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BRONSON MUSEUM

This is the Society's museum, 5th Floor of the 8 North Main Street Building, Attleboro, Mass. — Museum hours are from 9:30 to 4:30, Mondays, Tuesdays, and Thursdays. For special arrangements to visit on other days, contact the Director, Maurice Robbins, or the Curator, William S. Fowler by mail at the Society Office, Bronson Museum, Attleboro, Mass.

The Museum includes exhibits of artifacts and seven dioramas portraying man's prehistoric occupation of New England. The displays are arranged so as to show man's development through four culture stages, from early post glacial times.

The most recent diorama extends 15 feet across the front of the museum. It depicts an Archaic village of seven large and unique wigwams as indicated by their foundations, excavated at Assowampsett Lake by the Cohannet Chapter. Human figures to scale make the scene come alive and help create what unquestionably is an outstanding addition to our ever growing museum displays.
While surface hunting, the writer has often found evidence of an early occupation in the area represented by this site. Numerous artifacts were picked up, and an abundance of firestones and chips noted. To get a better idea of what lay below, small test holes were dug. Immediately, large quantities of reddened firestones, charcoal, and bits of calcined bone were exposed. On the basis of this evidence, it was decided to conduct a controlled excavation at this location. It appeared to be a discovery of a promising site, especially as it lay in the Washakumaug district between Farm and Washakumaug ponds. This area has long been known to have been used for camp sites in aboriginal times, because of frequent surface recoveries of artifacts.

Radio Station WKOX, Inc., owners of the property on which the site lies, were contacted. Upon learning that the work would be conducted under scientific control, authorized by the Massachusetts Archaeological Society, Richard E. Adams of the concern very gladly granted permission to excavate and retain such artifacts as might be recovered for study.

In the late summer of 1959 work was started in laying out the site, and excavation followed soon after. It was carried on in spare moments very largely by the writer, who was assisted on many occasions by John Sheehan, a member of the Society. Located near the northeast corner of Farm Pond in Framingham, Mass., the site consists of a bowl-shaped area of about an acre, and is protected from the northwest by a low-lying hill (Fig. 1). The land slopes gently toward a swamp, which formerly may have been the old shore line of the adjoining Farm Pond. This body of water forms a medium sized lake, which empties through the swamp into Eames Brook to the west, thence into Sudbury River, a tributary of the Merrimack. It is thought likely that in aboriginal days, canoes could have navigated all the way up this watercourse to Farm Pond. The area excavated lies about five feet above water level of the pond, and over the years has been subjected to water erosion from the high ground that surrounds it on the northwest. Unfortunately, this has caused an uneven accumulation of soils over the site, with relative depths decreasing as an approach is made to the swamp. As a result, this erosion has tended to interfere to some extent with the establishing of culture zones at fixed depths, and has had to be taken into consideration when assigning to their respective zones of concentration, artifacts which lie between these zones. However, this has not upset locating concentrations of artifact types.
EXCAVATION AND STRATIGRAPHY

The site was laid out from a 50 foot baseline at the foot of the hill to the west. Another 50 foot line was run at right angles to the first from its north end. This area was then subdivided into 6 foot grids, which were carefully staked and numbered. The actual work of excavation followed instructions as published in the Society Bulletin, and covered an area of 2,160 sq. ft. Each of the 60 squares excavated was troweled down shelf by shelf through several layers of soil to the white sand floor. This proved to be sterile except for one worked chip. While this may indicate a still earlier occupation, it is thought probable that it belongs to the Lower Zone. All recoveries were recorded on standard file cards, with vertical measurements to the nearest inch made to the junction and to the grass roots — junction is an irregular line of demarkation separating loam from subsoil. These recordings were eventually transferred to a master chart, showing their relative culture zone positions.

Disposition of soil consists of a top layer of loam about 12" in depth. At its base the uneven junction, 1 - 2" in thickness, feathers off into the

Fig. 2. CACHE OF ARTIFACTS, Washakumaug Site. 1, Modified Clumsy Plummert; 2, 3, Grooved Weight; 4, 5, Limonite; 6, Plain Gouge; 7, Oval Scraper.
subsoil, which indicates that the plow, which disturbed perhaps 8" of loam, never reached it. All colonial evidence such as broken glass, pieces of coal, and other modern debris appeared within the 8" of disturbed loam. Below junction, sandy subsoil is colored brown from humus leaching, which grows gradually lighter until the white sand level is reached. The subsoil varies in depth from 12-24", the greatest depth occurring toward the hillock in the rear. The few trees of second growth were not disturbed, excavation being carried as close as possible around them.

Artifacts were recovered from loam and subsoil, while the white sand, apparently, was sterile except for one worked flake, as previously stated. After transferring vertical positions of artifacts from field recordings, culture zones were established. These were determined by noting concentrations of the different types of artifacts, which at other sites have been found to have diagnostic culture significance. Of course, in establishing culture zones, no matter on what basis they are formed, there are always border-line artifact deposits, which must be thrown either way, depending upon the direction of concentration of the type in question. Then there are usually a few artifacts, which appear out of place, separated from the concentrations to which they belong. At this site the number of artifacts out of place was relatively small, amounting to only 7% of the total number of artifacts recovered and identified. Other factors, which have aided in determining the zones, are presence of Stage 1 potsherds as low as 2" below junction, but no lower. This establishes a line of demarkation between the Upper and the Middle Zones. Then in the Middle Zone appear fragments of steatite bowls. These contribute evidence to show this zone as belonging to the stone bowl industrial age of the Late Archaic. That which lies below forms the Early Archaic of the Lower Zone, which is set apart by its diagnostic artifact traits.

On this typological basis as outlined, three culture horizons were established: Lower Zone (Early Archaic) — white sand up to 7" below junction; Middle Zone (Late Archaic) — 7" below to 2" below junction; Upper Zone (Ceramic) — 2" below junction up through the loam.

**OCCUPATIONAL EVIDENCE**

The entire site excavated was filled with refuse pits and hearths, so much so that it was difficult at times to distinguish between them, since both contained charcoal. This extensive disturbance probably accounts for some of the recoveries appearing out of context. Two stone hearths in situ in the Middle Zone were recognizable. They were 18" in diameter, and had a stone accumulation of 7" in depth. The stones were laid evenly in a more or less solid mass. Also, there were 64 open hearths of a somewhat different formation in the Middle Zone at a lower level. They were constructed with a shallow charcoal basin of about 12" in diameter. Some of them extended into the white sand, and may have belonged to the Lower Zone. All contained much charcoal, but no artifacts.

An estimated 90 refuse pits were encountered, 25 of which contained artifacts. These varied greatly in size, and contained firestones, bone fragments, a few stone chips, but no shell remains or artifacts. There was one pit originating in loam of the Upper Zone. It contained 3 potsherds, a Small Triangular quartz point, felsite chips, deer bones, and a piece of fused deep blue colored glass. If this glass chunk is not intrusive, the deposit must be of contact nature with the sherds from Stage 4 ware. However, the sherds, instead, show traits of Stage 3 ware. This would seem to indicate that either the glass is intrusive, or what may also be possible, that the sherds are a late aspect of Stage 3 overlapping into contact times.

Lying close to the white sand appeared a group of 7 artifacts. As they were not spread out, it is believed they formed a cache, which was buried in a pit for some unknown reason. There was no charcoal, bone matter or red ochre to indicate the nature of the deposit, and probably because of this the pit shaft was unrecognizable. The artifacts consist of a modified Clumsy plummet, 2 Grooved weights, 2 chunks of limonite (decomposed iron pyrites firemaking equipment), 1 Plain gouge, and 1 Oval scraper (Fig. 2). It seems likely that this cache represents some significant ceremonial deposit, probably intrusive from the Middle Zone. It might well be a secondary burial of the Stone Bowl Makers, who practiced cremation according to recent reports appearing in the Society Bulletin. The first three weight items are believed to be line sinkers of two kinds, used in taking fish.

Altogether, 124 stone artifacts were identified and recorded, some perfect and some fragmentary. The most diagnostic specimens have been illustrated, and are shown in their respective culture zones; the number after each in parentheses indicates quantity recovered.

In the Lower Zone (Early Archaic) (Fig. 3) appear the following traits: Corner-removed #8 point (3); Whetstone (2); Classic plummet (1); Ulu (3); Oval scraper (4); Shaft scraper (1); Stem scraper (2); Hand spade (1); Hammerstone (1).
That additional tool types do not appear may be accounted for by the limited area excavated.

The Middle Zone (Late Archaic—Stone Bowl) (Fig. 4) contains more numerous traits and recoveries: Corner-removed #3 (7), #7 (2), Side-notched #3, 5 (8), Eared (5), Tapered Stem (1), Small Triangular (18), Small Stem (4) points; T drill (2); Stem knife (2); Stemless knife (4); Oval scraper (2); Clumsy plummet (2); Plain gouge (3); Wing atlatl weight (1); Whetstone (1); Steatite bowl fragments (2).

In the Upper Zone (Ceramic) (Fig. 5) appear the following: Corner-removed #3 (2), Small Stem (3), Small Triangular (9), Eared (1) points; Stem Scraper (2); Cross drill (1); Crescent drill (1); Steatite effigy (1); Notcher (1); Hatchet (1); Hatchet club (1); Chipped ax (1); and potsherds from the first 3 stages. One pestle was recovered from a pit, but since its top level of origin could not be determined, it has been impossible to assign it to a culture zone.

CONCLUSION

This site, although limited in size, has demonstrated, by the vertical distribution of its artifact types, separation of three culture periods. It is probable that it represents but one end of a more
Fig. 4. MIDDLE ZONE (Late Archaic) Washakumaug Site. 1, 2, Corner-removed &; 3-8, Small Triangular; 9, 10, Small Stem; 11, 12, Corner-removed &; 13, 14, 21, 22, Side-notched; 15-19, Eared; 20, Tapered Stem; 23, Oval Scraper; 24, Stem Knife; 25, Stemless Knife; 26, 27, T Drill; 28, 29, Clumsy Plummet; 30, 31, Plain Gouge; 32, Wing Atlatl Weight.
extensive occupation, reaching easterly above Farm Pond. However, it was impossible to extend operations to this area due to its destruction by heavy disturbance. Therefore, the report, of necessity, is confined to the small section above the swamp, which was excavated.

Although artifact recoveries from the Lower Zone are limited, it would appear that the early Archaics commenced living at the site, when white sand covered the area; probably a tundra environment. The most impressive artifact traits in this zone are Corner-removed #8 point, Classic plummet (small knob and evenly worked plumb bob-shaped form), and ground slate Ulu. [This is one of the best examples of the culture position of the Ulu yet discovered—Ed.]. Not only a perfect Ulu (re-worked broken end), but also two other blades represented by fractured segments appearing in this Lower Zone seems convincing evidence that this knife belongs to the Early Archaic.

When a look is had at the artifacts of the Middle Zone, here again is seen ample proof of another occupation, apparently the result of arrival of a new tradition. Of the traits reported, perhaps
In early October of 1962 the writer made what seems to be a significant find at the Swan Hold site in Carver, Mass., previously excavated by Richard H. Bent and other members of the Massachusetts Archaeological Society in 1952, and reported in Bulletin, Vol. 13, No. 2 of the Society.

At numerous times the writer had been shown certain outstanding implements recovered from Swan Hold in various Plymouth collections. These served as an incentive, on repeated expeditions to the site, through many fruitless days of digging. However, believing that archaeological persistence eventually pays off, the writer refused to give up, and was finally rewarded while excavating at the site with Richard Bent.

Selecting a small area undisturbed by former digging, excavation was made to a depth of 18" from the top of the ground, the depth in which most artifacts usually appear. However, to be on the safe side, excavation was then carried to a greater depth. At about 29" down, or 18" below the loam a distinct lens of darkened soil was encountered. This proved to be the top of a pit 16" in diameter, which extended 12" in depth through white sand and into the bottom floor of glacial gravel (Fig. 6). Contents of the pit included some firestone and one well-shaped Hammerstone, but no other artifacts.

At this point the excavated area was enlarged, so that upon reaching a depth on a level with the top of the pit, but just at one side, undisturbed soil beyond the pit shaft was explored. Obviously, this area was not connected with the pit except that probably they were coexistent. Here two gouges of the Channeled type appeared, lying side by side along with a few pieces of firestone (Fig. 7). This was a fitting and inspiring reward for an excavator’s perseverance, and while no other artifacts were recovered, the writer felt that these gouges, alone, had important bearing upon the study of prehistoric cultures, and went home a very happy digger.

Believing that the find had archaeological significance, both because of the type of gouge and the low depth at which the recovery was made, the writer showed the gouges to the curator of the Bronson Museum in Attleboro. He was impressed with the find, and requested details concerning it, which have been set down in this report. This
recovery seems to add one more piece of important evidence to the ever increasing network of information being dug up about early man in New England.

Marshfield, Mass.
January 1963

APPENDIX

Editor's Comment: First, it may be well to define a Channeled gouge, as appearing in the Massachusetts Archaeological Society's Classification. Usually, the cutting blade of this gouge is relatively short, and often is flaring. The stem end, generally, is terminated by a knobbed enlargement, from which a wide shallow channel has been pecked extending 3 to 1½" down the back of the stem, used as a means for securing hafting thongs. This channel differs from the groove of a Grooved gouge in that it tends to have a flat trough rather than a rounded one, and most always is not nearly as deep. In fact, more often than not, it is so shallow that a ruler held against it is required to detect the depression, as in the case of the second exhibit from Swan Hold (Fig. 7).

This recovery of two gouges in situ is most welcome, because it confirms similar evidence previously exposed at Twin Rivers site in the uplands of Rhode Island. There, a fractured but well-defined Channeled gouge appeared in a cobble stone hearth with small fire pit, 20" deep, and resting on glacial-laid gravel. A modified Fluted point of quartzite, thought to represent end of the Paleo-American period, occurred in this low zone. However, this may merely indicate Paleo overlapping of a stray Fluted point into the beginning of the Early Archaic. Similar Channeled gouge evidence in situ from other sites was lacking at the time, which prevented as high a degree of certainty about the diagnostic value of this gouge as might have been desired. Now, however, with the Swan Hold discovery, there need be no further doubt concerning an Early Archaic culture position for this gouge type.

In order to justify this statement, it is necessary to review the stratigraphy at Swan Hold, outlined in the original site report, as related to the recovered artifact types. Ceramic culture traits, including potsherds, occurred through an 8 to 10" loam overburden — probably did not extend several inches into the subsoil as formerly stated. This Ceramic extension was predicated, at the time of the report, on recovery at 7" below junction (line of demarkation between loam and subsoil), in the yellow sand subsoil at one spot only, of many sherds, all belonging to one pot. Back in the days of this dig, such a manifestation was assumed to
represent the earliest Ceramic level. However, since then, experience has demonstrated that potsherds exposed in this way from one pot almost never occur on an occupational level. Instead, they appear in a refuse pit, which always extends much below their level of origin. Often, the pit shaft is unrecognizable because of insufficient organic content in the pit, which leads to a misinterpretation of the evidence. Evidently, this is what happened in the initial Swan Hold report, especially, since the sherds in question were not from a Stage 1 pot, but rather were those of a later stage.

Below the loam appeared remains of the Late Archaic to a depth of about 10" below junction. From this level to the white sand, about 20" from junction, diagnostic traits of the Early Archaic were present: Oval atlatl weight, Ulu, and Corner-removed #5,9, projectile points.

With these facts in mind, examination of the profile chart of the dig clearly shows position of the two gouges well within the Early Archaic zone. Since no disturbance existed to suggest intrusive deposition, it may be concluded that the gouges represent an original placement outside of, but probably contemporaneous with the pit. This Swan Hold find tends to confirm the one at Twin Rivers, and furnishes what seems to be reliable evidence to justify postulation of the Channeled gouge as a diagnostic of the Early Archaic Age.

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**A STUDY OF CORDAGE AND ROLLED COPPER BEADS, BURIAL #6, TITICUT SITE**

Britta D. Jeppson

The history of thread or cordage goes back many thousands of years. In New England, it was known to Archaic peoples, and may have antedated them. It is believed that they, or those who preceded them from the Old World invented cordage for sewing or binding, along with bone needles and awls.

In the Southwest, and further south in Peru, it is known that early native women spun cordage, first by the hand-rubbed-cord-on-thigh method, then with a simple tool called a spindle and whorl. This consists of a slender wooden spindle, which pierces a small symmetrical perforated weight. Such a weight, presumed to be a whorl, has been identified among the artifacts on display in the Bronson Museum, and is illustrated (Fig. 8, #1). At first, only a single-ply of one thread — not very strong — was used. Then, perhaps by accident, it was discovered that a two-ply thread could be made, which was much stronger.

In New England, cordage is believed to have been used in earliest days for fish lines and tie cords of all kinds. In later times, probably toward the close of the Ceramic Age, it was used for fish nets, bags, and other purposes such as fine cords for stringing beads. Also, in the ceramic industry of pottery making some pots were cord-marked by paddles wound with twisted cord.

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Diffused from the West, knowledge of cord making was obtained by the native women of New England, who learned the technique of plying or twisting two threads together, and evidently discovered the trick of using three. A two-ply piece of cordage found in Paisley Five Mile Cave #2 (a Southwestern site recovery), yielded a Carbon-14 date of 7,610 ± 120 years ago, and is ample proof that cord making was an early art of the New World.

The writer examined two fragments of cordage from Burial #6 of the Titicut site with the help of a textile magnifying glass, and discovered that both were two-ply (Fig. 8, #3). In connection with this it is interesting to note that the preliminary step in cordage making is spinning an S twist (left twist), or single strand. When enough thread has been spun in this way, it may be doubled...
and twisted to the right for a combination of S and Z twist (meaning first left, then right), and may be continued in this way for any number of threads. The spinning of the Burial #6 cordage is quite evenly done, showing that it was made by an experienced weaver. Her tools may have been a spindle and whorl, although this is not at all certain for lack of evidence. Vegetable fibers, such as wild flax, milkweed, and the inner bark of basswood were some of the raw materials, which may have been used in making cordage.

The rolled copper beads from Burial #6, found with the cordage (Fig. 8, #2), would make an interesting story by themselves. In early times, copper ore was found in nugget form, one known source being the Lake Superior area in the West. The aborigines of New England in Late Archaic times are believed to have obtained their copper, such as they had, in the form of finished artifacts, although unworked nuggets may also have found their way eastward. Spectrographic analysis of a copper ax of this age from the Powers Shellheap, Plymouth, found it to be made of Lake Superior copper. However, in colonial days, when Burial #6 was interred, the natives are thought to have obtained small amounts of sheet copper from the English by barter. This could then have been reduced in thickness still more by pounding to bead thinness. After cutting to desired lengths, which proved to be quite irregular, the beads were formed by rolling the copper around a wooden or bone core. The core was then removed and the beads strung on suitable cordage for a necklace.

The writer is sincerely indebted to Karl Dodge for a comparative study of cordage used for a western bead necklace, and to William Fowler of the Bronson Museum for the illustrations.

West Brookfield, Mass.
October 12, 1962

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CARIBOU INDIANS OF THE QUEBEC LABRADOR PENINSULA

John T. McGee

Editor’s Note: This study of the Montagnais-Naskapi was made at close range on several occasions, during Dr. McGee’s work among these people of the North. It is of value to archaeologists, since it presents a way of life, which may have traditional connection with the Caribou Hunters of New England of the Early Archaic Age.

It seems to be widely accepted that archaeology and ethnology are handmaidens of history. Like Toynbee,1, Trever2 expresses this concept: “Anthropology, by its study of the earliest human remains and artifacts and of contemporary primitive peoples, has cast a flood of light upon human origins, the prehistoric ages of man, and his earliest institutions and beliefs.”

In the same vein Kroeber3 says: “Archaeology always can recover from the ground only a portion of any culture — the tangible material part — and of that only such fraction as manages to be physically preserved. The student of a living society, on the contrary, has the opportunity of inquiring equally into all segments of its culture... ethnographic studies have contributed perhaps as much as archaeological ones to our present understanding of the history of culture in native America. The

precise succession of culture growths, and their local variants in the past, we owe to the archaeologists; the clothing of this skeleton or framework with the flesh of fuller culture, and the reconstruction of the greater long outlines of development over the whole hemisphere — to these, ethnologists have contributed as much or perhaps more."

It is with this idea in mind that we hope to fill out a bit the framework of New England archaeology, at least in regard to Archaic man. To do so involves certain postulates which are here taken for granted, without any attempt being made to prove them beforehand, and without the implication that they are generally accepted, although they may be widely held. These are: 1) the continuity or persistence of culture in time and space is due to the endemic devotion of different peoples, or of any one people, to the basic institutions distinctively moulded by their own culture in accordance with their own traditional needs, aims, ideals and environment; 2) the ecology of man is to a great extent limited or determined both by the physical nature of any environment and by its human, faunal, floral, and climatic conditions; 3) postulation is that towards the end of the Wisconsin glaciation, when ice had receded from New England, for a long time the physical, faunal, floral, and climatic conditions were somewhat similar to present day conditions in Canada's subarctic zone where the boreal taiga meets the arctic desert. Also, that today the culture of the Montagnais-Naskapi, who inhabit the Quebec-Labrador peninsula (Fig. 9) is probably similar in part to the culture of Early Archaic man in prehistoric New England.

Assuming these postulates, we may begin with an outline of Montagnais-Naskapi daily life. We can do this by looking at some of their institutions—those relatively permanent structures of social patterns and relationships that this people has developed in socially sanctioned, unified ways of satisfying their basic needs — whether political, familial, educational, religious, recreational, or economic.

POLITICAL INSTITUTION
We may say that all the larger clusters or bands
of these people have elected or designated chiefs. In relatively recent times Canadian Government agencies have encouraged the natives to designate chieftains, who might represent bands and speak for the members in relations with outside agencies.

In one band, within the last ten years, Indians asked the local missionary how to hold an election. He proposed a secret ballot after public nomination of candidates. This was soon objected to on the grounds that it was not the Indian way of doing things. It was pointed out that candidates had to nominate themselves, giving appropriate reasons and citing a record of achievement. Indians in favor of any particular candidate had to line up behind him. It should be noted in passing that many of the men could not read or write, and that in all probability this condition was a factor in raising objections to the missionary's proposal.

After the missionary had counted the voters in each queue and had declared the winner, he gave a party for everyone in honor of the new chief in the mission hall. In addition, he allowed drumming and dancing — a very popular activity — the same as at weddings. The losing candidate and his followers refused to attend the victory celebration. Then a few days later they demanded the use of the parish hall for their own group. They accused the missionary of being unfair because he refused to put on a dance and party for them.

It must be pointed out that, today, the new chief has no more authority over anyone than he had in former days. However, he has just as much authority as patriarch among his own people as previously. He is simply an older man with more voting relatives than anyone else at present. But, he speaks neither English nor French in a country where both are official languages; consequently, he cannot deal directly with Government visitors, and is in fact for all practical purposes ignored. In effect, the election was useless. The "chief" is aware of his status and has complained to the missionary that his proper role was not being recognized.

FAMILIAL, EDUCATIONAL AND RELIGIOUS ACTIVITIES

Most of the Quebec-Labrador Indians are nominal Christians, following fairly faithfully the beliefs and practices of whichever sect first settled among them and remained in residence. In the course of time the ministers and priests succeeded in displacing the shamans, and to a large extent acquired much of the authority and moral influence that the old medicine men had. Today, many resident missionaries exercise much more authority and have more influence than the so-called chiefs. For all practical purposes they become the real internal chiefs, the external chief being the official Indian Agent or Welfare Officer. He makes virtually all decisions affecting the relations of any band member with the outside world.

The oldest man in a family group or in a tent is usually the head of the family. He makes the final decisions and has the last word in regard to anything of significance. This does not mean that he is not influenced by the opinions of others, or that he does not listen to them. Wives and other relatives, the missionary, and even sons and daughters influence decisions. But in both the nuclear family and extended family the patriarch is greatly respected, even when as many as five generations are housed under one roof, and after sons set up separate tents for themselves and their growing families hard by their father's tent.

In earlier days, retaliation to outside interference often took the form of recourse-shamans, who were asked to conjure against real or imagined offenders with the hope of causing them to suffer bad luck, accidents, or even death. Today, the minister or priest in the shaman's place listens to both sides, and tries to sift the truth; but no matter what his decision is, he will be accused of favoritism in the end by one or both sides of the dispute.

Family feeling and interdependence is strong among these people. Children are much more in evidence than adults. There is great prestige attached to having large families. The man or woman who has numerous offspring is listened to and shown preference. By the same token, women who are barren or who lose many children at birth, along with the men who have no sons to replace them on the hunt, lose status in the group.

Both boys and girls are cherished, and as a rule are better fed and clothed than their parents. In fact, by Euro-American standards, children often appear to be spoiled, disobedient, dominating the family until they reach the age of six or seven, when boys begin to follow their fathers, and girls to imitate their mothers. At this time, boys and girls are segregated from each other, and discipline or education begins for them with parental instruction. After years of virtually no repression these youngsters grow up with great devotion and parental respect, which lasts for the most part until they bury their fathers and mothers with great sorrow.

Beating of children rarely occurs. Their training at home consists largely in learning the well defined male and female patterns of economic life.
and family living. Love and affection binds them together. There is no divorce, and very little infidelity or abandonment. Christian patterns of conduct have been taught for a long time by missionaries to these natives, and they have largely accepted them with a few modifications. With Canadian Government assistance in the form of monthly allowances to children up to sixteen years of age, mission schools have been opened in places where there had never been any. School attendance is enforced for Indian children for at least a few months a year, when they are not far away hunting in the forests or on the tundra. This has tended to make the Indians more sedentary, and to encourage older men and women and the sickly, who are a burden in the bush and useless for hunting purposes, to reside the year round at mission sites. Children often are left behind for schooling and to care for these elderly folk.

At school the children learn virtually nothing that is of value in their environment, and because they are not hunting, they are not learning to follow in the footsteps of their parents, who until now have been caribou hunters.

RECREATIONAL ACTIVITIES

At mission stations where the children are attending school there is a tendency for them to learn some of the recreational patterns of white Canadians, such as ice hockey, skating, soccer — or football as it is called in many places. One thing is very noticeable, which is not the result of the school, but of early home training and a long tradition: girls and boys always play separately and do not even speak to, or shout at each other. Because of the lusty, healthful sex life of married adults there is the strictest supervision of the young until they marry, usually, about three years after the age of puberty. Consequently, there is virtually no sexual activity on the part of the young. Parents arrange marriages, but they cannot force young people to get married because of overt opposition by both church and state.

On the trail or in the bush, away from the missions, recreational activities at all age levels are similar: telling stories, smoking, playing cards, singing, watching the dog, playing with the baby, dancing, drumming, visiting neighbors, as well as certain phases of their routine work. For young boys and girls, imitation of the economic activities of their parents becomes a sort of game, as it often does in our own Euro-American culture.

ECONOMIC ACTIVITIES

The economic life of the Montagnais-Naskapi (Cris) northern hunters is today as it has been for centuries, centered in hunting-fishing-gathering and manufacturing the maintenance tools and articles, which help sustain this way of life. This economy, located in the Quebec-Labrador peninsula, corresponds to a similar one of Cris Indians, but with a different dialect, on the west side of Hudson Bay. In general, these native hunters are remarkable for their extensive and accurate knowledge of the geography, as well as of the fauna and flora of the area over which they hunt and trap and roam. In many cases this means a stretch of two hundred miles or more. Some individuals, of course, are acquainted with much greater areas.

Like the Indians themselves, the game animals, for the most part, are to be found most of the time inside the periphery of the boreal taiga: the thinning, sparse stunted trees, which grow at the edge of the tundra. Here the permafrost loses its cold grasp on the ground at the rate of over a hundred feet a year. The most highly prized game item sought by the hunters is the caribou, which shelters during the winter of seven or eight months in the taiga, south of the barren tundra. In the spring some of the caribou move away toward the arctic across the tundra, which supports them with grass, lichen, moss, and flowering plants for about four months. During this time the females calve and rest, while their young grow strong when they start the long trek back to the southern edge of the tundra. Here, even in winter there is always some daylight, and the arctic winds spend and break themselves on clusters of black spruce and twisted larch. Other caribou head for the fringes and the higher valleys of the countless bald glacier-rounded mountain tops, where conditions are somewhat the same as on the level far-reaching tundra.

Due to the fairly steady decline of the caribou population in northern Canada during this century, and particularly over the last twenty-five years, Indian hunters have been forced to change their mode of hunting. This in turn has resulted in the creation of a new authoritative role, namely the "hunt chief," who has an assistant or second-in-command. These men are chosen strictly on merit, and as a rule are the "big hunters" of their group: an organized hunting party of 12 or 15 kinfolk. Their authority is very great, and the recognized sanction for not immediately obeying their demands is permanent banishment from the group — "He never hunt again with us." This authority is strictly ad hoc and ceases as soon as the men arrive back at their base camp, where their families normally remain.
Today, older men in their sixties and seventies, and women as well, love to recount how they used to move with their families to kill sites, when their scouts brought the exciting news that the caribou were on the move, and telling which way they were heading, and where the best place was to trap them and get meat by the ton. Back in these good old days, there was plenty of meat for everyone, and much skin material for tents, clothes, snowshoes, and other things.

At kill sites the migrating caribou were way-laid either in natural narrow passages or in man-made ambushes. Sometimes the hunters killed the deer as they crossed lakes and rivers and came ashore driven from behind by other on-coming terrified animals. Sometimes they even decoyed the caribou by propping up antlers with sticks and covering stones with skins. According to these oldsters, when one could get close to the migrating caribou, by far the best and fastest weapon for killing them was a good solid home-made spear, well hafted with a sharp point, or a butcher knife solidly attached to a strong handle.

It is worth noting that by 1830, when traders were well established in several places on the peninsula, native hunters were still using bows and arrows, and were making fire with the bow-drill and punk from birch trees. It took about fifteen minutes for them to produce fire by this method. However, by this time many of them were using flint and steel obtained from the traders.

One old hunter got great pleasure recounting how he used to catch caribou with box snares of plaited caribou skin. The hardest part of this operation was the finding of two trees beside a caribou trail to which to attach the snare, that would be big and strong enough to hold a trapped deer. The operation consisted of a limited number of hunters deployed in such a way that a frightened animal would be driven toward the concealed snare, which would catch the antlers of the caribou.

Nowadays, hunting of the caribou is entirely different. Their migrations are in small numbers, which requires careful stalking of the animals. Being in small numbers, caribou conceal themselves more easily and blend into their natural surroundings. Ingenuity, patience, stealth, and endurance are required of today’s hunter. The lone hunter may have success from time to time, but he is extremely rare among these folk. They prefer an organized, armed hunting party under the leadership of an outstanding “big hunter,” and a young second in command. Getting close to the game is as important today as it was in the past, because these hunters for the most part use light weapons: mostly single shot .22 caliber guns, which are relatively light. More complex guns, such as repeaters and automatic weapons are not practical, because of the great difficulty in repairing them, and because of their tendency to jam and become inoperative in cold weather. Although these hunters regularly hunt caribou with .22's, they do not hesitate to attack a bear with these light guns. Last year, one young hunter put twenty-eight shots into a big bear before he brought it down.

Just as excavated Early Archaic camp sites in the New England area are often remarkable for their absence of heavy stone artifacts, so are the camps of these hunters today in the far north. Their weapons and tools for the most part are light and adapted to their environment. This is one reason the snare and deadfall are still commonly used.

The Montagnais are basically meat eaters, and of all their meats, caribou takes first place. Virtually the entire animal is consumed or used, even the contents of the stomach. The brains are used for tanning. Bone marrow is extracted and mixed with the tallow. This concoction is regarded as a great delicacy, and is usually the most highly prized item at a banquet. Also, hunters customarily drink warm blood from recently killed caribou. Broken leg bones and other bones are used as tools. For instance, women still use shaped leg bones as scrapers for removing hair from hides. This tool is about ten inches long, and fashioned by removing one inch of bone from one side and end. When using this artifact, a woman usually attempts to strengthen her thrust against the hair by holding a small deerskin bag full of pebbles in whichever hand is providing most of the power. One may say that bone is used on an as-needed basis. Often in the bush there is nothing else that can be shaped into a tool as quickly as a piece of bone. As recently as last year, the writer saw a hammer made from two pieces of bone. In another place, he saw a drumstick made from a caribou bone. Even in relatively recent times, bone splinters have been attached to sticks to serve as fishhooks. Also, they are used as straight pins, and awls.

Other elements of the caribou, that are still used today, as in past ages, are the sinews. They are cleaned and combed out as individual threads, but left attached to pieces of cartilage three or four inches long. Some of the threads are over two feet long. They are relatively tough and strong; are impervious to water. Often they are the preferred thread for sewing moccasins and mitts, and are considered essential as thread for sewing oilskins,
which are used on rainy days in the spring. When
the woman needs a thread, she simply snips one
from the cartilage. Also, sinews are used in making
caribou skin drums, both for binding the skin to the
wooden drum frame, and for the loose rattle string
with porcupine quills attached, which stretches
across the drum's surface. Years ago, when the
Indians did not have nails or tacks, sinew was used
for binding bark to canoe frames.

Until the white man's cloth replaced them,
caribou skins were the chief material for covering
huts and for clothing. In fact, skins predominated
in many places less than a century ago on the
peninsula, and even today for certain items, are pre-
ferred over anything the white man has to offer, as
for example, moccasins, mitts, leggings, belts, and
small bags for carrying salt, sugar, tea, tobacco, and
bullets. One may see these bags hanging on stakes
driven into the floor of the tent beside each hunter's
sleeping place. Further uses for caribou skins are
for ground sheets and bedding, used like tarpaulin
on toboggans and sleds, and in canoes to protect
clothing and food from snow, rain, spray, and dogs.

Pieces of skin are used to make dog harness, snares
and other articles. Another important use for the
sinew is in making webbing for snowshoes, which
are essential for winter travel and hunting when the
snow is fluffy, light and deep. Without snow-
shoes, hunters would be camp-bound most of the
winter. An active hunter uses four or five pair in
one season, partly due to carelessness. In their pur-
suit of game, the men carelessly run over stumps of
cut saplings, jagged roots and rocks, cross ice and
hard snow, which cuts through the web bindings.

Lightness and strength are the chief features of
the ovoid snowshoes used by the hunters. Any
animal that makes the mistake of getting into deep,
dry snow is at the mercy of an Indian on his snow-
shoes. In fact one of their techniques in hunting
caribou is to run the animals out of their cover and
off the wind-hardened, frozen snow on the moun-
tains into the much deeper snow of the valleys,
where they flounder and exhaust themselves, and
become easy prey.

Buckskin thongs are still used to bind together
the thinly whittled boards, which, after steaming,
are shaped to form the Indian toboggan. Also,
thongs are used to bind solid cross bars to the
hewn runners of the distinctively Indian sled, and
to lash on the saplings, which form the floor of the
sled. This popular Indian sled, made without nails,
screws, or bolts, is much preferred to the heavier
komatick, which a few people have adopted from
the Eskimo; the Indian emphasis is on lightness.

It is not at all unusual to see two arctic hunters
setting out from their hunting camp for what they
hopefully figure will be a kill site, each carrying on
his shoulder a hewn runner for a sled. If a caribou
is killed, the sled is quickly assembled at the kill
site, by cutting saplings and binding them to the
runners with thongs, in order to transport the meat
back to camp. As a rule, hunters camp a mile or
two from where they expect to find game, in order
not to alarm the animals by noise or smoke. For
the same reason, it is customary to hobble game,
and to bind their snouts tightly with thongs, or wire
preferably, to keep them from barking.

Important as caribou is to these hunters, it is
not the only source of sustenance. Bear meat is
highly prized. Virtually all of the animal is used,
except the entrails and bones, which are buried in
flowing water when possible. The skin is particu-
larly valuable for bedding — to lay over the spruce
twigs and branches, which cover the floor of every
tent residence in both winter and summer. Bear
skulls are usually mounted on trees, both as trophies
indicating the prowess of the hunter, and as objects
of respect, because of the manlike nature of the
bear. Like caribou skins, bear skins are rarely used
as objects of trade.

Animals hunted by the Naskapi, which provide
both food and fur for trade are: beaver, ermine, fox,
lynx, mink, muskrat, otter, squirrel, and seal. Beaver
meat is the most highly prized of these, while use of
the other animals for food seems to depend largely
upon the availability of other more desirable food.
When it happens, as it often does, that there is no
game, or that it gets away, and the stored rations
have been all consumed, there may be periods of
real hunger, when any living thing is valued as food
for survival. One of the most persistent fears of
these hunters is that hunger may drive one of them
to cannibalism.

Of course, fish is a staple. Even in winter the
Montagnais-Naskapi manage to fish, either by cut-
hing holes in the ice, or by camping near rapids,
which rarely freeze. Like caribou meat, fish is some-
times smoked and dried over a stove or a special
fireplace. At other times, it is dried by hanging it
from poles in the tents. Some of the Indians use
nets purchased from traders, while others weave
their own from purchased twine. Some natives spear
salmon from canoes at night by the light of torches
made by wrapping bark impregnated with resin
around green saplings. Their spears are homemade,
and have wooden pinchers on both sides of the
blade to help secure struggling fish when they are
lifted into the canoe.
One of the principal uses of the small dog is helping the hunter find nesting waterfowl. Each spring hunters paddle along the shores of rivers and lakes, while their dogs hunt the land for duck and geese. Even if the hunters miss the bird, they can still get the eggs, preferably with well developed young inside. Like the unborn offspring of pregnant rabbits and caribou, unhatched waterfowl including loon and gull are considered to be a great delicacy.

These Indians deny eating two things, namely shellfish and frogs. In fact they seem to recoil from the very thought of doing so, just as they physically recoil from touching frogs and toads. In this connection, it is interesting to note that in 1604 Champlain remarked that the northern Indians ate shellfish only when there was no other food to be had. This fact may help explain the absence of shell refuse on Archaic sites of New England, even those situated close to shellfish beds.

In July through September the Naskapi pick large quantities of blueberries, raspberries, gooseberries, and cranberries. Most of the picking is done by women and children, while the men fish, repair their canoes, and get ready for the trek to their trapping grounds. During this time, these people often live on practically nothing but berries, gorging themselves like bear. Occasionally, more provident women may preserve some berries by crushing them into jars and tins, or into birch bark containers, which they make themselves. Sometimes they mix berries with animal fat to use as a spread on bannock. During the berry season, families move to where the berries grow and stay there for weeks.

From October to May most of the hunters are at their hunting places, where they have few neighbors and friends. Here they must depend entirely upon themselves. When they are sick they bleed each other, a practice they seem to have picked up from the French in the 17th century. Sometimes they take steam baths by throwing snow on red hot stones rolled into little tents, or they drink concoctions made from various barks and roots, as remedies for various ailments. They appear happy in this bucolic existence, but after the rivers are free of ice in May the hunters begin to leave the bush, just ahead of myriads of black flies and mosquitoes, which make life almost impossible. To escape the flies they are happy to migrate to the sea shore, or to the banks of great fjords, where they can fish for salmon instead of trout. Here they may catch waterfowl, enjoy summer breezes, meet friends, relatives, potential spouses, and sell their furs to traders.

Men and Women of the Caribou Indians of the North have much work to do, as may be seen from the following partial outline of their division of labor, although not always strictly observed:

<table>
<thead>
<tr>
<th>Men's Work</th>
<th>Women's Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light morning fire</td>
<td>Tend fire during day</td>
</tr>
<tr>
<td>Fell trees</td>
<td>Chop wood</td>
</tr>
<tr>
<td>Haul wood home</td>
<td>Carry wood</td>
</tr>
<tr>
<td>Whittle kindling</td>
<td>Cover tent floor</td>
</tr>
<tr>
<td>Erect tents</td>
<td>Repair tents</td>
</tr>
<tr>
<td>Procure most food</td>
<td>Cook most food</td>
</tr>
<tr>
<td>Load, unload canoes</td>
<td>Carry water</td>
</tr>
<tr>
<td>Chop water holes</td>
<td>Prepare meat, fish</td>
</tr>
<tr>
<td>Hunt, fish, skin</td>
<td>Tan skins</td>
</tr>
<tr>
<td>Make smudges</td>
<td>Pick berries</td>
</tr>
<tr>
<td>Care for weapons</td>
<td>Follow on trail</td>
</tr>
<tr>
<td>Feed, handle dogs</td>
<td>Paddle in back</td>
</tr>
<tr>
<td>Lead on trail</td>
<td>Teach girls</td>
</tr>
<tr>
<td>Paddle in front</td>
<td>Make, repair clothing</td>
</tr>
<tr>
<td>Teach boys</td>
<td>Feed, care children</td>
</tr>
<tr>
<td>Brew poteen</td>
<td>Deliver babies</td>
</tr>
<tr>
<td>Make, repair equipment</td>
<td>Circumcize males</td>
</tr>
</tbody>
</table>

The Montagnais-Naskapi speak a dialect of Cris, and in general always seem to have something to do. They are happy doing it in their own way on the tundra and in the forests of the North. It is noticeable that most of the durable things they have, today, come from the whites. However, nearly all things they actually use are perishable, and will eventually disappear without leaving a trace. Hundreds of years from now, their camp sites, when excavated, will say very little to future archaeologists.

Stonehill College, North Easton, Mass. April 10, 1963
Technical illustrations are drawings which give accurate, clear pictures of objects in the physical world. Many disciplines make use of them, although, as will be seen presently, this is not a well known fact.

Talking to archaeologists about technical illustrations is like taking coals to Newcastle. Most scientists in this field are aware of its importance. However, many are not. In other areas of endeavor, especially in engineering and electronics, it is generally felt that the art of technical drawing is limited to representations of machine parts and electrical schematics. The prevalent impression is that everyone else employs photographs, or else gets along without illustrations of any kind. There is no doubt in any archaeologist's mind that at least, photographs are important, and he makes frequent use of them.

However, it is impossible to overemphasize the value of technical drawings in the field of archaeology. They are useful in a number of ways. A technical report makes dull reading at best, but without illustrations it is not only dull, it is much more difficult to understand. Hand drawn illustrations help to clarify many points. The amount of descriptive material can often be cut down to a reasonable minimum when the text is accompanied by illustrations. It has been said that a picture is worth a thousand words. If this be true, then a technical drawing is worth a million words.

It is common knowledge that an archaeologist's work begins in the field, and that the excavation of a site means its destruction. Photographs may record each stage of an operation in the field, but it is impossible to capture even a simple archaeological feature in its entirety with a single photograph. The technical artist, on the other hand, can reconstruct after the destruction has taken place. He not only reconstructs, but he can synthesize. Now, this is something a photograph can never do, not even a composite photograph. The artist can select important details, emphasize certain parts, and subdue others. He can choose the best angle from which to view the subject, whether from the top, the back, the right or the left. It is even conceivable that a particular subject might be presented more clearly by being shown from the bottom. In this matter, the artist is almost unlimited in his choice.

In order to do this work well, the artist should be present during all phases of an excavation. In this way he can record the progress being made in a systematic way. This step by step procedure will give him detailed information for the production of the drawing. This drawing, then, represents the final assemblage of all components of a feature, and is expected to incorporate all the details, which the archaeologist will need later, when analysis is in progress. It might be well to point out here that photographs, even the composite type, would never be a satisfactory substitute for this type of illustration. Photographs are useful, but the technical artist and his work are a necessity.

There are several types of drawings. The simplest is the outline representation of an object. Almost everyone is familiar with this. Such drawings often appear in archaeological reports. A second type is the rendered drawing, that is, a drawing which is shaded to give the object a greater sense of three-dimensional reality, the so-called photographic look. You have been aware, no doubt, of Dr. Fowler's beautiful illustrations in the Society Bulletin. These represent the highest degree of perfection attainable in this field.

Another type of drawing common in archaeology is the reconstruction drawing. In his making of such a drawing, the artist interprets the evidence to a degree, makes use of artistic license, and paints an imaginative picture. Such pictures are usually used in popular books. Strictly speaking, they are not technical drawings, although based on them. They are used in popular books to dramatize the subject for the ordinary reader, who has no knowledge of the technical aspects of the field.

Because the evidence is not all recovered at once, partial reconstructions are sometimes attempted, as the work progresses. This is often a great help to the archaeologist in his later work of interpretation. As it frequently happens, more than one interpretation is possible. Therefore, these reconstructions are useful in selecting the explanation most likely to coincide with the truth. One more point should be noted in connection with this matter of reconstructions. They serve as a stimulant to all concerned in the project, as a spur to the imagination, and help maintain interest in the work.

Brockton, Mass.
December, 1962

A LETTER OF APPRECIATION

William H. Claflin of 75 Federal Street, Boston, Mass. — a society member — writes as follows:

Dear Mr. Fowler: This letter carries with it my compliments for the excellent job you did on Volume 25, Number 1.

Your "Classification of Stone Implements of the Northeast" is an outstanding contribution to archaeology and not by any means limited to the Northeast.

I am taking the liberty of enclosing herewith a check for $25.00, made out to the Massachusetts Archaeological Society, Inc., which is an unrestricted gift to the Society on its twenty-fifth birthday.