

APPENDIX D
ETHNOHISTORY OF DELAWARE'S INDIANS

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I. ETHNOARCHAEOLOGY

Archaeologists learn about the past through the study of material culture; but how do they determine the functions of the objects they study? A number of archaeologists have argued that we can only understand the archaeological record by comparing it with something else. We can only recognize a stone ax as an ax, they would argue, because it looks like the metal ones with which we are familiar. The ax does not, in and of itself, tell us anything about its function. It is the analogy between what we find and what we know that enlightens us. When we describe a small stone triangle as an “arrowhead,” a burned spot surrounded by stones as a “hearth,” or a cluster of house patterns as a “village,” we are employing analogies based on contemporary or historically documented experience. Of course, analogies can be quite wrong—the stone triangle might have been a pendant; the cluster of house patterns might have been a prison—but analogy still provides, some argue, our best hope for understanding what behaviors lie behind the objects and patterns found on an archaeological site. When we consider not just the obvious function of an object, but its meaning for the people who used it, the questions of interpretation become even more difficult, and ethnographic analogy even more crucial. We might be able to guess the simple, or “technomic” function of an artifact, but understanding possible social (“sociotechnic”), political, or religious (“ideotechnic”) functions requires knowledge of the manifold meanings objects have been given by people of diverse cultures (Steward 1955; White 1959).

Ethnography, the study of living peoples, does not in any way provide direct information about people who lived in the past; however, it serves as a source of possible interpretations, or hypotheses, that can be tested against the archaeological record. To imagine what human behaviors might have created features and artifacts, archaeologists almost always turn to what they know about contemporary, or historically documented peoples. When we find a hearth, we imagine people sitting around it at least in part because we know that many people sit around hearths to this day. One of the most sophisticated authors who has written about the archaeological use and possible misuse of ethnographic analogy is Lewis Binford. Binford first made archaeological waves by challenging certain longstanding views of the Upper Paleolithic in central France using data on the reindeer hunters of central Alaska. Binford wrote the following after his experience with these native Alaskans:

In short, I was led to the inescapable conclusion that there existed no way to develop archaeological methods of inference except via the study of contemporary living peoples, or by doing controlled experiments under laboratory conditions, or by doing archaeology in situations whose dynamic component is historically documented. ‘Ethnoarchaeology,’ ‘experimental archaeology,’ and ‘historic sites archaeology’ seemed to me to be the only chances we have for the development and perfection of methods of inference dealing with humanly-generated artifactual material [Binford 1983:104].

It may seem far-fetched to apply lessons drawn from contemporary Alaska to Pleistocene Europe, 20,000 years and 8,000 miles away. Binford did not, however, argue for the direct applicability of any particular model. As he put it, “the value of archaeological studies of modern peoples is that, by observing the different types of sites which they occupy, we can begin to appreciate the range of variability which we are likely to encounter in the archaeological record” (Binford 1983:133).

In other words, being able to tie an artifact or feature to some observed behavior does not mean that this type of feature is always created by that particular behavior; it simply means that the observed behavior is one of the possible causes. By observing a wide variety of living groups, we may be able to document a range of possible origins for any archaeological phenomenon. For example, a great deal of work has been done with hunter-gatherers around the world, documenting the different ways they exploit their environments, move around their territories, and form themselves into groups of different sizes at different times of the year. This knowledge gives us some idea of the range of behavior we might encounter when studying hunter-gatherers

of the distant past. Also, by observing the kind of archaeological sites these documented modern peoples produce, we can suggest the behaviors most likely to produce the kinds of sites we find archaeologically. Typically, archaeologists give more weight to analogies between people living in similar environments and exploiting similar resources. These analogies do not by themselves prove anything, but they suggest possible models that we can investigate further.

Two possible sources of analogies for understanding the pre-Columbian peoples of the lower Delaware Valley are available: the worldwide body of information on hunter-gatherers, and historical accounts describing the Native Americans who lived in this region in the sixteenth and seventeenth centuries. Using the regional historical record offers some clear advantages. The historically documented groups lived in almost exactly the same environment as their prehistoric ancestors and exploited many of the same food species. Furthermore, there is considerable evidence of cultural continuity in the eastern woodland region over the past 3,000 years, indicating that knowledge and practices may have been directly handed down from prehistoric peoples to documented historic groups. On the other hand, the historic Indians were different from their ancestors of 2,000 to 4,000 years ago in several crucial respects. Most importantly, the historic Indians were agriculturalists who depended to a considerable extent on corn and beans, crops that had been introduced from Central America within the previous 1,500 years. However, they were not completely dependent on agriculture, but obtained a major part of their livelihoods through hunting, fishing, and gathering. A review of the ethnohistoric record for Delaware and the surrounding region may therefore provide important clues to the prehistoric past. Of course, data on historic Native Americans do not necessarily apply to prehistoric groups, but such data may be important in interpreting the archaeological record in Delaware.

The following review of ethnohistorical literature does not cover all aspects of Native American life. It focuses on a few aspects of particular importance to understanding the archaeological record in Delaware, and more specifically to interpreting the Puncheon Run Site. These aspects are subsistence, the use of storage pits, housing, burial practices, and technology. Our goal will be, as Binford suggests, to describe the range of documented behaviors that we might find on the site. Important information includes the range of plant and animal species exploited by historic groups, the ways those foods were processed and stored, the kinds of tools that might be associated with each processing activity, the kinds of houses built and the types of sites on which houses might or might not be found, and mortuary practices.

The Native Americans who inhabited the Delaware Bay and the lower Delaware River Valley are known as the Lenape or Delaware. The study of these people is complicated by the scarcity and late dates of the sources that pertain directly to this area. The Dutch and Swedes, who were the earliest European settlers along the Delaware, did not describe their native neighbors in the detail that John Smith and Thomas Hariot described the Algonquins of Virginia and North Carolina, or the French Jesuits described the Huron and Iroquois. In addition, our Dutch sources were all men who traveled on the Hudson as well as the Delaware, so it is often difficult to tell to which region they are referring. Although the inhabitants of the lower Hudson valley and western Long Island were also Lenape, there may still have been significant differences between them and the Lenape of Delaware. The only major sources we can be sure refer only to Indians along the Delaware are Johannes Campanius's notes, written around 1642 and published by his grandson in 1701; Peter Lindström's *Geographia Americanae*, based on his experiences in the 1650s; and William Penn's letters of the early 1680s. To develop a detailed picture of Indian life in Delaware, these sources must be supplemented with those from other areas. Especially important are the classic accounts by John Smith and Thomas Hariot, and the Dutch sources from New York. For certain topics of particular importance, the research has ranged further afield, to narratives of early New England, John Lawson's 1709 work on the Carolinas, the works of eighteenth-century missionaries, and William Bartram's mid-eighteenth-century works on the southeastern Indians. These later works were not used to obtain entirely new information, but are cited only to augment vague or terse descriptions from the earlier materials.

When using historical accounts to understand life in prehistoric periods, it is important to remember that the Indian populations of eastern North America were highly mobile. The Lenape language belongs to the Algonquin group, which seems to have originated in Canada. Exactly when Algonquin speakers entered the Middle Atlantic region is not known, nor is it known what kind of language the previous inhabitants may have spoken or what became of them (Feest 1978). Other Native American groups are also known to have migrated long distances in late prehistoric times. Because of these movements it is not at all clear how the historic Native American inhabitants of the lower Delaware Valley were related to the people who lived in this area 2,000 to 4,000 years ago. On a regional scale we are on safer ground. The culture of the eastern woodlands has many similarities over the entire region from North Carolina to the St. Lawrence Valley, especially in the areas of technology and subsistence, which are most accessible to archaeologists. A regional approach, documenting the range of variability over the northeast, actually provides a better opportunity for identifying the practices of Delaware's prehistoric inhabitants than purely local research.

The relatively late dates of our sources on the lower Delaware Valley Lenape, all after 1620, create further problems. By the 1620s there had already been a century of European exploration and trade along the Atlantic coast. In 1608 John Smith (1986:146) found an Indian group along the Sassafras River in Maryland in possession of "many hatchets, knives, peeces of iron, and brasse." Graves of the Seneca in what is now New York contained rich deposits of trade beads and other European goods by the 1550s (Tuck 1978). Cultural exchanges took place quickly, especially in the area of technology. Within 20 years of the founding of Jamestown, Thomas Glover described Indians on the James River fishing with iron hooks, and Englishmen "fire fishing" with spears in the Indian manner (Pearson 1972:856). In 1680 the Lenape around New York were growing peaches and raising chickens and pigs, as were some of the North Carolina Algonquins John Lawson encountered in 1700 (Danckaerts 1913:126; Lawson 1709:17). One important impact that European contact may have had on the Lenape was to exacerbate, or perhaps even cause, their conflict with the Susquehannocks. The Susquehannocks, a tribe based in central Pennsylvania and southern New York, were determined to control the fur trade in the Delaware Valley, and, in the second and third decades of the fifteenth century, Europeans described numerous Susquehannock attacks on Lenape settlements. The fur trade also had major impacts on Indian economies, as men devoted more of their time to obtaining furs for trade (Newcomb 1956:83). Epidemic diseases that ravaged Indian populations spread far ahead of actual white settlement. One old Indian living near Philadelphia in the 1680s reported that there had been great plagues in his grandfather's time, his father's time, and in the time of his youth (Becker 1976:27). Accounts from after 1650 may, therefore, describe Indian societies already altered by European trade, technology, and disease.

II. SUBSISTENCE

A. AGRICULTURE

All of the seventeenth-century informants described the Lenape as an agricultural people who also hunted, fished, and gathered wild plants. They raised maize, beans, pumpkins or squash, and tobacco in gardens near their summer houses. Agricultural work was performed by women, although one source mentions that men helped in the initial clearing of the fields. Because the archaeological evidence of prehistoric farming in Delaware is so weak, it is worth emphasizing the strength of the ethnohistoric evidence. William Penn (1908:5) observed, "their Diet is Maze, or Indian Corn, divers ways prepared. . . . They have likewise several sorts of Beans and Pease, that are good Nourishment; and the Woods and Rivers are their Larder." Isaack de Rasieres (1909:103) mentioned areas of good soil "where the savages plant their maize, upon which they live." Peter Lindeström (1925:153) described the Siconese, a Lenape group who inhabited southern Delaware, as "a powerful nation rich in maize plantations." The Lenape's main festivals, according to Penn (1908:6) and Van der Donck (1971:76), were held in the early fall, after the corn had been harvested.

Many accounts describe Indians selling surplus food to Europeans. Lindeström observed that “the savages also sell to the Christians foodstuffs, such as Indian corn of all kinds [and] Turkish beans” (Lindeström 1925:223). Van der Donck wrote, “they usually leave their fields and garden spots open, unenclosed, and unprotected by fencing, and take very little care of the same, though they raise an abundance of corn and beans, of which we obtain whole cargoes in sloops and galleys in trade” (1971:96). In 1663 the Dutch captain Krieger, on a punitive expedition against some New Jersey Lenape, “cut down two hundred and fifteen acres of maize and burned over one hundred pits of corn and beans” (Newcomb 1956:13). The Dutch were so used to being able to trade for corn and beans in the Delaware River that in 1633, when warfare between the Susquehannocks and the Lenape cut off supplies, David De Vries had to sail to the Chesapeake Bay and trade for corn with the English before he could sail home (De Vries 1909:26). It is possible that the Europeans, themselves an agricultural people, exaggerated the role of corn and other crops among the Lenape, but it is simply inconceivable that all of these observers could have imagined it.

De Rasieres wrote a clear description of the horticulture practiced by the Native Americans around New York in the 1620s:

At the end of March they begin to break up the earth with mattocks, which they buy from us for the skins of beavers or otters, or for sewan [wampum]. They make heaps like molehills, each about two and a half feet from the others, which they sow or plant in April with maize, in each heap five or six grains; in the middle of May, when the maize is the height of a finger or more, they plant in each heap three or four Turkish beans, which then grow up with and against the maize, which serves for props, for the maize grows on stalks similar to the sugarcane. It is a grain to which much labor must be given, with weeding and earthing up, or it does not thrive: and to this the women must attend closely [1628:107].

The use of iron mattocks in the 1620s shows how quickly Indians adopted some European technologies. John Smith wrote that the Powhatans of Virginia tilled the ground with “a crooked piece of wood” (1986:112), and Thomas Hariot described “wooden instruments, made almost in forme of mattockes or hoes” in North Carolina (Quinn 1955:341). Wood (1865:106) mentioned “Clamme shell-hooes” used in Massachusetts. However, no accounts of the Lenape describe the implements they used before the arrival of Europeans.

Only a few accounts tell of grinding stones. Generally, corn was pounded in a wooden mortar. According to Peter Lindeström,

They use no querns, but the meal for baking they pound asunder with a pestle and mortar, which they make in this manner, that for the purpose they cut a thick and large tree, 1½ ells from the root, in the stump of which they dig out a round hole and thus make a mortar which is suited for the purpose and in which they pound all their grain into meal [1925:253-254].

These wooden mortars were found throughout the eastern woodlands region and are particularly well documented for the Iroquois and the Nanticokes of the early twentieth century. John Lawson wrote that in North Carolina the pounding of corn was usually the work of girls, “of whome you shall see four beating with long great Pestils in a narrow wooden Mortar; and every one keeps her Stroke so exactly, that ‘tis worthy of Admiration” (1709:207).

Pounded meal could be baked into cakes in the fire, or boiled into a mush called *saepen* around New York. According to Van der Donck, *saepen* “is so common among the Indians that they seldom pass a day without it, unless they are on a journey or hunting” (1971:75). Corn stew could be made in many ways, with additions such as beans, venison, and dried fish. Cornmeal parched in the fire was light and could be easily reconstituted with water, and accounts from New England to Carolina tell of Indians carrying a small bag of

parched corn on long journeys: “they provide themselves severally with a small bag of parched corn meal, which is so nutritious that they can subsist on the same many days” (Van der Donck 1971:76).

Beans, according to our informants, were usually boiled in stews. We have few accounts of how squash was cooked, but Francis Daniel Pastorius (1700:364) described some New Jersey Lenape enjoying a meal of plain boiled pumpkin, which he contrasted with the European need for salt and spices.

B. GATHERING

Although they practiced agriculture, the Indians of eastern North America were not completely dependent on it. They were generalists, who used a wide variety of resources, and traveled widely to obtain them. They seem to have enjoyed having variety in their diets, and they preferred to use some very abundant resources only during certain seasons of the year. Rather than clear larger fields and live year-round on maize and beans, they kept their agricultural labor to a minimum so as to have time for gathering wild resources as well. In this they resembled modern hunter-gatherers in many parts of the world, who prefer to depend on a diverse resource base that gives them variety in their diets and security against a shortfall in any one food source.

Van der Donck’s description of the Indians eating maize at every meal probably applies only to the fall, because other sources tell us that the Indian diet varied greatly over the course of the year, depending on what was available. The classic account of the Native Americans’ seasonal round was provided by John Smith (1986:117-118) in his description of the Virginia Algonquins. He wrote,

In March and Aprill they live much upon their fishing wires; and feed on fish, Turkeys, and Squirrels. In May and June they plant their fields, and live most of Acornes, Walnuts, and fish. But to mend their dyet, some disperse themselves in small companies, and live upon fish, beasts, crabs, oysters, land Tortoises, strawberries, mulberries, and suchlike. In June, July, and August, they feed upon the rootes of Tochough berries, fish, and greene wheat. It is strange to see how their bodies alter with their dyet, even as the deere and wilde beasts they seeme fat and leane, strong and weake [Smith 1986:117].

Smith also described many of the wild plants on which the Indians depended. He mentioned several kinds of berries and other fruits, and he experimented with making wine from local grapes. John Lawson noted that the Carolina Indians eat “all wild fruits that are palatable, some of which they dry and keep against Winter” (1709:178).

Nuts seem to have been quite important food sources. Smith (1986:109) described Indians eating chestnuts, walnuts, acorns, and *Chechinquamins* (chinkapins), and he gave a detailed description of the manufacture of walnut milk, a native delicacy:

When they need walnuts they breake them betweene two stones, yet some part of the shels will cleave to the fruit. Then doe they dry them againe upon a Mat over a hurdle. After they put it into a mortar of wood, and beat it very small: that done they mix wit with water, that the shels may sinke to the bottome. This water will be coloured as milke, which they call *Pawcohiccora*, and keepe it for their use [1986:109].

Walnut milk was also described in several later accounts of the southeastern Indians and the Iroquois, so it was almost certainly used by the Lenape as well. Indeed, accounts of the southeastern Indians describe very great use of nuts. John Lawson, who traveled widely in the Carolinas around 1700, recorded that the Indians

he met kept great stores of nuts and nut oil, especially a fine oil made from the acorns of live oaks. Of hickory nuts he noted,

These Nuts are gotten in great Quantities by the Savages, and laid up for Stores, of which they make several Dishes and Banquets. One of these I cannot forbear mentioning; it is this: They take these Nuts, and break them very small betwixt two stones, till the Shells and Kernels are indifferent small; And this Powder you are presented withal in their Cabins, in little wooden Dishes; the Kernel dissolves in your Mouth, and the Shell is spit out. This tastes as well as any Almond. Another Dish is the Soup which they make of these Nuts, beaten, and put into Venison-Broth, which dissolves the Nut, and thickens, whilst the Shell precipitates, and remains at the bottom [Lawson 1709:98].

William Bartram (1995:39), traveling among the Creeks in 1757, observed that some families had as many as 100 bushels of hickory nuts in storage. The Pilgrims found acorns stored in Indian houses around Plymouth. Because our accounts mention that nuts were processed with wooden mortars, or with a combination of wood and stone, we should not expect large stone mortars to necessarily accompany nut-processing in the eastern woodlands.

John Smith (1986) described the Powhatans gathering wild onions, which were important foods throughout the east; the nineteenth-century Seneca celebrated an annual “wild onion week” as a major festival (Fenton 1978). Smith was one of the very few observers to note the use of small seeds by Native Americans. In the following passage he describes a variety which he called “Mattoun”: “Mattoun groweth as our bents do in meddows; the seed is not much unlike to Rie, though much smaller. This they use for a daintie bread buttered with deare suet” (Smith 1986:109).

Smith’s Mattoun was probably amaranth or some variety of *Chenopodium*, meadow-dwelling plants whose seeds are commonly found on archaeological sites throughout eastern North America.

To Smith the most important wild food of the Powhatans was the root of a plant called “Tockawhoughe,” which “groweth like a flag in the marshes” and have “much of the greatness and taste of Potatoes” (1986:110). Modern experts do not agree on the identity of this Tockawhoughe, or tuckahoe, but it may have been pickerel weed or arrow arum. (Indeed, the word may have been a general term referring to any root gathered from the marsh.) Smith tells us,

They use to cover a great many of them with Oke leaves and Ferne, and then cover all with earth in the manner of a Cole-pit; over it, on each side, they continue a great fire 24 houres before they dare eat it. Raw it is no better then poyson, and being rosted, except it be tender and the heat abated, or sliced and dried in the Sunne, mixed with sorrell and meale or such like, it will prickle and torment the throat extreamely, and yet in sommer they use this ordinarily for bread [1986:110].

Thomas Hariot gave a very similar description of a plant he called *Cocushaw*, used by the Indians of North Carolina, which “groweth in very muddie pooles and moist groundes” (Quinn 1955:349). He wrote,

The juice of this root is poison, and therefore heede must be taken before any thing be made therewithall: Either the rootes must bee first sliced and dried in the Sunne, or by the fire, and then being pounded into floure wil make good bread: or els while they are greene they are to bee pared, cut into pieces and stampt; loves of the same to be laid neere or over the fire untill it be soure, and then being well pounded againe, bread, or spone meate very good in taste, and holesome may be made thereof [Quinn 1955:349].

None of our accounts of the Lenape mentions the eating of marsh roots, but since the large marshes around the Delaware Bay abound in such plants, it would be surprising if they had not been exploited. Furthermore, the location of prehistoric sites near marshlands suggests that marsh roots may also have been important food sources in earlier times.

Other roots used by the historic Indians include the ground nut or wild potato (*Apios americana*), which was mentioned by Lawson, Hariot, and Bartram; sassafras; and a number of species that are now unidentifiable.

C. FISHING

While the sources on the Lenape give almost no detail on the use of wild plants, they emphasize hunting and fishing. The detail on fishing is particularly rich. After all, our European informants arrived by ship, so that the first Native Americans they encountered were often men out fishing or women gathering oysters on the shore. Some of our informants were professional seafarers who were themselves very knowledgeable about fishing. All of the accounts emphasize the importance of fishing to the Indians' diet, especially at certain times of the year. De Rasieres wrote, "they support themselves by hunting, and when the spring comes, fishing. In April, May, and June, they follow the course of these [the fish], which they catch with a drag-net they themselves knit very neatly, of the wild hemp, from which the women and old men spin the thread" (1628:105).

Van der Donck (1971:82) explained, "in the summer, and in the fishing seasons, many come to the water sides and rivers. . . . Sometimes towards the spring of the year, they come in multitudes to the sea shores and bays, to take oysters, clams, and every kind of shell-fish."

Fish were found in great abundance in New World waters, especially during the spring and fall fish runs, when the sheer number of fish in the rivers amazed European observers. Riverbanks in Canada were said to be buried a foot deep in smelt after one run (Thwaites 1959:175). Along the Delaware the runs of shad and herring were sometimes stupendous: "one might believe, when he sees such terrible amounts of them, there was as great a supply of herring as there is water. . . . One must behold the sight oneself" (Pearson 1972:834). The Dutch settlers particularly prized the striped bass, "which is of very good flavor, and quite as large as a salmon; it has white scales and the heads are so full of fat that in some there are two or three spoonfuls, so that there is good eating for one who is fond of picking heads" (de Rasieres 1909:105).

Among the other fish regularly mentioned are eel, salmon, pike, trout, flounder, and lampreys. In the spring, sturgeon were common, sometimes measuring up to 18 feet long. Crabs, lobsters, oysters, clams, mussels, and sea turtles were also common, and were frequently eaten by the Native Americans.

Many different fishing techniques are described in the historical accounts. Van der Donck (1971:97) explains that "their fishing is done with seines, set-nets, small fikes, weirs, and laying hoods." Other accounts add shooting with bows and arrows, spearing, and angling with a bone hook on a line. Sometimes spear fishing was done at night, and a fire was used to draw fish to the surface. Among the fish caught this way were the great sturgeons, which might also be snagged in small nets mounted on poles (Wood 1865:100). The Nanticoke of the early twentieth century used baskets for catching eels, like European eel pots, but there are no seventeenth-century descriptions of this technique (Porter 1987). South of New York, most of the boats observed by the Europeans were dugouts, some large enough to hold 40 men (Smith 1986:117). However, canoes made of birch or elm bark were also seen; John Smith encountered one such canoe at the northern end of the Chesapeake Bay.

Two kinds of fishing weirs were built by Native Americans. In coastal areas, weirs were made of reeds and nets, often in the form of a complex maze. At the fall lines, Indians built stone dams that closed off most of the river, and then they closed the gaps with large nets or waited with small nets on poles. Archaeological remains of both kinds of weirs have been found, some of them apparently dating back more than 2,000 years (Custer 1989:204). Several Europeans praised the utility of these weirs; William Strachey (1953:75) wrote that the Indians were

ingenious ynough in their owne workes, as may testefy the weeres, in which they take their Fish, which are certayne inclosures made of Reedes and framed in the fashion of a Labourinth or Maze, sett a fathome deepe in the water, with divers Chambers or bedds, out of which they entangled Fish cannot retourne or gett out being once in well may a great one by chance break the Reedes and so escape, otherwise he remaines a pray to the Fisher-man the next low water, which they fish with a nett tyed at the end of a pole.

Other English colonists were so impressed by these weirs that they began to make their own copies, and both Native and European Americans continued to build them into this century.

Native Americans did not salt or pickle fish, but they had other techniques for preserving their catch. Van der Donck tells us that “they do not know how to salt fish, or how to cure fish properly. They sometimes dry fish to preserve the same, but those are half tainted, which they pound to meal to be used in chowder in winter” (1971:97). Most often Indians did not gut the fish they ate, but cooked them whole.

Many Native Americans in the Pacific Northwest relied heavily on salmon caught during the spring runs to sustain them year-round, and there is a rich store of ethnographic data on their practices that may have some relevance for study of east coast Indians (Hayden 1997; Teit 1906). Salmon, caught in nets, were dried on wooden racks in the sun. Gutting and drying the fish was much more time-consuming than catching them. Drying fish was women’s work, and men who controlled productive fishing stations sometimes took several wives, at least in part to help them dry their catch. The fish were then stored in pits, where they lasted through the winter. One traveler commented that the practice of storing dried fish within pit houses “causes an unbearable repugnance to anyone who has not grown up in the midst of such stench” (Hayden 1997:94).

D. HUNTING

Among the woodland Indians, hunting was a means of obtaining food, as well as a great pleasure. Our observers described two kinds of hunts: ordinary year-round local hunts, and large annual fall hunts. Throughout the year, individuals or small groups of men would hunt around their dwellings, taking whatever they could find. Deer was the main quarry, but several European observers commented on the Indians’ willingness to eat almost any animal they encountered. According to Holm (1834:16), “they eat all kinds of wild animals and productions of the earth; fowls, birds, fishes, and fruits, which they find within their reach.” In *Representation of New Netherland* (Anonymous 1909:303), an observer described that “they eat even badgers, dogs, eagles, and such like trash, upon which Christians place no value. They use all kinds of fish, which they commonly cook without removing the entrails, and snakes, frogs, and the like.” Daniel Denton (1845:7) wrote that “the meat they live most upon is Fish, Fowl, and Venison; they eat likewise Polecats, Skunks, Raccoon, Possum, Turtles, and the like.” John Lawson (1709:178) described Carolina Indians as eating all sorts of turtles and even “young wasps, when they are white in the Combs, before they can fly,” which were “esteemed a Dainty.” John Smith (1986:118) summed up the Powhatans’ habits by noting, “they devoure all they can catch in their power.”

Hunting was largely performed with a bow, although snares and pit traps were sometimes used. Wood described deer traps in Massachusetts “which are springes made of young trees, and smoothe wrought coards;

so strong as it will toss a horse if hee be caught in it” (1865:99). Wood also described hedges used to herd deer toward waiting hunters: “Hedges a mile or two miles long, being a mile wide at one end, and made narrower and narrower by degrees, leaving onely a gap of sixe foote long, over against which, in the day time they lye lurking to shoot the Deere which come through that narrow gut” (1865:99).

Van der Donck saw similar hedges in New York (1971:97). Peter Lindeström (1925:216-217) observed a clever Lenape trick for hunting passenger pigeons, which in the fall gathered in enormous flocks:

When the pigeons come flying, then they usually settle down to rest in the largest and highest tree, which they find. Then they also have the custome that in the tree in which they once used to rest, they will, with preference go there again. When now the savage observes where they have been accustomed to rest, the savage goes and cuts around the tree, so that it stands only in the center. When now the pigeons come there again to sit down, they cannot possibly set themselves so evenly on the tree that they weigh alike on either side, whereby the tree falls over and kills a large number of them, for many cannot save themselves in such a fury of branches and leaves, nor fly away.

Hunting turkeys and bears was also much mentioned. Bears were commonly hunted in the winter, when they were sleepy and fat (Perrot 1911:82). Bear meat was much esteemed by both Europeans and Native Americans. John Lawson (1709:116) said the flesh of a young bear was “a Dish for the greatest Epicure living,” preferable to any beef or pork, and he noted that “Bear-Hunting is a great Sport in America, both with the English and the Indians.” William Bartram (1995:62) observed a festival meal staged by a Cherokee king after he returned from a successful bear hunt.

In the fall, large, communal deer hunts were organized by the chiefs. These hunts made a great impression on European observers, and many accounts are available. Peter Lindeström recorded one of the more detailed descriptions somewhere near the Swedish settlement at Wilmington:

Now as soon as the winter bids good night, they begin with their hunts, which is done with a fine innovation. Now at that time of the year [November] the grass which grows there, as has been said, is as dry as hay. When now the sachem wants to arrange his hunt, then he arranges his people close together in a circle of ½, 1 or 2 miles, according to the number of people at his command. In the first place each one roots up the grass in his position in the circumference, to the width of about 3 or 4 yards, so that the fire will not be able to run back, each one then beginning to set fire to the grass, which is mightily ignited, so that the fire travels away, in towards the center of the circle, which the Indians follow with great noise, and all the animals which are found within the circle, flee from the fire and the cries of the Indians, traveling away, whereby the circle through its decreasing is more and more contracted towards the center. When now the Indians have surrounded the center with a small circle, so that they mutually cannot do each other any harm, then they break loose with guns and bows on the animals which they then have been blessed with, that not one can escape and thus they get a great multitude of all kinds of animals which are found there [1925:214].

Van der Donck (1971:97) said that Indians sometimes united for “rare sport” in companies of 100 to 200, in which “they drive over a large district of land and kill much game.” Indians who lived near the coast typically traveled inland to hunt, since the deer had been so heavily hunted around their villages that few remained. Isaack de Rasieres (1909:108) wrote that Indians near New York “go . . . in October to hunt deer, leaving at home with their maize the old people who cannot follow.” John Smith explained that the Powhatans

At their huntings leave their habitations, and reduce themselves into companies . . . and goe to the most desert places with their families, where they spend their time in hunting and fowling up towards the mountaines, by the heads of the rivers, where there is plentie of game. For betwixt the rivers the grounds are so narrowe, that little commeth here wich they devoure not. . . . At their huntings in the

deserts they are commonly two or three hundred together. Having found the Deere, they environ them with many fires, and betwixt the fires they place themselves. And some take their stands in the midsts. The Deere being thus feared by the fires, and their voyces, they chase them so long within that circle, that many times they kill 6, 8, 10, or 15 at a hunting. They use also to drive them into some narrow poynt of land, when they find that advantage; and so force them into the river, where with their boats they have Ambuscadoes to kill them [1986:118].

John Lawson also observed that the North Carolina tribes traveled several days from their villages to hunt. In their hunting territories “they go and fire the Woods for many Miles, and drive the Deer and other Game into small Necks of Land and Isthmus’s, where they kill and destroy what they please” (1709:207).

E. FOOD

The most common Indian cooking technique was to stew everything together in one pot. This pot would be kept simmering all day, and ingredients would be added to it as they became available. According to Wood (1865:77), the result was “un-oat-meal’d broth, made thicke with Fishes, Fowles, and Beasts boyled all together; some remaining raw, the rest converted by over-much seething to a loathed mash.” A typical stew would include corn, beans, and meat or fish (Anonymous 1909:303; Smith 1986:112; Strachey 1953:82). Dried meat and fish were pounded into meal or dust, and this dust was added to the stew pot (Van der Donck 1971:76). Acorns and other nuts were also commonly eaten in stews. In the seventeenth century most Native Americans did their cooking in iron or brass kettles, which were among the first items obtained in trade from the Europeans; however, a few observers noted that in past times they had used “substantiall earthen pots of their owne making” (Wood 1865:75).

Corn was also eaten roasted, what we would call “corn on the cob.” Fresh meat was usually grilled on a simple spit. “Their spits are no other than cloven sticks sharped at one end to thrust into the ground; into these cloven sticks they thrust the flesh of fish they would have rosted, turning them as they see occasion” (Wood 1865:75). The only eating utensils used by the Native Americans were ladles and bowls made from wood or gourds.

III. STORAGE PITS

The digging of storage pits was a common, though not universal, practice among the Indians of eastern North America (DeBoer 1988; Stewart 1975). Peter Lindeström described their use among the Lenape of the lower Delaware: “Their larders they dig down in the ground, close to their dwellings, wherein they have their maize, their beans, tobacco and other provisions, such as deer-meat, elk-meat, bear-meat, birds, fish and other such things, which may serve for the sustenance of man” (1925:253).

In 1628 Isaack de Rasieres (1909:107-108) described similar pits among the Lenape of the lower Hudson and associated the pits with the practice of seasonally abandoning their villages: “The grain being dried, they put it into baskets woven of rushes or wild hemp, and bury it in the earth, where they let it lie, and go with their husbands and children in October to hunt deer, leaving at home with their maize the old people who cannot follow.”

Pits could also be lined with matts (Morton 1637:160) or bark (Wood 1865:106). Most of our accounts mention the storage of food, but William Strachey (1953:115) described the Powhatan Indians placing, not just food, but other objects of value (“most things with them of value according to their owne estimation”) in pits, hiding them from their neighbors.

The most detailed descriptions of storage pits were provided by the Pilgrims of Plymouth, who dug up several in their first weeks in America. As the chronicle known as *Mourt's Relation* describes, the newly arrived Pilgrims were exploring when they came across several recent excavations. The first one they investigated proved to be a grave; however,

There was also an heape of sand, made like the former, but it was newly done, (we might see how they had padled it with their hands,) which we digged up, and in it we found a little old Basket full of faire Indian Corne, and digged further & found a fine great new Basket full of very faire corne of this yeare, with some 36 goodly eares of corne, some yellow, and some red, and others mixt with blew, which was a very goodly sight; the Basket was round, and narrow at the top, it held about three of foure bushels, which was as much as two of us could lift up from the ground, and was very handsomely and cunningly made. . . . We concluded to take . . . as much of the Corne as we could carry away with us [Cheever 1848:34].

A few days later,

This done, we marched to the place where we had the corne formerly, which place we called Corne-hill; and digged and found the rest, of which we were very glad: we also digged in a place a little further off, and found a Botle of oyle; wee went to another place, which we had seene before, and digged, and found more corne, viz. two or three Baskets full of Indian Wheat, and a bag of Beanes, with a good many of faire Wheat-eares; whilst some of us were digging up this, some others found another heape of Corne, which they digged up also, so as we had in all about ten Bushels, which will serve us sufficiently for seed . . . [Cheever 1848:37]. Also a little further we found two Baskets full of parched Acorns hid in the ground, which we supposed had beene Corne when we beganne to dig the same; we cast earth thereon again & went our way [Cheever 1848:44].

Only a few observations were made regarding the size of pits. Samuel Champlain (1922:410), writing in 1605 about an area that was probably in Massachusetts, said the Indians “dig holes some five to six feet deep more or less, and place their corn and other grains in large grass sacks, which they throw into the said holes, and cover them with sand to a depth of three or four feet above the surface of the ground.” The first pit robbed by the Pilgrims contained two baskets, and the larger of the two held three to four bushels of grain. Four bushels equals about five cubic feet, so a hole three feet in diameter and two feet deep (about 14 cubic feet) could easily have held this amount. However, Wood (1865:106) described the storage pits of Massachusetts as “great holes,” which seems to imply something more along the lines of the five- to six-foot depth recorded by Champlain.

Why did Indians dig storage pits? Pits were not the only kind of storage used by Native Americans. According to Smith and Hariot, the Virginia and North Carolina Algonquins kept most of their corn in above-ground granaries. Eighteenth-century accounts of the Lenape speak of provisions hung from the roofs of houses (Loskiel 1794:26). The Pilgrims, besides looting storage pits, entered some empty Indian houses and found in them dried fish and baskets of acorns; they also found venison hanging in a hollow tree nearby (Cheever 1848:39). The question of the use of storage pits has been raised forcefully by DeBoer (1988), who noted that our accounts often mention specifically that pits were intended to protect stored goods from theft. In particular, pits were intended to protect stored food during times when most of the inhabitants had left the settlement. De Rasieres, in the passage cited above, says the Lenape buried their maize when they left their villages to go hunting. There are similar accounts about the Huron, the Mandan of the Missouri Valley, and other tribes (DeBoer 1988).

On the other hand, it must be said that burying food does not seem to have offered any real protection. The Pilgrims, despite their ignorance of local customs, had no trouble finding and digging up several pits. During

a 1696 campaign against the Onandaga, the French officer, Frontenac, and his men spent two days “digging up the caches, or hidden stores of food, and destroying their contents;” in the nineteenth century, among the Pawnee, “theft from, or destruction of, these cache pits by the enemy while the tribe was away on the winter hunt, was a frequent cause of privation” (cited in DeBoer 1988:1-2). Other modern ethnohistorians have emphasized the politics of pit storage, suggesting that Indian commoners used their pits to store food that they wanted to conceal from chiefs demanding tribute, while the chiefs used above-ground granaries to display their wealth (Potter 1993:170-173). The role of pits and pit storage in these societies, it must be said, remains unclear.

Most of our accounts indicate that corn and beans were the foods stored in pits. The discovery of buried acorns by the Pilgrims is significant, because it shows that pit storage was not simply part of the agricultural complex. It is possible that other wild foods would have been stored, but that most of our sources, who limited themselves to one or two sentences about pit storage, focused on the most commonly stored items.

IV. HOUSING

Accounts of housing among the Indians of northeastern North America have a rather monotonous quality, for although they describe three or four different shapes of houses, they describe only one construction technique. One of the first European explorers in the region, Verrazano (1904:435), described these houses in 1524: “We saw their houses made in circular or round forme 10 or 12 paces in compasse, made with halfe circles of timber, separate one from another without any order of building, covered with mattes of straw wrought cunningly together, which save them from the wind and raine.”

Representation of New Netherland, written in 1650, explains,

Their dwellings consist of hickory saplings, placed upright in the ground and bent arch-wise; the tops are covered with barks of trees, which they cut for this purpose in great quantities. Some even have within them rough carvings of faces and images, but these are generally in the houses of the chiefs. . . . They do not live long in one place, but move about several times in a year, at such times and to such places as it appears best and easiest for them to obtain subsistence [Anonymous 1909:302].

The bending of saplings into arches for the frame was a key characteristic; several English observers, including John Smith and Thomas Hariot, remarked that the frames resembled the arbors in English gardens. Sheets of bark and woven mats were common coverings. We call these houses *wigwams*. Wigwams could be round, such as those seen by Verrazano, oval, or rectangular. The rectangular variety could be small, or it could be extended into a multi-family dwelling like an Iroquoian longhouse, as in the following description by Adriaen Van der Donck:

Their houses are usually constructed in the same manner, without any particular costliness or curiosity in or to the same. Sometimes they build their houses above a hundred feet long; but never more than twenty feet side. When they build a house, they place long slender hickory saplings in the ground, having the bark stripped off, in a straight line of two rows, as far asunder as they intend the breadth of the house to be, and continuing the rows as far as it is intended the length to be. Those sapling poles are bent over towards each other in the form of an arch, and secured together, having the appearance of a garden arbour. The sapling poles are then crossed with split poles in the form of lathing, which are well fastened to the upright work. The lathings are heaviest near the ground. A space of about a foot wide is left open in the crown of the arch. For covering they use the bark of ash, chestnut, and other trees, which they peel off in pieces of about six feet long, and as broad as they can. They cover their houses, laying the smooth side inwards, leaving an open space of about a foot wide in the crown, to let out the smoke. They lap the side edges and ends over each other, having regard to the shrinking of the bark, securing the covering with withes to the lathings. A crack or rent they

shut up, and in this manner they make their houses proof against wind and rain. They have one door in the centre of the house. When the bark of the ash and chestnut trees is not loose, they have recourse to the timber trees, which grow along the brooks, the bark of which can be taken off during the whole summer season. Durability is a primary object in their houses. In short, their houses are tight and tolerably warm, but they know nothing of chambers, halls, and closetings [1971:80-81].

The wigwam was related to the way of life of the eastern Indians in several important ways. The frame could be quickly constructed out of readily available materials, and the coverings, whether bark or mats, were highly portable. In 1691 a Canadian Algonquin, urged by a Frenchman to build a European-style house, responded, “we can always say, more truly than you, that we are at home everywhere because we set up our wigwams with ease wherever we go and without asking permission of anybody” (Nabokov and Easton 1989:57). The habit of changing their places of residence several times a year was facilitated by these dwellings. However, the annual moves are probably not the only reason the eastern Indians preferred quickly built houses. Other North American peoples who also moved on an annual basis built much larger and more elaborate dwellings, such as the earth lodges of the Mandan, Hidatsa, and other tribes who lived along the Missouri River. The Missouri River Indians, although they moved seasonally, kept their winter villages in the same riverbank locations for decades. They grew their crops on the floodplains, where the soil was restored by annual floods. In contrast, the swidden agriculture of the eastern Indians quickly exhausted the soil, and for this reason they moved their villages every few years. The necessity of moving their villages was a strong impetus not to put too much effort into house construction.

The ease with which a single-family wigwam could be expanded into a multi-family longhouse was also useful for people who lived in larger groups at some times of the year than others. The evidence for this practice among the Lenape is indirect, but it is well attested in New England. Wood (1865:106) wrote of the Massachusetts Indians: “their houses are smaller in the Summer, when their families be dispersed, by reason of heate and occasions. In Winter they make some fifty or threescore foote long, fortie or fiftie men being inmates under one rooffe.”

De Laet, who observed life along the Hudson in 1609, explained that while in the summer the Indians traveled about freely and many slept outdoors, in the winter they used “dwellings built with beams in the form of an oven, covered above with the bark of trees, so large that they are sufficient for several families” (1909:57). Van der Donck likewise wrote that while the winter houses were large and well made, in the summer or while hunting the Indians set up “temporary huts or shanties” (1971:80). These accounts suggest that the Hudson Valley Lenape may have divided into smaller groups at some seasons; however, this evidence is hardly conclusive. Smith wrote that the Powhatans sometimes divided into smaller groups in the spring: “in May and June they plant their fields, and live most of Acornes, Walnuts, and fish. But to mend their dyet, some disperse themselves in small companies, and live upon fish, beasts, crabs, oysters, land Tortoises, strawberries, mulberries, and suchlike.” We have no information on such practices among the Lenape of the Delaware Valley, but it seems likely that they may also have lived in larger groups, and in larger houses, in some seasons than in others.

A few writers mentioned a second kind of structure among Native Americans in the northeast, a simple open-sided shed used especially in warm weather. Lawson (1709:177), describing the buildings of eastern North Carolina Indians, wrote, “they have other sorts of cabins without Windows, which are for their Granaries, Skins, and Merchandizes; and others that are cover’d overhead; the rest open for the Air. These have Reed-Hurdles, like Tables, to lie and sit on, in Summer, and serve for pleasant Banqueting-Houses in the hot Season of the Year.”

Similar open-sided structures were built by Native Americans in the Great Lakes area in the early twentieth century (Nabokov and Easton 1989:66).

Archaeologists working in Delaware have for years debated whether certain features found on prehistoric sites are semisubterranean “pit houses” or natural disturbances, such as tree throws. The ethnographic record from eastern North America provides no evidence of pit house construction. Pit houses were built by many North American native groups, but not in the east, at least, not in historic times. The closest parallels to the small, irregular pit houses proposed for Delaware are found in the mountains of the West. In both the Rockies and the Sierras many Indian groups built small houses in or over pits. The Navaho hogan is a particularly apt comparison because it could be built without ground-set posts; the absence of postholes has been one of the arguments advanced against the possible pit houses of Delaware. The roof and walls of a “forked pole” hogan were built by leaning three forked branches against each other and leaning other branches or logs against these three. The three central branches did not have to be set in holes; they could simply be braced against the sides of the pit (Nabokov and Easton 1989:329). Such a construction seems a better possible parallel for the irregular pits uncovered in Delaware than the large pit houses of the sub-Arctic that have been cited by Custer (1994).

One kind of semisubterranean structure mentioned in the historical accounts is the sweathouse. Loskiel (1794:37), describing the eighteenth-century Lenape, wrote, “their remedy for all disorders, great and small, is a sweat. For this purpose they have in every town an oven, situated at some distance from the dwellings, built either of stakes and boards covered with turf, or dig in the side of a hill, and heated with red hot stones.”

Van der Donck explains, “their sweating places are made of clay and enclosed tight in the earth with a small entrance to admit the patients within the apartments. Where the place is needed there many stones are heated, and places around and within the same; and then the patient enters and sits down, naked and singing, wherein he remains as long as possible” (1971:95).

As archaeological remains, these sweat lodges ought to have left some sort of pit, along with large quantities of stones. In the Ohio Valley the so-called keyhole structures have been interpreted as sweat lodges, but no good candidates for sweat lodge remains have been identified in Delaware.

V. BURIAL PRACTICES

Both archaeology and ethnographic research document great variability in Native American burial practices. In one cemetery at the Island Field Site in Delaware, at least seven different kinds of burials have been documented, including flexed burials, extended burials, bundle burials, disarticulated burials, redeposited cremations, and *in situ* cremations (Thomas and Warren 1970). No single seventeenth-century writer describes this many different burial styles, but taken together the historical accounts document a similarly rich pattern. Some writers noted more than one kind of burial in use in the same place. For example, Nicholas Perrot, a Frenchman who traveled extensively in the Great Lakes area between 1680 and 1700, wrote: “When the time comes for burying the corpse, they go to find the persons designated for this office, and a scaffold is erected seven or eight feet high, which serves the dead in place of a grave—or, if he is placed in the ground, they dig for him a grave only four or five feet deep” (1987:81).

Perrot gave no explanation of why the bodies of some people were to be buried in the ground, and others were exposed on platforms. John Smith, who described two modes of treating the dead among the Virginia Algonquins, related the treatment of the corpse to the status of the deceased:

But their chiefe God worship . . . they call Okee, and serve him more of feare then love. They say they have conference with him, and fashion themselves as neare to his shape as they can imagine. In their Temples they have his image evill favouredly carved, and then painted and adorned with chaines of copper, and beads, and covered with a skin, in such manner as the deformitie may well suit with such a God. By him is commonly the sepulcher of their Kings. Their bodies are first bowelled, then

dried upon hurdles till they be very dry, and so about the most of their joynts and necke they hang bracelets, or chaines of copper, pearls, and such like, as they use to weare, their inwards they stuffe with copper beads, hatchets, and such trash. Then lappe they them very carefully in white skins, and so rowle them in mats for their winding sheets. And in the Tombe which is an arch made of mats, they lay them orderly. What remaineth of this kinde of wealth their Kings have, they set at their feet in baskets. These Temples and bodies are kept by their Priests.

For their ordinary burials, they dig a deepe hole in the earth with sharpe stakes, and the corpse being lapped in skins and mats with their jewels, they lay them upon stickes in the ground, and so cover them with earth. The buriall ended, the women being painted all their faces with blacke cole and oyle, doe sit twenty foure houres in the houses mourning and lamenting by turnes, with such yelling and howling, as may expresse their great passions [1986:122].

Later accounts and archaeological discoveries show that the corpses exposed on platforms might eventually be buried in the ground. The reverse practice, that of burying corpses until the flesh had rotted away and then storing the bones in temples, was described by John Lawson among the North Carolina Algonquins:

But, to return to the dead Man. When this long Tale is ended, by him that spoke first; perhaps, a second begins and other long Story; so a third, and fourth, if there be so many Doctors present; which all tell one and the same thing. At last, the Corps is brought away from that Hurdle to the Grave, by four young Men, attended by the Relations, the King, old Men, and all the Nation. When they come to the Sepulcre, which is about six Foot deep, and eight Foot long, having at each end (that is, Head and Foot) a Light-Wood, or Pitch-Pine Fork driven close down the sides of the Grave; firmly into the Ground; (these two Forks are to contain a Ridge-Pole, as you shall understand presently) before they lay the Corps into the Grave, they cover the bottom two or three times over with Bark of Trees, then they let down the Corps (with two Belts, that the Indians carry their Burdens with) very leisurely, upon the said Barks; then they lay over a Pole of the same Wood, in the two Forks, and having a great many pieces of Pitch-Pine Longs, about two Foot and a half long, they stick them in the sides of the Grave down each End, and near the Top thereof, where the other Ends lie on the Ridge-Pole, so that they are declining like the Roof of a House. These being very thick plac'd, they cover them (many times double) with Bark; then they throw the Earth thereon, that came out of the Grave, and beat it down very firm; by this Means, the dead Body lies in a Vault, nothing touching him; so that when I saw this way of Burial, I was mightily pleas'd with it, esteeming it very decent and pretty, as having seen a great many Christians buried without the tenth Part of that Ceremony and Decency. Now, when the Flesh is rotted and moulder'd from the Bone, they take up the Carcass, and clean the Bones, and joint them together; afterwards, they dress them up in pure white dress'd Deer-Skins, and lay them amongst their Grandees and Kings in the *Quiogozon*, which is their Royal Tomb or Burial-Place of their Kings and War-Captains. This is a very large magnificent Cabin, (according to their Building) which is rais'd at the Publick Charge of the Nation, and maintain'd in a great deal of Form and Neatness. About seven foot high, is a Floor or Loft made, on which lie all their Princes, and Great Men, that have died for several hundred years, all attir'd in the Dress I before told you of. No Person is to have his Bones, lie here, and to be thus dress'd, unless he gives a round Sum of their Money to the Rulers, for Admittance. If they remove never so far, to live in a Foreign Country, they never fail to take all these dead Bones along with them [1709:181-182].

The Nanticokes of Maryland and southwestern Delaware had a similar practice, which they called *chiacosan* and was documented by Loskiel (1794:39) in the mid-eighteenth century:

The Nantikoks have this singular custom, that about three, four, or more months after the funeral, they open the grave, take out the bones, clean and dry them, wrap them up in new linen, and inter them again. The Iroquois and Wyandots every eight or ten years disinter their dead, and carry them to a place of general and final deposit, where they are buried again with much ceremony.

Thomas Campanius Holm and Peter Lindeström gave similar descriptions of burials among the Lenape of the lower Delaware Valley, both emphasizing that the dead were buried sitting, and that decorative posts were placed on or around the burial place. Holm wrote,

They make their graves quite round, and line them with logs, and, for their great men, with planks or boards. Then they lay the corpse in it, in a sitting posture, and place by him his shield and other weapons; they tie his hands together, one on each side of his head; they lay planks or boards underneath to support it; then they fill the grave with earth, and put planks or logs upon it to keep from the wild animals; they fix in the middle of it a long painted pole in remembrance of the deceased, on the top of which, if he was a good hunter, they put the figure in wood, of some wild animal, and if he was a good fisherman, that of a fish [1834:143].

These complex ways of treating the corpse apparently produce the variety of grave types found by archaeologists. Cremation is not documented in historic times, but both seated and extended burials and various forms of reburial are known to have been practiced, and sometimes more than one form was practiced in the same community.

VI. TECHNOLOGY AND ARCHAEOLOGY

In general, our accounts of the northeastern Indians place great emphasis on their use of wood, reeds, and other plant products, and very little emphasis on stone or pottery. John Smith (1986:117), one of the closest observers among the early ethnographers, provided a long paragraph on Native American technology that listed only two items made of stone. One of those stone items, arrow points, could also be made of bone, turkey claws, or “the bills of some other bird.” Axes, sometimes made from “a long stone sharpened at both ends,” could be made instead from a “the horn of a Deere put through a peece of wood in forme of a Pickaxe.” Otherwise, plant and animal products, which would not survive archaeologically, were used for most purposes. “For his knife he hath the splinter of a Reed to cut his feathers in forme [for arrows]. With this knife also he will joynt a Deere, or any beast, shape his shooes, buskins, mantels, etc. To make the nock of his arrow he hath the tooth of a Beaver, set in a sticke, wherewith he grateth it by degrees” (Smith 1986:117).

Bows were shaped by scraping with a shell. Hoes were made of wood, as were mortars for pounding corn or acorns. Fires were made “by chafing a dry pointed sticke in a hole of a little square peece of wood.” Dugout canoes were hollowed by “burning and scratching away the coales with stones and shels.” Fishhooks were bone, as were the heads of fishing spears. Many observers were impressed by the Indians skill in making baskets, which could be used for sieving corn and catching fish, as well as for carrying and storing goods.

These historical accounts have important implications for archaeological research. In the eastern coastal plain, where the acidic soil dissolves most bone, and plant material only survives under very unusual conditions, we find only a small remnant of the Native Americans’ possessions. As long as every major activity involved some use of stone tools or pottery, we should be able to identify it archaeologically, even if most of the technology involved was wooden. But what if there were activities, for example, gathering seeds, or gathering, slicing, and drying tuckahoe, that involved no stone tools at all? How would archaeologists find such sites? Features that may be prehistoric pits have been found in Delaware in areas with very few artifacts, including in one part of the Puncheon Run Site. Based on the ethnohistoric literature, it seems that these may indeed be prehistoric archaeological sites. They were probably locations where some kind of food was gathered and stored using an entirely plant-based technology.

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