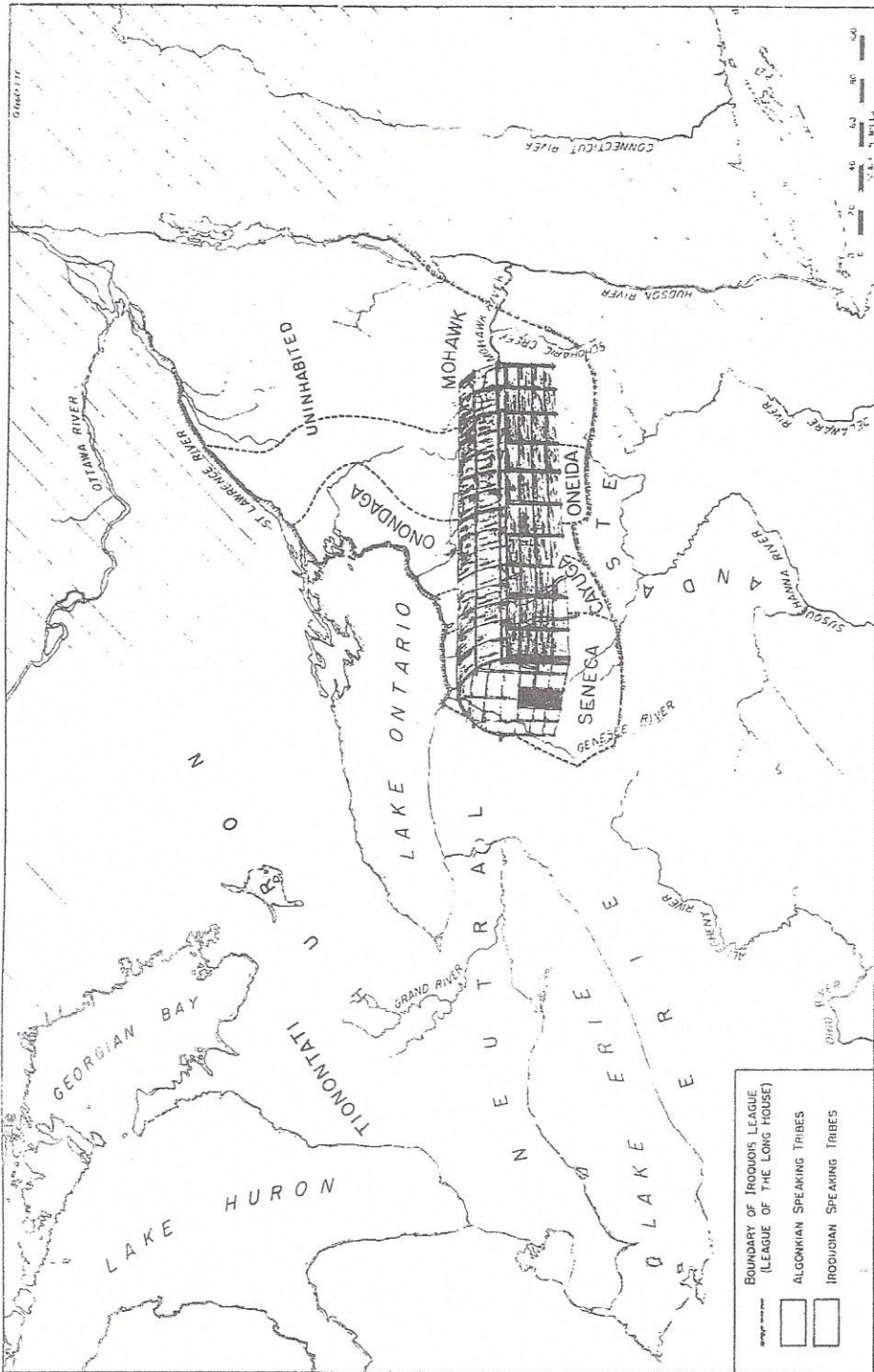


INDIAN ARTIFACTS

Taken from:

Ritchie, William A., Indian History of New York, Part I, The Pre-Iroquoian Tribes. Albany: New York State Museum, Educational Leaflet Series, No. 6, 1953, Fig. 3 and Fig. 4. See pp. 31-32 this book.

Ritchie, William A., Indian History of New York, Part II, The Iroquoian Tribes. Albany: New York State Museum, Educational Leaflet Series, No. 7, 1953. Fig. 2-5. See p. 33-66 this book.



LOCATION OF NORTHERN IROQUOIAN TRIBES ABOUT AD 1600
 Modified from *Beauchuc*: 2 (1899) and *Fenton* (1940)

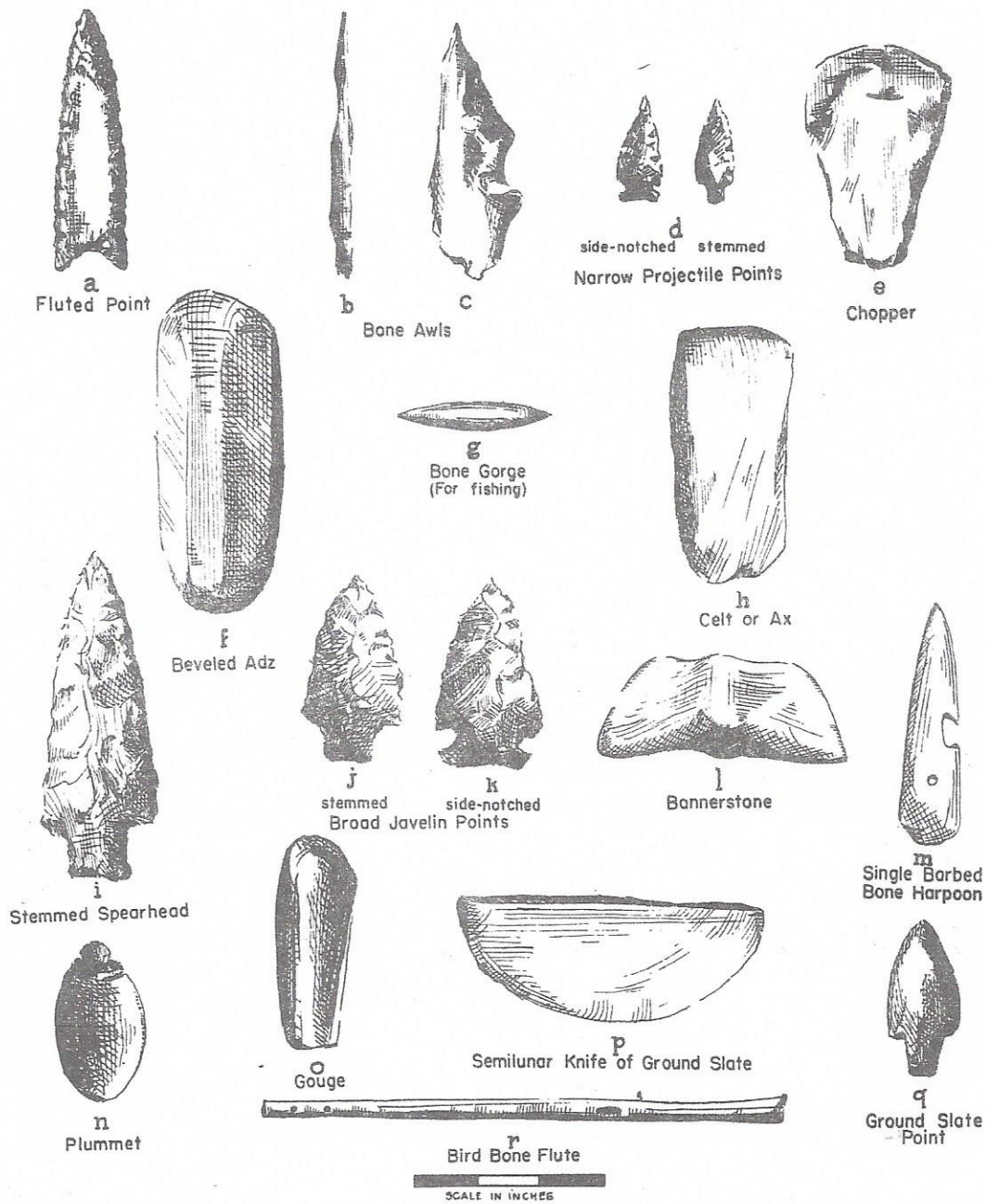


FIG. 3. ARTIFACT TYPES OF THE ARCHAIC PERIOD .

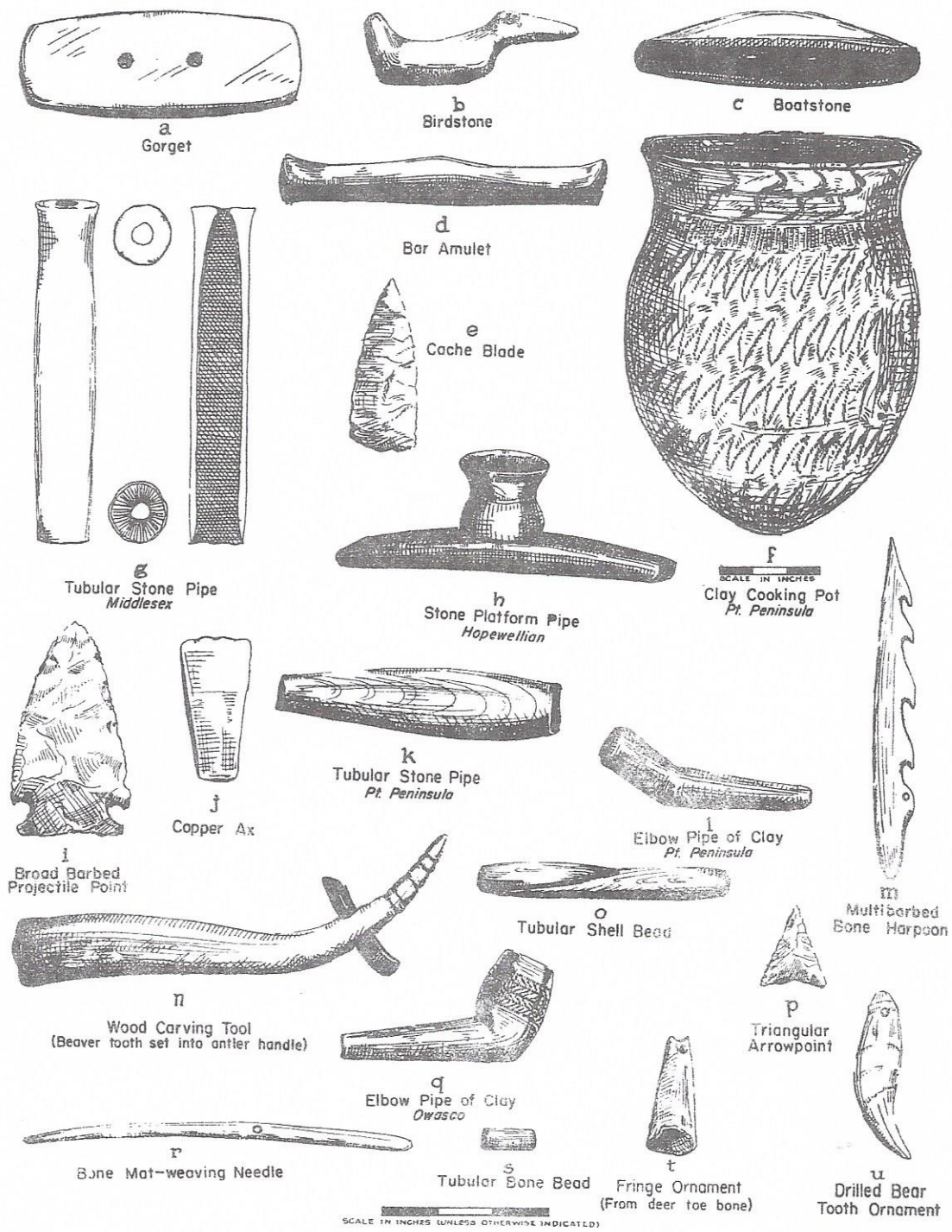


FIG. 4. ARTIFACT TYPES OF THE WOODLAND PERIOD

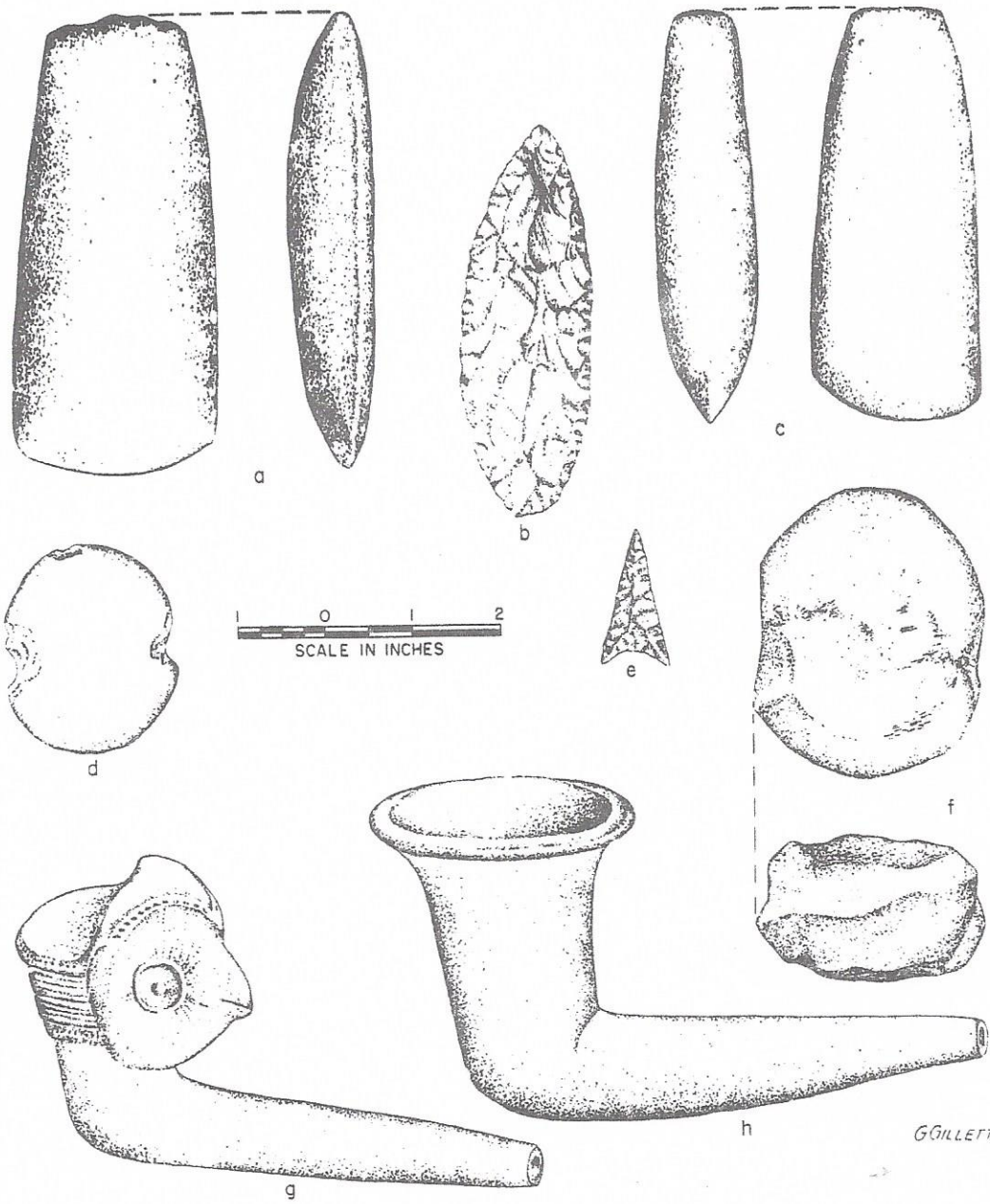


FIG. 2 TOOLS AND SMOKING PIPES OF THE IROQUOIS

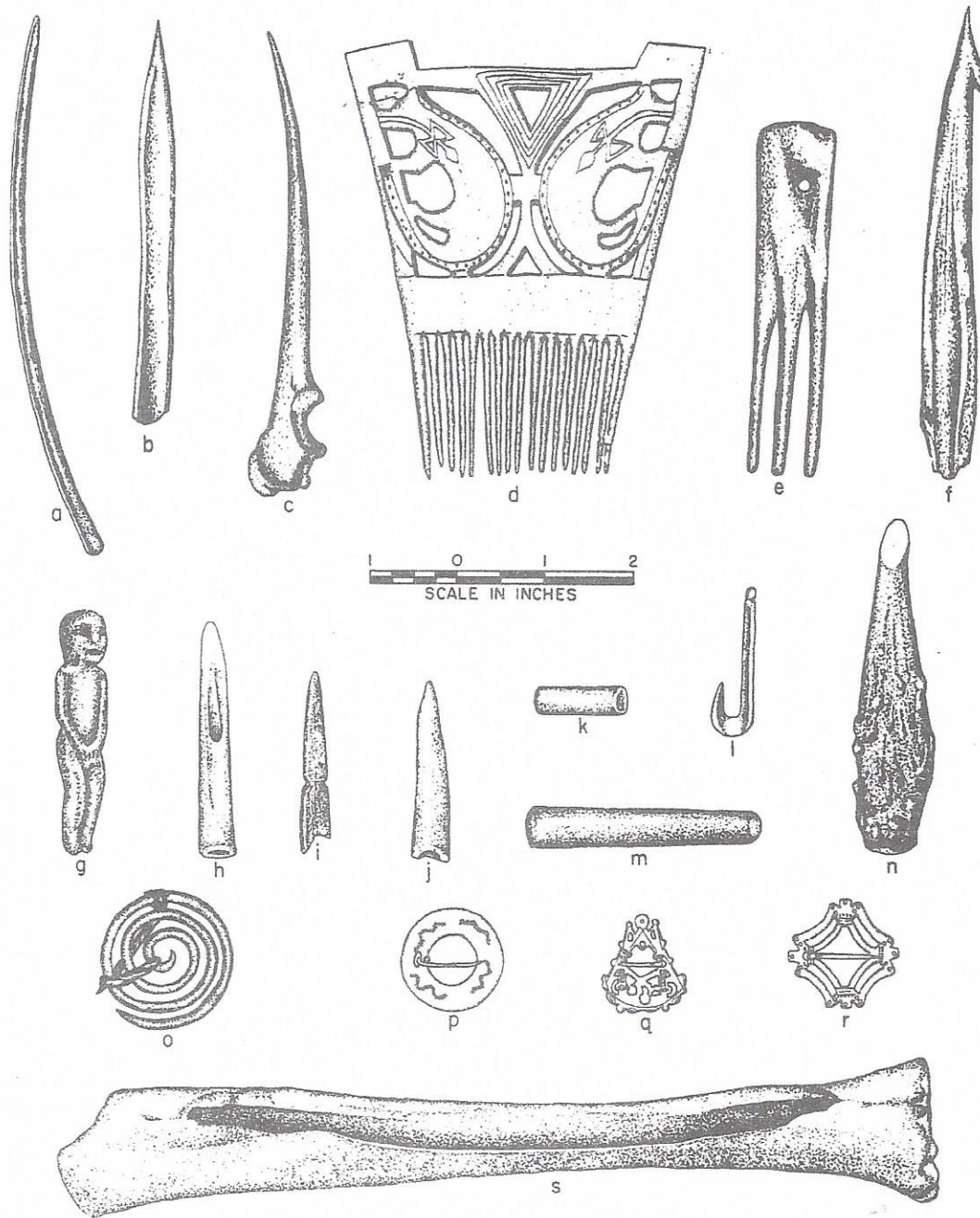


FIG. 3 TOOLS AND ORNAMENTS OF THE IROQUOIS

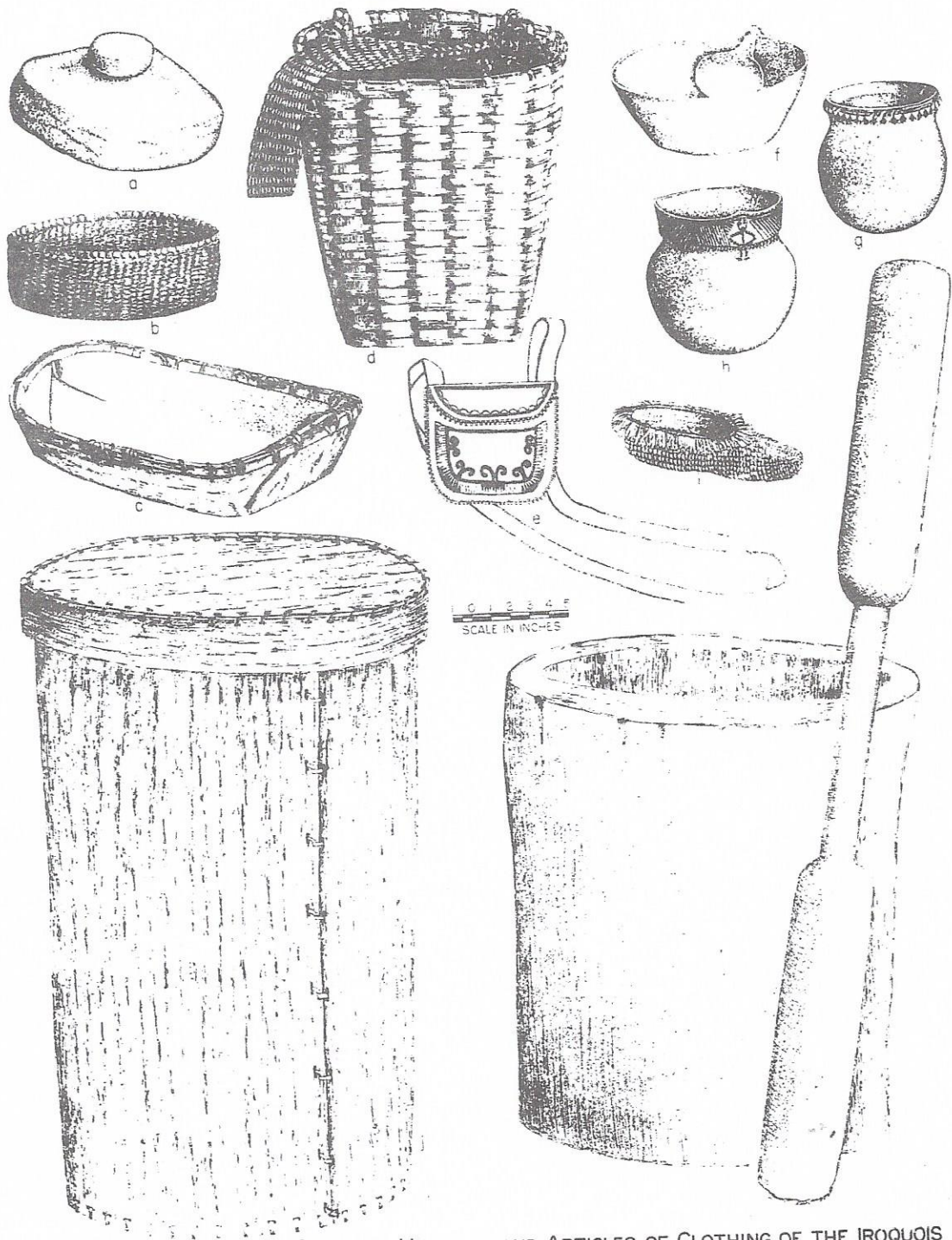


FIG. 4 DOMESTIC UTENSILS AND ARTICLES OF CLOTHING OF THE IROQUOIS

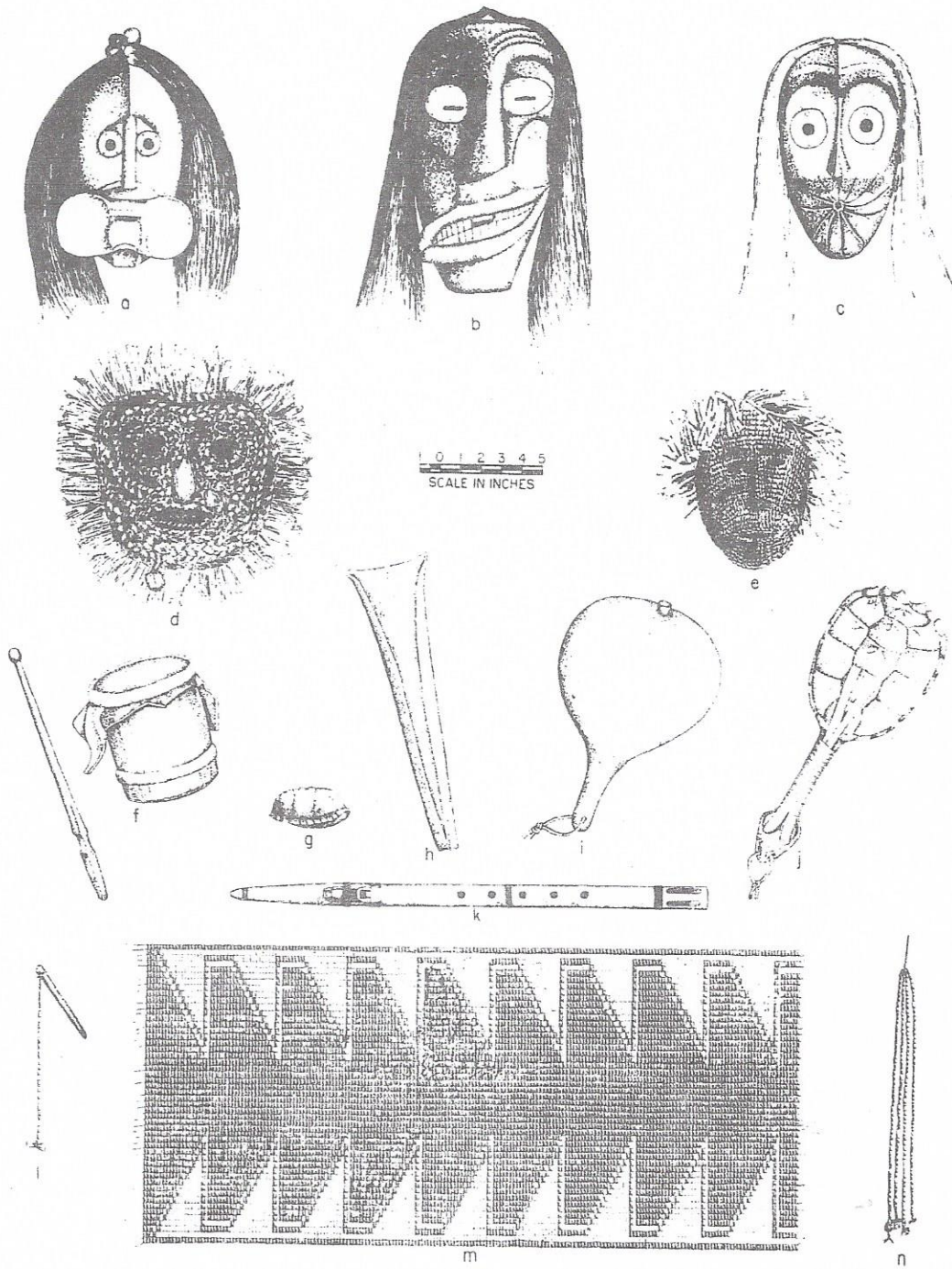


FIG. 5 CEREMONIAL AND COUNCIL ARTICLES OF THE IROQUOIS

VERIFICATION MATERIALS

Pre-Iroquoian Materials

Taken from:

Ritchie, William A., Indian History of New York State, Part I, The Pre-Iroquoian Tribes.
Albany: New York State Museum, Educational Leaflet Series, No. 6, 1953. 13 pp., passim.
See pp. 38-51 this book.

CULTURE SEQUENCE IN NEW YORK

PERIOD	INLAND AREA	COASTAL AREA	C ¹⁴ DATE
HISTORIC	IROQUOIAN TRIBES	ALGONKIAN TRIBES	A.D. 1609*
WOODLAND	IROQUOIS 4 3 2 OWASCO 1	CLASONS POINT SEBONAC BOWMANS BROOK	ABOUT 1000 B.C.
	4 3 POINT PENINSULA 2	CLEARVIEW	
	MIDDLESEX HOPEWELLIAN PIFFARD POINT PENINSULA 1	NORTH BEACH ORIENT	
ARCHAIC	LAURENTIAN		
	FRONTENAC	?	ABOUT 3000 B.C.
	LAMOKA		ABOUT 3500 B.C.
PALEO-INDIAN	<i>SCATTERED FLUTED POINTS</i>		BEFORE 3500 B.C.*

*Not from radiocarbon determinations

PRE-IROQUOIAN CULTURES

Since "the present is the child of the past and the parent of the future," we can not truly understand current cultural forms without such knowledge as only archeology can afford of the course of their development through the long distant past which extends far beyond recorded history. The archeologist is the specialized anthropologist who endeavors to discover and interpret buried human history through a study not only of the material goods of civilization but also of customs, beliefs and value systems insofar as revealed by archeological remains. In a very real sense, "we are all ghosts, the past walks with us."

It is one of the archeologist's ultimate aims to discover and formulate, with the aid of fellow anthropologists and historians, basic generalizations underlying the processes of growth and decline of cultures and civilizations all over the world. A mastery of such knowledge might be of inestimable diagnostic value to our own civilization. "Those who can not remember the past are condemned to repeat it."

According to present concepts, the New World was peopled by a succession of migrations of differing physical types whose portal of entry was at the Bering strait in Alaska. The New York Indians, presently to be described, were descendants of certain of these Asiatic immigrants.

While the prehistoric past of New York State may seem to be well outside the main stream of our history and therefore have but slight consequences for the broader study of human development, it is nevertheless true that, since "human history is one history," no knowledge of the whole is possible if we omit the parts. Ancient New York occupants participated in the leading cultural episodes of the eastern United States and their remains illustrate valid processes of cultural growth and change. There are, of course, unique features or regional expressions of cultural patterns, and these enhance rather than detract from our interest in the story.

In accord with present practice the New York cultures will be described under two major groupings or patterns, termed respectively the Archaic and the Woodland (see chart of culture sequence, Fig. 1). The former refers to the earlier period of occupation by several physically and culturally different groups of non-agricultural hunters; on the other hand, the Woodland tribes, who were in part their descendants, carried on the development to historic times and the progeny of some of them yet survive.

THE ARCHAIC PERIOD IN NEW YORK

It is still quite impossible to tell when the first Indian bands entered the territory now embraced by our State. There have been sporadic surface finds, especially along the Seneca river and in the valleys of Lakes George and Champlain, of projectile points, probably javelin heads, with characteristic fluted or channeled surfaces, generally similar in form to the Clovis fluted points of the western and especially southwestern United States (Fig. 3,a). In New Mexico, Colorado, Texas and elsewhere these fluted points have been discovered in indisputable association with the skeletal remains of such long extinct Pleistocene mammals as the Columbian elephant and certain species of horse and bison, with an estimated antiquity of more than 10,000 years. (See suggested reference no. 2.)

In view of certain recent discoveries in the Northeast, it now seems quite probable that a still undated Paleo-Indian period existed in New York prior to the Archaic period which began here somewhat more than 5,500 years ago (Fig. 1). At any rate, early hunters had established themselves in our present area before the Great Pyramids were reared at Gizeh in the Nile valley and when our European forebears were in the early New Stone Age. Proof of this order of antiquity will subsequently be given; it will first be well to sketch the general background of the long Archaic period in New York.

The last remnants of the final or Wisconsin ice sheet had evidently long since wasted away; forests of mixed evergreens and hardwoods covered most of the land; and present-day species of birds, fish and mammals thrived in large numbers when our first recognized hunters appeared along the valleys of the Finger lakes and larger rivers of western, central and southern New York. Many existing mucklands and swamps were then shallow lakes and the streams must have flowed clearer, deeper and certainly more constantly than now due to the thick spongy covering of the forest floor. Studies of fossil pollens from bogs in eastern North America have indicated the prevalence of relatively warm and humid conditions favorable to hunting, fishing and the gathering of wild food plants, especially nuts and fruits.

While there are major differences both in the physical characteristics of the people themselves, as told by their skeletal remains, and in their preserved cultural equipment during the several millenniums of the Archaic period in New York, the basic economy and general way of life of the various groups seem to have been similar. All were nomadic hunters, fishers and gatherers of shellfish, snails, wild vegetal and other foods, although the means of capture varied somewhat. Pottery and the use of the smoking pipe were unknown. By inference from generally similar cultures elsewhere in the country, we may suppose that baskets were a part of the material goods although no remnant has survived.

The vast number of shattered stones found on the camp sites proves that stone-boiling was an accepted method of cooking. In this extremely ancient method, heated stones were dropped into containers of bark, skin or basketry to boil their contents. Contact with the cooler liquid often caused the stones to split, making them thereby identifiable as human artifacts. Beds of firestones suggest the roasting of large pieces of meat, and large deep spreads of ashes on some sites hint at the practice of drying meat and fish. The discovery of lumps of iron pyrite (fool's gold), now altered into the mineral limonite (bog iron ore), seems to show that at least one very ancient method of kindling fire at will, namely by striking flint on pyrite, was known.

Of body covering we have no direct evidence, but one true, eyed bone needle suggests tailored skin clothing. A multitude of bone awls of many kinds (Fig. 3,b,c) may also in part have served in sewing skins. Personal decorations are scantily represented and will be mentioned more specifically later. The first shelters must have been fragile structures, probably of the dome-shaped wigwam type with skin, bark or mat coverings, as suggested by floor areas on one of the earlier sites (Lamoka). One may suspect, again by a somewhat dangerous analogy with contemporary primitive hunting tribes, that the social, religious and ceremonial aspects of life were relatively simple. Judging from the few burials found

pertaining to the first part of the Archaic period, there was no development of a "cult of the dead," such as was later to appear. The bodies were simply buried in the flexed or folded position on the side, without offerings and in no regular cemetery. Of the linguistic affiliations we will doubtless always be ignorant, for a people's speech is one of the many important elements of their culture which leaves no traces for the archeologist to recover.

Against this brief background we may in turn sketch the broad picture of the principal individual cultures comprising the Archaic period in New York.

The Lamoka Culture

The people responsible for the Lamoka culture, so-called from the finding of the key site of the earliest Archaic period on the outlet of Lamoka lake in Schuyler county (see Fig. 2, no. 1), were a long-headed¹ folk with narrow skulls, faces and noses, who were most clearly related physically and culturally to the early Shell Mound people of the southeastern United States. Whence they came into New York is still a mystery, as is the exact time of their appearance. Very recently a method has been developed for determining the age of charcoal on the basis of the amount of radioactive carbon (C^{14}) present in it. Such an examination of the charcoal from ancient hearths indicates approximately 5,500 years of elapsed time since the occupation of the Lamoka site in south-central New York.²

As shown by excavated sites (Fig. 2, nos. 1,2,3) and surface relics of diagnostic forms, such as small, narrow-bladed, side-notched or stemmed projectile points (Fig. 3,d); stemmed spearheads (Fig. 3,i); rough, almond-shaped choppers (Fig. 3,e); and well-polished, beveled stone adzes (Fig. 3,f); the scanty Lamoka population was confined chiefly to western, central and southern New York. The Genesee valley, the western Finger lakes and the Susquehanna river with its tributaries, extending well down into eastern Pennsylvania, have many small scattered sites.

Much of their food was taken from the water with barbless bone fishhooks, set-lines equipped with bone gorges or small, double-pointed, baited spikes which caught in the gullet of the fish (Fig. 3,g), and nets, as inferred from notched stone sinkers and what are believed to be eyed netting tools of bone. The bone harpoon, however, is missing from their sites.

Acorns were a staple item of diet, as is proved by finding the charred hulls as well as the means of pulverizing them and other wild vegetal foods into flour. These grinding tools comprised shallow stone mortars, mullers or hand grinding stones, and long, stone, cylindrical pestles.

¹ Long-headed persons have skulls in which the length of the skull, as measured from front to back, exceeds the breadth by a standardized relative proportion.

² We are indebted to Drs W. F. Libby and J. R. Arnold of the Institute for Nuclear Studies, University of Chicago, for the age determination of submitted charcoal samples. (See suggested reference no. 3.)

Wood was worked with rude, grooveless, stone axes known as celts (Fig. 3,h), and two kinds of stone adzes. Possibly with these devices and the aid of fire, logs were hollowed into dugout canoes. No copper or shell artifacts have yet come to light and but few and simple articles of personal decoration. Very likely red ocher was occasionally employed as a body pigment, and a small number of implements, such as bone daggers and strange, pendantlike objects of antler, both striped with this substance, have been found.

The Laurentian Culture

The next people to appear in New York were bands of hunters from north of the St Lawrence who were evidently descendants of another early wave of population out of Asia across the Bering strait land bridge through the coniferous forests of upper Canada. Spreading south to the long barrier of the Great lakes, they apparently penetrated at several points into what is now the United States. In eastern Canada and in upper New England they at length reached the limits of eastward expansion and gradually worked south through the St Lawrence valley into New York by way of the Champlain and Hudson valleys, and through the Oswego and tributary Seneca and Oneida rivers, reaching the heart of the State at Oneida lake. The Grand River valley on the Ontario peninsula of Canada, as well as western New York, also yields abundant traces of their occupation and indicates another way of entry.

We must not suppose that this migration was a steady or calculated movement; rather it took the form of a slow expansion by small bands of people into ever more promising game areas. It is significant to note that the intensity of occupation and the development of the culture are more marked in New York, with its milder winters and probably more abundant fauna, than in lower Ontario. Possibly the climate was becoming progressively warmer and drier at this time.

Because a major center of diffusion appears to lie in the St Lawrence valley, this culture has been named the Laurentian. Its abundant surface relics, chiefly in the form of large and heavy, broad-bladed, stemmed and notched projectile points for javelins or short spears (Fig. 3,j,k), found scattered on small camp sites over the whole of the State and its adjacent areas extending far to the south and west, clearly denote a very lengthy period of habitation to be measured in millenniums rather than in centuries.

In the inviting environs of central New York, particularly the great marsh lands of Montezuma, the Seneca river system, the shallow foot of Cayuga lake, and the long rapids of the Oneida river as it emerges from Oneida lake, the Laurentian hunters and fishermen found ideal conditions, and it is here that the large sites, occupied seasonally over a long time span, have been discovered (see Fig. 2, nos. 3, 4,5). On such sites deep refuse deposits of ashes and humus, containing discarded food bones and implements of bone and antler as well as stone, have been preserved for exploration.

Laurentian skeletons found at Brewerton on the Oneida river and Frontenac island in Cayuga lake reveal a people of stocky build with broad heads, faces and noses, quite at variance with the earlier Lamoka type. Their preference seems to have been for extending the body in a shallow grave, or most commonly simply

covering it with camp refuse, in no regular cemeteries, although clusters of burials, presumably "family plots," were found at Frontenac island.

Cremation, too, was practised, the burned bones being placed in a shallow pit, and occasionally, for obscure reasons, the Laurentians sprinkled a little powdered hematite (iron oxide) paint over the bones or body. Rarely, a few tools or weapons were placed with the dead, from which fact we may deduce a belief in afterlife of a kind not unlike earthly existence, a widespread and very ancient concept.

"By their works" we can form some notions of the Laurentians' way of life. The old device known as the spear-thrower was a part of their equipment as shown by the perforated and winged stones to which the misleading term "bannerstone" was applied before their true function was revealed (Fig. 3,1). With this short, throwing instrument of wood, weighted with the bannerstone, a javelin could be hurled with greater force and precision than was possible with the unaided arm. The present day Eskimo and Australians still employ a spear-thrower.

The Laurentian fishermen waded the rapids of the rivers and boated over the shallow river pools and lakes. Besides the nets, barbless bone hooks and gorges mentioned for the Lamoka culture, the Laurentians used barbed bone harpoons. These were of two types, one of which, equipped with a line-hole and detachable shaft, was provided with a large barb for holding the enormous pike and probably salmon then available (Fig. 3,m). Stone plummets found on some Laurentian sites are believed also to have formed part of the fishing equipment (Fig. 3,n).

Sometimes adzes, axes, awls, gorges and other tools fashioned of native copper were obtained by barter from tribes in the Lake Superior region who mined and worked this metal by a process of heating and beating. Ornaments of copper have not been found. At Frontenac island marine shell pendants which must have come by trade with other peoples along the Atlantic coast occurred with some of the skeletons. Other body adornments were perforated canine teeth of bear, wolf and elk, and even a beautifully engraved comb of antler. Spoons and cups of antler also survived at this site, and doubtless supplemented perishable wooden and bark bowls and other utensils. Individual burials of dogs of both a large and small breed, as well as skeletons of this animal in human graves, eloquently reveal emotions akin to our own. At Frontenac island a grave was opened containing a child's skeleton with a stone toy in its hand, and an infant's bones interred in a once warm bed of ashes with a puppy close against its body were found on the same site (Fig. 2, no. 3).

An important stone tool for working wood, found only in the Laurentian culture in New York, is the gouge (Fig. 3,o), a useful instrument for excavating dug-out canoes and probably large wooden receptacles. Two additional tool types of the Laurentians need to be mentioned, one of which has striking parallels with certain of the Eskimo cultures. This is a semilunar knife of ground slate resembling the ulo or woman's knife of the Arctic (Fig. 3,p). Some forms of the ground slate point (Fig. 3,q) also have a general similarity to Eskimo tools, and it was earlier assumed that the Eskimo themselves, or a people much influenced by them, had once dwelt in New York. Later studies have disproved this assumption, partly on the basis of the wide age discrepancy between the early Eskimo and Laurentian cultures. At Frontenac

island, a hearth sample of charcoal was dated at about 5,000 years ago. The earliest dated Eskimo culture is very much younger. (See suggested reference no. 4.)

Finally we must mention the interesting variety of musical flutes, fashioned of hollow bird bones, found on Frontenac island (Fig. 3,r). They have prototypes in the Lamoka culture as, indeed, do a considerable number of artifacts found in this exceedingly instructive site. The evidence there found proves that the occupation of the two quite different Archaic peoples, the Lamoka and the Laurentian, had in part overlapped in time and space. At first probably hostile, as suggested by arrow wounds on the bones, the two groups had overcome their enmity. Some of the skull forms as well as the mixed assemblages of grave goods suggest an eventual peaceful intermarriage. Perhaps in this fashion the Lamoka folk and their culture were gradually absorbed by the dominant Laurentians. At any rate, about this time they disappear from view.

But what, in turn, became of their successors, the Laurentians? This question can not yet be answered fully. It seems quite evident that they did not migrate out of New York nor become exterminated by some subsequent group. In the extreme eastern and southeastern parts of the State, as well as in New England, particularly along the coast, descendants of the Laurentian folk continued to thrive and develop their culture down to the historic period. Significant additions probably of blood, certainly of culture, diffused to them from time to time through other tribes living both to the west and south of this region. What we have called the Coastal culture in the northeastern area is thus doubtless the offspring in a more or less isolated or peripheral zone of the old Laurentian complex just described.

In the western and central parts of the State a few sites have been found where much of the material is still Laurentian, but "something new has been added," apparently from the outside rather than by independent invention. This novel increment consists, among lesser items, in the first traces of pottery and the earliest smoking pipes to appear in our State. Our quest for the immediate source of these elements takes us westward to the Ohio area. Here and farther south higher cultures were developing apparently during the latter part of the Laurentian occupation in New York, and ideas from these centers, and possibly to some extent migrations from them as well, introduced what is known as the Early Woodland period in New York.

THE WOODLAND PERIOD IN NEW YORK

Recently one Carbon¹⁴ date has been established for a site pertaining to this portion of our prehistory, and we may assume that the initial influences from the Ohio area were felt approximately 3,000 years ago. It is convenient to recognize three Woodland horizons of time and culture in New York, namely, the Early, Middle and Late, with their various subdivisions as shown in Fig. 1.

Collectively the Woodland cultures were based with ever-increasing emphasis upon a farming rather than a hunting economy. Consequently the people who lived by these cultures were more stable in their settlement patterns, and their population grew progressively with mastery of the new technic of subsistence

¹ "Woodland," as used by the Archeologist, refers to specific prehistoric Indian cultures such as those described in the text above. As used by many teachers, it is a regional term referring to historic Indians living in the forests of eastern North America.

which insured a surplus of such storable crops as maize and beans. The leisure afforded by relative abundance released energy for the elaboration of culture, which fact, at least in part, probably accounts for the high artistic achievements and complex ritualism, expressed in a "cult of the dead," which are observable in the Early and Middle Woodland cultures.

This was the period of the most cosmopolitan of the early New Yorkers. The semi-isolation of the Laurentian period gave way to a time of wide contacts, probably more by barter than through actual travel, with outsiders often far removed, as witnessed by the wide variety of exotic articles and materials found in these Woodland sites. For example, multi-colored chalcedony from the great Licking County, Ohio, quarries was used for knives and projectile points, as were rhyolite and jasper from southeastern Pennsylvania. The same area produced steatite or soapstone from which cooking pots were made. Mica, sharks' teeth and a variety of ocean shells probably came from farther south in the middle Atlantic area. Ohio pipestone was employed and fresh-water pearl beads were imported from the same state. Native copper derived from the Lake Superior region was used for tools like axes and awls, and for personal decorations in the form of tubular beads, ear ornaments and pendants. In addition, breast ornaments like gorgets (Fig. 4, a), and artifacts of still unknown use, such as birdstones (Fig. 4, b), boatstones (Fig. 4, c) and bar amulets (Fig. 4, d), were expertly fashioned by grinding and drilling the attractive banded slates which are said to outcrop along the north shore of Lake Huron.

While mound-building as a cultural trait was practised in various parts of the eastern United States from the Early Woodland period on to relatively recent times, all our New York mounds belong to the Middle Woodland period and are related to the southern Ohio center of the Hopewell culture. Mounds of this period were used exclusively for the burial of distinguished persons. (Some of the later mounds of the eastern United States belong to the Mississippi period, not found in New York, and were erected as substructures for temples and important dwellings.)

Another notable feature of the period is the relatively larger size of many of the articles. There are, for example, enormous carved antler combs ranging up to 14 inches in length, large engraved bone daggers, massive harpoons and extremely long stone blades, all of which suggest an energetic people imbued with definite and objective ideas. There is now also manifest a mastery of flint chipping technics not hitherto seen in the State. Many of the so-called cache blades which, like the long blades mentioned above were doubtless votive offerings, since they usually occur in masses of red paint associated with burials, are exquisitely chipped by pressure flaking and are only about 1/8 of an inch in thickness (Fig. 4, e).

With this over-all picture in mind, let us now consider the specific major cultures of the Woodland period in slightly more detail.

The Middlesex Culture (Early Woodland)

This culture, well represented at the classic Vine Valley burial site at Canandaigua lake (Fig. 2, no. 6), is related to the Adena culture in Ohio, Kentucky, West Virginia and elsewhere and is chiefly found in eastern New York. Its pottery, the first in our area, is crude, thick and coarsely tempered with crushed stone.

The pots are characterized by straight sides and pointed bottoms and are marked all over, inside and out, with the impressions of a cord-wrapped paddle. The earliest known pipes belong here, also, and are of two types, a straight stone or pottery tube with one end slightly expanded and perforated with a small hole (Fig. 4,g), and a faintly bent elbow form, also of stone or clay, which was always undecorated (Fig. 4,l). Unfortunately, as no habitation site of this culture has ever been found, our information comes only from burials and is therefore quite incomplete. These flexed or cremated burials were often provided with grave goods.

The Hopewellian Culture (Early Woodland)

This culture of mound-builders closely follows the Middlesex in time but, unlike it, has a major distribution in the western part of the State (see Fig. 2, nos. 7, 8). There are enough shared features to suggest a close relationship. It can be traced by its burial mounds from southern Ohio through northwestern Pennsylvania into our State. The Hopewellians, who were true Indians, had one of the most advanced cultures found in what is now the United States.

Burials of all kinds -- flexed, extended, cremated and bundled (that is, a heap of bones representing a secondary disposal of a body which had decomposed in a charnel house) -- occur in these mounds, often in stone-lined and stone-covered vaults (Fig. 5,a). Usually they are accompanied by a rather limited variety of burial offerings: comprising chiefly, platform pipes (Fig. 4,h); pendants and gorgets of polished stone; broad, barbed projectile points (Fig. 4,i); flake knives; copper axes (Fig. 4,j); and beads of shell and pearl. Hopewellian pottery in New York is similar, for the most part, to that described for the Middlesex culture.

The Point Peninsula Culture (Early and Middle Woodland)

Named from a site in northern New York (see Fig. 2, no. 13), the Point Peninsula is a complex and still imperfectly understood composite of cultural traditions stemming from the Middlesex and Hopewellian, with the addition of new traits introduced from Ontario, and with various local developments. Several stages can be differentiated with particular characteristics of their own. To the cord-marked pottery of the type above mentioned, there was soon added another variety of ware decorated by means of square-toothed stamps and single cord imprints. These pots resembled the older variety in having a pointed base, but the rim instead of being always straight was usually somewhat out-sloping (Fig. 4,f). Because pottery styles of form and decoration are extremely valuable in relating cultures, as well as in reflecting changes within a culture, the archeologist devotes considerable attention to their study. It has been possible to distinguish sixteen specific types of this later Point Peninsula ware, which was introduced from Canada, and so to trace the stages of development of Point Peninsula culture in New York.

Among the distinctive features of the Point Peninsula culture are cigar-shaped pipes of stone and clay (Fig. 4,k), and plain, faintly bent elbow pipes¹ (Fig. 4,l), bone daggers, antler combs, a rich variety of harpoons (Fig. 4,m), a striking form of wood-carving tool fashioned from a beaver incisor tooth set into an antler handle (Fig. 4,n), and a considerable variety of shell beads (Fig. 4,o). At this time broad triangular projectile points appear which were probably true arrow points, suggesting that at last this useful hunting device had been acquired. Most of the flint points described for the earlier cultures seem, almost certainly, to have

¹ This type was to undergo extensive development in the following Owasco culture.

been used as javelin or spearheads. Some, however, were doubtless special types of knife blades.

Human bodies, first reduced to skeletons above ground, were sometimes cremated in deep pits, but a more common custom was to flex or fold the body directly after death and dispose of it in a pit grave dug in a definite cemetery. The marked attention to mortuary matters, dominant from Middlesex times on, persisted until the late Point Peninsula period. While we know very little about the physical appearance of the Middlesex and Hopewellian peoples, since most of the skeletons found have been too badly decomposed for measurement, the available data indicate a mixed population for the Point Peninsula, which was apparently the result of a blending of previous strains. In both sexes the head was of medium breadth. The male face was of medium height and breadth, while that of the female was generally lower, and both sexes were broad-nosed.

The Owasco Culture (Late Woodland)

A cultural transition or change of gradual nature from the late Point Peninsula to the early Owasco, due apparently more to internal developments than to external causes, has been partially demonstrated by recent researches. The physical characteristics of the people remained much the same save for a prevalence of long-headedness among the Owasco. The population growth was marked, Owasco sites being more numerous and larger. While many of the early Owasco sites were, like Point Peninsula settlements, located along the rivers and marshes of central New York (see Fig. 2, nos. 11, 12, 16), others were fortified inclosures located on hilltops and thus foreshadow the early settlements of the Iroquois (see Fig. 2, nos. 15, 19). The earlier preoccupation with mortuary matters had virtually disappeared by Owasco times, the burials of this people being simple, flexed inhumations, very rarely with any offerings (Fig. 5. b). Sometimes these were clustered in regular cemeteries but, with the passage of time, they were more often randomly placed in abandoned food cache pits scattered about the village.

Their arrows were tipped either with a broad triangular flint point (Fig. 4,p), or with bone and antler points of a variety of shapes. Fish were taken with nets, either barbless or more rarely barbed hooks, and barbed harpoons. Although both hunters and fishermen, the principal subsistence activity of the Owasco was farming with digging stick and hoe. A few antler and stone hoe blades have been found, but the planting tools were doubtless chiefly of wood. Corn and beans preserved by accidental charring occur abundantly, and there is no reason to doubt that squashes were also a part of the diet, although their more perishable parts have not remained. Acorns, butternuts, hickory nuts and other wild foods, in a carbonized condition, have been recovered and represent but a small part of the utilized wild plant resources.

On one site in southern New York (see Fig. 2, no. 19), there miraculously survived by accidental carbonization remains of coiled and twined-woven baskets and bags for food storage, together with twisted bast cordage and even a set line of Indian hemp fiber equipped with compound hooks made of hawthorn spines. Individual dishes from box turtle shells and ladles or spoons cut from deer skulls and wild turkey breast bones have been found, but the probable wooden utensils employed have long since decayed.

Early Owasco cooking pots had pointed bottoms, constricted necks, somewhat flaring collarless rims, a cord-wrapped paddle surface finish, and usually rim and neck decorations of simple straight line patterns made by pressing a cord-wound stick against the plastic clay (see cover illustration). The vessels seem to have been made by modeling a mass of clay tempered with burned and crushed crystalline rock (paddle and anvil technic) rather than by the coiling process which was the method of constructing the earlier forms of New York pottery. Such pots were set directly in the fire, supported by stones and ashes. As time passed pottery styles changed somewhat in form and ornamentation, and later Owasco vessels have rounded bases, are sometimes collared, and occasionally bear, in addition to cord impressed decorations rudely incised simple designs.

The smoking pipes, too, underwent alterations in shape and embellishment. Beginning with the plain, faintly bent, elbow form inherited from the Point Peninsula culture, the angle between the bowl and stem was progressively reduced until a nearly modern shape resulted (Fig. 4,q). Meanwhile the modeling became more refined, the cord-imprinted decorative designs more elaborate, and animal effigy figures or human faces were sometimes added to the bowl. The latest recognized stage shows much free use of the imagination in creating novel variations on the traditional theme. Stone pipes were made by a few expert workmen through the whole of the Owasco period. We suspect that pottery manufacture was the work of women, pipe modeling the product of men. The degree of skill displayed in the two related fields progressed with about equal speed.

Palisaded villages have been mentioned, our knowledge being based on the discovery either of postmold patterns or ditches for the reception of a stockade line surrounding the village area. Inside the inclosures have been found the imprints of small, circular, pole-framed houses with hearths located near the center, indicating that the dwellings were of wigwam type, probably with domed roofs, and bark or mat coverings (Fig. 5,c). Curved, eyed needles, like those used by some still surviving tribes for sewing together rush mats are regularly found on Owasco settlement sites (Fig. 4,r).

Scattered among the lodges, especially on the later sites, were deeply dug storage pits. These pits from which the greater part of the archeologist's findings are usually recovered, were lined with bark and grass for caching shelled corn, beans, nuts, and doubtless other storable foods. They were probably sealed over with earth and bark roofs to protect the contents from moisture, insects and rodents. Ultimately they served as ideal refuse receptacles for the ashes cleaned from the hearth, floor sweepings, garbage and discarded implements. Frequently intact articles were accidentally lost in them. Their secondary use as ready-made graves is attested to by the burials, both human and dog, which have come to light on Owasco sites.

In our wet climate no articles of clothing have survived and we can only surmise the dress of these Indians. Drawshave-type scrapers fashioned from bear and deer leg bones suggest the dehairing of hides, and the numerous awls of many kinds probably in part functioned as sewing implements. Personal ornaments of bone and stone have remained including tubular bone beads (Fig. 4,s); toe bones of deer which were drilled probably for use as fringe ornaments on clothing (Fig. 4,t); perforated animal canine teeth, chiefly of the bear and wolf (Fig. 4,u); small oval perforated stone pendants; and bone pins with carved heads. Shell beads, so abundant in the Point Peninsula culture, and numerous other striking ornaments of this earlier time are virtually absent from Owasco sites.

Simple bone flutes and turtle shell rattles have been unearthed, and we suspect that they formed a part of the paraphernalia of ritual. Other more dramatic discoveries afford additional clues to Owasco ceremonial life. There is reason to believe that, in common with many Old and New World northern peoples, the bear was regarded with special veneration and was the object of definite observances. There are even broad hints of human sacrifice.

This is but the barest outline of the way of life of this interesting people who became the dominant late prehistoric¹ occupants of New York State and who probably were, in part at least, the forebears of the Iroquois. There is recent evidence to show that some of them, resident in southeastern New York and adjacent New Jersey came in time to be known as the Munsee, a tribe linked politically and linguistically, but not culturally, with the Algonkian-speaking Lenape or Delaware Confederacy.

SUMMARY

We may briefly summarize some of the major ideas presented in this leaflet as follows:

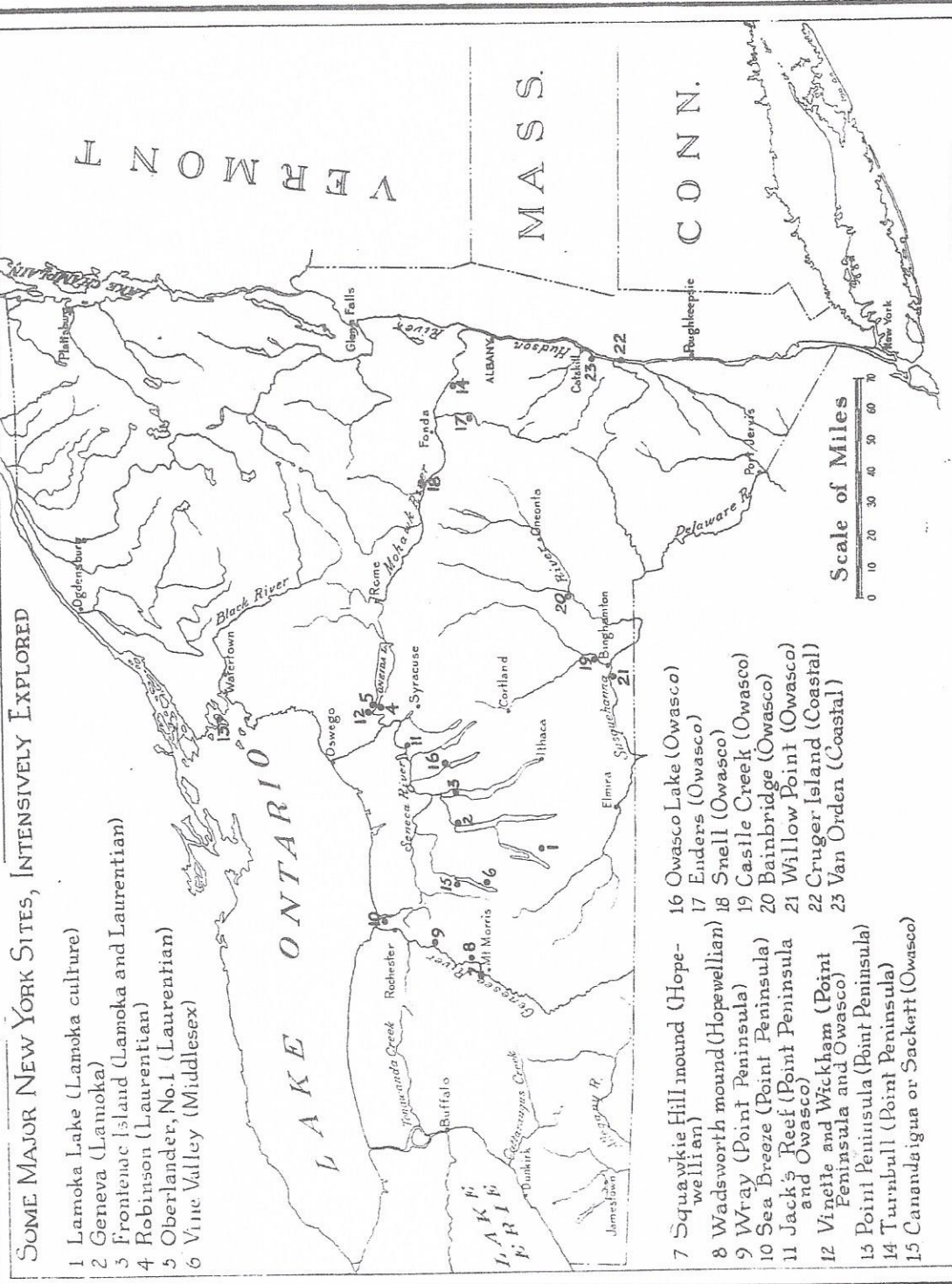
- 1 An archeologist is a scientist who endeavors to discover and interpret buried human history.
- 2 It is generally agreed that the Indians of the New World were of Asiatic origin.
- 3 Numerous Indian cultures preceding the historic Iroquois and Algonkian are known to have existed in New York State for several thousand years. These prehistoric Indian cultures may be divided into two major periods. Archaic and Woodland, with numerous subdivisions.
- 4 The older Archaic peoples were nomadic hunters and fishermen with no knowledge of agriculture, pottery or pipes, and with only simple burial customs.
- 5 The Woodland peoples, on the other hand, in general developed more complex culture patterns, with pottery, specialized burial rituals and an agricultural economy based on corn and beans.
- 6 The Hopewellian "mound-builders" belonged to the Middle Woodland period. Although their culture was most highly developed in the Illinois valley and southern Ohio, evidences of it can be found in western New York. Their mounds were constructed solely for burial purposes.

¹ Strictly speaking "prehistoric" means "pertaining to, or existing in, the period before written history begins." Since the Indians of New York had no written records, the earliest accounts of them are found after European contact -- that is, chiefly from 1609 on.

- 7 Although a few types of early Indian tools are reminiscent of certain Eskimo forms, there is no evidence of any Eskimo culture in New York.
- 8 The bow and arrow were not used until relatively late in prehistoric times. Many of the so-called "arrowheads," abundant in hobby collections, were probably javelin and spear points or special types of knives.
- 9 Indian pipes in New York show a gradual transition from simple hollow tubes to elbow and trumpet types. Our modern pipes are probably derived from the Indian elbow form which apparently evolved in the New York area. To the Indians we likewise owe our knowledge of tobacco.
- 10 A definite development in pottery forms is apparent in New York cultures. The first pottery vessels, which appeared in the Early Woodland period, were straight-sided pots with pointed bases which were surface finished inside and out by the application of a cord-wrapped paddle. This type was soon replaced by a more elaborate form introduced from Ontario. This pottery usually had a somewhat constricted neck, flaring rim and an over-all decoration on a smoothed body done with toothed-stamps or a cord-wound stick, often in rocker-stamped design (Fig. 4,f). A development of this form in early Owasco times differed chiefly in having a corded surface treatment with decoration on rim and neck made with cord-wound stick (see cover illustration). This form in turn was developed into a round-bottomed jar which was sometimes provided with a collar. We believe that this later Owasco type gave rise to the similarly shaped vessels of the Iroquois which, however, had prevailingly smooth bodies and triangular ornamentations on the rim or collar made by incising. Pottery of the Early and Middle Woodland periods appears to have been made by a coiling technic. Owasco and Iroquois vessels, however, seem to have been formed by modeling a lump of clay by what was known as the paddle and anvil process.

In future Educational Leaflets we shall describe in Parts II and III the Iroquoian and Algonkian tribes, the last of the Late Woodland peoples in New York who played such an important role in our own history and whose descendants still reside among us.

Note: Artifacts of prehistoric New York Indians are on display in the Morgan Hall of Indian Archeology at the New York State Museum.



SOME MAJOR NEW YORK SITES, INTENSIVELY EXPLORED

- 1 Lamoka Lake (Lamoka culture)
- 2 Geneva (Lamoka)
- 3 Frontenac Island (Lamoka and Laurentian)
- 4 Robinson (Laurentian)
- 5 Oberlander, No.1 (Laurentian)
- 6 Vine Valley (Middlesex)

- 7 Squawkie Hill mound (Hopewellian)
- 8 Wadsworth mound (Hopewellian)
- 9 Wray (Point Peninsula)
- 10 Sea Breeze (Point Peninsula)
- 11 Jack's Reef (Point Peninsula and Owasco)
- 12 Vinette and Wickham (Point Peninsula and Owasco)
- 13 Point Peninsula (Point Peninsula)
- 14 Turnbull (Point Peninsula)
- 15 Canandaigua or Sackett (Owasco)
- 16 Owasco Lake (Owasco)
- 17 Enders (Owasco)
- 18 Snell (Owasco)
- 19 Castle Creek (Owasco)
- 20 Bainbridge (Owasco)
- 21 Willow Point (Owasco)
- 22 Cruger Island (Coastal)
- 23 Van Orden (Coastal)

VERIFICATION MATERIALS

Iroquoian Tribes

Taken from:

Ritchie, William A., Indian History of New York State, Part II, The Iroquoian Tribes.
Albany: New York State Museum, Educational Leaflet Series, No. 7, 1953. 20 pp., passim.
See pp. 53-66 this book.

Villages

The Iroquois were a village people with a strong communal sense, who inhabited semipermanent settlements which were moved only when convenient supplies of firewood, wild vegetable foods and local game gave out, or when the unfertilized agricultural soil adjacent to the village became exhausted. This has been estimated at eight to twenty or more years depending upon the location, but ten years seems a fair estimate of village tenure. Settlements, small in the beginning, grew by the aggregation of scattered bands and by the multiplication of population into towns of several hundred to over a thousand people during the period between approximately 1550 and 1675. Such towns were called "castles" by the Dutch and later by the English.

Throughout this period and even earlier, communities were usually established on high, more or less level hilltops with steep protecting slopes and were additionally secured by log palisades twenty or more feet in height. Sometimes these stockades surmounted an earthen rampart flanked by a ditch; sometimes they were set in trenches dug in the ground. Such enclosures were circular, oval, rectangular or trapezoidal in outline. Numerous examples are known of crescentic fortifications, as marked by earthworks, and of short linear defenses across a narrow neck of land, the unstockaded sides being naturally protected by very abrupt declivities. The principal living area enclosed varied from less than one to several acres in extent.

Stockade lines might be single, double or even quadruple. A common type has been described as a single line of posts set vertically in the ground, with crossing poles arranged on either side forming a "V" at the top which was enlarged by tying on pole extensions and affixing bark battlements (see cover illustration). The whole enclosure might be some thirty feet in height. The battlement or fighting platform, reached from inside by a notched log ladder, was equipped with stones to hurl upon the enemy and with vessels of water for extinguishing fires. Such fires, kindled by fire arrows or set at the stockade base under cover of bark shields or even canoes carried by the invaders, were the great enemy of the early Iroquois towns.

Early travelers mention, and archeology confirms, the presence of outlying hamlets in the vicinity of the larger towns. Doubtless, then as now, there were people not wholly satisfied with existing conditions, dissenters who budded off the main village to found a settlement of their own. About 1700, following the close of the Iroquois Wars, many villages were moved to lower lands and were no longer palisaded.

Longhouses

Iroquois houses, both single and communal dwellings, followed a basic long-house plan (see Fig. 1 and cover illustration). This form endured until about the end of the eighteenth century, when one family, squared-log cabins of an introduced north European type came into vogue. Such homes are occasionally seen on present reservations, although they have largely been replaced by small frame houses.

Longhouse communities have been described by a number of seventeenth century travelers as containing from four or five bark lodges in a hamlet to as many as 120 dwellings in a large town, irregularly grouped or roughly ranged in streets. Unit family houses are said to have been about 20 feet in length, 15 feet in breadth and the same in height. Houses up to twice this size, described as "single-fire cabins," were probably occupied by two families. Communal dwellings and council houses had greater dimensions. The former ranged from approximately 50-150 feet in length, 15-25 feet in breadth and 15-20 or more feet in elevation. Perhaps the average multi-family home averaged some 60x18x18 feet.

House building was a cooperative effort utilizing the organized labor of a work party of friends or relatives who could expect reciprocal aid in turn. Both sexes worked together, men on the heavier tasks, women in bark-binding. This was but one of many occasions in village life illustrating the supplemental relationship between the economic activities of men and women.

Construction began by setting upright in the ground, some four or five feet apart, small forked-top logs five to eight inches in diameter and some ten feet in height to form the outline of the dwelling. These were then bound together with cross poles by means of bark strips. Roofs, made without ridge poles, were composed of a series of saplings bent into an arbor shape. In earlier times they were almost flat, and the people, especially the children, congregated on them to watch village events. Small poles were tied lengthwise across the roof supports and the house frame was ready for its bark cover.

In the springtime while the sap was still flowing freely, elm, ash or basswood bark, from which the rough outer covering had been removed, was peeled in sheets six to nine feet long and three to five feet wide. To prevent drying, curling and cracking before use, it was covered with flat stones and stored under water in streams or ponds. Some of the sturdy antler and stone "chisels" which we find on earlier sites were probably bark peelers, while the stout bone and antler "awls" and "punches" undoubtedly served to perforate the bark so that it might be tied upon the frame with bast (inner bark) strips or twisted cords. Overlapping roof slabs were vertically affixed, the remainder of the house being "shingled" horizontally. These sheets of bark were held securely between the inner poles of the house frame and an outer set of smaller poles placed lengthwise on the roof and upright along the walls.

Smoke holes, left at intervals of some twenty feet, were provided with bark covers which could be manipulated from within by a long pole. A bark door, suspended from the top like the porthole covers on a ship, occurred at either end. Carved figures and paintings in black and red of animals representing the clans of the inmates--deer, turtle, bear etc.--are mentioned by observers as adorning the gable ends of the cabin fronts. When the village was moved, these portions of the cabins are said to have been carried to the new site.

At either end of the house was a shed-like vestibule used for the storage of firewood and food in bark barrels and other containers and, through the removal of the bark sides, for summer sleeping porches for the children. Entering the

house through the vestibule, one came into a long corridor spotted at intervals with fires burning in shallow bowl-shaped hearths, one to each two families sharing opposite living compartments. Each compartment, about thirteen feet in length and six or so feet in width, was separated from the next in line by a bark-walled storage closet for personal articles, cooking utensils, hunting gear etc. Bunks for smaller children sometimes lined the closet walls.

The compartments or "rooms," open on the side toward the fire, were furnished with a pole- and bark-covered platform raised a foot or two above the floor and rendered comfortable for lounging and sleeping by an assortment of mats and furs, as well as deer and bear skins from which the hair had not been removed. A shelf overhead accommodated various goods, while from the rafters hung bunches of corn, braided together by the husks, and sundry other dried foods.

The houses and village areas of the Iroquois were fairly clean, even by our standards, the refuse being cast over the bank to form a hillside midden or into empty food storage pits dug into the ground and originally lined and covered with bark and grass. Smoke, draught, and vermin from the dogs (see cover illustration) which shared the living and sleeping quarters are mentioned as the chief annoyances of European travelers and missionaries.

Food

As previously stated, the Iroquois depended largely on hoe tillage for their food supply. Corn, beans and squashes, known among them as "supporters of life" and regarded as sacred gifts of the Creator, comprised the staples. We are told that numerous varieties of corn, beans and squashes were raised in areas cleared by fire, in natural forest clearings or on river flood plains. Tobacco and sunflowers were also grown, the latter for the oil obtainable from their seeds. Men cleared the land; women in work parties planted, hoed and harvested the crops. Corn and beans were readily storable. Squashes and pumpkins cut into strips and dried could also be kept for some time.

Besides the cultivated plants, women and girls gathered many kinds of wild vegetable foods such as nuts; berries; edible roots; leaf, stem and bark substances; fruits and fungi. Chief among these gathered food products were chestnuts, hickory nuts, butternuts, hazel nuts, acorns, strawberries, blackberries, blueberries, cranberries, groundnuts, pond lily roots, Solomon's seal, Indian turnip, leaf greens of marsh marigold, various cresses, wild mints, wild leek, wild garlic, plums, cherries, grapes, mushrooms, puffballs and morels. In addition, they gathered sassafras roots, hemlock twigs and birch bark which

Fig. 2. Tools and smoking pipes of the Iroquois

- a Polished stone adze (front and side views)
- b Chipped stone knife
- c Polished stone celt or ax head (side and front views)
- d Notched pebble netsinker
- e Chipped stone arrowpoint
- f Simple stone hammer (side and end views)
- g Owl effigy clay pipe
- h Plain trumpet clay pipe

were used in beverages, as were also infusions of maple sap and berry juices. Maple syrup was the only sweetener and but little, if any, use was made of salt until after the historic period.

Hunting was undertaken by family groups between harvest time and mid-winter, when the villages were largely abandoned for hunting camps in the woods. The principal hunting and war weapon was a short bow and arrow tipped with a triangular flint point (Fig. 2,e) or a bone or antler head (see Fig. 3,h-j). Deadfalls and nooses fixed to bent saplings took larger game; snares and nets of fiber cords caught birds and the smaller mammals. Blowguns, made from elder stalks and employing a slender dart, were part of the equipment for securing smaller game and are but one of the numerous cultural links with tribes of the southeastern United States.

Another general exodus from the towns took place in early spring, first to the sugar bush to harvest the maple sap and make it into syrup and sugar, and again later to gather eggs and adult birds when the passenger pigeons were nesting. Temporary camps were established on these occasions in which both men and women participated.

Fishing, a pursuit of spring and summer, was done with nets weighted with notched pebbles (Fig. 2,d), weirs, barbless bone hooks (Fig. 3,l) attached to lines of twisted Indian hemp fiber, and bone harpoons (Fig. 3,f) with one or several barbs. Both men and women seem to have shared in the fishing activity and fishing parties were encountered a long way from home by early travelers.

Numerous ways of preparing corn are reported by early observers, among them hominy and samp which were boiled, often with the addition of beans, nuts or game. Soups were made from green, dried or parched corn, with or without the addition of other vegetables, and often were flavored with maple syrup or sunflower seed oil. Puddings and bread, boiled or baked in the ashes, were other favorite foods. They, too, might have additional ingredients and were eaten with sunflower seed oil, deer or bear fat, or maple sugar. The hunter or traveler could subsist on small amounts of a nutritious mixture of shelled, parched and ground corn meal and sugar.

Most Iroquois food was prepared by boiling in well-made clay pots of distinctive shape and decoration. Meat was also broiled on spits and probably roasted in the ashes along with ears of green corn.

In olden times, one meal a day was customarily served about mid-morning, but the pot was always on the fire and people ate when hungry. Food hospitality was very great; anyone dropping in, friend or stranger, was fed.

Tools, Utensils and Ornaments

As already suggested, Iroquois industries in wood, bark, bone, antler and pottery were relatively rich and varied. Their stone industry, on the other hand, was decidedly weak and limited to such items as arrowpoints (Fig. 2,e), ovate chipped flint knives (Fig. 2,b), thick wedge-shaped hatchet heads (Fig. 2,c) and

adze blades (Fig. 2,a) of polished stone, rough stone hammers (Fig. 2,f), anvil-stones, bun-shaped grinding stones or mullers (Fig. 4,a), shallow stone mortars (Fig. 4,a) and netsinkers (Fig. 2,d).

From bone and antler were manufactured an assortment of awls of many kinds (Fig. 3,b,c), chisels (Fig. 3,n), flint-flaking tools (Fig. 3,m), mat-weaving needles (Fig. 3,a), the hunting and fishing equipment already described, and a limited inventory of other articles which included personal ornaments, such as tubular bone beads (Fig. 3,k), various small pendants, and combs (Fig. 3,d,e) of bone and antler or sometimes wood. The combs are among the artistic achievements of the Iroquois, but all the elaborate examples belong to the historic period and were made with the aid of metal tools.

To prepare corn for most dishes, it was crushed by means of a long-handled, double-ended wooden pestle in an upright wooden mortar fashioned from a fire-hollowed log (Fig. 4,k). Other utensils connected with the food activity comprised basket sieves and baskets plaited from black ash splints (Fig. 4,d); elm bark sap containers and mixing bowls (Fig. 4,c); wooden bowls of various sizes (Fig. 4,f) with cups, spoons (Fig. 4,f), ladles and pot stirrers; box turtle shell bowls and bark storage barrels (Fig. 4,j).

Iroquois pottery is distinguishable by a more or less globular, generally smooth body with rounded base, constricted neck and outflaring collared rim which bears the whole or major share of the decoration. The characteristic decoration consists of a pattern of incised lines in angular designs, usually spoken of as chevrons or triangle complexes (Fig. 4,h). Another pottery tradition makes use of a notched rim which became elaborated into many styles during the historic period (Fig. 4,g).

Fig. 3 Tools and ornaments of the Iroquois

- a Mat-weaving needle of bone
- b,c Bone awls
- d Antler effigy comb of historic period
- e Prehistoric antler comb
- f Bone harpoon
- g Antler figurine of historic period
- h,i,j Bone and antler arrowpoint
- k Bone bead
- l Bone fish hook
- m Antler flaker
- n Antler chisel
- o Brass spiral ear ornament of historic period
- p,q,r Silver brooches of historic period (note Masonic emblem on q)
- s Bone dehairing tool

Pottery was evidently not made by coiling, but rather by modeling a lump of plastic clay tempered with crushed crystalline rock to prevent undue shrinkage and cracking during the firing process. This baking took place in open fires in the presence of ample oxygen, resulting in light shades of brown, tan or terracotta. No use was made of slips or painting, nor were there lugs or handles (at least among the Five Nations Iroquois), but effigies of the human face or figure occur among some groups, especially the Onondaga and Oneida.

While women were the potters, men modeled or carved the smoking pipes of clay or stone (Fig. 2,g,h). Considerable esthetic sense and skill are shown in the bowl effigies of mammals, birds (Fig. 2,g) and men.

Little is known of early Iroquois art expressions beyond those preserved for us in the pottery, pipes and to a limited extent in the bone and antler articles, especially combs, already mentioned. It is of interest to note that while pottery designs are always rectilinear, most quilled, beaded and moosehair designs are predominantly curvilinear and fit into the general historic art pattern of the northeast as a whole. These embroidered techniques are found on articles of clothing, bags (Fig. 4, e), burden straps and probably on other objects not preserved from the prehistoric period. The art styles of the area are of uncertain origin, and some, especially the rather realistic plant and floral representations so well depicted in the later beadwork, seem to be of European, particularly French, inspiration.

Iroquois silver work, such as the brooches worn as clothing fasteners (Fig. 3,p-r), headbands, bracelets and earrings, was in most cases manufactured for Indian trade by English silversmiths both in Britain and Canada. There also developed a native industry utilizing silver coinage obtained by exchange for furs and land. While Scottish and other European designs prevailed, some minor variations are said to have been effected by the native craftsmen.

Clothing

Because of its highly perishable nature, no examples of early Iroquois clothing have survived, but there is historic evidence to inform us that clothing was originally of skin, chiefly of the deer, tanned with animal brains. Dehairing tools cut from a deer leg bone (Fig. 3,s) are common on some prehistoric sites. No cloth was made; but bags, nets, burden straps (Fig. 4,d) and other things were woven from cordage derived from twisted strands of bark and wild Indian hemp fibers. From braided or woven cornhusks were made baskets (Fig. 4,b), mats, moccasins (Fig. 4,i), masks (Fig. 5,d,e) and other articles of clothing, household and ceremonial usage.

The dress of men (see cover illustration) and boys consisted of a tunic-like shirt to which, in cold weather, separate sleeves might be attached by tying. This overlapped the breechclout held in place by a belt which also supported the leggings. A kilt, or short skirt-like garment, and moccasins completed the costume, except for the winter use of furred robes made of single bear, wolf or panther skins or compounded of the smaller pelts of otters, martens, raccoons etc. In the case of

the larger mammals, especially bear and wolf, the anterior skull portions including the jaws and teeth were sometimes left attached to the hide. When worn, they projected above the head of the wearer in an impressive manner described in early documents and confirmed by the evidence of modeled pipes and grave finds. Winter footgear is said to have included cornhusk and fur overshoes.

For women (see cover illustration) and girls the breechclout was omitted, the kilt became a longer dress, and their shorter leggings were tied above the knees. In summer, young children ran naked; men wore only the breechclout and women the skirt. A small, round, tightly fitting cap of deerskin, usually decorated with an eagle plume at the top and worn exclusively by males, was the only type of hat (see cover illustration).

By the middle of the seventeenth century, woolen cloth and blankets began replacing native forms which very largely disappeared within the next 150 years. The costumes worn by contemporary Iroquois on festive or ceremonial occasions are generally an individually acceptable mixture with non-Iroquoian items.

In early days men wore their hair roached, i.e., cut short and left standing up in a sort of cockscomb along the middle of the head. One or both sides might be completely shaved or a braided lock might be worn on side or back of head. Women either allowed their hair to hang loosely or in tied bunches down their backs. As a vermin repellent, both sexes greased head and body with animal fats, which quickly turned rancid. Young men, especially, painted their faces and even tattooing of face and body was practiced.

Some of the Iroquois "jewelry" is found by the archeologist and consists for the earlier period of necklaces of tubular bone beads (Fig. 3,k); drilled teeth of the bear, wolf, dog, lynx, elk and other animals; various bone pendants and other minor things. With the dawn of the historic period and the Iroquois Wars, many new devices were adopted from foreign sources, both Indian and white, such as

Fig. 4 Domestic utensils and articles of clothing of the Iroquois

- a Shallow stone mortar and muller
- b Twined woven corn husk basket
- c Elm bark mixing bowl
- d Splint carrying basket with burden strap
- e Quill and bead decorated leather pouch
- f Carved wooden bowl and wooden spoon
- g Clay cooking pot of notched rim type
- h Clay cooking pot of incised collar type
- i Twined woven corn husk moccasin
- j Elm bark storage barrel
- k Large wooden mortar and pestle

stone and shell pendants and necklace elements; glass beads; copper and brass ornaments of numerous kinds, including earrings (Fig. 3,o), bracelets and breast ornaments.

Social Organization

Iroquois tribal groups were organized into clans which varied in number among the Five Nations from three to ten. While the clans were named for animals, e.g., Bear, Wolf, Deer, Turtle, Hawk, Snipe etc., it was not believed that the members were descended from these animals, and the use as food of the name animal of one's clan was not forbidden. Clans cut across tribal lines; those like the Bear, Wolf and Turtle which occurred in each of the confederated tribes probably being the oldest.

Children belonged to and took their mother's clan name, the father's line being disregarded in reckoning descent, an arrangement referred to by anthropologists as matrilineal descent. The father's clansmen were, however, reckoned among one's close kin. The matrilineal lineage or family, two or more of which composed a clan, comprised a principal matron (often, but not necessarily, the oldest woman), her sons and daughters, the male and female children of her female descendants and their descendants through the female or clan-bearing side.

Marriage within the clan, either tribal or intertribal, was taboo. Marriages were generally arranged by the chief matrons of the two families involved, economic considerations being primary. A good provider and a good housekeeper were considered a promising couple. No important rites were observed, a simple exchange of food presents sufficing to unite the spouses. Separation was equally easy if desired by either mate, but efforts were made by both families to keep the marriage intact.

It was customary for the new couple to reside in the longhouse of the bride's family, a practice described as matrilocal residence. Here, the husband came under the authority of his wife's parents, grandparents and other relatives, and his tenure depended upon good behavior. Because his children also belonged to his wife's clan, according to rules of descent, dominance over their upbringing and behavior was exercised by her family. Inheritance also passed in the female line. Therefore, offspring inherited not from their father but from their mother and her lineage. The father's sisters' sons, being of his clan, comprised his heirs. Wives did not inherit from their husbands, and vice versa, for the same reason.

The matrilineal family was also important in other ways. It performed economic, ceremonial and political tasks, owned household property and generally functioned cooperatively, under the leadership of its head matron, as the basic unit of Iroquois society. Among its most valuable possessions were various titles, such as sachemships, names of chiefs and ceremonial officials. These were assigned by the matron to child successors after careful consultation among the leading women of the family group. Sachemships, as we shall see, were hereditary in certain "noble" families.

A group of matrilineal families, each consisting of three or four generations (perhaps 30 to 200 living members), comprised, as has been noted, a clan. The Iroquois had a still larger unit of society, namely, a moiety or phratry. As the name indicates, there were but two of these in each tribe, each embracing certain clans. The moieties, or groups of clans, functioned in historic times as social and ceremonial, rather than as political units. Members of one moiety played against the other in team games, especially those following ceremonies. Funeral services for one moiety were conducted by the opposite phratry which condoled with the bereaved group and, in the case of a deceased chief, gave it wampum to "wipe away the tears" and officiated in "raising up" a successor.

The clan, on the other hand, functioned in adoption of captives, in law and in politics. The clan bestowed the ordinary names on its members, arranged certain feasts and ceremonies and aided its members to redress their grievances. It protected them against vengeance, in cases of murder committed by a member, usually by paying or contributing to a blood price or wergild paid to the kin or clan of the deceased.

Political Organization

Perhaps the most notable achievement of the New York Iroquois was their political organization known as the League of Five (later Six) Nations, concerning the formation of which a great deal of conflicting and confusing information has appeared. This in part arises from the fact that the League, like other institutions of Iroquois culture, underwent such changes with time and circumstance that it appeared

Fig. 5 Ceremonial and council articles of the Iroquois

- a,b,c Wooden masks used by the False Face Society
 - a Spoon-lipped doorkeeper mask. (Note sacred bags of tobacco tied near the part in the hair)
 - b Crooked-mouth doctor mask
 - c Whistling beggar mask
- d,e Braided and twined corn husk masks used by the Husk Face Society
- f Wooden water drum and drumstick used by False Face Society
- g Box turtle rattle used in women's Bread Dance
- h Hickory bark rattle used by False Face Society
- i Gourd rattle used in Harvest Festival
- j Snapping turtle rattle used by False Face Society
- k Wooden flute used by the Little Water Society
- l Invitation wampum string attached to stick, notched to show date of event
- m Council wampum belt representing the Ever-growing Tree. (Displayed whenever the Constitution of the Six Nations was recited)
- n Condolence wampum

in a somewhat different light to numerous observers at various periods. Its real beginnings will doubtless always remain obscure and, in common with many events in world history, they have become invested with a body of myth and legend.

The traditional founders were Deganawidah and Hiawatha, the latter subsequently transferred and transformed by Longfellow. The legendary purpose behind the Confederacy is phrased as the desire to unite the warring brother nations of the Iroquois into a league for peace in which arbitration of differences would supplant force of arms, a kind of primitive League of Nations. After many vicissitudes on the part of the founders, the story says that five of the New York tribes were induced to "sit under the Tree of the Great Peace," a privilege declined by their neighboring kinsmen. Since in theory those tribes which failed to accept the "Great Peace based on union and law" were potential enemies of the League, they were, paradoxically, ultimately destroyed as organized tribes in the so-called Wars of the Iroquois. These conflicts took place between 1626, when the Mahican were driven out of the eastern Mohawk valley, and 1680, when the Iroquois raided the Illinois and Miami tribes far to the west of Iroquoia.

Astute modern historians have seen an underlying economic motive behind the development and activities of the Confederacy beginning with the appearance, early in the seventeenth century, of conflicting European powers, Dutch, French and English, and their subsequent struggles for monopoly in the fur trade and for colonial imperialism. In these long and bitter struggles the various groups of the Iroquois, including the Huron and other neighboring kinsmen of the Five Nations, played a key part. Even the cohesive force of the League did not always suffice to maintain harmony among its member tribes as the competition for markets was intensified.

The Indians' growing dependence on the fur trade with the whites to supply what they came to regard as necessities of life, combined with the latter's greed and intrigue, created bitter rivalries among the Iroquois groups for the coveted status of middlemen. This appears to have been the real factor underlying the succession of intertribal wars which brought destruction in turn to the Huron, Tionontati, Neutral, Erie and Andaste (between 1649-1675) at the hands of the "Keepers of the Great Peace." Although ultimately the replacement of the greater part of native material culture with European devices and the political alliance of the Five Nations (the Oneida excepted) with the English were to prove disastrous, these far-reaching implications could not have been anticipated. The Iroquois, like human societies everywhere and at all times, acted in the interest of immediate results.

The mechanism of the League in later historic times is much better understood than its formation and early growth. Affairs of the constituent tribes were self-managed on a states' rights basis. The ruling body, which met in Grand Council at Onondaga in the heart of the symbolic longhouse, comprised 50 civil sachems whose duty was to arbitrate matters of war, peace, foreign policy and intertribal dispute. Fear of political displacement was absent since, as earlier noted, these chieftainships were hereditary offices held for life upon good behavior.

All of the important clans and villages were represented at the National Council, not on an equal basis, however. There were 14 delegates from the Onondaga, 10 for the Cayuga, 9 each for the Mohawk and Oneida, and but 8 for the powerful Seneca. Because the principle of majority rule was unknown, this fact was meaningless. Unanimous agreement was required to pass any measure. Concurrence of opinion was reached in clan and tribal councils prior to the chiefs' conclave at Onondaga, where voting was by respective groups. In this general assembly there was no ranking officer, a moderator being appointed to conduct the discussions.

Some difference of function, however, existed among the delegates, the Onondaga chiefs being the keepers of the council fire and wampums. Shell wampum beads, purple or white in color, were arranged either in strings (Fig. 5,l,n) or in the form of belts (Fig. 5,m) and constituted, in the absence of a system of writing, a mnemonic record of the sessions. They were, in effect, the official documents of the Confederacy. Some years ago those that remained in Onondaga hands were transferred by sale to the perpetual custody of The University of the State of New York and may be seen in the New York State Museum collections.

The Great Council was not self-convening, but meetings could be called by any tribal council as need arose. Invitation wampums (Fig. 5,l) were dispatched to all member tribes of the Confederacy and the response was general, for the sessions of the National Council were occasions also of great social activity attended by games, dances, feasts and high merriment.

The status of civil sachem, being hereditary in certain family lineages, was open to few. Iroquois society made provision for the recognition of gifted individuals who were not eligible for the supreme titles by creating the institution of "pine tree" sachems, coveted but non-hereditary titles open to women as well as men. Chosen by a tribal council for distinguished ability in oratory and wisdom, candidates were confirmed by the Grand Council and could occupy seats and participate in discussion at the general sessions but were permitted no vote. Nevertheless, as counselors to the sachems, they possessed great influence and prestige. Some of the most eminent Iroquois statesmen belonged to this official category.

Mode of Warfare

War chiefs stood quite apart from civil sachems who were pledged to "protect the Great Peace." Their selection depended upon great personal courage and military acumen. While theoretically there could be no warfare without League sanction, in practice, this tenet was often violated by separate tribal action. Indeed, private warfare on the part of the Mohawk or Seneca, while the other tribes remained neutral, is a matter of recorded history. War parties were recruited from among the young men, commonly including the sons and grandsons of the war leaders. Women had no place in war, nor did clans as such participate. Before taking to the field, the members are said to have ritually purified themselves, feasted and danced about a war pole symbolically striped with red paint.

Ambush and surprise attacks were the rule. Weapons in earlier times comprised the bow and small, triangular, flint-tipped (Fig. 2,e) arrow, war club headed

with wooden ball or antler prong, wooden or bark shield and body armor made of wooden rods fastened together with thongs. Beginning about 1640, these were gradually replaced with guns and even earlier with iron hatchets of a variety of forms culminating in the pipe tomahawk of the late Colonial period.

Scalps and prisoners were sought, the latter being tortured and burned at the home village if not adopted. Adoption was in the hands of the women who thus replaced a relative lost in war. Whole nations might be adopted by League action. Thus, the Tuscarora were admitted in 1722, the Delaware, Tutelo and Nanticoke between 1762 and 1765. Emphasis on a military career developed along with European contacts and, after about 1660, the prestige of war chiefs began to overshadow that of civil sachems in Iroquois society. From the status of a comparatively obscure and isolated people impelled by peaceful cooperative motives centered about social and governmental ideals, the Iroquois had, through the historic accident of geographic position, trade and political involvement in a wholly new set of European cultural values, become gradually transformed into a more individualistic people conscious of their power and prestige.

Ceremonialism

Like primitive folk of other times and places, the Iroquois in the state of their culture could have little scientific understanding of the world of which they formed a part. The uniformity inherent in the interaction of events, or what we call the "laws of nature," was quite unknown to them. Yet, as human beings, they sought answers to the cause and effect relationships which they observed, as well as explanations of the great phenomena of life, illness and death.

Like other peoples, too, what they could not comprehend, they attributed either to the presence of anthropomorphized supernatural beings or to magical power called "orenda." Such power was conceived either as being exercised by these beings on behalf of or in opposition to man's will, or existing by itself alone and capable of being harnessed and directed by man through the employment of magical formulas, spells or incantations.

Relics of this type of thinking occur in our own fairy tales in such magic phrases as "open sesame." Power of this impersonal kind was likewise imputed to charms or amulets worn to protect against injury or to insure the wearer of certain extra abilities.¹ Thus, a talisman formed of a weasel skin could confer the savage cunning of this animal, while a gorget made from the skull of a brave human victim transferred to the wearer this esteemed virtue. The analogy of the rabbit's foot for good luck is well known, even today.

¹ Perhaps the antler female figurines (see Fig. 3,g) often found in Iroquois graves of the historic period belong rather in the category of amulets than of strictly decorative devices. They may have been inspired by the diffusion and reinterpretation of certain Christian concepts relating to the Virgin Mary.

To deal with the unseen world about them the Iroquois had well developed techniques, many of which were patterned upon behavior considered appropriate toward human beings. For example, since men enjoy the recognition of gifts and services to other men, the supernatural beings were likewise thought to respond to thanks offerings, sacrifices, praise and prayer. This worldwide concept found expression among the Iroquois in a whole series of thanksgiving festivals directed toward the deities, great and small, which were thought to control the necessities of existence. To illustrate, the ceremonial calendar provided for a "Planting Festival" or "Seed Dance" in the spring, a "Green Corn Festival" when the harvest began, and a "Harvest Festival" in the autumn when the ripe maize was gathered in. Observances of a similar order honored the spirits of the maple tree in the "Sap Dance" of early spring and the wild strawberry in the "Strawberry Dance" held in late May or June.

An all inclusive thanksgiving ritual formed part of the principal ceremonial observance of the year, the "Midwinter" or "New Year Festival." This began on the fifth day of the second new moon following the winter solstice, usually early in February, and lasted nearly a week. It was dedicated to one of the chief gods in the Iroquois pantheon, known as Teharonhiawagon, the "Master of Life" or "Holder of the Heavens," who was conceived as the ruler of the sky world and the father of life on earth.

The underlying concept of the complex ceremonialism of the "New Year Festival," which is still observed in the so-called "pagan longhouse" religion of the reservation Iroquois, seems definitely related to the ancient and widespread idea of an elemental conflict between the forces of life and death in the world. As phrased by the Iroquois, the power of the Life God is weakened in his contest with the Winter God and must be revived symbolically through magical rites performed by man. Thus, his powers will be restored and with them the means of sustenance to mankind. In the first phase of the ceremony the old fires are extinguished and new ones lighted in every house by special agents of the priesthood in charge of the ceremony. The arrival of the New Year is then announced.

The populace, congregated in the council house for the next part of the ceremony, listens to a long recitation or prayer of thanksgiving to the Master of Life specifically enumerating the elements of nature for which man's gratitude is due. Beginning with "Our Mother," the earth, the various categories of the plant world from grasses to trees are mentioned, followed by the cultivated plants, bodies of water, game animals, heavenly bodies, etc. etc.

Fire rites follow for the expulsion of evil spirits which cause disease and death. Then comes the "Dream Festival," of three days' duration, when the magical power of the personal guardian spirits of the people is restored by singing again their special songs. Several of the secret societies perform at this time, including the False Face Company of masked healers.

Formerly, on the morning of the last day, there was observed the sacrifice of the white dog. Ritually killed by strangulation and suitably bedecked with paint, feathers and wampum, the body of the animal was burned with sacred tobacco incense on an altar in an invocatory gesture to Teharonhiawagon for his continued blessings.

Other principal Iroquois deities included the grandmother of Teharonhiawagon, known as Ataentsic, who with her husband figures in the creation story. She brought life to the earth and became in time the divinity of death. In the paradoxical role of Ataentsic we apparently see another expression of the ages-old earth mother who supports an ever dying and reviving vegetation.

The conflict of good and evil in the world was symbolized by the struggle between the beneficent Teharonhiawagon and his brother Tawiskaron, who brought into being the noxious forms of life. Heno, the "Thunderer," brought the life-giving rains and with his roaring and lightning-flashing eyes frightened away the evil spirits who dwelt in the underworld. Finally, there was the powerful God of War, Agreskwe, who was identified also with the sun and in whose honor were offered the first fruits of the chase. Human captives were sometimes burned at the stake to sustain his favors.

The list of minor deities and nature beings is much too long for inclusion here. The latter include elf-like and ghost-like creatures, giants and grotesque animals of many kinds. Iroquois culture possessed a rich content of myth and legend which is referred to in works listed in the suggested references.

As in other societies, myth and ritual among the Iroquois were closely related. Thus, the various secret societies, chief among which were the False Face Company and the Little Water Society, have legendary founders whose initial instructions must be followed in the ritualism of the order. They are mainly healing societies devoted to the exorcism of evil spirits which, under the influence of witchcraft or other mechanisms, were thought to invade the body and cause illness and death. Each had its special songs, dances and paraphernalia, comprising masks (Fig. 5,a-e); water drums (Fig. 5,f); flutes (Fig. 5,k); wands; gourd, bark and tortoise-shell rattles (Fig. 5,g-j).

The emphasis on healing betokens the universal fear of death when, according to Iroquois belief, man became a disembodied spirit or ghost. At first earth-bound and dangerous, this spirit haunted the grave site seeking offerings of food. If not appeased, the ghost could retaliate by causing sickness. Its dismissal to the land of the dead, far to the west of but similar and superior to the familiar world, was accomplished by complying with its wishes for food, performing a mourning rite and by never again mentioning directly the name of the deceased.

In earlier times the clothed body of the deceased, soon after death, was bound in a skin shroud in a flexed position with knees against body and arms bent with hands before face, an extremely ancient mode. It was placed, usually without offerings, in a grave pit about three feet deep, lined and covered with bark before the admission of the earth. For reasons not yet understood, pottery vessels containing food and probably water together with personal ornaments, tools, weapons and smoking pipes, began to be interred with the dead after the advent of the historic period. Soon after the beginning of the eighteenth century flexed burial went out of fashion to be replaced by the European type burial of the extended body in a wooden board coffin. Articles thought to be useful in the spirit world, however, were still included, at least into the early part of the reservation period after 1800.