excavations revealed that a contemporary settlement was located immediately to the east of the defended village. A group of features were arrayed in an irregular circle that yielded pottery very similar to that from the village. A conical refuse pit yielded a radiocarbon date of 1650±75 A.D. (DIC-787). The refuse pits in the settlement differed from those in the village in that although they contained abundant plant residual, animal remains were largely absent. Additionally, over 100 complete or fragmentary grinding stones were recovered in the vicinity of the settlement, suggesting that the features to the east of the village represent a functionally different settlement type.

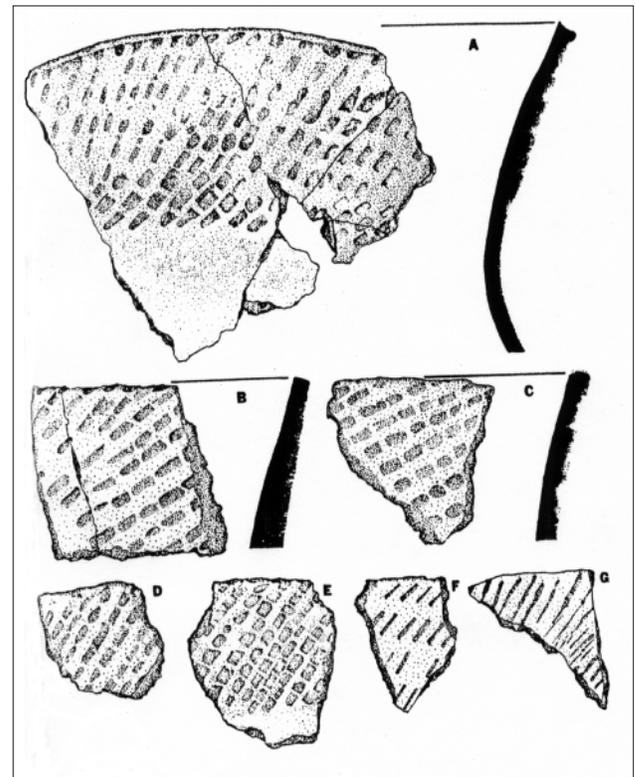


Figure 8.13. Late Prehistoric ceramic types from the Anderson site (Shane 1981).
A–G—Mixer tool-impressed sherds.

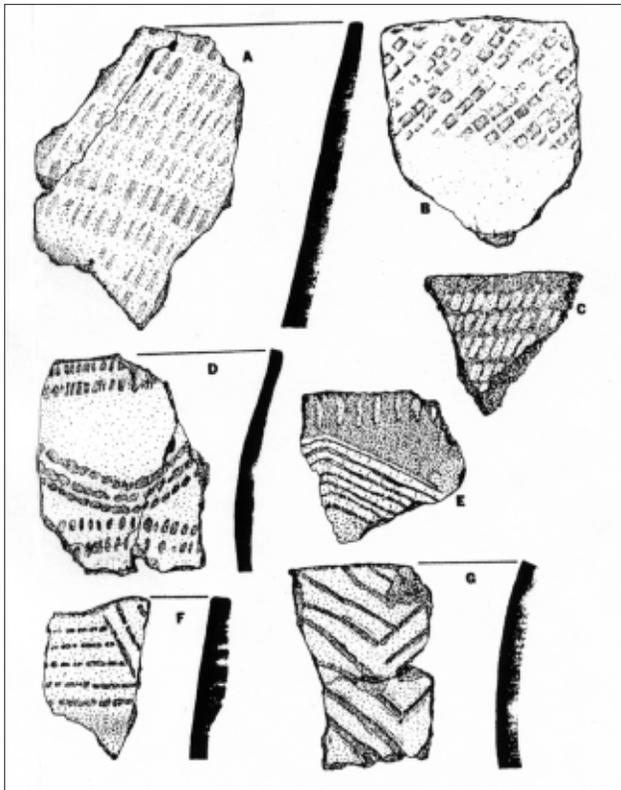


Figure 8.14. Late Woodland ceramic type from the Anderson site (Shane 1981)
 A–C, F—Mixer tool-impressed sherds;
 D, E, G—Parker Festooned sherds.

ENDERLE SITE

Located on a broad meander of the lower Huron River about 2 km south of Lake Erie (3 km west of the Old Woman Creek watershed), this small multi-component site contained historic Indian burials and Late Woodland artifacts. The site is centered on sandy knolls that undulate from 183 to 186 m (600 to 610 feet) above MSL. The knolls represent stabilized dunes that were formed during the low stage of Lake Erie following the recession of glacial Lake Lundy (~12,400 YBP). The site is about 6 m above the water level of the Huron River Estuary.

Three burials occupied the apex of one of the knolls, lying parallel about 1 m apart, and oriented in a north-south direction. Laboratory analyses indicated that the burials were all young adult Indians (2 females and 1 male) which date from AD 1760-1780 based on associated cultural materials, such as hand-wrought iron nails, numerous “trade beads” made of white and black glass, metal vanity objects including silver and brass rings, and pieces of French cotton fabric with floret designs. Wood preserved by the rust of the nails

may represent the remains of a rectangular coffin (Seeman and Bush 1979). A loosely woven mat of noded reed-like material (probably *Equisetum arvense*, common horsetail) appears to have been used to line the coffins. This appears to represent a transition in burial practices with the reed mat being a traditional Indian element and the coffin being a European element. Cultural contact situations are often characterized by “differential borrowing” such as this.

Thousands of white glass “seed beads” appeared to have been sewn on clothing of the females in a specific zigzag design. A choker-style, beaded necklace (composed of 230 black, glass tubular beads) was found at the neck of one of the females. Near the cranium, at the same burial, a massive concentration of 700 white “seed beads” was found with a number of greasy, vermilion lumps near the center. In the 18th century the Delaware Indians had a mortuary practice of breaking a hole in a sealed coffin to place a bag of vermilion near the head; the hole also served to released the deceased’s sprit (Newcomb 1956). The glass beads

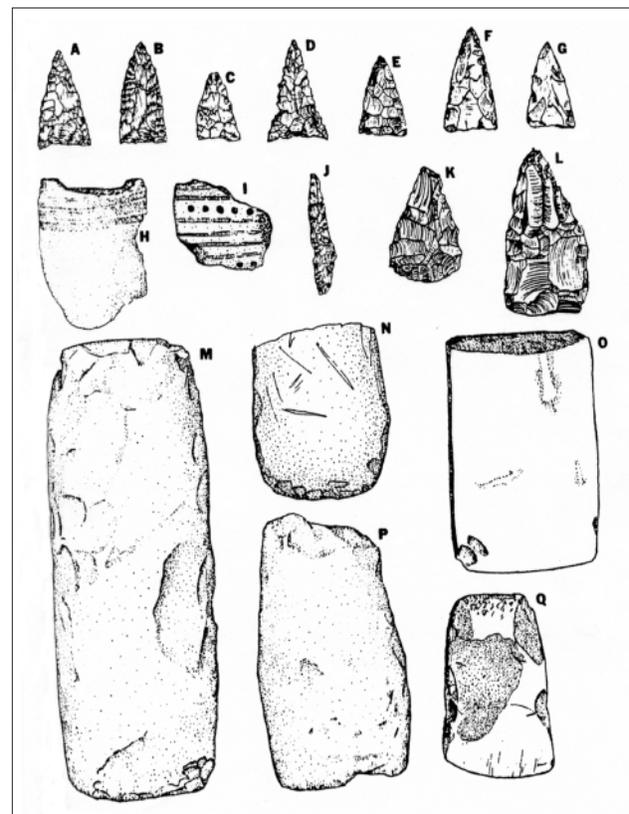


Figure 8.15. Late Woodland artifacts from the Anderson site (Shane 1981). A–G—Madison triangular projectile points; H, I—pipe fragments; J—straight drill; K, L—“hump-backed” scraper; M–Q—ground slate celts.

found near the cranium may have been sewn on the outside of such a pouch. The skeletons showed no obvious signs of trauma or debilitating pathology; thus the causes of the deaths could not be determined from the available evidence.

If the temporal placement of the Enderle burials in the late 18th century is correct, then it is likely the 3 individuals were Wyandot or Delaware. The Wyandot (formerly Huron Indians from southern Ontario) moved into northwestern Ohio during the mid-1600s and were concentrated along Sandusky Bay by the late 18th century. However, the Wyandot retained the Huronian ossuary type of burial practice until considerably after the period of the Enderle burials (McKenzie and Prufer 1967). The other possibility is that the Enderle burials are Delaware. During the period 1789 to 1804 two Moravian Delaware settlements (New Salem and Petquoting) were established on the Huron River within 5 km upstream of the Enderle site. The diary of one of the founders, Gotfried Oppelt, records the presence of a large “pagan” Delaware village downstream of Petquoting (White 1976). The possibility that there was a traditional Delaware village near the site, and that it was occupied only slightly later than the Enderle site, suggests that the burials could have been Delaware.

In addition to the 3 burials, several nearby refuse pit features produced artifacts indicative of Woodland affiliation, but none contained cultural material that was contemporary with the burial features. The pits contained pottery pieces, mostly grit-tempered, cord-marked, vessel-body sherds. On another knoll, immediately east of the burials, excavations in the upper soil horizons yielded artifacts and debitage representative of several Archaic and Woodland components (Figure 8.16). The bulk of these materials appear to be related to the Late Woodland workshop activities. Once the excavation of the burial features and the shallow Woodland features were completed, the field archaeologists concluded that it was unlikely that highway construction for Ohio Route 2 would adversely impact any remaining cultural resources in the locale (Shane 1981).



Figure 8.16. Reconstructed example of a Late Woodland dwelling (Jim Herbstritt).

WEILNAU SITE

This site, located on a high bluff overlooking the Huron River valley in Milan Township, Erie County (approximately 6 km west of Old Woman Creek watershed), contained a habitation structure and projectile point associated with the Early Archaic period (Abel and Haas 1991, Abel 1994). The habitation structure consisted of a shallow, circular depression (3.2 m in diameter) surrounded by post molds. A cluster of fire-cracked rocks near its center were interpreted as a hearth. Several Lake Erie bifurcated-base points and a Stanley stemmed-base point found within the structure indicated an age of ca. 8,300 to 7,800 YBP, the period of the Early Archaic culture in northern Ohio (Justice 1987).

Abel (1994) interpreted the Weilnau site as a hunting camp. The site offers a clear view of the broad floodplain and meanders of the Huron River, some 20 m below. The valley constricts immediately downstream of the site forming a bottleneck for game moving in that direction. Abel postulated that Early Archaic hunters used the bluff tops near the site as observation points to locate and pursue deer and other game moving through the valley. The habitation structure and the hearth suggests cold-weather occupation of the camp (autumn and winter), when deer are most mobile and best hunted. The Huron River valley was probably utilized heavily by deer during these seasons, especially since the river rarely freezes below the site under current conditions and most certainly was ice-free during the mild temperatures of the Climatic Optimum (8,000 to 6,000 YBP).