

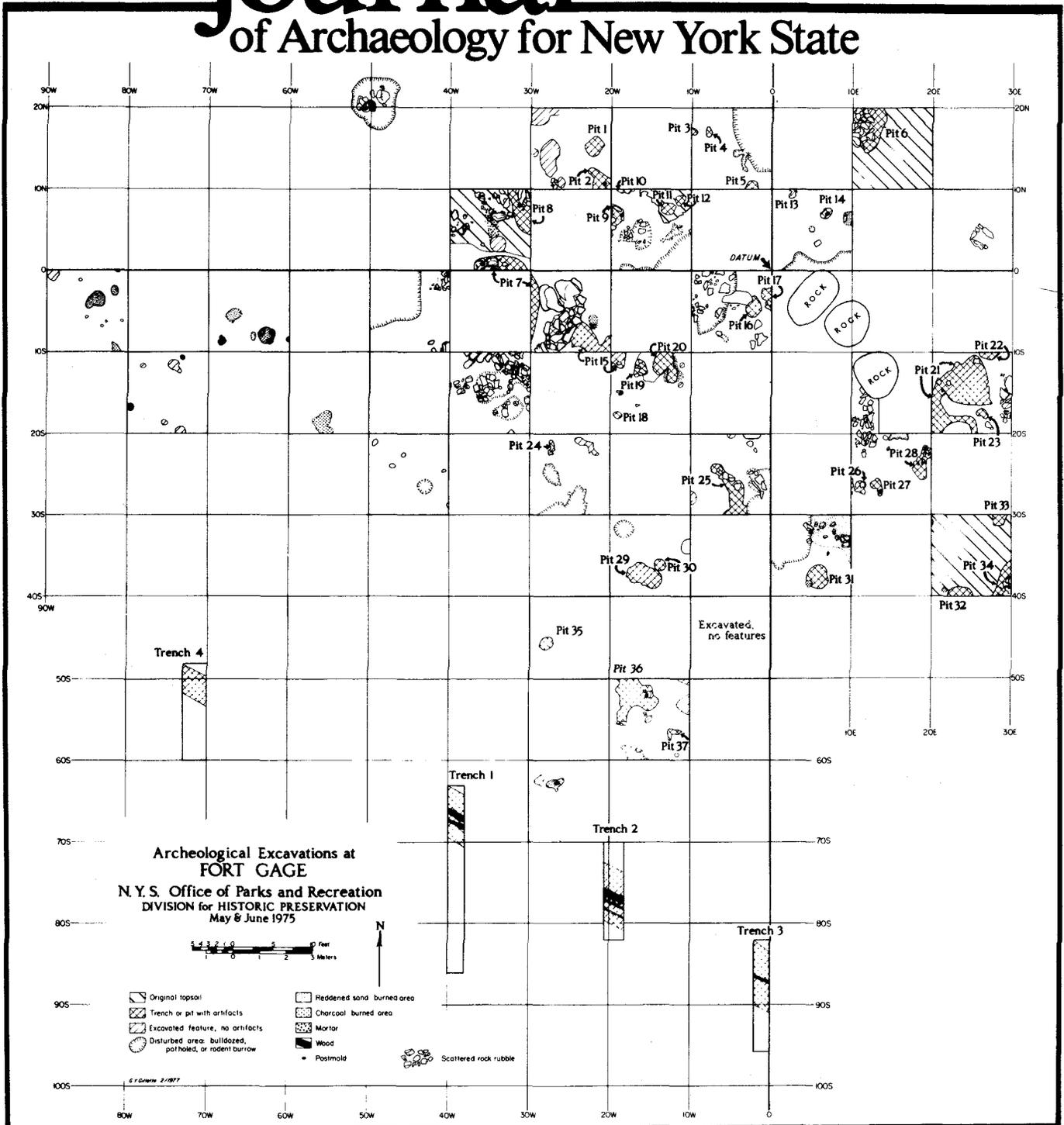
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AN INTERPRETATION AND ANALYSIS OF THE SEVENTEENTH CENTURY MOHAWK NATION: ITS CHRONOLOGY AND MOVEMENTS

Donald A. Rumrill

Van-Epps-Hartley Chapter

INTRODUCTION

Prior to the beginning of the seventeenth century, change had been very gradual amongst the Native Americans, at times consuming millenia or, at the very least, several centuries. Those changes had come about by environment such as post glacial successions of tundra, coniferous forests, deciduous invasion, etc.; by chance such as the discovery that steatite could be transformed into pots and, later, that certain clays and grit were an easier and quicker in situ method; and by the bow and arrow and, most importantly, cultivation of corn and other crops which made permanent settlers of a nomadic people.

The early seventeenth century saw Iroquoia at its zenith of artistic ability and self-sufficiency. Within whose palisaded villages lived a strong and proud populace. No one starved nor became inebriated nor suffered through decimating disease epidemics. Generally they lived far back from the rivers, secluded, and for all of the good reasons of survival. However, when the Europeans arrived with their wondrous steel, brass, and glass attractions, it suddenly became advantageous to move to the river areas of east-west travel and trade. With this move came exposure to smallpox, enemy attack, and the ultimate, sudden and complete change in their mode of living, which we now label "acculturation".

It has been most interesting, to say the least, to develop the chronology artifactually and find that the sites "cluster" in a very definite pattern. Comparing them to literature of that date, one realizes that the movements are of a clan (Turtle, Bear, Wolf, etc.) within their own exclusive enclave not just any random site selection within the territory inhabited by the Mohawk Nation as a whole.

At the end of the seventeenth century most of Iroquoia had absolute dependence on articles of European invention and manufacture. Once the axes, knives, brass kettles, shovels, guns, cloth, and many other articles became common every day utilities and necessities, there was no turning back to flint tools and points, stone pipes and axes, clay cooking vessels and bone awls. Also, a major transformation that is often overlooked is that the day of the longhouse was relegated to antiquity. The "civilized" man's log cabin became his abode. At the lower and upper areas of the Mohawks' continued habitation, the Indians still had their castles but even they were set up like period settlement villages with assistance in construction by Dutch craftsmen. Others lived wherever they chose and built log cabins. The long honored longhouse was finally abandoned.

Therefore, the seventeenth century amongst the Iroquois is a very unique and tangible case study of what disasters and accomplishments can occur within a particular and singular nation in a comparatively short period of time.

During the summer of 1983 an archaeological project was carried on at Oak Hill near Fort Plain, New York by college students and Earthwatch personnel under the direction of Dr. Dean Snow and Dr. William Starna of the State University of New York at Albany and Oneonta, respectively. They were a dedicated, enthusiastic group that, before the "dig" was completed, became enamored with their surroundings. So much so that they had T-shirts made with an original logo on the fronts and "WHAT A VALLEY" in large capital letters printed on the backs.

And so it is. The land of the Mohawks is magnificent! I have found that just about every seventeenth century village site has a view that is absolutely breathtaking, almost as if the aesthetic was one of the Native Americans' prime prerequisites along with a good spring, abundant firewood, satisfactory corn growing soil, etc. I am in the valley every chance I get, not just for the thrill of a new artifact or discovery of an unknown site but because I just like being there.

There hasn't been much done in the Mohawk Valley, scientifically so to speak, to bring forth its wonderful story. The most well known village, of course, is the Veeder site at Fonda, New York, usually called Caughnawaga, on the hill behind the Katerie Tekakwitha Shrine. Additionally, those with scientific

excavations and good records are the Freeman, Oak Hill No. 1, and Jackson- Everson sites, taking into context only those from the seventeenth century. And, of course, digging burials used to be "the thing" for archaeologists of past generations. Now there is a moratorium on digging Indian graves, at least amongst the professionals and serious amateurs.

Some Mohawk sites will never reveal their story. Routes 5 and 5S, the New York State Thruway, the north and south shore railroad tracks, and some secondary roads have sliced through many of them. Others have been stripped for gravel and topsoil even with the knowledge of Indian occupation and still others have residences built on them and the contours leveled for landscaping purposes.

There are other threats present and on the horizon that are real and unless the New York State or United States governments react soon, these irreplaceable treasures are doomed. Today's chisel plowing extends as much as sixteen inches into the ground destroying all of the stratigraphic evidence such as multi occupations, post molds, longhouse features including hearths and storage pits, etc. that is absolutely necessary to correlate sites with known literature and possible future discoveries of contemporary writings, potentially the only links to the past. The chemicals that are being used today and others that may be used in the future for fertilizers, weed killers, and so on will consume all of the organic and metallic evidence reposing in situ for all of these centuries, in a comparatively short span of time.

Therefore, it is my purpose to make public the following information and personal interpretation and to submit it for critical inspection to anyone who so desires to add, detract, reevaluate, and/or contribute to present day knowledge. Perhaps in this manner the consequences that are in so delicate a balance will have an impact in such a way that more will be accomplished "today" rather than "tomorrow" when it may be too late. I will try to relate certain sites to tangible historic sources whenever possible and leave it to the reader to exercise fair and profound judgment in arriving at effective conclusions.

To arrive at my conclusions, I have relied upon first of all, my personal collections from the various sites, thus knowing without question what the provenance is of any and every artifact. Along with this is actually being on a site with certain of my friends and cronies at the exact moment that they had significant finds. This also necessitates the fact that I have actually and physically been on a site, have the feel of it contourwise and otherwise, and, in many cases, measured the areas. Most of these sites are registered with the New York State Archaeologists' office in Albany, New York, of which a few are well known, some are known to a selected few, and others are known only to the discoverer. It has been my personal thrill to have found several seventeenth century sites that were previously undiscovered and unpicked. This leads me to believe that there may be a number of other unknown sites, which could help resolve the current debates about the chronology and site serrations.

Secondly, I have tried to correlate all the information I have about the Mohawks' country with various contemporary articles, papers, pamphlets, etc. analyzed and composed concerning the Oneidas, Onondagas, Cayugas, and Senecas since they definitely appear to have similar trade and personal habit parallels plus or minus a very short period of time. Fortunately, much useful literature has come from these areas in recent years. I have also been privileged to converse and correspond with many of the best-informed people from these sections of Iroquoia. Annual New York State Archaeological Association meetings always increase my knowledge as well as other related conferences. I have relied on the Jesuit Relations for pertinent dates and on Kenneth and Martha Kidd's classification system to correlate the trade bead serrations.

I realize that at this point I am only, scratching the surface of the information needed to place everything in its proper niche. For the past eight years I have searched diligently in the eastern third of the area represented in this study. The middle third has received considerable attention in the past four years, and in the past year or so i have made some exciting discoveries in the western section of my concentration.

I personally know of over 40 seventeenth century Mohawk Indian villages and will refer to most of them. However, in listing, dating, and geographically locating them on my maps I find glaring gaps in the patterns and feel there are probably as many more that I don't know or that have not been discovered to date. One doesn't walk a field for an hour or so and come away confident that it was never occupied. Every site is not loaded with clamshell, bone, fire cracked rock, or beads. Sometimes a tiny fragment of bone or a subtle redness to the earth is the only hint that one has "stumbled" onto a segment of history. In addition middens are not always over the brink of a precipitous slope. As often as not, refuse was

deposited in a nearby depression. These middens are often buried further due to deposition of rotted trees and leaf mulch.

One cannot comment on the seventeenth century Mohawk Valley without referring to the journals and records left by van den Bogaert, Jogues, DeTracy, Greenhalgh, Frontenac and other seventeenth century individuals. The most controversial, and least likely to be clarified in the near future, is that which is attributed to Harmen Myndertz van den Bogaert writing of his trip and observations through the Mohawks' country and villages as of December 1634 and January 1635. One sometimes wonders exactly where he was since, for instance, he does not make mention of the natural phenomenon of "The Noses", a jutting escarpment around or over which he necessarily had to navigate, and yet he speaks in almost awe of the high hills or large tracts of flatlands he must traverse.

I will also be content with applying; in most cases, only a median date to my site determinations. I have a feeling that many of them were occupied for up to 15 years; some, but not many, may have exceeded this span slightly. Most of them probably had their major habitation for closer to 10 years. Therefore, in regard to my median date postulations, I would allow a plus or minus of six years and, on a few occasions, eight years, as the earliest and latest dates of village occupation.

The four digit numbers in parenthesis after a named site are the identification numbers recently introduced by the New York State Museum and Science Service in place of the topographic quadrant abbreviation system used in the past. Referring to the accompanying map (Figure 1), my additional personal numbers for use with this work only, will approximately position within an area the village being discussed without revealing its actual location. I do admit to a little smoke screening to protect the sites from the numerous pothunters that seem to spring from nowhere when "treasure" is found.

Also, although the question would never arise, whenever I mention "the river" it refers, naturally, to the Mohawk River and whenever "the valley" is mentioned it, of course, refers to the Mohawk Valley.

So . . . let's get on with it.

1595-1615

Protohistoric villages that continue into the seventeenth century are enigmatic. Several are known and are located far back from the Mohawk River where, in most cases, land has never been cleared or cultivated.

Three of these are the Chapin (1125), Barker (1137), and England's Woods (1138) sites situated in the eastern group approximately two and one-quarter miles (3.62km), two and one-half miles (4.02km), and three and one-half miles (5.63km), respectively, north of the river. Topographically, they do not fit a pattern. Chapin is a classic example for its era in that it sits upon a promontory with three precipitous sides and with two streams joining at its terminus; Barker sits on a plateau with a beautiful view of the valley; England's Woods is in an area of fairly level surroundings. No protohistoric sites have as yet been identified in the central and western groups.

The common denominators for these three sites are the trade bead types found on each. The small black IIa6, aqua blue IIa36, robin's egg blue with three white stripes IIb56, and IVk3 and IVnn4 "star" type beads are present on all. Some rolled brass articles and, on Chapin, a trade axe (Figure 2), have been found.

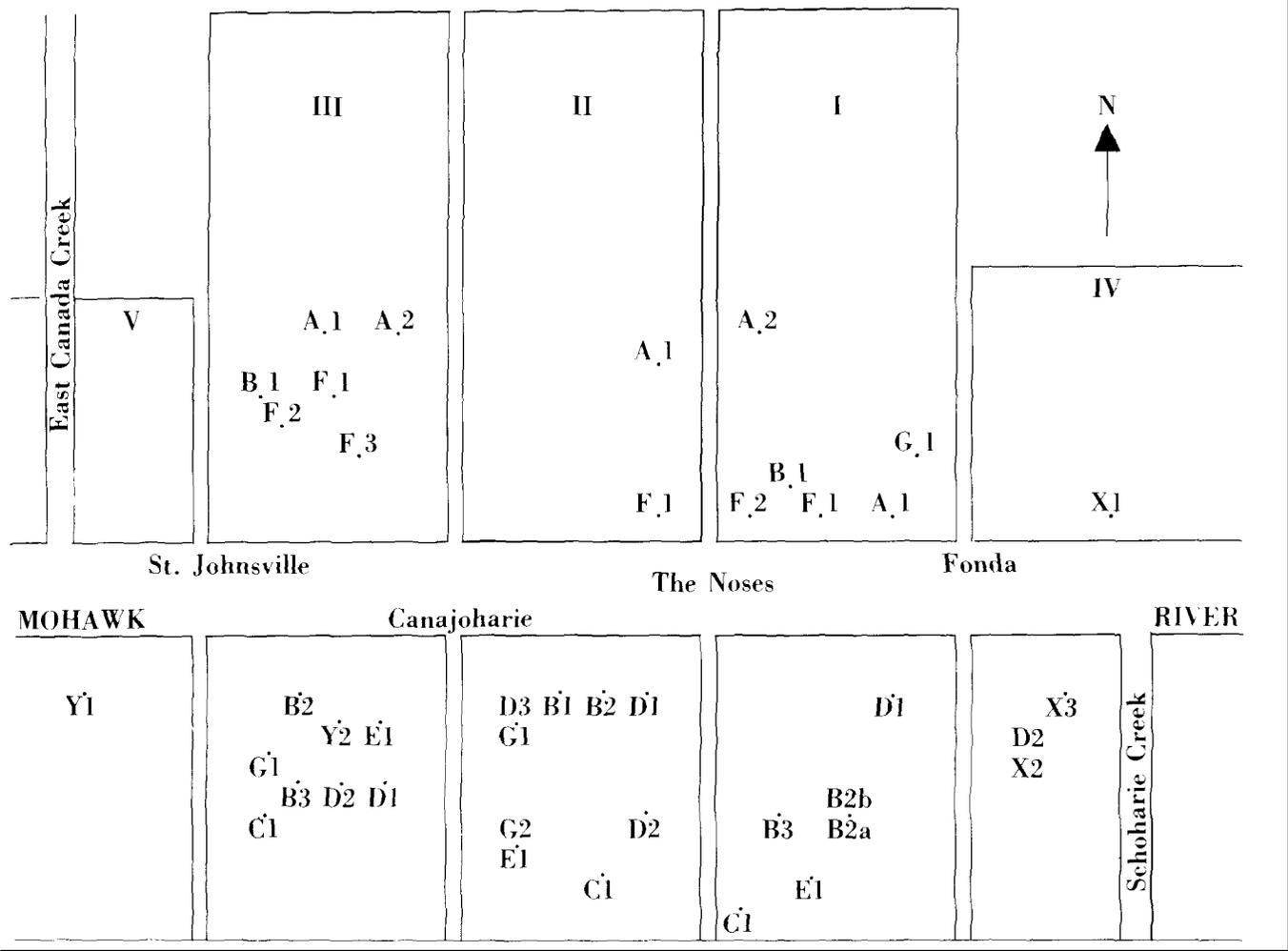
On the basis of more than 99% Indian made artifacts to less than 1% European and the beads being contemporary to the very earliest historic Iroquois sites, I would suggest a median date of A.D. 1600.

1600-1630

IA1 Martin (1143)

In the eastern area of the Mohawk Valley in the seventeenth century, the section that I designate with the Roman numeral I, there were two important villages. One is the Martin site.

Martin lies closer to the river than any other Mohawk site for this early date being only 390 meters to



- | | | | | | |
|--------|----------------------------|-------|--------------------|------|--------------------|
| IIIA1 | Wagner's Hollow | IIA1 | Rice's Wood's | IA1 | Martin |
| IIIA2 | "X" | IIB1 | Van Evera-McKinney | IA2 | Coleman-Van Duesan |
| IIIB1 | Katydid | IIB2 | Ford | IB1 | Briggs's Run |
| IIIB2 | Failing | IIC1 | Rumrill-Naylor | IB2a | Cromwell |
| IIIB3 | Sand Hill | IIDI | Mitchell | IB2b | Cromwell |
| IIIC1 | Oak Hill No. 1 | IID2 | Janie | IB3 | Yates |
| IIID1 | Fiske | IID3 | Horatio Nellis | IC1 | Bauder |
| IIID2 | Fort Plain Cemetery | IIIE1 | Allen | ID1 | Printup |
| IIIE1 | Brown | IIIF1 | Schenck | IE1 | Freeman |
| IIIF1 | Jackson-Everson | IIIG1 | Horatio Nellis | IF1 | Fox Farm |
| IIIF2 | "X" | IIIG2 | Allen | IF2 | Turtle Pond |
| IIIF3 | "X" | | | IG1 | Caughnawaga |
| IIIG1 | Oak Hill No. 4 | | | | |
| IIIIY2 | Prospect Hill | | | IVD2 | Milton Smith |
| | | | | IVX1 | Tribes Hill |
| VY1 | Canajoharie (Upper Castle) | | | IVX2 | Milton Smith |
| | | | | IVX3 | Fort Hunter |
| | | | | | (Lower Castle) |

Figure I. Map and Index of Mohawk Villages Cited.

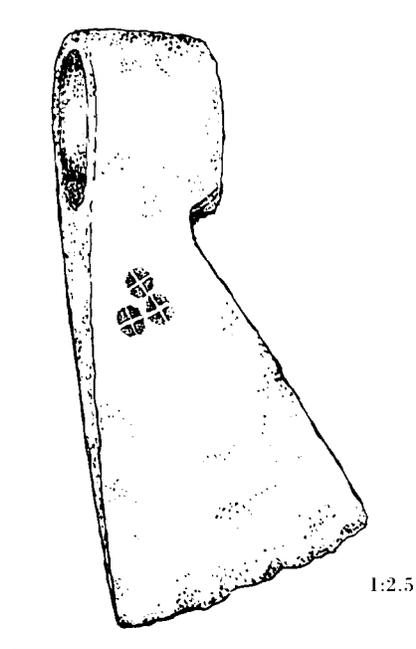


Figure 2. Trade axe, Chapin Site.

the north. It is a rather large site of approximately three acres including middens and when it is plowed one can discern the probability of twelve longhouses by the dark sections of "Indian dirt" which becomes visible. It has been surface searched, dug, and potholed even with the use of a mechanized posthole auger over the years so that there isn't much material remaining.

To aid in dating this village, there was found in my presence a French copper coin with the 1615 date still very legible. It is quite worn, denoting the fact that it had been in circulation for some time before arriving at this particular spot and being mislaid. Also found in my presence was a German counter or jetton, the original date of which could have been as early as 1585. Either or both of these may have come from direct or indirect trade with the French on the St. Lawrence River or the Dutch on the Hudson River.

Native pottery of all the popular period motifs is well made and plentiful as well as considerable flint pieces such as points, drills, scrapers, reamers, knives, etc. However, there are also many nails, brass scraps, iron axes, and brass and copper points, both perforated and imperforated varieties with straight and concave bases.

Possibly the most significant artifacts I have retrieved from Martin are evidence of firearms at this early date. I have a serpentine from a matchlock (Figure 3), a frizzen from an early doglock c. 1620-1640, and a small gunspall of local flint. The late Robert S. Hartley, a well known amateur archaeologist from the valley, listed in his collection catalog other gunflints and musket balls and the Larner collection has a huge French gunspall measuring 39.5mm X 30.1mm from Martin.

The trade bead assemblages concur with Oneida and Onondaga dating conclusions being mostly polychromes, a large percentage of which are of the star chevron varieties and a representative sprinkling of flush eyes, gooseberries, early sky blue varieties, and an occasional tubular bead type IIIa12, the bright blue outer layer and core with an opaque white layer of glass in between.

One final item is the discovery of several pieces of Weser slipware (Weserware), a northern European earthenware imported into Amsterdam, Holland c. 1570-1620. Remnants of the same type ware have been recovered also at the Oneida Cameron site c. 1600 and the Onondaga Pompey Center site c. 1600-1620 as well as in early seventeenth century tidewater dwelling areas of Virginia.

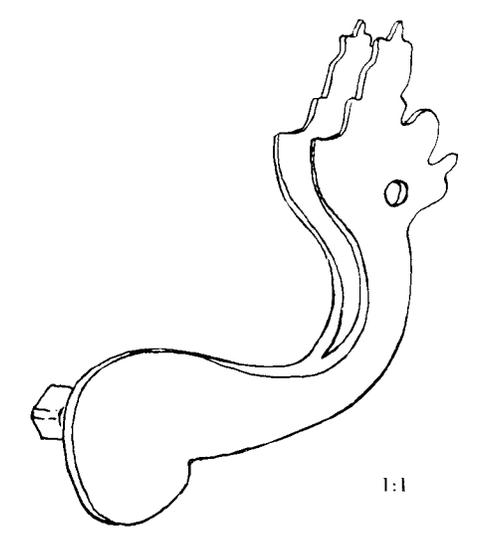


Figure 3. Serpentine, from a matchlock, Martin Site.

IA2 Coleman-Van Duesan (1119)

The other known important village in the eastern area of the Mohawk Valley for this period of time is the Coleman-Van Duesan site. It is geographically typical of Mohawk sites for this date and is located one and three quarters miles (2.8km) from the river. The surrounding terrain is quite flat and the village proper sits on sort of a hump; that is to say, it slopes downward in all directions from the center of the field in which it lies. There is an excellent, ever flowing spring still in existence on its western perimeter. The area, known as the Big Nose escarpment, is the southern end of the Mayfield Mountain Range. There is a natural draw through the southeastern cliffs that give easy access to the river and yet is defensible. The cliffs and the general area, by the way, are famous, or infamous, for its rattlesnake population.

Though I have been on Coleman-Van Duesan a half a dozen times or so, I do not have much personally in the way of diagnostic artifacts and have to rely on other collections for provenience and analysis. I have no reason to doubt the former. I do have 95 assorted trade beads and so feel that I do have a good handle on matters in that department.

Material includes considerable sheet brass waste, probably from kettles, including kettle lugs and large globs of brass as if the metal was melted down but never formed into a shape or perhaps for no reason at all. The nicest artifact is that of a beaver pendant 102mm in length, cut and filed into a perfect silhouette, broad tail and all, and drilled for suspension. This was found in a burial adjacent to the village perimeter.

Trade beads from this site are again mostly polychromes that fit into Pratt's Oneida sequence from 1595-1625 and 1625-1637 including one so-called "giant" star chevron. They also coincide quite well with Onondaga village data for the same time periods. Significant are shiny-coated redwood barrel beads, redwoods with clear centers (IVa2), redwoods with apple green centers (IVa5), small star chevrons (IVk4), gooseberries (IIb18), clear turquoise (IIa31), and clear greens (IIa28).

Some other artifacts are: one small (18mm diameter) dumbbell type ball seal with a partial stamping on it, scissors, Jew's harps, musket balls, a piece of rum bottle, a bone handled clasp knife, and one split piece of kaolin pipe stem of 7/64" bore diameter but, unfortunately, no identifying decorations.

IIA1 Rice's Woods (1201)

In the central or middle area of the Mohawks' habitation, the section that I designate with the Roman numeral II, there is the Rice's Woods village site. It is situated on an east-west sloping ridge two miles (3.2km) north of the river.

One finds considerable amounts of pottery of many patterns in vogue for this time period as well as Madison points and tools and other items made of flint. All of the native made artifacts are of superlative craftsmanship. Bone scrapers and awls are also in evidence. A short distance away is the Knauderack Creek where there is a quarry that was used by other Native Americans in previous centuries.

At Rice's Woods are found iron awls, iron trade arrow points, scrap brass, and, of course, glass trade beads, the most profuse of which are the small star chevron types. Of over 2000 beads recovered, mostly in burials, 99% are round and the majority polychromes as is the case in all sites of the very early historic Mohawk time period.

III A1 Wagner's Hollow (1202)

In the western area, for which I am using the Roman numeral III, there were two Mohawk villages based on information known at this time. Both are at present inaccessible due to the owners' prerogative of privacy but, fortunately, I have seen some material from each, especially trade bead assemblages, and feel I can surmise a temporal bracket based on this admittedly scanty evidence.

One site is known as Wagner's Hollow. It is situated one and three quarters miles (2.8km) to the north of the river and sits on a promontory with two sides precipitously falling away vertically by 30.5 meters to the Caroga Creek on the southern and western sides, a small creek bed on the north and open level ground on the east. Most of the site has had up to 61cm stripped from it for topsoil.

III A2 "X"

A few months ago as the first snows of winter were beginning to fall, I believe I found what may be the companion to Wagner's Hollow. It is within a mile (1.6km) of the above named site and lies approximately two and one half miles (4km) from the river. For present purposes, I will refer to it as "X" site since no identifying designation has been assigned to it.

The glass trade beads from "X" are predominately round polychromes of the star chevron varieties including one known amongst the aficionados as a "giant" star. The oval beads are generally transparent monochrome and the one tubular has bright navy outer and core layers separated by a laver of white, the same type IIIa12 as found on the Martin site. This latter type continues to show up on Mohawk village locations at least through the 1650s.

Therefore, I offer the following postulations for the period 1600-1630: Wagner's Hollow 1610 to 1630, especially since a remnant of a kaolin pipe bowl was found there which had a tulip heelmark (Archaeology of the Clay Tobacco Pipe II pg. 64). "X" site I believe may be slightly earlier, say 1600 to 1620. Rice's Woods I would place at 1605 to 1625. Martin continues the same approximate dates at 1605 to 1625. I believe Coleman-Van Duesan got a bit later start and so place it at 1615 to 1635.

All of these sites have similar, very consequential trade beads, which support the hypothesis of coming within the same approximate date bracket. Kidd types I1b18, I1b1, IVb32, IVb34, IVg1, and IVk3 are found variously on the above village sites as well as on the Onondaga Pompey Center (Cza 7-1) c. 1600-1620, the Oneida Reeher (Ond 1-4) c. 1595-1625, as well as the Seneca Dutch Hollow c. 1595-1615. Other comparative supportive evidence includes the high percentage of pottery, points, and utilization of other native made necessities closely correlating with and resembling those of other contemporaneous Iroquois cantons.

1620-1640

At some point in time around 1630 there seems to have been a mass departure of Mohawk villages from the north side to the south side of the Mohawk River and there they remained for the next 35 to 45 years. This move may have been made to facilitate trade with the Dutch at Fort Orange and seemingly indicates a main trail that does not require crossing the Mohawk at any place. This is not in dispute with the course Van den Bogaert may have followed on his trip through the valley in 1634-35 but in addition to or as an alternative of the north shore trail. The new villages were also built much closer to the river than previously.

IB1 Brigg's Run (1118)

Brigg's Run is one exception to the above since it was built on the river's north side but closer than most previous villages had been. It lies six-tenths of a mile (1 + km) from the river in a very defensible position. The south side is a steep high ridge with both sides falling off precipitously onto two tributaries of the Brigg's Run Creek while the north side constricts very abruptly rendering a narrow passage onto the village site proper from that direction.

The occupants were still masters of the crafts of pottery making and lithic skills. Very fine examples are evident in the rim sherds of their cooking vessels and items such as pestles, scrapers and Madison arrow points. However, brass scraps and kettles are abundant as are brass points of perforate, imperforate, and conical varieties. Hand wrought nails are much in evidence but as far as I know there have been no gun parts, musket balls, or gunflints recovered here. Other interesting discoveries from Brigg's Run include an apostle spoon found in a burial adjacent to the site and a small piece of Westerwald gray stoneware with cobalt blue decoration.

The glass trade beads include a number of small star chevrons (IVk3) as well as so-called barrel beads of opaque redwood with transparent apple green centers (IVa7), the outer layer being quite shiny. The most preponderant varieties however are the small blacks (IIa7), ultramarine outer layer and core with an opaque white center layer (IVa17), and the small white with a clear center, a variant of type IVa13. I also have some discoidal shell beads from the side hill middens at the Brigg's Run site.

111BI Katydid (1178)

At least one other site remained on the north side during this period. It is called Katydid. The beads and artifacts correlate closely with Brigg's Run even to some pieces of Westerwald being found there. Unfortunately, considerable gravel has been hauled away, again, destroying part of a fine little Mohawk site.

I present a median date of 1626 for both Brigg's Run and Katydid, consideration being given to both the artifactual and documentary evidence available at this time.

*IB2a Cromwell Fda 12 (1121)**IB2b Cromwell Fda 55 (---)*

The Cromwell site appears at first to be two separate small seventeenth century villages, one about four-tenths of a mile (.64km) and the other about six-tenths of a mile (.97km) from the river. The site reports were filed at two different times and received two numbers of identification from the New York State Museum and Science Service. The complete area is quite level and there is a house, several barns, silos, and other outbuildings between the two locations. The land has been cultivated for over two hundred years ever since Philip Cromwell, a surgeon of the Tryon County Militia, erected his home here in 1778. It is very possible that the village extended from the more southern site area through the space now containing the various buildings to the more northerly site area. If so, it had to have been a very large village or "castle". The proof of this hypothesis appears to be not even a remote possibility, the evidence having been completely obliterated due to the necessities of a successful farming operation. Therefore, I shall deal with Cromwell as two different artifact locations but arrive at a combined conclusion.

Cromwell IB2a, which is the more southerly or farther from the river, has considerable pottery mostly of Cayadutta or Fonda Incised motifs, and many flint Madison arrow points. There is not much in the way of trade goods, however, suggesting confirming an early seventeenth century date assumption. There are hand wrought rose head nails to be sure, but not a lot of scrap brass etc. and though I have found two pieces of kaolin pipe stems, they both have a bore of 5/64" and I have therefore delegated them to the "intrusive material" category, at least for the present.

The best objective evidence to give us a small handle on the date of occupancy are the trade beads. They include the small star chevron (IVk3), the bright navy with 16 white stripes (IVb34), and the shiny redwood barrel bead with a clear apple green core (IVa7).

Cromwell IB2b is distinguished in my sparse collection by the presence of rum bottle remnants, (maybe from a different occupation) kaolin pipe stem segments, and gunflints. Not much, but they are

sufficiently significant to suggest a possible sequential occupation for IB2a and 1B2b or a contemporary occupation of a very large village for both of them. Two of the kaolin pipe stems are of 7/64" diameter bore and the third is of 8/64" diameter bore. (See Table 2) A small sample to be sure but it does give an extension to a terminal date and hints at the early time of more frequent use of the white clay trade pipe as well as more bore data. I also have some pieces of Indian made clay pipes including trumpet bowl styles from here.

Both of my gunflints are of the style labeled gunspalls, are wedge shaped, and the material is a greyish brown chert. The configuration and material are similar to those attributable to French sources of manufacture although probably brought here by the Dutch.

I have dismissed the conjecture that one of the areas has superseded the other. Cromwell IB2a and IB2b probably were one very large village site. Since I am dating it between 1624 to 1636, it is possible that this could be the Onekagonka castle that van den Bogaert visited in December 1634 and January 1635. For this period of time, there is not another village site known up to the present, even close to containing 36 longhouses in this section of the Mohawk Valley.

IIB1 Van Evera-McKinney (1232)

There are many other seventeenth century Mohawk sites that have not been plowed in many years, which make it difficult to arrive at conclusions. I have had to rely, in these cases, on persons who are sufficiently knowledgeable to make a comparison. This is the case with the Van Evera-McKinney site. This site is about 500 meters south of the river. The field in which it lies is almost 91 meters wide by over 215 meters long, and orientated in a north by northeast direction, amounting to approximately five acres.

I do not know as yet to what extent this field was occupied; however, I have found nails and brass scraps in various areas from at least two thirds of the length of it, most of which was on the more northerly section. I found one trade axe on the extreme north end and one on the extreme south end, the former without armorers marks and the latter with obliterated marks due to corrosion. The brass arrow points are both perforated and unperforated and the one identifiable trade knife remnant that I have is a type H. (See Table 1)

One diagnostic artifact found here is a brass jew's harp with a stylistic capital R etched on the left side of the curved back. This has been identified by Jan Baart of the Amsterdam Historical Museum as having been the trademark of a single manufacturer in Amsterdam, Holland from 1640-80. Another is a high profile heel of a kaolin pipe with the impressed trademark of a galloping horse ridden by a knight with a raised sword and with the initials V O underneath the scene for which there is no maker's identity as yet. (Figure 4)

Based on this admittedly skimpy evidence and information, I am provisionally applying a median date of 1636 for Van Evera-McKinney with a terminal date extending to at least 1642. Also, from information I have received concerning burials excavated here many years ago, this site seems contemporary with the Cromwell sites.

TABLE 1
Knife Types (Hagerty 1963) From 17th Century Mohawk Village Sites

	D	E	G	H	I	J	ORT	OFT	NST
1600-1630									
1620-1640									
1630-1650	1	22	16	41			6	1	
1640-1660		17	18	27	2	3	4		
1650-1666			4	2			5		
1666-1680		2	12	2		1	6	1	4
1680-1693			7	3	1		5		
			ORT = Other Rattail Tangs						
			OFT = Other Flat Tangs						
			NST = No Similar Types						
			Note: No type A, B, C, or F located as of 6/1/84.						

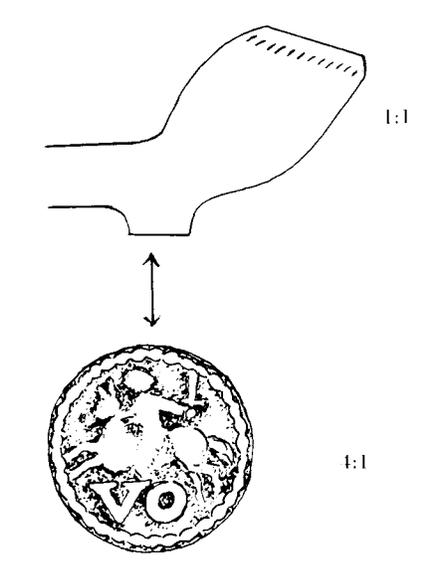


Figure 4. VO pipe heel, Van Evera-McKinney Site.

IIB2 Ford (1233)

The Ford site now is just another abandoned gravel bank and I have seen just one datable artifact from there. I don't believe it was a very large occupation area since the gravel bank itself is not too extensive and a couple of preliminary surveys around the perimeter have not had good results.

The site itself is approximately 450 meters south of the river. The one artifact previously mentioned is a small redwood bead with a dark core and three thin equidistant opaque white stripes on the outside. This is similar to Kidd's IVb3 except for the width of the stripes. Pratt (1982) designated it as #31 and dates this type to finds on the Blowers (Ond l-4) Oneida site and suggests a bracket of 1595-1625. I also have two from the Mohawk Martin site (1143). Additionally, a few kaolin pipe stem fragments have been recovered from Ford.

I therefore, taking the above into account, would consider 1626 to be a very logical median date for the Ford site.

IIIB2 Failing (1197)

Possibly the farthest western location of the early seventeenth century Mohawk castles was the Failing site. Unfortunately the New York State Thruway was constructed through and removed forever the evidence, of what was probably the largest ever of all the Mohawk villages (not necessarily in area but in longhouse numbers) without allowing even a minimal salvage effort. This castle was probably the one known in the second quarter of the seventeenth century as Tenotoge according to van den Bogaert and was described by him in 1634 as having 55 houses. It had been triple palisaded but, at the time of his visit, the remnants were in a sorry state of deterioration denoting its lengthy existence and that a move would soon be required.

The castle was situated quite close to the river and was directly across from a tributary stream, in this case the Caroga Creek, where there were, as noted by the Dutch surgeon's diary, "other houses which were filled with grain (corn)". This location has also been found in the position described.

When this village site was revealed by the gouging of bulldozers and earthmovers, two local, highly respected amateur archaeologists, Donald Lenig and Earl Caster, did their best evenings and weekends in the short period of time they had, to do some salvage work. Native pottery and lithic tools were evident but so were trade knives, brass arrow points, scrap brass, nails, axes, etc. Unfortunately, in the abbreviated duration of their efforts, not one single bead was recovered. They did manage to roughly map

out the area, including pits, and estimated the village proper to be an area of two and a half acres, which is a large Mohawk site size.

Based on this information and giving the village a couple of more years of occupation, I would venture a median date of 1628 for the Failing site habitation.

IB3 Fates (1131)

The Yates site was plowed when I located it late in the season six years ago and since then has been in hay only and so I haven't had the opportunity to examine it as well as I would prefer. It lies 640 meters southeast of the river. A road runs through one corner of the village area and a huge deposit of gravel has been removed from the main occupation zone. Ironically, this was done to construct a railroad bridge over New York State Route 5S and, now, the railroad has abandoned this section, taken up the tracks and ties, the fill is being leveled, and Route 5S is again being rerouted through this sacred soil.

There have been nails, kettles, scrap brass, and other metallic trade objects found but there are also many artifacts of Indian manufacture suggesting an early seventeenth century occupation. The triangular brass arrow points are both perforate and imperforate while seed beads dominate (80%) in black, white, and blue hues such as are found at Brigg's Run (90%) as well as a few tubulars (5%).

Therefore, I would suggest for the Yates village site a temporal span of 1626-1640, which equates to a median date of 1633.

1630-1650

Mohawk Indian villages begin to be more interesting than previously due primarily to increased acculturation as well as documentation that has been preserved over the centuries. At the beginning of this period, firearms were extremely rare. By the early 1640s a few had begun to trickle into Mohawk possession and by the late 1640s they had become fairly common, though not even then in great numbers.

Considering the infiltration of firearms and the types available and other datable artifacts of contemporary introduction by trade means, I can place only three villages in the valley with a median date within these two decades at the present time. Possibly others will reveal themselves as time goes on, or, it could be possible that the villages were just much larger than previously. Rumrill-Naylor is my most well documented site considering that I discovered it in 1981 and no one else has been allowed to "hawk" it. This summer (1984), a field team will do an archaeological dig on this site and much more positive information will be on record after analysis and evaluation by laboratory means. Meanwhile, I have assembled a meaningful collection of artifacts and have pretty much plotted the perimeters of the village.

The Bauder and Oak Hill No. 1 sites have been hunted, potholed, and searched with metal detectors by every collector in and out of the valley for many, many decades and as a result, in most cases, the artifacts have been dispersed to the winds without cataloging or documentation.

ICI Bauder (1122)

The Bauder site is almost one full mile (1.6km) south of the Mohawk River-by the most accessible route shorter if one opted to ascend a high, almost vertical ledge face to its northwest. It overlooks the Yatesville Creek on the east-another almost vertical ascent. At present it is on a narrowing promontory at the end of a cultivated field that is almost 670 meters long. The actual occupation area is approximately 70 meters by 82 meters square totaling about one and one-half acres. I've been over and over the field and these dimensions stretch the habitation area to the utmost. This was done because we had been told that the village took up most of the field and we wanted to check this out to our own satisfaction.

I have discussed this with nearly a dozen other highly regarded collectors who are very familiar with the site, including two knowledgeable former owners who were themselves amateur archaeologists. All but one agree that no more than six or eight longhouses could have occupied the area and the habitation was all located near the point at the east end of the field only.

Except for a few nails and articles of farm equipment and barn sweepings, there is no metal, bone, clay pottery, clamshells, fire cracked rock, or anything else to indicate a larger area beyond the irregular

one and one-half acres noted above. To the east and north on the precipitous slopes, there are four middens and one possible on a shallow slope, also to the north. All of these are on the perimeters of the habitation area described above and nowhere else on the field do other middens occur. The heavily laden midden areas do seem to indicate a probable long span occupation.

To put Bauder in perspective time wise, the small but valuable kaolin pipe material I have seen indicates a span of 1625-1650. One has a diamond enclosing quartering fleur-de-lis embellishing the stem and a tulip on the raised heel. This is similar to those found at Oak Hill No. 1 (1630-1650), Fort Orange (1624-1675), Wagner's Hollow (1610-1630), and Thurston (Oneida) dated by Pratt at 1625-1637. Another has an "RH" for which I have no data at present. One in my possession has a stylized "HF" enclosed in a circle. Other pipes for this site have been cited by McCashion as falling into the 1625-1650 time span and a good percentage are in the stem bore category of 7/64 of an inch. However, as explained elsewhere, I prefer not to use pipe stem bores as a criteria for dating purposes. (See Table 2)

Iron artifacts found on Bauder are trade axes, knives (including 1 type D, 7 type G, 2 type H), (see Table 1), pintles, jew's harps, hoes, awls, buckles, scissors, nails, a key, and gun parts. There are also many lead musket shot and lead taking forms of gaming pieces, pendants, and a bear effigy measuring 3.32cm long cut from sheet lead.

An important artifact in the collection of the author is a tube seal probably originating from Campen, Holland, a center of textile production in the province of Oberyssel as it is similar to that described by Bradley as having been found on the Carley (Onondaga) site c. 1640-1650. There is an additional impression on the reverse side that may someday be deciphered and shed more light for dating this tube type bale seal and the site. Pewter is in evidence including pieces of spoon handles, a round brooch, and a beautiful little cup, 98% complete standing exactly 5.5cm tall. If it could talk, the conversation would be more than just mildly interesting!

There is still a considerable amount of native made pottery, all incised and collar base notched-nothing to suggest earlier or prehistoric occupation. Occasional flint scrapers and Madison points are also found. A profusion of brass points made mostly from broken trade kettles have been recovered. Imperforate points outnumber perforates about two to one. I also have a well-made brass rear sight from a flintlock musket.

I have personally seen over 300 beads from Bauder and have a list of 200 more, a great percentage of which are seed beads, blues being predominate. There are also many blacks, and whites are not scarce, as well as star chevrons, blue on white flush eyes, and green corn beads suggestive of the 1630s and before or just heirloom possessions. There are also many robin's egg blue (IIa40), robin's egg blue with three white stripes (IIb56), opaque white with a clear center (IVa13), and a variant of the round redwood (IIa1) with a shiny cover and a very small diameter bore which I have found only on Bauder and Rumrill-Naylor otherwise. Several faceted beads have been picked up, Kidd's type If*, which I feel are consistent with the inclusive dates of a single occupation, not from a subsequent habitation.

The few wampum beads I have found here have all been drilled straight through, no taper drilling as in earlier native made wampum, and opaque black glass cassock buttons are present.

TABLE 2
Kaolin Pipe Stem Bore Diameters From 17th Century Mohawk Village Sites

	4/64"	5/64"	6/64"	7/64"	8/64"	9/64"	10/64"
1600-1630							
1624-1640				2	1		
1634-1650			4	17	12	6	
1640-1660	1	2	31	173	103	66	50
1654-1666			2	7	6	2	1
1666-1680		2	6	23	11	1	
1680-1693	2		19	5	2		

IICI Rumrill-Naylor (5698)

One site with which I am more familiar than anyone else is the Rumrill-Naylor site which is 800 meters south of the river. My singular thought when I started out in the spring of 1981 was to try to find the "Canagere" of the van den Bogaert papers which I thought had to be in this specific area, and so, with permission from the owners, Harry and Margaret Naylor, I spent a day walking two newly plowed fields. I finally spied a piece of lead bar, such as is found on most historic Indian sites, a piece of pottery, and a Madison projectile point.

The field had been plowed only a couple of times in forty years or so and had been cultivated just a few short years even back then. Very little was on the surface the first season that I examined it but each year since it has yielded increasingly more.

By the time I reported the Rumrill-Naylor site to the New York State Archaeologist's office in Albany in July 1981, the artifact assemblage was diagnostic to c.1630-40, which I so noted. In 1982 I also expressed to the directors of the State University of New York archaeological field school that I was pretty much convinced that this was the Canagere village site. This year (1984) the field school will professionally excavate a section with a large group of students and Earth Watch personnel. Hopefully, the results will be positive enough to uphold my postulation and provide another link to the chain of events in the seventeenth century Mohawk Valley.

It has turned out to be a very large site as far as Mohawk villages go; material is found in an area in excess of four acres including three middens. It has been a treasure of the most varied artifacts imaginable. If this segment seems long, it is only because I want to include everything possible pertinent to this village's era in order to provide a correlation to other, Mohawk in particular and Five Nations in general, sites known now and others as they reveal themselves.

The beads are interesting because of the varying shades of blue present and which are predominately round and large (over 6mm in diameter). The hues include turquoise, cerulean blue, bright blue, and aqua blue. Some are robin's egg blue with three white stripes (IIb56), others are barrel shaped bright navy with four white stripes (IIb'12), and still others are dark navy with twelve white stripes (IVb36). The small shiny round redwood with a tiny bore (variant of IIa1), as I mentioned previously, is found so far only on Rumrill-Naylor and Bauder.

Large tubular beads are so far all redwood, simple and compound, some with blue on white stripes (Ibbl) and some with black on white (Ibb*). Small tubulars are untumbled bright navy outer and center layers with an opaque white middle layer (IIIa12). There is only a small percentage of the latter types but they do help to extend the terminal date for the site.

Additional glass recoveries are two pieces of Rhenish drinking glasses. One is a raspberry prunt and the other, also a cylindrical stemmed goblet type decoration of nondescript form, a simple protuberance if you will. I have several opaque black glass buttons from this site too, which are sometimes referred to as gaiter buttons but more often as cassock buttons.

There are five different kinds of pipe materials found at the Rumrill-Naylor site including some artisan fashioned brass pipe liners, several very large bore pewter pipe stems, and a number of Indian made ceramic pipe stems. One unique item is a rim piece from the bowl of an Indian pipe with two large eyes and the beak of an owl similar to that illustrated in Beauchamp (1898) from the so-called Nichols Pond Oneida site.

Three years ago I found the bowl of a polished grey slate pipe with a lead inlaid letter "X" facing the user; two years ago I found the stem that matched; now I need one more side of the bowl for the complete pipe. In the course of a professional dig at Oak Hill No. 1 in the summer of 1983, a twin of the same material but without the inlay, was unearthed.

I have 39 kaolin pipe stems with stem bore diameters as follows: 6/64"-4, 7/64"-17, 8/64"-12, and 9/64"-6. Some of these are very large such as the complete pipe found at Oak Hill No. 1 and stems found at Bauder and Thurston (Oneida) dated 1625-1637. These have four fleur-de-lis in a large diamond shape, each in a diamond shape of its own, and much rouletting along the stem. I recently found a 7/64" bore stem piece that has three longitudinal rows of fleur-de-lis in a diamond, each cartouche also having the letters "P" and "G" straddling the top stem of the fleur-de-lis. The PG letters on kaolin pipes have been found at the Shurtleff (Onondaga) site c. 1630-1640 and a nearby vicinity to Fort Orange (across the river) in a context of approximately 1630-1645.

In addition, I have three complete pipe bowls with heelmarks, two of which have been identified for me by John McCashion. They compare to those found at the Stadt Huys (Stadt House) in New York City c. 1625. One has a 7/64" diameter bore and the other is 8/64". The heelmarks resemble a swastica to some extent and the Dutch manufacturer remains a mystery to date.

Interestingly, there was a Susquehanna Broad projectile point found and a half a dozen Madison points as well as quite a number of pottery sherds. The rim sherds denote Otstungo Incised, Fonda Incised, Garoga Incised, one sometimes referred to as Chapin Crisscross, and a couple of others for which I have no reference at this time. An item of Indian manufacture too is a polished celt of light textured granite speckled heavily with sparkling garnet. Add to the list of natural materials several pieces each of graphite paint stone, hematite, and yellow ochre.

I've found a half a dozen more partial pigs of lead since the very first artifacts I found on Rumrill, all with axe cuts in them. This must have been their method of cleavage. There is considerable waste lead around as well, such as gang shot sprues that Beauchamp (1903: ex #156), by the way, labeled as "a unique pewter ornament." Gun shot abounds in all sizes including swan, buck and musket. There are examples of tumbled and Rupert shot but the great majority were apparently locally molded. We find whizzers here, which in this case are pieces of lead with holes drilled through them like a button that produces a whizzing sound when whirred through the air on a piece of string or sinew.

Part of a large dumbbell type Campen bale seal with the "PEN" still visible as well as two Campen tube type bale seals such as I found at Bauder (and other sites) and five smaller bale seals with no impressions are indicators of a probable flourishing fur trade going on at this village. Three other pieces of lead drilled for suspension probably means that this metal was sometimes used ornamentally. One is a nicely sculpted three-dimensional effigy of what appears to be a white tail deer of the female gender with her tail up and two holes along her back for suspension. This measures 3.4mm in length and 1.3mm in height.

There are several examples of pewter spoons having been in use with six sided stems sometimes referred to as "slipped in the stalk" (Masse 1971:41), or "stellas", and popular from the mid sixteenth to the mid seventeenth centuries. Pewter buttons are flat faced with iron eyes. The most unusual pewter item is a nicely decorated cast brooch of elongated form. I saw another brooch of similar decorations from the Bauder site four years ago but, unfortunately, it is no longer available for comparison.

Discarded brass is too numerous to count; kettle lugs from small to huge, globs of melted brass, remnants from ruined kettles and pots, and items that look like they might have some definite purpose but no reference or logic gives a good clue. There are many straight rolled tubes but relatively few of the conical form that could be called bangles or tinklers.

The biggest surprise was a brass pestle. It is 17.8cm long and from the looks of the scars on it, it was used to beat on nails, knives, or anything else other than its intended white settlers use. An interesting find was a finely marked brass scale weight with a capital "A" and "1/4" on the smaller, tapered end. It weighs approximately 126 grams. A rather fancy large cast kettle lug also is unusual, as is a seventeenth century brass boss from the cheekpiece of a curb bit used on horses, similar to that described by Ivor Noel Hume (1978:242, Fig. 76-1).

Other brass items are tobacco box tampers, thimbles, bracelets (bent, flat strips of brass), fleur-de-lis musket stock escutcheons, and square stock jew's-harps with five notches in each tang but without the stylized capital R on the back, plus two flat buttons with soldered on eyes, each 2.2cm in diameter. I have one well made conical arrow point with part of the wooden shaft still in it and 59 triangular points, half of which are perforated and four of which are bifurcated. The significance of that statistic is that I don't feel that there is any significance temporally to perforate, imperforate, bifurcate, or conical brass points.

The most common articles found on even the earliest seventeenth century Mohawk villages are hand wrought nails ranging in length from brads of under 2.5cm to huge spikes of 17.5cm and more. Most are rose headed and remarkably well preserved, especially if they have been subjected to a hot fire. It may therefore be assumed that the longhouses were being constructed with a plentiful use of nails at a very early date. The price per pound could not have been too high considering the totals found. Another "modernistic" early trend is the utilization of hinges and pintles denoting the Indians' grasp of the practical necessities of life. Pintles, nails, and all other iron objects I've mentioned herein were in existence on the Rumrill-Naylor site.

It always amazes me that axes, especially, and other iron artifacts, could be bent, fractured, and

otherwise upset but, one does find quite often that the blades (celts) and heels have been separated from each other and the breaks are in places other than hammer welds or laps. I have eight complete axes, several with armorers marks, and three heels and four celts. Since all of the armorers marks are found continuously through the seventeenth century, they do not aid in dating sites at this time. There are also eight hoes and one adze but, again, no interpretation is forthcoming.

Other iron objects found here are kettle bails, medial ridged sword remnants (including shaft, point, and handle sections), fishhooks (large with a barb and the shank end is spatulated instead of eyed), needles, scissors, flat and halfround files, and awls. The latter, however, are all straight (no offsets in the 27 that I have and some almost 15cm in length), which may or may not have some significance. The fishhooks, by the way, presumably were used to catch the large fish from the Mohawk River. As noted by several chroniclers such as Warren Johnson, brother of Sir William Johnson, even a century later, "salmon, trout, some a foot and a half long . . .", etc.

Using Hagerty's (1963) categories for trade knife identification for the total of 76 I have recovered from Rumrill-Naylor to date, there are 22 type E, nine type G, and 39 type H. (See Table 1) Sometimes, due to corrosion and deterioration, type H are not as distinguishable as one would prefer for positive separation into established or new categories but this will have to suffice for now. Other knives of no referenced categories are: one with a rattail handle that centers on a large blade, one similar to type G but with a flat handle, one similar to type E but with a rattail handle, and three similar to type G but with a collar 2.6cm in length.

Popular trade items amongst the Iroquois were jew's-harps and it must have been quite an experience to walk the length of a longhouse in midwinter and hear the various tunes being played. I have twenty one of these made of iron, fourteen of which have rounded backs and seven having straight backs. Articles that were apparently not so common are ice creepers which one would necessarily have to wear with a well heeled shoe so I wonder if they actually were used by the Indians at this early stage of acculturation or if they were just mislaid by a white trader. In any case, I have two from this site which are not identical. I also have a nicely crafted locking hasp for, I suppose, a small trunk of some sort where someone could keep his (or her) valuables secure and out of sight.

There are a number of iron projectile points, one of which is an unshafted triangle and I presume this to have been used with an arrow. Three others have short shafts 5-7.5cm long and six have longer shafts 12.5-15cm long, probably to attach to a wooden mainshaft and used as a spear.

Since there was a dwindling employment of the chipped flint tool industry at this point in time, the natives needed implements with which to clean their raw skins for marketing to the fur traders, hence we now find European iron scrapers present in at least three different sizes. They are fashioned like a miniature spade, some slightly curved, with an expanded ball and others with a loop on the end of the handle. The blade itself always has a slight curve to it. At Rumrill-Naylor, the three sizes are: small-less than 2.5cm wide, medium-less than 5cm wide, and large .5 to 7.5cm wide. I'm sure they made the scraping process a much less tedious task than it had been for the many millenia prior to their availability.

Other tools that I have found on the grounds of this Mohawk castle are two wood bits for .71cm diameter drilling, one wood gouge for .625cm diameter, five chisels, two punches or drifts, one small pocket anvil used for making repairs or replacement parts in the field, and two draw shave blades, each with a handle broken on one end.

I have one Indian made gunflint and that brings me to an inventory of gun related artifacts found within the confines of this site. One of the questions this brings to mind is "how long did a musket last in the hands of these neophytes and therefore, how many guns could they have had serviceable at any one time"? Does the fact that many pieces and remnants of gun barrels in evidence mean that they were of inferior quality or did the owners overload the powder charge? If it were the latter, how many Indians were killed or maimed? If there were a number of unbroken, workable gunparts on the site, one could assume that perhaps the Indians were repairing their own unserviceable muskets but since almost all of the parts found were either bent beyond use or broken, one must assume that the weapons were not being put back into use. Perhaps this has the intonation that at the time this village was extant, furs were still plentiful locally and the feeling of easy come, easy go was prevalent.

Some of the gunparts give us a clue to the early date of habitation at Rumrill-Naylor. For instance, there are two snaphaunce lockplates identified by Jan Puype (at the Trade Gun Conference at the Rochester Museum and Science Center, June 1984) a seventeenth century Dutch firearms authority from

Amsterdam, Holland and one type C lockplate (Mayer 1943:40-11) with its hammer still in place and punched for a lateral acting sear. In addition to the lockplates, there are five mainsprings and one frizzen spring for early doglocks, two mainsprings for later doglocks, and one wheellock mainspring. Most unusual of all and also identified by Jan Puype, are two batteries from Spanish miquilets. None of these have surfaced on other Iroquois sites to my knowledge. There were also seven horizontal sears and one early doglock musket cock, one snaphaunce pistol cock, and a snaphaunce battery.

Evidence that a wheellock actually did make an appearance is indicated by the exciting find of a wheellock spanner (Figure 5), a wrench type tool used to apply tension to the firing mechanism of, naturally, a wheellock musket.

Parts not assigned to any particular type firearms are a breechplug with tang and rear sight, one trigger, one flint vise top clamp, two frizzens, two ramppipes, one iron rear sight, and various trigger guard pieces and finials. Accoutrements located so far are two gun worms, one plier type musket ball mold, one touch hole cleaner, and a rare musket barrel scourer. Finally, there are three solid cannon balls from Rumrill-Naylor of one and one-half, two, and two and one-half pounds respectively, no doubt obtained at Fort Orange in one manner or another.

Last but not least in the weaponry department are a spontoon or lance blade and a nicely fashioned rapier hilt. The spontoon blade's tip is missing but a good estimate of its length is 20cm and the width at the tang is just under 5cm—a very formidable weapon indeed!

There have been no religious articles such as crucifixes or Jesuit rings or medals uncovered to date. Considering the above supportive evidence, I have come to the conclusion that the Rumrill-Naylor village site has the overlapping properties that make it a contemporary of Bauder to the east and Oak Hill No. 1 to the west. Bauder is perhaps slightly earlier and Oak Hill No. 1 seems to fit pretty closely.

IIIC1 Oak Hill No. 1 (1186)

Oak Hill No. 1 has recently also been referred to as the Little site, so named for the present owners, and is slightly over a mile (1.6km) from the river. The village area proper and the middens have been picked over and potholed probably more than any other historic Mohawk site in the valley. It is also the reputed location where an old silver chalice was found and was on display at the Auriesville Shrine from whence it disappeared.

An archaeological field excavation was done in some areas in the summer of 1983; however, the artifact assemblage did not reveal much that had not been conjectured previously. The usual nails, brass,

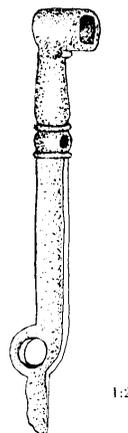


Figure 5. Wheellock spanner, Rumrill-Naylor Site.

trade knives, and brass arrow points were found but not much in the way of gun parts, kaolin pipe stems or bowls, or even beads considering the amount of earth that was moved. This pointed out the extent to which previous digging and the use of metal detectors had stripped the area of artifacts.

Some of the kaolin pipe stem pieces that were found have the distinctive four fleur-de-lis in a large diamond shape, each in a diamond of its own with much rouletting on other sections of the stem. One complete pipe such as this was removed from a nearby burial many years ago. It is of large proportions compared to others of its day and has as its heel decoration a variety of the Dutch tulip (McCashion 1979:84). Stems of like stamping have been found at the Rumrill-Naylor and Bauder sites in the Mohawks' territory as well as at Fort Orange and at the Thurston site in Oneida territory dated by Pratt at 1625-1637.

The trade beads at the Oak Hill No. 1 (Little) site (Sugihara) are similar to those from Bauder and Rumrill-Naylor and are a carry over from the Brigg's Run site. That is to say, there are many round robin's egg blue (IIa40) and robin's egg blue with three white stripes (IIb56) but even more predominate are the small circular black (IIa7) and especially the small circular opaque white with clear center (variant of IVa13). There are also occasional opaque black glass cassock buttons found here.

A small brass religious medal was found similar to those associated with rosaries, perhaps from one of the Jesuits made captive in their villages contemporary with the time period of this site. A twin to this medal was also found at the Mitchell site (1248) in my presence; however, to my knowledge, no other religious articles or any Jesuit rings have been recovered from Oak Hill No. 1.

The absence of bale seals, to date, may be significant, too.

Considering all of the above, I have to conclude that these three village sites are of the same comparative era; that is, a median date of approximately 1640.

Trade bead comparisons include totals of over 500 from Bauder, 143 from Oak Hill No. 1, and 60 from Rumrill-Naylor. Common denominator beads are IIa1 (variant), IIa7, IIa40, IIb56, IVa13 (variant). Comparative absence of tubular beads is significant negative evidence since their era in the Mohawk Valley begins in the late 1640's giving us a handle on the terminal dates for these habitations.

Since the Bauder site appears to be the most eastern village for the Mohawks of which we know for this period of time and considering validated contemporary evidence, I would suggest that this is the Ossernenon or Oneuguioré of 1642 and 1646 respectively as reported by Fr. Isaac Jogues in the Jesuit Relations of 1646 (Thwaites 1896-1901 v.29:51) ". . . arrived at first small village of Oneuguioire, formerly Osserion"). Dominie Megapolensis called this same village "Asserue, the turtle clan . . ." in 1643.

One in-person visit to this site will confirm that which Jogues describes-the nearby hill overlooking the small village, the hill through the fields down to the creek below which is ever running and torrential at times, and the woods on the opposite bank are still not cleared off.

The Rumrill-Naylor village site, therefore, has the probability of being Jogues' Andagoron or Gandagaro and Megapolensis' bear castle of Bandagiuro or Kanagere.

The Oak Hill No. 1 village site would then be Tionontoguen of Jogues trials and tribulations.

I also believe and suggest that the Rumrill-Naylor site is the Canagere of van den Bogaert's journal. Hopefully, the 1984 archaeological field school will produce some very positive and datable artifacts and information to allow further analysis and conclusions for these three very interesting sites.

1640-1660

This period of the mid seventeenth century provides us with considerable definitive material with which to determine dates and thereby associate certain artifacts with recorded visits and happenings in the Mohawk villages. The Jesuit Relations pinpoint actual dates for such as Fr. LeMoyné's visit in September and October 1655 with time out for a side trip to Fort Orange. As this was not prearranged to establish a mission but, instead, to confirm a peace between the Mohawks and the French, it is probable that there were not many, if any, religious articles such as rings and crucifixes distributed at that time. It is also doubtful that any of the captive Jesuits previously in the valley, had a supply of religious items. This was no doubt the case of Fr. Jogues on his ten day diplomatic visit in June 1646. His second visit, this time to establish a mission, in October 1646 lasted just one day and that in the most easterly village only where he was murdered.

Fr. LeMoyne returned to the Mohawk villages from August 1657 until May 1658 and again from May through July 1659. These are the only periods of time prior to DeTracy's destruction of the villages south of the river and the Mohawks' move to the north side in 166f-67, that the Jesuits had the freedom of performing their missionary work and distributing their religious gifts. Therefore, it is logical to assume that the absence of these items mandate a terminus ante quem of 1655 and their presence mandates a habitation date within the 1657-1659 period of time.

At a council in Fort Orange in June of 1657, the Mohawks asked the Dutch to ". . . provide them with some horses to haul logs out of the wood to repair their castles . . ." signifying that their castles were deteriorating, which also assumes that they were already in place for at least five years and possibly as much as ten.

The following village site dates are based on the fact that Jesuit rings and other religious articles are present, sometimes in abundance and the trade bead comparisons and other comparable artifacts place them within the same time span. Perhaps it would have worked as well to start this chronicle at this point and to have worked towards both directions in time as a more positive and persuasive method.

By arriving at a median date or initiating date or terminal date or any combination of the three on key sites through logical and interpretive informational sources and processes and collating them in the overall picture for any of the areas, the complete picture will come together for all contiguous areas.

IDI Printup (1124)

The Printup site lies a little over 450 meters south of the river. One doesn't find much in print about it, probably because it hasn't always been as easily accessible by motor vehicle as it has been in recent years.

Curiously, I can find no reference to this site by Robert M. Hartley (a well known serious collector in the valley and for whom the area chapter of the New York State Archaeological Association was named) in his 1943 catalog or by A. G. Richmond. Although S. L. Frey (a nineteenth century collector) refers to "Andagoron" (Jogues second castle), he doesn't place his site for us geographically as Nelson Greene (*The Old Mohawk Turnpike Book* pg. 130) does when he refers to Printup as Andagoron. Arthur C. Parker (New York State Archaeologist 1906-1924) refers to it in part two of the *New York State Museum Bulletin* nos. 237 and 238 pg. 624 as the More farm "historic site with glass beads". Rev. Thomas Grassman (1969) was aware of the site but chose not to include it in his book, whatever the reason may have been.

A rather significant fact about Printup is the abundance of gun parts. Fortunately, the make up of the soil seems to somewhat preserve rather than to destroy iron. Pistol locks and right and left hand musket gunlocks are in evidence. Although a few snaphaunce parts have been found, most of the relics such as locks, lockplates, mainsprings, frizzens, etc. are for late doglock and flintlock muskets as portrayed by Joseph R. Mayer (1943). Additionally, the sears that I have seen have all been vertical acting and the brass rear sights and fleur-de-lis escutcheons tie nicely into other sites of this same time period. Four musket barrel scourers have been found here as well as Indian made gunflints, one French fine grade gunflint, and several pieces of other broken French gunflints.

Allied to the presence of so much in the way of gun parts are, of course, the number and variety of lead shot. Hamilton (1980) states, "Before 1665, shot (as distinguished from swan and buckshot which have always been cast in molds) was made by the laborious process of cutting sheet lead into cubes and then tumbling them in a barrel to more or less round off the corners, Kurz (1937:322)". After 1665 there was Rupert shot, which is a process of running molten lead through a colander-like dish and the spheres dropping into water. This process leaves a dimple on the more flattened side of the almost round shot. My scrutiny of these categories leads me to the conclusion that lead shot per se, was not traded to the Mohawks but, rather, pigs of lead and bullet molds-single and gang-were the trade items with which the Indians made their own shot. However, ten to fifteen per cent of what I have observed on Printup appear to be tumbled shot or, at least, were not molded.

Converse to the substantial numbers of gun parts is the almost absolute dearth of native pottery. I know of only a very few fragments of Indian ceramics to come from this site. Perhaps at some later date pits may be excavated and reveal that the people of this village still practiced the art but even the middens, in particular, have not given up a sherd to this point.

Iron artifacts include five type F, seven type G, seven type H, two type I, and three type J knives and

one bone handled clasp knife, Files, cold chisels, scissors, fishhooks, three ice creepers, one belt axe with a high relief X in a circle on the left side only, one drill bit of .74cm diameter, pieces of sword blades, eight straight awls, one offset awl, one double curved awl, the remnants of a pair of sheet metal shears, needles, and four iron spear points with 10-12.5cm shafts are some of the items i have found on this site.

At least 100 Jesuit rings and other religious articles have been found at this location to date. This by itself surely places the Printup site village in existence somewhere within the dates of 1655 to 1678 and most probably in the earlier spans of 1655-56 and 1657-58. All of the rings are incised, also giving credit to the suggestion of the earlier dates. A separate study of Jesuit ring designs should be made for the Mohawks' country similar to the endeavors of Alice S. Wood (1974). Studies done on the Onondaga sequence by James Bradley (1979) and the Seneca sequence by Charles Wray (1953) tend to support the postulation that religious articles and Jesuit rings are not generally found on Iroquois sites until the 1650s and the Jesuit Relations gives us clear dates of when their missionaries were initially able to bring these things to the Mohawks, thus validating site habitation time wise.

Brass artifacts include kettle remnants, especially lugs whose styles were cast, rolled, folded corners, and clipped corners. Arrow points that are conical, triangular, round shouldered, bifurcated, shafted, single and double perforations, and imperforate, bangles, pendants, bracelets, and thimbles are dher brass items. One very unique puzzler that was recently identified for me by Charles Wray of the Rochester Museum is a pipe tobacco box tamper to facilitate filling the small pipe bowls of that early date. In other words, the belly bowl opening was too small for even the little finger to enter and tamp the tobacco. Thus necessity invented this artifact. Charles Wray's informant was Jan Baart of Amsterdam, Holland.

Perhaps the most copious of potentially datable evidence are the kaolin pipe bowls and stems, etc. There are over 400 measurable pipe stem bores from this site for study and several preliminary analyses have been done on them. Interestingly, there are at least 50 stems with 10/64" bores (12.5%). This size is not included in most graphs presumably because it was not commonly found. The range is from 4/64" to 10/64", the most plentiful being approximately 170 of 7/64" which is 42.5% of the total and the next most plentiful being approximately 100 of 8/64" or 25%, of the total. Other totals are: 1-4/64", 2-5/64", 30-6/64", 69-9/64". Using all stems 4/64" through 10/64" and entering them for calculation using the Binford Formula, a median date of 1627 is forthcoming. Eliminating the 4/64" and 5/64" as being possible later date intrusions, the median date appears as 1625. Again, using information from known dated Onondaga and Seneca sites, we are quite certain that kaolin pipes were very scarce in 1630-40 and were traded in greater quantities, frequencies, and localities after those dates.

It appears to the writer that the Binford Formula cannot be used with any accuracy in the Mohawk Valley (See Table 2), at least in the date range to which we are alluding. It is really very understandable though, considering that Binford used only English pipes to arrive at his conclusions and, logically, the Mohawk Valley being controlled by the Dutch, we may be dealing primarily with pipes of butch manufacture. It appears that even in areas of English control the Binford Formula just is not an acceptable method for date establishment through the early and middle seventeenth century.

On the Printup site, the most common raised platform heel marks on the acorn bowls are those marked EB surrounded by a beaded ring and EB on a plain field while the funnel bowl pipes with a flush heel have an EB surrounded by what may be a rope or a worn beaded ring. All of these are attributed to one Edward Bird of the Netherlands and appear for a period of over twenty years in the Mohawk Valley. The EB pipes occur on all Iroquois sites from 1650 onward.

There are rare occasions when coins are found on Indian sites; rare, because at this date there was no necessity for using a monetary system other than wampum or whatever could be acquired in trade for furs. Two coins have been found on Printup. One is a Venetian coin with the word SOLDINO on the obverse and the number 74 on the reverse. The latter, of course, is a denomination rather than a date. The information on this coin is not available as yet since it is of very recent discovery. The other coin is a French silver alloy coin of 23.5cm diameter known as a douzain piece, as T was informed by Gordon DeAngelo, probably struck in the late sixteenth century. It has a modified Maltese cross on the reverse quartered by four crowns with a Latin inscription that interprets either as "Blessed be the name of the Lord" or "In the hands of God". The most interesting and revealing mark, however, is a countermark of a fleur-de-lis that Louis XIII had impressed on all old coinage when he initiated a new coinage system in 1640-41. It is a heavily worn piece with the obverse being barely discernable and the reverse completely

obliterated. The fleur-de-lis counterstamp reveals that Printup, therefore, necessarily postdates 1641 and probably by several years.

Bale seals, like coins and pipes, can be a bit disconcerting. Their provenience can be determined without too much difficulty—at least by country and sometimes even by city—and if one is fortunate, by an impressed date. We do have evidence of many of these from such as Fort Orange from a location dating 1648 to 1668 and Onondaga sites Lot #18, Indian Castle, and Indian Hill covering a temporal range of 1650 to 1682. Among those from Printup are two circular two-piece seals, each approximately 3.8cm in diameter (originally shaped like a flattened dumbbell), which were folded over the edges of cloth goods, crimped together with two ears flattened across the face and stamped or embossed at the same time. Those from Printup are from Campen, Holland (a center of textile production in the province of Overijssel) with the word CAMPEN arcing across the top of the seal while the center depicts a town gate complete with drawbridge.

Another double circular type is considerably smaller (approximately 1.75cm in diameter) and was probably affixed to warp threads at the end of the material. This seal was folded, crimped, and stamped with crossed pike poles on the front and an incised 66 on the back, probably to denote the amount of material in the lot. Another seal is a bit misshapen but I believe it was a circular piece of approximately 1.8cm in diameter with a 1.7cm connecting strap. Unfortunately, almost all of the front is missing but on what remains there are indications of impressed stamping. On the back, the number 64 is stamped rather than incised. One could get carried away with one's imagination and consider the 66 and 64 as years of the seventeenth century but logic and other artifactual evidence preclude this possibility.

I have several halves and pieces from double circular bale seals from Printup including one with an embossed number 8 that shed no further light and two tube seals with the same Campen type gate impression, one on both sides and the other on one side only.

There is not much of importance to say about the buttons from this habitation area except that they are not as scarce as they seem to be on other Indian sites. They are pretty evenly divided between brass and pewter and most are small and decorated. All of the smaller buttons are convex or conical except for one brass button with a male silhouette embossed on it. The larger buttons, 1.7-1.8cm, are also numerically half brass and half pewter, most not decorated and much flatter, including one that is absolutely flat and measures 1.9cm. As far as the so-called Jesuit buttons go, although I am sure they were a standard of their daily habit, since they are a common occurrence on non Jesuit visited habitations, such as Peck's Lake in the Adirondacks and 1630-40 sites in the valley, etc., I refer to them simply as cassock buttons and avoid attempting to clarify the nebulous. They have also been identified as gaiter buttons, shoe buttons, and just plain opaque black glass buttons with an iron wire loop.

Jew's-harps are common and numerous on historic Indian village sites throughout the seventeenth and eighteenth centuries in both brass and iron. Printup is no exception. There have also been found here several of the distinctive brass harps with the stylized capital R on the back and five notches on the twanging ends as described for Van Evera-McKinney. Also, as mentioned before, Jan Baart of the Netherlands attributes them to one manufacturer in Holland only and for the dates 1640-80 exclusively. I've left the matter of trade beads until last because they are probably the most datable of artifacts simply because there have been so many studies made on this subject by some of the most reliable people in the field of historic Iroquois archaeology. Of 267 glass trade beads from Printup that I have classified according to Kidd system, 217 or 81.3% are tubular and most, but not all, are untumbled. 181 are small (sometimes referred to as straw beads), 28 are large, two are twisted, six have stripes, and several have clear green or opaque black cores. Of 39 round beads, 22 are IIB36 aqua blue, six are IIA redwood, two are IIB56 robin's egg blue with three white stripes, one is a IIA6 black, and one is a IIBB4 redwood with three bright navy on white stripes and three light gold stripes. Seven are circular beads type IIA38 aqua blue; oval bead types are seven IIA57 navy and two IIB'4 marbled blue, yellow, and red on white.

These types and figures jibe amazingly close to Bradley's breakdown of the Onondaga Lot #18 site dated 1650-55 and with Pratt's Oneida Lower Dungey site with a 1976 corrected date of 1650-60. The IIA56 are not to be misread for this period as they seem to appear for a considerable time span and are not in abundance at Printup.

There are several of us who have been surface hunting Printup for a good number of years and we all pretty much agree as to what the perimeters seem to be. Having measured these outlines, it appears to be a site of approximately 1.87 acres including three large midden areas. The fields have also been plowed most

of these years and the Indian dirt at times is well pronounced. Keeping records and sharing information of where the artifacts have been found and at least four good interpretive estimates without any actual excavation, the probability is for seven or, at most, eight longhouses running west to east on an "L" shaped plot.

Considering all of the foregoing and the fact that 99% of all items are trade goods, I have to conclude that the Printup site most probably was occupied in the years bracket of 1647 to 1660 overlapping Bauder on the early side and Freeman on the late side. The median date therefore is 1653.

IVD2 Milton Smith (1092)

The Milton Smith site is an apparent two occupation site, one in the mid seventeenth century and one in the last decade of the same. It lies almost three miles (4.83km) east of Fultonville and less than a mile (1.6km) west of Auriesville on a plateau with a magnificent view of that part of the Mohawk Valley.

The middens have been dug out and screened and much of the artifactual evidence is scattered. Some day I hope to determine the village perimeters but because of the present land usage, have not been able to. My information at this time is that it was not a very large site.

I have seen more than 100 beads from here of which 40% are seed beads similar to those from the Allen site, 35% are tubulars, mostly untumbled but with a sprinkling of the tumbled types, similar to Allen, Mitchell and Printup. The remainder are round and circular, almost all monochromes and also similar to the last named three sites. They are types such as IIA6 black, IIA7 black, IIA13 white, IVA13 white with a clear center. Additionally, there are many white and purple wampum beads, all straight drilled as opposed to earlier native tapered drilling. One bead is present that is a bit disconcerting in that it is usually associated with the next decade and that is Kidd type Ia7 light gold untumbled tubular. Perhaps it was just a stray early comer-more will be said about that later. The rest of the above mentioned beads compare with Oneida, Onondaga, and Seneca sites dated from the mid 1640s through the mid 1650s.

As support to the above, there have been found on the Milton Smith site, several brass jew's-harps with the five notches on the twanging ends and the unique and distinctive capital R incised on the flattened back, left side. Again, this compares to Printup and Mitchell. Another comparative artifact for the site is a number of fired clay discs that are distinctive in configuration that were probably used as gaming devices. The twins to the Smith discs appear on the Allen site (1223).

One complete pewter pipe is comparable in configuration and bowl angle to one found on Mitchell (1248).

An obvious bit of negative evidence is the absolute lack of religious articles even with the screening of the middens. This seems to assure us of a terminal date of the earlier occupation prior to 1657. Although the amount of available artifacts are not as large as one would desire, those that I have seen are very significant with which to make comparisons with Mohawk sites and other established Iroquois village dates. Therefore, I feel justified in assigning the median date of 1650 to the earlier occupation of the Milton Smith village site.

Also, because of the lack of reported sites for four miles to the westward, I suspect that eventually several more sites will be found to provide more clues to the settlement pattern of the Mohawks.

IIIDI Fiske (1210)

The Fiske site is another about which I have minimal information. The village was located 1200 meters from the river and, unfortunately, the foundations of a barn have taken its place and the surroundings have been leveled by a bulldozer.

The only artifacts I have seen are some glass trade beads positively identified as having been recovered during the barn's construction and these were mixed in with other beads from later dates. Be that as it may, those to which I was referred were all small untumbled tubulars similar to those recovered from Mitchell, Printup, Allen, and Janie.

Based on that evidence alone, I am tentatively and questionably putting the Fiske site into a bracket of 1646 to 1660 until I see more; that is, if there remains in someone's collection somewhere, the necessary means.

IIVI Mitchell (1248)

The Mitchell site is located a little over three miles (4.83km) east of Canajoharie in a trapezoidal shaped field of approximately 2.65 acres. When occupied by the Mohawks and until the third quarter of the twentieth century it was much larger but the "wheels of progress" then cut a huge swath through it destroying probably 30% of the occupation area creating a modern highway and shortcut from Route 5S near Sprakers, New York to Central Bridge, New York via new Route 162. There has been much "hawking, picking, and potholing" of what remains and, surprisingly, beads and artifacts still appear when the field is plowed. Catastrophically, the best and most representative collection was destroyed in a barn fire many years ago.

There isn't much Indian made material from this village except for some pottery (I've seen only body sherds), a few flint tools such as a drill, side scrapers, and a uniface which was probably used as a knife, and a short piece of greenish steatite pipe stem.

Trade knives are one type E, one type G, six type H, one similar to E but with a rattail, and one similar to D also with a rattail tang. One trade axe is a belt type with an armorer's mark of a cross within a circle, one on each side of the blade. Other iron objects are two large pintles, one large key, awls which are mostly of the straight variety (approximately one in eight being offset). Fishhooks are quite large, barbed, and the ends of the shanks are spatulated; spear points have 11.25cm to 12.5cm shafts; one scraper is a narrow type of 2.38cm; seven jew's harps of which four are made of continuous square stock, two had flattened, straight backs and one had a flattened curved back.

On the Mitchell site, we again find those unique brass jew's harps with five notches on each tang and an incised, stylized capital R on the left hand shoulder of the flattened, curved back.

Another intriguing artifact is an oval brass plate embossed with a scene of a hunter with a flintlock musket and three dogs in pursuit of a bounding stag. It has two holes punched in it, one on each end, and is about the right size to fit the bottom of a powder horn. It has also, at one time or another, been attached to another piece of metal by means of soldering.

A 1.55cm square cut piece of brass which I found recently may be a monetary indicator or a mathematical counter but I have had no success in identifying it as yet. The obverse has lines crossed perpendicular to each other and a circle in each of the four quarters thus created, all of which is surrounded by a stamped circular impression. The reverse has laurel leaves or some type of floral impression, in the form of a circle. Both sides are worn considerably and the piece has been drilled, probably for suspension, to be worn as an ornament.

Additional brass items are thimbles, arrow points of perforate, imperforate, conical, and bifurcate configurations; rolled, cast, and folded kettle lugs; and tampers from Dutch tobacco boxes (similar to Printup). I also know of at least a dozen Jesuit rings found in recent years, all decorated by incising, and one small religious medallion like the one found at Oak Hill No. 1, probably from a rosary.

I would like to detail many gun parts but, unfortunately, I have first hand knowledge of only two vertical functioning sears, one snaphaunce battery, two Indian style gunflints, and one French style grey gunspall.

A heavily corroded complete pewter pipe comparable to the one found on the Milton Smith site was found on Mitchell a few years ago and several pewter pipe stems have emerged from the plowed ground. Most of the buttons have also been pewter, all decorated and cone shaped, and many opaque black glass cassock buttons have been recovered.

At least eight turtle and one otter lead effigies have been found as well as many musket balls of varying sizes and purposes, most of which have been molded but, also, a few have been tumbled. Several Campen bale seals have turned up and one of those which I have has a counterseal of a 4 over a capital TB. Paul Huey suggested two possibilities of merchants who could have used this mark: Cornelis Teunisz Bos who was a magistrate at Fort Orange or Cornelis Teunisz van Breukelen who was the famed Broer Cornelis. He qualifies this by saying that it is pure speculation but if it isn't one of the above, I am sure it is a Fort Orange merchant's mark and fortunate finds of this sort may be the solid clues we need for dating some Mohawk village sites.

I don't have much in the way of kaolin pipe material; in fact, no bowls or heelmarks or stems with markings on them. For the sake of statistics, I have one stem piece with a 6/64" bore, three are 7/64", one

8/64", and two 9/64". McCashion (1979:92, Pl. 13) portrays a bowl with an EB heelmark from Mitchell which he credits to Edward Bird of Amsterdam, Holland and dates to 1655-1665.

I have three pieces of metal that appear to come from dishes or tableware. One piece of pewter is non identifiable as to utilization but one other piece of pewter and one of bronzeware, because of the degree of rim are, appear to be from dishes of approximately 12.5cm in diameter.

The last item to consider is the glass trade bead assemblage, the total of which is not very great at this time. However, we do find that the tubular beads were popular with the type IIIa12 being very dominate. This bead has a clear bright navy outer laver and core separated by a center layer of opaque white glass. iIa40, a round robin's egg blue is also frequently found. Of interest are five different chunks from the "giant star" beads types IIIml, IIIm*, and IVn7 I have that seem to be as highly coveted now as they were over three centuries ago.

It's a pity that so much supportive evidence was destroyed with which a more conclusive date could be determined for this interesting and important Mohawk Indian village site. However, with the bead progression, the presence of numerous Jesuit rings and other still available artifacts to compare with nearby and other Iroquois sites, I have determined that a median date of 1652 would be quite reasonable.

IID2 Janie (.5808)

The Janie site is another of my discoveries. It lies about three-tenths of a mile (.483km) south of the river and has a magnificent view of the valley looking westward. To my knowledge, I am the only one to have any material from this location. It was almost by accident that I found it although I am sure I would have recognized the signs before the day was over.

I was out surveying newly plowed fields with the particular purpose in mind of locating unknown Indian occupation areas and took a slight detour to avoid disturbing twin fawns in a nearby field. Perhaps even by being bent over to conceal my presence, I found a 10cm long piece of the octagonal end of a flintlock musket barrel. It was the fifth field that I had been in that day and was supposed to be on my planned route back to the road.

I was able to spend five and one-half days in early summer and no time at all in the fall of 1982 because the corn was cut too late, and five and one-half days in 1983 on the site and feel I have a pretty good idea of the perimeters. It is not large, being approximately 55 meters square plus a six meter by twelve meter oval midden area. Of course, both area dimensions could have been distorted in any direction due to recent plowing.

It probably succeeds the Rumrill-Naylor site in the occupation sequence, one group going to the Mitchell site and a smaller group coming to the Janie site. You will notice in the artifact inventory not only the carry over from Rumrill but the positive resemblance to Mitchell and Printup lending credence and support to the data analysis and temporal span allotted to those two sites and, vice versa, objectively supporting my bracket for this small village and adding to the list of diagnostic artifacts from other sites in the Mohawk Valley sequence.

Beads have not been plentiful yet. I have but 24. Nine of those are type IIIa12-small untumbled tubulars with a clear bright navy blue inner and outer layer separated by an opaque white middle layer and six are circular type I1a37 opaque aqua blue. I have also found one black cassock button. Other buttons are small cast brass with a five petal floral design.

There are some very interesting brass artifacts including a coin whose denomination is known as a duit (Figure 6) according to L. W. Vosloh of the Smithsonian Institution who made the identification for me. The reverse legend reads TRANSISULANIA which is a Latin form for Overijssel, a Netherland province. The obverse has a crown, a lion rampant, and the date 162?. Unfortunately, the last number has been worn off. It was probably equal to one stiver or about six cents.

I have found one incised Jesuit ring so far and one brass jew's-harp with the stylized capital R on the left side of the back. Other items of brass from Janie are pipe bowl liners, thimbles (some with perforated ends for use as tinklers), perforated and imperforate arrow points, kettle lugs of diverse configuration three of them rolled with spatulated ends, one similar but cast, many of layered flattened brass of which some have folded corners and others have their corners clipped-trigger guards, and finials.

Some finds of iron are: a broken drawshave, one cold chisel, one sword handle with about seven and a half centimeters of the medial ridged blade remaining intact, one screw driver, one small and one

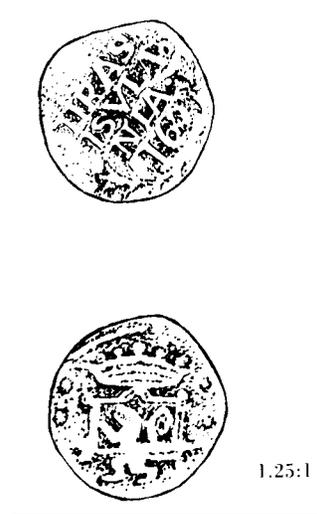


Figure 6. Coin, Janie Site.

medium scraper, two pairs of scissors, one drift or punch, and a few awls, none of which are offset. And, in addition, one iron triangular spear point with a 7.5cm shaft. Continuing, there is one complete hoe and three with blades eroded away, one belt axe (blade only), and three full felling axes-one with no armorers marks, one with two marks on each side creating an + in a circle by indenting four 90° arcs, and one with an elongated stylized X in a rectangle-and, of course, dozens of hand wrought nails. Knife categories break down as follows: 11 type E, 10 type G, 14 type H, and two rattailed, no referenced category.

There is not much so-called Indian material on this site so far-a few small potsherds, two bipitted hammerstones, and a beautiful knife fashioned from Coxsackie flint which I am sure was from a much earlier era. Unfortunately, there is a paucity of kaolin pipe fragments. All that I have to this point are two stem pieces of 8/64" diameter bore and a belly bowl fragment including the heel which is absolutely plain. However, there are five pieces of pewter pipe stems, all about 7.5cm in length. Incidentally, the bores of these stems are: one of 9/64", two of 11/64", one of 18/64", and one of 21/64". I also have a pewter pipe bowl effigy from Janie, a well molded representative of an Otter. Other types of effigies are of lead rather than of pewter and include three turtles of different styles and one hawk. All of these are three dimensional.

I have picked up several partial pigs of lead and many, many musket balls, about a dozen of which are of the tumbled variety and three round, flat gaming pieces.

Amongst the bale seals is a small rivet type such as I found at Printup (embossed 8). Others are: one large dumbbell type Campen seal, two whole and one half small dumbbell type seals, and two Campen tube type seals.

Gun parts are informative in as much as, except for one snaphaunce flashpan, everything else points to late doglock muskets. These articles are mainsprings, tumblers, sears, triggers, and frizzens. Most importantly, the writer found a late doglock plate which is punched for a lateral acting sear with the doglock hammer, double notched tumbler, mainspring, and frizzen spring still in place. This assemblage is the exact duplicate of one depicted by Mayer (1943) as belonging to the 1640-1660 period. In my collection also are several pieces of gun barrels, one bullet mold, and an Indian made gunflint.

Based on the data above and comparing the same to other Mohawk village sites of which I am somewhat knowledgeable, I place the Janie site as contemporary with the Printup and Mitchell habitations. I have previously noted those as mid seventeenth century and in view of the additional supportive evidence, my judgment is that the median date sits quite comfortably at 1650. The initial and terminal bracket dates at the extremes are also probably within 1642-1658.

IIV3 Horatio Nellis (1229)

I am also considering a small village on the Horatio Nellis site within this time period and will treat with that question in the 1680-1693 main habitation of this location. In that presentation, be sure to take note of the beads consistent with this earlier time in the seventeenth century, namely the untumbled tubulars. Consider also the Jesuit ring and musket barrel scourers on the above sites that I duplicated in recovery on the Horatio Nellis site.

1650-1666

IE1 Freeman (1145)

Almost four miles (6.44km) west of Fultonville, New York and a mile (1.6km) from the river is the location of the Freeman site. This is another site that has been destroyed by construction of one sort or another. Where once proud Mohawks lived and traded, and yes, probably witnessed the vengeance of the French from Canada under the Marquis DeTracy in October 1666, there is now a modern ranch style house surrounded by a well groomed lawn and a farm pond.

Fortunately, one of the longstanding members of the Van Epps-Hartley Chapter of the New York State Archaeological Association, Dr. Kingston Larner, prevailed upon the owner to hold off building on the property until he could conduct at least a minimum scientific sampling of the area. Consequently, a fifteen and a quarter by eighteen and a quarter meter L shaped excavation was conducted. One of the most revealing results of this endeavor was the exposing of a layer of ash at the occupation level and almost all of the post molds encountered were found to have been charred signifying that the village had burned or been burned, probably the latter.

Incidentally, a temporarily puzzling aspect of the post mold inspection turned out to be "hop posts" molds, so-called because of the flourishing hop growing business in the area at the turn of the twentieth century. The hop posts, of course, were of much smaller diameter (3.75cm) than the longhouse post molds and were placed in absolutely straight and perpendicular lines.

One corner bastion was also revealed by the excavation.

Freeman is another site about which one can find very few written references. Frey, Richmond, Van Epps, Hartley, Parker, and others of that ilk apparently did not know of its existence or location. Since it is of recent exploration and analysis, it also has not been used to explain its correlation to sequences of historical journeys and events in the Mohawk Valley in the seventeenth century. However, its artifacts, area, and proximity suggest strongly that it was a successor to the Printup village previously evaluated in this document.

A new name appears in New York colonial documents and elsewhere as the first castle of the Mohawks in 1659-that of Kaghnuwage where meetings were held between the Dutch and the Mohawks September 24, 1659. Seven years later the Marquis DeTracy uses the name Andarogue as the easternmost castle. The names have distinctive similarities in pronunciation using the combined patois of French and Mohawk tongues. The Freeman site also appears to have been abandoned rather abruptly since large chunks of burned wood and charcoal are in the hearths as well as one pile of fresh water clams that were never opened!

DeTracy says in his account,

. . .while in the distance could be seen the barbarians, loudly hooting on the mountain(?) and discharging many wasted shots at our soldiers.

There is a high hill (mountain?) to the southeast of the site that fits the scenario very well.

Seventeen Hollanders delivered presents to the Mohawks on September 24, 1659 in the "first castle of the Mohawks called Kaghnuwage". (Court Minutes 186-187) In the speeches it was noted that the Mohawks "were very busy cutting wood to build your fort" for which the Dutch were requested to supply horses. They refused, saying it was not feasible because "the hills were too high and steep" and the Dutch

men themselves "could not carry palisades". This suggests an interpretation that some, at least, of the houses in the new village of Kaghnuwage were already in place and being lived in and the Indians wanted assistance with the much larger and, therefore, heavier trees used in palisading their castle. This, then, in effect, establishes the beginning year of the Freeman site village and puts it absolutely in the proper place and time framework to be DeTracy's Andaraque!

Whereas my choice for the predecessor of Kaghnuwage, Printup, was profuse with Jesuit rings and medals, etc., as does the successor, the Fox Farm site, there have not been any at all revealed so far from the Freeman site. From 1655 to 1659 the Jesuits had fairly free access to the Mohawk Valley if they so desired and had established missions from time to time through 1657-58. From 1659 until 1667 no one from any of the blackrobes orders were in the valley for any reason. Therefore, no religious rings, medals, crucifixes, etc. would be expected to be found at this particular Kaghnuwage.

A 1632 double tournois coin was recovered here, a significant item for the 1663-1682 period as will be noted in the Fox Farm site report later on in this chronicle.

A trade artifact similarity to Printup, Mitchell, Smith, and Janie sites shows up on Freeman in the form of the brass jew's-harp with the capital R and five notches on the tangs. The brass arrow points range from imperforate to single and double perforations to bifurcated, stemmed, and stylized examples.

These indicate that even in the 1660's the Mohawks were not yet completely modernized with firearms for hunting and warfare. Seven Madison flint points were also found.

There were ten pieces of Indian pottery recovered at Freeman, all but one a rimsherd and all local Late Woodland motifs. Even though none were found at Printup, these pieces do not denote a double occupation of this site but rather that the art had not been lost as yet. Indeed, native pottery was also found at the Veeder site which in all probability was in existence as late as 1693.

The only piece of European ceramics recovered was a piece of grey stoneware with a brown slip from a Rhenish bottle known as a Bellarmine. (Figure 7) Fortunately, it was from the facial feature prominent on the necks of these bottles and this is a time designating part of these particular vessels. According to Hume and others, Bellarmine bottles were produced from as early as 1550-90 until as late as 1690-1710 and although the side medallions were changed frequently, the neck decoration of a man's face with a long flowing beard changed gradually in three or four subtleties. On early Bellarmines the hair, eyes, mouth, beard, etc. were well defined artistically rendered features. By the second quarter of the seventeenth century, the face was less well defined and by the third quarter the touch of an artist had been left behind and the faces and beards were just grotesque resemblances of past work. This is where the Freeman site Bellarmine fits in.

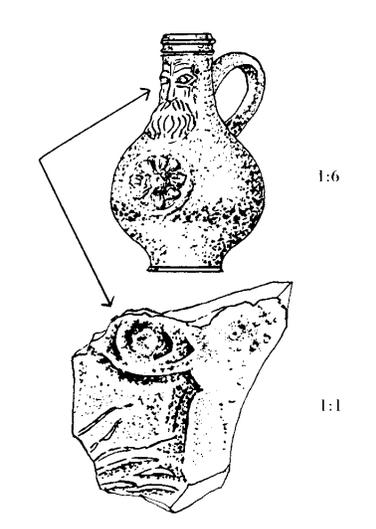


Figure 7. Bellarmine bottle fragment, Freeman Site.

There were not enough kaolin pipe remnants recovered with which to do a good analysis. However, there were broken stem pieces of 5/64", 6/64", 7/64", 8/64", and 9/64" diameter bores as well as two 7/64" bore EB flush heel funnel elbow pipe bowl pieces such as found at Printup, Sullivan (Moot) Oneida 1660-1677 (Pratt), and Marsh Seneca 1650-1670.

Also lacking were amounts of gun parts but, then, only a small percentage of the site area was examined. One of the items recovered, however, was a beautiful flintlock hammer, an exact twin of type I, (Mayer 1943:38) which Mayer places in the 1660-1680 time period. Several gunspalls were unearthened, mostly of the honey colored French variety; however, two were of what appears to be English flint. Two iron remnants of a sword scabbard were found during the excavation and several knives, all of which fit into Hagerty's representation of 1660-1677 on Oneida sites.

The glass trade bead collection shows a very abrupt change, as I will demonstrate that it does in all third quarter seventeenth century Mohawk village sites. A goodly proportion are round and circular redwood monochromes, typed by Kidd as IIa1 and IIa2 respectively. Tubulars still make up about half of the total, most of which are of the short tumbled variety and the most popular of these apparently were the type IIIa3 redwood with a clear apple green center and type Ia5 opaque white. Most significant is a light gold tubular type Ia7, a key bead that generally shows up on Mohawk and Oneida sites only in the 1660 to 1670 period (except for the one I previously mentioned on the Milton Smith site).

Considering the artifactual evidence and, more importantly, the supportive documentary evidence, the Freeman site village in my estimation is the Kaghnuwage dating from 1659 to October 17, 1666.

IIF1 Allen (1223)

The Allen site is very puzzling considering artifactual and documentary evidence. There can not be much question of two different definable historic occupations and the plowed earth does reveal that there was an all consuming conflagration at some point in time. The villages were in existence at the times of the destructive raids of both DeTracy and Frontenac and the question arises, "was it the result of the first raid, the second raid, or both?"

DeTracy's narrative recounts capturing five villages and burning only four. Perhaps the Allen site village was that fortunate escapee and Frontenac didn't pass up the opportunity but we'll never know positively until we have five excavated sites of the same 1666 date and can compare soil samples. That is almost impossible thinking at this date but there is always hope. I am of the opinion that it was burned by DeTracy in 1666 and not by Frontenac in 1693.

The Allen site lies just over 450 meters from the Mohawk River on its south side. There are two everflowing springs nearby and from the variety of flint points found in the proximity, Indians had hunting camps in the immediate area for many millenia.

It appears that there probably was a Late Woodland period village here also from the number of Madison points and pottery types that have been found. Richmond and Frey, two local collectors a hundred years ago, reported finding "Venetian" and catlinite beads, copper kettles, lead, buttons, rings, buckles, celts, pottery, axes, etc. and dozens of people have continued to collect from Allen since then. I have been there a number of times myself and the following are the items that I have found and, in a few cases, some that I have witnessed as having been picked up there.

In the religious vein, there is a large brass crucifix, a small religious medallion usually associated with rosaries, and several Jesuit rings, all of which, except for one, are incised varieties. Additionally, there are many cassock buttons, thimbles, rum bottle fragments, brass arrow points of all types and styles, brass scrap that includes a number of single layer heavy gauge small kettle lugs with rounded corners as opposed to the usual large folded or clipped cornered multi-layered lugs, and tobacco box tampers.

I do not have much in kaolin pipe material; in fact, just one bowl and nineteen stem fragments are the total accumulation. The bowl has a stem bore of 7/64" and an EB low profile raised heel mark with an encircling beaded decoration. The pipe stem bores size out from 5/64" to 9/64" and well they should with a double occupation. With that consideration and the small amount of material, or, even a good representative selection, I am afraid an analysis would provide more confusion than enlightenment at this time.

Another probably useless group of statistics is that there were three type G, two type H, three similar to type E but with rattail, two similar to E but with rattail and a large flange collar, and one similar to type

G but with a much smaller collar, knives. All of the above seem to carry on haphazardly in varying degrees throughout the seventeenth century in Mohawk country.

There is nothing diagnostic in the gun parts that I have, that is, no lock plates, sears, cocks, or mainsprings. The musket balls are of the usual molded types and I have but two gunflints, one of Indian manufacture and one grey speckled gunspall, possibly of English production. Iron jew's-harps have surfaced but none of brass as yet as far as I know, awls are double tapered and none are offset, and there is nothing unusual about strike-a-lites from the Allen site.

The two lead turtles that I have are well cast and finished and I have an 5.7 cm are piece of a lead disc similar to a bale seal with impressed decorations, not meaningful at present, that probably had an original diameter of 7.6cm.

There are also pieces of spoon handles and bowls, a large dish segment, and pipe stems of not large outside dimensions or inner bore, all of pewter. Additionally, there is a flattened pewter cup and an equally flattened pewter bottle. My most interesting piece of pewter from this site is a large pipe effigy (5.7cm) of what has been labeled a "birdman" (Figure 8)-that is to say that the figure is that of an erect human body form with an extension from the posterior of the trunk such as the tail feathers would appear on a hawk.

Trade beads are perhaps the most definitive articles to come from the Allen site. Frey listed over a thousand and I've seen over 2000 collected by sifting out one large midden adjacent to the habitation area. The earlier historic occupation is defined by the so-called untumbled small diameter tubulars as well as the shorter and thicker tumbled tubulars, both striped and plain. The former types express an indication of the 1650s and the latter, especially the white with three redwood stripes (Ib10), are indicative of the 1660s. Also, as at the Freeman site, there are a few light gold tubulars (Ia7) indicating the 1660s.

There are a good number of round redwoods (IIa1) present which presents a problem since they are also indicative of the 1660s and continue until the early 1680s on Mohawk sites and the round black beads found in relative abundance signify the 1680s and 1690s. Additionally, there are some faceted and wire wound beads as well as white on black flush eves and Roman beads.

Shell beads and ornaments run the gamut of quahog and conch shell wampum, runtees, discoidals, new moon, and long and short tubulars. Catlinite and red shale beads and decorations are not uncommon.

My conclusions for the Allen site in the historic seventeenth century occupations are that the first time span is probably 1655 to 1666 and the second, within the 1682 to 1705 date range. The former is



Figure 8. Bird Man pipe effigy, Allen Site.

based upon the preponderance of artifactual and documentary evidence of DeTracy's adventures in the Mohawk Valley and indications of an all consuming conflagration. The latter by relying on the trade bead sequence and Frotenac's account of his subsequent tour indicates to me that he bypassed the Allen site in favor of a larger target a short distance to the west. Greenhalgh, in 1677, mentions villages only on the north side of the river perhaps giving us the proof we need that there was a lapse of occupation as noted above.

DeTracy clearly mentions five villages in the valley in October of 1666 and that he destroyed four of them. I am quite positive that one was Freeman and feel strongly that Allen was another. Because of the religious material and other artifacts found at Allen, I am of the opinion that it probably had its inception between 1655 and 1658. For the sake of a conclusion, I would put the Allen site earlier village squarely in the date bracket of 1657 through October 1666.

IIIE1 Brown (1204)

I also have a feeling that the Brown site is a third DeTracy-burned village based mainly on the similarities of beads I have seen from that location.

IIID2 Fort Plain Cemetery (1196)

A fourth possibility could be the Fort Plain Cemetery site; however, the few beads and artifacts I've seen so far lead me to estimate a slightly earlier date at this time.

1666-1680

IF1 Fox Farm (1126)

After the DeTracy raids on the Mohawks in 1666, most, if not all, of the villages were reestablished but, this time, on the north side of the river. The farthest easterly of these at first was at the Fox Farm site which is a little over 400 meters from the water's edge. I make a point of this measurement since it also is most likely the first "town" that Wentworth Greenhalgh visited on his journey through the Mohawk Valley from May 28, 1677 through July 14, 1677, which he named Cahaniaga.

Four hundred meters is a long bow shot on the level but the Fox Farm site location is over 30 meters higher than the river and that's how Greenhalgh describes his Cahaniaga-"situate upon the edge of a hill, about a bow shot from the river". Perfect description, and the only site on the north side of the river to fit this representation except for one I've given the name of Turtle Pond from approximately the same time period. More on that site later. Greenhalgh continues in his portrayal of Cahaniaga as being "double stockadoed round, has four ports about four feet wide apiece, and contains about twenty four houses".

The Fox Farm was a fairly large site. The huge gravel pit that has taken its place is just about the outline of the village proper according to the people that mined the gravel from it. They described to me the "Indian dirt" house outlines as well as the many deep pits that were revealed in their excavation. No one will ever again know whether there were twenty four houses and a double stockade to ascertain the basic facts to support the suggestion that this was, indeed, Cahaniaga.

The only thing good that did happen was that, prior to removing the gravel, the topsoil was pushed back onto the westerly end of the operation and, later, respread over about a third of the area that was stripped. Consequently, each year when the land is plowed, artifacts continue to surface. Also, one side hill midden area is still pretty much intact even though one small section was apparently dug into at some point in time.

The first indication for a date for the Fox Farm site is the number of redwood beads present. All of the Iroquois Nations across New York State show a dramatic change from the previous majority of tumbled tubulars to round monochrome types. The redwood types were predominate for approximately 20 years after that. More than 90% of what I have and what I have seen from collections from the Fox Farm are redwood types IIa1 (round) and IIa2 (circular) with a sprinkling of IVa5 (round redwood with a clear apple green core) and I have one IVa8 (round redwood with a clear blue core). Other beads are a

variety of round blues and blacks, redwood and navy tubulars, wampum and other shell beads. To my knowledge there have been no wire wound or faceted beads found at this site giving credence to the conjecture that the terminal date for this village necessarily has to be prior to 1685, the approximate date of introduction of wire wound beads becoming more common in Iroquoia.

I have 43 measurable pieces of kaolin pipe stems from this location. The following breakdown of bore diameters is included only for what it may be worth in some future study: 2-5/64", 6-6/64", 23-7/64", 11-8/64", 1-9/64". I also have an EB and a Cross and Orb heelmarks such as McCashion illustrates for Fox Farm; however, I don't agree that this village site should be called Gandagaro and suggest that the terminal date is much earlier than 1693. This is supported by the negative evidence that there have been no HG pipe heelmarks found here.

There have been many Jesuit rings recovered over the years of which I have seen but four. Three are the HIS style (See Figure 9) and one is an Ave Maria Motif I as described by Alice S. Wood. All are stamped-embossed and according to Wood's (1974) chronological tables from Seneca village sites, these rings do much in the way of corroborating the dates that I am suggesting for the Fox Farm village site.

I have one coin from here, found just in this past year. It is a Louis XIII double tournois researched for me by Gordon DeAngelo and dated to 1629. This by itself, of course, has no significance except to assure us of occupation after that date. However, in Bradley's (1979) report on the historic Onondaga sequence, he makes note of the fact that a large number of French coins, especially double tournois and lairds of this approximate date, show up on the Indian Hill site dated 1663 to 1682.

Strangely, or so it seemed at first, native pottery shows up on this site as well as some flint points, tools, and quite a bit of flint debitage. It was puzzling to some of my theories until after picking up some 20 odd plain body sherds, I finally found two finely decorated rim sherds. One is either Fonda or Otstungo Incised and is 2.27cm long by 1.81cm wide, not of sufficient size to identify more precisely. The other is 3.81cm long by 3.27cm wide and is a nice example of Otstungo Notched. My only logical conclusion then is that what we have here is a double occupation site, certainly not a rarity along the Mohawk River. One finds earlier Woodland and Archaic points, pottery, and tools on these sites probably because the good spring water, still extant, was one of their prime prerequisites when selecting locations.

Here one finds scattered pieces of rum bottles, large conch shell remnants, brass articles including points-perforated, imperforate, and conical—a brass saw similar to one found on the Martin site, hawk bells, and, of course, many pieces and scraps from kettles. Lead musket balls still surface as do pewter spoon handles and a slightly convex solid pewter button.

Iron artifacts include axes, which are not as stoutly made as in earlier days and with rounder eyes, jew's-harps of both flat and square stock, fishhooks, buckles, scissors, strike-a-lites, sword blades, and

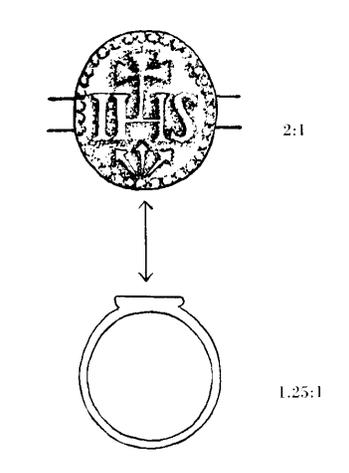


Figure 9. IHS ring, Fox Farm Site.

knives. My collection of the last named is: two type E, two type H, one type J, six similar to E except rattail, and four of no catalogued type.

Gun parts are startling in the fact that besides those from contemporary flintlock muskets, there is a snaphaunce hammer, one snaphaunce pan cover, and a top flint vise jaw from a Spanish Miquilet. In view of the facts presented, especially the DeTracy raid, the Greenhalgh chronicle, the redwood beads, the kaolin pipe heelmarks, and comparisons with other Iroquoian dated village sites, I have concluded that the Fox Farm village site should properly have a median date of 1675 with a bracketed date of 1666 to 1683, plus or minus a couple of years on the terminal date.

IF2 Turtle Pond(-)

There is a small unreported site almost 400 meters north of the Mohawk River that has at times been labeled the "Lone Man Site", someone claiming that one Indian chief and his family, only, lived here in voluntary isolation from a smallpox epidemic. I prefer to call it Turtle Pond, since there is a wonderful body of water here that is home to hundreds (it seems) of box turtles. On any nice day in the summer one sees them constantly popping to the surface and resubmerging again in a few minutes. The pond itself is naturally impounded and has been there through the centuries.

Unfortunately, the midden has been sifted out by collectors and not much remains for analysis, but I do know from first hand conversations that the great majority of the beads were round redwood Kidd type IIa1 with a sprinkling of black (IIa6) and a few robin's egg blue (IIa40). Small and fragile though the evidence may be, I'll base my conclusions on comparing the same bead types and geographical location; that is, on the north bank of the river.

One other note -I have been on this location after recent plowing and subsequent rain showers and can definitely establish at least two fair sized (approximately 23.4 meters long by 6.7 meters wide) longhouses, not just one small one as some have surmised.

I place the dates of the Turtle Pond site habitation at 1666 to 1680, give or take a few years on the latter.

IIF1 Schenck (1123)

The Schenck site is 475 meters north of the river on a rise above the flats and as Wentworth Greenhalgh described his village of Canagora, "a stone's throw from the river". I don't have a lot to go on again, artifactually, but most is diagnostic to the third quarter of the seventeenth century and correlates extremely well with Fox Farm, Jackson-Everson, and other Mohawk sites and to the Onondaga Indian Hill (1663-1682) and Oneida Sullivan (1660-1677), sites.

For instance, of 141 glass trade beads I typed according to the Kidd system, 73% are redwood types IIa1 and IIa2 and there are four light gold Ia7's, distinctive to the 1660-1670 period. There are also a few long cylindrical shell beads and opaque black glass cassock buttons.

The Cross and Orb heelmarks on kaolin pipes found at Schenck's also ties it to the Mohawk Fox Farm site, Onondaga Bloody Hill site, and the Oneida Hogan site to which pipes McCashion presents the dates 1670-1680. To my knowledge, there have been no HG heelmarks found here which are found at Fort Orange and other Mohawk Indian sites of the last decade of the seventeenth century context.

The Schenck village site also suggests to me a date of 1666 to 1683, again, plus or minus a couple of years on the terminal date.

IIIF1 Jackson-Everson (1213)

The Jackson-Everson site is situated almost exactly one mile (1.6km) north of the Mohawk River. As with most Mohawk Indian village sites built in close proximity to the river in the seventeenth century, the view of the valley is magnificent. It was probably a very comfortable area in which to live except for the fact that they were forced to make a premature move due to the DeTracy raid in 1666. Despite the sudden urgency, I am sure the sachems responsible for periodic mass movements of complete habitation sites had had this location in mind for some time if it became necessary to emigrate to the north side of the river. There has been some conjecture that this could be the village to which a large number of Huron bear

clan captives were moved from Canada and there is quite a bit of Huron decorative types amongst the pottery remnants found here. This cannot be dismissed lightly but I do believe that since most, if not all, of the Mohawk villages were on the south side of the river at the time of the Huron dispersal, that originally they were absorbed into existing villages rather than to create a whole new habitat on the north side, remote from their victors' control.

Some artifacts also support this reasoning, especially the glass trade bead chronology constructed within this work as well as Oneida and Onondaga sequences. Over 50% are of the round redwood type (IIa1) and fully another 25% are circular redwoods (IIa2); 15% are round and circular redwoods with a clear apple green core, types IVa5 and IVa6 respectively. This all fits to a nearly 100% correlation with the aforementioned villages of 1666-1680 period, those which moved to the north shore immediately following the DeTracy raid.

Contrary to the Freeman site which had much smaller percentages of some similar bead types but no Jesuit rings or other religious artifacts supporting its demise prior to 1667, the Jackson-Everson site does have a goodly number of Jesuit rings including five found in a midden when scientifically excavated by professionals recently, pointing to its existence after that date. All have incised designs as opposed to stamped-embossed designs found at the Fox Farm site, however.

There were not many metallic artifacts, including gun parts, found during the above mentioned dig which is understandable since a number of collectors have frequented the site with metal detectors and the collections are hiding in cellars and closets and, therefore, not available for consideration. There were several French gunflints found including fine and ordinary grade types and knives of insufficient quantity to form an opinion or list by types.

Fortunately, partly because the metal detectors could not locate them, kaolin pipe material survived and forty nine stems averaged out to a mean bore diameter of slightly over 7/64". Four identifiable heelmarks are EB types and one DG for which there is no information available at this time. Again, there were no HG heelmarks recovered.

There were quite a few native ceramic potsherds in the midden; however, since many pieces fit together, the sample may not represent many actual vessels. As mentioned above, some were of definite Huron decorative motifs.

With the above information in direct correlation with other north side Mohawk villages such as Fox Farm and Schenck, I suggest a similar date of 1666 to 1683 for Jackson-Everson. Additionally, although it is only one mile (1.6km) instead of two miles (3.2km) from the river (perhaps in the wilderness his judgment wasn't accurate in this case), I also suggest that this site probably was Greenhalgh's Canajorha. Considering an area of more than one and one-half acres, it could easily accommodate sixteen longhouses per his description.

IIIF2 and HIF3

There are two more sites that fit into this time period but my knowledge other than the trade bead sequence is very limited. Both are known and recorded sites, but I will, for the present at least, use only my designations for identity.

IIIF2 is a large pristine site that probably was the main castle for its area. IIIF3 is not too far away but was small and therefore probably was an outlying or satellite type hamlet as was the habit in most Mohawk areas throughout the seventeenth century. IIIF3 has been somewhat denuded for its gravel content.

Both of these habitats are "red bead" villages, that is to say, the great predominance of beads are the types IIa1 and IIa2 round and circular redwoods. Based on this fact alone I am including them in the 1666 to 1683 period of existence also but not attempting, for now, to place them in Greenhalgh's order of village names.

1680-1693

IG1 Caughnawaga (1116)

The Mohawk Indian village of Caughnawaga, which lies a little over a half a mile (.8km) from the river, is also known as the Veeder site for the one time owners of the property. The entire project

associated with the site the Caughnawaga Museum, St. Peters' Memorial Chapel, and the Memorial Shrine of Kateri Tekakwitha is operated by the Franciscans and is the only Iroquois village completely excavated to date. The recovered artifacts are stored in the vault attached to one of the original farm buildings and some are on display in the museum. Also, the Van Epps-Hartley Chapter of the New York State Archaeological Association has its headquarters here at present.

Villages of this period are hard to locate since English documents refer to them simply as First, Second, and Third Castles or Lower, Middle, and Upper Castles without revealing locations or accurate distances from either Fort Orange or Schenectady. Frontenac's account of his destruction of two of the three Mohawk villages in February of 1693 does not seem to coincide with presently known sites near to Caughnawaga- ". . . two small villages one quarter league from one another". His "seven or eight leagues to the third village" does place his Tionontoguen in the area of Oak Hill northwest of Fort Plain making the Caughnawaga and Oak Hill No. 4 sites very logical and feasible conclusions for the first and third villages of his chronical for that time period.

The trade beads are in direct correlation with other Mohawk, Oneida, and Onondaga villages dating to the last decade of the seventeenth century being predominantly (67.4% of 724 beads) of pea size opaque black glass designated by the Kidd classification system as IIa6, IIa7, and IIa8. It is almost as if overnight the Dutch and English traders changed from the redwoods (IIa1 and IIa2) at the same time that new villages were being constructed. Perhaps the Indians, too, could have influenced similar dramatic changes periodically throughout the century.

Another interesting and datable group of artifacts are the kaolin pipe stem pieces and bowls with the makers marks on the heels. The EB mark that had been so prevalent for several decades began to decline and in its place the HG with three pointed and five pointed crowns (See Figure 10) slowly took over prominence. This was the largest heelmark representation of the total emerging from the excavation at Caughnawaga and is the same as those recovered at Fort Orange in context with other artifacts dated to 1690. None of these appear on Mohawk sites from just prior to this period such as Fox Farm, Schenck, Jackson-Everson, etc., et al, whose terminal dates were approximately 1683.

There does not seem to be much doubt in my mind that this is one of the villages that Frontenac destroyed in February 1693. Its location is geographically correct and the artifact assemblage being from a complete village scientifically excavated gives us the opportunity of excellent analysis and evaluation.

My conclusion for the Caughnawaga village site is a median date of 1688 with a time span of 1683 to 1693.

II G1 Horatio Nellis (1229)

The environs of the Horatio Nellis site are a conglomeration of cultural and artifactual eras. The field upon which the village was located is less than 250 meters from the river and is four and seven-tenths acres

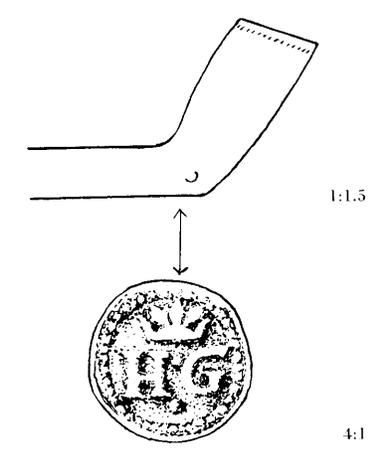


Figure 10. HG pipe heel, Caughnawaga Site.

in area. In the northeastern corner, at one time, there was an abode of a probable white person in colonial days as is noticed from the ceramics and other deposits in that location. In the northwest corner, some flint debitage and a Normanskill point was found as was an Orient Fishtail point in an adjacent field to the southeast. In the field to the southwest, is an ancient spring, though now all but filled in, surrounding which is much flint debitage where I found an Archaic point much like a Neville and a small side notched Lamoka point.

Within the field itself I have found parts of four triangular points that were not either Madison or Levanna and a triangle preform. I have picked up a number of Madison points and pottery of Cayadutta and/or Otstungo Incised (some sherds are quite small attesting to the continuous cultivation) suggesting a triple occupancy of one Late Woodland and two Historic habitations within the same village area.

Several large Indian made ceramic pipe stems have surfaced but, so far, no bowls. Four kaolin flush heel bowls have appeared but, unfortunately, have no makers' marks on them. The kaolin pipe stem and bowl bore diameters measure as follows: 5-4/64" (no doubt a later date intrusion), 19-6/64", 5-7/64", and 2-8/64". Interestingly, I have read and been informed by persons dealing in the Harrington Charts and Binford Formula that stem bores finally can be fairly well relied upon in the Mohawks' country towards the end of the seventeenth century and it appears to work out well for the Horatio Nellis site. Utilizing graphs before me, the above statistics fall into the broad 1680-1710 bracket. The Binford Formula produces a median date of 1690.05 discarding the 4/64" bore data. It is reasonably close to my own postulation for a possible late date historic village at this site.

I retrieved one incised HIS Jesuit ring and three pewter religious type medals, considerably obliterated by corrosion, but one has a skull and crossbones and another has the appearance of a serpent on the reverse side. To all intents and purposes it seems as if Jesuit missions and missionaries ceased amongst the Mohawks by 1678 and this meager collection of religious articles seems to bear that out, but also, establishes either an earlier habitation for the site or carry over heirlooms from a date not many years previous to the establishment of the later habitation.

I also picked up one lead turtle effigy and amongst the 28 lead musket shot were seven of the tumbled variety and one with a small hole drilled through it, possibly for suspension.

Buttons, as usual, are not plentiful but now we find hollow, semi globular brass types made by soldering the two hemispheres together and similarly attaching an eye of the same material. I have three and they seem to have had a tinned coating producing, I suppose, a fine appearance. Another type is a brass backing for a 1.9cm inset and still another is a glass inset of 1.27cm diameter of blue background with a maroon and white floral decoration. My only other button is small, made of pewter, and has an undeterminable decoration, lost in the processes of deterioration.

Iron articles include two full felling axes, three other felling axes with the cutting edges gone, three belt axes with the heels gone, and one cutting edge only. One belt axe has an armorer's mark and that is an X in a circle, one on each side of the blade. The belt axes seem to be of much lighter construction than on sites of earlier dates. The blades of three hoes or adzes have rusted away making these specific implements unidentifiable. Other objects that retain their identity are punches or drifts, scissors, razors, strike-a-lites, needles, chisels, square stock jew's-harps, one large key, buckles, two flat files, one sword handle, one pintle, one type H knife converted to a saw similar in appearance to a later date hay saw, several awls-two double tapered 12.5cm long-and only two are offset, one iron ball-drilled and threaded such as chain shot would be but more probably came from a piece of farm machinery-and various other unidentifiable iron objects. The knife categories break down to six type G, three type H, one type I, four similar to E but rattailed and one similar to D but also rattailed.

As a general rule the brass on this site seems to be of heavier gauge than on those of earlier dates including the kettle lugs, of which none are cast or rolled; however, all are neatly clipped or have folded corners. The brass arrow points are heavier too, and filed to very sharp points and edges. The imperforated ones are about equal in number to the perforated examples, and some have nicely filed concave bases giving them a neat classic appearance. I have an extra large brass buckle from Horatio Nellis, many bangles and straight brass rollers, and a brass scale weight weighing exactly two and one-half ounces.

All of the gun parts I have are attributable to the late seventeenth century flintlock muskets including one intricately decorated brass lockplate. There are also two triggers, one frizzen, one vertically acting sear, one upper flint vise jaw, one mainspring, one frizzen spring, one trigger guard, and one musket

barrel scourer, all made of iron. Of the four gunflints, one is definitely ordinary grade English, two probable English gunspalls, and one possible, but not necessarily, French gunspall, being as it is of a light shade of greyish brown.

I have 33 trade beads from Horatio Nellis, not hardly enough to do an in depth analysis but enough I feel, to support the other evidence to arrive at a last quarter of the seventeenth century occupation period. 14 are the opaque black type IIa6 and only one is a IIal round redwood associated with the previous quarter of the same century.

My present conclusion for a median date for the Horatio Nellis village site is 1688 with a temporal bracket of 1683-1693. I am also suspicious that there could have been a small satellite village here in the mid seventeenth century considering some untumbled tubular beads (total of eight) together with the incised Jesuit ring and the musket barrel scourer, all of which are in common with assemblages from Printup, Janie, Mitchell, etc.

IIG2 -Allen (1223)

Now back to the Allen site. As outlined under the period 1650-1666 covered earlier in this chronicle, there appears to have been prehistoric occupation and two distinct historic habitations in the seventeenth century. I am also convinced it was destroyed in DeTracy's raid of 1666 but not by Frontenac in 1693. After studying all reports of the latter, there is no indication of an attack on a Mohawk Indian Village in the central area of their canton even though it is quite evident that the Allen site village was actively occupied at the time.

Trade beads recovered from the middens are the best indicator as artifactual proof of this second historic period occupation. Pea size opaque black type IIa6 and IIa7 beads are abundant as well as "Roman" beads types IIjl and IIj2, white on black flush eyes type IIgl, and countless seed beads. A good number of the beads are also of the wire wound variety.

One of the Jesuit rings recovered was stamped-embossed similar to Wood's figure 7e Man and Crucifix (Wood 1974:90). This example is outstanding in its clarity and Wood assigns her sample to the Seneca Snyder-McClure site which she dates to 1687-1710.

As noted in my earlier section on the Allen site, I believe the second historic occupation has a median date of 1694 with a beginning as early as 1682 and a terminal date as late as 1705 and possibly even 1710.

IIIGI Oak Hill No. 4 (1184)

I do not actually have a candidate site as yet in the western end of the Mohawks' country for the 1680-1693 era since I have not personally been on the Oak Hill No. 4 site and have not seen its artifacts. It will be a future pursuit and endeavor to resolve this question. I have been made to understand that this is the best possibility for the village that Frontenac destroyed in 1693. We shall see.

1699-1785

One dramatic result of the Frontenac incursion and destruction in the Mohawk Valley was the temporary cessation of the three clan castle system in existence through most of the seventeenth century. As a matter of fact, the Mohawks seem to have scattered and built small settlements without any arrangements relative to earlier patterns.

In the eastern section, it appears that they had small villages at Tribes Hill (IVX1) and, for a second time, at the Milton Smith site (IVX2). The latter is attested to by the presence of many type IIa6 black beads and the HG heelmarks on kaolin pipe bowls, carry overs from the Caughnawaga village period. The Milton Smith and Tribes Hill sites were in place until the English built a new castle and church for them under the auspices of Queen Anne as well as an adjacent fort and parsonage at Fort Hunter in 1712. This was then called the Lower Castle (IVX3). Documents also account for a small village of seven or eight single unit cabins at "Eskahre" on the Schoharie Creek near Middleburg.

The Allen site village continued on into the eighteenth century, probably until 1710, when they and

others from Sand Hill (IIB3) (just west of Fort Plain) moved to a new castle which came into existence at Prospect Hill (IIY2) in the present village of Fort Plain. In 1755, the occupants made one final move in the Mohawk Valley and joined their brethren at the upper castle of Canajoharie (VY1), which is the present day Indian Castle, New York eleven miles (17.7km) west of Fort Plain. Their original church and cemetery are still to be found at this location.

The Mohawk Indians left the valley in the early years of the American Revolutionary War. Some remained at the Upper and Lower Castles for several years but all eventually removed to British Canada and settled permanently on reservations set aside specifically for them. We will not attempt to go into specifics or locations or details at this time.

I am sure it must have been a sad day for most of them to realize that the Mohawk Valley would no longer be called home. The participants of the 1983 archaeological field school were no doubt merely echoing the words of two hundred years before. . . .

"WHAT A VALLEY!"

SUMMARY AND CONCLUSIONS

At the turn of the seventeenth century, the Mohawks were following a pattern that had worked well for at least two centuries, that of palisaded villages defensively positioned and well inland from the more traveled routes of waterways and tributaries. A piece of brass here, a trade axe there, or a misplaced glass bead hint at the fact that they were aware that bewildering and aesthetic as well as practical trinkets were available to them for just a few of the furs that they had in abundance. They also had the good sense to know that if they were going to arrive at maximum benefits from this blossoming business, they had to be in position to control trade through their established territory. Consequently, the villages were moved closer to the river.

Prior to 1625-30, the villages were moved primarily for new supplies of their two major necessities. Long house supports and palisades had a habit of becoming infested and rotting out within ten to fifteen years and an extremely large area of the proper size and genus of trees were required to rebuild. Secondly, their corn fields (maize) experienced a dwindling yield in about the same amount of time.

In village sites of this period we find iron axes, knives, and awls and brass pots and bangles and, the vanity item, glass beads, of which the majority were polychromes. Indian pottery, Madison projectile points, carved and polished bone and shell objects were still major native made items.

Around 1630, most of the Mohawk villages were rebuilt, as necessity dictated, on the south side of the river. This was not merely to facilitate trade between themselves, and Fort Orange but, just as importantly, to control all transactions and commerce of other tribes to the west and south of them. As time went on and furs became scarce they went to war with the Canadian tribes to the north, not for land on which to hunt and trap but for control of the fur trade, the vital key to the economics of their new mode of living.

Their villages on the south side of the river were on the first plateau beyond the flats; not always, but as a general rule. Potable water and a good wood supply sometimes necessitated a slightly more inland habitat. However, there also appears to be three main areas of settlement movement which had to do with their clan system. The villages did not move in large jumps of two or three or even four miles as in the past but stayed within a small radius usually with one large and two or three smaller close by villages in each clan area. Significantly, their main corn fields were on the flood plains which almost yearly were replenished with nutrients as a result of flooding in the spring. Their main concerns, therefore, were the basics of wood and water of which there was then and is now, an abundance.

Guns were still a luxury until the 1640s when, due to increased warfare, they became the necessity of economic power. Conversely, the large numbers of brass arrow points aptly acknowledge that the bow and arrow were still the mainstay of the hunters. Less and less pottery was being made and very rarely could a flint point be found. Newly introduced items found at this stage are kaolin pipes, lead bale seals, jew's-harps, scissors, black glass buttons, Rhenish ware, and the trade beads are mostly monochromes. Unfortunately, pieces of green rum bottles are found more frequently and abundantly in this context.

The Mohawks were also the victims from time to time of diseases such as smallpox, typhoid fever, and

measles which sometimes reached epidemic proportions and decimated the villages. The result of this was repopulation by capturing and adopting into their villages men and women of enemy tribes, principally Hurons. Some villages were populated with up to 40% adoptees. Accordingly, even though ceramics were going out of style for the Mohawks, a goodly amount of Huron pottery can be found on some sites of this era.

At mid century, an abrupt transition to the untumbled tubular trade bead varieties is apparent. At first red and blue (simple and compound) were the favorites; in mid 1650s, white tubulars are a bit more prominent than earlier and at the end of the decade, a pretty light gold untumbled tubular made its appearance and is seen for less than ten years after that. Guns were quite common and native made articles were rapidly disappearing.

Jesuit rings, crucifixes, and other religious articles are found in quantity only for the years 1657-1659 on the south side of the Mohawk River and this gives us an opportunity to almost pinpoint some site dates as well as the supportive artifacts found in association with them.

Conversely, from 1659 to 1666, documents reveal that there were no religious activities or missions amongst the Mohawks and therefore no related articles are found.

The beads also had another radical change, this time to predominately redwood in color and in round, circular, and short tumbled tubular varieties. Kaolin pipes still include the belly bowl style with a raised profile heel but the flush heel funnel bowl was becoming more frequent.

In 1666, the Marquis DeTracy destroyed the main villages on the south side of the river and the Mohawks made a contrived, coordinated move to the north shore almost opposite to where they had been. We call these 1666 to 1680s villages "the red bead sites". Each of them has an incidence of from 80% to 90% of the round and circular redwoods, the only sites in the seventeenth century to demonstrate this trend. We also know that the Jesuits again set up missions from 1667 to 1678 and all of these sites have produced religious articles such as rings (including the significant stamped-embossed types), crucifixes, etc., and their journals support this objective evidence.

The sites described in the sequence from 1650 to 1680 have so much positive proof and correlation throughout Iroquoia, it might have been better and more convincing to have worked this complete narrative around that era instead of being chronological. They are the keys to prior and later movements because of available contemporary documents and abundance of significant diagnostic artifactual evidence. It would not have been proper in a literary sense, I suppose, but if the reader would like to test a different approach for more clarity, give it a try.

Finally, the period marked by the Frontenac raid on the north shore castles, has distinct traits of its own, the most obvious of which are the black pea size beads and the advent of a number of wire wound beads. Of course, one no longer finds religious artifacts and the kaolin pipes have a new heelmark that becomes predominate, the initials HG.

One thing that, for a while, seemed to be singular to the Mohawk Indians is the double occupation of sites in the historic period. This is understandable when one considers that they were the only tribe in Iroquoia to have the fertile river flatlands for their cornfields but I do not feel this was their only reason. Consider, if you will, the forests regenerating a new crop of trees of just the right size for constructing longhouses and palisades and one can appreciate the wisdom of returning to a site inhabited perhaps twenty five years or so previously. It would be well to continue looking into known and new habitats and to ascertain if this was a more common practice than is believed at present. It would also be an interesting project to apply to other Iroquoian areas.

Another avenue of thought is how much influence or input the colonists may have had on the Mohawks due to their proximity to Fort Orange in matters of horticulture, such as fertilization, and the infancy of animal husbandry. There are many questions yet unanswered and many sites still to be located.

I hope that what I have written and delineated at this time may have answered some previously unanswered questions and perhaps in the future can provide some more light on the Mohawk Valley in the seventeenth century.

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ARCHAEOLOGICAL TESTING AT FORT GAGE,
A PROVINCIAL REDOUBT OF 1758 AT LAKE GEORGE, NEW YORK

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ABSTRACT

Archaeological work at the Fort Gage site at Lake George occupied in 1758 by provincial troops yielded valuable information about occupation of the site even though it had been bulldozed. Despite the efforts of two state agencies and numerous archaeologists, developers completely destroyed the site before the mitigation work was completed.

INTRODUCTION

South of the village of Lake George and approximately one mile south of the site of Fort William Henry, Fort Gage overlooked Lake George to the north. At an elevation of between 500 and 600 feet above sea level, Fort Gage stood over 200 feet above the water level of Lake George. To the west of the Fort Gage site rise the rugged Adirondack Mountains, while to the eastward stands French Mountain, a high promontory overlooking the upper Hudson Valley which spreads southward. Along the side of the narrow valley between the mountains, the colonial road between Lake George and Fort Edward ran close to Fort (age, which thus guarded this section of the vital supply line and portage route south of the lake while providing a commanding view and lookout northward over the lake.

The Fort Gage site appeared as a prominent geographic feature in 1756 on a map of Lake George surveyed by Captain Jackson and published in 1776. Southwest of Fort William Henry was noted "A Rising Ground that overlooks the Fort" (Brassier 1776). As early as 1842 travelers recognized the remains of Fort Gage as a historic site along with the sites of Fort George and Fort William Henry at Lake George Village. On the basis of documentary research and archaeological sampling this site appears to date from a relatively short period of construction and occupation during the Crown Point campaign of the British army under General James Abercromby in 1758.

The French and Indian wars of the 1740s and 1750s were among the most important events in British colonial America. During research to locate and identify sites of the French and Indian War period and, in particular, those from the various Crown Point expeditions of the 1750s, members of the Bureau of Historic Sites, New York State Office of Parks, Recreation and Historic Preservation, visited the Fort Gage site in 1972 and noted the presence of well preserved earthworks and a bastion. In the spring of 1975, after a developer bulldozed the site as a preliminary for construction of a large motel without first obtaining a permit from the Adirondack Park Agency, the Bureau of Historic Sites archaeologists were asked by the APA to determine whether or not the site still retained its archeological significance.

On March 3, permission was received from an owner of the property to conduct archaeological investigations jointly with the Lake George Institute of History, Art and Science. In organizing and conducting the archaeological work, the Bureau of Historic Sites depended on support and assistance in the field from local members of the Auringer-Seelye Chapter of the New York State Archaeological Association.

The archaeological sampling of Fort Gage left a major portion of the site unexcavated in hopes it could be preserved or thoroughly excavated at the developer's expense. The information gained by archaeologists was drawn together in a preliminary report that formed the basis for testimony at a hearing

held by the Adirondack Park Agency. The day before the results of the hearing were to be announced, the developers bulldozed the site a second time, withdrew their plans for a huge motel complex on the site, and bypassed APA review by building a 99 room unit. The artifacts recovered from the site were conserved at the Peebles Island archaeological laboratory, photographed, and returned to the owner.

HISTORY

During the repeated British military campaigns against the French at Crown Point on Lake Champlain during the French and Indian wars, the army of 1758 commanded by General James Abercromby was the largest ever before gathered on the American continent. This powerful, well equipped, modern British force consisted of almost 15,000 men, of which 6,000 were British regulars and the rest provincials from New England, New York, and New Jersey, all serving together in this greatest-yet effort against French Crown Point. It was an especially important military experience for the American provincials. By June 19 the army had arrived at Lake George, and Captain John Campbell was ordered with 200 Grenadiers to be posted that night for the security of the camp "on the hill, on the rt hand of the road" (Moneypenny 1969:352; O'Callaghan 1858:728n). Captain Campbell's camp on the night of June 19 was probably at or close to the future site of Fort Gage.

Abercromby's army embarked on Lake George on July 5, but the advance northward against Crown Point ended abruptly on July 8 when he sent the army into a disastrous attack on the French lines near Ticonderoga. Abercromby retreated south to the head of Lake George where, on July 12, he began to establish a heavily fortified camp (Cleaveland 1959:200; Rea 1881:107; Fuller 1970:11). The last section of this huge enclosure was laid out on July 17 and was completed by July 19.

While strengthening his camp, Abercromby also began to construct a powerful fleet on Lake George. There is very little indication yet, however, of any activity on the high hill located to the southwest on the main road leading south toward Halfway Brook, Fort Edward, and Albany.

On July 26 Abel Spicer, serving in Captain John Stanton's company of Connecticut troops, recorded the beginnings of a fortification on a hill which became the site of Fort Gage. "The chief of the men that was ordered for work from Colonel Whiting's regiment was to go clearing a place for to build a breastwork on a small hill which lieth about 100 rods south from the southwest corner of the breastwork that is round the encampment" (Spicer 1911:398). Renewed French raids were now effectively terrorizing the British. The road south from Lake George had become the scene of many tragedies, and the construction of this new fortification close to this road reflected the continued danger from the French.

The fortification which Connecticut troops from Colonel Whiting's regiment helped build on the hill southwest of the main encampment was on the east side of the road to Fort Edward. Andrew Fraser's "A Map of the Retrenched Camp at Lake George in 1758" clearly indicated the size and location of this redoubt, identifying it with the "Provincial light Infantry" (Figure 1) (Fraser 1758). Across the road was a smaller redoubt, the "Advanced Guard," which was evidently built earlier. In his journal on August 15 Dr. Caleb Rea recorded continued activity, evidently in the new Provincial Light Infantry Redoubt, when a large party of men began working on the hill "in order to Build a Block House & plant some Cannon. . . ." This work ceased before the end of August (Rea 1881:186) leaving the blockhouse unfinished, but other preparations continued as if to renew the attack on Ticonderoga and Crown Point. By the end of October, however, Abercromby had scuttled his new fleet in the lake, demolished his fortifications, and retreated to Fort Edward for the winter. No firm documentary evidence has been found showing that the Fort Gage site was ever used by any other army in the frequent campaigns of the French and Indian and Revolutionary Wars.

RESEARCH GOALS

Most military sites were occupied repeatedly by successive armies, each disturbing or replacing the evidence left by its predecessors. Fort Gage was a rare "time capsule" representing remains from only one Provincial Light Infantry of the British army during one year, clearly distinguished from the many other armies that passed through this area. The site was a resource for the in-depth study of weapons.

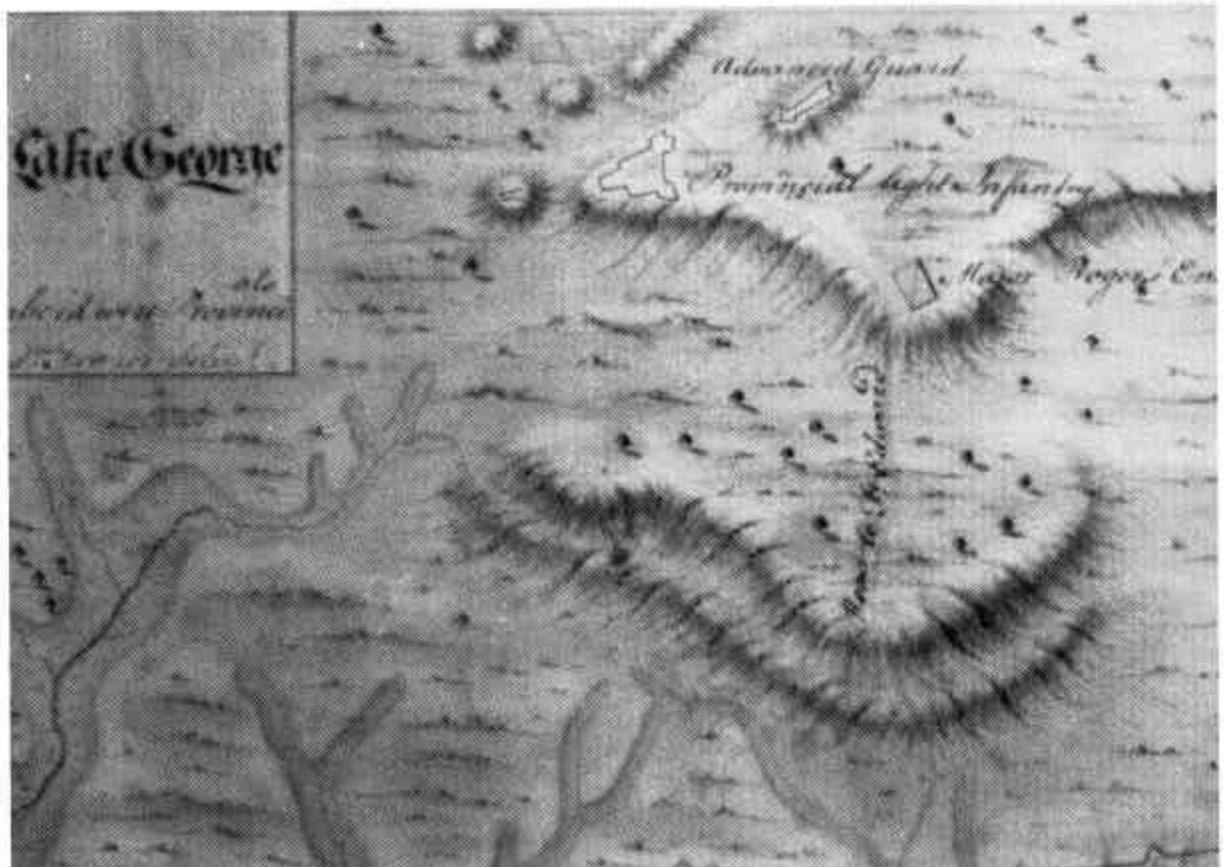


Figure 1. Detail from the 1758 map by Frasier showing the outpost that became known as Fort Gage. Courtesy of the Fort Ticonderoga Museum.

equipment, and diet of provincial troops in 1758. The limited archaeological data from the site is especially valuable because of the absence of more detailed historical documentation of the site and the total destruction of the site for motel development.

One purpose of the test excavations at Fort Gage was to determine whether or not the site still contained undisturbed features even though it had been bulldozed. A second purpose was to retrieve a controlled sample of material with which to study cultural patterns associated with the British and provincial army of 1758. The results of the initial sampling indicated that further work would definitely yield worthwhile data about the 1758 encampment and its occupants. Unfortunately, the opportunity to preserve the site or to conduct full-scale study of it was thwarted, and it is possible to produce only tentative results.

EXCAVATION PROCEDURES

The Hudson Valley Railway cut through the eastern edge of the Fort Gage site around 1910, evidently leveling the north wall of the fort, including the eastern corner and the east end of the south wall. Another small part of the earthworks, the tip of the northwest bastion, was destroyed in the early 1960s during massive earthmoving to obtain fill for construction of the Northway. Railroad and highway construction thus resulted in disturbance of perhaps 40% of the visible earthwork remains of the original fort. Based on the 1972 visit to the Fort Gage site, the archaeologists were able to estimate the size of what

still remained of the site. It was decided, therefore, to concentrate sampling in the area that previously had appeared to be most promising. A datum stake was set up and 10 foot grid squares surveyed and laid out on a coordinate system. Alternate squares were then excavated with the backdirt deposited on the undug squares after plastic was laid down to mark the existing ground surface level. With this alternate square excavation pattern, a larger area of the site could be examined and yet at least half of the area still left for further research.

Excavation itself consisted of first carefully removing the loose bulldozed surface material with flat shovels and trowels in order to recover artifacts left behind in the disturbed earth. In most squares disturbed brown sand continued all the way to a coarse yellow gravelly subsoil sand. Undisturbed historic features intrusive into the yellow subsoil sand were revealed and excavated with trowels and other small tools. In a few squares, notably on the east side of the site, undisturbed topsoil still remained under the mottled surface. This topsoil was removed with trowels, and features were often then exposed underneath and carefully excavated.

Work at the Fort Gage site continued from May 2 to June 27. During the week the crew averaged five members and, for a few Saturdays, as many as 20 (Figure 2).

EXCAVATION RESULTS

Excavation at the Fort Gage site resulted in completion of 28 10-foot squares systematically covering the area within the gridded portion of the site. In addition, exploratory trenches excavated to the south of



Figure 2. Archaeologists working at the Fort Gage site, May 1975. Photograph by J. McEvoy

the area successfully located the south moat (Figure 3). A small section of the northwest bastion of the fort was also recorded.

In six out of the 28 squares, part of the original occupation surface was found. The other 22 squares were disturbed by the bulldozer down to and a little below the top of the original subsoil level. The disturbed areas consisted of brown and yellow mottled sand, frequently full of unassociated artifacts. All of this material was collected, recorded, and analyzed as part of a large surface collection. The undisturbed soil layer, a dark brown sand, was distinguished from the bulldozed soils by its uniform

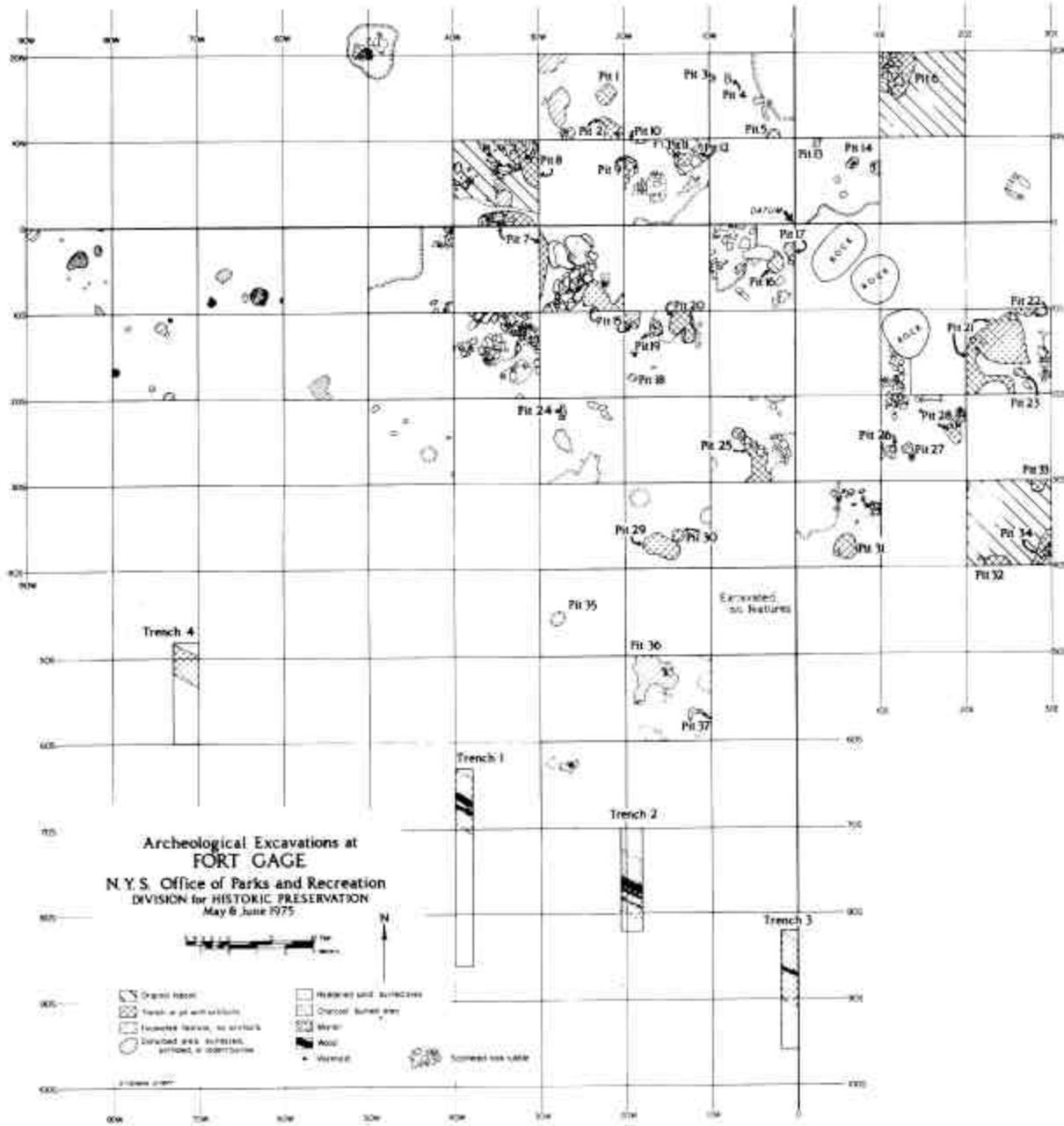


Figure 3. Map of grid squares and trenches excavated at the Fort Gage site. Only those pits that contained artifacts are numbered. The northwest bastion was located farther to the northwest. Drawing by G. Gillette.

color, the presence of plant material growing upright, and roots still connected with each other in horizontal growth patterns. In addition, where there were undisturbed areas the bulldozed soil above tended to "break away" from the original soil when troweled.

Features were found in the light yellow sand subsoil under disturbed as well as undisturbed layers. Some of these features proved to be small garbage or refuse pits, postholes, concentrations of stone from walls built with mortar, and hearths. Each of these features was mapped and cross-sectioned, and the contents were carefully removed. Profiles were drawn through each feature.

STRATA AND FEATURES

Occupation Surfaces. The bulldozing of the Fort Gage site had resulted in massive disturbance of almost all soil above the subsoil level, with a few exceptions in the excavated squares. Portions of original occupation surfaces were found in squares S20W40, S60W20, N10W20, and N10W40. In two other squares, S40E30 and N20E20, the entire square was found to contain a 6 to 8 inch layer of brown sand undisturbed except in parts of N20E20 where potholes had been dug after the bulldozing occurred.

Of the six squares that still had undisturbed brown sand, two contained a large quantity of artifacts, three contained a few, and one yielded none. The areas that had highest concentrations of artifacts were located near the remains of stone walls close to the center of the excavation area, and one was directly associated with a hearth feature. Other areas farther to the south and east were probably away from the busiest activity area of the Fort Gage site.

Twenty-two squares were found to be disturbed as far as and sometimes below the original subsoil surface level. The disturbed soil was mottled brown and yellow and contained over 1500 18th century artifacts (See Table 2). In addition there were over 100 scraps or fragments of modern debris or unidentified remains. All were retrieved, treated in the laboratory, and catalogued. The types of artifacts that were recovered, as with the associated materials, were categorized and will be discussed below. The overwhelming number of artifacts from soils above subsoil and features are from the middle of the 18th century while some, such as white earthenware and machine-cut nails, are from the 19th century.

Hearths. These features were identified at the Fort Gage site by the presence of orange-red scorched earth, heavy amounts of charcoal, gray ash, and scorched and fire-cracked rocks.

Three of the six possible hearth areas uncovered at the Fort Gage site were concentrated near the stone wall areas. Two were located farther to the southeast, and one was northeast of datum. All of the hearths yielded military artifacts, mostly unused musket balls, lead "sows" or trimmings, and flakes of or partial gunflints (Figure 4). This observation indicates musket balls were being cast at the site, probably in great numbers (46 more were found in bulldozed areas). The amount of calcined bone material and bottle glass remains varied, but both were always present along with clay pipe fragments. The largest hearth, located in S40E10, contained very large numbers of burned, rounded lumps of limestone. That hearth was probably being used for the purpose of making lime mortar for the building of walls. The partially scorched nodules of clay daub with impressed wood lath or split stick marks found in that same hearth could be associated with chimney construction. Perhaps this hearth with a chimney was built first to begin making lime mortar, and the hearths in N10W40, S10W30, and S20W40 were placed inside the building being constructed. Two hearths within pits dug into subsoil were found in S40E30 and N10E30 and may be associated with temporary huts erected on the site while to their west construction was proceeding.

Pits. The pits at Fort Gage were generally bowl-shaped, an average of 10 inches deep, and contained a mixture of artifacts from the mid 18th century. There was obviously an attempt at Fort Gage to keep the site clean. In all, 37 trash pits were discovered that contained artifacts. Because the pits could not be differentiated by function, contents of these pits have been analyzed by artifact types. Table 1, however, lists the finds in each.

Post Holes. Ten post holes were found in the excavated squares at Fort Gage. Although some of these seemed possibly to line up, no definite pattern could be discerned from this small scattering of features.



Figure 4. Musket balls, melted lead, and gunflints from N0W40. Photograph by J. McEvoy.

All of the post holes were deeply pointed, and three contained parts of the wooden posts themselves. A few of the post holes also contained bits of bone, and all contained charcoal.

South Moat. During the final days of exploratory excavations at Fort Gage, both the south moat and the northwest bastion of the fort were successfully located and mapped within the grid system, placing every feature discovered within the excavated area in relationship to two walls of the fort.

Three exploratory trenches were fully excavated to uncover part of the south moat, revealing log footings. An additional trench (#4) was cleared only to expose the tell-tale dark black pattern of humus that outlined and lay within the moat, thereby confirming the accuracy of projecting the moat's location.

Trench #1 extended from S63W40 to S86W40, a distance of 23 feet. One and one-half feet wide, the trench was begun at S70W40 and excavated southward about 10 feet without exposing the moat. The trench was then extended northward and almost immediately encountered the southern limit of the moat. Trench #2, commencing at S74W20 and extending southward, successfully encountered the moat line and encompassed its northern and southern edges within the 11 foot long trench. Trench #3 was started farther south at S81W0 and extended to S96W0. It also successfully uncovered the remains of the moat.

After removal of two layers of mottled yellow and brown bulldozed sand and a layer of brown sand with loose twigs and leaves, a dark stain in the soil appeared in each trench. This dark brown sand had many small interwoven roots growing which gave the entire stain a sod-like appearance and texture. The stain in each case ran from the northwest to the southeast. Below this dark sod-like stain was a layer of medium brown sand that was also within the moat and contained the remains of logs.

TABLE 2
Artifacts Found in Bulldozed Soils

Food Remains	
Faunal material	770
Shell fragments	11
Green bottle fragments	149
Modern bottle fragments	79
White earthenware	126
	Total: 1135
Building Materials	
Lime mortar fragments	430
Brick fragments	39
Hand wrought nails	42
Machine-cut nails	120
Window glass fragments	23
	Total: 654
Hunting-Military Remains	
Gunflint material	21
Local flint	3
Musket balls (.66 to .75)	37
Small shot (.30 to .55)	7
Square shot	2
Lead fragments	
melted	12
"pencil"	1
Gunsling	1
	Total: 84
Personal Items	
Clay pipe fragments	38
Buttons	4
Buckle fragments	3
Scissors handle, iron	1
	Total: 46
Other (iron scraps, modern debris)	102

In the southern half of Trench #1, the first horizontal log was encountered at a depth of approximately 2 feet in the brown sand, running parallel to the strike of the moat. In excavating further to the north, two more logs were found, one above the other. The first was at a 24 inch depth and the second at a 12 inch depth. All three logs ran in the same direction parallel to the direction of the moat. The uppermost (and northernmost) of the logs was the smallest, resembling a split fence rail. The second log was the largest (approximately 4 1/4 inches in diameter) and was a round whole log (Figure 5).

In Trench #2, also, a total of three logs was uncovered. Here the uppermost log was largest (about 9 inches in diameter) and was first encountered at a depth of approximately 1 foot in the dark sod-like sand. The other two smaller (c. 3 inches in diameter) logs were entirely within the brown sand. There were faint stains approximately 8 inches apart on the center in the brown sand in Trench #2 that could have been from vertical or angled posts placed between the two uppermost logs (Figure 6). Remains of a wood stake was uncovered under the bottom-most log. Other sharpened post remains were found scattered around the site in bulldozed soils.

Excavation of Trench #3 revealed only one log in the moat, encased entirely within the brown sand under the dark sod-like sand. Approximately 3 inches in diameter, it was at the 2 foot level below present ground surface.

It would appear from the archaeological evidence that the method used in building the south moat at Fort Gage consisted of digging a trench 3 or 4 feet deep, inserting horizontal logs as anchors, and then

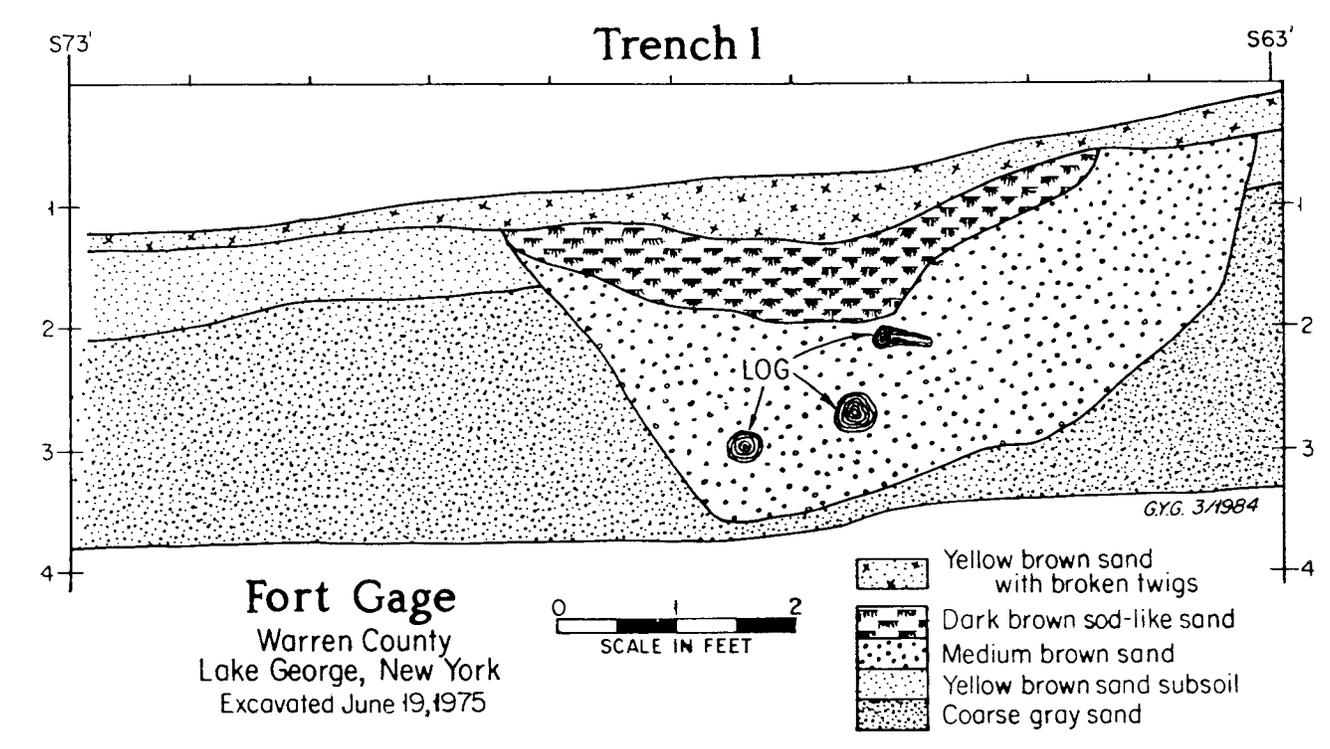


Figure 5. Profile drawing of the log footings in Trench #1. Drawing by G. Gillette.

backfilling with brown sand to at least half the depth of the upper log. Sharpened posts inserted vertically (a picket) or at an angle (a fraise) approximately 8 inches apart on center between the logs would then have formed a strong defensive palisade wall within the moat in the sandy soil.

A few artifacts were found in the dark sod-like sand and in the log trench fill (brown sand). With the exception of one unused musket ball, caliber .71, all of the finds in the sod-like sand were bone and teeth. In the brown sand below the sod-like sand in Trench #3, another musket ball, also unused and measuring .71 caliber, was found. In association with it were three fragments of cartridge paper and a small piece of cartridge string 7/8 inch long. The string was adjacent to the ball and around the paper cartridge. This undoubtedly was originally a complete cartridge consisting of a musket ball and powder, wrapped in paper and tied with string, ready for use. A tiny fragment of clay pipe bowl was also found in this lowest layer.

The absence of more artifacts than those mentioned above is probably explained by the rapid filling of the log trench. The sod-like sand accumulated more slowly, however, during occupation and subsequent destruction so that garbage bones were tossed in intermittently.

The northwest bastion outlined by a shallow depression in the ground surface was identified and mapped but not excavated. During the July 1972 visit by the Bureau of Historic Sites staff, the presence of the northwest bastion was sketched. While surveying the site with the transit in 1975, its location was once again noted and identified on the basis of the depressed line of the moat in the ground. The feature was subsequently destroyed by motel development.

ARTIFACTS

Food Remains. Included under the category of food remains are not only bones but also utensils or implements involved in the preparation or consumption of food and drink.

Faunal material was by far the most ubiquitous type of artifact found in the 37 Fort Gage pits that contained remains. There were only five pits that did not contain bone or teeth. A total of 3,089 fragments



Figure 6. Postmold stains from the posts placed in Trench #1. Photograph by J. McEvoy.

of faunal material were submitted to the American Museum of Natural History for analysis (Lawrence n.d.). Over 1300 of the bone remains were charred or calcined, and only 293 were identifiable. Of those identified, 47% were pig, 43% were cow or ox, and 7% were deer. The remaining 5% were sheep and unidentified hoofed animals. There were no fish, reptile, or bird remains. Almost every skeletal element of cattle and pigs was present, and most appeared to be butchering waste. Seventy-four percent of the identified bones were recovered from pit features as were 38% of the unidentified remains (Lawrence, n.d.:7, 9, Table 4).

The soldiers stationed at the fort Gage site were apparently being supplied by domestic animals which they butchered on site. There was some reliance on hunting for food, and some of the bone probably came in military provision barrels. Dr. Ilea noted on August 31, 1758: "the Deer have been very plenty with us for some time, many cross the Lake and some pass so near as to be caught by our Sentry & Guards" (Rea 1881:187). The soldiers perhaps were not hunting far from their camps but were fortunate enough to obtain deer close by.

Abercromby issued orders that ". . . all the garbage, or what may, be nuisance to the camp, be at all times buried" (Money Penny 1970:444). Most of the pits at the Fort Gage site were undoubtedly dug for the disposal of garbage and other camp refuse.

Hand-blown dark green bottle glass was also found in the Fort Gage pits, hearths, and occupation floor areas. Fragments recovered were almost all body fragments so that more exact dating of these glass bottle remains on the basis of necks or bases is not possible other than to say the glass is the type used in the 18th century.

Evidence of two other types of glass container was found at the Fort Gage site, both in Pit 8. Four very thin light blue-green fragments probably indicate a wine glass: 18 clear bottle fragments of hard, clear glass were probably those of a molded round medicine bottle about 1 3/4 inches in diameter. The flaring rim above the neck was 1/8 inch thick. Clear glass pharmaceutical bottles with small flattened lips like this example were in use around the middle of the 18th century (Noel Hume 1970:74).

Two possible whetstones were found associated with food remains. In Pit 16 a rock broken at one end had numerous striation marks on its surface. The stone was 2 inches long, 1 3/4 inches wide, and 3/4 inch thick with a sandy surface over a hard gray core. Another whetstone, made of limestone, was discovered in Pit 11. This larger stone measured five inches by 2 1/4 inches and showed definite wear patterns on the edges. It is interesting to note that small whetstones were also found in trash pits at Fort Ligonier (Grimm 1970: Plate 60). Both of the whetstones at Fort Gage were associated with large amounts of faunal material.

Small pieces of tin-plated iron vessels as well as two recognizable objects were found in the Fort Gage pits. These were a partial canteen and an iron dish or plate. In Pit 20, three fragments of iron indicate some type of container or vessel. The largest piece (1 3/4 inches by 1 inch) had a neatly rolled edge and a thickness of .10 inch. In Pit 21 several artifacts associated with food preparation and/or service were found. Again, out of six fragments of very thin iron, one had a rolled edge. A second piece had a straight cut edge. In the hearth in S10W30, eleven very similar tin fragments were recovered. Eight canteen fragments including; a large piece measuring 2 5/8 inches by 3 1/2 inches were also discovered in Pit 21. This large canteen fragment still had an attached neck (spout) which protruded slightly through to the inside of the canteen. The spout's entire length was 1 inch and its diameter was 3/4 inch (Figure 7). A canteen very similar to this was found at Fort Ligonier. This is described as having a flat top and bottom with concave-convex sides with two angled corners. The one neck recovered at Ligonier also measured 1 inch in length and 1 inch in diameter (Grimm 1970: Plate 71). The fragment found at Fort Gage was the flat top of a canteen with the neck still attached, kind it is one of only a few yet known from the French and Indian War period.

One of the most surprising aspects of the Fort Gage collection is the absence of ceramics. Ceramics are ordinarily the most universal cultural indicator on archaeological sites, especially British military sites. The soldiers at Fort Gage, however, must either have been socially separate or otherwise totally, avoided the use of such domestic utensils. Abercromby had specifically ordered the officers in his army to carry no more camp equipment than a tent, a small portmanteau, blankets, and a bearskin (Money Penny 1969:336). The need for eating utensils might have been satisfied by the use of tin-plated serving dishes, similar to that found in Pit 6 resting on subsoil at the very bottom of the pit. The plate had crimped edges and was depressed in the center so that its sides were slightly raised. The center depth from one diagonal was 7/8 inch, from the other diagonal 3/8 inch. The plate was about 4 1/2 inches by 6 inches.

The handle of a spoon similar to that which may have been used with this plate was found in Pit 21, the same pit that contained the canteen remains. Made of pewter, the handle was 2 inches long with a flat end 3/4 inch wide. In raised letters on the back of the handle were the letters LON enclosed in a double-lined square shaped border. Similar spoon handles were also found at Fort Michilimackinac (Stone 1974:18) and Fort Ligonier (Grimm 1970:14). Each contained the word or part of the word LONDON. In addition, the Fort Michilimackinac spoon had the name RUE, perhaps the maker. This spoon is very similar to that from Fort Gage, even to the 3/4 inch width at the flat end.

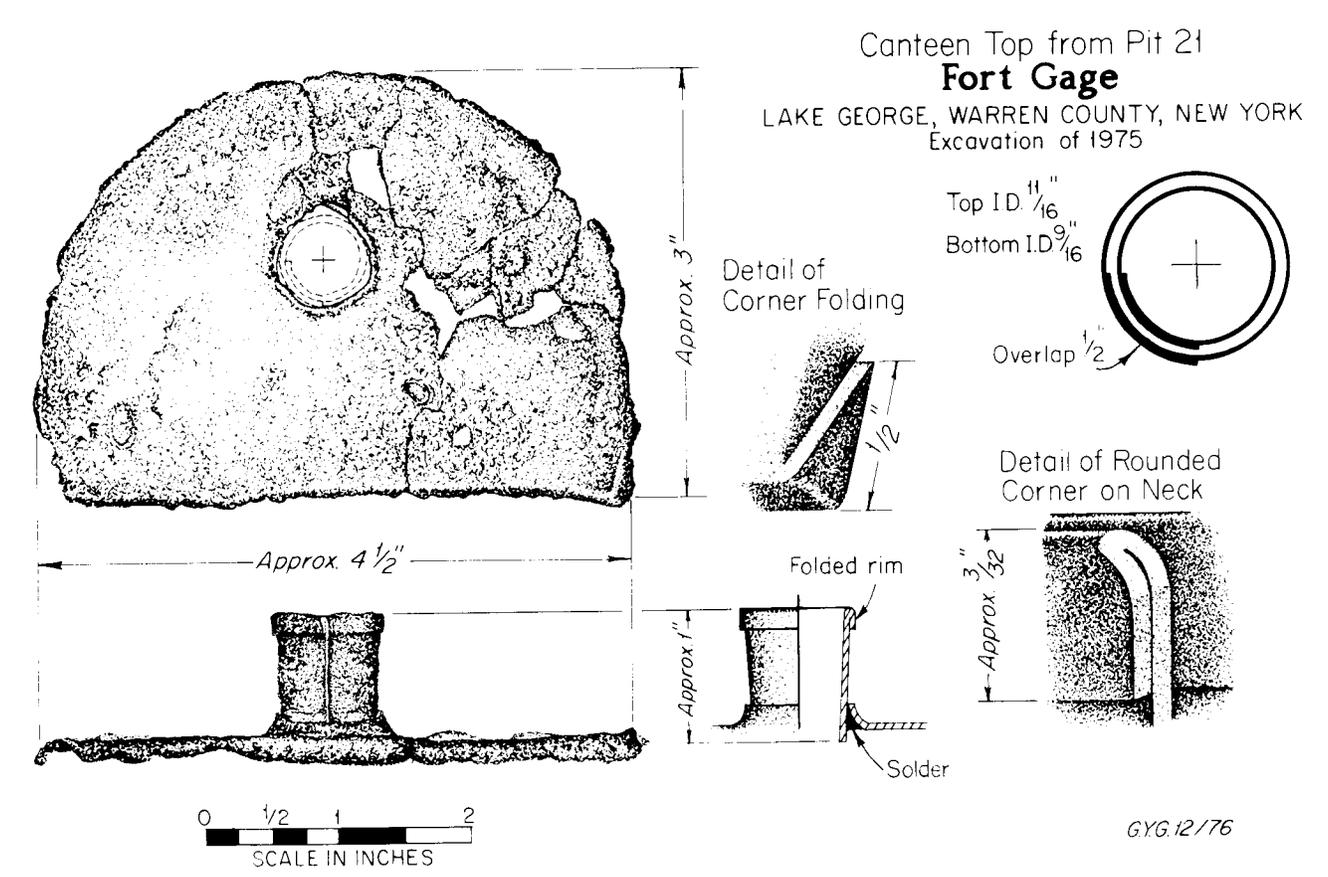


Figure 7. Drawing of the canteen fragment found in Pit 21 at Fort Gage. Drawing by G. Gillette.

Hunting-Military Artifacts. Fourteen of the 37 pits containing artifacts excavated at the Fort Gage site also contained objects associated with firearms as did four of the hearths. Both the undisturbed brown sand stratum and the bulldozed soils also contained quantities of artifacts categorized as military.

The round lead balls used for bullets were frequently cast by owners of firearms themselves rather than purchased by them from gunsmiths. This operation, done in molds of the scissors-type and/or nut-cracker type, resulted in many pieces of waste lead that extended up through the pouring hole and needed to be trimmed. Several pieces of these lead trimmings were found in pits at the Fort Gage site as well as in the hearths. The musket balls were almost all unused and did not contain dents, slits, or other evidence of being fired. Most of them had been trimmed after casting, smoothed either by a knife or by rolling or tumbling them together to remove extra pieces of lead. A few had flat spots where not enough lead had been poured into the mold. The musket balls measured within a rather narrow range of caliber, from .62 to .75. The standard British Brown Bess musket had a bore size of .75 (Neumann and Kravic 1975:201), and it fired balls ranging from .66 to .72 caliber (Hanson and Hsu 1975:80). In unassociated contexts were six smaller balls ranging in size from .30 to .55 caliber. Those under .50 caliber are commonly called buckshot; those over .50 caliber could possibly be rifle balls which often ranged in size from .50 to .60 (Peterson 1968:60). The small shot could also have been used for pistols.

Another by-product of the manufacture of musket balls is from the rectangular channel across the top of a gang mold that allows the lead to flow into each of the holes. When the mold is open, the balls remain linked together by strips called sprites, each ball connected to the sprue by a small stalk. Two of these sprites were found in the Fort Gage pits (Pits 6 and 11). Each sprite contained only one stalk, an indication the scissors-type of single mold was being used which produces only one musket ball at a time. The diameter of one stalk was $\frac{1}{4}$ inch, the other was $\frac{3}{16}$ inch. Each was found in association with an

unused musket ball. There was also evidence in the hearth areas that old or imperfect musket balls were being melted down to make new ones.

Three examples of another kind of shot were found at the Fort Gage site in features. These were of cut lead and almost cubical. One measured .14 inch (Pit 31), the second measured .21 inch (Pit 16), and the third measured .47 inch by .168 inch in the hearth in S40E10. The cut shot found at Fort Ligonier was also made of lead. The majority of the finds at Fort Ligonier were cube-shaped and nearly all had measurements between .12 inch and .20 inch (Grimm 1970:109).

Of the European gunflint material found, some were flakes that probably resulted from trimming the edges of gunflints after fitting in musket hammers. Three of the gunflint flakes were honey-colored rather than gray-white like the other partial gunflints or gunflint fragments, indicating French flints were also being used at the site. All three honey-colored fragments were in Pit 14. The whole gunflints were of the spall-type and gray-white in color (Figure 8). Most of the gunflints found in features showed signs of never having been used; that is, their edges were still acute, rather than nipped, to form a striking angle. The two found in a wood ash layer in S40E10 were extensively used, however, one probably as a strike-a-light.

In the bulldozed soils there was an iron gunsling still with its threaded bolt which had probably once attached it to a musket. Although the gunsling is similar in shape to those found on muskets in the mid 18th century, it was somewhat light-weight compared to most. Examples nearest in size have been observed by the authors on an 18th century Indian trade gun and on a Dutch or German officer's fusil of about 1750.

A few other unidentified materials were found in the pits that probably were associated with military objects. These included unidentified pieces of lead, some hammered flat and cut, perhaps to make cut shot or coat weights. An unidentified piece of iron was in Pit 21. One edge of the metal was bent upward and had a hole punched through the center of the lower piece. It could have been a small iron clip.

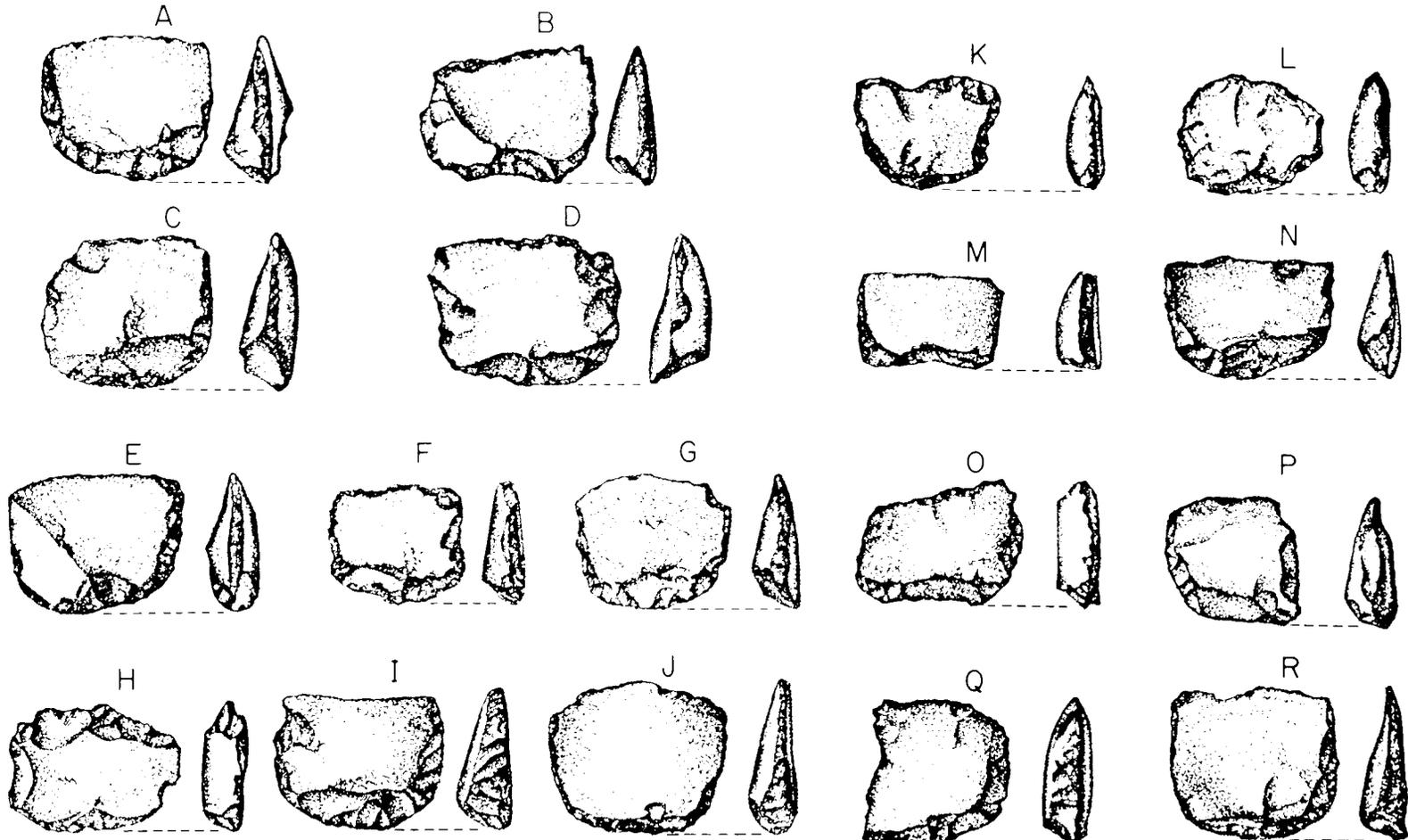
Building Materials. Abercromby in August 1758 ordered a large party of men to build a blockhouse, probably on the site of Fort Gage, inside a breastwork ordered earlier. Much evidence exists at the site that work on the blockhouse was begun but left unfinished. Nodules of partially burned limestone were found in the Fort Gage hits as well as in the hearths. The lime mortar was perhaps produced with the lime from the burning of this limestone which was found in great abundance at the site. Some was still attached to scattered rock, and some was associated with short sections of laid masonry walls still left despite the bulldozing (Figure 9). One pit, Pit 17, contained 79 lumps of mortar of various sizes. This pit was located immediately adjacent to the areas where laid stone walls were located. A hearth located in S20W40 also contained some 70 lime mortar fragments. Small amounts were found in other pits and hearths. Over 430 lime mortar fragments were recovered in the material collected from bulldozed soils.

That some building with wood was also occurring at the Fort Gage site is demonstrated by the presence of 64 nails. Eleven nails, poorly preserved, were found in pits. All were hand-wrought and all except one still had a head attached. Nine of the heads were rose heads, but one was an L-shaped head, probably a flooring nail. The eleven nails found in hearths were all hand-wrought and partly burned. Here also was one L-shaped nail while all the others had rose heads.

It is likely that the soldiers assigned to build the fortifications at Fort Gage were also living at the site, perhaps in temporary wooden huts or in tents. The two hearths uncovered at the eastern end of the site might have been inside such structures. Unfortunately, the bulldozing obliterated all traces of any remains that might have been examined. When the Bureau of Historic Sites archaeologists visited the Fort Gage site a few years before bulldozing occurred, the types of depressions left in the ground seemed to be those of hut sites.

Personal Items. Thirty fragments of clay tobacco pipes were found in ten pits, in addition to six found associated with hearths, a large number in bulldozed soils, and 26 found in undisturbed strata. All of the pipes measured 4/64 inch, a bore diameter size usually associated with mid to late 18th century occupations. The absence of any variety in stem bore sizes suggests a single supply source and perhaps only one or two makers of the pipes used at Fort Gage.

A few of the clay pipe fragments were marked. Most of the bowl pieces were of the Tippet style (heel-less, elongated, trumpet-shaped), but only six were actually marked by the maker. One found in Pit 8 was marked with a simple RT, like another also found in the undisturbed brown sand in N10W40 and



GYG 1/1977



Gun Flints, Fort Gage
LAKE GEORGE, WARREN COUNTY, NEW YORK
Excavation of 1975

GYG 1/1977



Gun Flints, Fort Gage
LAKE GEORGE, WARREN COUNTY, NEW YORK
Excavation of 1975

Figure 8. Drawing of gunflints at the Fort Gage site. Drawing by G. Gillette.



Figure 9. Traces of walls and scattered stone at the Fort Gage site. Photograph by J. McEvoy.

one in a hearth in S40E10. A more elaborate mark was that of R TIPPET occurring in Pit 16 and again in the hearth in S40E 10. The double edged cartouche mark was plain and there was no hyphen in the TIPPET name. Several authors have investigated Tippet pipes, including those "made by R/TIP/PET, heel-less and marked on the side with RT impressed on the back before firing. These were clearly designated for the American market" (Oswald 1959:61). Described Walker (1971:8-9) as "by far the most important Bristol pipemakers . . .," generations of the Robert Tippet family produced pipes for

almost 100 years. These pipes "had a vast market and are known from contexts as late as 1760 . . ." (Walker 1971:8-9).

The TD mark found on another pipe in Pit 16 is "probably the most common decoration found in North American sites. It occurs in at least 60 varieties from almost 1750 to 1880" (Wylie, n.d.:18). The variety found in Pit 16 is a TD in a cartouche with a rope-like edge. The Fort Gage example is perhaps one of the earliest examples to be recovered from a firmly dated context.

An unusual pipe mark on a stem was recovered as part of the surface collection. Rouletting was present along the broken edge, and a shield-like device below the rouletting was also broken through at the end. The shield contained three wheat sheafs with a dagger in the center (Figure 10). The dagger mark like this one on the Fort Gage pipe stem was found as a heel mark on a pipe from Plymouth, Devon (Oswald 1969:137), but this is the closest example yet known.

Three pieces of flat, pointed lead were found in two separate pits (3 and 21) and in bulldozed soils. Those found in pits were 1 3/8 inches long with pointed ends; the third was 2 1/4 inches long and pointed at both ends. They were rectangular in cross section. Lead pencils similar to these are often found at military sites and domestic sites. A sharpened piece of charcoal 1/16 inches long was found in the largest hearth, that in S40E10.

Both flat and two-piece buttons were found at Fort Gage. Seven of these were associated with features or undisturbed strata; the other four were found in bulldozed soils.

The flat buttons were made of pewter, brass, and white metal with one very deteriorated iron button being found in a hearth. The smallest of these (in Pit 30) was of pewter (1/2 inch in diameter) and could have been part of a set of sleeve buttons. A second flat pewter button, also partially deteriorated, was larger (.62 inch diameter) with its eye missing. The brass flat buttons were all plain, had iron eyes, and were 3/4 inch to 15/16 inch in diameter. They were found in Pits 12 and 32 and in bulldozed soils. A fragment of flat white metal button (Pit 31) had a groove cut on its reverse side and was a shiny gray color.

The hollow buttons were of two pieces, but the filler material (usually putty) was missing in each. They were of brass, white metal, and pewter, and each had one or two holes in the back for the expansion of gasses when the two pieces were joined together during manufacture. All were plain and had either brass or iron eyes. One brass button in Pit 6 was 7/8 inch in diameter and was surrounded by some of the

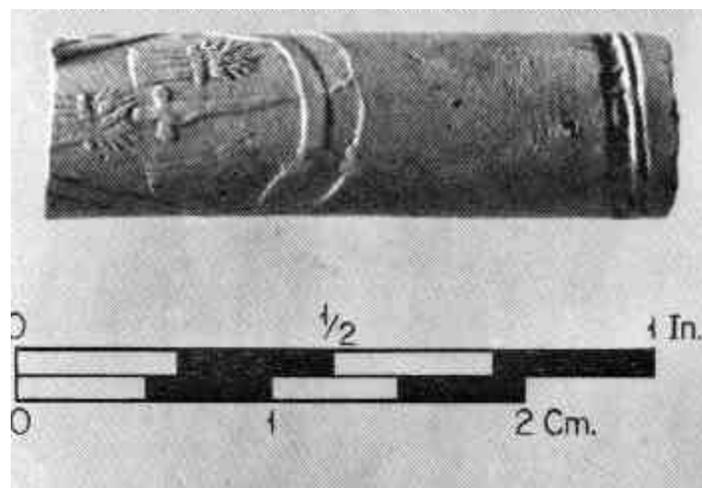


Figure 10. Unidentified clay pipe stem mark found in bulldozed soils. Photograph by J. McEvoy.

original fabric of the clothing to which it was once attached. This fabric and another piece found in the soil next to the button was of a greenish color, probably from the corrosion products of the button, and were a plain weave pattern.

In the 18th century, buttons ranging in size from 9/16, to 3/4 inch were most often found on waist coats and knee bands. Larger buttons were used for regimental coats and the waistbands of pants (Hanson and Hsu 1975:82). The majority of the Fort Gage buttons were the smaller type. Only two were large enough to be used on an outer coat or waistband, including the brass button found with the fabric attached.

Although only 11 buttons were found, their variety should be noted. The buttons varied as to type, material, and size. This might indicate a lack of military standardization. The provincials were famous for their non-military appearance and these buttons may have been on the outfits of such soldiers. ("Yankee Doodle" was supposedly written in 1758 about these troops as they camped outside Albany before moving to Lake George).

A brass knee buckle and partial iron tongue found in the Fort Gage bulldozed soils was very similar to knee buckle #21 at Fort Ligonier (Grimm 1970:54). One and one-quarter inch by 1 1/8 inch, the buckle had a plain flat top that was longer from side to side than top to bottom. It had a single forked tongue and an iron bar across for attaching the tongue. Other fragments of brass buckles were also found in bulldozed soils.

A roughly rectangular piece of thin brass containing four nail holes in one-half of the slightly bent piece was found in the hearth in S40E10. This could have been a type of skid, possibly for the bottom of a trunk or other piece of furniture. The bend appears to be 90° as though it was nailed to the bottom of the piece while the other half was bent up and over the outside for further protection.

Two small pieces of brass, both with turned-over edges, two musket balls (.69 and .64 caliber), and a jews harp were among the associated artifacts found in S20W40. The jews harp was 2 1/2 inches long, made of iron, with a small rounded head. The center tang was missing.

A piece of square iron ferrule much like another found at Fort Ligonier (Grimm 1970:124) had two holes punched in opposite sides; it measures 1 1/4 inches on each side and was 1/2 inch thick. Resembling a box without top or bottom, it was probably used as a fastener, perhaps on a wagon or harness. It was found in a hearth in S40W30.

CONCLUSIONS

Although many features and some small amounts of undisturbed occupation surfaces were examined, resolving many questions about structure and spatial organization is not possible. Pits were concentrated in one half of the site with no pits found west of the W40 line, perhaps because of the bulldozing. With the exception of dark green glass bottle fragments which cluster in pits along the northern part of the site, each of the pits contained basically the same material. It does not seem possible to sort them by function; all are trash pits, but whether they were located inside or outside buildings is not known.

Rocks and lime mortar concentrations in S10W30, S20W40, N10W40, and along the E10 line may indicate the location of structures. Without an opportunity to examine the intervening squares, however, one cannot be sure.

The most important structural evidence uncovered at the site was perhaps the log footings in the south moat, which apparently acted as anchors for a row of sharpened pickets or an angled fraise and were designed to hold them firmly against an assault. Discovery of wooden fortifications is extremely rare, and these features should have been studied further and preserved.

Artifacts nevertheless indicate some of the activities of soldiers stationed on this hilltop (Table 1). The soldiers were butchering animals on the site, cooking meals, eating from tin plates, and drinking from canteens, bottles, and wine glasses. This is perhaps rather an unusual 18th century site in that no ceramics were found. Although this might seem like the prototype of a military site, such food consumption behavior on an 18th century military site appears to be unusual. The Soldiers' Barracks at Crown Point, built the next year, were found to contain all the common types of 18th century ceramics (Feister 1984). The absence of such material at Fort Gage confirms its main purpose as an outpost where soldiers camped and lived under limited conditions. A large sample of unused musket balls and buckshot recovered at the site shows how the soldiers occupied their time while on guard or during construction

work. Most of this material was recovered from hearths along with lead sows and strips associated with the manufacturing of lead balls. Finally, there were some rarely encountered items and associations found at the site: part of a French and Indian War canteen, part of a ball and paper cartridge, a button with fabric attached, and clay pipe stems with absolutely consistent bore diameters.

The Fort Gage site in its original condition offered priceless resources for the study of a military encampment occupied for only a brief period under conditions of impending conflict by provincial soldiers, a group that is still poorly understood. Even after its first bulldozing, the site yielded some information of use to archaeologists and historians. It was indeed unfortunate that despite the efforts of many people and the Adirondack Park Agency, the site was lost.

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