

years later that we first learn of the existence of this fortified structure.

Historical records by themselves, however, are not always completely informative. Although published records of the site of Fort Hill date back to 1687, the historian is still left to wonder what this structure had actually looked like. Was it used for a granary, a military fort, a village, or a combination of these? Did it actually exist on the steep-sided hill a mile to the west of Boughton Hill? These are such questions which would prompt a controlled excavation of the site.

Irving Coates came as close as anyone in determining with reasonable certainty that the small hill to the west of Boughton contained a palisaded structure, for in 1890 he discovered segments of orderly arranged palisades washed out of the eastern slope. What may have existed on the summit is, however, still only a matter of conjecture.

With the view of clarifying specific facts regarding the site and in the process learning more about the Seneca of historic times, Charles F. Hayes, III, Michael Rip-ton, and myself, during the 1960 field season, attempted the planning of a controlled excavation of the Fort Hill site. A 150' trench line composed of 30 five-foot sections was laid across the summit so that it would of necessity intersect any possible palisade line which would be circumscribing the southern edge of the summit. Field work in 1960, however, turned up neither evidence in support of historical assumptions nor arti-factual remains.

Those interested in a complete record of the 1960 excavations of the site are invited to consult the museum files.

The trench across the summit still is composed of 28 non-excavated sections. A tremendous amount of work may yet lie ahead unless the palisades are not soon inter-sected. Chapter members interested in participating in the excavation of this site are invited to contact me for further information.

THE PERCENTAGE OF RECOVERY IN SALVAGING BEADS FROM DISTURBED BURIALS

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Even though each of us has the utmost confidence in our archeological techniques, all of us must have wondered at some time just how thorough a job we do. It is always possible that something could have been overlooked or not observed. Recently the writers had the opportunity of testing the thoroughness of even careful excavation.

On Boughton Hill near Victor, New York, the great Seneca capital of Gannagaro was located until its destruction by the French in 1687. One of its large cemeteries was re-excavated by the writers. More than 50 per cent of the burials had been pre-viously excavated in recent years. Undisturbed graves were found mixed in among the dug graves and around the periphery of the cemetery.

It was while redigging one of these dug graves that an interesting and important discovery was made which ultimately led to an extensive experiment. It came about in this way. Burial #35 was tested into, yielding a soft-mixed soil with scattered bones and frequently a red glass bead. As the test pit was dug deeper, more beads were found. Near the bottom of the pit was a complete brass pipe liner with a sec-tion of the wooden pipe bowl still attached. The test pit was then enlarged and exca-vation by trowel and grapefruit knife began. As it was late afternoon, only two hours were spent carefully picking out the glass beads, many of which were extremely small seed beads (14 or more to the inch). Progress was slow and by evening very little had been accomplished.

The following morning, the test pit was reopened and again enlarged. The wall of the grave was located and carefully followed. About mid-morning the soil color and texture made a radical change and undisturbed fill was recognized. The soil was lighter in color and more compact. Soon a small fragment of a pottery pipe stem was encountered. Inches away another much larger piece was found. The third piece was

then found and hopes ran high for the recovery of the remainder of the pipe. Finally the bowl was uncovered. Once again it was proven that the "dug" grave must never be neglected.

The pipe was most unusual and complete except for the tip of the stem. The entire bowl was composed of the complete effigy of a human figure. The posterior view showed two legs, one coming down each side of the bowl. Facing the smoker was a large head and face complete with pronounced ears, the eyes set close together, a prominent nose, and an open mouth. The arms came down each side of the bowl bending upward with open hands laid side by side under the chin or upon the neck of the figure.

The excavation of the grave was completed on the third day. Besides the pipe, the brass pipe liner, one triangular flint and three brass arrowpoints, one tiny musket ball, one glass button and three homemade brass nails, a total of 419 beads were found. Of these, 333 were tiny seed beads (14 or more to the inch).

In the hopes of recovering the missing fragment of the pipe stem and as an experiment to see how many beads might have been missed, it was decided to screen the grave fill. However the soil on Boughton Hill is a heavy, lumpy clay and would be nearly impossible to shake through a screen fine enough to hold tiny seed beads. There remained only one alternative. The grave fill would have to be washed through a very fine screen. Since there was no water available at the site, the dirt had to be moved to the home of one of the writers. As you might imagine, this was no easy task. The grave had been a large one, measuring 6 feet long, 4 feet wide, and 3 to 4 feet deep. To make matters even worse, the only farm lane in to the site had been abandoned and blocked by obstructions.

The fourth and undoubtedly last excavation of this burial began by filling five gallon paint pails with the now thoroughly mixed grave fill. These had to be carried down the hill about 500 feet to the road and then transported by car about two miles. In this manner, 175 pails of dirt were stacked in the back yard awaiting screening. Now we were faced with a new problem, a huge open pit where the grave had been. Nearby was an abandoned fence line. Since it was uneven and built up by plowing, we set to work leveling it, filling the five gallon paint pails, carrying them to the pit and dumping them in. When the job was completed, the area was level, clear of weeds, and actually improved.

The next step was the construction of a screen. Regular aluminum window screen was used on a wood frame measuring 24 by 36 inches with five inch sides. The fineness of the mesh would prevent even the smallest of the seed beads from going through. Wooden legs supported the screen at a waist level height.

At first, the washing of the dirt proved to be a very slow and tedious process. Half a pail of dirt was placed in the screen and then a jet stream of water from a garden hose was directed on the dirt until even the clay balls were broken up and only gravel remained. The beads were removed as they appeared in the screen, with the aid of tweezers. Approximately 10 to 15 minutes were required to process each half pail of dirt. By experimenting, it was discovered that when a pail of dirt was soaked over night, the process could be greatly speeded up.

The bead recovery was surprisingly uniform. Each half pail of dirt produced an average of 12 to 15 beads. Most of these were tiny seed beads. The smallest of these would take from 22 to 25 to measure one inch. The largest, the typical red or black round glass bead found on the site, averaged only 4 to the inch.

Before considering the results of our experiment, we must remember that the grave had been: first, anciently looted; second, recently excavated; third, carefully troweled through; and last, washed and screened. The nature of the soil is also important. The tough, sticky, smeary clay of Boughton Hill makes it very difficult to see tiny objects.

Now, let's study the results. Table #1 gives a complete list of what was found in our first redigging. Table #2 lists everything found in the washing and screening of the fill.

TABLE #1.

Artifacts found in the first redigging

1 human figure, effigy pottery pipe	
1 brass pipe liner with wood bowl fragment	
1 triangular flint arrowpoint	
3 triangular brass arrowpoints	
1 Jesuit ring fragment	
1 glass "cassock" button, black	
1 wooden ladle fragment	
3 brass homemade nails with attached wood fragments	
2 clay pipe stem fragments	
1 clay pipe bowl fragment	
1 tiny lead musket ball	
419 glass cane beads:	
79 round, red	size 5 to 6 to the inch
1 round, black	size 5 to 6 to the inch
6 oval, red	size 4 to the inch
121 round, black	size 15 to the inch
106 round, red, cored	size 14 to the inch
82 round, red	size 17 to the inch
23 round, white	size 22 to the inch
1 round, blue	size 17 to the inch

TABLE #2

Artifacts Found By Screening and Washing

4 triangular brass arrowpoints	
2 triangular flint arrowpoints	
1 gun flint	
2 brass homemade nails	
1 iron musket fragment	
1 fragment of a pottery pipe bowl	
1 fragment of a pottery pipe stem	
1 small, round brass disc	
3 lead musket balls	
40 tiny lead musket balls (5/32 inch in diameter)	
3,666 glass cane beads:	
181 round, red	size 5 to 6 to the inch
9 round, black	size 4 to 6 to the inch
6 oval, red	size 4 to the inch
1442 round, black	size 15 to the inch.
765 round, red, cored	size 14 to the inch
519 round, red	size 17 to the inch
674 round, white	size 22 to the inch
44 round, blue	size 17 to the inch
10 round, blue	size 5 to 6 to the inch
7 round, red, cored	size 5 to the inch
1 round, green	size 7 to the inch
1 round, clear	size 9 to the inch
1 round, purple	size 14 to the inch
1 tubular, black, and 1 red	size 4 to the inch
3 round, bone beads	size 4 to the inch
1 purple wampum	size 4 to the inch
3,666 total beads of all types found by screening	

It is interesting to note that careful trowelling recovered only 10 per cent of the total number of beads, 43 per cent of the brass arrow points, 33 per cent of the flint arrow points, and only 2 per cent of the tiny musket balls. Examining the beads more closely we find that size and color were the controlling factors in the percentage of recovery. Trowelling recovered 8 per cent of the round black beads, size 15 to the inch; 30 per cent of the round red size 5; 12 per cent of the round red, cored, size 14; 3 per cent of the round white, size 22; 10 per cent of the round black, size 5; 2 per cent of the round blue, size 17; 50 per cent of the oval red, size 4; and 12 per cent of the round red, size 17.

Size, therefore, was the most important factor and color the second most. The high percentage of recovery of the oval red bead may indicate the importance of shape, but the small quantity of that bead (12) makes this questionable.

In conclusion, the writers would like to state that the experiment was conducted in all seriousness and sincerity. The results are as stated. The difference between Table #1 and Table #2 we do not attribute to carelessness on our part but to certain conditions such as soil, the smallness of the bead size, and the previous disturbance of the burial. It was, however, quite revealing for us to realize that such large numbers of beads could be missed by trowelling. The washing and screening of the fill of every grave would indeed be impracticable. However, when any large quantity of beads are encountered in grave fill, especially near the floor of the grave, that portion of the fill could easily be saved and transported back to the home or laboratory for washing and screening. The results might indeed be surprising as well as rewarding.

THREE MILE HARBOR SITES*

East Hampton, Long Island, New York

Roy Latham

Long Island Chapter

Three Mile Harbor connects with Gardiner's Bay on the north through a narrow inlet across Sammy's Beach. This beach extends westward from the inlet to the hills. On the beach are numerous stone-paved fireplaces used by the Indians for roasting clams and crabs, which were abundant in the harbor. Three Mile Harbor is a sheltered locality, and the natives assembled there in winter from as far away as Montauk, which is a bleak region.

The first village on the west side of the harbor from the inlet is Hands Creek. This village is situated on a sandy slope on the north side of the creek, which drains into the harbor. The creek terminates in the fresh water springs of an alder swamp. In the upper portion of the creek there is sunk among the springs a hollow log-curb that is prehistoric in origin and is still in sound preservation. When the tide is ebb, fresh water is available in the curb.

This site was excavated by the Long Island Chapter. Broken and trampled shells cover the surface of the ground several inches deep to the edge of the creek, and water settles in the pits on the lower side, indicating that higher ground existed there when the pits were occupied. The site is 235 feet east to west and 85 feet across from north to south. Along the back, north margin of the site there is a line of shallow fireholes without stone foundation; their contents, over fire-reddened sand, are ashes mixed with fish scales and bones. In one of these cooking hearths, eight inches below the surface, was uncovered a multiple mortar, 55 pounds in weight, of coarse sandstone, 16 inches in length, eight inches wide by six inches deep. On one side are four cups, on the reverse face, one cup. A nine-inch rough sandstone pestle was lying on top of the mortar as left by the occupants. A considerable amount of nice pottery was taken from the site, with the Sebonac predominating, and a fair amount of Niantic present, with some trade type sherds, (not Long Island) was found. A miniature vessel, one by one and one-half

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